

SR 710 North Project

LOS ANGELES COUNTY, CALIFORNIA
07-LA-710 (SR 710)
E.A. 187900
EFIS 0700000191

Final Environmental Impact Report/ Environmental Impact Statement and Individual Section 4(f) Evaluation

Volume IIA & IIB
Appendices A through O

Prepared by:
State of California Department of Transportation
and the
Los Angeles County Metropolitan Transportation Authority



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 USC 327 and the Memorandum of Understanding dated December 23, 2016, and executed by FHWA and Caltrans.

November 2018

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Appendix A: CEQA Checklist

Supporting documentation of all California Environmental Quality Act (CEQA) checklist determinations is provided in Chapter 4 of this Environmental Impact Report/Environmental Impact Statement (EIR/EIS). Discussion of all avoidance, minimization, and/or mitigation measures is under the appropriate topic headings in Chapters 3 and 4.

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CEQA Environmental Checklist

07-LA 710 (SR-710)	N/A	187900
Dist.-Co.-Rte.	P.M/P.M.	E.A.

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. 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.

	TSM/TDM	BRT	LRT	Freeway Tunnel
I. AESTHETICS:				
Would the project:				
a) Have a substantial adverse effect on a scenic vista	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	No impact	No impact	No impact	No impact
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	Less than significant impact	Less than significant impact	Potentially significant impact	Less than significant impact
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact

II. AGRICULTURE AND FOREST RESOURCES:				
Would the project:				
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?	No impact	No impact	No impact	No impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No impact	No impact	No impact	No impact
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))?	No impact	No impact	No impact	No impact
d) Result in the loss of forest land or conversion of forest land to non-forest use?	No impact	No impact	No impact	No impact
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?	No impact	No impact	No impact	No impact

III. AIR QUALITY:				
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	Less than significant impact	Less than significant impact	Less than significant impact	No impact
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact

	TSM/TDM	BRT	LRT	Freeway Tunnel
c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
d) Expose sensitive receptors to substantial pollutant concentrations?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
e) Create objectionable odors affecting a substantial number of people?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact

IV. BIOLOGICAL RESOURCES:				
Would the project:				
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?	Less than significant impact	Less than significant impact	Less than significant with mitigation	Less than significant with mitigation
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?	No impact	No impact	No impact	Less than significant with mitigation
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	No impact	No impact	No impact	Less than significant with mitigation
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?	No impact	No impact	No impact	No impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	No impact	Less than significant with mitigation	Less than significant with mitigation	Less than significant with mitigation
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?	No impact	No impact	No impact	No impact

V. CULTURAL RESOURCES:				
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	Potentially significant impact	Potentially significant impact	Potentially significant impact	Potentially significant impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	Less than significant with mitigation	Less than significant with mitigation	Less than significant with mitigation	Less than significant with mitigation
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Less than significant with mitigation	Less than significant with mitigation	Potentially significant impact	Potentially significant impact
d) Disturb any human remains, including those interred outside of formal cemeteries?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact

	TSM/TDM	BRT	LRT	Freeway Tunnel
VI. GEOLOGY AND SOILS:				
Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
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?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
ii) Strong seismic ground shaking?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
iii) Seismic-related ground failure, including liquefaction?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
iv) Landslides?	No impact	Less than significant impact	Less than significant impact	Less than significant impact
b) Result in substantial soil erosion or the loss of topsoil?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
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?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
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?	No impact	No impact	No impact	No impact

VII. GREENHOUSE GAS EMISSIONS:	
Would the project:	
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Caltrans has used the best available information based to the extent possible on scientific and factual information, to describe, calculate, or estimate the amount of greenhouse gas emissions that may occur related to this project. The analysis included in the climate change section of this document provides the public and decision-makers as much information about the project as possible. It is Caltrans' determination that in the absence of statewide-adopted thresholds or GHG emissions limits, it is too speculative to make a significance determination regarding an individual project's direct and indirect impacts with respect to global climate change. Caltrans remains committed to implementing measures to reduce the potential effects of the project. These measures are outlined in the climate change section that follows the CEQA checklist and related discussions.
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	

VIII. HAZARDS AND HAZARDOUS MATERIALS:				
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less than significant impact with mitigation	Less than significant impact with mitigation	Less than significant impact with mitigation	Less than significant impact with mitigation
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?	Less than significant impact with mitigation	Less than significant impact with mitigation	Less than significant impact with mitigation	Less than significant impact with mitigation

	TSM/TDM	BRT	LRT	Freeway Tunnel
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	No impact	No impact	No impact	No impact
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?	Less than significant impact with mitigation	Less than significant impact with mitigation	Less than significant impact with mitigation	Less than significant impact with mitigation
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 for people residing or working in the project area?	No impact	No impact	No impact	No impact
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	No impact	No impact	No impact	No impact
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	Less than significant impact	No impact	No impact	No impact

IX. HYDROLOGY AND WATER QUALITY:				
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	No impact	No impact	Less than significant impact	Less than significant impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
e) 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?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
f) Otherwise substantially degrade water quality?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	No impact	No impact	No impact	No impact
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	No impact	No impact	No impact	Less than significant impact
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
j) Inundation by seiche, tsunami, or mudflow	No impact	No impact	No impact	No impact

	TSM/TDM	BRT	LRT	Freeway Tunnel
X. LAND USE AND PLANNING:				
Would the project:				
a) Physically divide an established community?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	Potentially significant impact	Potentially significant impact	Potentially significant impact	Potentially significant impact
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	No impact	No impact	No impact	No impact

XI. MINERAL RESOURCES:				
Would the project:				
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?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
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?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact

XII. NOISE:				
Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	No impact	No impact	Less than significant	Less than significant impact
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
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 expose people residing or working in the project area to excessive noise levels?	No impact	No impact	No impact	No impact
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	No impact	No impact	No impact	No impact

XIII. POPULATION AND HOUSING:				
Would the project:				
a) Induce substantial 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)?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	No impact	No impact	No impact	No impact
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	No impact	No impact	No impact	No impact

	TSM/TDM	BRT	LRT	Freeway Tunnel
XIV. PUBLIC SERVICES:				
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:				
i) Fire protection?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
ii) Police protection?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
iii) Schools?	No impact	No impact	No impact	No impact
iv) Parks?	No impact	No impact	No impact	No impact
v) Other public facilities?	No impact	No impact	No impact	No impact

XV. RECREATION:				
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?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant 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?	No impact	Less than significant impact	No impact	No impact

XVI. TRANSPORTATION/TRAFFIC:				
Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	Potentially significant impact	Potentially significant impact	Potentially significant impact	Potentially significant impact
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	No impact	No impact	No impact	No impact
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	No impact	No impact	No impact	No impact
e) Result in inadequate emergency access?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	No impact	No impact	No impact	No impact

XVII. UTILITIES AND SERVICE SYSTEMS:				
Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	No impact	No impact	No impact	No impact
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact

	TSM/TDM	BRT	LRT	Freeway Tunnel
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
e) 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?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	Less than significant impact	Less than significant impact	Less than significant impact	Less than significant impact
g) Comply with federal, state, and local statutes and regulations related to solid waste?	No impact	No impact	No impact	No impact

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project 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?	Less than significant with mitigation	Less than significant with mitigation	Potentially significant impact	Potentially significant impact
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)?	Potentially significant impact	Potentially significant impact	Potentially significant impact	Potentially significant impact
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	Potentially significant impact	Potentially significant impact	Potentially significant impact	Potentially significant impact

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Appendix B: Section 4(f) Documentation

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Appendix B.1

Section 4(f) Evaluation

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State Route 710 North Project Final Individual Section 4(f) Evaluation

E.A. 187900

EFIS 0700000191

07-LA-710 (SR 710)

Prepared for



The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or has been, carried out by Caltrans pursuant to under its assumption of responsibility pursuant to 23 USC 327 and the Memorandum of Understanding dated December 23, 2016 and executed by FHWA and Caltrans.

Submitted pursuant to 49 United States Code 303.

November 2018

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Acronyms and Abbreviations

ACC	All Communities Convening
ACHP	Advisory Council on Historic Preservation
APE	Area of Potential Effect
ATM	Active Transportation Management
bgs	below ground surface
BMP	best management practice
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CIDH	cast in drilled hole
DOI	U.S. Department of the Interior
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
FHWA	Federal Highway Administration
FOAE	Finding of Adverse Effect
Focused RDEIR/SDEIS	Focused Recirculated Draft EIR/Supplemental Draft EIS
ft	foot/feet
FTIP	Federal Transportation Improvement Program
FTNB	Freeway Tunnel Alternative Noise Barrier
GSRD	gross solid removal device
HOV	high-occupancy vehicle
HPSR	Historic Property Survey Report
I	Interstate
L RTP	Long Range Transportation Plan
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
OCS	overhead contact system
OHP	Office of Historic Preservation
OMC	Operations and Maintenance Center

PM	post mile
PRDM	Post-Review Discovery and Monitoring
ROW	right-of-way
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SHPO	State Historic Preservation Officer
SOAC	Stakeholder Outreach Advisory Committee
SOIS	Secretary of the Interior's Standards for the Treatment of Historic Properties
SR	State Route
TAC	Technical Advisory Committee
TBM	tunnel-boring machine
TCE	temporary construction easement
TNB	TSM/TDM Alternative Noise Barrier
TPSS	traction power substation
TSSP	Traffic Signal Synchronization Program
UPRR	Union Pacific Railroad
USC	United States Code

Chapter 1 Section 4(f) Evaluation

1.1 Introduction

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 United States Code (USC) 303, declares that “it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.”

Section 4(f) specifies that the Secretary of Transportation may approve a transportation program or project requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

- There is no prudent and feasible alternative to using that land and
- The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

Section 4(f) further requires consultation with the Department of the Interior and, as appropriate, the involved offices of the Department of Agriculture and the Department of Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f). If historic sites are involved, then coordination with the State Historic Preservation Officer (SHPO) is also needed.

Responsibility for compliance with Section 4(f) has been assigned to the California Department of Transportation (Caltrans) pursuant to 23 USC 326 and 327, including determinations and approval of Section 4(f) evaluations, as well as coordination with those agencies that have jurisdiction over a Section 4(f) resource that may be affected by the project action.

1.2 Additional Background

The State Route 710 (SR 710) North Study Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) (2015) included a Draft Section 4(f) De Minimis Finding which analyzed all Section 4(f) resources within the study area, 0.5 miles for parks, recreational areas, wildlife and waterfowl refuges and within the Area of Potential Effects (APE) established under Section 106 for Historic Properties. After circulation of the Draft EIR/EIS, the Finding of No Adverse Effect (FONAE) under Section 106 for the Arroyo Seco Parkway Historic District and the no use determination under Section 4(f) changed to a Finding of Adverse Effect (FOAE) under Section 106 and a use under Section 4(f). This Individual Section 4(f) Evaluation has been prepared to address the change in use under Section 4(f) to the Arroyo Seco Parkway Historic District. A Focused Recirculated Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement (Focused RDEIR/SDEIS) providing significant new information on cultural resources and a Section 4(f) update was circulated to the public from May 18, 2018 to July 5, 2018. All comments received on the Draft EIR/EIS and the Focused RDEIR/SDEIS have been included and addressed in the Final EIR/EIS.

Information regarding Section 4(f) properties was obtained from the Community Impact Assessment (CIA) (November 2014), Noise Study Report (October 2014), Visual Impact Assessment (VIA)

(November 2014), Historic Property Survey Report (HPSR) (December 2014), Supplemental HPSR (October 2017), FOAE (December 2017), and Alternatives Analysis (December 2012).

The focus of this Section 4(f) Evaluation is the analysis of the use under Section 4(f) on the Arroyo Seco Parkway Historic District by all of the build alternatives.

Chapter 2 Description of the Proposed Project

2.1 Project Background

Planning efforts to complete the SR 710 corridor date to 1933, when Legislative Route 167, later renamed State Route 7 (SR 7), was defined to run from San Pedro east to Long Beach and north to the vicinity of Monterey Park. In 1959, the proposed northern limits of SR 7 were extended to the planned Foothill Freeway (which is now Interstate 210 [I-210]). The part of the facility from Long Beach to Interstate 10 (I-10) has been constructed and was incorporated in 1983 into the Interstate Highway System as Interstate 710 (I-710). The parts from I-10 to Valley Boulevard (southern stub) and from I-210 to the I-210/SR 710/SR 134 interchange (northern stub) were designated SR 710 in 1984.

Over the years, planning efforts continued for SR 710 to evaluate alternatives and address community and agency concerns, eventually leading to the issuance of a Record of Decision (ROD) in 1998 by the Federal Highway Administration (FHWA) for a surface freeway. After litigation initiated by some of the affected communities, FHWA rescinded the ROD in 2003, citing changes in project circumstances such as funding uncertainty and the opening of the Metro Gold Line to Pasadena and requiring a more thorough evaluation of the feasibility of a bored tunnel.

In 2006, Metro completed the feasibility assessment of extending SR 710 from Valley Boulevard to I-210. The feasibility evaluation was focused principally on deep subterranean bored or mined tunnel construction methods instead of the more environmentally intrusive shallow trench excavation or “cut-and-cover” tunnel methods. Three tunnel alignments were considered that would extend from the existing SR 710 in south Alhambra to the existing I-210. The assessment concluded that the tunnel concept was feasible to complete a freeway, and no fatal flaws were identified.

Between 2008 and 2010, a geotechnical feasibility study of a tunnel extending SR 710 was conducted. Based on requests from local communities, the study was to be guided by “route-neutral” principles. The route-neutral approach specified that no one route for the tunnel should be favored over another; therefore, all practicable routes for extending SR 710 were considered based on factual data. As part of the route-neutral concept, Caltrans and Metro identified five study zones to represent the corridors for extending SR 710. The geotechnical study was conducted to evaluate the geologic, groundwater, and seismic conditions to determine the viability of a tunnel option in each of the five zones considered. Field explorations and laboratory testing programs were conducted in each of the five tunnel zones. Geotechnical conditions such as geology, faults, seismicity, groundwater, contaminated materials, and potential for gassy conditions were studied in each zone. Based on the information collected and reviewed as part of the geotechnical study, tunneling is considered to be geotechnically feasible in all five zones.

In November 2008, Measure R (a half-cent sales tax dedicated to transportation projects in Los Angeles County) was approved by a two-thirds majority of county voters. Included in the Measure R plan is the commitment of \$780 million to improve the connection between the SR 710 and I-210 freeways.

In June 2010, Metro (in coordination with Caltrans) authorized moving forward with an environmental review phase for the SR 710 North Study. The scoping process for the SR 710 North Study Environmental Impact Report/Environmental Impact Statement (EIR/EIS) was initiated with the preparation and distribution of a Notice of Preparation and the publication of a Notice of Intent on March 3, 2011 (Appendix I of the Draft EIR/EIS).

Many community briefing events were held to provide information and keep the public informed of the progress of the study. After the formal scoping process, project-specific professional committees and outreach teams (for example, a technical advisory committee and stakeholder outreach advisory committee) were formed, and the SR 710 Alternatives Analysis phase of the North Study began. Starting in early 2011, a series of meetings was held to collect ideas, from which possible transit/non-transit suggestions were considered and discussed.

As discussed in the Alternatives Analysis Report (2012), a screening analysis was conducted to determine the alternatives to be carried forward for analysis in the Draft EIR/EIS (March 2015).

2.2 Project Location and Description

This section describes the proposed action and the alternatives developed to meet the Purpose and Need of the project while avoiding or minimizing environmental impacts. The alternatives are the No Build Alternative, the Transportation System Management/Transportation Demand Management (TSM/TDM) Alternative, the Bus Rapid Transit (BRT) Alternative, the Light Rail Transit (LRT) Alternative, and the Freeway Tunnel Alternative.

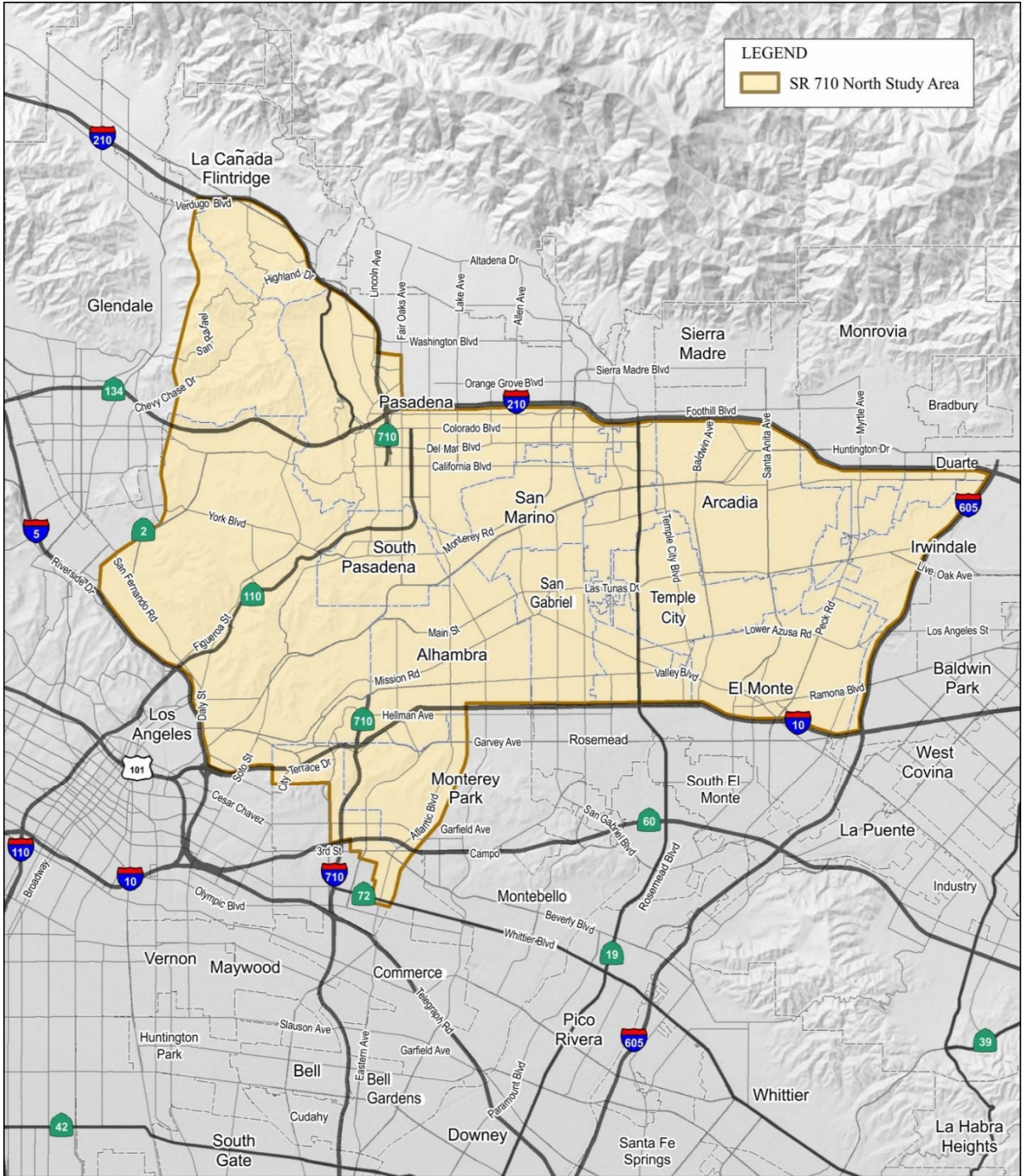
The project is located in east/northeast Los Angeles and the western San Gabriel Valley in the area between State Route 2 (SR 2) and Interstates 5, 10, 210, and 605 (I-5, I-10, I-210, and I-605, respectively) (Figure 2.2-1). The purpose of the proposed action is to effectively and efficiently accommodate regional and local north–south travel demands in the study area of the western San Gabriel Valley and east/northeast Los Angeles, including the following considerations:

- Improve efficiency of the existing regional freeway and transit networks
- Reduce congestion on local arterials adversely affected due to accommodating regional traffic volumes
- Minimize environmental impacts related to mobile sources

The need for the project is described in detail in this section, based on consideration of the following factors:

- Capacity, transportation demand, and safety
- Social demands or economic development
- Legislation
- Modal interrelationships and system linkages

Figure 2.2-1: SR 710 North Study Area



Source: SR 710 North Study Draft EIR/EIS (2015)

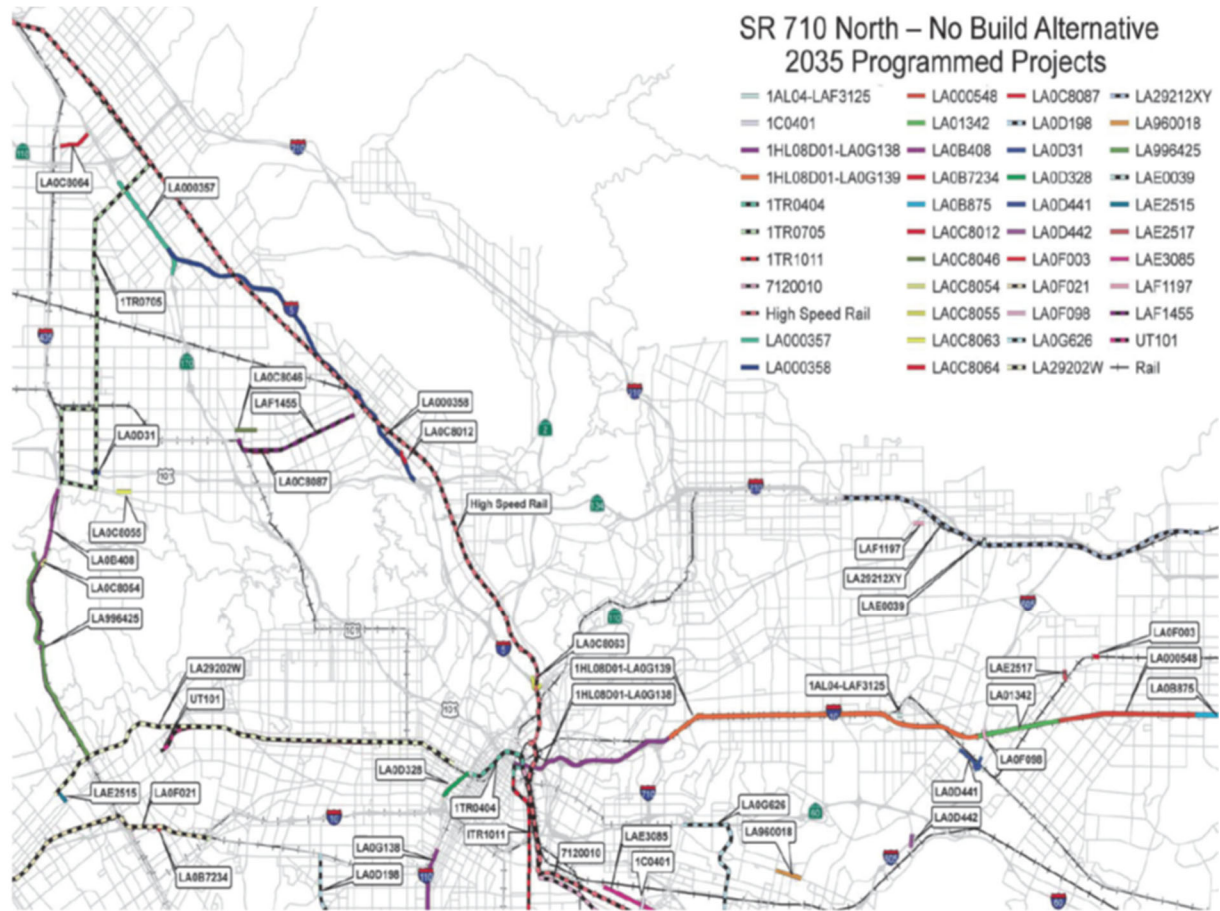
2.3 Alternatives

The proposed alternatives are the No Build Alternative, the TSM/TDM Alternative, the BRT Alternative, the LRT Alternative, and the Freeway Tunnel Alternative. As discussed in the *Alternatives Analysis Report (2012)*, a screening analysis was conducted to determine the alternatives to be carried forward for analysis in the EIR/EIS. The screening of alternatives followed a three-step sequential process: preliminary screening, initial screening, and secondary screening. Additional detail regarding each of these steps is provided in Section 2.3.6.

Based on the findings of the *Alternatives Analysis Report*, the rationale for carrying the five project alternatives forward is as follows:

- **No Build Alternative:** Under the National Environmental Policy Act (NEPA), 40 Code of Federal Regulations (CFR) Section 1502.14(d) requires analysis of the alternative of no action. Section 15126.6(e)(1) of the California Environmental Quality Act (CEQA) Guidelines requires that a “no project” alternative be evaluated to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. Therefore, the No Build Alternative was carried forward for analysis in this EIR/EIS.
- **TSM/TDM Alternative:** 23 CFR Section 450.320 requires that a TSM/TDM Alternative be considered on all proposed major highway projects in urban areas with a population of over 200,000 people. Therefore, the TSM/TDM Alternative was carried forward for analysis in this EIR/EIS.
- **BRT Alternative:** Of the BRT alternatives analyzed in the secondary screening process, the BRT Alternative carried forward in the EIR/EIS (referred to as BRT-6 in the *Alternatives Analysis Report*) performed slightly better at increasing access to high-frequency transit service and increasing north–south transit patronage than did the other BRT alternatives analyzed. In addition, that selected BRT Alternative could be implemented with no or limited right-of-way (ROW) acquisition and would also have a smaller potential impact on sensitive habitat. Therefore, Alternative BRT-6 was carried forward for analysis in this EIR/EIS.
- **LRT Alternative:** Among the LRT alternatives analyzed in the secondary screening process, the LRT Alternative carried forward in the EIR/EIS (referred to as LRT-4A/B in the *Alternatives Analysis Report*) would require less property acquisition and would result in fewer impacts to historic period properties and communities’ facilities than the other LRT alternatives analyzed. Therefore, Alternative LRT-4A/B was carried forward for analysis in this EIR/EIS.
- **Freeway Tunnel Alternative:** Among the freeway alternatives analyzed in the secondary screening process, the freeway alternative carried forward for analysis in this EIR/EIS (referred to as F-7 in the *Alternatives Analysis Report*) would minimize travel times, improve connectivity and mobility, and reduce congestion on local streets. In addition, compared to the other freeway alternatives, F-7 would require substantially less property acquisition and would impact fewer historic period properties and community facilities. Therefore, Alternative F-7 was carried forward for analysis in this EIR/EIS.

Figure 2.3-1: No Build Alternative Programmed Improvements until 2035



Source: SR 710 North Study Draft EIR/EIS (2015)

The TSM/TDM Alternative improvements would also be constructed as part of the BRT, LRT, and Freeway Tunnel Alternatives. Because of physical constraints, some of the TSM/TDM Alternative improvements would not be constructed with the Build Alternatives. These exceptions are discussed under each of the Build Alternatives provided later in this section. The structures and ROW costs are included in these estimates.

Because of the wide range of Build Alternatives, they do not share many common design features and are discussed separately below.

2.3.1 No Build Alternative

The No Build Alternative does not include improvements associated with Build Alternatives identified within the SR 710 North Study Area. For several environmental topics (that is, traffic, air quality, noise, and energy), the No Build condition used for analysis purposes includes improvements identified separately in the Federal Transportation Improvement Program (FTIP), as listed in the Southern California Association of Governments' 2012 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), Measure R, and the funded part of the Metro's 2009 Long Range Transportation Plan (LRTP). The Opening Year and Horizon Year traffic forecasting for the No Build Alternative includes projects/planned improvements through 2035 that are contained in the FTIP, RTP/SCS, Measure R, and the LRTP. The projects included in the No Build

Alternative are illustrated on Figure 2.3-1. These projects have been, or are being, evaluated separately.

2.3.2 TSM/TDM Alternative

The TSM/TDM Alternative consists of strategies and improvements to increase efficiency and capacity for all modes in the transportation system with lower capital cost investments and/or lower potential impacts. The TSM/TDM Alternative is designed to maximize the efficiency of the existing transportation system by improving capacity and reducing the effects of bottlenecks and chokepoints. Components of the TSM/TDM Alternative are shown on Figure 2.3-2.

The TSM/TDM Alternative is being evaluated as a stand-alone alternative. Improvements included in the TSM/TDM Alternative have also been incorporated into the other Build Alternatives. The components of the TSM/TDM Alternative that are incorporated into the other Build Alternatives are described under each alternative. The T-2 Other Road Improvements to the Arroyo Seco Parkway Historic District freeway ramps is included in all Build Alternatives.

Transportation System Management

TSM strategies increase the efficiency of existing facilities (that is, TSM strategies are actions that increase the number of vehicle trips a facility can carry without increasing the number of through lanes). TSM also encourages automobile, public and private transit, ridesharing programs, and bicycle and pedestrian improvements as elements of a unified urban transportation system. Modal alternatives integrate multiple forms of transportation modes, such as pedestrian, bicycle, automobile, rail, and mass transit. TSM strategies include Intelligent Transportation Systems (ITS), local street and intersection improvements, and Active Traffic Management (ATM):

- **Intelligent Transportation System (ITS) Improvements:** Figure 2.3-2 depicts proposed ITS improvements, including traffic signal upgrades, synchronization and transit prioritization, arterial changeable message signs (CMSs), and arterial video and speed data collection systems. The TSM/TDM Alternative includes signal optimization on corridors with signal coordination hardware already installed by Metro’s Traffic Signal Synchronization Program (TSSP). These corridors include Del Mar Avenue, Rosemead Boulevard, Temple City Boulevard, Santa Anita Avenue, Fair Oaks Avenue, Fremont Avenue, and Peck Road. The only remaining major north-south corridor in the San Gabriel Valley in which TSSP has not been implemented is Garfield Avenue; therefore, TSSP on that corridor is included in the TSM/TDM Alternative. Table 2.3-1 lists the locations of proposed ITS improvements depicted on Figure 2.3-2. The following provides a further explanation of the ITS elements listed above:
 - Traffic signal upgrades include turn arrows, vehicle and/or bicycle detection, pedestrian countdown timers, and incorporation into a regional management traffic center for real-time monitoring of traffic and updating of signal timing.
 - Synchronization is accomplished through signal coordination to optimize travel times and reduce delay.
 - Transit signal prioritization includes adjusting signal times for transit vehicles to optimize travel times for public transit riders.
 - Arterial CMSs are used to alert travelers about unusual road conditions, special event traffic, accident detours, and other incidents.

Table 2.3-1: TSM/TDM Alternative ITS Improvements

ID No.	Description	Location
ITS-11	Signal optimization on Peck Rd	Live Oak Ave to I-10
ITS-12	Signal optimization on Fremont Ave	Huntington Dr to I-10

CMSs = changeable message signs

I-10 = Interstate 10

ITS = Intelligent Transportation System

SR 110 = State Route 110

TDM = Transportation Demand Management

TSM = Transportation System Management

US-101 = United States Route 101

- Local Street and Intersection Improvements:** Local street and intersection improvements within the Cities of Los Angeles, Pasadena, South Pasadena, Alhambra, San Gabriel, Rosemead, and San Marino. Table 2.3-2 outlines the locations of proposed improvements to local streets, intersections, and freeway ramps as well as two new local roadways. Please see Figure 2.3-3.

Figure 2.3-3: Map of TSM/TDM Local and Street Intersection Improvements



Source: SR 710 North Study Draft EIR/EIS (2015)

Table 2.3-2: Local Street and Intersection Improvements of the TSM/TDM Alternative

ID No.	Description	Location	Proposed Improvement/Modification
<i>Local Street Improvements</i>			
L-1	Figueroa St from SR 134 to Colorado Blvd	City of Los Angeles (Eagle Rock)	<ul style="list-style-type: none"> • Add a dedicated right-turn lane from NB Figueroa Street to the EB SR 134 on-ramp. • Add an additional merging lane to the EB SR 134 on-ramp from Figueroa Street, a dedicated right-turn lane from the EB SR 134/Figueroa Street off-ramp to NB Figueroa Street. • Add a dedicated right-turn lane from NB Figueroa Street to the WB SR 134 on-ramp. • Restripe.
L-2a	Fremont Ave from Huntington Dr to Alhambra Road	City of South Pasadena	<ul style="list-style-type: none"> • Convert existing dedicated left-turn lanes along Fremont Ave between Oneonta Knoll Street and approximately 150 ft north of the Fremont Ave/Alhambra Road intersection into a reversible directional lane that would be reversed between the NB and SB directions to accommodate peak traffic flows. • Add a merging lane on northbound Fremont Ave just north of the Fremont Ave/Alhambra Road intersection. • Modify the intersections of Fremont Ave/Oneonta Knoll Street, Fremont Ave/Beech Street, Fremont Ave/Maple Street, and Fremont Ave/Elmpark Street to prohibit left-turn movements to and from Oneonta Knoll Street, Beech Street, Maple Street, and Elmpark Street by adding pork chop median islands. • Convert the dedicated right turn lane from NB Fremont Ave to EB Huntington Drive into a shared through right-turn lane from NB Fremont Ave. • Convert the dedicated SB right-turn lane at Fremont Ave/Huntington Drive to a shared through right-turn lane. • Add a merging lane on SB Fremont Ave just south of Huntington Drive. • Widen the west side of Fremont Ave south of Huntington Drive. • Restripe adjacent lanes accordingly.
L-2c	Fremont Ave from Mission Road to Valley Blvd	City of Alhambra	<ul style="list-style-type: none"> • Remove raised median along Fremont Ave between Valley Boulevard and Mission Road to extend NB and SB left-turn pockets at Mission Road and Valley Boulevard, respectively. • Restripe adjacent lanes accordingly.

Table 2.3-2: Local Street and Intersection Improvements of the TSM/TDM Alternative

ID No.	Description	Location	Proposed Improvement/Modification
L-3	Atlantic Blvd from Glendon Way to I-10	City of Alhambra	<ul style="list-style-type: none"> • Add a dedicated right-turn lane on SB Atlantic Boulevard from Glendon Way to the WB I-10 on-ramp. • Modify the intersections of Atlantic Boulevard/Glendon Way and Atlantic Boulevard/Norwood Place by adding pork chop islands to prohibit left-turn movements to and from Glendon Way and Norwood Place, respectively. • Convert one of the existing NB through lanes on Atlantic Boulevard into a shared through-right turn lane at Glendon Way. • Convert the existing center lane, including left-turn pockets on Atlantic Boulevard between Valley Boulevard and Glendon Way into a reversible directional lane that would be reversed between the NB and SB directions to accommodate peak traffic flows. • Convert one of the existing SB through lanes on Atlantic Boulevard into a shared through right-turn lane at Glendon Way. • Add a merging lane on NB Atlantic Boulevard just north of Glendon Way. • Remove a portion of the raised median on Atlantic Boulevard south of Glendon Way. • Restripe adjacent lanes accordingly.
L-4	Garfield Ave from Valley Blvd to Glendon Way	City of Alhambra	<ul style="list-style-type: none"> • Add a reversible directional lane on Garfield Ave that would be reversed between the NB and SB directions to accommodate peak traffic flows. • Add a dedicated right-turn lane on SB Garfield Ave from Glendon Way to the WB I-10 on-ramp. • Modify the intersections of Garfield Ave/Glendon Way and Garfield Ave/Norwood Place by adding pork chop islands to prohibit left-turn movements to and from Glendon Way and Norwood Place, respectively. • Move the raised median and replace the NB left-turn lane on Garfield Ave, south of Glendon Way, with a SB merge lane. • Restripe adjacent lanes accordingly.
L-5	Rosemead Blvd from Lower Azusa Road to Marshall St	City of Rosemead	<ul style="list-style-type: none"> • Widen outside through lane in each direction on Rosemead Boulevard between Lower Azusa Road and Marshall Street. • Add a dedicated right-turn lane from EB Marshall Street to SB Rosemead Boulevard.

Table 2.3-2: Local Street and Intersection Improvements of the TSM/TDM Alternative

ID No.	Description	Location	Proposed Improvement/Modification
L-8	Fair Oaks Ave from Grevelia St to Monterey Road	City of South Pasadena	<ul style="list-style-type: none"> • Convert existing dedicated left-turn lanes and median area along Fair Oaks Ave between Monterey Road and Grevelia Street into a reversible directional lane that would be reversed between the NB and SB directions to accommodate peak traffic flows and prohibit left-turn movements from Fair Oaks Ave to Oxley Street, El Centro Street, Mission Street, and Hope Street as well as left-turn movements from SB Fair Oaks Ave to EB Monterey Road. • Convert the existing NB and SB outside lanes on Fair Oaks Ave at Oxley Street, El Centro Street, Mission Street, and Hope Street intersections to shared through right-turn lanes. • Convert the NB left-turn lane and NB through left lane on Fair Oaks Ave at the Grevelia Street intersection to two through lanes. • Add one SB through lane on Fair Oaks Ave at Grevelia Street and eliminate parking on the west side of Fair Oaks Ave south of Grevelia Street. • Restripe adjacent lanes accordingly.
<i>Intersection Improvements</i>			
I-1	West Broadway/Colorado Blvd	City of Los Angeles (Eagle Rock)	<ul style="list-style-type: none"> • Eliminate the left-turn pocket from EB Colorado Boulevard to Lockhaven Ave by extending the raised median.
I-2	Eagle Rock Blvd/York Blvd	City of Los Angeles (Eagle Rock)	<ul style="list-style-type: none"> • Add a second dedicated right-turn lane from NB Eagle Rock Boulevard to EB York Boulevard • Add a dedicated right-turn lane from WB York Boulevard to NB Eagle Rock Boulevard • Add a dedicated left-turn lane from EB York Boulevard to NB Eagle Rock Boulevard.
I-3	Eastern Ave/Huntington Dr	City of Los Angeles (El Sereno)	<ul style="list-style-type: none"> • Add a second left-turn lane from WB Huntington Drive to SB Eastern Ave. • Add a dedicated left-turn lane from SB El Sereno Ave to EB Huntington Drive. • Add a dedicated right-turn lane from NB Eastern Ave to EB Huntington Drive. • Add a left turn from Eastern Ave.

Table 2.3-2: Local Street and Intersection Improvements of the TSM/TDM Alternative

ID No.	Description	Location	Proposed Improvement/Modification
I-8	Fair Oaks Ave/Monterey Road	City of South Pasadena	<ul style="list-style-type: none"> • Convert the outer southbound through lane on Fair Oaks Ave at Monterey Road into a shared through right-turn lane. • Extend the median island on Monterey Road west of Fair Oaks Ave to restrict WB left turns at the Chase Bank driveway. • Extend NB left-turn pocket on Fair Oaks Ave south of Monterey Road. • Implement adaptive traffic signal control. • Implement signal coordination. • Refer to Arterial L-8 of this table for improvements and modifications north of Monterey Road. • Restripe adjacent lanes accordingly.
I-9	Fremont Ave/Monterey Road	City of South Pasadena	<ul style="list-style-type: none"> • Add a second through lane in the NB direction on Fremont Ave through the Fremont Ave/Monterey Road intersection. • Widen the existing dedicated right-turn lane from SB Fremont Ave to WB Monterey Road.
I-10	Huntington Dr/Fair Oaks Ave	City of South Pasadena	<ul style="list-style-type: none"> • Remove a portion of landscaped median and add a third SB left-turn lane on Fair Oaks Ave at Huntington Drive. • Relocate the existing crosswalk that crosses Huntington Drive farther west within the intersection. • Widen the outer WB through lane on Huntington Drive through the intersection. • Realign and restripe the existing crosswalks (three) across Fair Oaks Ave. • Restripe adjacent lanes accordingly.

Table 2.3-2: Local Street and Intersection Improvements of the TSM/TDM Alternative

ID No.	Description	Location	Proposed Improvement/Modification
I-11	Fremont Ave/Huntington Dr	City of South Pasadena	<ul style="list-style-type: none"> • Convert a shared EB through right-turn lane on Huntington Drive at Fremont Ave to a through lane and a right-turn lane. • Add a second WB left-turn lane on Huntington Drive. • Add a merging lane on SB Fremont Ave just south of Huntington Drive. • Convert NB and SB exclusive right-turn lanes on Fremont Ave to through right-turn lanes. • Modify the gore area on Huntington Drive, west of Fremont Ave, and realign the westbound lanes (3). • Refer to Arterial L-2a of this table for improvements and modifications south of Huntington Drive. • Restripe adjacent lanes accordingly.
I-13	Huntington Dr/Garfield Ave	Cities of Alhambra/South Pasadena/San Marino	<ul style="list-style-type: none"> • Convert a shared through right-turn lane on EB Huntington Drive to a dedicated right-turn lane. • Widen Garfield Ave to add a SB shared through right-turn lane at the approach to Huntington Drive. • Widen to add SB through right-turn lane on Garfield Ave at Huntington Drive. • Widen Garfield Ave to add a SB dedicated right-turn lane at Atlantic Boulevard. • Convert EB through lane on Huntington Drive to a dedicated left-turn lane at Garfield Ave. • Restripe adjacent lanes accordingly.
I-14	Huntington Dr/Atlantic Blvd	Cities of Alhambra/South Pasadena/San Marino	<ul style="list-style-type: none"> • Refer to Intersection I-13 of this table for improvements and modifications.
I-15	Atlantic Blvd/Garfield Ave	Cities of Alhambra/South Pasadena/San Marino	<ul style="list-style-type: none"> • Refer to Intersection I-13 of this table for improvements and modifications.

Table 2.3-2: Local Street and Intersection Improvements of the TSM/TDM Alternative

ID No.	Description	Location	Proposed Improvement/Modification
I-16	Garfield Ave/Mission Road	City of Alhambra	<ul style="list-style-type: none"> • Widen the roadway bridge to add a dedicated NB right-turn lane at Mission Road. • Widen the roadway to add a dedicated SB right-turn lane at Mission Road. • Extend the northbound left-turn pocket storage on Garfield Ave south of Mission Road. • Permanently remove three on-street parking spaces on southbound Garfield Ave north of Mission Road and one off-street parking space (El Rancho parking lot on the northwest corner.) • Restripe adjacent lanes accordingly.
I-18	San Gabriel Blvd/Huntington Dr	City of San Marino/Unincorporated Los Angeles County (East Pasadena/East San Gabriel)	<ul style="list-style-type: none"> • Remove a portion of the median to accommodate a second EB left-turn lane at San Gabriel Boulevard. • Restripe adjacent lanes accordingly.
I-19	Del Mar Ave/Mission Road	City of San Gabriel	<ul style="list-style-type: none"> • Add dedicated left-turn lanes for both directions of Mission Road at Del Mar Ave. • Modify WB El Monte Street to prohibit left-turn movements to Del Mar Ave. • Add one additional through lane in each direction on Del Mar Ave through the intersection. • Upgrade traffic signal heads to 12-inch heads. • Permanent loss of 3 parking lot spaces and 10 on-street parking spaces. Del Mar Ave heading north of Mission Road has a permanent loss of three on-street parking spaces. Property at southeast corner of Del Mar Ave and Mission Road has permanent loss of three parking lot spaces as a result of reconfiguration. El Monte Street east of Del Mar Ave has permanent loss of one on-street parking space. Mission Road WB east of Del Mar Ave has permanent loss of six on-street parking spaces. • Restripe adjacent lanes accordingly.
I-22	San Gabriel Blvd/Marshall St	City of San Gabriel	<ul style="list-style-type: none"> • Widen San Gabriel Boulevard to widen and realign NB lanes slightly east. • Add an additional SB through lane on San Gabriel Boulevard. Modify the existing median area on San Gabriel Boulevard south of Marshall Street. • Convert the existing dedicated right-turn lane from WB Marshall Street to San Gabriel Boulevard into a shared turn lane that would accommodate both right- and left-turn movements onto San Gabriel Boulevard. • Restripe adjacent lanes accordingly.

Table 2.3-2: Local Street and Intersection Improvements of the TSM/TDM Alternative

ID No.	Description	Location	Proposed Improvement/Modification
I-24	Huntington Dr/Oak Knoll Ave	City of San Marino	<ul style="list-style-type: none"> • Add one additional through lane on EB Huntington Drive through the Huntington Drive/Oak Knoll Ave intersection. • Convert the existing diagonal parking stalls along EB Huntington Drive between Oak Knoll Ave and Chelsea Road into parallel parking stalls. • Remove 11 on-street parking stalls on Huntington Drive. • Permanent loss of 11 EB on-street parking spaces on the south side of Huntington Drive east of Oak Knoll Drive.
I-25	Huntington Dr/San Marino Ave	City of San Marino	<ul style="list-style-type: none"> • Add one additional through lane on EB and WB Huntington Drive through the Huntington Drive/Sierra Madre Ave intersection. • Convert the existing diagonal parking stalls along eastbound Huntington Drive between Westhaven Road and Ridgeway Road and westbound Huntington Drive between Kenilworth Ave and Ridgeway Road into parallel parking stalls. • Remove 11 on-street parking stalls on Huntington Drive. • Permanent loss of 11 EB on-street parking spaces on the south side of Huntington Drive west of Sierra Madre Boulevard.
I-43	Del Mar Ave/Valley Blvd	City of San Gabriel	<ul style="list-style-type: none"> • Add a dedicated SB right-turn lane on Del Mar Ave. • Extend green time for NB and SB through movements. • Add an additional NB merge lane on Del Mar Ave north of Valley Boulevard. • Extend green time for the EB and WB left-turn phase. • Restripe adjacent lanes accordingly.
I-44	Hellman Ave/Fremont Ave	City of Alhambra	<ul style="list-style-type: none"> • Remove existing median to add a through lane on NB Fremont Ave between I-10 and Hellman Ave. • Convert the existing shared through NB right-turn lane on Fremont Ave to a dedicated right-turn lane. • Restripe adjacent lanes accordingly.
I-45	Eagle Rock Blvd/Colorado Blvd	City of Los Angeles (Eagle Rock)	<ul style="list-style-type: none"> • Lengthen the existing left-turn pocket from WB Colorado Boulevard to SB Eagle Rock Boulevard. • Modify WB left-turn pocket on Colorado Boulevard.

Table 2.3-2: Local Street and Intersection Improvements of the TSM/TDM Alternative

ID No.	Description	Location	Proposed Improvement/Modification
<i>Other Road Improvements</i>			
T-1	Valley Blvd to Mission Road Connector Road	Cities of Alhambra/Los Angeles (El Sereno)	<ul style="list-style-type: none"> • Construct a new connector road between Valley Boulevard and Mission Road. • Modify the Valley Boulevard/SR 710 on- and off-ramps. Realign the NB off-ramp approximately 40 ft west to allow the approach to be at a 90-degree angle from Valley Boulevard and aligning with the new connector road. Move the SB on-ramp approximately 215 ft east, adjacent to the NB off-ramp at Valley Boulevard. • Add a roundabout at the intersection of the new connector road and Alhambra Ave–Mission Road. • Add a NB through lane as well as convert the existing left-right shared lane to a through-left shared lane. • Provide a roadway underpass crossing beneath the Union Pacific Railroad (UPRR) corridor. • Restripe adjacent lanes accordingly. • Construct a temporary shoofly track to construct the roadway underpass at the UPRR corridor.
T-2	SR 110/Fair Oaks Ave Hook Ramps	Cities of South Pasadena/Pasadena	<ul style="list-style-type: none"> • Modify the alignment of the existing SB off-ramp at State Street to accommodate the addition of a one-lane SB on-ramp at State Street. • Widen the existing SR 110 NB off-ramp at Fair Oaks Ave and add two lanes to convert the existing through left and through right lanes to two left lanes, one through, and a through-right lane. • Eliminate the two NB left-turn lanes at the SR 110 SB on-ramp at Fair Oaks Ave and provide a SB right-turn lane with greater turning radius to eastbound State Street leading to the new SR 110 SB on-ramp. • Restripe and widen EB lanes on Grevelia Street east of the Fair Oaks Ave intersection. • Add one NB lane and convert the outer NB lane to an exclusive right-turn lane along Fair Oaks Ave south of State Street. • Terminate EB Grevelia Street at Mound Ave, providing driveway access to the existing parking lot at the southwest corner of Fair Oaks Ave and Grevelia Street. • Restripe adjacent lanes accordingly. • For improvements and modifications south of Grevelia Street, refer to Arterial L-8 of this table.

Table 2.3-2: Local Street and Intersection Improvements of the TSM/TDM Alternative

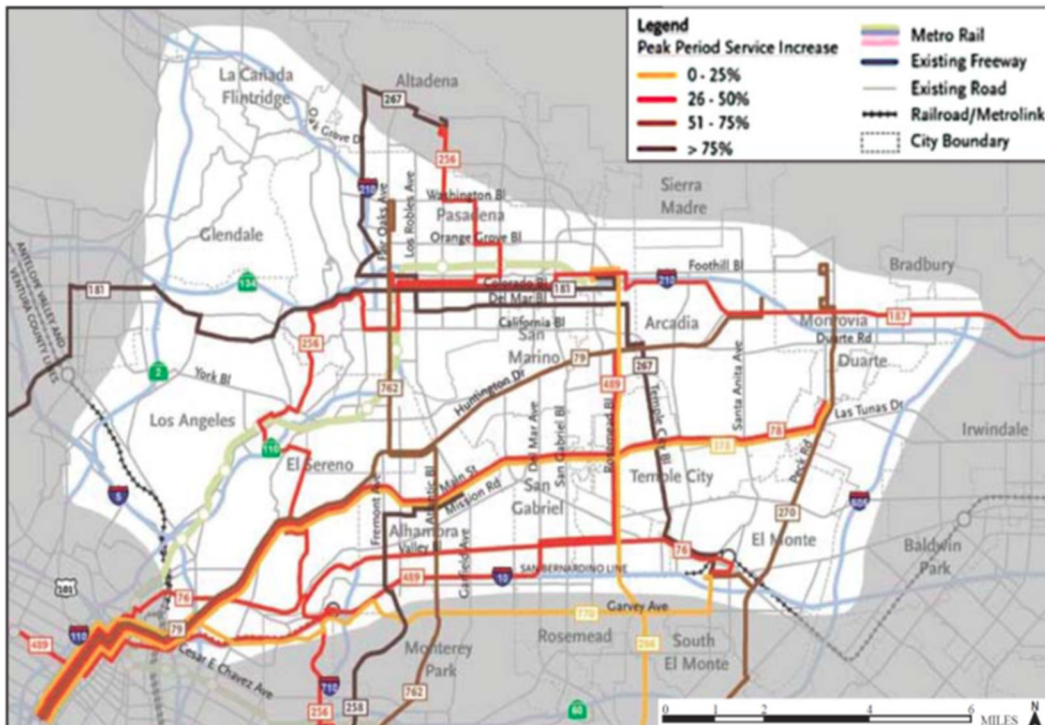
ID No.	Description	Location	Proposed Improvement/Modification
T-3	St. John Ave Extension between Del Mar Blvd and California Blvd	City of Pasadena	<ul style="list-style-type: none"> • Extend St. John Ave from Del Mar Boulevard to California Boulevard. • Construct a 14-ft-wide through lane and add two traffic signals on southbound St. John Ave. • Construct new intersections between the St. John Ave extension at Waverly Drive, Bellevue Drive, and Palmetto Drive. • Modify the SB SR 710 off-ramp to California Boulevard.

- Active Traffic Management:** ATM technology and strategies are also included in the TSM/TDM Alternative. The major elements of ATM are arterial speed data collection and CMS. Data on arterial speeds would be collected and distributed through Los Angeles County’s Information Exchange Network. Many technologies are available for speed data collection or the data could be purchased from a third-party provider. Travel time data collected through this effort could be provided to navigation system providers for distribution to the traveling public. In addition, arterial CMS or “trailblazer” message signs would be installed at key locations to make travel time and other traffic data available to the public.

Transportation Demand Management

TDM strategies focus on regional means of reducing the number of vehicle trips and vehicle miles traveled as well as increasing vehicle occupancy. TDM strategies facilitate higher vehicle occupancy or reduce traffic congestion by expanding the traveler’s transportation options in terms of travel method, travel time, travel route, travel costs, and the quality and convenience of the travel experience. The TDM strategies include reducing the demand for travel during peak periods, reducing the use of motor vehicles, shifting the use of motor vehicles to uncongested times of the day, encouraging rideshare and transit use, eliminating trips (through, for example, telecommuting), and improved transportation options. The TDM strategies associated with the TSM/TDM Alternative include expanded bus service, bus service improvements, and bicycle improvements. (Please see Figures 2.3-4 and 2.3-5).

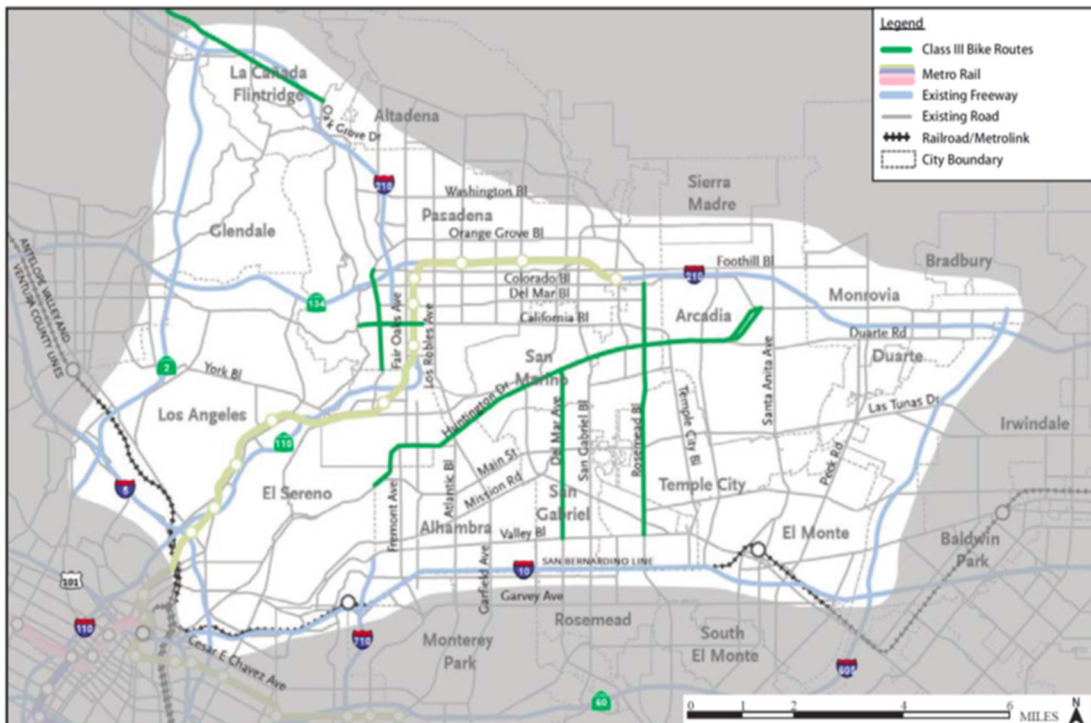
Figure 2.3-4: TSM/TDM Alternative Transit Refinement Improvements



Source: SR 710 North Study Draft EIR/EIS (2015)

- Expanded Bus Service and Bus Service Improvements:** Transit service improvements included in the TSM/TDM Alternative are summarized in Table 2.3-3 and are illustrated on Figure 2-3-4. The transit service improvements enhance bus headways between 10 and 30 minutes during the peak hour and between 15 and 60 minutes during the off-peak period. Some of the bus service enhancements almost double existing bus service.
- Bicycle Facility Improvements:** The bicycle facility improvements include on-street Class III bicycle facilities that support access to transit facilities through the study area and expansion of bicycle parking facilities at existing Metro Gold Line stations. Proposed bicycle facility improvements are outlined in Table 2.3-4 and illustrated on Figure 2.3-5.

Figure 2.3-5: Active Transportation and Bicycle Enhancements in the TSM/TDM Alternative



Source: SR 710 North Study Draft EIR/EIS (2015)

Table 2.3-3: Transit Refinements in the TSM/TDM Alternative

Bus Route	Operator	Route Type	Route Description	Existing Headways		Enhanced Headways	
				Peak	Off-Peak	Peak	Off-Peak
70	Metro	Local	Downtown Los Angeles to El Monte via Garvey Ave	10–12	15	10	15
770	Metro	Rapid	Downtown Los Angeles to El Monte via Garvey Ave/Cesar Chavez Ave	10–13	15	10	15
76	Metro	Local	Downtown Los Angeles to El Monte via Valley Blvd	12–15	16	10	15
78	Metro	Local	Downtown Los Angeles to Irwindale via Las Tunas Dr	10–20	16–40	10	15
378	Metro	Limited	Downtown Los Angeles to Irwindale via Las Tunas Dr	18–23	—	20	30

Table 2.3-3: Transit Refinements in the TSM/TDM Alternative

79	Metro	Local	Downtown Los Angeles to Santa Anita via Huntington Dr	20–30	40–45	15	30
180	Metro	Local	Hollywood to Altadena via Los Feliz/Colorado Blvd	30	30–32	15	30
181	Metro	Local	Hollywood to Pasadena via Los Feliz/Colorado Blvd	30	30–32	15	30
256	Metro	Local	Commerce to Altadena via Hill Ave/Ave 64/Eastern Ave	45	45	30	40
258	Metro	Local	Paramount to Alhambra via Fremont Ave/Eastern Ave	48	45–55	20	30
260	Metro	Local	Compton to Altadena via Fair Oaks Ave/Atlantic Blvd	16–20	24–60	15	30
762	Metro	Rapid	Compton to Altadena via Atlantic Blvd	25	30–60	15	30
266	Metro	Local	Lakewood to Pasadena via Rosemead Blvd/Lakewood Blvd	30–35	40–45	15	30
267	Metro	Local	El Monte to Pasadena via Temple City Blvd/Del Mar Blvd	30	30	15	30
485	Metro	Express	Union Station to Altadena via Fremont/Lake Ave	40	60	30	60
487	Metro	Express	Westlake to El Monte via Santa Anita Ave/Sierra Madre Blvd/San Gabriel Blvd	18–30	45	15	30
489	Metro	Express	Westlake to East San Gabriel via Rosemead Blvd	18–20	—	15	—
270	Metro	Local	Norwalk to Monrovia via Workman Mill/Peck Rd	40–60	60	30	60
780	Metro	Rapid	West Los Angeles to Pasadena via Fairfax Ave/Hollywood Blvd/Colorado Blvd	10–15	22–25	10	20
187	Foothill	Local	Pasadena to Montclair via Colorado Blvd/Huntington Dr/Foothill Blvd	20	20	15	15

Table 2.3-4: Active Transportation and Bus Enhancements of the TSM/TDM Alternative

ID No.	Description	Location
Bus Service Improvements		
Bus-1	Additional bus service	See Table 2.3-3 and Figure 2.3-4
Bus-2	Bus stop enhancements	Along the routes listed in Table 2.3-3
Bicycle Facility Improvements		
Bike-1	Rosemead Blvd bike route (Classes II and III depending on the segment of Rosemead Blvd)	Colorado Blvd to Valley Blvd (through Los Angeles County, Temple City, Rosemead)
Bike-2	Del Mar Ave bike route (Class III)	Huntington Dr to Valley Blvd (through San Marino, San Gabriel)
Bike-3	Huntington Dr bike route (Classes II and III depending on the segment of Huntington Dr)	Mission Rd to Santa Anita Ave (through the City of Los Angeles, South Pasadena, San Marino, Alhambra, Los Angeles County, Arcadia)
Bike-4	Foothill Blvd bike route (Class III)	In La Cañada Flintridge

Table 2.3-4: Active Transportation and Bus Enhancements of the TSM/TDM Alternative

ID No.	Description	Location
Bike-5	Orange Grove bike route (Class III)	Walnut St to Columbia St (in Pasadena)
Bike-6	California Blvd bike route (Class III)	Grand Ave to Marengo Ave (in Pasadena)
Bike-7	Add bike parking at transit stations	Metro Gold Line stations
Bike-8	Improve bicycle detection at existing intersections	Along bike routes in study area

Components of the TSM/TDM Alternative

Landscaping

Landscaping removed within Caltrans ROW would be replaced to the extent feasible. Landscaping removed outside of State-owned ROW would be replaced, as feasible, in coordination with the applicable local jurisdiction.

Bridges

The TSM/TDM Alternative would require widening of the Garfield Avenue Bridge. In addition, a new bridge would be constructed for the SR 710 connector road to Mission Road underpass crossing beneath the Union Pacific Railroad (UPRR) corridor.

Utilities

The TSM/TDM Alternative would require the relocation or protection in-place of various utilities. A complete list of utilities is provided in the Draft EIR/EIS (Table 3.46 of Section 3.4, Utilities/Emergency Services).

Non-motorized and Pedestrian Facilities (Active Transportation)

The TSM/TDM Alternative includes modifications to existing arterial streets and intersections, and freeway on- and off-ramps as shown in Table 2.3-2. It also includes enhancements to bus stops and the addition of several segments of on-street bike lanes as shown in Tables 2.3-3 and 2.3-4. Existing pedestrian and bicycle facilities along arterials, at intersections, and at freeway on- and off-ramps would be either protected in-place during construction of the TSM/TDM Alternative improvements or would be replaced in kind at the completion of the construction of those improvements. Any such improvements would be constructed to current Americans with Disabilities Act (ADA) standards for curb ramps and sidewalks. Improvements to the bus stops would also be constructed to ADA standards as feasible based on available public ROW to accommodate those types of improvements.

Specific improvements/changes in pedestrian and bicycle facilities under the TSM/TDM Alternative would include:

- On arterials and at intersections, the TSM/TDM improvements would accommodate pedestrians and would comply with ADA requirements.
- Class III bikeways would be accommodated, but Class I and Class II bike lanes would not be accommodated, due to limited lane widths.

- On St. John Avenue from California Boulevard to Del Mar Boulevard, the proposed improvements are within State-owned ROW (freeway mainline only) and would provide for pedestrian access.
- At the Valley Boulevard connector road and T-2 hook ramps, the proposed improvements within the State-owned ROW (freeway mainline and off-ramps) would not provide pedestrian or bikeway access beyond what is currently allowed for emergency access in the Caltrans *Highway Design Manual* and *Standard Plans*.

Drainage Facilities

Existing catch basins affected by roadway widening or ramp improvements would be relocated to the new curb and gutter. The proposed T-1 improvement would include new gutters and catch basins that would direct roadway flows to the Dorchester Avenue storm drain.

Stormwater Treatment

Two biofiltration swales are proposed at the State Route 110 (SR 110) southbound on-ramp at State Street as part of the SR 110/Fair Oaks Avenue Hook Ramps (Other Road Improvement T-2). One Gross Solids Removal Device (GSRD), type Linear Radial (LR-6), is proposed for the southbound SR 710 connector from Valley Boulevard as part of the Valley Boulevard to Mission Road Connector Road (Other Road Improvement T-1). Tree box filters are proposed as part of the Valley Boulevard to Mission Road Connector Road (Other Road Improvement T-1) and the SR 110/Fair Oaks Avenue Hook Ramps (Other Road Improvement T-2); the intersection improvements at San Gabriel Boulevard/Marshall Street (Intersection Improvement I-22), SR 710 northbound off-ramp/Valley Boulevard (Intersection Improvement I-5), Huntington Drive/Fair Oaks Avenue (Intersection Improvement I-10), and Del Mar Avenue/Mission Road (Intersection Improvement I-19); and the local street improvements at Rosemead Boulevard from Lower Azusa Road to Marshall Street (Local Street Improvement L-5).

Catch basin screens and filter inserts are proposed for new inlet locations as part of the St. John Avenue Extension between Del Mar Boulevard and California Boulevard (Other Road Improvement T-3); the intersection improvements at Garfield Avenue/Mission Road (Intersection Improvement I-16); and the local street improvements at Rosemead Boulevard from Lower Azusa Road to Marshall Street (Local Street Improvement L-5).

Retaining Walls

Retaining walls would be installed at the bridge for the SR 710 underpass beneath the UPRR corridor. In addition, retaining walls would be built for the hook ramp improvements, at the northbound SR 110 off-ramp at Fair Oaks Avenue, and along the southbound SR 110 south of the State Street on-ramp and adjacent to State Street.

Noise Barriers

Preliminary abatement measures proposed for the TSM/TDM Alternative include seven noise barriers: two for Local Street Improvement L-3, one for Local Street Improvement L-5, two for Other Road Improvement T-1, and two for Other Road Improvement T-2, as follows:

- L-3/TSM/TDM Alternative Noise Barrier (TNB) No. 1 is a recommended barrier along the perimeter of the private swimming pool area at the Atlantic Riviera Apartments, located at 1417 South Atlantic Boulevard.

- L-3/TNB No. 2 is a recommended barrier along the private property line of 1721 South Atlantic Boulevard.
- L-5/TNB No. 1 is a recommended barrier along the private property line of 3955 Rosemead Boulevard.
- T-1/TNB No. 1 is a recommended barrier along the Caltrans ROW/private property line along the northbound side of SR 710 south of Valley Boulevard.
- T-1/TNB No. 2 is a recommended barrier along the edge of shoulder on the southbound side of SR 710 south of Valley Boulevard.

The following noise barriers were proposed for Other Road Improvement T-2 (SR 110/Fair Oaks Avenue Hook Ramps). However, subsequent to the circulation of the Draft EIR/EIS, and in an effort to minimize adverse visual effects to historic resources, the following noise barriers are no longer proposed:

- T-2/TNB No. 1, an approximately 743-ft-long barrier along the Caltrans ROW/private property line along the northbound side of SR 110 ranging in height from 6 to 16 ft. (Refer to Sheet 8 of Figure 3.14-3 in the Draft EIR/EIS Appendix N for this TSM/TDM Alternative noise barrier.)
- T-2/TNB No. 2, an approximately 963-ft-long barrier along the edge of shoulder on the southbound side of SR 110 ranging in height from 12 to 20 ft. (Refer to Sheet 8 of Figure 3.14-3 in the Draft EIR/EIS Appendix N for this TSM/TDM Alternative noise barrier.)

The analyzed noise barriers are shown on Figure 3.14-3 in the Draft EIR/EIS, Appendix N, Noise Tables and Figures.

Property Acquisitions

The TSM/TDM Alternative would require the permanent acquisition of full and partial parcels of land that would be permanently incorporated into the transportation improvements in this Alternative as summarized in Table 2.3-5. The improvements in the TSM/TDM Alternative are not expected to require any permanent easements.

Table 2.3-5: Summary of Permanent Acquisitions for the TSM/TDM Alternative

Type of Permanent Acquisition	Number of Parcels
Full parcel acquisition	1
Partial parcel acquisition	31
Aerial easement	0
Surface easement	0
Permanent tunnel easement	0
Permanent underground easement	0

Source: *Community Impact Assessment* (2014)

Ramp Metering

It is anticipated that the southbound SR 110 on-ramp at Fair Oaks Avenue (Other Road Improvement T-2) would require ramp metering because it is a downhill ramp leading to a relatively short weaving section, with a signal directly upstream. Thus, the ramp metering is recommended to enhance the operation of the ramp connection to the mainline freeway. In general, ramp metering reduces congestion by controlling traffic coming onto the freeway and reducing friction. By doing so, ramp metering helps to maintain more consistent freeway throughput, uses the capacity of the freeway more efficiently, and improves safety. Caltrans Deputy Directive 35 (DD-35) and *Ramp Metering Design Manual* specifically note that “Caltrans is committed to using ramp metering as an effective traffic management strategy to maintain an efficient freeway system and protect the investment made in constructing freeways by keeping them operating at or near capacity.” Caltrans’ Ramp Metering Policy Procedures state that “...projects which propose the modification of an existing interchange or the construction of a new interchange... should include provisions for ramp meters.”

Construction Activities

Grading and Excavation

Many of the improvements included in the TSM/TDM Alternative, such as video detection systems, enhanced bus service, and bike routes, do not involve ground disturbance. However, other improvements (for example, the installation of CMSs and additional bus stops as well as the local street and intersection improvements) may require ground disturbance for their implementation. Excavation and construction for the local street and intersection improvements involve multiple components that vary in degree of ground disturbance. Examples of these components include changes to signs and lane striping; rehabilitation of traffic signals; removal of medians; and installation of new medians, sidewalks, pavement, noise barriers, and overhead cantilever signs for the reversible lanes. Anticipated depth of excavation for these components ranges from zero to approximately 10 ft. The majority of improvements within the TSM/TDM Alternative include one or more of these components. In addition to these smaller-scale components, a few improvements in this Alternative include more substantial changes such as new alignments for roads, on-ramps, and off-ramps. These larger-scale changes involve greater levels of ground disturbance with excavation that may reach depths of up to approximately 45 ft.

Traditional excavation equipment (for example, scrapers, trackhoes, bulldozers) would be used for most components that involve ground disturbance. For signal poles, cast-in-drilled-hole (CIDH) piles that are up to approximately 30 inches in diameter would be used, and the shafts for these piles would be drilled up to approximately 10 ft deep using a drill rig equipped with an auger. No pile driving would be allowed during construction of the TSM/TDM Alternative.

Construction Staging and Phasing

Construction staging describes the steps taken to construct project improvements in a logical and effective order with minimal disruption to traffic and the adjacent community. The intent of construction staging is to mobilize work crews and materials and construct improvements in a progression that minimizes the need for multiple periods of construction in one area. Construction staging can include, but not be limited to, how and when utility relocations and modifications are implemented; how lane, ramp, and street closures are integrated with the construction of improvements in those areas; and the concurrent use of multiple work crews in different areas.

Construction phasing identifies project components that would be designed and implemented in discrete phases as a project is constructed over time. Typically, phased improvements build on earlier

improvements. For example, if a freeway is proposed to be widened to add one general-purpose lane and one high-occupancy vehicle (HOV) lane in each direction, the freeway could be widened first to add the HOV lanes and then, as demand increases, the general-purpose lanes could be constructed at a later date. Phasing plans typically focus on identifying meaningful transportation improvements that would provide timely benefits to travelers. To be most effective, phased improvements should have independent utility and not depend on other transportation improvements to provide benefits to travelers.

As shown on Figure 2.3-3 and in Tables 2.3-2 through 2.3-4, the TSM/TDM Alternative includes discrete improvements across the project area. Some of those improvements would require temporarily shifting or closing travel lanes to provide space to construct the improvements. Each improvement would be staged to minimize the disruption to traffic and maximize the effectiveness of the construction activities. However, because these are discrete improvements, they can be designed and implemented in any order without any specific overall phasing. For example, the ITS improvements listed in Table 2.3-1 could be implemented individually and are not dependent on other TSM/TDM improvements being in place. The ITS improvements would require coordination and integration with existing ITS improvements at the intersections or cross streets in the vicinity of the ITS improvements to maximize the effectiveness of those improvements.

A majority of the TSM/TDM improvements were designed within the existing ROW, which is consistent with the approach for this alternative. Minor street improvements, such as adding turning lanes or through lanes may require street widening, raised median removal, and restriping. It is anticipated that these types of improvements would result in minimal construction related impacts and require minimal import and/or export of material.

Other TSM/TDM improvements, such as T-1 (Valley Boulevard to Mission Road Connector Road), T-2 (SR 110/Fair Oaks Avenue Hook Ramps), and T-3 (St. John Avenue Extension between Del Mar Boulevard and California Boulevard) and also I-16's (Garfield Avenue/Mission Road) bridge widening would require more construction effort than other TSM/TDM locations. T-1 would be constructed within Caltrans property, and it is anticipated that sufficient space would be available on this property for staging and storage of equipment and materials.

Improvement T-1 would require a temporary shoofly track in order to construct the Valley Boulevard to Mission Road Connector Road underpass at the UPRR corridor. The shoofly (temporary) track would take approximately 30 days to construct and 15 days to remove, and would remain in place approximately 12 months. It is anticipated that the proposed roundabout of T-1 at Mission Road would be constructed in two stages. Roadway excavation would be reused where possible within the roadway ROW, and any excess material could be hauled away along the southbound SR 710 and eastbound I-10 to an existing Class I landfill and/or sold to a soil broker.

Improvement T-2 would require widening of the existing SR 110 northbound off ramp at Fair Oaks Avenue and a retaining wall would be placed along the outside shoulder of the ramp. Construction in this area may require night or weekend closures along the off-ramp. Similarly, the relocated SR 110 southbound off-ramp at State Street and the proposed to SR 110 SB on-ramp from State Street may require a weekend or night closure of the ramps during construction. Excavated material would be reused within the state ROW where possible, and any excess material could be hauled away to an existing Class I landfill and/or sold to a soil broker.

Improvement T-3 proposed the extension of St John Avenue from Del Mar Boulevard to California Avenue. A majority of this work would be completed within a Caltrans ROW, and it is anticipated that sufficient space is available for storage of equipment and materials within Caltrans property.

Additional space beyond the ROW boundary needed for construction is minimal and will be acquired as a temporary construction easement (TCE). Excavated material would be reused within the roadway ROW where possible, and any excess material can be hauled away along the northbound SR 710 and eastbound I-210 to an existing Class I landfill and/or sold to a soil broker.

Bridge widening for Improvement I-16 would require removing part of the existing structure, followed by construction of the widened portion and lastly connecting the existing structure and widening with a concrete closure pour. Minimal excavation and imported material is anticipated at this location. As shown in Table 2.3-2, the majority of the improvements in the TSM/TDM Alternative would require some temporary closures of travel lanes, but only a few would require detours to minimize delays to the traveling public in those areas. Most of these closures and delays would be limited in duration (hours or days).

Temporary Construction Easements

TCEs are areas outside the permanent ROW that would be needed during construction of improvements adjacent to the TCEs. TCEs can be needed to provide space for constructing walls along the ROW, extending major drainage facilities and culverts, utility relocations and modifications, and widening bridges. TCEs may also be used to provide temporary access to a construction area or temporary storage for construction equipment and/or materials. Any land used as a TCE during construction would be returned to its original or better condition prior to the return of that land to the original owner after completion of the construction activities requiring that TCE.

The majority of the improvements in the TSM/TDM Alternative are anticipated to be constructed within existing publicly owned ROWs. It is anticipated that the TSM/TDM Alternative would require TCEs for the construction of improvements where there is not sufficient room within the public ROWs to accommodate the construction activities and/or storage of materials or equipment for those improvements. No permanent project features would be constructed within the boundaries of the TCEs used during construction of the TSM/TDM Alternative.

Equipment Storage and Parking, and Construction Employee Parking

During construction of the improvements in the TSM/TDM Alternative, all construction equipment would be stored and staged within the project limits or the TCEs. Construction employees would be required to park within the project construction limits or TCEs.

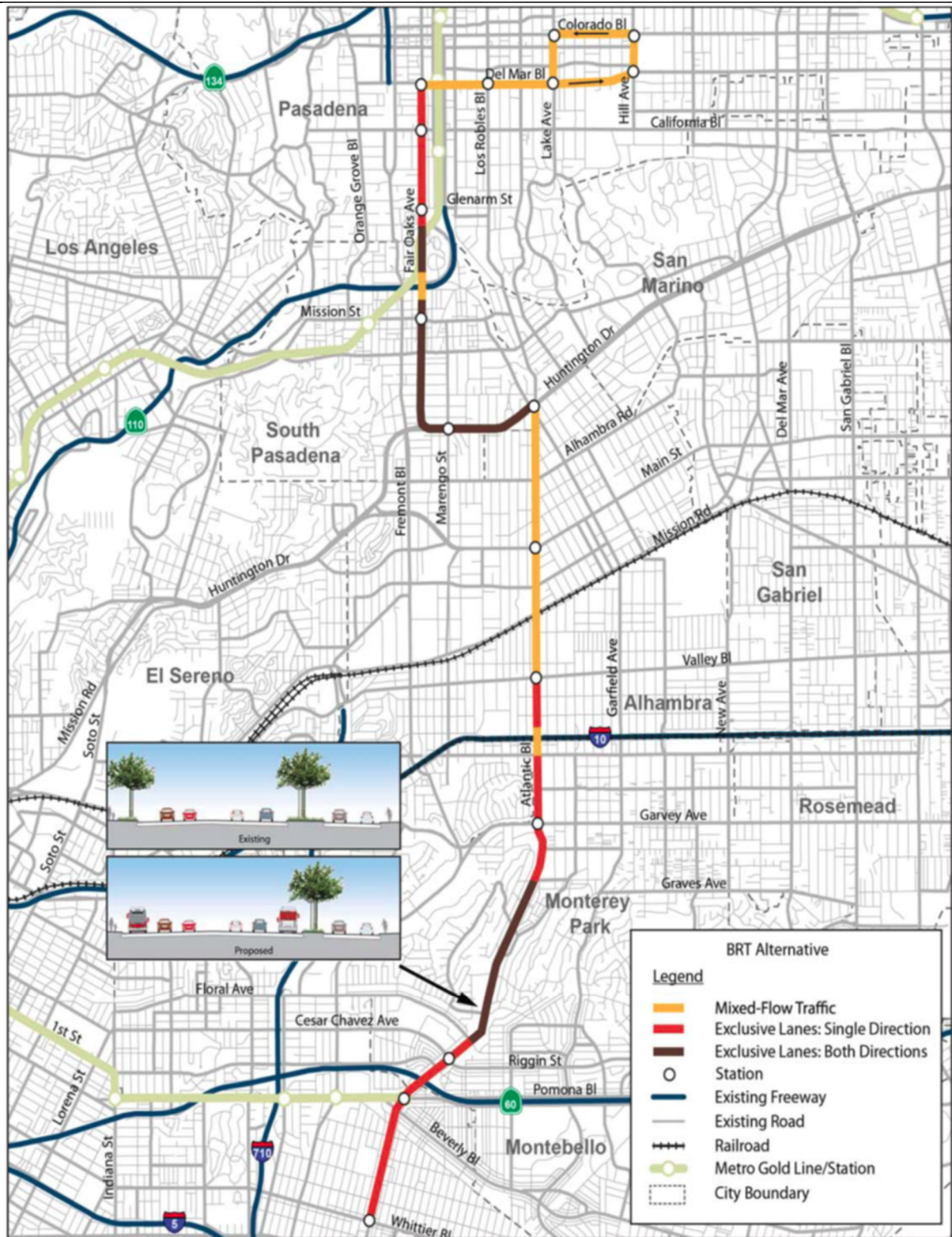
Cost

The TSM/TDM Alternative is estimated to cost approximately \$105 million (2014 dollars) and \$126 million (2020 dollars). This estimate includes all components of the TSM/TDM Alternative, including ITS improvements, local street improvements, ATM technology, bicycle improvements, and expanded bus service.

Schedule

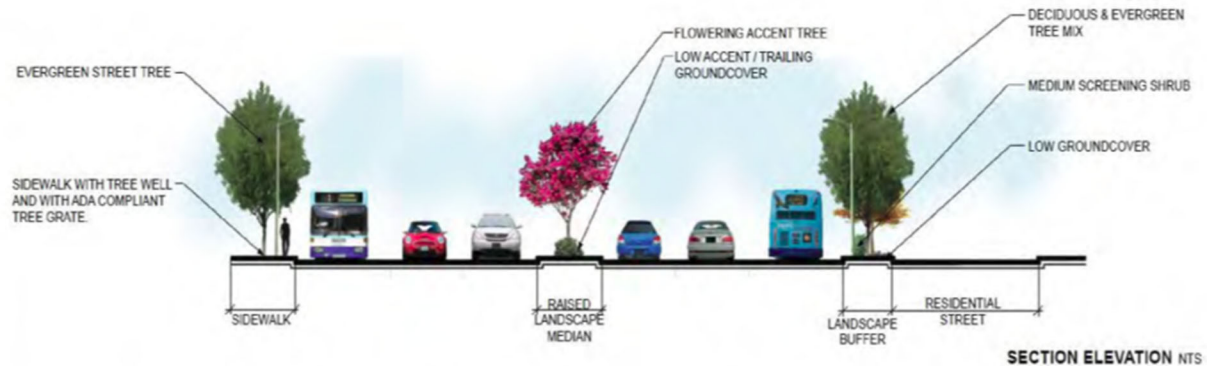
The construction of the improvements in the TSM/TDM Alternative is expected to take approximately 2 years to complete.

Figure 2.3-6: BRT Alternative and Station Locations



Source: SR 710 North Study Draft EIR/EIS (2015)

Figure 2.3-7: Illustration of a Typical Cross Section of the BRT Alternative



Source: *Finding of Adverse Effect (2017)*

2.3.3 Bus Rapid Transit (BRT) Alternative

The BRT Alternative would provide high-speed, high-frequency bus service through a combination of new, dedicated, and mixed-flow traffic lanes to key destinations between East Los Angeles and Pasadena. The proposed route length is approximately 12 miles. (See Figures 2.3-6 and 2.3-7.)

The BRT Alternative includes the BRT trunk line arterial street and station improvements, frequent bus service, new bus feeder services, and enhanced connecting bus services. Buses are expected to operate every 10 minutes during peak hours and every 20 minutes during off-peak hours. The BRT service would generally replace, within the study area, the existing Metro Route 762 service. The approximately 12-mile route would begin at Atlantic Boulevard and Whittier Boulevard to the south, follow Atlantic Boulevard, Huntington Drive, Fair Oaks Avenue, and Del Mar Boulevard, and end with a terminal loop in Pasadena to the north. Buses operating in the corridor would be given transit signal priority from a baseline transit signal priority project that would be implemented separately by Metro.

Where feasible, buses would run in dedicated bus lanes adjacent to the curb, either in one direction or both directions, during peak periods. The new dedicated bus lanes would generally be created within the existing street ROWs through a variety of methods that include restriping the roadway, restricting on-street parking during peak periods, or narrowing medians, planted parkways, and sidewalks. Buses would share existing lanes with other traffic in cases where there is not enough ROW. The exclusive lanes would be limited to buses and right-turning traffic during a.m. and p.m. peak hours only. At other times of day, the exclusive lanes would be available for mixed-flow traffic and/or on-street parking use.

The BRT service would include 60-ft articulated buses with three doors, and would have the latest fare collection technology, such as on-board smart card (transit access pass card) readers to reduce dwell times at stations.

Specific project features of the BRT Alternative are discussed in detail below.

Components of the BRT Alternative

Bus Stops

Specific project features of the BRT Alternative are discussed in detail below.

A total of 17 BRT stations with amenities would be placed on average at approximately 0.8-mile intervals at major activity centers and cross streets. Typical station amenities would include new

shelters, branding elements, seating, wind screens, leaning rails, variable message signs (next-bus information), lighting, bus-waiting signals, trash receptacles, and stop markers. Some of these stops would be combined with existing stops, while in some cases, new stops for BRT would be provided directly adjacent to existing local stops on the same side of the street.

The BRT stops would be provided at the following 17 locations:

- Atlantic Boulevard at Whittier Boulevard
- Atlantic Boulevard between Pomona Boulevard and Beverly Boulevard
- Atlantic Boulevard at Cesar Chavez Avenue/Riggin Street
- Atlantic Boulevard at Garvey Avenue
- Atlantic Boulevard at Valley Boulevard
- Atlantic Boulevard at Main Street
- Huntington Drive at Garfield Avenue
- Huntington Drive at Marengo Avenue
- Fair Oaks Avenue at Mission Street
- Fair Oaks Avenue at Glenarm Street
- Fair Oaks Avenue at California Boulevard
- Fair Oaks Avenue at Del Mar Boulevard
- Del Mar Boulevard at Los Robles Avenue
- Del Mar Boulevard at Lake Avenue
- Del Mar Boulevard at Hill Avenue (single direction only)
- Colorado Boulevard at Hill Avenue (single direction only)
- Colorado Boulevard at Lake Avenue (single direction only)

Figure 2.3-8 shows examples of the three BRT stations being proposed.

Street Improvements

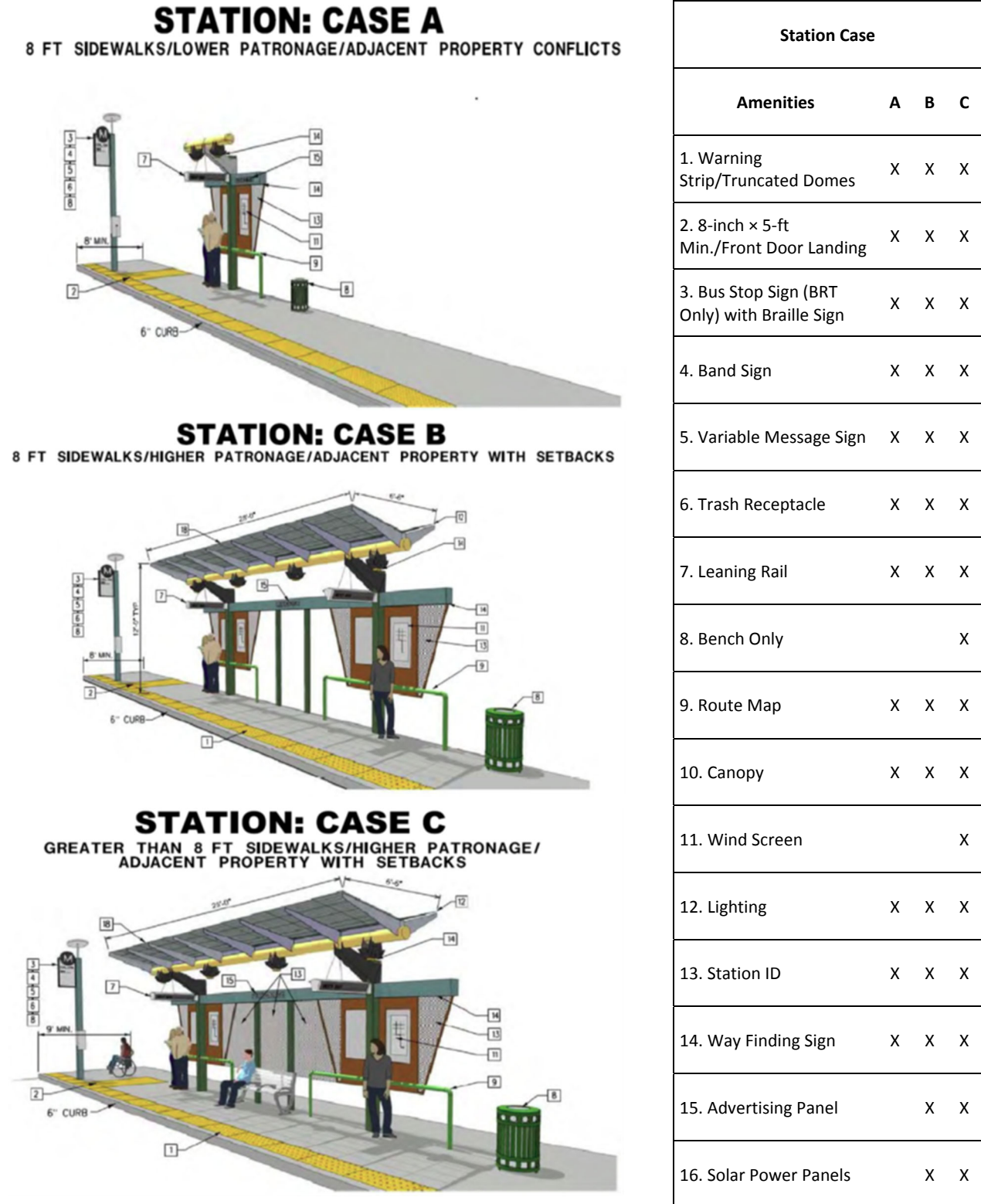
Street widening would be required to accommodate the bus lanes and to add turn lanes or bus queue jump lanes approaching intersections. Below are locations of the proposed street widenings:

- **Atlantic Boulevard:** Between Whittier Boulevard and Hellman Avenue, between Glendon Way and Shorb Street, and between San Marino Avenue and Front Street
- **Huntington Drive:** Between Garfield Avenue and Fair Oaks Avenue
- **Fair Oaks Avenue:** Between Huntington Drive and Grevelia Street, between State Street and Columbia Street, and between State Street/Grace Terrace and Del Mar Boulevard

Bridges

The BRT alternative would not require widening or modification of any bridge structures. However, restriping of the travel lanes on bridges would be required at Atlantic Boulevard over the Alameda Corridor, Fair Oaks Avenue over SR 110, and Fair Oaks Avenue over the Metro Gold Line.

Figure 2.3-8: Proposed BRT Station Types



Source: Finding of Adverse Effect (2017)

Bus Feeder Routes

The BRT Alternative would include bus feeder routes that would connect additional destinations with the BRT mainline. Two bus feeder routes are proposed: (1) one that would run along Colorado Boulevard, Rosemead Boulevard, and Valley Boulevard to the El Monte transit station, and (2) another bus feeder route that would travel from Atlantic Boulevard near the Gold Line station to the Metrolink stations in the Cities of Commerce and Montebello via Beverly Boulevard and Garfield Avenue. In addition, other existing bus services in the study area would be increased in frequency and/or span of service.

Landscaping

The BRT Alternative would preserve existing landscaping on streets, including trees and other forms of vegetation, as much as possible. Landscaping removed outside of State-owned ROW would be provided, as feasible, in coordination with the applicable local jurisdiction. At constrained locations where larger-diameter trees are not feasible, low groundcover, shrubs, or smaller trees would be provided.

Utilities

The BRT Alternative would require the relocation or protection in-place of various utilities. A complete list of utilities is provided in the Draft EIR/EIS Table 3.46 of Section 3.4, Utilities/Emergency Services.

Non-motorized and Pedestrian Facilities

The BRT Alternative includes modifications to existing arterial streets and intersections and freeway on- and off-ramps and the construction of bus lanes and bus stations. Existing pedestrian and bicycle facilities along arterials, at intersections, and at freeway on- and off-ramps would be either protected in place during construction of the BRT Alternative improvements or would be replaced in kind at the completion of the construction of those improvements. Any such improvements would be constructed to current ADA standards for curb ramps and sidewalks. The bus stations would be constructed to ADA standards as feasible based on available public ROW to accommodate those types of improvements.

Specific improvements and changes in pedestrian and bicycle facilities under the BRT Alternative would include:

- Bicyclists would be allowed to ride in the peak-period bus lanes at all times. Proper signage would be provided and would read "Bike OK." During the a.m. and p.m. peak periods, bicycles would share the bus lane with buses and right-turning vehicles near intersections or at driveways. Outside of peak hours, bicyclists would share the outside general traffic lane with other vehicular traffic.
- ADA-compliant curb ramps and sidewalks would be provided where street modifications are proposed under the BRT Alternative.
- ADA-compliant tree grates at tree wells would be provided.
- Bike racks and/or lockers could be provided at the BRT stations if desired by the local jurisdictions and if they can be accommodated within the public ROW.
- The BRT Alternative would result in improved connectivity to the Metro Gold Line and many other points of interest along the BRT Alternative alignment for pedestrians and bicyclists.

- In areas with the bus lanes, the BRT Alternative would reduce sidewalk widths to a minimum of 8 ft at bus stops and a minimum of 6 ft elsewhere.
- The bus lanes on Atlantic Boulevard, Huntington Drive, and Fair Oaks Avenue would increase the lengths of pedestrian crosswalks at many locations.

Drainage Facilities

Widening of roadways to accommodate the proposed BRT Alternative would require the relocation of existing gutters and catch basins to the new curb.

Stormwater Treatment

Tree box filters are proposed at new catch basins along the BRT alignment where the sidewalk width is at least 7 ft, as required to meet ADA standards. Catch basin screens and curb inlet filters are proposed along the BRT alignment at locations with a new inlet where the sidewalk is less than 7 ft. A biofiltration swale is proposed within Caltrans ROW where the BRT alignment crosses SR 60.

Retaining Walls

Two retaining walls are proposed with the BRT Alternative to minimize impacts to the existing residential streets immediately adjacent to Atlantic Boulevard. One wall is located along the eastern edge of the proposed sidewalk on Atlantic Boulevard, between Repetto Drive and Sevilla Street, and the second wall would be located on the northwest corner of Atlantic Boulevard and Brightwood Street.

Noise Barriers

Preliminary abatement measures proposed for the BRT Alternative includes three noise barriers as follows:

- BRT Alternative Noise Barrier (BNB) No. 1 is a recommended barrier along the private property line of the multifamily residential use along Atlantic Boulevard and De La Fuente Street.
- BNB No. 3 is a recommended barrier along the private property line of the multifamily residential use along Atlantic Boulevard and De La Fuente Street.
- BNB No. 5 is a recommended barrier along the private property line at the northeast corner of Atlantic Boulevard and San Marino Avenue.

These noise barriers are shown on Figure 3.14-4 in Draft EIR/EIS, Appendix N. The final heights, lengths, and locations of noise barriers for the BRT Alternative would be determined during final design. Four noise barriers were originally proposed for the TSM/TDM Alternative and would be included in the BRT Alternative. However, subsequent to the circulation of the Draft EIR/EIS, and in an effort to minimize adverse visual effects to historic resources, the following noise barriers are no longer proposed:

- T-2/TNB No. 1, an approximately 743-ft-long barrier along the Caltrans ROW/private property line along the northbound side of SR 110 ranging in height from 6 to 16 ft. (Refer to Sheet 8 of Figure 3.14-3 in the Draft EIR/EIS Appendix N for this TSM/TDM Alternative noise barrier.)
- T-2/TNB No. 2, an approximately 963-ft-long barrier along the edge of shoulder on the southbound side of SR 110 ranging in height from 12 to 20 ft. (Refer to Sheet 8 of Figure 3.14-3 in the Draft EIR/EIS Appendix N for this TSM/TDM Alternative noise barrier.)

The analyzed noise barriers are shown on Figure 3.14-3 in the Draft EIR/EIS, Appendix N, Noise Tables and Figures.

Property Acquisitions

The BRT Alternative would require the permanent partial acquisition of parcels of land that would be incorporated into the transportation improvements in this Alternative as summarized in Table 2.3-6. The improvements in the BRT Alternative are not expected to require any permanent easements.

Table 2.3-6: Summary of Permanent Acquisitions for the BRT Alternative

Type of Permanent Acquisition	Number of Parcels
Full parcel acquisition	0
Partial parcel acquisition	45
Aerial easement	0
Surface easement	0
Permanent tunnel easement	0
Permanent underground easement	0

Source: *Community Impact Assessment* (2014).

TSM/TDM Components

The TSM/TDM Alternative improvements would also be constructed as part of the BRT Alternative. These improvements would provide the additional enhancements to maximize the efficiency of the existing transportation system by improving capacity and reducing the effects of bottlenecks and chokepoints. All of the road improvements identified in Table 2.3-2 would be implemented with the BRT Alternative, with the exception of Local Street Improvement L-8 (Fair Oaks Avenue from Grevelia Street to Monterey Road) and the reversible lane component of Local Street Improvement L-3 (Atlantic Boulevard from Glendon Way to I-10). Additionally, enhancements to Route 762 identified in Table 2.3-2 would not be implemented with the BRT Alternative.

There are locations along the alignment of the BRT Alternative that overlay or cross areas that would also be improved under the TSM/TDM Alternative. All the improvements at those locations would be designed to ensure the effective operation of the BRT Alternative facilities and services in conjunction with the applicable TSM/TDM Alternative improvements. For example, ITS improvements under the TSM/TDM Alternative along or crossing the BRT Alternative alignment would be designed and implemented to compliment and support the transportation facilities and services in the BRT Alternative so as to maximize the benefits of those improvements for the traveling public.

Construction Activities

Grading and Excavation

Ground disturbance involved in the BRT Alternative is minimal and mainly concentrated in existing public ROWs. These improvements include widening roadways, pavement, and sidewalk reconstruction, modifications to the SR 60/Atlantic Boulevard interchange, and installation of ancillary structures (for example, traffic signs, power poles, small retaining walls, and noise barriers).

Bus shelters constructed at the new bus stops would involve deeper excavation. Anticipated ground disturbance for their installation involves an approximately 3-ft-diameter drilled shaft that may extend up to approximately 20 ft below the original ground surface.

Where roadways would be widened (for example, along Atlantic Boulevard, Huntington Drive, and Fair Oaks Avenue), existing surface materials (landscaping, pavement, crushed rock, etc.) would be excavated to allow placement of the new pavement section. Similarly, for sidewalk reconstruction, existing material would be removed and replaced.

The proposed modification for the ramps at the I-710/SR 60 interchange does not include much change in the vertical profile from the existing alignments. As such, ground disturbance in this area would be minimal and possibly similar to that for widening the roadways.

The installation of smaller features, including traffic signal poles, traffic signs, electrical power poles, light poles, small retaining walls, and drainage facilities would occur in various places along the approximately 12-mile route. These features are similar to those included in the TSM/TDM Alternative improvements and would likely have similar levels of ground disturbance. Excavation for this Alternative would use traditional excavation equipment (for example, scrapers, trackhoes, bulldozers) as well as construction of CIDH piles. No pile driving would be allowed during construction of the BRT Alternative.

Construction Staging and Phasing

As shown earlier on Figure 2.3-6 and as discussed above, the BRT Alternative includes the provision of high-speed, high-frequency bus service on a system of proposed dedicated bus and existing mixed-flow lanes. Seventeen BRT stations with amenities would be provided at major activity centers and cross streets. Construction areas required for these improvements would result in temporarily shifting or closing travel lanes. Each improvement would be staged to minimize the disruption to traffic and maximize the effectiveness of the construction activities. The construction staging and sequencing concepts for the BRT Alternative improvements are described briefly below.

Roadway and Station Improvements

The roadway and station improvements in the BRT Alternative are anticipated to be constructed in three primary construction stages:

1. Street widening and other modifications to provide for the dedicated bus lanes
2. Construction of the BRT Alternative stations
3. Widening and other intersection improvements to join the street widening and align the dedicated bus lanes and other travel lanes at and across intersections

Within each of those overall construction stages, preliminary construction staging of the improvements is expected to include some or all of the following:

- Restriping the existing travel lanes and/or intersections to shift traffic away from an active construction area, including providing for the same number of through lanes as in the existing condition, where feasible, based on the available ROW
- Installation of temporary traffic control devices and closure of the active construction area to traffic, including appropriate temporary traffic control, directional, and informational signing
- Provision of temporary pedestrian walkways and detours and temporary bicycle detours, including appropriate temporary traffic control, directional, and informational signing

- Modification and relocation of utilities and street lights, and modification of storm drain catch basins as needed
- Modification of existing traffic signals and signing
- Construction of new road pavement, curbs, and sidewalks, including striping and appropriate permanent traffic control, directional, and informational signing
- Construction and installation of the BRT station amenities including appropriate informational signing
- Reopening the construction area to vehicles, pedestrians, and bicyclists

Most of these general staging activities would occur all along the alignment of the BRT Alternative as the improvements along each segment are constructed. It is anticipated that improvements would be constructed on one side of the street and when those improvements are complete, the improvements on the other side of the street would be constructed. As a result, the staging activities described above would apply as the improvements on the first side of the street are constructed, and then again as the improvements on the other side of the street are constructed. It is anticipated that these types of improvements would result in minimal construction-related impacts and would require minimal import and/or export of material. Excess material resulting from these improvements would be reused on site to the extent feasible, and any remaining material would be transported to a Class I landfill and/or sold to a soil broker.

Traffic Signal Modifications

The existing traffic signal equipment at signalized intersections would be modified where the roadways are widened, intersections are modified, or where stations in the BRT Alternative would conflict with the existing signal equipment. This would include replacing, relocating, and/or upgrading the existing traffic signal equipment.

Street Lighting Modifications

The existing street light poles and the supporting electrical facilities along Atlantic Boulevard and Fair Oaks Avenue would need to be modified where widening of those streets would occur under the BRT Alternative. The modifications to the existing street lighting would generally be staged after the installation of temporary traffic control devices on the roadway, placement of temporary lighting, and closure of the active construction area to traffic.

Temporary Construction Easements

The majority of the improvements in the BRT Alternative are anticipated to be constructed within existing publicly owned ROWs. However, it is anticipated that the BRT Alternative would require TCEs where there is not sufficient room within the public ROWs to accommodate the construction activities and/or storage of materials or equipment for those improvements. Any land used as a TCE during construction of improvements under the BRT Alternative would be returned to its original or better condition prior to the return of that land to its original owner following completion of the construction activities requiring that TCE. No permanent project features would be constructed within the boundaries of the TCEs used during construction of the BRT Alternative.

Equipment Storage and Parking, and Construction Employee Parking

During construction of the improvements in the BRT Alternative, all construction equipment would be stored and staged within the project limits or the TCEs. Construction employees would be required to park within the project construction limits or TCEs.

Cost

The total estimated cost of the BRT Alternative is approximately \$247 million (2014 dollars) and \$297 million (2020 dollars). Of that total, the cost of the TSM/TDM improvements that would be constructed with the BRT Alternative is estimated to be approximately \$102 million (2014 dollars) and \$122 million (2020 dollars). The structures and ROW costs are included in these estimates. This cost includes the vehicles, stations, roadway, structures, and ROW costs for the BRT.

Schedule

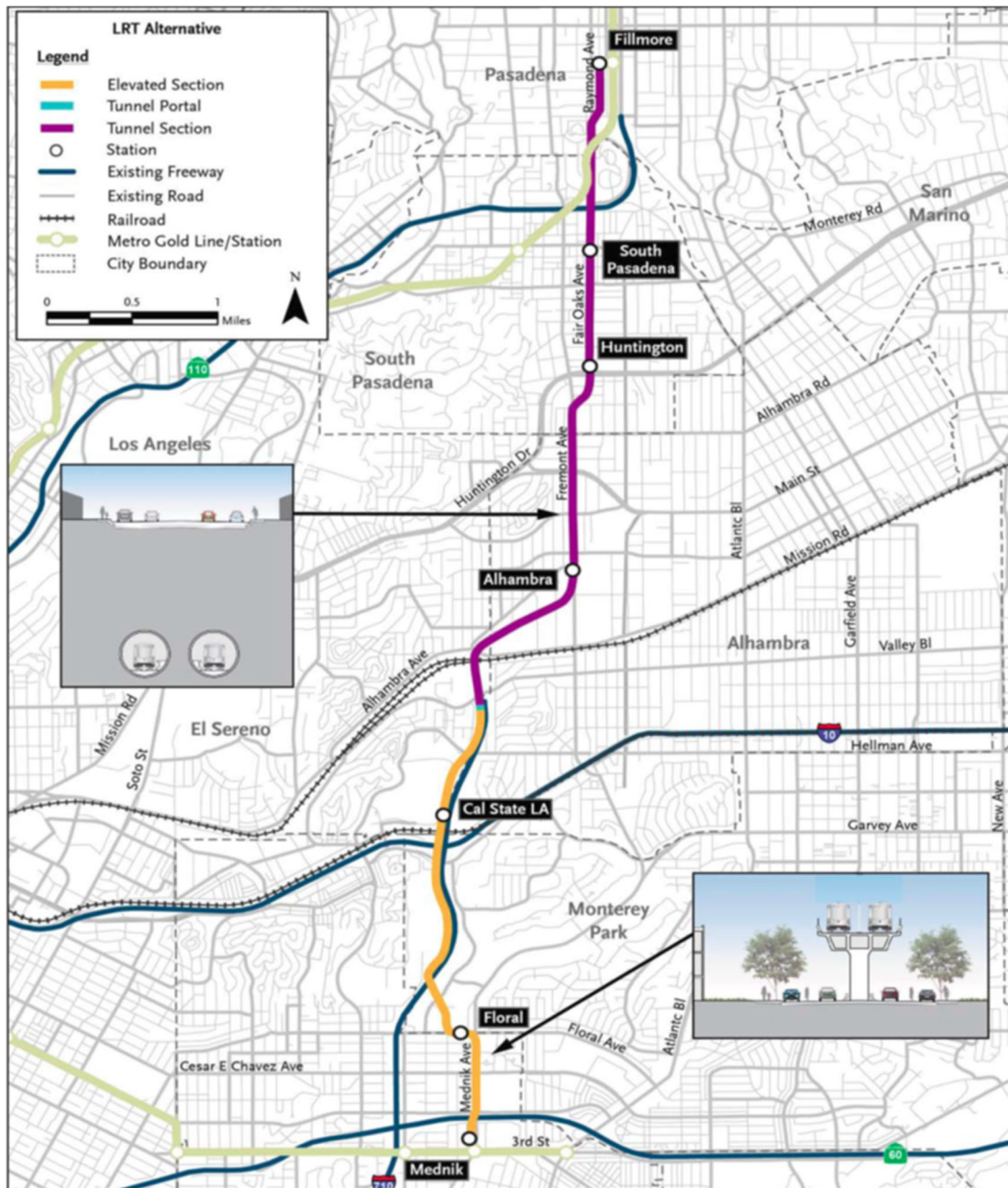
The construction of the improvements in the BRT Alternative is expected to take approximately 2 years to complete.

2.3.4 LRT Alternative

The LRT Alternative would include a passenger rail line that is operated along a dedicated guideway similar to other Metro light rail lines. The LRT alignment is approximately 7.5 miles long, with approximately 3 miles of aerial segments and approximately 4.5 miles of bored tunnel segments. Figure 2.3-9 illustrates the LRT Alternative.

The LRT Alternative would begin at an aerial station on Mednik Avenue adjacent to the existing East Los Angeles Civic Center Station on the Metro Gold Line (Eastside Extension). The alignment would remain elevated as it travels north on Mednik Avenue, west on Floral Drive, north across Corporate Center Drive, and then along the west side of I-710, primarily in Caltrans ROW, to a station adjacent to California State University, Los Angeles (Cal State LA). The alignment would descend into a tunnel south of Valley Boulevard and travel northeast to Fremont Avenue, north under Fremont Avenue, and easterly to Fair Oaks Avenue. The alignment would then cross under SR 110 and end at an underground station beneath Raymond Avenue adjacent to the existing Fillmore Station on the Metro Gold Line in Pasadena.

Figure 2.3-9: LRT Alternative and Station Locations



Source: SR 710 North Study Draft EIR/EIS (2015)

Two approximately 20-ft-diameter tunnels (one in each direction) are expected to be constructed with cross passages connecting the tunnels to allow for emergency access. The LRT tunnels are expected to be constructed using tunnel-boring machines (TBMs) except for at the portal and the stations, which would be constructed using the cut-and-cover construction method. The depth of the bored tunnel would vary from approximately 20 to 90 ft below ground surface (bgs) measured from the crown (top) of the tunnel. The depth would be shallower near the construction portal. The cut-and-cover tunnel would vary from 5 to 20 ft bgs. The vertical and horizontal alignments would

be refined during final design, if this alternative is selected, based on more detailed geotechnical investigations and engineering.

Components of the LRT Alternative

Stations

Seven stations would be located along the LRT alignment:

- Mednik Station at Mednik Avenue in East Los Angeles
- Floral Station at Floral Drive in Monterey Park
- Cal State LA Station at Cal State LA in Los Angeles
- Alhambra Station at Fremont Avenue in Alhambra
- Huntington Station at Huntington Drive in South Pasadena
- South Pasadena Station at Mission Street in South Pasadena
- Fillmore Station at Fillmore Street in Pasadena.

The Alhambra Station, the Huntington Station, the South Pasadena Station, and the Fillmore Station would be underground stations. The Huntington Station excavation would also include an underground crossover and the Fillmore Station would include underground tail tracks at the northernmost end of the alignment. See Figure 2.3-10.

Park-and-Ride Facilities

Parking facilities would be provided for the LRT Alternative at the following stations:

- **Floral:** A four-story parking garage on Kern Avenue would have 415 parking spaces. Entrances to the parking garage would be provided on Kern Avenue and Monterey Pass Road.
- **Alhambra:** A two-story parking garage on Fremont Avenue would have 382 parking spaces. An entrance would be provided on Fremont Avenue.
- **Huntington:** A three-story parking garage on Huntington Drive would have 400 parking spaces. Entrances would be provided on Fremont Avenue.
- **South Pasadena:** A surface parking lot on Mission Street would have 338 parking spaces. Entrances would be provided on Fair Oaks Avenue and Mission Street.

Maintenance Yard

A maintenance yard to clean, maintain, and store light rail vehicles would be located on both sides of Valley Boulevard at the terminus of SR 710. A track spur from the LRT mainline to the maintenance yard would cross above Valley Boulevard.

Connections to Existing Transit Services

The LRT Alternative would provide opportunities for riders to transfer to the existing Metro Gold Line at the Fillmore Station at the northern end and at the Mednik Station at the southern end. The entrance to the proposed Fillmore Station on the LRT Alternative would be approximately 120 ft from the entrance to the existing Fillmore Station on the Metro Gold Line. A small plaza would be constructed at the entrance to the new Fillmore Station that will allow patrons to walk directly to the existing Gold Line station.

Figure 2.3-10: Simulations of Proposed LRT Stations and Maintenance Yard



Proposed LRT Running above Mednik



Proposed Floral Station



Proposed Cal State LA Station



Proposed Alhambra Station



Proposed Huntington Station



Proposed South Pasadena Station

Figure 2.3-10: Simulations of Proposed LRT Stations and Maintenance Yard



Proposed Fillmore Station



LRT Maintenance Structure at Valley Blvd

Source: Finding of Adverse Effect (2017)

The entrance to the proposed Mednik Station would be approximately 400 ft from the entrance to the existing East LA Civic Center Station on the Metro Gold Line. Existing sidewalks and crosswalks will allow patrons to walk from one station to the other. The LRT Alternative would also provide opportunities for riders to transfer at the Cal State LA Station to/from the Metrolink San Bernardino Line and to/from buses operating on the El Monte Busway via a new walkway along Circle Drive that would be constructed as part of the LRT Alternative. The walkway would connect the Cal State LA LRT Station to the Cal State LA Metrolink and Busway stations.

Bus Feeder Service

Two bus feeder services would be provided as part of the LRT Alternative. One would run from the Commerce Station on the Orange County Metrolink line and the Montebello Station on the Riverside Metrolink line to the Floral Station, via East Los Angeles College. The other would run from the El Monte Bus Station to the Fillmore Station via Rosemead and Colorado Boulevards. In addition, other existing bus services in the study area, such as the El Sol shuttle, would be increased in frequency and/or span of service.

Bridges

The LRT Alternative would require new aerial bridges over the entire elevated alignment, which includes bridges over SR 60 at Mednik Avenue, I-710 north of Floral Drive, the I-710/I-10 interchange, I-10 (El Monte Busway), and SR 710 at Hellman Avenue.

Ventilation System

The ventilation system would maintain the air velocity and temperature within the tunnel and underground stations at a comfortable level for passengers and staff. During normal operation, the air velocity in the tunnel is determined by the piston action of the trains traveling through the tunnels.

For maintenance operations, the emergency ventilation system can be used to provide the required air flow in the tunnels in the event of a fire, tunnel air velocity would be maintained between 150 and 2,200 ft per minute but no less than the critical velocity, which is the air velocity that controls the direction in which smoke travels.

If a fire were to occur on a train, the operator would attempt to reach the nearest station. If the train reaches the station, exhaust fans could be used to ventilate the station. As a result of the

exhaust fans being activated, the pressure level in the station would be reduced. To compensate for the pressure differential between the station and the ambient air, fresh air would flow through the tunnel openings and evacuation paths into the station. Fresh air flowing through the evacuation paths would prevent the spread of smoke into the evacuation paths. As a result, the lower 8.2 ft of the evacuation path would be clear of smoke.

If a burning train is not able to reach the nearest station, it has to stop inside a tunnel. In this case, the overhead trackway exhaust inside the stations cannot be used to exhaust the smoke. The emergency ventilation would be maintained in the paths of evacuation and would be designed to keep the shortest evacuation path free of smoke in a situation like this. Jet fans at the ceiling of the tunnels and station fans are used to create an airflow directed to the longer evacuation path. This way a short path is available for self-rescue and the smoke would flow into the long part of the tunnel until it reaches the exhaust dampers and is drawn into the exhaust duct.

Communication and Surveillance System

The communication system for the LRT includes numerous components that detect, transmit, receive, display, store, and manage information related to the safe operation of the LRT system. Components of the communication system include the following:

- **Rail Operation Center (ROC):** This is the main control center for all rail lines operated by Metro. Currently, the ROC is located at Imperial Highway and Wilmington Avenue. The ROC would be upgraded to include monitoring equipment for all the communications systems associated with the LRT Alternative.
- **Cable Transmission System:** Provides high-speed data transport system including all network data, voice, and video traffic between the ROC and the stations and maintenance yard.
- **Telephone System:** Includes digital phones system used in stations and cross passage.
- **Transit Passenger Information System:** Provides live and prerecorded announcements on the public address system and visual message signs in the paid and unpaid passenger station areas.
- **Closed Circuit Television System:** Provides visual surveillance of station areas, cross passages and tunnel portals for safety, security, revenue protection, and anticrime and antiterrorist monitoring.
- **Intrusion Detection and Controlled Access System:** Provides access control and/or intrusion detection for designated doors in the stations.
- **Fire Alarm Detection System:** Provides intelligent fire alarm and detection equipment and systems.
- **Gas Detection and Alarm System:** Provides a gas detection and alarm system that monitors for dangerous gas concentration levels in stations and cross passages.
- **Seismic Detection System:** Provides system for detecting recording and transmitting alarms of seismic events at each tunnel station.
- **Tunnel Portal Surveillance and Alarm System:** System that detects persons entering the tunnels at the portals in order to warn train operators and ROC of unauthorized entry.

Emergency Systems

Emergency Egress

The tunnel would include emergency evacuation for pedestrians. A walkway running the entire longitudinal length of each tunnel bore is necessary to provide passengers access to cross passages or stations in the event of an emergency. In the event of a stalled train on fire in a tunnel, passengers will evacuate the train and use the emergency walkway to reach the nearest appropriate cross passage, during which time they will be provided a tenable environment via the emergency ventilation system. The cross passage provides passengers access to the non-incident bore where they can either walk to the nearest station or be picked up by a rescue train. The emergency walkway and cross passages are designed to be ADA accessible.

In the event of a train fire in a station, the platform will be evacuated as quickly as possible, and the fire suppression and emergency ventilation systems will be activated promptly. The concourse level will be used as a point of safety for evacuating passengers because the emergency ventilation system will draw enough air in through the station entrance to keep the smoke out of it.

Emergency Response Systems

An approved Emergency Response Plan for tunnel operations would be prepared during final design, in coordination with the applicable agencies, including the Los Angeles County Sheriff, the State Fire Marshal, and local fire agencies. A fire detection and suppression system and standpipe for fire department use would be provided in the tunnel. These systems, along with the ventilation and communications/surveillance systems, would work together in an emergency response situation. If possible, a train that is on fire will continue to the nearest station to facilitate evacuation and utilize the fixed fire suppression equipment in the station. If the train cannot continue to the nearest station, it will be evacuated in coordination with the ventilation system and local authorities as defined in the emergency response plan.

The station emergency response plan will also be coordinated with the appropriate authorities. Each station will have a local control panel that is able to visually display the emergency response procedure and serve as a command center for first responders.

Emergency fire suppression systems are being rapidly improved, and new devices and techniques may become available prior to tunnel construction. If available, innovative, state-of-the-art technical equipment would be considered.

Traction Power Supply System

The LRT Alternative would include a traction power supply and distribution system that would provide electricity to run the LRT trains. The traction power supply and distribution system would be designed to requirements listed in Metro Design Criteria Section 7, Electrical. This system includes three elements: traction power substations (TPSS), a direct current (DC) power distribution system, and an overhead contact system (OCS).

TPSS would convert the alternating current (AC) power provided by the local utility to DC power for distribution to trains via the OCS. The following locations have been preliminarily identified for the placement of TPSS units:

- Northeast corner of the planned park-and-ride lot for the Floral Drive station
- West side of I-710 south of I-10
- North side of Valley Boulevard at the LRT maintenance yard
- Underground at the Alhambra Station

- Underground at the Huntington Station
- Underground at the South Pasadena Station
- Underground just south of the Fillmore Station

The DC power distribution system connects the OCS to the TPSS through a system of cables. The OCS would consist of a set of two copper wires supported by steel poles mounted on the aerial guideway or suspended from the tunnel ceiling. OCS poles would be spaced along the LRT guideway, between or adjacent to the tracks, at a typical spacing of 150 ft.

Special Trackwork

Four double crossovers would be constructed as part of the LRT Alternative. Double crossovers allow trains to switch from the northbound track to the southbound track or vice versa; reverse direction at the ends of the alignment; or, in case single-track operations are required, go around a disabled train. The proposed locations of the double crossovers are as follows:

- North of the proposed Mednik Station, approximately 750 ft north of 1st Street
- North of the proposed Cal State LA Station
- North of the proposed Huntington Station
- On the tail tracks north of the proposed new Fillmore Station

In addition, a pair of turnouts (switches) would be located on the southbound track immediately north of Hellman Avenue to provide access to the lead tracks into the maintenance yard. A single crossover approximately 400 ft south of Hellman Avenue would allow a train to switch from the northbound track to the southbound track to access the maintenance yard.

Street/Freeway Improvements

The following improvements to local streets and freeways are included in the LRT Alternative:

- A Class II bicycle lane would be provided on Mednik Avenue between First Street and Floral Drive.
 - Mednik Avenue would be permanently reduced to one lane in each direction in this area.
 - Left-turn lanes would be maintained at all signalized intersections. Existing on-street parking would be maintained.
- The SR 710 northbound off-ramp would be realigned to be adjacent to the southbound on-ramp, reducing the existing two intersections at Valley Boulevard/SR 710 to one signalized intersection.

Landscaping

Landscaping is recommended in the proposed median in Mednik Avenue, as feasible, in coordination with the local jurisdiction.

Utility Relocation/Protection-in-Place

The LRT Alternative would require the relocation or protection in-place of various utilities. A complete list of utilities is provided in the Draft EIR/EIS Table 3.46 of Section 3.4, Utilities/Emergency Services.

Non-motorized and Pedestrian Facilities

The LRT Alternative includes modifications to existing arterial streets, intersections, and freeway on- and off-ramps, and the construction of light rail tracks and stations. Existing pedestrian and bicycle

facilities along arterials, at intersections, and at freeway on- and off-ramps would be either protected in-place during construction of the LRT Alternative improvements or would be replaced in kind at the completion of construction of those improvements. Any such improvements would be constructed to current ADA standards for curb ramps and sidewalks.

The stations for the LRT Alternative would be constructed to ADA standards. Specific improvements to non-motorized and pedestrian facilities include:

- Restriping of Mednik Avenue between First Street and Floral Drive to provide a new Class II bicycle lane
- Providing new ADA-compliant sidewalks on the north and south sides of Valley Boulevard between the existing SR 710 northbound off-ramp (to be removed) and the southbound on-ramp (there is no existing sidewalk on the north side, and there currently is a non-ADA-compliant sidewalk on the south side)
- Providing a pedestrian plaza between the proposed underground Fillmore Station and the existing at-grade Fillmore Station
- Providing a new sidewalk on Circle Drive that connects the Cal State LA Station to the existing El Monte Busway/Metrolink Station

Drainage Facilities

The LRT Alternative includes the installation of deck drains near each column on the elevated train decks. A pipe inside the column drains water down to the street below. With the tunnel portion of the LRT Alternative, a pump would be installed at the lowest point of the tunnel, to pump out any fire sprinkler or seepage water to the proposed storage tank located in the maintenance yard. The wash or fire water would be tested then hauled away and properly disposed of consistent with federal and State regulations. In the train yard, underdrains are proposed under each track, and swales, catch basins, and pipes are proposed to collect and treat surface runoff within the train yard. This water would be collected and drained to the Dorchester Channel.

Stormwater Treatment

Best management practices (BMPs) are proposed only for areas outside the tunnel. Most of the LRT alignment outside the tunnel is on an elevated track above steep terrain, where BMPs are infeasible. Four biofiltration swales are proposed where the LRT alignment is within Caltrans ROW near the I-710/I-10 interchange. Tree box filters are proposed at multiple locations along the LRT alignment. Catch basin screens and filter inserts are proposed at new inlet locations along the LRT alignment. Within the rail yard, bioretention facilities are proposed for the parking lot areas, and media filters are proposed to treat the ballast areas.

Retaining Walls

Retaining walls would be provided at the following locations:

- South of the I-10/I-710 interchange
- Cal State LA Station
- Maintenance yard

Noise Barriers

No noise barriers are proposed for the LRT Alternative. Noise barriers were originally proposed for the TSM/TDM Alternative and would be included in the LRT Alternative. However, subsequent to

the circulation of the Draft EIR/EIS, and in an effort to minimize adverse visual effects to historic resources, the following noise barriers are no longer proposed:

- T-2/TNB No. 1, an approximately 743-ft-long barrier along the Caltrans ROW/private property line along the northbound side of SR 110 ranging in height from 6 to 16 ft. (Refer to Sheet 8 of Figure 3.14-3 in the Draft EIR/EIS Appendix N for this TSM/TDM Alternative noise barrier.)
- T-2/TNB No. 2, an approximately 963-ft-long barrier along the edge of shoulder on the southbound side of SR 110 ranging in height from 12 to 20 ft. (Refer to Sheet 8 of Figure 3.14-3 in the Draft EIR/EIS Appendix N for this TSM/TDM Alternative noise barrier.)

The analyzed noise barriers are shown on Figure 3.14-3 in the Draft EIR/EIS, Appendix N, Noise Tables and Figures.

Property Acquisitions

The LRT Alternative would require the permanent acquisition of full and partial parcels of land that would be permanently incorporated into the transportation improvements in this alternative as summarized in Table 2.3-7. The improvements in the LRT Alternative are also expected to require permanent easements as shown in Table 2.3-7.

Table 2.3-7: Summary of Permanent Acquisitions and Easements for the LRT Alternative

Type of Permanent Acquisition	Number of Parcels
Full parcel acquisition	58
Partial parcel acquisition	11
Aerial easement	12
Subsurface easement	1
Permanent tunnel easement	182

Source: *Community Impact Assessment* (2014)

TSM/TDM Components

The TSM/TDM Alternative improvements would also be constructed as part of the LRT Alternative. These improvements would provide the additional enhancements to maximize the efficiency of the existing transportation system by improving capacity and reducing the effects of bottlenecks and chokepoints. The only component of the TSM/TDM Alternative improvements that would not be constructed with the LRT Alternative is Other Road Improvement T-1 (Valley Boulevard to Mission Road Connector Road) because it would conflict with the LRT Alternative maintenance yard near Mission Road.

There are locations along the alignment of the LRT Alternative that overlay or cross areas that would also be improved under the TSM/TDM Alternative. All the improvements at those locations would be designed to ensure the effective operation of the LRT Alternative facilities in conjunction with the applicable TSM/TDM Alternative improvements. For example, ITS improvements under the TSM/TDM Alternative along or crossing the LRT Alternative alignment would be designed and implemented to compliment and support the transportation facilities and services in the LRT Alternative to maximize the benefits of those improvements to the traveling public.

Construction Activities

Grading and Excavation

Grading and excavation for the LRT Alternative can be divided into two general categories based on the methods, equipment, and section of the alignment: (1) construction of rail stations and the bored tunnel section and (2) the cut-and-cover tunnel at the portal and other improvements.

Current design plans indicate that bored tunnel sections of the LRT Alternative would be excavated using pressurized-face TBMs. A TBM has a rotating cutterhead at the front of the machine that excavates soil and rock as it is advanced through the ground. The excavated materials are typically removed from the tunnel by rail cars or a continuous conveyor system and taken to the construction portal. As the TBM advances, positive face control can be maintained to address ground loss at the face of the excavation, and a precast concrete tunnel lining system is installed, providing immediate support of the ground. Cross passages are anticipated to be excavated using the sequential excavation method (SEM) from within the tunnels excavated by the TBMs. In the SEM, tunnel excavation and support is typically performed in a series of drifts, depending on the anticipated ground conditions, which are sequenced to develop successively larger openings until the design profile is achieved. As the SEM excavation is taking place, the appropriate ground support measures are also installed to maintain stability of the excavation.

Other tunneling methods are feasible and may be evaluated in future phases; however, it is not anticipated that open face shields or the SEM would be used to advance the main running tunnels.

Most of the aerial section would be supported by CIDH columns that are approximately 8 to 12 ft in diameter. For these columns, a drill rig equipped with an auger would drill a shaft approximately 100 to 125 ft bgs. The columns may extend deeper depending on the final load calculations and properties of the subsurface material. After the shaft is drilled and the soil and rock removed, the shaft would be filled with reinforcement and concrete. In a few areas, the aerial section would be supported by mechanically stabilized earth instead of columns.

Traditional excavation equipment (for example, scrapers, trackhoes, bulldozers) would be used during development of the underground rail stations and associated parking structures, the portal to the bored tunnel, and other improvements listed below. Cut-and-cover construction at rail stations, and at the tunnel portal would be excavated from the surface to the depth of the bored tunnel, and would generally be constructed with minimal surrounding surface settlements by using appropriate support of excavation systems. Other areas of the LRT Alternative would involve ground disturbance to varying depths in order to implement their respective improvements. These improvements include:

- Widening Mednik Avenue by 20 ft between First Street and Floral Drive
- Replacing the slope on the north side of Floral Drive with a retaining wall
- Installing retaining walls and grading the area for the maintenance yard
- Relocating the SR 710 northbound off-ramp to Valley Boulevard
- Constructing an embankment and a mechanically stabilized earth wall to support the rail line along the I-710 ROW south of the I-10/I-710 interchange and the Cal State LA Station

Disposal Sites and Haul Routes

Construction of the tunnel segments (that is, bored and cut-and-cover) and the underground stations for the LRT Alternative would generate excess excavated material that cannot be reused within the project limits. That excess material is proposed to be disposed of at two former rock quarries (the Manning and Olive Pits) in the City of Irwindale. These pits have been previously

environmentally cleared and licensed to accept clean soil from construction projects. The Manning Pit, 37 acres of which are owned by the City of Irwindale, is at Vincent Avenue and Arrow Highway and has a total capacity of 5 million cubic yards. The Manning Pit is accessible by both rail and truck. A 3.35-acre parcel of railroad ROW along 4th street (adjacent to and east of the Manning Pit) could be used to offload soil from incoming rail cars. The 187-acre Olive Pit is at Olive Street and Azusa Canyon Road and has a total capacity of 50 million cubic yards. The Olive Pit is accessible only by truck via East Arrow Highway and Vincent Avenue. Other Class I landfills and/or sale to a soil broker are other options for disposal of excavated materials.

The preliminary routes for hauling that excavated material from the LRT Alternative tunneling would include segments on Fair Oaks Avenue (from the South Pasadena and Fillmore Station sites) and Fremont Avenue (from the Huntington and Alhambra Station sites), on Arrow Highway and Live Oak Avenue (to/from I-605 at the disposal end of the haul trips), and on Azusa Canyon Road (to access the Olive Pit) and Vincent Avenue (to access the Manning Pit). Those haul routes would be used only during construction of the LRT Alternative tunnel segments and underground stations.

If the LRT tunnel is expected to pass through potentially contaminated soil or groundwater, the Contractor would be required to set up an area at the construction portal to sample and classify the excavated material as it is excavated. A sampling and analysis plan would be required so that the excavated material is classified properly and the correct handling methods and disposal sites are selected. Excavated material that is determined to be hazardous and cannot be taken to the Manning or Olive Pits would be transported to a landfill certified for accepting hazardous waste appropriate for the waste encountered.

Additives such as foams, polymers, or bentonite may be used during TBM excavation to condition the soil. These additives or soil conditioners would be required to be non-toxic and biodegradable and when used in accordance with manufacturer's recommendations not expected to contribute to special disposal requirements specifically as a result of the additives.

Water, including construction water, groundwater, and wet-weather flows, must also be sampled. If necessary, the water can be treated at the construction portal areas by the Contractor prior to discharge into the sewers. The Contractor would be required to have basic water treatment capabilities at the construction site. If the water cannot be treated to meet sewer discharge requirements or if the volume of water for disposal exceeds the discharge permit's capacity, it may need to be transported to an off-site disposal location. Disposal of all materials would need to meet all federal, State, and local regulations where applicable.

Construction Staging and Phasing

As shown earlier on Figure 2.3-9 and as discussed above, the LRT Alternative includes a passenger rail operated on a dedicated guideway with approximately 3 miles of aerial segments and approximately 4.5 miles of bored tunnel segments. There would be two bored tunnels, one for each of the LRT Alternative tracks. The LRT Alternative includes aerial and underground stations.

Each improvement would be staged to minimize the disruption to traffic and maximize the effectiveness of the construction activities. Preliminary construction staging of the LRT Alternative has been organized into the following components:

- Roadway improvements (including traffic signal modifications, and traffic control, directional, and information signing)
 - Where the elevated alignment crosses SR 60, I-710 or other roadways, overnight closures would be required for placement of K-rail adjacent to the median or construction of

- falsework. Other than these overnight closures, the roadways below the aerial alignment would remain open during construction of the elevated alignment. The falsework would be designed so there are no vertical clearance issues for vehicles passing under the falsework.
- During construction of the elevated LRT alignment in the ROW for the I-710 and SR 710 ROW, occasional short (a few hours at most) closures of the outside southbound lane would be necessary to transport equipment and material to the construction area.
 - During construction of the Cal State LA Station, Circle Drive would be the access route for construction equipment and materials and may be blocked occasionally as equipment is transported to the construction area.
 - On Valley Boulevard, columns would be constructed in the #1 eastbound lane to support falsework for the bridge deck, which would require shifting the eastbound lanes on Valley Boulevard to the south.
- Utility relocations, protection in-place, and removal
 - Boring of the tunnels
 - A construction portal would be excavated at the south end of the bored tunnel alignment to launch the TBMs. The portal would be excavated first by installing support of excavation walls around the perimeter of the planned excavation and then excavating the soil or rock within those walls, employing groundwater control measures where necessary. This south portal would eventually become a portion of the cut-and-cover tunnel. During bored tunnel excavation, it is expected that the Contractor would use this area for laydown to support construction operations.
 - It is anticipated that the LRT tunnels would be excavated using two pressurized-face TBMs launched from the south portal, and these tunnels are expected to be lined with a water-tight gasket or pre-cast concrete segmental liner as the TBMs pass. With this approach, the south portal would be the main staging area for the launch of the TBMs and tunneling equipment, and the TBMs would be removed from the Fillmore Station excavation. Cross passages between the two tunnels would likely be excavated using the SEM; these cross passages would be excavated from within the LRT tunnels after the main bores have been excavated. Where necessary, ground treatment and pre-support would be installed depending on the ground type at each cross passage and would be implemented prior to excavation of the cross passages. A cast-in-place concrete lining with water and gas proofing where necessary would be installed in the cross passages after excavation is complete.
 - It is anticipated that the excavated material from the excavation of the tunnels would be removed from the south portal. Excavated material may need to be stockpiled at the construction staging areas if it is too wet from the tunneling operations to transport. Refer to the section on disposal sites and haul routes for more information about the disposal of excavated material.
 - Tunnel boring operations and muck handling could potentially occur 24 hours per day, 7 days per week.
 - After the TBMs pass each of the two active fault zones during excavation of the bored tunnels, oversized vaults would be constructed from within the tunnel in the areas of the fault crossings for each tunnel bore. This would require excavating a diameter slightly larger than that already excavated by the TBMs and supporting the ground with a robust cast-in-

place concrete final lining. The oversized tunnel section is expected to be able to accommodate the anticipated movement from fault offset. Other methods to accommodate fault offset are also feasible and may be further evaluated during final design.

- Typical construction of the underground stations and support facilities for the tunnels
 - After utility relocations, the underground stations would be excavated from the top down, first by installing support of excavation walls around the perimeter of the planned excavation and then excavating the soil or rock within those walls, employing groundwater control measures where necessary.
 - The stations would be located in local streets, and therefore temporary decking would typically be required to allow for traffic over the excavations.
 - It is anticipated that the underground stations would be excavated prior to the TBM reaching each station location.
 - The construction sequence for the final station structure would include construction of the foundation base slab, followed by the installation of exterior walls and any interior column elements. Slabs are poured as the columns and intermediate floor and roof wall pours progress. Construction of portal structures would involve placement of concrete inverts, walls, and walkways. Station entrance locations are generally used as access points to the underground station during the construction process. Exterior entrances would be constructed after the station structure has been completed.
- Installation of track and tunnel systems
 - Direct fixation track consisting of steel rail attached to reinforced concrete plinth pads would be used on the alignment's aerial and underground sections. Gaps between the plinth pads would allow for drainage and cable runs.
- Construction of the elevated rail alignment and stations

During construction of the Floral Station:

- Parking would be temporarily prohibited on Floral Drive between Dangler Avenue and Mednik Avenue to allow the traffic lanes to be shifted to accommodate construction of the station.
- The sidewalk on the north side of Floral Drive between Dangler Avenue and Mednik Avenue would be temporarily closed.

For all underground stations:

- Utility relocations would require daytime lane and sidewalk closures on weekdays. In most cases, at most one lane and one sidewalk would be closed at the same time.
- Drilling of piles to support the temporary roadway deck and the installation of the support excavation walls for the station would require daytime closures of one lane and possibly adjacent sidewalks. Cross streets may also be affected (for example, Mission at Fair Oaks, California at Raymond, and the southbound right-turn lane from Fair Oaks to Huntington).
- Excavation of the first 10 to 15 ft of the station would be done without decking and would be conducted primarily in the evening and weekends, to the extent feasible.
- The installation of the roadway deck could require multiple consecutive weekend (Friday night to Monday morning) full road closures. Cross streets may also be affected (for example,

Mission at Fair Oaks, California at Raymond, and the southbound right-turn lane from Fair Oaks to Huntington). The duration/sequencing of deck installation would be affected by engineering requirements and public input.

- The deck would be in place with all lanes open for traffic at most times.
- Removal of the deck when the station construction is complete could require full road closures similar to those during installation of the deck.

Laydown and storage areas during construction would be located at the portal area on Valley Boulevard and at each station location.

Temporary Construction Easements

The majority of the improvements in the LRT Alternative are anticipated to be constructed within existing publicly owned ROW. However, it is anticipated that the LRT Alternative would require TCEs where there is not sufficient room within the public ROWs to accommodate the construction activities and/or storage of materials or equipment for those improvements. Any land used as a TCE during construction of improvements under the LRT Alternative would be returned to its original or better condition prior to the return of that land to the original owner after completion of the construction activities requiring that TCE. No permanent project features would be constructed within the boundaries of the TCEs used for the construction of the LRT Alternative.

Equipment Storage and Parking, and Construction Employee Parking

During construction of the improvements in the LRT Alternative, all construction equipment would be stored and staged within the project limits or the TCEs. No construction equipment would be stored or staged on any public streets. Construction employees would be required to park within the project construction limits or TCEs.

Cost

The total estimated cost of the LRT Alternative is approximately \$2,368 million (2014 dollars) and \$2,830 million (2022 dollars). Of that total, the cost of the TSM/TDM improvements that would be constructed with the LRT Alternative are estimated to be approximately \$52 million (2014 dollars) and \$66 million (2022 dollars). The structures and ROW costs are included in these estimates.

Schedule

The construction of the improvements in the LRT Alternative is expected to take approximately 6 years to complete.

2.3.5 Freeway Tunnel Alternative

The alignment for the Freeway Tunnel Alternative starts at the existing southern stub of SR 710 in Alhambra, north of I-10, and connects to the existing northern stub of SR 710, south of the I-210/SR 134 interchange in Pasadena.

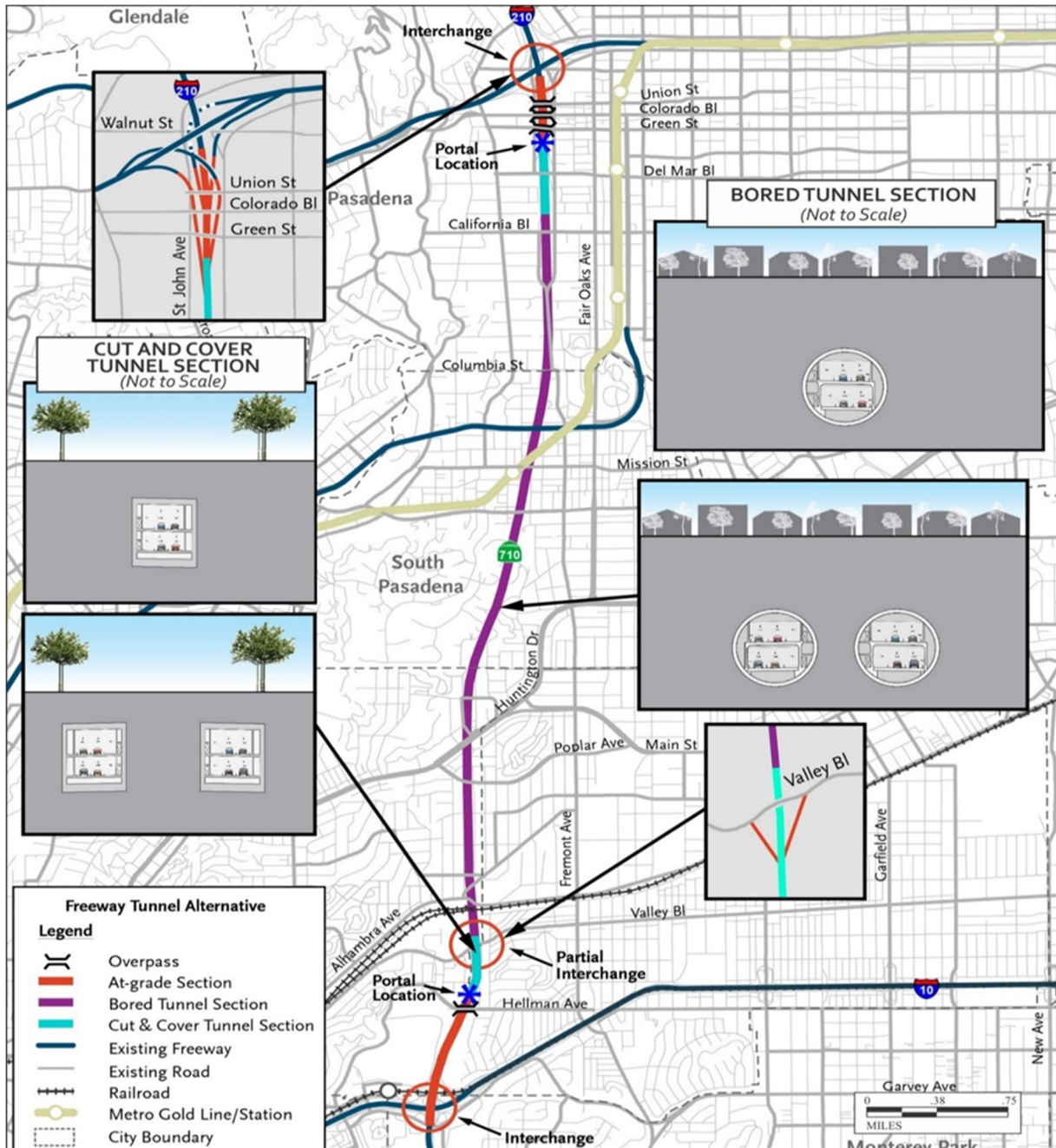
Design Variations

The Freeway Tunnel Alternative includes two design variations that relate to the number of tunnels constructed (that is, dual-bore and single-bore). The dual-bore design variation includes two tunnels that independently convey northbound and southbound vehicles. The single-bore design variation includes one tunnel that carries both northbound and southbound vehicles. Figure 2.3-11 illustrates the dual-bore and single-bore tunnel design variations for the Freeway Tunnel Alternative. Each of these design variations is described below.

- **Dual-Bore Tunnel:** The dual-bore tunnel variation is approximately 6.3 miles long, with approximately 4.2 miles of bored tunnel, 0.7 mile of cut-and-cover tunnel, and 1.4 miles of at-grade segments. The dual-bore tunnel variation would consist of two side-by-side tunnels (one northbound, one southbound), each tunnel of which would have two levels. Each tunnel would consist of two lanes of traffic on each level, traveling in one direction, for a total of four lanes in each tunnel. The easterly tunnel would be constructed for northbound traffic, and the westerly tunnel would be constructed for southbound traffic. Each bored tunnel would have an excavated diameter of approximately 60 ft. Vehicle cross passages would be provided throughout this tunnel design variation that would connect one tunnel to the other tunnel for use in an emergency situation. Figure 2.3-11 illustrates the dual-bore tunnel design variation cross section. Short segments of cut-and-cover tunnels would be located at the south and north termini to provide access via portals to the bored tunnels. The dual-bore design variation requires widening SR 710 along its east side adjacent to the portals in order to transition the existing number of lanes to four lanes in each direction proposed in the tunnel cross section. The portal at the southern terminus would be located south of Valley Boulevard. The portal at the northern terminus would be located north of Del Mar Boulevard. No intermediate interchanges are planned for the tunnel.
- **Single-Bore Tunnel:** The single-bore tunnel design variation is also approximately 6.3 miles long, with 4.2 miles of bored tunnel, 0.7 mile of cut-and-cover tunnel, and 1.4 miles of at-grade segments. This tunnel design variation would consist of a single, two-level, bored tunnel with two lanes on each level. The northbound traffic would use the two lanes on the upper level, and the southbound traffic would use the two lanes on the lower level. The single-bore tunnel would provide a total of four travel lanes. The single bore tunnel would also have an excavated diameter of approximately 60 ft. The single-bore tunnel would be in the same location as the northbound tunnel in the dual-bore tunnel design variation. Figure 2.3-11 illustrates the single-bore tunnel design variation cross section.

The approximate depth of full-range bored tunnel for the Freeway Tunnel Alternative with the single-bore and dual-bore design variations is approximately 20 to 280 ft bgs measured from the crown (top) of the tunnel. The depth would be shallower near the north and south construction portals. The majority of the underground segment of the freeway would be constructed using a TBM while the remaining segments would be constructed using the cut-and-cover construction method. The cut-and-cover tunnel segment at the south portal would be up to approximately 5 to 60 ft deep bgs to the top of the tunnel. The cut-and-cover tunnel segment at the north portal would be up to approximately 0 to 30 ft bgs to the top of the tunnel. The vertical and horizontal alignments would be refined during final design, if this alternative is selected, based on more detailed geotechnical investigations and engineering.

Figure 2.3-11: Freeway Tunnel Alternative



Source: SR 710 North Study Draft EIR/EIS (2015)

Operational Variations

Operational variations have been identified for the Freeway Tunnel Alternative, as described below. It should be noted that vehicles carrying flammable or hazardous materials would be restricted from using the tunnel under all operational variations.

- **Freeway Tunnel Alternative without Tolls:** This operational variation would be considered for only the dual-bore tunnel design variation. The facility would operate as a freeway with lanes open to all vehicles.
- **Freeway Tunnel Alternative with Trucks Excluded:** This operational variation would be considered for the dual-bore tunnel design variation only. The facility would operate as a freeway; however, trucks would be excluded from using the tunnel. This operational variation would be considered for the dual-bore tunnel design variation only. Signs would be provided along I-210, SR 134, I-710, SR 710, and I-10 to provide advance notice of the truck restriction.
- **Freeway Tunnel Alternative with Tolls:** This operational variation would be considered for both the dual- and single-bore tunnel design variations described above. All vehicles using the tunnel(s) would be tolled.
- **Freeway Tunnel Alternative with Tolls and Trucks Excluded:** This operational variation would be considered for the single-bore tunnel design variation only. The facility would operate as a freeway and all vehicles would be tolled. Trucks would be excluded from using the tunnel. Signs would be provided along I-210, SR 134, I-710, SR 710, and I-10 to provide advance notice of the truck restriction.
- **Freeway Tunnel Alternative with Toll and Express Bus:** This operational variation would be considered for the single-bore tunnel design variation only. The single-bore tunnel would operate as a tolled facility and include an Express Bus component. The Express Bus would be allowed in any of the travel lanes in the tunnel; no bus-restricted or exclusive lanes would be provided.
- The proposed Express Bus route would start at the Commerce Station on the Orange County Metrolink line, and then serve the Montebello Station on the Riverside Metrolink line and East Los Angeles College before entering I-710 at Floral Drive. The bus would travel north to Pasadena via the proposed freeway tunnel, making a loop serving Pasadena City College, the California Institute of Technology, and downtown Pasadena before re-entering the freeway and making the reverse trip.

Toll/no-toll operational variations were considered because of the potential for tolled operations to improve the financial feasibility of a freeway tunnel. Truck/no truck operational variations were considered because of the potential for restricting use by trucks to address community concerns regarding the attraction of trucks to the tunnel because the tunnel would provide a connection between the I-10 and I-210. Scenarios without tolls are not feasible for the single-bore design variation because the traffic demand would exceed the capacity of the tunnel, which would result in queues in the tunnel. A freeway tunnel with express bus operational variation was considered because of the potential for this variation to improve the performance of the overall regional transit system, decrease north-south transit travel times through the study area, and attract additional transit ridership. Some combinations of variations involving express buses and/or truck prohibitions were evaluated for only the single- or dual-bore tunnel variations. To limit redundant analysis, only the single-bore or dual-bore variation with the biggest changes in traffic patterns, and therefore greatest impacts, was evaluated.

Components of the Freeway Tunnel Alternative

Street Improvements

Both the single- and dual-bore design variations propose to extend St. John Avenue from Del Mar Boulevard to California Boulevard. In addition, both variations would widen Pasadena Avenue to include a new lane from the proposed northbound SR 710 off-ramp at Pasadena Avenue to Colorado Boulevard.

Bridges

The dual-bore tunnel design variation would require widening of the Ramona Boulevard Undercrossing bridge and the SR 710/I-10 bridge.

Both the single- and dual-bore tunnel design variations would require demolition and replacement of the Hellman Avenue overcrossing and the Green Street overcrossing. The Del Mar Boulevard overcrossing would be demolished and replaced with an at-grade road for both design variations. In addition, a new bridge would be constructed at the Laguna Regulating Basin and a new overpass bridge would be constructed at Valley Boulevard for both the single- and dual-bore tunnel design variations.

Ventilation System

Proposed components of the ventilation system for the Freeway Tunnel Alternative include air scrubbers, two exhaust fans at each portal, an exhaust duct along the entire length of the tunnel, and jet fans located exclusively within the traffic area of the cut-and-cover tunnel. The design is a longitudinal ventilation (using jet fans) and smoke extraction by dampers that are connected to tunnel length ducts, which eliminate the need for intermediate vent shafts. There would be ventilation shafts located at each end of the tunnel, and jet fans would be provided to control the longitudinal velocity of the air flow. The ventilation system would have sufficient redundancy such that the system would still perform adequately even if one of the fans becomes inoperable.

At the south portal, an approximately 50 ft high ventilation structure would be integrated with the Operations and Maintenance Center (OMC) building. At the north portal, two locations for the ventilation structures are being considered. The first option would be an approximately 50-ft-high ventilation structure located at the SR 710/SR 134 interchange. The second option would be four 50-ft-high ventilation structures located at the SR 710/Colorado Boulevard interchange.

During normal operation, the tunnel ventilation system's primary function is to maintain fresh airflow through the tunnel and reduce the level of harmful gases released to the surrounding environment, specifically particulate matter less than 2.5 microns in diameter (PM_{2.5}) and particulate matter less than 10 microns in diameter (PM₁₀).

The tunnel ventilation system is designed to remove smoke and harmful gases during a tunnel fire. In case of fire, the fire detection system would be capable of locating the fire, and the smoke would be extracted by dampers located within the tunnel. Smoke in the traffic area would be extracted via two open dampers next to the fire location into the exhaust duct, by using exhaust fans located in the portal ventilation building. The design also includes a Fixed Fire Fighting System that works in conjunction with the ventilation system to control smoke and gases during a fire. This would maintain an acceptable environment for the evacuation of motorists and for the safe entry into the tunnel by first responders.

Operations and Maintenance Building

The tunnel would be managed from either of two OMCs that are located at the portal buildings. In addition to this redundant configuration at the tunnel, the design could include the capability for all OMC functions to be implemented from a remote facility, such as a Caltrans regional traffic management center.

The OMC functions to monitor and control the entire tunnel as well as the approach roadways. The layout consists of a control room with a video wall, several operator consoles, and a supervisor console.

In addition to the control room itself, other supporting rooms are recommended such as a computer equipment room, crisis management room, visitor gallery, and provisions for staffing 24 hours a day, 7 days a week.

Communication and Surveillance System

Communication systems enable the tunnel motorists and for tunnel operators as well as for the emergency services. It functions to enable people to communicate in case of emergency and to instruct and guide them to exit dangerous areas. It consists of the telephone system for emergency and maintenance purposes, the radio system for radio frequency and voice communication inside the tunnel and of a public address system for announcements to tunnel drivers in case of emergency. A Supervisory Control and Data Acquisition (SCADA) system would be provided for all 24-hour monitoring and control of systems and equipment within the tunnels, portals and portal buildings.

Traffic systems would be provided for detecting, monitoring, and controlling traffic within the tunnels, at the portals, and on the approach roadways. Detection would be implemented through video and acoustic analytics to provide real-time volumes and incident detection. Detected traffic data would be collected, processed, and historized to assist traffic management and planning. Traffic control would allow the tunnel operator to manage lane or tunnel closures through activation of signs and gates. Traffic detection and control systems for the tunnel would be integrated with the Caltrans regional traffic management systems.

Communication and surveillance systems are being rapidly improved and new devices and techniques may become available prior to tunnel construction. If available, innovative, state-of-the-art technical equipment would be considered.

Emergency Systems

Emergency Egress

The tunnel would include emergency evacuation for pedestrians and suppression systems. A walkway running the entire longitudinal length of the tunnel is necessary to provide passengers access to an egress location in the event of an emergency. Fire walls rated at 2 hours adjacent to the motorway, would separate pedestrian emergency access paths from vehicles in the tunnel, and would provide protection from fire. Access to the emergency ADA accessible pedestrian walkways would be provided along each roadway level, consistent with National Fire Protection Association (NFPA) 502. In the event of an emergency, pedestrians would be able to enter the walkways and would be directed to another location in the tunnel where tenable conditions would be maintained by the emergency ventilation system. Additionally, emergency vehicle cross passages are expected to be provided along the dual-bore design variation at a spacing of approximately 3,000 ft; these

would enable movement of vehicles from one tunnel bore to the other. The emergency walkways would be pressurized to prevent smoke from entering the walkways.

Emergency Response Systems

An approved Emergency Response Plan for tunnel operations would be prepared in coordination with the applicable agencies, including the California Highway Patrol, the State Fire Marshall, and local fire agencies.

Fire detection and suppression systems would be provided in the tunnel by one approximately 92,000-gallon tank located in the OMC building at the north portal. The tank would consist of an approximately 30,000-gallon Fire Hose System that would store potable water from the City of Pasadena and an approximately 62,000-gallon deluge foam system. During a fire, the system could be used for discharge of water first, followed by discharge of foam for a specified period, and then followed by water until manually shut off. The sequence of water and foam can be adjusted by the operator. These systems, along with the ventilation and communications/surveillance systems and the OMC building operations, would work together in an emergency response situation.

Emergency fire suppression systems are being rapidly improved and new devices and techniques may become available prior to tunnel construction. If available, innovative, state-of-the-art technical equipment would be considered.

A closed-circuit television (CCTV) system with automatic video detection capability would be provided for general supervision of traffic conditions within the tunnel. Video detection would identify wrong-way driving, smoke, debris on the roadway, and other hazards. The detection system would be linked to the fire alarm control panels to trigger alarms in case of smoke detection inside the tunnel. In the emergency walkways, fixed-view cameras would be installed and mounted for monitoring pedestrian evacuation.

For traffic surveillance purposes, color pan-tilt-zoom cameras would be mounted inside the tunnel near emergency exits and outside the tunnel. For incident detection purposes, color, fixed-view cameras would be mounted inside the tunnel.

An acoustic tunnel monitoring system would be provided in the tunnel. Junction boxes with integrated microphones would be mounted on the tunnel wall at the CCTV locations. The microphone signals would be transmitted to a centralized computer that would detect anomalous sounds such as a vehicle collision, squealing tires, or load spills. An alarm would then be generated and transmitted to the OMC for the tunnel operator to evaluate the situation.

Electrical Substation

An electrical substation is proposed to deliver temporary power to the tunnel boring machine during construction and permanent power for tunnel operations after construction is complete. The location of the substation would be coordinated with the Los Angeles and Pasadena Departments of Water and Power.

Landscaping

All existing planting that is removed or disturbed due to construction would be replaced following Caltrans Replacement Planting Policy and Procedure, to the extent feasible. Landscaping would be provided at the south and north portals, cut-and-cover tunnel sections, and within disturbed soil areas.

Utilities

The Freeway Tunnel Alternative would require the relocation or protection in-place of various utilities. A complete list of utilities is provided in the Draft EIR/EIS Table 3.46 of Section 3.4, Utilities/Emergency Services.

Non-motorized and Pedestrian Facilities (Active Transportation)

The Freeway Tunnel Alternative includes modifications to existing arterial streets and intersections, freeway on- and off-ramps, and the construction of new freeway and freeway tunnel facilities. Existing pedestrian and bicycle facilities along arterials, at intersections, and at freeway on- and off-ramps would be either protected in-place during construction of the Freeway Tunnel Alternative improvements or would be replaced in kind at the completion of the construction of those improvements. Any such improvements would be constructed to current ADA standards for curb ramps and sidewalks.

Specific improvements/changes in pedestrian and bicycle facilities under the Freeway Tunnel Alternative would include:

- The St. John Avenue extension would require the realignment of St. John Avenue and the widening of that street at Del Mar Boulevard. This would result in a slightly wider pedestrian crossing on the north side of Del Mar Boulevard and would add a pedestrian crossing on the south side of Del Mar Boulevard and a new sidewalk on the west side of the St. John Avenue extension from Del Mar Boulevard to California Boulevard. The existing bike path along St. John Avenue may be extended from Del Mar Boulevard to California Boulevard.
- The existing sidewalk on the west side of Pasadena Avenue between Green Street and Colorado Boulevard would be moved farther west to accommodate a new lane from the northbound Pasadena Avenue off-ramp.
- The existing crosswalk along the north and south sides of Green Street and across Pasadena Avenue would be lengthened as a result of the new lane from the northbound Pasadena Avenue off-ramp.
- For the dual-bore variation only, the existing crosswalk on the north and south sides of Green Street at St. John Avenue would be lengthened to accommodate a southbound SR 710 on-ramp from St. John Avenue.
- For the dual-bore variation only, the existing crosswalk on the south side of Colorado Boulevard at St. John Avenue would be lengthened to accommodate a new lane.
- A new sidewalk would be provided on westbound Valley Boulevard between the SR 710 northbound off-ramp and the SR 710 southbound on-ramp at Valley Boulevard.

Drainage Facilities

The Freeway Tunnel Alternative dual-bore and single-bore design variations would include numerous drainage improvements, including the following facilities. This Alternative would encroach horizontally on the maintenance road on the west side of the Laguna Regulating Basin. The roadway would be constructed on a bridge to minimize effects to the Basin. A new entrance and pull-out area from the I-10/I-710 Connector would be installed. Drainage associated with the southerly cut-and-cover section of the Freeway Tunnel Alternative would be conveyed via a series of pipes to a proposed pump station near Valley Boulevard. The pump station would convey runoff to the Dorchester Channel.

A sump pump would be constructed at the low point of the tunnel to collect fire sprinkler and seepage water inside the tunnel. This water would be conveyed via pipe to a storage tank located under the parking lot for the OMC, north of Valley Boulevard. There is a separate stormwater drainage system located outside of the north portal that would need modifications. The wash or fire water would be tested and properly hauled away and disposed of consistent with federal and State regulations. The existing pump station and storage chamber south of Del Mar Boulevard would be relocated north of Del Mar Boulevard. Water from the storage chamber would be conveyed via a reinforced concrete pipe to the existing pipe in Del Mar Boulevard.

The dual-bore design variation of the Freeway Tunnel Alternative would relocate segments of the Dorchester Channel north and south of Hellman Avenue. The affected segments of the existing reinforced concrete channel would be replaced with a double reinforced concrete box along the original channel alignment. The single-bore design variation would not affect these segments of the Dorchester Channel.

Stormwater Treatment

Four biofiltration swales and eight GSRDs at two locations are proposed for the dual-bore design variation of the Freeway Tunnel Alternative. BMPs are only proposed in areas outside the tunnel. Biofiltration swales are proposed to be located in the SR 710 North to I-10 East loop ramp at the south portal and adjacent to northbound SR 710 at the Laguna Regulating Basin. Two treatment systems consisting of a pump station, GSRDs, and a biofiltration swale are proposed adjacent to southbound SR 710 at Valley Boulevard and adjacent to northbound SR 710 at the north portal near Pasadena Avenue. The pump stations would be designed such that the lower flows would be treated by the BMPs and larger flows would bypass the BMPs.

Three biofiltration swales and GSRDs are proposed for the single-bore design variation of the Freeway Tunnel Alternative. A biofiltration swale is proposed to be located adjacent to northbound SR 710 at the Laguna Regulating Basin. Two treatment systems consisting of a pump station, GSRDs, and a biofiltration swale are proposed adjacent to southbound SR 710 at Valley Boulevard and adjacent to northbound SR 710 at the north portal near Pasadena Avenue. The pump stations would be designed such that the lower flows would be treated by the BMPs, and larger flows would bypass the BMPs.

Retaining Walls

Retaining walls are proposed to limit ROW needs along the freeway alignment and near the tunnel portal areas for the segments of the freeway leading to and from the cut-and-cover tunnels.

Noise Barriers

Preliminary abatement measures proposed for the Freeway Tunnel Alternative include six noise barriers. Of these, four are feasible and reasonable for both the single-bore and dual-bore design variations, while an additional two are feasible and reasonable for only the dual-bore design variation.

Single-Bore and Dual-Bore Design Variations

- Freeway Tunnel Alternative Noise Barrier (FTNB) No. 5 is a recommended barrier along the Caltrans ROW/private property line on the east side of SR 710 between Hellman Avenue and Valley Boulevard.
- FTNB No. 7 is a recommended barrier along the Caltrans ROW/private property line on the west side of SR 710, south of Valley Boulevard.

- FTNB No. 8 is a recommended barrier along the Caltrans ROW/private property line on the west side of SR 710, south of Valley Boulevard.
- FTNB No. 10 is a recommended barrier along the Caltrans ROW/private property line at the northeast quadrant of the I-210 and SR 134 interchange for both the single-bore and dual bore design variations.

Dual-Bore Design Variation Only

- FTNB No. 6D is a recommended barrier along the edge of shoulder of the SR 710 Valley Boulevard southbound on-ramp.
- FTNB No. 9 is a recommended barrier along the private property line of the restaurant at the corner of Pasadena Avenue and Colorado Boulevard.

The analyzed noise barriers for the single-bore and dual-bore design variations of the Freeway Tunnel Alternative are shown on Figures 3.14-6 and 3.14-9, respectively, in the Draft EIR/EIS, Appendix N. The final locations, heights, and lengths of noise barriers for the Freeway Tunnel Alternative would be determined during final design. Four noise barriers originally proposed for the TSM/TDM Alternative would also be included in the Freeway Tunnel Alternative. However, subsequent to the circulation of the Draft EIR/EIS, and in an effort to minimize adverse visual effects to historic resources, the following noise barriers are no longer proposed:

- T-2/TNB No. 1, an approximately 743-ft-long barrier along the Caltrans ROW/private property line along the northbound side of SR 110 ranging in height from 6 to 16 ft. (Refer to Sheet 8 of Figure 3.14-3 in the Draft EIR/EIS Appendix N for this TSM/TDM Alternative noise barrier.)
- T-2/TNB No. 2, an approximately 963-ft-long barrier along the edge of shoulder on the southbound side of SR 110 ranging in height from 12 to 20 ft. (Refer to Sheet 8 of Figure 3.14-3 in the Draft EIR/EIS Appendix N for this TSM/TDM Alternative noise barrier.)

The analyzed noise barriers are shown on Figure 3.14-3 in the Draft EIR/EIS, Appendix N, Noise Tables and Figures.

Table 2.3-8: Summary of Permanent Acquisitions for the Design Variations of the Freeway Tunnel Alternative

Type of Permanent Acquisition	Number of Parcels
<i>Dual-Bore Design Variation</i>	
Full parcel acquisition	1
Partial parcel acquisition	3
Aerial easement	0
Subsurface easement	41
Permanent tunnel easement	563
Permanent footing ^a easement	3
Permanent maintenance easement ^b	2

Table 2.3-8: Summary of Permanent Acquisitions for the Design Variations of the Freeway Tunnel Alternative

Type of Permanent Acquisition	Number of Parcels
<i>Single-Bore Design Variation</i>	
Full parcel acquisition	1
Partial parcel acquisition	2
Aerial easement	0
Subsurface easement	32
Permanent tunnel easement	324
Permanent footing ^a easement	3

Source: *Community Impact Assessment* (2014)

^a This easement is required to accommodate structural foundations beneath the number of parcels listed in the table.

^b These easements are required to permit ongoing inspection and maintenance of the transportation improvements above these parcels.

Property Acquisitions

The design variations of the Freeway Tunnel Alternative would require the permanent acquisition of full and partial parcels of land that would be permanently incorporated into the transportation improvements in this alternative as summarized in Table 2.3-8. The improvements in the Freeway Tunnel Alternative are also expected to require permanent easements as shown in Table 2.3-8.

Ramp Metering

It is anticipated that ramp metering would be needed at the southbound SR 710 on-ramp at Valley Boulevard and the southbound SR 710 on-ramp at St. John Avenue. Ramp metering is recommended at these locations to enhance the operation of the ramp connection to the mainline freeway.

TSM/TDM Components

The TSM/TDM Alternative improvements would also be constructed as part of the Freeway Tunnel Alternative, including either the dual-bore or single-bore design variations. These improvements would provide the additional enhancements to maximize the efficiency of the existing transportation system by improving capacity and reducing the effects of bottlenecks and chokepoints. The only components of the TSM/TDM Alternative improvements that would not be constructed with the Freeway Tunnel Alternative would be Other Road Improvement T-1 (Valley Boulevard to Mission Road Connector) and Other Road Improvement T-3 (St. John Extension between Del Mar Boulevard and California Boulevard).

There are locations along the alignment of the Freeway Tunnel Alternative that overlay or cross areas that would also be improved under the TSM/TDM Alternative. All the improvements at those locations would be designed to ensure the effective operation of the Freeway Tunnel Alternative facilities and services in conjunction with the applicable TSM/TDM Alternative improvements. For example, ITS improvements under the TSM/TDM Alternative along or crossing the Freeway Tunnel Alternative alignment would be designed and implemented to compliment and support the transportation facilities and services in the Freeway Tunnel Alternative so as to maximize the benefits of those improvements for the traveling public.

Construction Activities

Transport of the TBM

TBM manufacturers can design TBMs in a way such that they are transported in pieces and assembled at the construction site. The TBM manufacturers take transportation restrictions into consideration when designing the TBMs, and the TBMs are routinely delivered in urban areas using existing infrastructure. The specific needs of this project and local jurisdictional permit requirements for transporting the TBMs or other equipment for this project would be considered when the TBM is fabricated.

Grading and Excavation

Excavation and ground disturbance for the Freeway Tunnel Alternative may also be grouped into three categories based on the methods, equipment, and section: (1) the central bored tunnel section, (2) cut-and-cover tunnels at the north and south portals, and (3) other modifications. Current design plans indicate that the bored tunnel section of the Freeway Tunnel Alternative would be excavated using a pressurized-face TBM. Please refer to the description of TBM operation provided in the LRT discussion above.

Emergency vehicle cross passages are anticipated to be excavated using the SEM from within the tunnels excavated by the TBMs. Please refer to the description of SEM operation provided in the LRT discussion above.

Cut-and-cover tunnels, located in the north and south portal areas of the bored tunnel would be constructed to allow vehicles to reach the depth of the bored tunnel from the at-grade portion of the freeway. These cut-and-cover tunnels would be excavated from the surface to the depth of the bored tunnel using traditional excavation equipment (for example, scrapers, trackhoes, and bulldozers) and can generally be constructed with minimal surrounding surface settlements by using appropriate support of excavation systems.

Other elements of the Freeway Tunnel Alternative would also use traditional excavation methods and equipment for their development; however, the level of ground disturbance would be less extensive than for the cut-and-cover tunnels. These improvements include modifications to surface streets (for example, Hellman Avenue, Del Mar Boulevard, St. John Avenue, and Valley Boulevard), on-ramps and off-ramps to and from SR 710, and the interchanges with I-10, I-210, and SR 134. In addition, CIDH piles would be used for new signs.

Disposal Sites and Haul Routes

Construction of the bored and cut-and cover tunnel segments of both design variations of the Freeway Tunnel Alternative would generate excess excavated soil and other materials that cannot be reused within the project limits. That material is proposed to be disposed of at the Manning and Olive Pits in Irwindale. The locations and capacities of those pits for accepting excess soils were described earlier in the discussion of the generation of excess soils during tunneling for the LRT Alternative. Other Class I landfills and/or sale to a soil broker are also options for disposing of the excavated material.

The preliminary route for hauling excavated material generated at the south tunnel portal and at the north tunnel portal would be via the existing SR 710. Haul trucks would enter SR 710 without traveling on local streets. The preliminary route at the disposal end of the trip under both design variations includes Live Oak Canyon and Arrow Highway (to/from I-605 at the disposal end of the haul trips), and Azusa Canyon Road (to access the Olive Pit) and Vincent Avenue (to access the Manning Pit).

If the single-bore or dual-bore design variation of the Freeway Tunnel Alternative is expected to pass through potentially contaminated soil or groundwater, the Contractor would be required to set up an area at the construction portal to sample and classify the excavated material as it is excavated. A sampling and analysis plan would be required so that the excavated material is classified properly and so the correct handling methods and disposal sites are selected. Excavated material that is determined to be hazardous and cannot be taken to the Manning or Olive Pits would be transported to a landfill certified for accepting hazardous waste appropriate for the waste encountered.

Construction Staging and Phasing

Each component of the Freeway Tunnel Alternative would be staged to minimize the disruption to traffic and maximize the effectiveness of the construction activities. Preliminary construction phasing of the bored tunnel portions of the Freeway Tunnel Alternative are as follows:

- Construction at portals would be excavated at both the south and north ends of the bored tunnel alignment to launch the TBMs. The portal would be excavated from the top down, first by installing support of excavation walls at the headwall and along the sidewalls of the planned excavation and then by excavating the soil or rock within those walls, employing groundwater control measures where necessary. The Contractor may choose to excavate only the portion of the portal necessary to launch the TBMs prior to launching the machines, or could excavate the entirety of the area necessary for the cut-and-cover tunnels, as the cut-and-cover tunnels would eventually be located in the excavation of the construction portals. During bored tunnel excavation, it is expected that the Contractor would use these areas for laydown of the construction operations.
- It is expected that the freeway tunnels would be excavated using two pressurized-face TBMs for each tunnel bore, launched from each portal. This means that there would be two TBMs total for the single-bore design variation and four TBMs for the dual-bore design variation. With this approach, both of the portals would be launch sites for the TBMs and construction staging areas for the tunneling equipment.
- The bored tunnels would be lined with a water- and gas-tight pre-cast concrete segmental liner as the TBMs pass. However, where the freeway tunnels cross active fault zones, a specially designed steel and concrete composite segmental lining is expected to be installed. The lining would allow for more space inside the tunnel in the fault zones to accommodate expected movement from fault offset. The special lining could be installed by the TBMs as they excavate the tunnels just as the typical segmental concrete lining.
- In the dual-bore tunnel design variation, emergency vehicle cross passages between the two tunnels would likely be excavated using the SEM; these cross passages would be excavated from within the freeway tunnels after the main bored tunnels are excavated. Where necessary, ground treatment and pre-support would be installed depending on the ground type at each cross passage and would be implemented prior to excavation of the cross passages. A cast-in-place concrete lining with water- and gas-proofing where necessary would be installed in the cross passages after excavation is complete.
- It is anticipated that the excavated material from the excavation of the tunnels and cross passages would be removed from both the north and south portals for the freeway tunnels. Excavated material may need to be stockpiled at the construction staging areas if it is too wet from the tunneling operations to transport. Refer to the section on disposal sites and haul routes for more information about the disposal of excavated material.

- Because it is anticipated that two TBMs would be used to excavate each bore, each TBM would excavate roughly half of the alignment and the TBMs would meet underground at the end of their drives. Because the TBMs would meet underground, the TBM shield would be left in place, providing temporary ground support while the remaining TBM components, including the trailing gear and cutterhead, would be removed from the tunnel. The cutterhead would be removed in pieces, with the Contractor supporting the ground around it additionally as needed, and a reinforced concrete cast-in-place final lining would be installed inside each TBM shield (between the segmental lining already installed by each TBM). Abandoning the TBM shield is a practice that is commonly performed if a TBM cannot be retrieved at a shaft or portal location at the end of its drive.
- As the bored tunnels are being excavated and lined, the installation of the roadway deck and concrete internal structure can begin to be installed some distance after the TBMs pass. The internal structure is expected to be a combination of pre-cast reinforced concrete and cast-in-place reinforced concrete.

Temporary Construction Easements

The majority of the improvements in the Freeway Tunnel Alternative are anticipated to be constructed within existing publicly owned ROWs. However, it is anticipated that the dual-bore design variation of the Freeway Tunnel Alternative would require TCEs where there is not sufficient room within the public ROWs to accommodate the construction activities and/or storage of materials or equipment for those improvements. Any land used as a TCE during construction of improvements under either design variation of the Freeway Tunnel Alternative would be returned to its original or better condition prior to the return of that land to the original owner after completion of the construction activities requiring that TCE. No permanent project features would be constructed within the boundaries of the TCEs used for construction of either design variation of the Freeway Tunnel Alternative.

Equipment Storage and Parking, and Construction Employee Parking

During construction of the improvements in the Freeway Tunnel Alternative, all construction equipment would be stored and staged within the project limits or the TCEs. Construction employees would be required to park within the project construction limits or TCEs.

Cost

The total estimated cost of the Freeway Tunnel Alternative is approximately \$5.657 billion (2014 dollars) and \$6.755 billion (2022 dollars) for the dual-bore design variation and \$3.157 billion (2014 dollars) and \$3.770 billion (2022 dollars) for the single-bore design variation. Of that total, the cost of the TSM/TDM improvements that would be constructed with either design variation of the Freeway Tunnel Alternative is estimated to be approximately \$50 million (2014 dollars). The cost of the TSM/TDM improvements for the single-bore design and dual-bore design is estimated to be approximately \$64 million, respectively (2022 dollars). The roadway, structures, and ROW costs are included in these estimates for both design variations.

Schedule

Construction of the Freeway Tunnel Alternative would take approximately 4 to 5 years for the single-bore design variation and approximately 5 years for the dual-bore design variation.

2.3.6 Alternatives Considered but Eliminated from Further Discussion Prior to the Draft EIR/EIS

During the preliminary studies for the SR 710 North Study, a wide range of possible transportation alternatives were evaluated. Alternatives were identified based on past studies and comments received from stakeholders, including elected officials, city and agency staff, and the community. The resulting options were evaluated and refined through a sequential screening process (including preliminary, initial, and secondary screenings) to identify the alternatives that best meet the Need and Purpose of the study. The screening process was detailed in the *Alternatives Analysis Report* (2012) and is summarized below.

- **Preliminary Screening:** An unscreened set of alternatives was identified during project initiation through a process that included a review of prior studies and public input received during the “710 Conversations” scoping process conducted by Metro and Caltrans in 2011. From this large set of alternatives, the preliminary screening step led to the identification of the preliminary set of alternatives, consisting of 42 alternatives representing a reasonable range of modes and alignments. Criteria used for the preliminary screening included the potential to accommodate regional north-south travel, reduce local street congestion, minimize community impacts, minimize the potential to encounter contaminated soil and groundwater, and accommodate ridership potential (for relevant modes). Within each travel mode, alternatives were evaluated against each other, and the most promising alternatives from each mode were selected to be included in the preliminary set of alternatives.
- **Initial Screening:** The initial screening evaluated the preliminary set of alternatives based on eight project objectives. In general, the initial screening relied on available data and schematic representations of each alternative. To find the best performing alternatives within each mode in the initial screening, the performance of each alternative was compared only to that of other alternatives of the same mode. This evaluation step resulted in the identification of the initial set of alternatives (consisting of 12 alternatives and representing each mode from the preliminary set of alternatives) which were carried forward for a secondary screening.
- **Secondary Screening:** In the secondary screening step of the alternatives analysis phase, the initial set of alternatives were studied and evaluated using detailed performance measures reflecting the eight project objectives. Additional engineering and environmental evaluation of each alternative was conducted based on travel demand and ridership forecasting specific to each alternative and the conceptual-level engineering plans. One alternative in each mode that performed best on the secondary screening was brought forward for further study in this EIR/EIS.

As stated above, 12 alternatives were identified and studied as part of the secondary screening in the *Alternatives Analysis Report* (2012). The 12 alternatives included the No Build Alternative, the TSM/TDM Alternative, two BRT alternatives (BRT-1 and BRT-6), two LRT alternatives (LRT-4A and LRT-6), four freeway alternatives (F-2, F-5, F-6, and F-7), and two highway alternatives (H-2 and H-6). In addition, one BRT design variation (BRT-6A) and two LRT design variations (LRT-4B and LRT-4D) were analyzed. Alternatives BRT-1, BRT-6A, LRT-4B, LRT-4D, LRT-6, F-2, F-5, F-6, H-2, and H-6 were considered but withdrawn from further environmental study as stand-alone alternatives, and are described below. The remaining alternatives (No Build, TSM/TDM, BRT-6, LRT-4A/B, and F-7) were refined and carried forward for further study in this EIR/EIS.

Alternative BRT-1

Alternative BRT-1 would provide BRT service between Los Angeles Union Station and the Jet Propulsion Laboratory (JPL) in La Cañada Flintridge.

Among the BRT alternatives evaluated in the *Alternatives Analysis Report* (2012), the measures for the objectives related to transportation system performance were similar to one another and did not clearly favor one alternative over the others. However, Alternative BRT-1 would require ROW acquisition and would also have a greater potential impact on sensitive habitat. Therefore, Alternative BRT-1 was dropped from further consideration.

Alternative BRT-6A

Alternative BRT-6A is a design variation of Alternative BRT-6 but with a different terminal loop than Alternative BRT-6. Instead of traveling both eastbound and westbound on Colorado Boulevard, Alternative BRT-6A would travel only eastbound on Colorado Boulevard and then return westbound on California Boulevard after stopping at Pasadena City College and Caltech.

Among the BRT alternatives evaluated in the *Alternatives Analysis Report* (2012), the measures for the objectives related to transportation system performance were similar to one another and did not clearly favor one alternative over the others. Therefore, Alternative BRT-6A was dropped from further consideration.

Alternative LRT-4B

Alternative LRT-4B was developed as a design variation of Alternative LRT-4A to reduce the length of the bored tunnel section. Alternative LRT-4B would originate and end at the same locations as Alternative LRT-4A. However, instead of entering a tunnel near the SR 710 terminus at Valley Boulevard, it would remain elevated along Mission Road and Palm Avenue in Alhambra, before entering a tunnel near Main Street. Alternative LRT-4B would have greater construction impacts than Alternative LRT-4A because of the location of the tunnel portal in a residential area, far from any freeway access. In addition, the tight curve from Mission Road to Palm Avenue would have resulted in lower design speeds, reducing the operating efficiency and attractiveness of the system to potential riders. Therefore, Alternative LRT-4A was dropped from further consideration.

Alternative LRT-4D

Alternative LRT-4D was developed as a design variation of Alternative LRT-4A to eliminate the bored tunnel section and use only cut-and-cover tunnel techniques. Alternative LRT-4D would originate at an underground station beneath Beverly Boulevard, near the existing Atlantic Station on the Metro Gold Line, and end at an underground station beneath the existing Fillmore Station on the Metro Gold Line.

Among the LRT alternatives evaluated in the *Alternatives Analysis Report* (2012), the measures for the objectives related to transportation system performance were similar to one another. However, on the measures for the objectives related to environmental and other concerns, Alternative LRT-4D would have greater property impacts than Alternatives LRT-4A and LRT-4B. Therefore, Alternative LRT-4D was dropped from further consideration.

Alternative LRT-6

Alternative LRT-6 would connect the existing Atlantic and Fillmore stations on the Metro Gold Line. Alternative LRT-6 would begin at an aerial station on Atlantic Boulevard near Pomona Boulevard and terminate with a new, elevated station above the existing Fillmore Station on the Metro Gold Line. The alternative would consist of at-grade and aerial segments.

Among the LRT alternatives evaluated in the *Alternatives Analysis Report* (2012), the measures for the objectives related to transportation system performance were similar to one another. However, on the measures for the objectives related to environmental and other concerns, Alternative LRT-6 was clearly inferior to Alternative LRT-4A/B. Alternative LRT-6 would require the acquisition of hundreds of properties, impact more historic period properties, and impact more community facilities. Therefore, Alternative LRT-6 was dropped from further consideration.

Alternative F-2

Alternative F-2 would originate at the existing SR 710 stub north of I-10 and connect to SR 2 between the Verdugo Road and SR 134 interchanges. The alternative would be an eight-lane freeway primarily constructed in two bored tunnels. Each tunnel would be dedicated to either northbound or southbound travel, with two lanes on each of two levels in each tunnel.

Among the freeway alternatives, Alternative F-7 was superior to Alternative F-2 on the measures for the objectives related to transportation system performance. In addition, Alternative F-2 would require over 300 property acquisitions. Therefore, Alternative F-2 was dropped from further consideration.

Alternative F-5

Alternative F-5 would also originate at the existing SR 710 stub north of I-10, similar to Alternative F-2, and connect to SR 134 near the Colorado Boulevard interchange. Alternative F-5 would also be an eight-lane freeway with two bored tunnels for directional travel similar to Alternative F-2. Alternative F-2 would provide access to the SR 134/SR 710 interchange both to and from SR 134 for both eastbound and westbound travel and interchange access to Valley Boulevard.

Among the freeway alternatives, Alternative F-7 was superior to Alternative F-5 on the measures for the objectives related to transportation system performance. In addition, Alternative F-5 would require over 200 property acquisitions. Therefore, Alternative F-5 was dropped from further consideration.

Alternative F-6

Alternative F-6 would also originate at the existing SR 710 stub north of I-10, but would consist of a combination of surface and depressed freeway segments, ultimately connecting to the existing SR 710 stub south of the I-210/SR 134 interchanges in Pasadena. Generally, Alternative F-6 would follow an alignment very similar to the “Meridian Variation” approved in the ROD in 1998. Ramps would provide access to the freeway from Valley Boulevard, Mission Road/Alhambra Avenue, Huntington Drive, and Del Mar Boulevard. Senate Bill 416, which was signed into law in 2014, mandated that Alternative F-6 no longer be deemed a feasible alternative.

Among the freeway alternatives, Alternative F-6 performed well on measures for the objectives related to transportation system performance. However, Alternative F-6 would have required over 400 property acquisitions in addition to properties that Caltrans already owns. Alternative F-6 would have also impacted more historic period properties and community facilities than Alternative F-7. Therefore, Alternative F-6 was dropped from further consideration.

Alternative H-2

Alternative H-2 would begin at the existing SR 710 stub north of I-10 and connect SR 710 directly to Concord Avenue. SR 710 would come to an end at Valley Boulevard and transition to a major arterial that would travel over Valley Boulevard, the UPRR tracks, and Mission Road/Alhambra Avenue to Concord Avenue. The alignment would ultimately end near the intersection of San Rafael Avenue and Linda Vista Avenue.

None of the highway alternatives evaluated in the *Alternatives Analysis Report* (2012) performed well on the measures for objectives related to transportation system performance. They also performed poorly on the measures for objectives related to environmental and other concerns. Alternative H-2 would require over 600 property acquisitions. Therefore, Alternative H-2 was dropped from further consideration.

Alternative H-6

Alternative H-6 would also begin at the existing SR 710 stub north of I-10 and connect SR 710 directly to Sheffield Avenue. SR 710 would come to an end at Valley Boulevard and transition to a major arterial that would travel over Valley Boulevard, the UPRR tracks, and Mission Road/Alhambra Avenue to Sheffield Avenue. The alignment would then continue to Huntington Drive, to Fair Oaks Avenue, to Columbia Street, and then to Pasadena Avenue. Just north of the intersection of Pasadena Avenue and Bellefontaine Street, the roadway would split into a northbound segment along Pasadena Avenue and a southbound segment along St. John Avenue. The improvements in both directions would end near Del Mar Boulevard.

None of the highway alternatives evaluated in the *Alternatives Analysis Report* (2012) performed well on the measures for objectives related to transportation system performance. They also performed poorly on the measures for objectives related to environmental and other concerns. Alternative H-6 would require approximately 200 property acquisitions. In addition, Alternative H-2 would have the greatest potential impact to historic resources and designated historic districts/buildings. Therefore, Alternative H-6 was dropped from further consideration.

2.3.7 Alternatives Withdrawn after the Alternatives Analysis

LRT Design Variations for the Southern Segment

Based on stakeholder feedback, two LRT design variations for constructing the LRT alignment within a tunnel in the southern portion of the alignment were evaluated, one under Mednik Avenue and one connecting to the Atlantic Station near Beverly Boulevard. Besides the additional expense of constructing a tunnel, launching the TBMs for either of these alignments would involve substantial ROW acquisition and traffic impacts. In addition, the tunnel configurations pose substantial design challenges due to the grade change around Corporate Center Drive, which would require substantial excavation of the adjacent hill. Therefore, a tunnel along the southern portion of the LRT alignment was dropped from further consideration.

Combined LRT/BRT Alternative

A combined LRT/BRT Alternative would include both an LRT alignment and a BRT alignment, providing both LRT and BRT transit service options in the corridor. While the alignments of the BRT and LRT are not identical, they serve similar markets. This alternative concept was withdrawn from further consideration because the two transit services would compete for the same customers. The analysis of the LRT and BRT Alternatives conducted individually for each service indicated that some of the new ridership would be drawn from existing transit services (especially bus). A new LRT or BRT service would provide transit mode and route choice options for existing transit customers. Because they compete for the same customers, a combined LRT/BRT Alternative would result in fewer transit trips than the sum of the two services individually. The capital and operational costs would be the sum of the two alternatives.

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Chapter 3 Description of Section 4(f) Property

3.1 Introduction

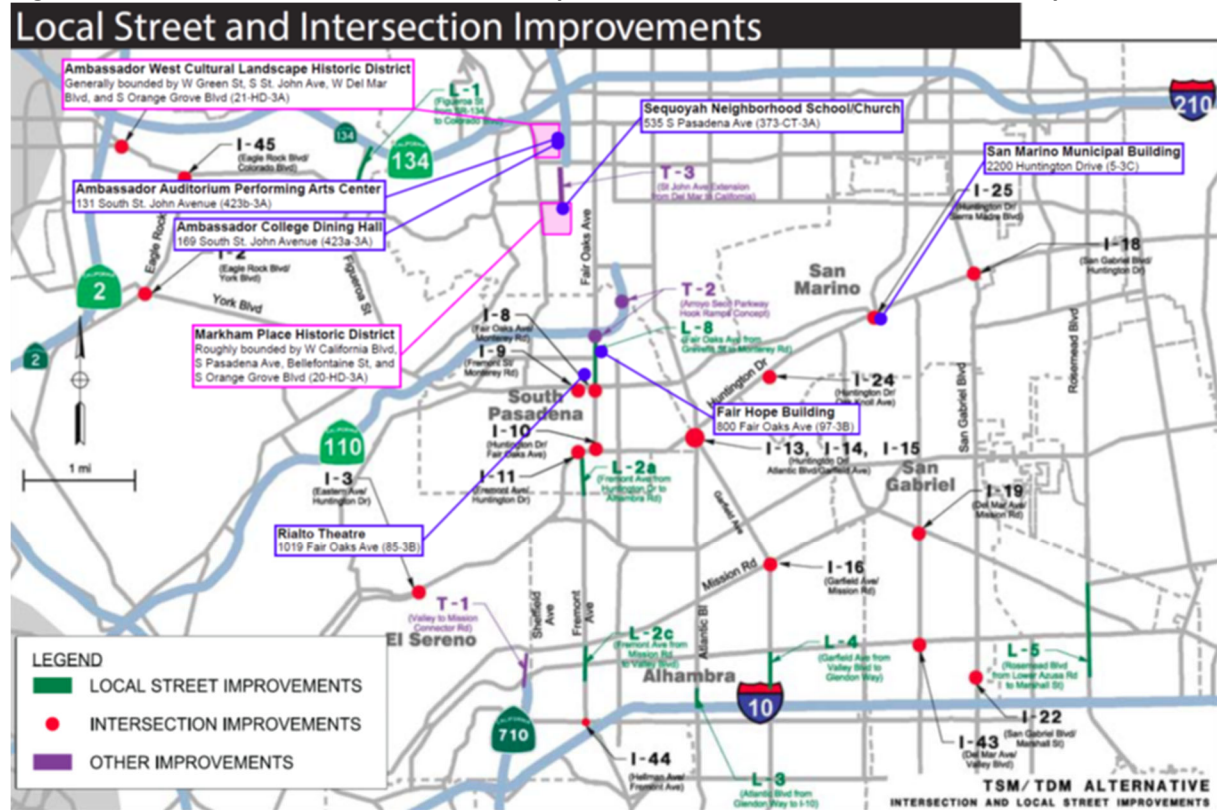
The Project alternatives were described in Chapter 2, Description of the Proposed Project, of this Section 4(f) Evaluation. The figures in Chapter 2 show the anticipated Project routes and limits for each Build Alternative. This chapter describes the Arroyo Seco Parkway Historic District, the Section 4(f) resource that would be adversely affected and used by the project Build Alternatives.

In accordance with Section 106 PA Stipulation VI.B.8, Caltrans established an Area of Potential Effects (APE) Map on December 3, 2014. Caltrans prepared a Historic Property Survey Report (HPSR) in December 2014, that included a Historic Resources Evaluation Report and an Archaeological Survey Report. To prepare the HPSR, Caltrans' consulting team conducted a records search, conducted field surveys, evaluated properties for eligibility to the National Register of Historic Places (NRHP), consulted with Native Americans and Consulting Parties, and held numerous public meetings with the public to identify historic properties within the APE. The SHPO concurred with the APE on February 26, 2015.

The Arroyo Seco Parkway Historic District is within the Section 106 APE, as documented in the Historic Property Survey Report (HPSR) (December 2014), Supplemental HPSR (October 2017), and FOAE (December 2017), and was analyzed to determine whether it is a protected Section 4(f) resource.

This Individual Section 4(f) Evaluation focuses on the Arroyo Seco Parkway Historic District, a protected Section 4(f) historic property, which would be adversely affected and used by the TSM/TDM Alternative (T-2 Other Road Improvements), which is also a component that is included as part of the BRT, LRT, and Freeway Tunnel Alternatives. The following figure depicts the proposed TSM/TDM Alternative and the historic properties located within the APE.

Figure 3.1-1: Local Street and Intersection Improvements Area of Potential Effects Map



Source: Finding of Adverse Effect (December 2017)

A complete inventory of all the properties that were evaluated for potential Section 4(f) use was completed and is included in Appendix B, Section 4(f) Evaluation. It was determined that, for most of the resources, Section 4(f) was not triggered because there would be no use of the resources or because the resources did not qualify for protection under Section 4(f); therefore, they are not discussed in this evaluation.

3.1.1 Section 4(f) Consideration for Historic Bridges, Highways and other Transportation Facilities

The Section 4(f) Policy Paper issued by the U.S. DOT FHWA's Office of Planning, Environment, and Realty Project Development and Environmental Review on July 20, 2012, addresses the issue of historic transportation facilities in Question and Answer 8A:

The Section 4(f) statute imposes conditions on the use of land from historic sites for highway projects but makes no mention of bridges, highways, or other types of facilities such as railroad stations or terminal buildings, which may be historic and are already serving as transportation facilities. The FHWA's interpretation is that the Congress clearly did not intend to restrict the rehabilitation or repair, of historic transportation facilities. The FHWA therefore established a regulatory provision that Section 4(f) approval is required only when a historic bridge, highway, railroad, or other transportation facility is adversely affected by the proposed project; e.g., the historic integrity (for which the facility was determined eligible for the National Register) is adversely affected by the proposed project. [23 CFR 774.13(a)(1)(2)].

The Arroyo Seco Parkway Historic District was one of the Resources Evaluated Relative to the Requirements of Section 4(f) and Section 6(f) in the Draft EIR/EIS. A preliminary FONAE for the SR 710 North Study was prepared in 2015 and the anticipated finding of no adverse effect was documented in the Draft EIR/EIS discussion for the Arroyo Seco Parkway Historic District, a historic transportation facility and a Historic District protected under Section 4(f). Based on the FHWA Section 4(f) Policy Paper Question and Answer 8a, because there was an anticipated FONAE for the Arroyo Seco Parkway Historic District, the project's impacts to any contributing elements to the historic transportation facility was not considered a use under Section 4(f) and did not require the preparation of a Section 4(f) Evaluation. After circulation of the Draft EIR/EIS, the finding of effect for the Arroyo Seco Parkway Historic District changed from an anticipated FONAE to a FOAE. Therefore, any use of the contributing elements of the Arroyo Seco Parkway Historic District now require Section 4(f) approval.

The Section 4(f) Policy Paper issued by the US DOT FHWA's Office of Planning, Environment, and Realty Project Development and Environmental Review on July 20, 2012, also addresses how Section 4(f) applies to historic districts that are on or eligible for the National Register in the answer to Question 2B, "How does Section 4(f) apply in historic districts that are on or eligible for the NR [National Register]?" which is given below:

Within a National Register listed or eligible historic district, FHWA's long-standing policy is that Section 4(f) applies to those properties that are considered contributing to the eligibility of the historic district, as well as any individually eligible property within the district. Elements within the boundaries of a historic district are assumed to contribute, unless they are determined by FHWA in consultation with the SHPO/Tribal Historic Preservation Officer not to contribute.

As described above, Section 4(f) applies to those elements/properties that contribute to the eligibility of the site as a historic district or resources within a historic district that are individually eligible for listing on the National Register. Section 4(f) does not apply to property within the district that does not contribute to the eligibility of the historic district or that is not individually eligible.

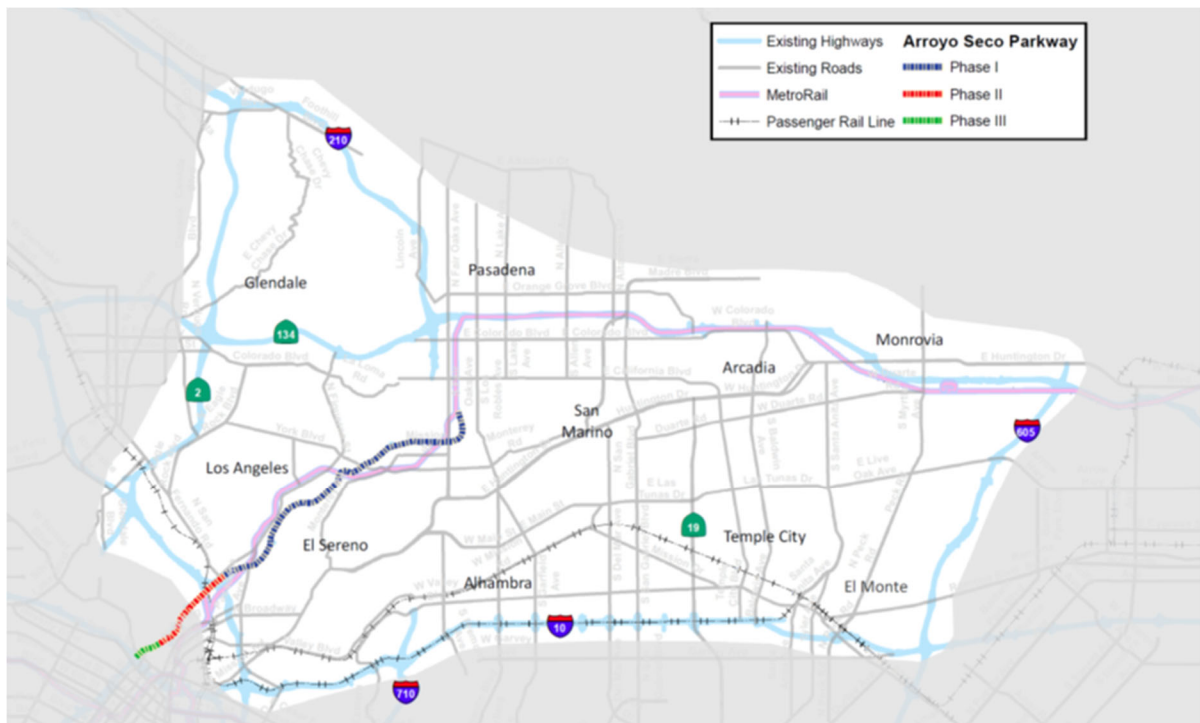
Following circulation of the Draft EIR/EIS (March 2015), Caltrans reanalyzed and revised the individual findings for numerous properties in the APE. Based on extensive consultation between Caltrans and the State Historic Preservation Officer (SHPO), as well as valuable input from consulting parties under Section 106, the effect finding for the proposed Project was changed to reflect an adverse effect to the Arroyo Seco Parkway Historic District, which, as discussed above, results in any use of the contributing elements of the Arroyo Seco Parkway Historic District now requiring Section 4(f) approval. In addition, Caltrans has reviewed comments received from municipalities, public agencies, preservation organizations, and members of the public concerning the potential for effects of the Build Alternatives on cultural resources in the APE. As a result, Caltrans prepared a FOAE (December 2017) for the proposed project consistent with the requirements of Section 106. The FOAE forms the main basis for this Individual Section 4(f) Evaluation for the Arroyo Seco Parkway Historic District.

Because the elements of the TSM/TDM Alternative have been incorporated into all the project build alternatives, Caltrans also determined that all proposed Build Alternatives would have an adverse effect on the Arroyo Seco Parkway Historic District after incorporation of proposed minimization and mitigation measures pursuant to Section 106 PA Stipulation X.C and consulted SHPO. The SHPO concurred with the findings and analysis in the FOAE for the TSM/TDM (Preferred Alternative) on May 3, 2018, please refer to Chapter 5, Correspondence and Coordination of this Final EIR/EIS.

3.2 Description of Arroyo Seco Parkway Historic District

The Arroyo Seco Parkway Historic District is located between the cities of Pasadena and Los Angeles in Los Angeles County (Figure 3.2-1). It consists of a linear district, comprising 60 components including a divided roadway, on-and-off ramps, bridges, tunnels, grade separations, overcrossings, pedestrian overpasses, pedestrian and equestrian under-crossings, a four-level interchange, the Arroyo Seco Channel, and two buildings at the Arroyo Seco Maintenance Station. It was constructed in three phases from 1938 to 1953. It starts at Post Mile (PM) 31.89, just south of Glenarm Street in the city of Pasadena, runs 8.21 miles along the Arroyo Seco Channel, and ends at PM 23.69 at the four-level interchange in the city of Los Angeles.

Figure 3.2-1: Arroyo Seco Parkway Historic District



Source: *Finding of Adverse Effect (2017)*

The Arroyo Seco Parkway Historic District is listed in the National Register under Criteria A, B, and C at the state-wide level, with a period of significance of 1938 to 1953. The Arroyo Seco Parkway Historic District was listed in the National Register on February 4, 2011. It is significant under Criterion A for its association with transportation planning in the Los Angeles Basin and roadway construction from Los Angeles to Pasadena; under Criterion B for its association with Los Angeles City Engineer Lloyd Aldrich, who was the dominant figure throughout the planning and construction of the 8.2-mile roadway, guiding its transition to a freeway in connection with the regional highway system; and under Criterion C for innovative and original highway engineering design in Los Angeles. Because the property is listed on the National Register, it is automatically included in the California Register under Criteria 1, 2, and 3. The historic district boundaries include all road-related features and associated landscaping within the legal ROW.

The following features within the historic district boundaries contribute to the significance of the Arroyo Seco Parkway Historic District (Table 3.2-1):

Table 3.2-1: Contributing Features to the Arroyo Seco Parkway Historic District

Feature Name	Location	Phase of Construction	Year Built
Phase I Roadway	PM 31.89-25.78	Phase I	1938–1940
Arroyo Seco Flood Control Channel	PM 25.48-30.10	Phase I	1935–1947
Fair Oaks Overcrossing (Bridge No. 53-0440)	PM 31.17	Phase I	1940
Fremont Avenue Railroad Underpass (Bridge No. 53-0439)	PM 31.01	Phase I	1940
Fremont Avenue Overcrossing (Bridge No. 53-0438)	PM 31.01	Phase I	1940
Meridian Avenue Overcrossing (Bridge No. 53-0437)	PM 30.78	Phase I	1940
Prospect Avenue Overcrossing (Bridge No. 53-0436)	PM 30.70	Phase I	1939
Orange Grove Avenue Overcrossing (Bridge No. 53-0434)	PM 30.43	Phase I	1939
Arroyo Drive Overcrossing (Bridge No. 53-0433)	PM 30.30	Phase I	1938
Arroyo Seco Pedestrian and Equestrian Undercrossing (Bridge No. 53-0432)	PM 30.25	Phase I	1938
Arroyo Seco Bridge (Bridge No. 53-02760)	PM 30.10	Phase I	1939
York Boulevard Overcrossing (Bridge Nos. 53-0121 and 53C-1874)	PM 29.50	Phase I	1912
Arroyo Seco Maintenance Station (6740 Marmion Way)	PM 29.30	Phase I	1931
Marmion Way Overcrossing (Bridge Nos. 53-0445 and 53C-1879)	PM 29.28	Phase I	1940
Santa Fe Arroyo Seco Railroad Bridge (Bridge No. 53-0431)	PM 29.03	Phase I	ca. 1900
Avenue 60 Ramp Pedestrian Undercrossing (Bridge No. 53-0988)	PM 28.86	Phase I	1940
Avenue 60 Ramp (Bridge No. 53-0986)	PM 28.86	Phase I	1940
Avenue 60 Overcrossing (Bridge Nos. 53-0430 and 53C-1878)	PM 29.76	Phase I	1939
Arroyo Seco Park Bridge	N/A	Phase I	1940
Via Marisol Overcrossing (Bridge No. 53-0429)	PM 28.38	Phase I	1939
Avenue 52 Overcrossing (Bridge No. 53-0428)	PM 28.05	Phase I	1939
Sycamore Grove Pedestrian Overcrossing (Bridge No. 53-0344)	PM 27.64	Phase I	1940
Avenue 43 Overcrossing (Bridge Nos. 53-0427 and 53C-1877)	PM 27.12	Phase I	1939
Avenue 43 Ramp (Bridge No. 53-0985S)	PM 27.08	Phase I	1940
Pasadena Avenue Overcrossing (Bridge Nos. 53-0426 and 53C-1876)	PM 26.48	Phase I	1940
Avenue 35 Railroad Underpass (Bridge No. 53-0425)	PM 26.40	Phase I	1940
Avenue 26 Overcrossing (Bridge No. 53-0372 and 53C-1875)	PM 25.91	Phase I	1925, 1939
Figueroa Street Off-Ramp Undercrossing (Bridge No. 53-0533L)	PM 25.78	Phase I	1940

Table 3.2-1: Contributing Features to the Arroyo Seco Parkway Historic District

Feature Name	Location	Phase of Construction	Year Built
Phase II Roadway	PMs 25.78–24.55	Phase II	1940-1943
Los Angeles River Bridge Eastbound (Bridge No. 53-0042R)	PM 25.48	Phase II	1936
Los Angeles River Bridge Westbound (Bridge No. 53-0042L)	PM 25.48	Phase II	1944
Riverside Drive Off-Ramp Viaduct (Bridge No. 53-222G)	PM 25.48	Phase II	1931
Figueroa Street Tunnel (Bridge No. 53-0202R)	PM 25.37	Phase II	1931
Elysian Park Pedestrian Undercrossing (Bridge Nos. 53-0477R and 53-0477L) (No Longer Extant)	PMs 25.33 and 25.36	Phase II	1931, 1942
Figueroa Street Tunnel 2 (Bridge No. 53-0201R)	PM 25.28	Phase II	1931
Park Row Overcrossing (Bridge No. 53-0542L)	PM 25.2	Phase II	1942
Figueroa Street Tunnel 1 (Bridge No. 53-0200R)	PM 25.14	Phase II	1931
Solano Avenue Pedestrian Undercrossing (Bridge No. 53-0532R)	PM 25.1	Phase II	1931, 1942
Solano Avenue Undercrossing (Bridge No. 53-0541L)	PM 25.09	Phase II	1942
Amador Street Undercrossing (Bridge No. 53-0504L)	PM 25.04	Phase II	1946
Figueroa Street Tunnel 4 (Bridge No. 53-0199R)	PM 24.90	Phase II	1936
Stadium Way Overcrossing (Bridge No. 53-0540R)	PM 24.76	Phase II	1942
Stadium Way Undercrossing (Bridge No. 53-0540L)	PM 24.73	Phase II	1942
Hill Street Off-Ramp Overcrossing (Bridge No. 53-0539C)	PM 24.55	Phase II	1942
Yale Street Pedestrian Undercrossing (Bridge No. 53-0586M) (No Longer Extant)	PM 24.4	Phase II	1940
Phase III Roadway	PMs 24.55–23.6	Phase III	1948–1953
College Street Overcrossing (Bridge No. 53-0382)	PM 24.16	Phase III	1939
Alpine Street Overcrossing (Bridge No. 53-0592)	PM 23.96	Phase III	1948
Sunset Boulevard Overcrossing (Bridge No. 53-0246)	PM 23.83	Phase III	1948
Beaudry Avenue Overcrossing (Bridge No. 53-0621H)	PM 23.75	Phase III	1949
Four Level Interchange (Bridge Nos. 53-0622, 53-0622F, 53-0622L, 53-0622R)	PM 23.69	Phase III	1949

Source: Finding of Adverse Effect (2017)

The character-defining features of the Arroyo Seco Parkway Historic District include the roadway and all related features such as the service lanes, landscaping, the Arroyo Seco Channel, bridges, tunnels, fences, and walls. Specifically, the character-defining features include the three 11-foot-wide lanes in each direction, outer lanes paved in Portland cement, inner lanes paved in dark asphalt concrete (dual-tone pavement), broken concrete and mortar retaining walls, chain link fences along the edge of the Arroyo Seco Parkway Historic District, five ca. 1929 on- and off-ramp

entrances and exits, compressed cloverleaf acceleration/deceleration ramps, banked roadway around curves, landscaped slope between the curbs and fences (between 3 and 4 feet), 50 “refuge areas” or “safety bays,” storm drains, sewers, road base, concrete curbs (6 inches higher than the roadway with sloped edges and a 4-inch horizontal surface) and gutters (12 inches wide), 6-foot-wide center median, divided lanes of traffic, traffic islands, entrance and exit ramps, Marbelite lamps and globes, and safety features.

Three small segments of the Arroyo Seco Parkway Historic District are located within the APE:

- The Fair Oaks Avenue Overcrossing (Caltrans Bridge No. 53-0440)
- A small segment of SR 110 between the Fair Oaks Avenue Overcrossing and the historic district’s northern boundary at East Glenarm Street
- A small segment of SR 110 between Fairview Avenue and Magnolia Lane

Figure 3.2-2: View of Dual-Tone Pavement, Looking East



Figure 3.2-3: View of Fair Oaks Overcrossing Looking East



Figure 3.2-4: Contributing Curb and Gutter



The Fair Oaks Avenue Overcrossing (Caltrans Bridge No. 53-0440) is a contributing feature to the Arroyo Seco Parkway Historic District. The character-defining features of the Fair Oaks Avenue Overcrossing include its surface-level highway crossing; its dual, 40-foot span and clear roadway of 76 feet; continuous two-span, reinforced concrete deck; metal railings; rigid-frame abutments and

pier; wide sidewalks containing telephone conduits and gas mainlines; fluted metal streetlight standards; and the original metal hood lights inset into the support walls beneath the overcrossing. The modern lamps on the original streetlight standards are not character-defining features. Figures 3.2-2 through 3.2-4 are photos of the Arroyo Seco Parkway Historic District.

Chapter 4 Use of Section 4(f) Property

4.1 Introduction

This chapter discusses the potential direct use, temporary use, and constructive use of the Project Build Alternatives and the Arroyo Seco Parkway Historic District. The Arroyo Seco Parkway Historic District includes the route of the Arroyo Seco Freeway from the four-level interchange in the City of Los Angeles, traveling through South Pasadena to East Glenarm Street in Pasadena, and the bridges along the route. The Arroyo Seco Parkway Historic District was described in detail in Chapter 3.

4.1.1 Use of the Section 4(f) Property

As defined in 23 CFR 774.17, “use” of Section 4(f) property occurs:

1. When land is permanently incorporated into a transportation facility.
2. When there is a temporary occupancy of land that is adverse in terms of the statute’s preservation purpose as determined by the criteria in 23 CFR 774.13(d). Section 774.13(d) indicates that temporary occupancies of land that are so minimal as to not constitute a use within the meaning of Section 4(f) are exceptions to the requirement for Section 4(f) approval. Specifically, for the purposes of Section 4(f), such temporary occupancy of a Section 4(f) resource does not normally constitute use if each of the following five conditions is met 23 CFR 774.13(d):
 - a. Duration must be temporary (i.e., less than the time needed for construction of the project), and there should be no change in ownership of the land;
 - b. Scope of the work must be minor (i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal);
 - c. There are no anticipated permanent adverse physical impacts, nor would there be
 - d. interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis;
 - e. The land being used must be fully restored (i.e., the property must be returned to a
 - f. condition that is at least as good as that which existed prior to the project); and
 - g. There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.
3. When there is a constructive use of a Section 4(f) property as determined by the criteria in Section 774.15. Section 774.15(a) indicates a constructive use occurs when the transportation project does not incorporate land from a Section 4(f) property, but the project’s proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired. Substantial impairment occurs only when the protected activities, features, or attributes of the property are substantially diminished.

The Project footprint/Right of Way (ROW) related to the Arroyo Seco Parkway Historic District was defined to include the permanent ROW needed for each Project Build Alternative and the area anticipated to be disturbed during construction of the alternatives. The Project footprint/ROW includes the land that would be permanently used within the Arroyo Seco Parkway Historic District and any temporary construction easements or other temporary uses of land anticipated from the Arroyo Seco Parkway Historic District.

4.2 Impacts on the Section 4(f) Property by Build Alternative

4.2.1 Use of the Section 4(f) Property Under the No Build Alternative

The No Build Alternative would not include any of the elements of the Build Alternatives; therefore, it would not result in the use of any land from a Section 4(f) property. Therefore, the No Build Alternative is not discussed in this section. It is discussed in Chapter 5, Section 4(f) Avoidance Alternatives, of this Section 4(f) Evaluation.

4.2.2 Effects to Section 4(f) Property from the Build Alternatives

This section describes the effects of the Build Alternatives on the Arroyo Seco Parkway Historic District. As discussed in Chapter 2, there are four Build Alternatives: the TSM/TDM, BRT, LRT and Freeway Tunnel Alternatives. All of the Build Alternatives include the TSM/TDM Alternative (T-2 Other Road Improvements) that would result in the same use of and impacts to the Arroyo Seco Parkway Historic District under Section 4(f).

TSM/TDM Alternative

The TSM/TDM Alternative is being evaluated as a stand-alone alternative. Improvements included in the TSM/TDM Alternative have also been incorporated into the other Build Alternatives as long as there were no conflicts. The TSM/TDM Alternative (T-2 Other Road Improvements) is proposed within the boundaries of the Arroyo Seco Parkway Historic District and has been included in all Build Alternatives. Therefore, the term “project” as used in this section refers to all build alternatives.

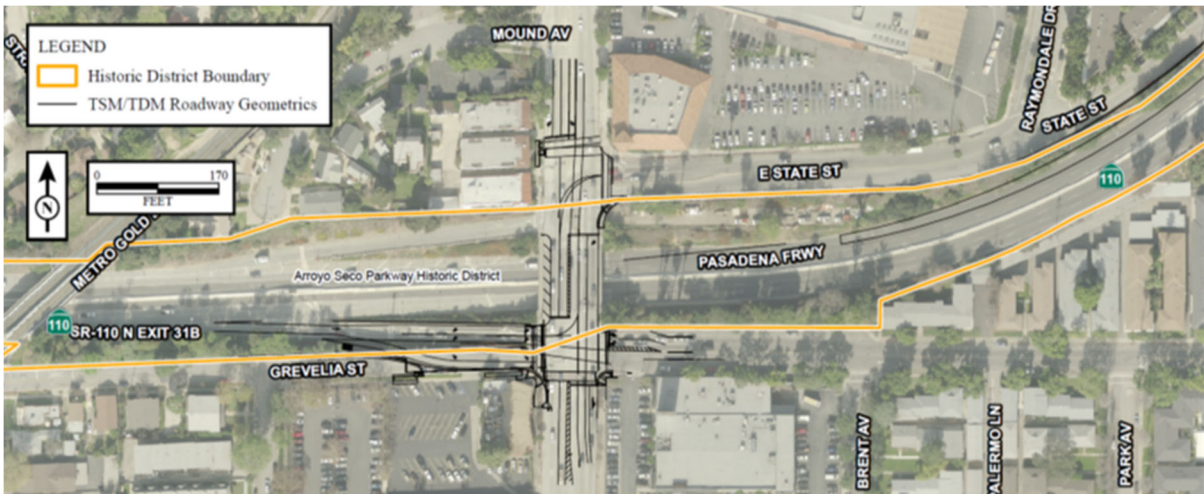
The following figures depict existing conditions, proposed engineering conceptual plans, and simulations of the proposed improvements to the Fair Oaks Avenue Overcrossing, a contributing feature of the Arroyo Seco Parkway Historic District.

Figure 4.2-1: Existing Condition: Aerial Photo of the Fair Oaks Off-Ramp Exit from the Arroyo Seco Parkway, Looking East



Source: Finding of Adverse Effect (2017)

Figure 4.2-2: Aerial Photo Showing the Proposed Engineering Plans Near the Arroyo Seco Parkway Historic District



Source: Finding of Adverse Effect (2017)

Figure 4.2-3: Existing Condition; View of the Eastbound Off-Ramp from the Arroyo Seco Parkway onto Fair Oaks Avenue, View Looking West from Grevalia Street



Source: Finding of Adverse Effect (2017)

Figure 4.2-4: Visual Simulation: Proposed TSM/TDM Alternative Improvements to the EB Off-Ramp from the Arroyo Seco Parkway onto Fair Oaks Avenue, View Looking West from Grevalia Street



Source: Finding of Adverse Effect (2017)

Figure 4.2-5: Existing Condition: View of the Northbound (NB) Off-Ramp onto Fair Oaks Avenue, View Looking Southeast from the Westbound (WB) Arroyo Seco Parkway



Source: Finding of Adverse Effect (2017)

Figure 4.2-6: Visual Simulation: Proposed TSM/TDM Alternative Improvements to the Northbound Off-Ramp onto Fair Oaks Avenue, View Looking Southeast from the Southbound Arroyo Seco Parkway



Source: Finding of Adverse Effect (2017)

Figure 4.2-7: Existing View Showing the Proposed TSM/TDM Improvements from SR 110 South of the Northbound Fair Oaks Exit, Facing North



Source: Finding of Adverse Effect (2017)

Figure 4.2-8: Simulated View Showing the Proposed TSM/TDM Improvements from SR 110 South of the Northbound Fair Oaks Exit, Facing North



Source: Finding of Adverse Effect (2017)

Table 4.2-1 describes the proposed TSM/TDM Alternative project features, the applicable adverse effect criteria (36 CFR 800.5), the effect finding based upon the effect criteria, and whether the project activity would constitute a use within the meaning of Section 4(f).

Table 4.2-1: Proposed TSM/TDM Alternative Features and Assessment of Potential Effects on the Arroyo Seco Parkway Historic District

TSM/TDM Alternative Features Proposed Near the Arroyo Seco Parkway Historic District and Assessment of Effects	Applicable Adverse Effect Criteria (36 CFR 800.5)	Effect Finding Based on Effect Criteria	Section 4(f) Use
<p>1. Construction Activity at Fair Oaks Avenue Overcrossing: Close Grevelia Street, west of Fair Oaks Avenue, and convert to a dead-end east of Mound Street. Traffic will no longer have access traveling eastbound on Grevelia to Fair Oaks Avenue. The truncated Grevelia Street would continue to provide rear access to the commercial property (currently Shaker’s Restaurant) located immediately south of the ramp terminus.</p>	Potential for an indirect visual effect (criteria v)	No effect	No use
<p>The proposed reconfiguration would take place outside the boundaries for this historic district; therefore, there would be no actual use associated with this activity. Due to the topography of the site, it would not be visible from the historic property; therefore, the closing of the roadway would not cause an indirect visual effect on the Arroyo Seco Parkway Historic District and would not cause proximity impacts that would rise to the level of substantial impairment. Therefore, there would not be any constructive use associated with this activity.</p>			
<p>2. Construction Activity at Fair Oaks Avenue Overcrossing: Install signalization, signage, and delineate pavement on Fair Oaks Avenue and the existing ramp.</p>	Potential for a direct effect (criterion i)	No adverse effect	No use
	Potential for an indirect visual effect (criteria v)	No effect	No use
<p>The Fair Oaks Avenue ramp does not have original pavement; therefore, modifications to the pavement delineation would not have a potential to cause an adverse direct effect on the features of the Fair Oaks Avenue Overcrossing that contribute to the eligibility of the Arroyo Seco Parkway Historic District. The rest of the proposed improvements for this activity would take place outside the boundaries of the historic district. Therefore, there would be no actual use of the Arroyo Seco Parkway Historic District for this activity.</p> <p>This activity would not alter the setting of the Arroyo Seco Parkway Historic District. Therefore, the proposed installation of signalization, signage and pavement delineation does not have the potential to cause an indirect visual effect on the Arroyo Seco Parkway Historic District and would not cause proximity impacts that would rise to the level of substantial impairment. Therefore, there would not be any constructive use associated with this activity.</p>			
<p>3. Construction Activity at Fair Oaks Avenue Overcrossing, Road Reconfiguration within and Adjacent to the District: Widen the northbound SR 110 (Arroyo Seco Parkway) off-ramp at Fair Oaks Avenue from two lanes on the outside to four lanes. Convert two existing 12-foot lanes into dedicated left-turn lanes. One additional lane would be a 12-foot through lane, and the outermost would be a 12-foot combination through/right-turn lane for traffic onto eastbound Grevelia Street and southbound Fair Oaks Avenue, respectively.</p>	Potential for a direct effect (criterion i)	Adverse effect	Use; permanent incorporation
	Potential for an indirect visual effect (criteria v)	Adverse effect	No use

Table 4.2-1: Proposed TSM/TDM Alternative Features and Assessment of Potential Effects on the Arroyo Seco Parkway Historic District

TSM/TDM Alternative Features Proposed Near the Arroyo Seco Parkway Historic District and Assessment of Effects	Applicable Adverse Effect Criteria (36 CFR 800.5)	Effect Finding Based on Effect Criteria	Section 4(f) Use
<p>The off-ramp at Fair Oaks Avenue is a character-defining feature of the Arroyo Seco Parkway. The widening would remove portions of the ramp itself, including character-defining curbs, and the character-defining vegetated embankment. Therefore, the widening of this feature would cause an adverse direct effect on the Arroyo Seco Parkway and would also result in an actual use (permanent incorporation) under Section 4(f).</p> <p>Infrastructure improvements in an urban setting that replace, move, or alter existing non-historic elements that are not character-defining to the setting of a historic district would not cause an effect on historic properties as long as the setting is not an essential aspect of integrity for the historic property. The setting outside the boundaries of the historic district is not an essential aspect of integrity for the Arroyo Seco Parkway. However, the off-ramp, with its vegetated embankment, is a character-defining feature to the significance of the Arroyo Seco Parkway Historic District. Therefore, the proposed lane alteration would cause an indirect adverse visual effect on the Arroyo Seco Parkway. While the project would have an indirect visual effect on the Arroyo Seco Parkway Historic District, it would not rise to the level of substantial impairment because the value of the Arroyo Seco Parkway Historic District, in terms of its Section 4(f) purpose and significance, would not be meaningfully reduced or lost. The Arroyo Seco Parkway Historic District would retain its listing status on the NRHP. Therefore, there is no constructive use associated with this construction activity.</p>			
<p>4. Construction Activity at Fair Oaks Avenue Overcrossing, New Transportation Elements within the District: Install an approximately 275-foot-long retaining wall, ranging from approximately 6 feet to 20 feet in height, along the south side of the widened off-ramp to accommodate the new configuration. The retaining wall is needed to support Grevelia Street at the top of the wall and allow the proposed lane configuration of the northbound off-ramp. The wall would be approximately 22 feet tall near the base of the ramp and would gradually diminish in height to ground level at approximately 50 feet from the top of the ramp. At the top of the ramp, a concrete barrier and a 3-foot-wide planting area would separate the roadway from the new sidewalk along the south side of Grevelia Street to the top of the ramp. Install a 275-foot-long K-rail deflective concrete barrier at the base and front of the proposed retaining wall for safety.</p>	<p>Potential for a direct effect (criterion i)</p>	<p>Adverse effect</p>	<p>Use; permanent incorporation</p>
	<p>Potential for an indirect visual effect (criteria v)</p>	<p>Adverse effect</p>	<p>No use</p>
<p>The off-ramp at Fair Oaks Avenue is a character-defining feature of the Arroyo Seco Parkway Historic District and the installation of the retaining wall and concrete barrier would remove portions of the ramp and its character-defining features. Therefore, the proposed retaining wall would cause an adverse direct effect on the Arroyo Seco Parkway Historic District and would also result in an actual use (permanent incorporation) under Section 4(f).</p> <p>The proposed retaining wall and barrier are located within the Arroyo Seco Parkway Historic District boundaries and introduce new elements that are incongruous within the historic district. Therefore, the proposed retaining wall and barrier would cause an adverse indirect visual effect on the Arroyo Seco Parkway Historic District. While the project would have an indirect visual effect on the Arroyo Seco Parkway Historic District, it would not rise to the level of substantial impairment because the value of the Arroyo Seco Parkway Historic District, in terms of its Section 4(f) purpose and significance, would not be meaningfully reduced or lost. The Arroyo Seco Parkway Historic District would retain its listing status on the NRHP. Therefore, there is no constructive use associated with this construction activity.</p>			

Table 4.2-1: Proposed TSM/TDM Alternative Features and Assessment of Potential Effects on the Arroyo Seco Parkway Historic District

TSM/TDM Alternative Features Proposed Near the Arroyo Seco Parkway Historic District and Assessment of Effects	Applicable Adverse Effect Criteria (36 CFR 800.5)	Effect Finding Based on Effect Criteria	Section 4(f) Use
<p>5. Construction Activity at Fair Oaks Avenue Overcrossing, Road and Sidewalk Reconfiguration: Remove a non-contributing raised median island on top of the Fair Oaks Avenue Overcrossing and existing pork chop traffic island and associated traffic signal at the Fair Oaks Avenue and State Street intersection and replace with striping; repave Fair Oaks Avenue, which is non-contributing to the district, from approximately 95 feet south of Grevelia Street to approximately 60 feet north of State Street (Figure 4.2-1 to 4.2-6); replace an existing dedicated left-turn lane and one combination through/left-turn lane on northbound Fair Oaks Avenue (south of Grevelia Street) with two 12-foot through lanes to eliminate left turns onto the SR 110 (Arroyo Seco Parkway) southbound on-ramp; replace the outer northbound Fair Oaks through lane with a 12-foot combination through/right-turn south of the Grevelia Street intersection, and a 12-foot dedicated right-turn lane on Fair Oaks Avenue, north of the Grevelia Street intersection; and provide accessible pedestrian ramps at the southeast and southwest corners of Fair Oaks Avenue and Grevelia Street and one on the southeast corner of Fair Oaks Avenue and State Street.</p>	<p>Potential for an indirect visual effect (criteria v)</p>	<p>No effect</p>	<p>No use</p>
<p>Infrastructure improvements in an urban setting that replace, move, or alter existing non-historic elements that are not character-defining to the setting of a historic district would not cause an effect as long as the setting is not an essential aspect of integrity for the historic property. Although this work takes place on the contributing Fair Oaks Avenue Overcrossing, the work will not be visible from within the district boundaries and will take place on non-character-defining features of the overcrossing. Therefore, there is no actual use (permanent incorporation) of the features of the Fair Oaks Avenue Overcrossing that contribute to the eligibility of the Arroyo Seco Parkway Historic District.</p> <p>The remaining work associated with the road and sidewalk reconfiguration falls outside the boundaries of the historic district. The setting outside the historic district is not an essential aspect of its integrity. Therefore, the proposed road and sidewalk reconfiguration would not cause an indirect visual effect on the Arroyo Seco Parkway Historic District and would not cause proximity impacts that would rise to the level of substantial impairment. Therefore, there would not be any constructive use associated with this activity.</p>			
<p>6. Construction Activity: Restripe the adjacent lanes accordingly.</p>	<p>Potential for a direct effect (criterion i)</p>	<p>Potential Adverse Effect</p>	<p>Use; permanent incorporation</p>
<p>Because the dual-tone paved surfaces (design, not materials) of the Arroyo Seco Parkway Historic District are character-defining features, restriping in those areas has the potential to cause an adverse direct effect on the Arroyo Seco Parkway Historic District and would also result in an actual use (permanent incorporation) under Section 4(f).</p> <p><u>Temporary Use:</u></p> <p>Any temporary uses during construction that take place within the limits of the proposed improvements to the Fair Oaks Overcrossing that are within the boundaries of the Arroyo Seco Historic District would be within the same footprint of the actual uses under Section 4(f).</p>			

The Arroyo Seco Parkway Historic District Features Evaluated Relative to the Requirements of Section 4(f)

The project would not result in the use of any other contributing features besides the Fair Oaks Avenue Overcrossing. The features listed below were determined to not trigger protection under

the requirements of Section 4(f) as a result of the Build Alternatives because there was no permanent incorporation or constructive use. The resources were evaluated to assess whether project-related effects would result in proximity impacts after mitigation that would be so severe that the activities, features, and/or attributes of the property are substantially impaired resulting in the value of the resource in terms of its Section 4(f) significance being meaningfully reduced or lost. The TSM/TDM Alternative (T-2 Other Road Improvements) that would result in a direct use of the Arroyo Seco Parkway (SR 110) within the project construction limits extends from Post Mile (PM) 31.1/31.9.

Table 4.2-2 lists other contributing features of the Arroyo Seco Parkway Historic District that were evaluated under the requirements of Section 4(f). The features listed below are outside the project construction limits of the TSM/TDM Alternative (T-2 Other Road Improvements).

Table 4.2-2: Arroyo Seco Parkway Historic District Resources That Were Evaluated Relative to the Requirements of Section 4(f)

Contributing Features	Why Section 4(f) Is Not Triggered
Arroyo Seco Flood Control Channel	PM 25.48-30.10 outside APE (approximately 1 mi) No use/no proximity impacts*
Fremont Avenue Railroad Underpass (Bridge No. 53-0439)	PM 31.01 outside APE (approximately 475 feet/ 0.09 mi) No permanent incorporation and given the distance from the construction boundaries (475 feet) and from Fair Oaks Avenue Overcrossing (OC) (approximately 845 feet), the roadway curves/visibility and the minimal impacts of the TSM/TDM Alternative (T-2 Other Road Improvements) with respect to noise, air quality, vegetation removal and visual impacts the proximity impacts after mitigation would not rise to the level of substantial impairment.
Fremont Avenue Overcrossing Bridge No. 53-0438)	PM 31.01 outside APE (approximately 475 feet/0.09 mi) No permanent incorporation and given the distance from the APE and the Fair Oaks Avenue OC (approximately 845 feet), the roadway curves/visibility and the minimal impacts of the TSM/TDM Alternative (T-2 Other Road Improvements) with respect to noise, air quality, vegetation removal and visual impacts the proximity impacts after mitigation would not rise to the level of substantial impairment.
Meridian Avenue Overcrossing (Bridge No. 53-0437)	PM 30.78 outside APE (approximately 1,689 feet (0.32 mi) No permanent incorporation and given the distance from the APE and the Fair Oaks Avenue OC (approximately 2059 feet) and minimal impacts of the TSM/TDM Alternative (T-2 Other Road Improvements) with respect to noise, air quality, noise and visual; there would be no proximity impacts.
Prospect Avenue Overcrossing (Bridge No. 53-0436)	PM 30.70 outside APE (approximately 2112 feet/0.40 mi) No permanent incorporation and given the distance from the APE and the Fair Oaks Avenue OC (approximately 2482 feet) and the minimal impacts of the TSM/TDM Alternative (T-2 Other Road Improvements) with respect to noise, air quality, vegetation removal, and visual; there would be no proximity impacts.

Table 4.2-2: Arroyo Seco Parkway Historic District Resources That Were Evaluated Relative to the Requirements of Section 4(f)

Contributing Features	Why Section 4(f) Is Not Triggered
Orange Grove Avenue Overcrossing (Bridge No. 53-0434)	PM 30.43 outside APE (approximately 3537 feet /0.67 mi) No permanent incorporation and given the distance from the APE and the Fair Oaks Avenue OC (approximately 3907 feet) and the minimal impacts of the TSM/TDM Alternative (T-2 Other Road Improvements) with respect to noise, air quality, vegetation removal, and visual; there would be no proximity impacts.
Arroyo Drive Overcrossing (Bridge No. 53-0433)	PM 30.30 outside APE (approximately 4224 feet /0.80 mile) No permanent incorporation and given the distance from the APE and the Fair Oaks Avenue OC (approximately 4594 feet) and the minimal impacts of the TSM/TDM Alternative (T-2 Other Road Improvements) with respect to noise, air quality, vegetation removal, and visual; there would be no proximity impacts.
Arroyo Seco Pedestrian and Equestrian Undercrossing (Bridge No. 53-0432)	PM 30.25 outside APE (approximately 4488 feet (0.85 miles) No permanent incorporation and given the distance from the APE and Fair Oaks Avenue OC (approximately 4858 feet) and the minimal impacts of the TSM/TDM Alternative (T-2 Other Road Improvements) with respect to noise, air quality, vegetation removal, and visual; there would be no proximity impacts.
Arroyo Seco Bridge (Bridge No. 53-02760)	PM 30.10 outside APE (approximately 1 mile) No use/no proximity impacts*
York Boulevard Overcrossing (Bridge Nos. 53-0121 and 53C-1874)	PM 29.50 outside APE No use/no proximity impacts*
Arroyo Seco Maintenance Station (6740 Marmion Way)	PM 29.3 outside APE No use/no proximity impacts*
Marmion Way Overcrossing (Bridge Nos. 53-0445 and 53C-1879)	PM 29.28 outside APE No use/no proximity impacts*
Santa Fe Arroyo Seco Railroad Bridge (Bridge No. 53-0431)	PM 29.03 outside APE No use/no proximity impacts*
Avenue 60 Ramp Pedestrian Undercrossing (Bridge No. 53-0988)	PM 28.86 outside APE No use/no proximity impacts*
Avenue 60 Ramp (Bridge No. 53-0986)	PM 28.86 outside APE No use/no proximity impacts*
Avenue 60 Overcrossing (Bridge Nos. 53-0430 and 53C-1878)	PM 29.76 outside APE No use/no proximity impacts*
Arroyo Seco Park Bridge	N/A outside APE No use/no proximity impacts*
Via Marisol Overcrossing (Bridge No. 53-0429)	PM 28.38 outside APE No use/no proximity impacts*

Table 4.2-2: Arroyo Seco Parkway Historic District Resources That Were Evaluated Relative to the Requirements of Section 4(f)

Contributing Features	Why Section 4(f) Is Not Triggered
Avenue 52 Overcrossing (Bridge No. 53-0428)	PM 28.05 outside APE No use/no proximity impacts*
Sycamore Grove Pedestrian Overcrossing (Bridge No. 53-0344)	PM 27.64 outside APE No use/no proximity impacts*
Avenue 43 Overcrossing (Bridge Nos. 53-0427 and 53C-1877)	PM 27.12 outside APE No use/no proximity impacts*
Avenue 43 Ramp (Bridge No. 53-0985S)	PM 27.08 outside APE No use/no proximity impacts*
Pasadena Avenue Overcrossing (Bridge Nos. 53-0426 and 53C-1876)	PM 26.48 outside APE No use/no proximity impacts*
Avenue 35 Railroad Underpass (Bridge No. 53-0425)	PM 26.40 outside APE No use/no proximity impacts*
Avenue 26 Overcrossing (Bridge No. 53-0372 and 53C-1875)	PM 25.91 outside APE No use/no proximity impacts*
Figueroa Street Off-Ramp Undercrossing (Bridge No. 53-0533L)	PM 25.78 outside APE No use/no proximity impacts*
Phase II Roadway	PMs 25.78–24.55 outside APE No use/no proximity impacts*
Los Angeles River Bridge Eastbound (Bridge No. 53-0042R)	PM 25.48 outside APE No use/no proximity impacts*
Los Angeles River Bridge Westbound (Bridge No. 53-0042L)	PM 25.48 outside APE No use/no proximity impacts*
Riverside Drive Off-Ramp Viaduct (Bridge No. 53-222G)	PM 25.48 outside APE No use/no proximity impacts*
Figueroa Street Tunnel (Bridge No. 53-0202R)	PM 25.37 outside APE No use/no proximity impacts*
Elysian Park Pedestrian Undercrossing (Bridge Nos. 53-0477R and 53-0477L) (No Longer Extant)	PMs 25.33 and 25.36 outside APE No use/no proximity impacts*
Figueroa Street Tunnel 2 (Bridge No. 53-0201R)	PM 25.28 outside APE No use/no proximity impacts*
Park Row Overcrossing (Bridge No. 53-0542L)	PM 25.2 outside APE No use/no proximity impacts*
Figueroa Street Tunnel 1 (Bridge No. 53-0200R)	PM 25.14 outside APE No use/no proximity impacts*

Table 4.2-2: Arroyo Seco Parkway Historic District Resources That Were Evaluated Relative to the Requirements of Section 4(f)

Contributing Features	Why Section 4(f) Is Not Triggered
Solano Avenue Pedestrian Undercrossing (Bridge No. 53-0532R)	PM 25.1 outside APE No use/no proximity impacts*
Solano Avenue Undercrossing (Bridge No. 53-0541L)	PM 25.09 Outside APE No use/no proximity impacts*
Amador Street Undercrossing (Bridge No. 53-0504L)	PM 25.04 outside APE No use/no proximity impacts*
Figueroa Street Tunnel 4 (Bridge No. 53-0199R)	PM 24.90 outside APE No use/no proximity impacts*
Stadium Way Overcrossing (Bridge No. 53-0540R)	PM 24.76 outside APE No use/no proximity impacts*
Stadium Way Undercrossing (Bridge No. 53-0540L)	PM 24.73 outside APE No use/no proximity impacts*
Hill Street Off-Ramp Overcrossing (Bridge No. 53-0539C)	PM 24.55 outside APE No use/no proximity impacts*
Yale Street Pedestrian Undercrossing (Bridge No. 53-0586M) (No Longer Extant)	PM 24.4 outside APE No use/no proximity impacts*
Phase III Roadway	PMs 24.55–23.6 outside APE No use/no proximity impacts*
College Street Overcrossing (Bridge No. 53-0382)	PM 24.16 outside APE No use/no proximity impacts*
Alpine Street Overcrossing (Bridge No. 53-0592)	PM 23.96 outside APE No use/no proximity impacts*
Sunset Boulevard Overcrossing (Bridge No. 53-0246)	PM 23.83 outside APE No use/no proximity impacts*
Beaudry Avenue Overcrossing (Bridge No. 53-0621H)	PM 23.75 outside APE No use/no proximity impacts*
Four Level Interchange (Bridge Nos. 53-0622, 53-0622F, 53-0622L, 53-0622R)	PM 23.69 outside APE No use/no proximity impacts*

*1 mile or more away from proposed TSM/TDM Alternative T-2 Other Road Improvements

The non-contributing features of the Arroyo Seco Parkway Historic District listed in Table 4.2-3 were evaluated relative to the requirements of Section 4(f). As noted above, Section 4(f) does not apply to property within the district that does not contribute to the eligibility of the historic district or that is not individually eligible; therefore, there would be no Section 4(f) use and these features are not discussed further.

Table 4.2-3: Arroyo Seco Parkway Historic District Non-Contributing Features

Non-Contributing Feature	Location	Year Built
Cypress Avenue Pedestrian overcrossing (Bridge No. 53-0538)	PM 26.19	1962
Westbound SR 110 to I-5 Connector Overcrossing (Bridge No. 53-1457F)	PM 26.12	1962
Northbound SR 110 to I-5 Connector Overcrossing (Bridge No. 53-1456H)	PM 26.07	1962
Elysian Viaduct (Bridge No. 53-1424)	PM 25.75	1962
Figuroa Street Sidehill Viaduct (Bridge No. 53-2857L)	PM 25.27	2001
Stadium Way Sidehill Viaduct (Bridge No. 53-2859L)	PM 24.73	2001
Stadium Way Off-Ramp Overcrossing (Bridge No. 53-1635S)	PM 24.53	1962
Yale Street Pedestrian Overcrossing (Bridge No. 53-1105)	PM 24.37	1962

Source: *Finding of Adverse Effect (2017)*

A temporary construction easement is proposed for the TSM/TDM Alternative (T-2 Other Road Improvements) to the SR 110 State Street on-ramp. The State Street on-ramp is a non-contributing feature of the Arroyo Seco Parkway Historic District therefore it would not be considered a use under Section 4(f).

Chapter 5 Section 4(f) Avoidance Alternatives

5.1 Introduction

Section 4(f) specifies that the Secretary of Transportation may approve a transportation program or project requiring the use of Section 4(f) property only if there is no prudent and feasible alternative to using that land. 23 CFR 774.17 defines a feasible and prudent avoidance alternative as follows:

- (1) A feasible and prudent avoidance alternative avoids using Section 4(f) property and does not cause other severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) property. In assessing the importance of protecting the Section 4(f) property, it is appropriate to consider the relative value of the resource to the preservation purpose of the statute.
- (2) An avoidance alternative is not feasible if it cannot be built as a matter of sound engineering judgment.
- (3) An avoidance alternative is prudent:
 - (i) Compromises the project so that it is unreasonable given the Purpose and Need;
 - (ii) Results in unacceptable safety or operational problems;
 - (iii) After reasonable mitigation, still causes:
 - (a) Severe social, economic, or environmental impacts;
 - (b) Severe disruption to established communities;
 - (c) Severe environmental justice impacts; or
 - (d) Severe impacts to other federally protected resources;
 - (iv) Results in additional construction, maintenance, or operational costs of an extraordinary magnitude;
 - (v) Causes other unique problems or unusual factors; or
 - (vi) Involves multiple factors listed above that, while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude.

This section discusses whether there are any feasible and prudent avoidance alternatives to the use of the Section 4(f) property.

5.2 No Build Alternative

The No Build Alternative would not result in the construction or operation of any of the transportation improvements in the four Build Alternatives and would totally avoid use of any and all Section 4(f) properties; however, the No Build Alternative would not be a feasible and prudent alternative to avoid Section 4(f) properties because it would not meet the project Purpose and Need; therefore, (1) it would compromise the project so that it is unreasonable given the Purpose and Need. (Please see Section 2 of this evaluation for a detailed description of the Project Purpose and Need).

5.3 Build Alternatives

All Build Alternatives would result in an adverse effect to the Arroyo Seco Parkway Historic District under Section 106 of the National Historic Preservation Act which would result in a use of a historic transportation facility or historic district. Even with design and mitigation, those effects cannot be fully avoided. Therefore, none of the four Build Alternatives would be an avoidance alternative that would fully avoid Section 4(f) properties.

5.4 SR 710 North Study Alternatives Analysis (AA)

Numerous alternatives and design shifts were analyzed as part of the development of the SR 710 North project. As documented in this summary of the SR 710 North Alternatives Analysis Report, the efforts did not result in any prudent and feasible Section 4(f) avoidance alternatives because every build alternative studied either had uses of Section 4(f) properties or they resulted in conditions that made them not feasible and prudent. In 2012, Metro conducted an alternatives analysis that considered a wide range of possible transportation alternatives identified based on past studies and comments received from stakeholders including elected officials, city and agency staff, as well as the community as part of the EIR/EIS process. That analysis process and findings are documented in the Alternatives Analysis Report (2012) and data from the report has been summarized below; the report is also hereby incorporated by reference. The alternatives considered were evaluated and refined through a sequential screening process to identify the alternatives that best met the purpose and need for the SR 710 North Study. The preliminary alternatives evaluated in the AA that avoid use of the Arroyo Seco Parkway Historic District were identified and potential impacts to cultural resources, parks and recreation areas were evaluated using the methodology described below.

Parks and Recreation Facilities

For the Level I and II Screening process, the methodology used to provide the parks and recreational facilities analysis was the review of each Level I and Level II Alternative using Geographical Information System (GIS) analysis, specifically using the ArcGIS viewer software. This viewer allows for the collection of data from an aerial map of the Project Study Area, with overlays of each alternative. Approximately 70 parks and recreational facilities are located with the SR 710 Study Area and the ArcGIS viewer shows the alternative alignments in relationship to the existing parks and recreational facilities. The analysis of the potential effects to parks and recreational facilities was focused within each alternative's potential disturbance limit lines (DLL) developed by the engineering team, and the physical location of the existing parks and recreational facilities, either adjacent to or within each alternative's DLL.

Cultural Resources

For the Level I and Level II Screening process, the following methodology was used to determine the estimated numbers of historic-period (45 years of age or older) buildings and features that would be directly (physically) impacted by the SR 710 Build Alternatives.

For the Level I and II Screening effort general background research was conducted using published literature in local and regional history, online resources regarding the history and development of the San Gabriel Valley and the cities and communities within it, historic aerial photographs, and historic maps of the project vicinity. In addition, the California Office of Historic Preservation (OHP) Directory of Properties in the Historic Property Data File for Los Angeles County (April 2004, 2011, 2012) was reviewed and maps were made for each alternative using Geographic Information Systems (GIS) technology. The maps incorporated parcel data from the Los Angeles County

Assessor's Office, such as parcel lines, addresses, Assessor Identification Numbers (AIN), and dates of construction. As more information was collected through the research process it was added to the maps and appropriate files and tables.

As part of the Level I Screening, which was quite broad in scope, the mapping process consisted of the creation of two buffers around the centerline for each of the alternatives (250 feet for freeway alternatives, 100 feet for all others). The purpose of the buffers was to define an area that would encompass all of the direct impacts as well as most of the potential indirect impacts associated with each alternative and create reasonable boundaries within which to limit the property research (properties directly above bored tunnels were excluded from the counts of directly impacted properties).

No known archaeological resources were identified in the study areas of any of the alternatives.

The following preliminary set of the SR 710 North Study Alternatives initially evaluated in the Alternatives Analysis avoid use of the Arroyo Seco Parkway Historic District. However, they were eliminated as Section 4(f) Avoidance Alternatives due to their use of potential Section 4(f) and Section 4(f) properties. The information used for this analysis was taken from the Alternatives Analysis (2012).

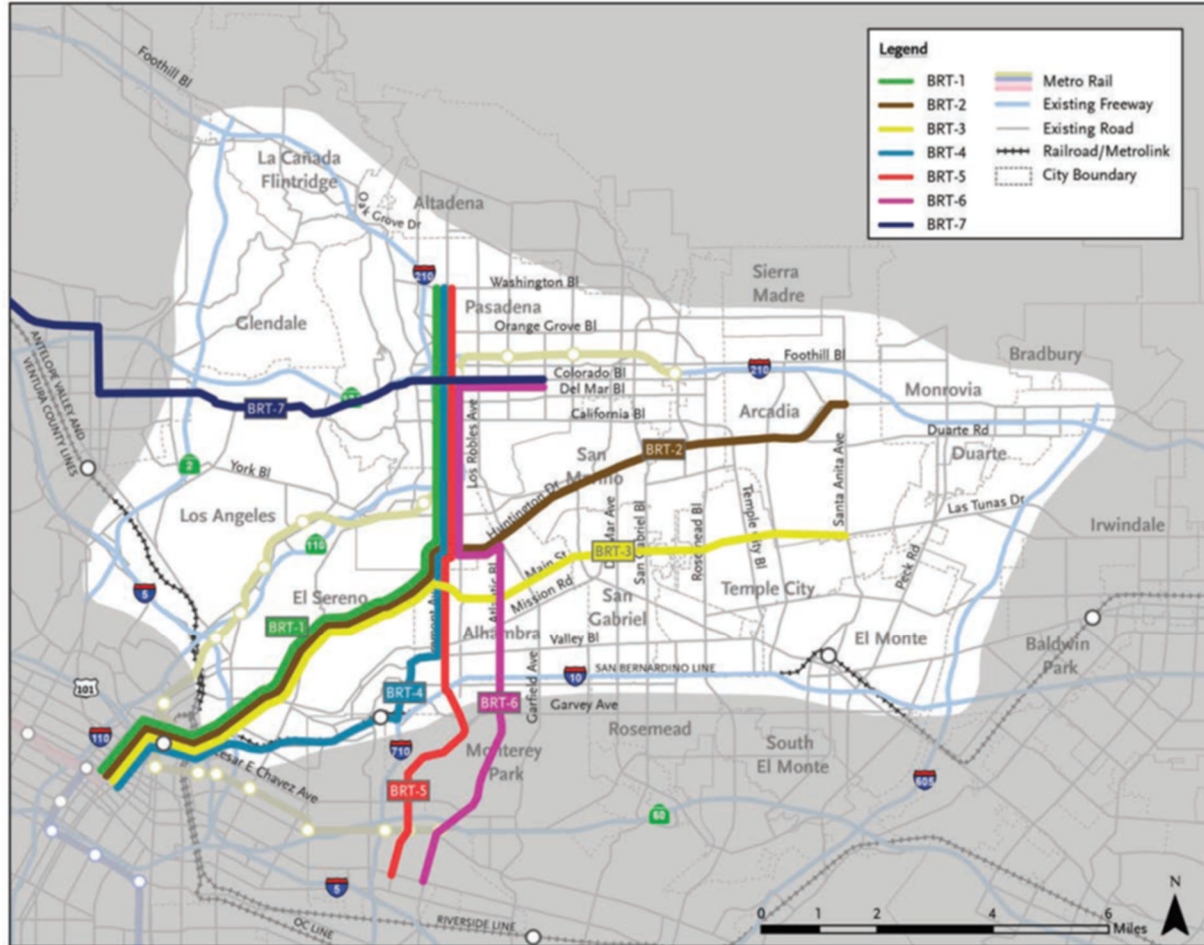
5.4.1 The Bus Rapid Transit (BRT) At-Grade Alternatives

BRT-2 would connect the LA Metro Union Station to the Santa Anita Park and Ride.

Potential use of Section 4(f) properties:

- Lincoln Park, Michillinda County Park, Santa Anita Golf Course and Arcadia County Park could potentially be affected due to construction activities, noise and access to the parks.
- This is an at-grade alternative. Within a 200-foot-wide corridor centered on this alternative there are at least 555 properties with historic-period buildings. It was anticipated that some ROW acquisitions would be needed for this alternative and, therefore, it was estimated that 51-100 properties would likely be directly impacted.

Figure 5.4-1: BRT Alternatives in the Preliminary Set of Alternatives



Source: Alternatives Analysis (2012)

BRT-3 would connect the LA Metro Union Station to Live Oak in Temple City.

Potential use of Section 4(f) properties:

- Lincoln Park, San Gabriel Country Club and Golf Course and Temple City Park could potentially be affected due to construction activities, noise and access to the parks.
- This is an at-grade alternative. Within a 200-foot-wide corridor centered on this alternative there are at least 580 properties with historic-period buildings. It was anticipated that some ROW acquisitions would be needed for this alternative and, therefore, it was estimated that 51-100 properties would likely be directly impacted.
- BRT 1, BRT-4, and BRT-7 intersect with the Arroyo Seco Parkway Historic District; therefore, they were not evaluated as potential Section 4(f) Avoidance Alternatives.

Among the BRT Alternatives analyzed during the AA, BRT-6 was carried forward into the technical studies for the Draft EIR/EIS and since it intersects with the Arroyo Seco Parkway Historic District; it was not evaluated as a potential Section 4(f) Avoidance Alternative.

5.4.2 Light Rail Transit (LRT) and Commuter Rail At-Grade, Aerial/Tunnel Alternatives

LRT-1 would connect LA Metro Union Station to Burbank Airport.

Potential use of Section 4(f) properties:

- The Los Angeles Historic Park, Elysian Park and Cypress Park could potentially be affected due to construction activities, noise and access to the parks. Rio de Los Angeles State Park Cerritos School Park and Gross Park could potentially be affected because of the partial acquisitions required for the alignment of this alternative.
- Within a 200-foot-wide corridor centered on this alternative there are at least 274 properties with historic-period buildings. However, it was anticipated that only minor ROW acquisitions would be needed for this alternative and, therefore it was estimated that up to 50 properties may be directly impacted.

LRT-2 would connect the Gold Line at I-210 to the Burbank Airport.

Potential use of Section 4(f) properties:

- Annandale Golf Course, Carr Park, Glendale Central Park and Eagle Rock Hillside Park could potentially be affected due to construction activities, noise and access to the parks. Pasadena Memorial Park, Brookside Park and Gross Park could potentially be affected because of the partial acquisitions required for the alignment of this alternative.
- Within a 200-foot-wide corridor centered on this alternative there are at least 423 properties with historic-period buildings. It was anticipated that some ROW acquisitions would be needed for this alternative, therefore it was estimated that 51-100 properties would likely be directly impacted.

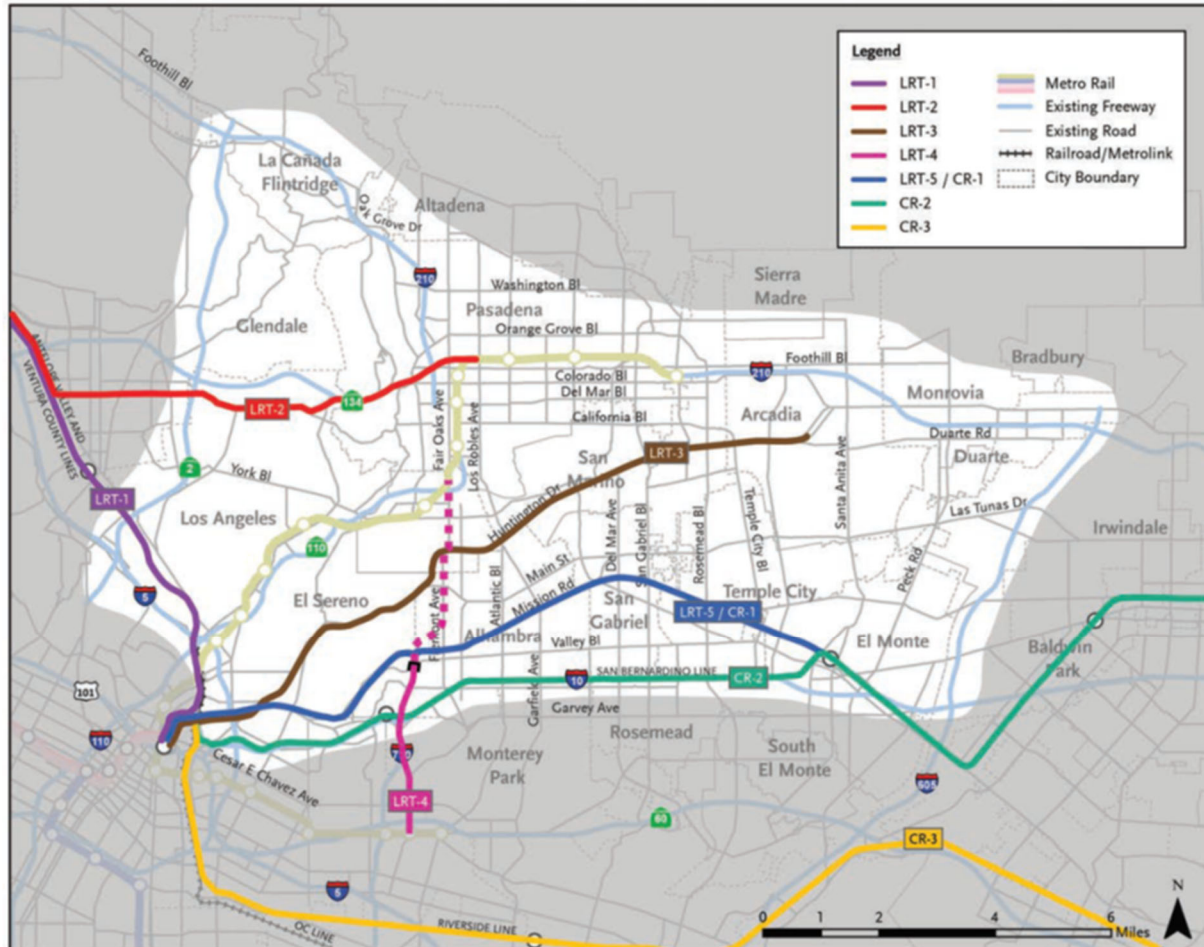
LRT-3 would connect the LA Metro Union Station to the Santa Anita Park and Ride.

Potential use of Section 4(f) properties:

- Lincoln Park could potentially be affected because of the partial acquisitions required for the alignment of this alternative. The aerial variation of this alternative could potentially affect and require a partial acquisition of the west side of Lincoln Park. The Option 2 aerial variation of this alternative could potentially require a partial acquisition of the south side of Lincoln Park. Michillinda County Park could potentially be affected due to construction activities, noise and access to the parks.
- This alternative included four options: two aerial and two at-grade. Within a 200-foot-wide corridor centered on the at-grade options there are at least 500 properties with historic-period buildings. It was anticipated that some ROW acquisitions would be needed for these options, therefore it was estimated that 51-100 properties would likely be directly impacted.
- Within a 200-foot-wide corridor centered on the aerial options for this alternative there are as many as 72 properties with historic-period buildings. However, the indirect impact area would likely be enlarged due to the visibility of an aerial option. However, for the aerial options it was anticipated that only minor ROW acquisitions would be needed, therefore it was estimated that up to 50 properties would be directly impacted.

LRT-5/CR-1 would connect the LA Metro Union Station to the El Monte Metro Link Station.

Figure 5.4-2: LRT and Commuter Rail Alternatives in the Preliminary Set of Alternatives



Source: Alternatives Analysis (2012)

Potential use of Section 4(f) properties:

- Lincoln Park, Almansor Park and the Alhambra Municipal Golf Course could potentially be affected due to construction activities, noise and access to the parks.
- Within a 200-foot-wide corridor centered on this alternative there are at least 262 properties with historic-period buildings. However, it was anticipated that only minor ROW acquisitions would be needed for this alternative and, therefore it was estimated that up to 50 properties would be directly impacted.
- Among the LRT Alternatives analyzed during the AA, LRT-4 was carried forward into the technical studies for the Draft EIR/EIS and since it intersects with the Arroyo Seco Parkway Historic District; it was not evaluated as a potential Section 4(f) Avoidance Alternative.

CR-2 Metrolink San Bernardino line.

Potential use of Section 4(f) properties:

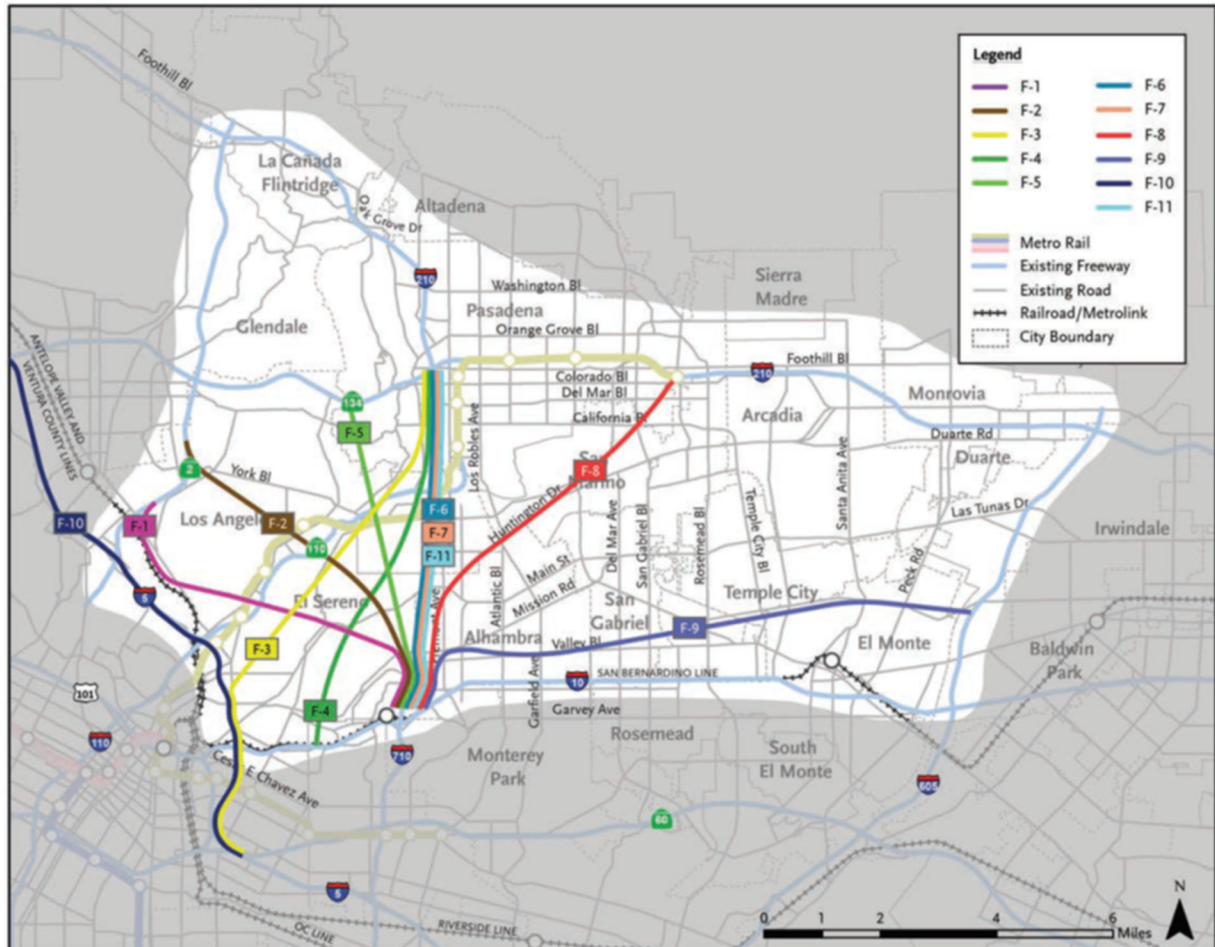
- Ramona Gardens Park and Pioneer Park could potentially be affected due to construction activities, noise and access to the parks.

CR-3 Metrolink Riverside line.

Potential use of Section 4(f) properties:

- The Little League baseball fields along Big Falls Drive could potentially be affected due to construction activities, noise and access to the parks.

Figure 5.4-3: Freeway Alternatives in the Preliminary Set of Alternatives



Source: Alternatives Analysis (2012)

5.4.3 Freeway Tunnel (F) At-Grade, Tunnel Alternatives

F-8 would connect the southern stub to I-210 east of the SR-710 northern stub.

Potential use of Section 4(f) properties:

- Alhambra Park could potentially be affected because of the partial acquisition required for the alignment of this alternative.

F-9 would connect the SR-710 southern stub to the 605.

Potential use of Section 4(f) properties:

- The football field at Gabrielino High School could potentially be affected because of the partial acquisition required for the alignment of this alternative.

- F-1, F-2, F-3, F-4, F-5, F-6, F-10, F-11 intersect with the Arroyo Seco Parkway Historic District; therefore, they were not evaluated as potential Section 4(f) Avoidance Alternatives.
- Among the Freeway Tunnel Alternatives analyzed during the AA, F-7 was carried forward into the technical studies for the Draft EIR/EIS and since it intersects with the Arroyo Seco Parkway Historic District; it was not evaluated as a potential Section 4(f) Avoidance Alternative.

5.4.4 Highway (H) at-Grade Alternatives

H-7 proposed to build a new highway from SR-710 southern stub to SR-134

Potential use of Section 4(f) properties:

- Villa Park and La Pintesca Park could potentially be affected because of the partial acquisitions required for the alignment of this alternative.

This alternative involved upgrades to existing streets. Within a 500-foot-wide corridor centered on this alternative there are at least 582 properties with historic-period buildings. It was anticipated that ROW acquisitions would be needed for this alternative and, therefore, it was estimated that more than 100 properties would likely be directly impacted. H-8 proposed upgrades to existing facilities at Valley, Mission, Fremont, Poplar, Marengo, Huntington, Los Robles

Use of Potential Section 4(f) properties:

- Within a 500-foot-wide corridor centered on this alternative there are at least 250 properties with historic-period buildings. It was anticipated that some ROW acquisitions would be needed for this alternative and, therefore, it was estimated that 51-100 properties would likely be directly impacted.

H-9 proposed upgrades to existing facilities at Valley, Fremont, Mission, Atlantic, Los Robles

Potential use of Section 4(f) properties:

- The park/field at Madison Elementary School and the La Pintesca Park could potentially be affected because of the partial acquisition required for the alignment of this alternative. This alternative involved upgrades to existing streets.
- Within a 500-foot-wide corridor centered on this alternative there are at least 502 properties with historic-period buildings. It was anticipated that ROW acquisitions would be needed for this alternative and, therefore, it was estimated that more than 100 properties would likely be directly impacted.

H-11 proposed upgrades to existing facilities at San Gabriel/I-10, San Gabriel at I-210

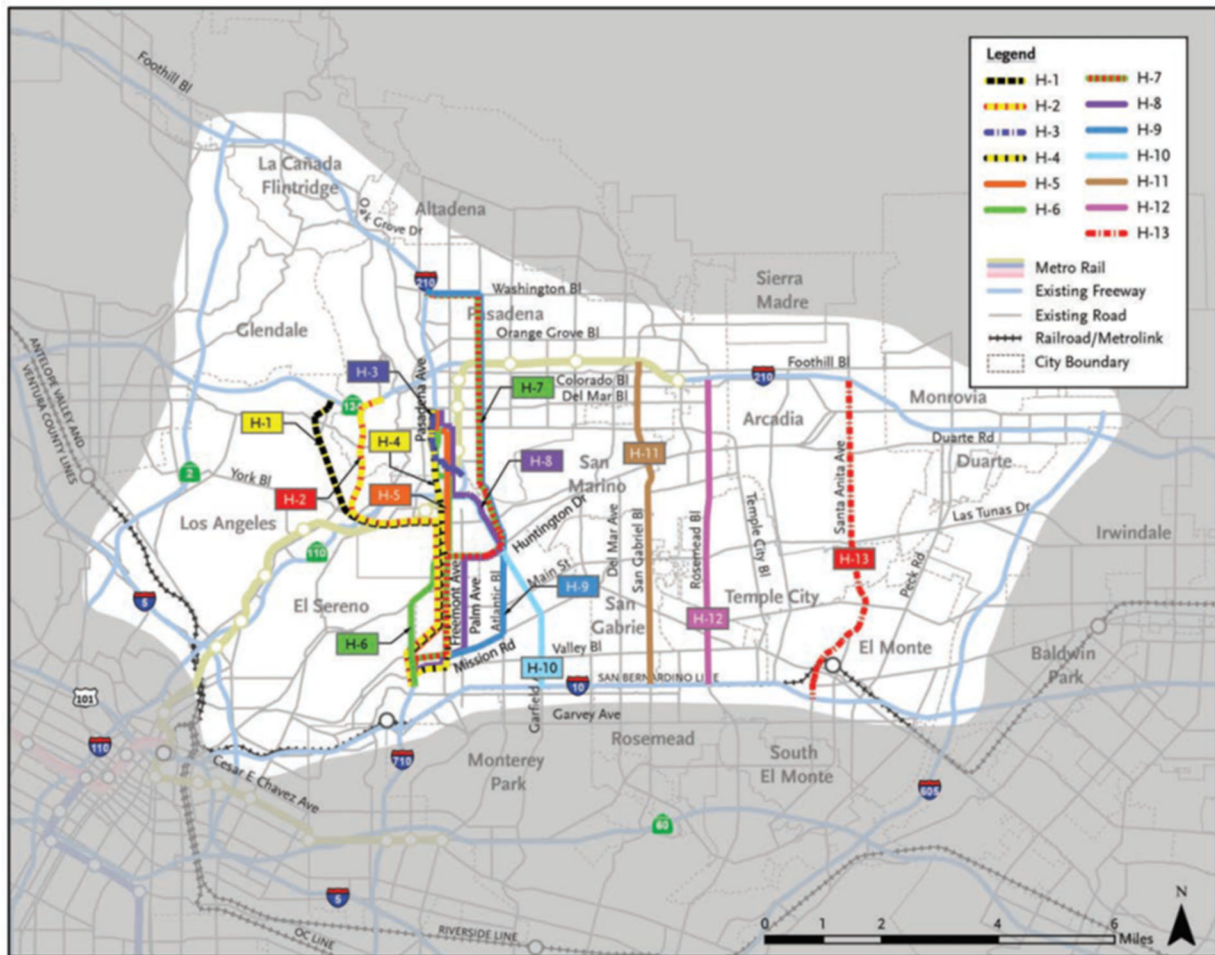
Potential use of Section 4(f) properties:

- The San Gabriel County Club could potentially be affected because of the partial acquisition required for the alignment of this alternative.
- This alternative would utilize existing streets. Within a 500-foot-wide corridor centered on this alternative there are at least 365 properties with historic-period buildings. It was anticipated that ROW acquisitions would be needed for this alternative and, therefore, it was estimated that more than 100 properties would likely be directly impacted.

H-12 Alternative proposed upgrades to existing facilities at Rosemead at I-10 and Rosemead at I-210
 Use of Potential Section 4(f) properties:

- This alternative would utilize existing streets. Within a 500-foot-wide corridor centered on this alternative there are at least 262 properties with historic-period buildings. It was anticipated that some ROW acquisitions would be needed for this alternative and, therefore, it was estimated that 51-100 properties would likely be directly impacted.

Figure 5.4-4: Highway Alternatives in the Preliminary Set of Alternatives



Source: Alternatives Analysis (2012)

H-13 Alternative would connect I-10 to the I-210 East of the 710 gap.

Potential use of Section 4(f) properties:

- The Santa Fe Trail Historic Park, the Santa Anita Golf Course and Arcadia Park could potentially be affected because of the partial acquisitions required for the alignment of this alternative.
- This alternative would utilize existing streets. Within a 500-foot-wide corridor centered on this alternative there are at least 239 properties with historic-period buildings. It was anticipated that some ROW acquisitions would be needed for this alternative and, therefore, it was estimated that 51-100 properties would likely be directly impacted.

H-1, H-2, H-3, H-4, H-5, H-6, H-10 intersect with the Arroyo Seco Parkway Historic District; therefore, they were not evaluated as potential Section 4(f) Avoidance Alternatives.

5.5 Elimination of the TSM/TDM Alternative (T-2 Other Road Improvements) from All Build Alternatives

The TSM/TDM Alternative (T-2 Other Road Improvements) was initially identified and proposed in an approved Caltrans Project Report for the Fair Oaks Interchange Modifications and New Access at State Street Project (August 2004). According to the project history, the project was a part of an overall strategy developed by the cities of South Pasadena and Pasadena and the community of El Sereno in Los Angeles to improve mobility and reduce congestion in the north/south corridor. The Fair Oaks Avenue corridor is the primary north/south arterial within the City of Pasadena, and capacity on the northbound SR-110 Fair Oaks off-ramp was found to be insufficient to accommodate evening peak-hour volumes, as vehicle queues frequently extend onto the SR-110 mixed flow lanes. Over time, this roadway condition has continued to deteriorate as traffic levels continue to increase. According to the Project Report, the No Action Alternative (i.e. elimination of the TSM/TDM Alternative (T-2 Other Road Improvements)), would maintain the existing interchange configuration. Traffic volumes at the interchange would continue to grow, and existing levels of service would continue to degrade. Traffic queues would become longer and vehicle delays would increase; therefore, (ii) this alternative would result in unacceptable safety or operational problems and would not be prudent.

5.6 Design Changes to Avoid Use of Section 4(f) Property

5.6.1 Consideration of Non-Standard Design Features

The following design variations, including the use of non-standard design features and alignment shifts were considered, but were no longer under consideration as documented in the Project Report (August 2004) for the Fair Oaks Interchange Modification and New Access at State Street Project. These alternatives were eliminated as potential Avoidance Alternatives because they do not avoid the use of the Arroyo Seco Parkway Historic District.

Hook Ramp Design Option

The hook on-ramp design option was favored by the City of South Pasadena. This major improvement included a new on-ramp at Fair Oaks Avenue to SR-110 (within the Arroyo Seco Parkway Historic District) via State Street. However, the ramp location was closer to Fair Oaks Avenue, with the ramp originating at the Raymondale Drive/State Street intersection. Due to the close proximity of the ramp to the existing Fair Oaks Avenue overcrossing and constrained ROW, several exceptions to mandatory highway design standards would be required. Several of the exceptions were deemed unacceptable by Caltrans and FHWA geometricians and they would not approve the Fact Sheet. This design change would (ii) result in an unacceptable safety or operational problem; therefore, it would not be a prudent avoidance alternative.

Loop Ramp Design Option

The loop ramp design option for the SR-110 (within the Arroyo Seco Parkway Historic District) was designed to achieve minimum design standards consistent with current engineering practice. The configuration required substantial ROW, impacts to businesses and costs exceeded available funds.

This design change would (iv) result in additional construction, maintenance, or operational costs of an extraordinary magnitude; therefore, it would not be a prudent avoidance alternative.

Alternative 2

Alternative 2 consisted of providing a southbound SR-110 off-ramp (within the Arroyo Seco Parkway Historic District) at State Street and widening the northbound Fair Oaks Avenue off-ramp. This alternative would provide a new on-ramp with a realigned intersection that would be sufficient to allow a bus with a 42-foot wheelbase to maneuver onto the freeway. The ramp interior intersection radius would remain at 25 feet and is currently designed to accommodate a standard bus (refer to the Caltrans Highway Design Manual).

To accommodate the ramp, approximately 328 feet of State Street would be realigned. The realignment would require approximately 646 square feet of Caltrans ROW and 288 square feet from the City of Pasadena ROW. A 183-foot-long retaining wall was proposed to limit private property impacts. The required area is within an existing landscaped slope adjacent to an apartment building. Additional impacts for this alternative would include requiring acquisition of new ROW and adverse impacts to a historic property. This design change would adversely impact a potential Section 4(f) property and (iv) result in additional construction, maintenance, or operational costs of an extraordinary magnitude; therefore, it would not avoid a potential Section 4(f) property and it would not be a prudent avoidance alternative.

For more detailed information, please refer to the Caltrans Project Report for the Fair Oaks Interchange Modifications and New Access at State Street Project (August 2004).

5.7 Alignment Shifts

The Alternatives Analysis (2012) Level I Screening was broad in scope; the mapping consisted of two study buffers around the centerline for each of the alternatives (250 feet for freeway and highway alternatives, 100 feet for all others). The purpose of the buffers was to define an area that would encompass all of the direct impacts as well as most of the potential indirect impacts associated with each alternative and create reasonable boundaries within which to limit the property research. (Properties directly above bored tunnels were excluded from the counts of directly impacted properties.)

As discussed above, the following preliminary set of alternatives avoid the Arroyo Seco Parkway Historic District, but would result in a direct impact (use) to historic period buildings. Historic period buildings eligible for or listed on the National Register of Historic Place are Section 4(f) properties. Due to the number of historic period buildings found within the study buffers, and the number of Section 4(f) properties found within the APE (see Chapter 3 Section 3.1), any potential alignment shift would most likely result in a use of a potential Section 4(f) Property.

The following numbers of historic period buildings were found within the study buffer; this information was taken from the Alternatives Analysis (2012). A 200-foot buffer was used to assess potential impacts to historic-period buildings (100 feet on either side of the centerline) for TSM/TDM, BRT, and LRT Alternatives:

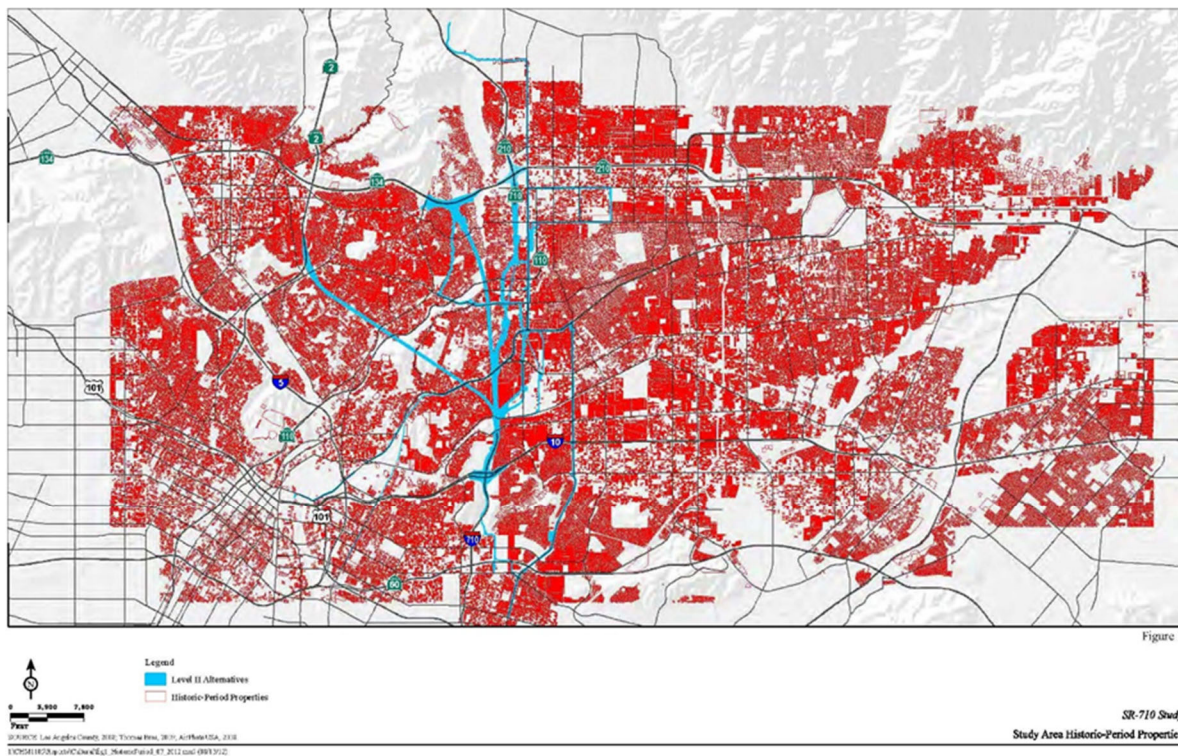
- TSM/TDM: At least 4,060 properties with historic-period buildings.
- BRT-2: At least 555 properties with historic-period buildings.
- BRT-3: At least 580 properties with historic-period buildings.
- LRT-1: At least 274 properties with historic-period buildings
- LRT-2: At least 423 properties with historic-period buildings.

- LRT-3: At least 500 properties with historic-period buildings.
- LRT-4 At least 72 properties with historic-period buildings
- LRT-5/CR-1: At least 268 properties with historic-period buildings
- CR-2: At least 134 properties with historic-period buildings.
- CR-3: At least 224 properties with historic-period buildings.

A 500-foot buffer was used to assess potential impacts to historic-period buildings (250 feet on either side of the centerline) for Freeway Tunnel and Highway Alternatives:

- F-8: At least 1,378 properties with historic-period buildings.
- F-9: At least 1,551 properties with historic-period buildings
- H-7: At least 582 properties with historic-period buildings.
- H-8: At least 250 properties with historic-period buildings.
- H-9: At least 502 properties with historic-period buildings.
- H-11: At least 365 properties with historic-period buildings.
- H-12: At least 262 properties with historic-period buildings
- H-13: At least 239 properties with historic-period buildings.

Figure 5.7-1: SR 710 Study Area Historic Period Properties (identified in red)



Source: Alternatives Analysis (2012)

The study buffer data indicate there is a high number of historic period properties within the 200 foot-wide study corridor for the TSM/TDM (4,060 properties), BRT (between 580 and 555 properties), and LRT (between 500 and 72 properties) preliminary alternatives and within the 500-foot-wide corridor for the Highway (between 582 and 239 properties) and Freeway (between 1,551 and 1,378 properties) preliminary alternatives. Due to the high number of historic period

buildings found within close proximity to the preliminary alternatives discussed above and found within the Project study area, any alignment shifts within the study buffers would likely result in a use of a historic period building that may be eligible for or listed on the NRHP; therefore, alignment shifts would not be considered a Section 4(f) Avoidance Alternative. See Figure 5.7-1 for a map depicting historic period buildings (outlined in red) found within the SR-710 North study area.

For more detailed information, please see the SR 710 North Study Alternatives Analysis Report (2012).

5.8 Alternative Actions

Alternative actions such as different modes of transportation such as Freeway, Highway, Bus, Light Rail, Commuter Rail and non-capacity increasing strategies such as Transportation System Management Strategies were previously evaluated and considered as potential Avoidance Alternatives. It was determined that all of these alternatives do not avoid Section 4(f) Properties; therefore, Alternative Actions would not be a Section 4(f) Avoidance Alternative.

5.9 Consideration of Section 4(f) Avoidance Alternatives

After evaluation of all potential Avoidance Alternatives, the No Build Alternative is the only alternative that would avoid the use of any and all Section 4(f) properties. The No Build Alternative would not be a feasible or prudent Avoidance Alternative because (i) it compromises the project so that it is unreasonable given the Purpose and Need.

The No Build Alternative, the Build Alternatives, Design Changes, Location Alternatives, Alignment Shifts, and Alternative Actions were all evaluated utilizing the criteria outlined in 23 CFR 774.17. Based upon this evaluation, there is no feasible and prudent avoidance alternative, including the No Build to avoid the use of land from any and all Section 4(f) properties.

Because there is no feasible and prudent avoidance alternative, the remaining alternatives that use Section 4(f) property, must be evaluated to determine which alternative would cause the least overall harm in light of the statute's preservation purpose. This analysis is required when multiple alternatives that use Section 4(f) Property remain under consideration. The analysis and identification of the alternative that has the least overall harm will be documented in the Final Section 4(f) evaluation.

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Chapter 6 All Possible Planning to Minimize Harm

6.1 Introduction

After determining that there are no feasible and prudent alternatives to avoid the use of a Section 4(f) property, the project approval process for the Individual Section 4(f) evaluation requires that the action includes all possible planning, as defined in 23 CFR 774.17, to minimize harm to a Section 4(f) property resulting from such use 23 CFR 774.3 (a)(2).

All possible planning, as defined in 23 CFR 774.17 means that all reasonable measures identified in the Section 4(f) Evaluation to minimize harm or mitigate for adverse impacts and effects must be included in the project:

- (1) With regard to public parks, recreation areas, and wildlife and waterfowl refuges, the measures may include (but not limited to) design modifications or design goals; replacement of land or facilities of comparable value and function; or monetary compensation to enhance the remaining property or to mitigate the adverse impacts of the project in other ways.
- (2) With regard to historic sites, the measures normally serve to preserve the historic activities, features, or attributes of the site as agreed by Caltrans as the NEPA Assigned Lead Agency (Caltrans) and the official(s) with jurisdiction over the Section 4(f) resource in accordance with the Section 106 consultation process under 36 CFR part 800 Protection of Historic Properties.
- (3) In evaluating the reasonableness of measures to minimize harm under §774.3(a)(2), Caltrans will consider the preservation purpose of the statute and:
 - (i) the views of the official(s) with jurisdiction over the Section 4(f) property;
 - (ii) whether the cost of the measures is a reasonable public expenditure in light of the adverse impacts of the project on the Section 4(f) property and the benefits of the measure to the property, in accordance with §771.105(d) of this chapter; and
 - (iii) any impacts or benefits of the measures to communities or environmental resources outside of the Section 4(f) property.
- (4) All possible planning does not require analysis of feasible and prudent avoidance alternatives, since such analysis will have already occurred in the context of searching for feasible and prudent alternatives that avoid Section 4(f) properties altogether under §774.3(a)(1), or is not necessary in the case of a *de minimis* impact determination under §774.3(b).

6.2 Protection of Historic Properties 36 CFR part 800 (Section 106)

Under Section 106, anticipated adverse effects should be avoided, minimized, or mitigated wherever possible to satisfy federal regulations for the treatment of historic properties. When neither avoidance nor reduction is possible in establishing final design, construction, and operation details of the undertaking, mitigation measures must be agreed on by appropriate parties through preparation of a project specific agreement document. The following final design, pre-construction, construction, and post-construction mitigation measures are recommended for agreement among

the funding, construction, operation, consulting, and review parties through a project-specific agreement document that will be drafted and executed.

The avoidance, minimization, and mitigation measures are organized by effect types (direct and indirect) and subtype. The historic property that is adversely affected is identified and measures to avoid the effects will be identified, where possible. Where avoidance is not possible, minimization and mitigation measures are proposed for each property. Some measures are proposed for avoidance, minimization, and mitigation. These measures include: pre-construction surveys, property-specific protection plans, post-construction building surveys, post-review discovery and monitoring plans, public outreach, a plan for discovery of human remains, and training for construction staff.

6.3 Pre-construction Surveys

As a baseline for information prior to effects and subsequent avoidance, minimization, or mitigation measures, baseline information is necessary. A preconstruction survey is required for all properties with a finding of adverse effect or conditional no adverse effect.

Pre-construction surveys shall be conducted on historic properties with a finding of adverse effect or conditional no adverse effect before any construction activities commence. The pre-construction surveys shall be performed by qualified Structural Engineers in collaboration with a qualified Architectural Historian and/or Historic Architect. The qualifications for the structural engineer, architectural historian and/or historic architect shall be approved by a Caltrans PQS in collaboration with Metro.

Pre-construction conditions assessment reports shall be carried out during the final project design phase and after more data on site-specific geotechnical conditions are available. The surveys shall document the baseline physical conditions of each historic property to better understand the building's structure and condition. Additional localized geotechnical studies shall be performed near each historic property to identify additional strategies and control measures to better protect each historic property during construction. The conditions assessment reports shall document all aspects of known structural conditions through observations and measurements, plans, photographs, and any other data the qualified preparer may deem appropriate. Photos and plans may also be used to indicate existing damage on the historic property. The information developed in the pre-construction surveys shall be integrated into the Property-Specific Protection Plans described in this section.

The pre-construction conditions assessment reports shall be prepared according to an agreed upon template and level of detail that provides sufficient baseline information for historic properties to: a) assess their structural condition, and b) determine the minimum established effect criteria applicable to a historic property when compared to the proposed activity at that location. The pre-construction surveys shall include, but not be limited to, inspection of building foundations, exterior walls, driveways, sidewalks, hardscape elements, and interior floors and walls, and documentation of any pre-existing defects such as cracks, settlement, subsidence, bulges, walls out of plumb, sticking windows and doors, corrosion, and water damage. The inspection can be documented by, but not be limited to, measured drawings, sketches, or CAD drawings of all cracks, or photographing or videotaping the elements of the property under inspection. Evaluation of the risk from construction activities may also be incorporated into the reports.

At least two months prior to start of construction, the properties where pre-construction surveys were completed as part of the studies for the EIR/EIS will be revisited to confirm that the

information in the surveys remains valid. These pre-construction surveys shall be used as the baseline in the post-construction surveys, which will document any evidence of change in the physical condition of historic properties, following completion of construction.

A copy of the pre-construction survey shall be made available to the property owner(s) and occupant(s). A copy of each survey shall also be kept on file with the appropriate municipal department as well as at Caltrans and/or Metro for the duration of the project. At the request of SHPO, its office may also receive copies.

6.4 Measures to Mitigate Demolition or Destruction to All or Part of a Historic Property

For the proposed Undertaking, the TSM/TDM Alternative, and Build Alternatives with the TSM/TDM (T-2 Other Roadway Improvements) would cause a direct physical effect on one historic property: The Arroyo Seco Parkway Historic District, which is described in detail in Chapter 3.

6.4.1 Arroyo Seco Parkway Historic District

The TSM/TDM Alternative would replace landscaped buffers, install new retaining walls within the boundaries of the historic district, and remove an existing off-ramp at State Street. Due to the project needs for this alternative, these adverse effects could not be avoided or minimized.

To minimize effects on the character-defining features of the Arroyo Seco Parkway Historic District, the new construction shall be designed in a manner that is consistent with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (SOIS). The Project Architectural Historian shall review the final design plans, review mockups as needed, and conduct a field visit to ensure that the following work is performed in accordance with the SOIS. At a minimum, the plan will ensure:

- New elements, like retaining walls, off-ramps, on-ramps, lighting, and curbing, will be designed to be compatible with the historic district, in terms of color, materials, profiles, dimensions, etc.;
- Any work taking place on character-defining features will minimize potential damage to the historic district; and
- All revegetation of buffers and planting strips will be designed to be compatible with the historic district.

Additional mitigation measures have been identified in consultation with the Consulting Parties to mitigate the adverse effect to the Arroyo Seco Parkway Historic District.

Caltrans will install a highway sign near the northern entrance to the Parkway at Glenarm Street that welcomes drivers to the Arroyo Seco Parkway Historic District. The sign will be compatible with similar signage found at the southern entrance to the Parkway.

Create and Post electronic content for a smart phone traveler application (the Clio or equal) that describes and interprets the Historic District. The content will include historical narrative information, as well as historical photographs, and other documentation. This application will be available free to the public through smartphone application stores prior to the termination of this agreement. The availability of the application will be advertised on or in Metro facilities such as bus benches, local bus lines, Gold Line Stations and rail cars within the project area.

Caltrans shall submit design development plans for the Fair Oaks and State Street Interchanges for review and comment at 60% and 90% completion.

All parties to the MOA will be invited to review the design development plans to determine whether the plans conform to concepts described in the SOIS Plan. All parties to the MOA will provide comments on the submittals to Caltrans within 30 calendar days of receipt. If MOA parties do not comment within the time provided, Caltrans may assume that the MOA parties concur and the package meets the cited objectives.

Caltrans will incorporate MOA parties' comments into the project plans to the fullest extent. If Caltrans revises project plans in response to MOA parties' comments, then no further review is required for that consultation package.

Should Caltrans object to incorporation of MOA parties' comments into consultation packages at any stage of the project, Caltrans will provide the MOA parties with written explanation of that objection. Objection to the plans shall be resolved in accordance with Stipulation IV.B of the MOA.

6.5 Property-Specific Protection Plans

During final design, the Project Engineer, in consultation with the Historic Architect, Architectural Historian, the Structural Engineer, the Acoustical Engineer, and the Geotechnical Engineer, will prepare a Property-Specific Protection Plan for the property adversely affected by the proposed Undertaking.

The intent of the Property-Specific Protection Plans is to ensure that the potential effects of the selected project alternative on each property are addressed by specific mitigation measures implemented as part of the project pre-construction, construction, and post-construction phases.

At a minimum, the Property-Specific Protection Plans will include the following for each affected property:

- Name, address, boundary, and description of the historic property
- List of potential effects of the preferred alternative and the mitigation measures to address those effects applicable to the property
- Key actions required in each mitigation measure
- Party/parties responsible for implementing each key action in each mitigation measure
- Other party/parties involved in implementing, overseeing, and/or documenting the implementation of the key actions in each mitigation measure
- Timing of the implementation of the key actions in the mitigation measure (final design/pre-construction, construction, and/or post-construction)
- Requirements for documenting compliance with the requirements of each mitigation measure
- Other relevant technical and supporting information

A Property-Specific Protection Plan will be prepared during final design for each historic property affected by the selected project alternative. The Project Engineer, Resident Engineer, and the Construction Contractor will be required to implement the Property-Specific Protection Plans for each property during the appropriate project phases (pre-construction, construction, and/or post-construction).

6.6 Post-Construction Building Surveys

Post-construction building surveys (which would be equal in their level of effort, qualifications of preparers, scope, and implementation as the pre-construction surveys described earlier) will be conducted. The post-construction surveys would be completed within 2 months or 60 days following completion of work in a specific area. The Construction Contractor and the Resident Engineer will notify the Structural Engineer and Architectural Historian when construction in the vicinity of a specific historic property or properties is completed. At that time, the Structural Engineer, the Historic Architect, the Architectural Historian, the Geotechnical Engineer, and other appropriate qualified specialists will conduct the post-construction surveys.

If the post-construction survey identifies damage to historic properties as a result of project-related activities, the Structural Engineer and Caltrans and/or Metro will consult with the Historic Architect to collaborate on a plan to repair the damage per the SOIS. The repairs will be performed by a qualified Rehabilitation General Contractor who has completed a certified rehabilitation project and has a proven record of completing seismic retrofitting for historic structures. The Rehabilitation General Contractor will perform those repairs under the direction of the Resident Engineer, with oversight by the Structural Engineer and the Historic Architect. The cost of the repairs will be paid by Caltrans and/or Metro or the Construction Contractor, depending on the contract provisions.

6.7 Public Outreach

Community outreach will be conducted by Caltrans and/or Metro or their designated representative to educate the public about the project and its expected effects and shall include individual consultation with the owners and occupants of historic properties that are likely to be subjected to project-related settlement and/or ground-borne vibration or any other construction or operational effect described in the FOAE. This consultation would provide information demonstrating the relationship between ground settlement, ground-borne noise and vibration, human perception, and superficial and structural damage related to tunnel boring and other construction activities associated with the Build Alternatives. As part of this outreach, Caltrans and/or Metro or their designated representative will provide a procedure for obtaining feedback and maintaining a registry for ensuring that public comments are addressed. The registry will be updated routinely and will contain the responses provided by appropriate staff based on the nature of the inquiries, questions, and requests in a deliberate, timely fashion.

6.8 Discovery of Human Remains

If human remains are discovered during project construction, 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 Los Angeles County Coroner shall be contacted. Pursuant to the California Public Resources Code Section 5097.98, if the remains are thought to be Native American, the Coroner will notify the Native American Heritage Commission, which will then notify the Most Likely Descendant. The person who discovered the remains will also contact Caltrans and/or Metro staff so that they may work with the Most Likely Descendant on the respectful treatment and disposition of the remains. Further provisions of Public Resources Code Section 5097.98 are to be followed as applicable.

6.9 Construction Worker Training

Following the Notice to Proceed but before work begins, the Resident Engineer and the Construction Contractor will provide cultural resources training to key personnel and supervisors.

The training will be prepared and conducted by an Archaeologist, Architectural Historian, and Historic Architect. The training, which may be in person or via video, will describe the applicable measures for treatment and protection of historic properties in compliance with the SOIS. The training will present and discuss applicable laws, their penalties, and examples of artifacts that may be encountered and potential conditions where historic resources can be damaged during construction. The training will also outline the steps that must be taken should work crews encounter cultural resources during project-related activities, including the authority of archaeological monitors in conjunction with the Resident Engineer to halt work in the area of a discovery to ensure the resource is protected against further effects.

6.10 Measures to Minimize Harm

The following noise barriers were proposed for T-2 Other Road Improvements (SR 110/Fair Oaks Avenue Hook Ramps). However, subsequent to the circulation of the Draft EIR/EIS, and in an effort to minimize adverse visual effects to historic resources, the following noise barriers are no longer proposed:

- T-2/TNB No. 1 would be an approximately 743 ft long barrier along the Caltrans ROW/private property line along the northbound side of SR 110 and would range in height from 6 to 16 ft. (Refer to Sheet 8 of Figure 3.14-3 in Draft EIR/EIS Appendix N for this TSM/TDM Alternative noise barrier.)
- T-2/TNB No. 2 would be an approximately 963 ft long barrier along the edge of shoulder on the southbound side of SR 110 and would range in height from 12 to 20 ft. (Refer to Sheet 8 of Figure 3.14-3 in the Draft EIR/EIS Appendix N for this TSM/TDM Alternative noise barrier.)

All applicable measures to minimize harm to the Section 4(f) Property were taken from the SR 710 North Draft EIR/EIS Appendix E Environmental Commitments Record and are listed below:

Plant Species

PS-4 Trees Protected by City and/or County Ordinances (applies to the four Build Alternatives):

The following will be required to address project effects on protected trees:

- Prior to construction or ground-disturbing activities, the Resident Engineer will require the Construction Contractor to plan a highly visible barrier (e.g., environmentally sensitive area fencing or other marker) near or around any part of the population that will be placed around the dripline or trunk of protected trees within and adjacent to the limits of disturbance such that no work will occur within the protected area. If this is infeasible, the Resident Engineer will require the Construction Contractor to obtain appropriate tree removal permits for each impacted protected tree from the appropriate local agency (i.e., Cities of Los Angeles, Pasadena, South Pasadena, and Rosemead, or Los Angeles County).
- Compensatory mitigation may be required at the discretion of the agency with jurisdiction over protected trees; therefore, the compensatory mitigation would vary by jurisdiction. Compensation will be provided consistent with the requirements of the appropriate local agency's tree protection ordinance.

Invasive Species

IS-1 Weed Abatement Program (applies to all four Build Alternatives): During final design, the Los Angeles County Metropolitan Transportation Authority (Transportation System Management/Transportation Demand Management, Bus Rapid Transit, and Light Rail Transit

Alternatives) or the California Department of Transportation (Freeway Tunnel Alternative) Project Engineer will develop a weed abatement program and will include it in the Plans, Specifications, and Estimates package. The intent of this program is to minimize the introduction and spread of nonnative plant material during construction of the selected Build Alternative. This program will include, but not be limited to, the following monitoring and eradication measures during and after construction:

- Preconstruction surveys will be conducted to identify populations of invasive species within the project disturbance limits with the potential to be encouraged by construction activities such as exposure or tilling of bare ground, disturbance of adjacent habitats that are not highly invaded, and/or enhanced distribution of pollen or seeds. Such populations will be controlled by mechanical or chemical means prior to construction.
- Revegetation of soils will occur as soon as practical after completion of construction activities in those areas. To prevent the spread of invasive species on the project site, invasive species-free products will be exclusively used for all activities, including, but not limited to, landscaping materials and soil erosion materials (i.e., mulch, soil mats, straw fencing, or wattles).
- Any disturbance in any construction area not containing existing infestations of exotic plants will be monitored quarterly for 1 year post-construction to ensure that establishment of invasive plant species in the area has not occurred. If evidence of invasive plant species establishment is found, invasive species control measures will be implemented immediately.

Visual/Aesthetics

V-1 Walls with Aesthetic Treatments: The final designs of sound walls and retaining walls adjacent to identified viewer groups or within sensitive Key Views within State-owned ROW will be based on Caltrans Highway Design Manual standards and consideration of community input. Metro design standards will be used for the Transportation System Management/Transportation Demand Management Alternatives. The wall designs will include enhancements such as, but not limited to, graphic patterns and colors based on input gathered from the local community, stakeholders, and Caltrans.

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Chapter 7 Consultation and Coordination

7.1 Introduction

7.1.1 Consultation and Coordination Requirements Under Section 4(f)

Under 23 CFR 774.5, prior to making Section 4(f) approvals under 23 CFR 774.3(a), the Section 4(f) Evaluation shall be provided for coordination and comment to the official with jurisdiction over the Section 4(f) resource and to the Department of the Interior, and as appropriate to the Department of Agriculture and the Department of Housing and Urban Development.

A minimum of 45 days shall be provided for receipt of comments. If comments are not received within 15 days after the comment deadline, a lack of objection is assumed and the action may proceed.

In the case of historic properties, the official with jurisdiction is the SHPO for the State wherein the property is located or, if the property is located on tribal land, the Tribal Historic Preservation Officer. When the Advisory Council on Historic Preservation (ACHP) is involved with consultation concerning a property under Section 106 of the National Historic Preservation Act (NHPA), the ACHP is also an official with jurisdiction over the resource for purposes of this part. When the property is a National Historic Landmark, the National Park Service is also an official with jurisdiction over that resource.

The Section 4(f) Policy Paper issued by the US DOT FHWA's Office of Planning, Environment, and Realty Project Development and Environmental Review on July 20, 2012, outlines the following coordination requirements with the official with jurisdiction

- Prior to making approvals, 23 CFR 774.3 (a);
- Determining the least overall harm, 23 CFR 774.3 (c);
- Applying certain programmatic Section 4(f) evaluations, 23 CFR 774.5(c);
- Applying Section 4(f) to properties that are subject to Federal encumbrances, 23 CFR 774.5(d);
- Applying Section 4(f) to archeological sites discovered during construction, 23 CFR 774.9 (e);
- Applying Section 4(f) to multiple-use properties, 23 CFR 774.11 (d);
- Determining if the property is significant, 23 CFR. 774.11 (c);
- Determining applicability of Section 4(f) to historic sites, 23 CFR 774.11 (e);
- Determining constructive use, 23 CFR 774.15 (d);
- Determining if proximity impacts will be mitigated to equivalent or better condition, 23 CFR 774.3 (a)(2) and 23 CFR 774.17; and
- Evaluating the reasonableness of measures to minimize harm, 23 CFR 774.3 (a)(2) and 23 CFR 774.17.

Lack of Objection

The regulations require a finding that the official(s) with jurisdiction have been consulted and “have not objected” in the following situations:

- When applying the exception for restoration, rehabilitation, or maintenance of historic transportation facilities, 23 CFR 774.13 (a); and
- When applying the exception for archeological sites of minimal value for preservation in place, 23 CFR 774.13 (b)(2).

Concurrence

The regulations require written concurrence of the official with jurisdiction in the following situations:

- Finding that there are no adverse effects prior to making a *de minimis* impact finding, 23 CFR 774.5 (b);
- Applying the exception for temporary occupancies, 23 CFR 774.13 (d); and
- Applying the exception for transportation enhancement activities and mitigation activities, 23 CFR 774.13 (g).

7.2 Section 4(f) Consultation

7.2.1 Applicability of Section 4(f) to Historic Sites

Section 4(f) Significance

A historic site is defined in 23 CFR 774.17. For purposes of Section 4(f) a historic site is significant only if it is on or eligible for the National Register.

The Arroyo Seco Parkway Historic District was listed in the NRHP at the state level under Criteria, A, B and C in 2011. The Arroyo Seco Parkway Historic District was constructed in phases between 1938 and 1953, which serves as its period of significance. The Arroyo Seco Parkway Historic District is significant under Criterion A for its association with transportation planning. It was the first fully grade-separated, limited access landscaped freeway in the western United States and would serve as an important prototype for the freeways to follow, as well as a catalyst for the regional freeway system in Southern California. The Arroyo Seco Parkway Historic District is significant under Criterion B for its association with Lloyd Aldrich, an influential figure who helped organize the city, county, state, and federal governments during construction of the Arroyo Seco Parkway Historic District. Lastly, the Arroyo Seco Parkway Historic District is significant under Criterion C for its bridge and tunnel architecture, as well as representing early and new highway design, safety, and engineering concepts that would influence future freeway design in the state of California.

Applicability of Section 4(f)

The Section 4(f) requirements only apply to historic sites on or eligible for the NRHP 23 CFR 774.11 (e) (1). The Arroyo Seco Parkway Historic District is a historic site of state significance, as it was listed in the NRHP at the state level under Criteria, A, B and C in 2011.

Official with Jurisdiction

For the Arroyo Seco Park Historic District, the Official with Jurisdiction is the SHPO.

7.2.2 Section 4(f) Coordination

The Draft EIR/EIS was circulated in March 2015. During the public review period, several comments were received regarding the adequacy of the identification and evaluation of historic properties and questions regarding Caltrans' finding that the project would not cause an adverse effect on historic properties.

As a result, a few additional areas and buildings were added to the APE, and several properties were identified that required further analysis for historical significance. Three of the properties identified were determined eligible for listing in the NRHP and three additional resources were identified as CEQA-only historical resources. In response, Caltrans reanalyzed and revised the individual findings for numerous properties in the APE.

On April 22, 2016, Caltrans and Metro held a meeting with the California SHPO and OHP staff, the Federal Preservation Officer from the Advisory Council on Historic Preservation (ACHP), and the consulting parties to provide more detailed information about the tunneling process and the type of construction associated with each Build Alternative. The meeting was held in response to the consulting parties' opposition to the Preliminary Draft FONAE, and concerns regarding the effects to historic properties from tunneling vibration and ground settlement. Following the meeting, Caltrans staff took the interested parties on a driving tour of portions of the project APE. Groups and agency staff who attended that meeting were:

- ACHP
- OHP staff
- National Trust for Historic Preservation
- Pasadena Heritage
- Sequoyah School
- SHPO
- City of South Pasadena
- Los Angeles Conservancy
- No on 710 Action Committee

In October 2016, an email update on the progress of the revised FOAE was sent to the consulting parties. In March 2017, Caltrans cultural resources staff met with several of the consulting parties at the office of Pasadena Heritage. The primary goal of the meeting was to discuss the property sales in the SR-710 Corridor, but the SR-710 North Study was discussed as well. Following the meeting, an email update was sent to the consulting parties that were not in attendance. Based on extensive consultation between Caltrans and the State Historic Preservation Officer (SHPO), as well as valuable input from consulting parties through the Section 106 process, the effect finding for the proposed Project was changed to reflect an adverse effect. As a result, Caltrans documented the supplemental evaluations in a Supplemental HPSR and submitted the findings to the SHPO in October 2017. In October 2017, the Supplemental HPSR and an update on the preparation of the FOAE was sent to consulting parties. SHPO concurred with the determinations on November 9, 2017. In December 2017, Caltrans prepared an updated FOAE for the proposed Project consistent with the requirements of Section 106. On December 22, 2017, the FOAE was sent to the Consulting Parties for review and on January 3, 2018, the FOAE was sent to the SHPO for review.

On February 14, 2018, Caltrans held a meeting with the SHPO, ACHP, and Consulting Parties. The purpose of the meeting was to provide a project update and answer questions related to new significant effects identified subsequent to the circulation of the Draft EIR/EIS in the FOAE and how they would be addressed in the Focused RDEIR/SDEIS, Draft Individual Section 4(f) Evaluation, and the Final EIR/EIS. The Consulting Parties requested to review the Draft Individual Section 4(f) Evaluation.

Under 23 CFR 774.5, prior to making Section 4(f) approvals under 23 CFR 774.3(a), the Section 4(f) Evaluation must be provided to the SHPO, the official with jurisdiction over the Section 4(f) resource, and to the U.S. Department of the Interior (DOI).

On February 23, 2018, the Draft Individual Section 4(f) Evaluation was circulated to the SHPO, DOI, and Consulting Parties. A minimum of 45 days was provided for receipt of comments by April 9, 2018. SHPO and DOI did not provide comments by the deadline; therefore, a lack of objection is presumed.

On March 31, 2018, Caltrans granted a 2-week time extension to the Consulting Parties. The Consulting Parties and the City of South Pasadena submitted comments on April 23, 2018. Section 4(f) correspondence is contained in Appendix A of this Individual Section 4(f) Evaluation.

The consulting parties have been involved throughout the Section 106 process and will have the opportunity to review and comment on the FOAE. Caltrans has taken into account public and Consulting Party comments throughout the Section 106 process.

On May 3, 2018, SHPO concurred with the analysis and findings in the FOAE and further consultation was conducted to develop the necessary and appropriate measures to avoid, minimize, and mitigate adverse effects. A project-specific Memorandum of Agreement was executed on October 18, 2018 by Caltrans and SHPO which identifies measures to address impacts to the Arroyo Seco Parkway Historic District.

In addition to the required consultation and coordination under Section 4(f), the following consultation and coordination took place related to Section 106 of the NHPA and as part of the EIR/EIS public outreach efforts in compliance with CEQA/NEPA.

7.3 Section 106 Consultation with Interested Parties

In 2013, the following 55 groups and individuals were contacted via letter and/or email as part of the formal public outreach process for the HPSR. Follow-up outreach was conducted in 2014.

- Alhambra Chamber of Commerce
- Alhambra Historical Society Museum
- Alhambra Preservation Group
- Arroyo Seco Foundation
- Bungalow Heaven Neighborhood Association (Pasadena)
- California African American Museum
- California Historic Route 66 Association
- California Preservation Foundation (Route 66)
- Chinese American Museum
- Claire W. Bogaard
- El Sereno Historical Society
- Friends of the Gamble House (Pasadena)
- Garfield Heights Neighborhood Association (Pasadena)
- Garvanza Improvement Association
- Getty Research Institute
- Highland Park Heritage Trust
- Historic Highland Park Neighborhood Council
- Historic Highlands Neighborhood Association (Pasadena)
- Historical Society of Southern California
- J. Paul Getty Trust
- Japanese American National Museum
- Jewish Historical Society of Southern California
- La Cañada Flintridge Chamber of Commerce and Community Association
- La Cañada Flintridge Community Development Department Planning Division
- Lanterman House/La Cañada Flintridge Historical Society
- Los Angeles City Historical Society
- Los Angeles Conservancy
- Los Angeles Fire Department Historical Society

- Los Angeles Office of Historic Resources
- Los Angeles Railroad Heritage Foundation
- Montebello Historical Society
- Montecito Heights Improvement Association
- Monterey Park, Recreation and Parks Department
- Old Pasadena Management District
- *Our Town El Sereno* (community awareness newsletter)
- Pasadena Heritage
- Railway and Locomotive Historical Society, Inc., Southern California Chapter
- Route 66 Preservation Foundation
- San Marino Historical Society
- Society of Architectural Historians Southern California Chapter
- South Pasadena Preservation Foundation, Inc.
- West Pasadena Residents' Association
- Los Angeles Police Historical Society
- Modern Committee of the Los Angeles Conservancy (ModCom)
- Montebello Planning Department
- Monterey Park Historical Society Museum
- National Historic Route 66 Federation
- Orange Heights Neighborhood Association (Pasadena)
- Pasadena Chamber of Commerce
- Pasadena Museum of History
- Route 66 Corridor Preservation Program, Federal Advisory Council
- Route 66 Territory Visitors Bureau
- San Rafael Neighborhoods Association (Pasadena)
- South Pasadena Chamber of Commerce
- The Electric Railway Historical Association of Southern California
- National Trust for Historic Preservation

Of those contacted, 11 groups or individuals responded. Three organizations, the Los Angeles Conservancy, Pasadena Heritage, and the West Pasadena Residents' Association, requested to be consulting parties pursuant to 36 CFR 800.2(c)(5). Additional information regarding coordination with consulting parties is included below.

An additional 15 groups and individuals, listed below, were contacted in person, or via email or telephone, regarding specific buildings and/or areas within the APE as part of the identification and evaluation of historic properties for this project.

- Paul Lam, City of Alhambra Development Services, Planning Division
- City of Monterey Park Building and Safety Division
- Bill Pascarella, City of Pasadena Light and Power Department
- City of San Gabriel Building and Safety Division
- City of South Pasadena Planning and Building
- City of Los Angeles Department of Building and Safety
- City of Pasadena Planning and Community Development Department
- City of Rosemead Building Department
- City of San Marino Planning and Building Department
- County of Los Angeles Building and Safety

Department

- San Marino Heritage
- Tim Gregory, The Building Biographer
- Brian Tichenor, AIA, faculty, University of Southern California School of Architecture
- South Pasadena Historical Museum
- Tim Sales, Herkimer Gardens

As part of the effects assessment for the project, Caltrans prepared and circulated a Preliminary Draft FONAE to interested parties in May 2015. Various individuals or organizations with an interest in the project provided comments to Caltrans on the Preliminary Draft FONAE, identifying several properties that warranted additional consideration. Therefore, Caltrans conducted additional research and evaluation on the additional properties and continued outreach efforts with the interested parties and consulting parties throughout the process.

7.3.1 Native American Consultation

On June 14, 2013, Caltrans' consulting archaeologists submitted a request to the Native American Heritage Commission (NAHC) to conduct a Sacred Lands File search. The NAHC responded that the Sacred Lands File did not indicate presence of Native American cultural resources within the coordinates defined in the request, but they did note that adjacent sections in Azusa and Pasadena include Native American cultural resources, as those areas were occupied by the Gabrielino Tongva group and are considered culturally sensitive. The NAHC also recommended contacting ten Native American (NA) individuals representing the Gabrielino and Gabrielino Tongva groups. In response to the NAHC request, the following ten Native American groups and individuals were contacted by certified letter dated June 26, 2013.

- Los Angeles City/County Native American Indian Commission, Ron Andrade, Director
- Gabrielino Tongva Nation, Sam Dunlap, Cultural Resources Director
- Ti'At Society/Inter-Tribal Council of Pimu, Cindi M. Alvitre, Chairwoman-Manisar
- Gabrielino-Tongva Tribe, Bernie Acuna, Co-Chairperson
- Gabrielino/Tongva San Gabriel Band of Mission Indians, Anthony Morales, Chairperson
- Gabrielino-Tongva Tribe, Linda Candelaria, Co-Chairperson
- Gabrielino Band of Mission Indians, Andrew Salas, Chairperson
- Gabrielino-Tongva Tribe, Conrad Acuna
- Tongva Ancestral Territorial Tribal Nation, John Tommy Rosas, Tribal Administrator
- Gabrielino Tongva Indians of California Tribal Council, Robert F. Dorame, Tribal Chair/Cultural Resources

In response to the initial letters, the following two individuals representing their NA groups responded. Their responses are provided below:

- Mr. John Tommy Rosas with, the Tongva Ancestral Territorial Tribal Nation, responded by email dated June 26, 2013, referencing the ACHP and its endorsement of the United Nations Declaration on the Rights of Indigenous People (UNDRIP), and encouraged all agencies and non-agencies to become familiar with the Declaration.
- Mr. Robert F. Dorame, the Tribal Chair of the Gabrielino Tongva Indians of California Tribal Council, responded in a telephone call on July 8, 2013, that this project will impact areas known to be culturally sensitive to his group and stated that he believes Native American monitors need to be present. He would like to be involved in consultation for the duration of the project.

As a follow-up to the initial outreach letters, the consulting archaeologists called and sent a second round of emails to the ten NA groups or individuals between July 19, 2013, and July 26, 2013. As a result of the follow-up calls and e-mails, the following three responses were received:

- Mr. Sam Dunlap, with the Gabrielino Tongva Nation, responded by email on July 29, 2013, to say that the project is within the traditional tribal territory of the Gabrielino Tongva Nation, and that he would like to express his concern for the possible impacts to the cultural resources of his tribal group. He requests an archaeologist as well as a Native American monitor on all subsurface construction activities.
- Anthony Morales, with the Gabrieleno/Tongva San Gabriel Band of Mission Indians, called to discuss the project on August 22, 2013. He stated that he believes the area to be sensitive for cultural resources. He requests monitoring of ground disturbance by a Native American monitor from his group and diligence when dealing with cultural resources.
- Andrew Salas, with the Gabrieleno Band of Mission Indians, responded by email on July 21, 2013, to say that the project is within high culturally sensitive areas, and, in order to protect their resources, they are requesting one of their experienced and certified Native American monitors to be on site during all ground disturbances.

None of the Native American individuals or organizations listed above requested to be a consulting party during the Section 106 process for the SR 710 project, pursuant to 36 CFR 800.2(c)(2). Caltrans continues to consult with Native American individuals or organizations throughout the Section 106 process.

A project status update letter was sent to all ten Native American representatives on December 8, 2014. The letter provided a summary of the findings of the Archaeological Survey Report, specifically the identification of the Horatio Rust Site and the Otsungna Village Site within the APE. On the same day, phone calls were made to those representatives who had previously requested Native American monitoring to let them know that monitoring would likely occur in the vicinity of these two sites. These representatives included Mr. Sam Dunlap, Mr. Robert F. Dorame, Mr. Anthony Morales, and Mr. Andrew Salas (see above).

A second project status update letter was mailed to the ten representatives on May 5, 2017, informing them that a draft Finding of Effects document and a draft Post-Review Discovery and Monitoring Plan (PRDM Plan) had been completed for the project. The PRDM Plan delineates archaeological monitoring areas for locations with highest geoarchaeological sensitivity. In the letter, Caltrans stated that if the Tribes wished to review the PRDM Plan, to please request a copy. Requests to review the PRDM Plan were received from Ms. Gloria J. Cuevas of the Native American Indian Commission on May 9, 2017, and from Mr. Andrew Salas on May 18, 2017. Copies of the document were sent to the representatives on May 19, 2017, with a request for comments by June 9, 2017. Mr. Salas provided general comments regarding village locations on May 26, 2017, and requested a meeting to discuss the project; no comments have been received to date from the Native American Indian Commission.

Caltrans representatives met with Mr. Salas and Mr. Matthew Teutimez on August 31, 2017, to discuss the project and any concerns. During the meeting, Mr. Salas and Mr. Teutimez stated that the project alignment was part of an ancient trading route (and later railroad) that linked two main villages, and that isolated Native American burials are very likely along such ancient routes. For these reasons, the Tribe believes that archaeological and Native American monitoring is necessary for the entirety of the project's APE. Caltrans explained the process for determining monitoring for

the project, which is based on the results of the cultural studies, and that the study findings did not warrant monitoring of the entirety of the project's APE.

Mr. Andrew Salas was contacted again by phone on November 16, 2017, to follow up on the August 31, 2017, meeting, but specifically to address the topic of monitoring as it pertains to the protocols and procedures outlined in the draft PRDM Plan that the Tribe reviewed. During the phone call, Mr. Salas requested specific project information be re-sent to him for comments, including the APE map, locations of ethnographic villages, and the PRDM Plan. These were sent to him on the same day. In a letter dated November 20, 2017, Mr. Salas acknowledged receipt of the information and provided the Tribe's understanding of the locations of specific village sites. Mr. Salas reiterated that the entirety of the project's APE is culturally sensitive and thus requires the development of "a suitable cultural resources program."

On December 5, 2017, Mr. Salas met with a Caltrans representative and consultant archaeologists to review additional research that was conducted by the consultant to address the Tribe's concerns. During the meeting, Mr. Salas provided oral history of the area within and around the project's APE and reiterated the Tribe's view that the APE is culturally sensitive and should be monitored in its entirety. Caltrans acknowledged the Tribe's concerns and explained Caltrans' guidelines for monitoring; specifically, that monitoring is identified for those areas where multiple lines of evidence indicate that there is potential for encountering buried archaeological deposits. Based on the information provided by the Tribe at this meeting, Caltrans actively reassessed the Archaeological Monitoring Areas previously identified in the Post-Review Discovery and Monitoring Plan prepared for this project. The results of this reassessment are provided in the final Post-Review Discovery and Monitoring Plan.

7.3.2 CEQA and NEPA Outreach Efforts

Separate from the Section 106 process, Caltrans conducted extensive public outreach as part of the CEQA and NEPA process. The various outreach methods are summarized below:

Public Scoping Meetings—The scoping process for the EIR/EIS was initiated on March 4, 2011, and ended on April 14, 2011. During that period, a number of public meetings and public information/comment opportunities were offered to members of the public, interested parties, and public agencies. The purpose of the meetings was to describe and solicit comments on the project and the environmental process. The dates and locations of the meetings are provided below.

- March 15, 2011, at Jefferson Middle School in San Gabriel
- March 16, 2011, at the Civic Center Library in Alhambra
- March 22, 2011, at Glendale Community College in Glendale
- March 23, 2011, at South Pasadena High School in South Pasadena
- March 29, 2011, at Los Angeles Christian Presbyterian Church in El Sereno
- March 30, 2011, at Lake Avenue Church in Pasadena
- April 5, 2011, at La Cañada High School in La Cañada Flintridge
- April 6, 2011, at Ramona Hall Community Center in Highland

SR 710 Conversation Series Meetings—This series of meetings was held in early 2011 and provided broad overviews of key steps in the project process. Each meeting was offered in a number of cities and communities in the approximately 100-square-mile study area. These meetings were open to the public. The first series of meetings provided a broad overview of the history of the SR 710 North Study. The second series provided information on NEPA and CEQA and their relationship to the

project. The third and final series served as the formal scoping meetings for the project. Refer to the EIR/EIS for additional information regarding public meetings.

Technical Advisory Committee (TAC) Meetings—The TAC is composed of representatives from public works, engineering, and planning departments in the cities and other agencies in the study area that advise Metro. These ongoing meetings are typically held quarterly to provide updated information on the project engineering, environmental planning tasks, and schedule. In addition, issues of concern to Metro are discussed.

Stakeholder Outreach Advisory Committee Meetings—The Stakeholder Outreach Advisory Committee (SOAC) is composed of elected or appointed officials from the jurisdictions in the study area who advise Metro. The SOAC meetings are ongoing, are held approximately quarterly, and are intended to provide updated information on the project engineering, progress of the technical studies, and public outreach activities. Typically, the SOAC meetings are held the day after TAC meetings and have the same agendas and information updates. The SOAC members provide updates to their respective jurisdictions on the progress of the project.

All Communities Convening Information Sessions and Open House Meetings—The All Communities Convening (ACC) was composed of interested members of the general public. The ACC Information Sessions and Open House meetings were held periodically and provided updated information on the project engineering, environmental planning tasks, and the project schedule.

Community Liaison Council Meetings—The Community Liaison Councils were groups of local cities and communities represented by stakeholders from the following cities, communities, and neighborhoods in the study area: Alhambra, Altadena, Arcadia, Atwater Village, Azusa, Baldwin Park, Bradbury, Burbank, Cypress Park, Duarte, East Los Angeles, El Monte, El Sereno, Glassell Park, Glendale, Highland Park, Irwindale, La Cañada Flintridge, La Crescenta-Montrose, Monrovia, Monterey Park, Mt. Washington, Pasadena, Rosemead, San Gabriel, San Marino, Sierra Madre, South El Monte, South Pasadena, and Temple City. Meetings were held with the Community Liaison Council from April 2012 to August 2013.

Other Meetings and Sources of Information Regarding the Project—Informational meetings and open houses were held in communities throughout the study area. The meetings provided general information related to the Build Alternatives under consideration, alternatives withdrawn from consideration, and topics to be evaluated in the EIR/EIS.

Social Media—In addition to the meetings and public information/comment opportunities, Metro used Facebook, Twitter, and a project-specific page on their website for the SR 710 North Study to provide updated project information to all interested parties. These electronic information sources are updated as appropriate to ensure that current project-related information is available.

Circulation of the Draft EIR/EIS —On March 6, 2015, Caltrans circulated the Draft EIR/EIS, with its supporting technical studies, to the public for review and comment. Five public hearings were held during the public comment period, from March to June 2015. The comment period was extended to August 5, 2015. During the public comment period, over 5,000 comments were submitted from elected officials, from federal, state, and local agencies, and from many other stakeholders. There was a wide range of comments received covering common themes and questions. Chapter 5 of the Draft EIR/EIS (Comments and Coordination) provides detailed information about the outreach conducted as part of the larger environmental process, including responses to comments received.

During the public review period for the Draft EIR/EIS, several comments were received regarding the adequacy of the identification and evaluation of historic properties and questions regarding

Caltrans' finding that the project would not cause an adverse effect on historic properties. A summary of the general types of comments received during the Draft EIR/EIS public comment period that relate to historic properties and/or historical resources are summarized in the next section.

As part of this public review and comment period, five public hearings were held to solicit comments on the proposed Draft EIR/EIS. A summary of general comments raised regarding historic properties and cultural resources are provided below.

7.3.3 Issues Raised by the Public Regarding Historic Properties

The following is a summary of key public comments related to historical resources received during the public comment period for the Draft EIR/EIS:

- Requested more information and/or reconsideration of project effects at the 4777 East Chavez Avenue, South Pasadena Middle School Markham Place Historic District, Norton Simon Museum, Fair Hope Building, Oaklawn Waiting Station, War Memorial Building, Old Pasadena Historic District, John S. Hartwell House, Ambassador West Cultural Landscape District and Historic Route 66.
- Requested additional information/analysis of visual and noise effects due to the operation of the Build Alternatives, including the proposed sound wall near the Old Pasadena Historic District and the ventilation structures associated with the tunnel portals associated with the Freeway Tunnel Alternative.
- Comments noting disagreement with the finding of no effect in the 2015 technical memorandum prepared by Jacobs (Jacobs 2015) attached to the FOE. Concerns were also raised that properties were grouped for analysis in this memorandum rather than individually assessed. Also, comments regarding the effects associated with the Freeway Tunnel and LRT Alternatives, crossing earthquake faults was expressed.
- Requested information on the duration of tunnel boring under each area and the potential for and contingency plans related to breakdowns of tunnel boring machines in the tunnels.
- Requested that the distance from excavation/construction areas to historic properties be verified.
- Requested more information on the potential effects of vibration, ground-borne noise, settlement, excavation, blasting, and tunnel boring on historic properties above or in the vicinity of the Build Alternatives during construction and criteria used to assess those effects.
- Requested additional evaluation of effects at the tunnels and the tunnel portals in the vicinity of the Sequoyah School.
- Requested specific commitments to measures for adverse effects of the Build Alternatives on historic properties.
- Requested additional clarification regarding the numbers of properties (contributing and non-contributing) in each historic district including the Library Neighborhood Historic District and the El Cerrito Circle Historic District.
- Requested verification that periods of significance, National Register status (if appropriate), contributor/non-contributor status, and other relevant information are provided for all historic properties.

- Requested that the FOE include the complete Area of Potential Effect map in the FOE and requested additional detail about how the APE was developed.
- Concerns were raised regarding the adequacy of the effects of the Build Alternatives on historic properties under CEQA provided in Chapter 4 in the Draft EIR/EIS.
- Concerns were raised regarding resources that were not addressed in the FOE Including Edward Roybal Comprehensive Center, proposed El Sereno-Berkshire Historic Preservation Overlay Zone, Maravilla Handball Court, Belvedere Park, Monty's Steakhouse Sign, and West Colorado Street Auto Row Historic District and the City of South Pasadena Historic Resources Survey Phase 1: SR 710 APE (June 25, 2015).

7.3.4 Issues Raised by the Public Regarding Archaeological Resources

Comments were received regarding the identification and assessment of effects to archaeological resources, including the following: 1) the adequacy of the Native American consultation, pursuant to federal and State laws; 2) sources and procedures used to identify Native American resources; 3) request to include the Arroyo Rosa de Castillo and artifacts in the vicinity of East Wynate in the analysis; 4) potential to delay construction due to discovery of artifacts; and 5) request for monitoring during construction.

7.3.5 Resolution of Comments Received

Subsequent to the circulation of the Draft EIR/EIS, Caltrans reanalyzed and revised the individual findings for numerous properties in the APE. Based on extensive consultation between Caltrans and the State Historic Preservation Officer (SHPO), as well as valuable input from consulting parties through the Section 106 process, the effect finding for the proposed Project was changed from no adverse effect to reflect an adverse effect. In addition, Caltrans has reviewed comments received from municipalities, public agencies, preservation organizations, and members of the public concerning the potential for effects of the Build Alternatives on cultural resources in the APE. As a result, Caltrans prepared an updated FOAE (December 2017) for the proposed Project consistent with the requirements of Section 106.

Specifically in response to public comments, Caltrans has provided more information and/or reconsideration of project effects on a variety of historic properties within the APE; additional information/analysis of visual and noise effects due to the operation of the Build Alternatives; more information on the potential effects of vibration, ground-borne noise, settlement, excavation, blasting, and tunnel boring on historic properties above or in the vicinity of the Build Alternatives; established criteria to assess all potential direct and indirect effects; created specific commitments and measures to resolve adverse effects; provided additional information on historic district contributing and non-contributing properties; confirmed properties' eligibility determinations and dates; and re-considered potential effects on properties and archaeological resources specifically named in the comments. Responses to comments on historic properties received during circulation of the Draft EIR/EIS are addressed in the Final EIR/EIS.

7.3.6 Focused Recirculated Draft Environmental Impact Report/ Supplemental Draft Environmental Impact Statement

A Focused RDEIR/SDEIS was prepared for the SR 710 North Project to provide significant new information relevant to the proposed project after circulation of the Draft EIR/EIS, and supplements the cultural resources analysis of the Draft EIR/EIS that was released for public review on March 6, 2015.

The Focused RDEIR/SDEIS addresses minor refinements to the APE, additional properties that were evaluated for National Register eligibility, a FOAE for historic properties pursuant to Section 106 of the NHPA, a Section 4(f) use pursuant to Section 4(f) of the Department of Transportation Act, and significant impacts to historic resources, proposed avoidance and minimization measures, and coordination efforts since circulation of the Draft EIR/EIS.

The Focused RDEIR/SDEIS was circulated to the public for review and comment from May 18, 2018 to July 5, 2018. On June 13, 2018, a public hearing was held at Maranatha High School in the City of Pasadena to provide an overview of the Focused RDEIR/SDEIS, to answer questions, and to solicit comments. All comments on the Focused RDEIR/SDEIS received during public circulation have been addressed in the Final EIR/EIS.

Chapter 8 Least Overall Harm Analysis

8.1 Introduction

If there is no prudent and feasible avoidance alternative, an evaluation must be completed to determine which among the remaining Build Alternatives would cause the least overall harm to the Section 4(f) Property. To determine which of the remaining Build Alternatives would cause the least overall harm in light of the statute's preservation purpose, a comparison must be made of the seven factors 23 CFR 774.3 (c) (1) concerning the alternatives under consideration. The first four factors relate to the net harm that each alternative would cause to the Section 4(f) property. The remaining three factors are evaluated to account for any substantial problem with any of the alternatives remaining under consideration on issues beyond Section 4(f). By balancing the seven factors, four of which concern the degree of harm to Section 4(f) properties, all relevant concerns are considered to determine which alternative would cause the least overall harm.

The following seven factors to determine the alternative that would cause the least overall harm in light of the statute's preservation purpose are outlined in 23 CFR 774.3 (c)(1) as follows:

- (i) Ability to mitigate adverse impacts to each Section 4(f) resource;
- (ii) Relative severity of the remaining harm, after mitigation, to the protected activities and attributes or features;
- (iii) Relative significance of each Section 4(f) property;
- (iv) Views of the officials with jurisdiction over the Section 4(f) property;
- (v) Degree to which each alternative meets the purpose and need;
- (vi) After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f); and
- (vii) Substantial differences in costs among the alternatives.

After circulation of the Draft Section 4(f) evaluation in accordance with 23 CFR 774.5(a), Caltrans will consider comments received on the evaluation and will prepare and finalize the comparison of all factors listed in 23 CFR 774.3(c)(1) for all the alternatives. The analysis and identification of the alternative that has the least overall harm is documented below.

8.2 Least Overall Harm Analysis

To determine which of the Build Alternatives would cause the least overall harm, Caltrans must compare seven factors as set forth in 23 CFR 774.3(c)(1) concerning the alternatives under consideration. A comparison of each of the seven factors under each of the Build Alternatives is in Table 8.1 below.

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Table 8.1: Least Overall Harm Analysis Factor from 23 CFR 774.3 (c)(1)

	TSM/TDM Alternative (Preferred Alternative)	BRT Alternative	LRT Alternative	Freeway Tunnel
1. The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property)	The ability to mitigate adverse effects to the Arroyo Seco Parkway Historic District (ASPHD) would not be possible since the modification to character-defining features and introduction of new elements cannot be avoided, minimized, or mitigated.	ASPHD: same as TSM/TDM. Jardin del Encanto and Cascades Park. The removal of the six-foot sidewalks to accommodate roadway widening and the conversion of non-contributing parkland to sidewalk would not impact the activities, attributes or features would be reduced to a Conditional No Adverse Effect after mitigation.	ASPHD: same as TSM/TDM.	ASPHD: same as TSM/TDM.
The ability to mitigate adverse effects on the ASPHD is equal for the Build Alternatives and all would result in an adverse effect after mitigation. Only the BRT Alternative would have an adverse effect on the Jardin del Encanto and Cascades Park; however, the adverse effect would be reduced to a conditional no adverse effect after mitigation.				
2. The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection	The proposed improvements – widening the off-ramp at Fair Oaks and removal of character-defining curb and vegetated embankment – and installation of retaining walls and concrete barrier under the TSM/TDM Alternative would have a direct adverse effect to character-defining features of the ASPHD that cannot be avoided or mitigated.	Same as TSM/TDM for ASPHD. Jardin del Encanto and Cascades Park. The Cascades Park covers approximately 1.3 acres (ac.). The four parcels at Cascades Park southeast of De La Fuente Street are turf/grass with scattered trees for passive recreational use. The removal of existing sidewalks to accommodate roadway widening and the conversion of non-contributing parkland to new sidewalk would not impact the activities, attributes, or features. The BRT Alternative would be able to mitigate the adverse effects under Section 106 to a Conditional No Adverse Effect.	Same as TSM/TDM for ASPHD.	Same as TSM/TDM for ASPHD.
All Build Alternatives propose the same project footprint, improvements, and mitigation for the ASPHD; therefore, the severity of harm after mitigation would be equal under all Build Alternatives. The BRT Alternative would result in no adverse effect to the protected activities, attributes, or features after mitigation.				
3. The relative significance of each Section 4(f) property	The ASPHD was listed in the NRHP at the state level under Criteria, A, B, and C in 2011. First freeway in the Western United States and represents the transitional phase between early parkways and modern freeways.	ASPHD: same as TSM/TDM. The Jardin del Encanto and Cascades Park was designed as a focal point for Midwick View Estates, a proposed garden community designed to rival Bel-Air and Beverly Hills in 1929. As a result of the Depression, the development was never realized. It was determined eligible for the NRHP under Criterion A and C, at the local level, with a period of significance of 1928 to 1929 (SHPO concurrence 11/2014).	ASPHD: same as TSM/TDM.	ASPHD: same as TSM/TDM.
According to the FHWA Policy Paper (2012) Question 2A: For the purpose of Section 4(f), a historic site is significant only if it is on or eligible for listing in the NRHP. The ASPHD and the Jardin del Encanto and Cascades Park are listed on the NRHP and are significant resources under Section 4(f).				
4. The views of the officials with jurisdiction over each Section 4(f) property.	The SHPO is the official with jurisdiction for the ASPHD. The Draft Individual Section 4(f) Evaluation was based on information contained in the FOAE. The FOAE was sent to the SHPO on January 3, 2018, and the Draft Individual Section 4(f) Evaluation was sent to SHPO on February 23, 2018. On May 3, 2018, the SHPO concurred with the FOAE. The SHPO did not provide comments to the Draft Individual Section 4(f) Evaluation by the April 23, 2018, deadline; therefore, a lack of objection to the determinations in the Draft Individual Section 4(f) Evaluation was presumed.	ASPHD: same as TSM/TDM. The City of Monterey Park (City) is the official with jurisdiction for the Jardin del Encanto and Cascades Park. On November 12, 2014, the project team provided a project update to the City and discussed potential impacts to the Jardin Del Encanto Cascades Park to accommodate a dedicated bus lane for the proposed BRT Alternative. Removal and replacement of a small portion of existing curb, signage, and landscape was anticipated and the City did not have any issues with the proposed improvements. The City also informed the team of their plans to improve the irrigation, and refurbish the waterfalls and rose gardens; therefore, they did not see restoring the sidewalks as an issue.	ASPHD: same as TSM/TDM.	ASPHD: same as TSM/TDM.
The SHPO, the official with jurisdiction, would have the same view for ASPHD under all the Build Alternatives. The SHPO did not provide comments or object to any of the analysis, determinations, or proposed measures contained in the Draft Individual Section 4(f) Evaluation or the determination of a Section 4(f) use for the ASPHD.				
5. The degree to which each alternative meets the purpose and need for the project.	As discussed in Section 1.2 of the Final EIR/EIS, all Build Alternatives would meet the project purpose and need.			
6. After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f).				

Adverse Effects to Resources not protected by Section 4(f)	TSM/TDM Alternative (Preferred Alternative)	BRT Alternative	LRT Alternative	Freeway Tunnel Alternative
Land Use	Conversion of 0.6 acre of non-transportation land to transportation use. Loss of 26 on-street parking (am/pm peak periods) and 220 on-street parking (all hours).	Conversion of 0.3 acre of non-transportation land to transportation use. Loss of 1,029 on-street parking (am/pm peak periods) and 114 on-street parking (all hours).	Conversion of 18.0 acres of non-transportation land to transportation use. Loss of 4 on-street parking.	Conversion of 1.5 acres of non-transportation land to transportation use.
Parcel Acquisitions Relocations	1 full/30 partial 0 residential/1 business	0 full/45 partial 0 residential/0 business	58 full/11 partial 0 residential/74 business	1 full/2-3 partial 0 residential/2 businesses
Visual/Aesthetics	5 noise barriers – low to high.	8 noise barriers, moderate to moderately high (including 5 from TSM/TDM component).	5 noise barriers (5 from TSM/TDM component).	11 noise barriers/8 noise barriers (dual/single bore), moderate to high (including 5 from TSM/TDM component).
Water Quality and Stormwater Runoff	Temporary disturbance of 21 acres of soil during construction. Permanent increase of impervious surfaces, 3.8 acres.	Temporary disturbance of 35 acres of soil during construction. Permanent increase of impervious surfaces, 1.2 acres.	Temporary disturbance of 33 acres of soil during construction. Permanent increase of impervious surfaces, 16.5 acres.	Temporary disturbance of 81/93 acres (single/dual bore) of soil during construction. Permanent increase of impervious surfaces 1.7/13.5 acres (single/dual bore).
Wetland and Other Waters	None	None	None	Single-bore 0.06 acres permanent impact to non-wetland waters. Dual-bore 0.5 acres permanent impact to non-wetland waters.
Wetland and Other Waters	None	None	None	Single-bore 0.06 acres permanent impact to non-wetland waters. Dual-bore 0.5 acres permanent impact to non-wetland waters.
Plant Species	No impact.	Removal of 136 locally protected trees.	Removal of approximately 21 locally protected trees.	Potential permanent impacts to the Coulter’s goldfields and to a Southern California black walnut tree. Removal of approximately 84 locally protected trees.
Animal Species	Temporary and permanent adverse impacts to areas that may contain suitable habitat for the San Bernardino ring-necked snake, and to nonnative grasslands that may support milkweed plants required for monarch butterfly breeding and also suitable for western spadefoot toad and San Bernardino ring-necked snake.	Same as TSM/TDM Alternative.	Temporary and permanent adverse impacts to areas that may contain suitable habitat for the San Bernardino ring-necked snakes, and impacts to nonnative woodlands that may contain eucalyptus trees with winter roosting aggregations of adult monarch butterflies.	Same as TSM/TDM Alternative, and temporary and permanent impacts to nonnative woodlands that may contain eucalyptus trees with winter roosting aggregations of adult monarch butterflies.
The representative resources not protected under Section 4(f) used for comparison under Factor 6 were taken from Table ES-1 Summary of Potential Environmental Impacts of the Build Alternatives in the Executive Summary of the Final EIR/EIS. According to the summary, all Build Alternatives would result in adverse impacts to both natural and human environments.				
7. Substantial differences in costs among the alternatives.	\$105 million (in 2014 dollars); \$126 million (in 2020 dollars).	\$139 million (BRT improvements in 2014 dollars) plus \$102 million for the TSM/TDM improvements. \$241 million total (in 2014 dollars). \$166 million (BRT improvements in 2020 dollars) plus \$122 million for the TSM/TDM improvements. \$288 million total (2020 dollars).	\$2,368 million (LRT Alternative improvements in 2014 dollars) plus \$52 million for the TSM/TDM Alternative improvements. \$2,420 million total (in 2014 dollars). \$2,830 million (LRT Alternative improvements in 2022 dollars) plus \$66 million for the TSM/TDM Alternative improvements. \$2,896 million total (in 2022 dollars).	\$3,100 million (single-bore design variation in 2014 dollars) and \$5,600 million (dual-bore design variation in 2014 dollars) plus \$50 million for the TSM/TDM improvements. Single-bore total: \$3,150 million (in 2014 dollars). Dual-bore total: \$5,650 million (2014 dollars). \$3.927 million (single-bore design variation in 2022 dollars) and \$7.094 million (dual-bore design variation in 2022 dollars) plus \$64 million, respectively, for the TSM/TDM improvements. Single-bore total: \$3,991 million (2022 dollars). Dual-bore total: \$7.158 million (in 2022 dollars).
The cost for the TSM/TDM (Preferred Alternative) is substantially less than the other Build Alternatives and the construction cost estimate for the Preferred Alternative can be funded utilizing existing resources, unlike the single-bore freeway tunnel that is estimated to cost approximately \$3.15 billion and is subject to local fund restrictions. (Use of Measure M funds to construct a 710 tunnel is prohibited.)				

8.3 Identification of the Least Overall Harm Alternative

8.3.1 TSM/TDM Alternative (Least Overall Harm Alternative)

A Least Overall Harm Analysis has been completed and after balancing the seven factors in 23 CFR 774.3 (c)(1) concerning the Build Alternatives under consideration, the TSM/TDM Alternative (Preferred Alternative) has been identified as the Least Overall Harm Alternative.

For the Arroyo Seco Parkway Historic District, Factors 1 through 5 would be equal under all Build Alternatives; however, the BRT Alternative would have a De Minimis Impact on another Section 4(f) resource, the Jardin del Encanto and Cascades Park.

Under Factor 6, the analysis concluded that the TSM/TDM Alternative (Preferred Alternative) would be environmentally superior, after mitigation, to the other Build Alternatives for the largest number of environmental parameters, and the magnitude of adverse impacts would be less than the other Build Alternatives after implementation of avoidance, minimization, or mitigation measures.

Under Factor 7, the analysis concluded the cost for the TSM/TDM (Preferred Alternative) is substantially less than the other Build Alternatives and the construction cost estimate for the Preferred Alternative can be funded utilizing existing resources, unlike the single-bore freeway tunnel that is estimated to cost approximately \$3.15 billion and is subject to local fund restrictions. (Use of Measure M funds to construct a 710 tunnel is prohibited.)

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Chapter 9 Conclusion

The TSM/TDM Alternative (Preferred Alternative) would attain the purpose and need of the project and would improve local traffic operations, mobility, and accessibility; enhance modal choice; and accommodate planned growth within the study area while minimizing environmental impacts. The TSM/TDM Alternative would provide direct benefits for traffic circulation on local arterials and some benefit to the regional freeway and transit networks resulting from the following improvements:

- Signal optimization
- Local street and intersection improvements
- Transit service improvements
- Bus service enhancements
- Bicycle facility improvements

The TSM/TDM Alternative consists of relatively small capital cost investments with low impacts that include operational improvements and strategies that increase the efficiency and capacity of the existing transportation system, while reducing the effects of localized bottlenecks and chokepoints. The TSM component of this alternative includes ITS, local street and intersection improvements, and ATM throughout the study area. The TDM component of the alternative includes expanded bus service, bus service improvements and bicycle facility improvements throughout the study area. The TSM/TDM Alternative also encourages automobile, public and private transit, ridesharing programs, and bicycle and pedestrian improvements as elements of a unified urban transportation system. For more detailed information, please see Section 2.4 Identification of a Preferred Alternative, of this Final EIR/EIS. Based on the above considerations, there is no feasible and prudent alternative to the use of land from the Arroyo Seco Parkway Historic District. The proposed action includes all possible planning to minimize harm to the Arroyo Seco Parkway Historic District resulting from such use and causes the least overall harm in light of the statute's preservation purpose.

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Chapter 10 List of Preparers

Caltrans

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Jason Roach, Senior Environmental Planner, Branch Chief

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Christine Miller Cruiss, Cultural Resources

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Chapter 11 References

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APPENDIX A

SECTION 4(f) CORRESPONDENCE

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**From Ron Kosinski, Deputy District Director, Division of Environmental Planning,
Caltrans District 7**

February 22, 2018

- Ms. Natalie Lindquist, California Office of Historic Preservation
- Ms. Michaela Noble, Department of the Interior
- Ms. Sarah Stokely, Advisory Council on Historic Preservation
- 710 North Project, Section 106 Consulting Parties

March 21, 2018

- Ms. Elizabeth Merritt, National Trust for Historic Preservation
- Ms. Susan Mossman, Pasadena Heritage
- Ms. Stephanie DeWolfe, City of South Pasadena

From Elizabeth Merritt, National Trust for Historic Preservation

April 23, 2018

- To: Ron Kosinski, Caltrans District 7
Re: State Route 710 North Study, Comments on Draft Individual Section 4(f) Evaluation

From Susan N. Mossman and Adam F. Rajper, Pasadena Heritage

April 23, 2018

- To: Ron Kosinski, Caltrans District 7
Re: Comments on State Route 710 North Study Draft Individual Section 4(f) Evaluation

From Stephanie DeWolfe, City of South Pasadena

April 23, 2018

- To: Ron Kosinski, Caltrans District 7
Re: SR-710 North Project, Section 4(f) Evaluation Comment Letter

The United States Department of Transportation Act mandates a minimum of 45 days for receipt of comments regarding Section 4(f) impacts. If comments are not received from your agency by **April 9, 2018**, a lack of objection may be assumed and the process may proceed to a final evaluation.

If you should have any questions or would like to arrange a meeting to discuss further, please contact Jason Roach of my staff at (213) 897-0357 or jason.roach@dot.ca.gov.

Sincerely,



RON KOSINSKI

Deputy District Director, Division of Environmental Planning
Caltrans District 7

DEPARTMENT OF TRANSPORTATION

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100 S. MAIN STREET, SUITE 100
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*Making Conservation
a California Way of Life.*

February 22, 2018

Michaela Noble, Director
Office of Environmental Policy and Compliance
Department of the Interior
Main Interior Building, MS 2462
1849 "C" Street, NW
Washington, DC 20240

Dear Ms. Noble:

This letter is regarding the Individual Section 4(f) Evaluation prepared for the 710 North Project (project). Caltrans is initiating consultation with your agency regarding the project's impacts on Section 4(f) resources.

The California Department of Transportation (Caltrans), in cooperation with the Los Angeles County Metropolitan Transportation Authority (Metro) proposes transportation improvements to improve mobility and relieve congestion in the area between State Route 2 (SR 2) and Interstates 5, 10, 210 and 605 (I-5, I-10, I-210, and I-605, respectively) in east/northeast Los Angeles and the western San Gabriel Valley. The study area for the State Route 710 (SR 710) North is approximately 100 square miles (sq mi) and generally bounded by I-210 on the north, I-605 on the east, I-10 on the south, and I-5 and SR 2 on the west. The study area also includes portions of East Los Angeles and Monterey Park south of I-10.

The SR 710 North Study Draft EIR/EIS (2015) included a Draft Section 4(f) De Minimis Finding which analyzed all Section 4(f) resources within the study area, 0.5 miles for parks, recreational areas, wildlife and waterfowl refuges and within the Area of Potential Effects established under Section 106 for Historic Properties. After circulation of the Draft EIR/EIS, the Finding of No Adverse Effect under Section 106 for the Arroyo Seco Parkway Historic District and the no use determination under Section 4(f) changed to a Finding of Adverse Effect under Section 106 and a use under Section 4(f). The attached Individual Section 4(f) Evaluation has been prepared to address the change in use under Section 4(f) to the Arroyo Seco Parkway Historic District.

The United States Department of Transportation Act mandates a minimum of 45 days for receipt of comments regarding Section 4(f) impacts. If comments are not received from your agency by **April 9, 2018**, a lack of objection may be assumed and the process may proceed to a final evaluation.

If you should have any questions or would like to arrange a meeting to discuss further, please contact Jason Roach of my staff at (213) 897-0357 or jason.roach@dot.ca.gov.

Sincerely,



RON KOSINSKI

Deputy District Director, Division of Environmental Planning
Caltrans District 7

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February 22, 2018

Ms. Sarah Stokely, FHWA Liaison
Advisory Council on Historic Preservation
401 F Street, NW, Suite 308
Washington, DC 20001-2637

Dear Ms. Stokely:

This letter is regarding the Individual Section 4(f) Evaluation prepared for the 710 North Project. As requested at our 2/14/18 Consulting Party Meeting, enclosed please find one CD copy of the Draft Individual Section 4(f) Evaluation.

The California Department of Transportation (Caltrans), in cooperation with the Los Angeles County Metropolitan Transportation Authority (Metro) proposes transportation improvements to improve mobility and relieve congestion in the area between State Route 2 (SR 2) and Interstates 5, 10, 210 and 605 (I-5, I-10, I-210, and I-605, respectively) in east/northeast Los Angeles and the western San Gabriel Valley. The study area for the State Route 710 (SR 710) North is approximately 100 square miles (sq mi) and generally bounded by I-210 on the north, I-605 on the east, I-10 on the south, and I-5 and SR 2 on the west. The study area also includes portions of East Los Angeles and Monterey Park south of I-10.

The SR 710 North Study Draft EIR/EIS (2015) included a Draft Section 4(f) De Minimis Finding which analyzed all Section 4(f) resources within the study area, 0.5 miles for parks, recreational areas, wildlife and waterfowl refuges and within the Area of Potential Effects established under Section 106 for Historic Properties. After circulation of the Draft EIR/EIS, the Finding of No Adverse Effect under Section 106 for the Arroyo Seco Parkway Historic District and the no use determination under Section 4(f) changed to a Finding of Adverse Effect under Section 106 and a use under Section 4(f). The attached Individual Section 4(f) Evaluation has been prepared to address the change in use under Section 4(f) to the Arroyo Seco Parkway Historic District.

The United States Department of Transportation Act mandates a minimum of 45 days for receipt of comments regarding Section 4(f) impacts. If comments are not received from your agency by **April 9, 2018**, a lack of objection may be assumed and the process may proceed to a final evaluation.

If you should have any questions, please contact Jason Roach of my staff at (213) 897-0357 or jason.roach@dot.ca.gov.

Sincerely,



RON KOSINSKI

Deputy District Director, Division of Environmental Planning
Caltrans District 7

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February 22, 2018

Dear 710 North Project Section 106 Consulting Parties:

This letter is regarding the Individual Section 4(f) Evaluation prepared for the 710 North Project. As requested at our 2/14/18 Consulting Party Meeting, enclosed please find one CD copy of the Draft Individual Section 4(f) Evaluation.

The California Department of Transportation (Caltrans), in cooperation with the Los Angeles County Metropolitan Transportation Authority (Metro) proposes transportation improvements to improve mobility and relieve congestion in the area between State Route 2 (SR 2) and Interstates 5, 10, 210 and 605 (I-5, I-10, I-210, and I-605, respectively) in east/northeast Los Angeles and the western San Gabriel Valley. The study area for the State Route 710 (SR 710) North is approximately 100 square miles (sq mi) and generally bounded by I-210 on the north, I-605 on the east, I-10 on the south, and I-5 and SR 2 on the west. The study area also includes portions of East Los Angeles and Monterey Park south of I-10.

The SR 710 North Study Draft EIR/EIS (2015) included a Draft Section 4(f) De Minimis Finding which analyzed all Section 4(f) resources within the study area, 0.5 miles for parks, recreational areas, wildlife and waterfowl refuges and within the Area of Potential Effects established under Section 106 for Historic Properties. After circulation of the Draft EIR/EIS, the Finding of No Adverse Effect under Section 106 for the Arroyo Seco Parkway Historic District and the no use determination under Section 4(f) changed to a Finding of Adverse Effect under Section 106 and a use under Section 4(f). The attached Individual Section 4(f) Evaluation has been prepared to address the change in use under Section 4(f) to the Arroyo Seco Parkway Historic District.

The United States Department of Transportation Act mandates a minimum of 45 days for receipt of comments regarding Section 4(f) impacts. If comments are not received by **April 9, 2018**, a lack of objection may be assumed and the process may proceed to a final evaluation.

If you should have any questions, please contact Jason Roach of my staff at (213) 897-0357 or jason.roach@dot.ca.gov.

Sincerely,

A handwritten signature in blue ink that reads "Ron Kosinski".

RON KOSINSKI

Deputy District Director, Division of Environmental Planning
Caltrans District 7

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March 21, 2018

Ms. Elizabeth Merritt
National Trust for Historic Preservation
Los Angeles Field Office
811 West 7th Street, Suite 1138
Los Angeles, CA 90017

Dear Ms. Merritt:

This letter is regarding the Individual Section 4(f) Evaluation prepared for the 710 North Project and your request for a two week extension. Caltrans values your input and so, we have approved your request for a two week extension. Please provide us with your comments by April 23, 2018. If you should have any questions, please contact Jason Roach of my staff at (213) 897-0357 or jason.roach@dot.ca.gov.

Sincerely,

A handwritten signature in blue ink that reads "Ron Kosinski".

RON KOSINSKI

Deputy District Director, Division of Environmental Planning
Caltrans District 7

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March 21, 2018

Ms. Susan Mossman
Pasadena Heritage
651 South ST. John Ave
Pasadena, CA 91105

Dear Ms. Mossman:

This letter is regarding the Individual Section 4(f) Evaluation prepared for the 710 North Project and your request for a two week extension. Caltrans values your input and so, we have approved your request for a two week extension. Please provide us with your comments by April 23, 2018. If you should have any questions, please contact Jason Roach of my staff at (213) 897-0357 or jason.roach@dot.ca.gov.

Sincerely,

A handwritten signature in blue ink that reads "Ron Kosinski".

RON KOSINSKI

Deputy District Director, Division of Environmental Planning
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March 21, 2018

Ms. Stephanie DeWolfe
City of South Pasadena
Office of the City Manager
1414 Mission Street
South Pasadena, CA 91030

Dear Ms. DeWolfe:

This letter is regarding the Individual Section 4(f) Evaluation prepared for the 710 North Project and your request for a two week extension. Caltrans values your input and so, we have approved your request for a two week extension. Please provide us with your comments by April 23, 2018. If you should have any questions, please contact Jason Roach of my staff at (213) 897-0357 or jason.roach@dot.ca.gov.

Sincerely,

A handwritten signature in blue ink that reads "Ron Kosinski".

RON KOSINSKI

Deputy District Director, Division of Environmental Planning
Caltrans District 7



National Trust *for*
Historic Preservation
Save the past. Enrich the future.

April 23, 2018

Ron Kosinski
Caltrans, District 7
100 South Main Street, Suite 100
Los Angeles, CA 90012

Re: State Route 710 North Study
Comments on Draft Individual Section 4(f) Evaluation

Dear Ron,

Thank you for providing the National Trust for Historic Preservation¹ a copy of the Draft Section 4(f) Evaluation for the SR 710 North project, and for extending the deadline for consulting parties to submit comments on the draft to April 23, 2018.

We commend the California Department of Transportation (Caltrans) for its decision to advance the TSM/TDM (Transportation System Management/Transportation Demand Management) Alternative as the “Preferred Alternative” for this project. We were notified of this decision at the consultation meeting on February 14, 2018. We strongly support this decision, not only because the TSM/TDM Alternative would be the least harmful to historic and cultural resources, but also because it would be the most feasible, efficient, and cost-effective alternative, in addition to being the locally preferred and environmentally superior alternative. It is also the only alternative with a dedicated source of funding for implementation (i.e., Metro’s reallocation of all remaining Measure R funds to TSM/TDM).

¹ The National Trust for Historic Preservation is a private nonprofit organization chartered by Congress in 1949 to facilitate public participation in the preservation of our nation's heritage, and to further the historic preservation policy of the United States. 54 U.S.C. §§ 320101, 312102. With more than one million members and supporters across the nation, the National Trust works to protect significant historic sites and to advocate historic preservation as a fundamental value in programs and policies at all levels of government. The National Trust has decades of experience working for better transportation solutions in Southern California. Beginning in 1989, the Trust named South Pasadena, Pasadena and El Sereno to its annual list of *America’s 11 Most Endangered Historic Places*, for five consecutive years, shining a national spotlight on the devastating threat posed to historic communities within the corridor from the proposed 710 freeway extension. In 1999, the National Trust was a co-plaintiff in the litigation that resulted in an injunction against the surface freeway proposed at the time, which would have demolished hundreds of historic homes and cultural sites. *City of South Pasadena, et al. v. Slater*, 56 F. Supp. 2d 1106 (C.D. Cal. 1999). More recently, in 2015, the National Trust named the “Historic Communities of the 710” as a National Treasure, in light of the renewed threats to historic resources, neighborhoods, and communities from the proposed SR 710 North project. And we have been actively engaged from the outset in the consultation and review process for this project under federal and state law, through our Los Angeles field office.

Lack of Coordination Between Section 106, NEPA, and Section 4(f) Review

The Draft Section 4(f) Evaluation seems to have been written before the decision was made to pursue TSM/TDM as the Preferred Alternative, or without reference to this decision. It also seems to lack coordination with the recent Finding Of Adverse Effect (FOAE) issued under Section 106 of the National Historic Preservation Act (NHPA), and in response to which the consulting parties submitted comments on March 1, 2018. In any event, the TSM/TDM Alternative is clearly the only alternative that satisfies the requirements of Section 4(f) of the Department of Transportation Act, 23 U.S.C. § 138(a), 49 U.S.C. § 303(c), 23 C.F.R. Part 774, because it is the least harmful feasible and prudent alternative. Accordingly, our Section 4(f) comments will focus on the TSM/TDM Alternative. However, if Caltrans at some future date decides to pursue one of the other alternatives, we would raise an objection to the Section 4(f) Evaluation, and it would be necessary for Caltrans to revisit and update its reviews under Section 4(f), as well as the National Environmental Policy Act (NEPA) and Section 106 of the NHPA.

The Stringent Standard Set by Section 4(f)

As you know, Section 4(f) of the Department of Transportation (DOT) Act is one of the most stringent federal environmental and historic preservation statutes ever enacted. The statute explicitly prohibits the approval or funding of any federally assisted transportation project that requires the “use” of historic sites (as well as public parks, recreation areas, and wildlife refuges), *unless* (1) there is “no prudent and feasible alternative” to the use of the sites, and (2) the project includes “all possible planning to minimize harm” to the sites.² Section 4(f) imposes a substantive constraint on agency decisions, and operates as a “plain and explicit bar to the use of federal funds” for transportation projects that would use historic sites; “only the most unusual situations are exempted.”³ Indeed, the language of Section 4(f) shows that Congress intended the protection of historic sites to be given “paramount importance” in the planning of federal transportation projects.⁴

The Tunnel Alternative Would Violate Section 4(f).

It is clear that the Tunnel Alternative would fail to comply with Section 4(f), because the TSM/TDM Alternative would constitute a feasible and prudent alternative that would minimize harm to historic properties.

Cumulative Impacts

The Section 4(f) Evaluation needs to address cumulative impacts, but does not adequately do so. For example, Chapter 4 includes a discussion of individual projects that are part of the package that makes up the TSM/TDM Alternative, and describes how the individual projects could potentially affect the Arroyo Seco Parkway Historic District. But this essentially constitutes a piecemeal analysis, rather than a holistic evaluation of the cumulative impacts these projects could have on the historic district.

² 28 U.S.C. § 138; 49 U.S.C. § 303(c).

³ *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 402, 411 (1972).

⁴ *Id.* at 412-13; *see also City of South Pasadena, et al. v. Slater*, 56 F. Supp. 2d at 1113.

All Possible Planning to Minimize Harm from the TSM/TDM Alternative.

Although the TSM/TDM Alternative is the least harmful among those that have been proposed, its impacts must still be minimized, pursuant to the “all possible planning to minimize harm” requirement of Section 4(f)(2). In addition, since the TSM/TDM Alternative represents a package or collection of smaller projects, it is important to clarify that these comments only apply to projects that have already been disclosed as being within the scope of the TSM/TDM Alternative. In other words, our comments that are supportive of the TSM/TDM Alternative could not be construed as necessarily supporting additional components that may be added to the package later, but are not mentioned in the current Section 4(f) Evaluation. For example, we would not support the addition of projects that would widen the existing roadway or remove substantial parking.

Section 6.5 discusses the future development of Property-Specific Protection Plans to minimize harm. It will be extremely important to ensure that the local communities are directly engaged in the development of these plans. The Section 106 consultation process could provide a mechanism for developing these plans, but it would be essential to ensure that the substantive standard of “all possible planning to minimize harm” is applied as the basis for the plans, rather than the optional standard under Section 106 that allows adverse effects to be minimized ***or*** mitigated.⁵

Section 7.3 Section 106 Consultation with Interested Parties

Curiously, the National Trust for Historic Preservation is missing from the list on page 7-4, which identifies parties contacted through the public outreach process, and we are also missing from the list of groups that responded and requested to participate as consulting parties, at the bottom of page 7-4. (However, the National Trust is properly included on the list of parties that attended the consultation meeting held on April 22, 2016, described on page 7-3.)

Thank you for considering the comments of the National Trust for Historic Preservation. We look forward to continuing our involvement as a consulting party to develop a consensus-based resolution to the effects of the proposed project.

Sincerely,



Elizabeth S. Merritt
Deputy General Counsel

⁵ In general, Chapter 6 tends to use the terms “minimize” and “mitigate” interchangeably, causing unnecessary confusing by failing to distinguish adequately between the two.

cc: Sarah Stokely, Charlene Vaughn, and Reid Nelson,
Advisory Council on Historic Preservation
Carol Braegelmann, U.S. Dep't of the Interior
Julianne Polanco, California State Historic Preservation Officer
City of South Pasadena
Los Angeles Conservancy
Pasadena Heritage
West Pasadena Residents Association
No 710 Action Committee
Westridge School
Sequoia School



April 23, 2018

Ron Kosinski
Caltrans, District 7
100 South Main Street
Los Angeles, California 90012

RE: Comments on State Route 710 North Study Draft Individual Section 4(f) Evaluation

Dear Mr. Kosinski:

Pasadena Heritage appreciates the opportunity to serve as a Consulting Party for the State Route (SR) 710 North Project and provide comments on the Draft Individual Section 4(f) Evaluation issued by the California Department of Transportation (Caltrans), in cooperation with the Los Angeles County Metropolitan Transportation Authority (Metro), in February 2018. We are pleased to see that the findings of the SR 710 North Study Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) issued in 2015 have changed to a Finding of Adverse Effect (FOAE) under Section 106 and a use under Section 4(f). We understand that the Section 4(f) Evaluation addresses the change in use under Section 4(f) to the Arroyo Seco Parkway Historic District. Below are our comments on this report.

Specific Comments

Preferred Alternative

Pasadena Heritage is pleased that the FOAE report issued in December 2017 duly recognized potential adverse effects on historic properties resulting from four proposed project alternatives. At the Section 106 Consulting Parties Meeting on February 14, 2018, we were overjoyed to learn that the Transportation System Management/ Transportation Demand Management Alternative (TSM/TDM) Alternative has been selected by Caltrans as the preferred Alternative. It was clear from the FOAE analysis that the other Alternatives, and especially the Tunnel Alternative, would result in the most adverse effects on historic properties. In our March 1, 2018 comments, we urged that Caltrans unequivocally state that the Tunnel Alternative, which we opposed, be removed from any further consideration based on the number, severity, and substantial additional study needed regarding adverse effects.

The Section 4(f) Evaluation appears to imply, but not explicitly state, that the TSM/TDM Alternative is the preferred Alternative. The report should clearly: (1) identify the TSM/TDM Alternative is the preferred Alternative because the other Alternatives would be more harmful to historic properties; and (2) state that the TSM/TDM Alternative is the Environmentally Superior Alternative because it would result in the least adverse effects. If our assumption is incorrect and the TSM/TDM Alternative is, in fact, not the preferred Alternative, we expect that Caltrans will revise and update its Section 4(f) Evaluation to address the other Alternatives and allow Consulting Parties to provide comments.

Arroyo Seco Parkway Historic District

Section 4(f) of the United States Department of Transportation (USDOT) explicitly prohibits USDOT agencies from using land from public or private historic properties unless there is no feasible and prudent alternative to that use and the action includes all possible planning to minimize harm to the property resulting from such a use. As such, Section 4(f) affords a high level of protection to historic properties. It is absolutely critical that sufficient evidence be provided to demonstrate how a project satisfies the above two conditions.

We are concerned because the Section 4(f) Evaluation identifies an adverse effect to, and a use of, the Arroyo Seco Parkway Historic District. Listed in the National Register of Historic Places and California Register of Historical Resources under Criteria A/1, B/2, and C/3, this linear resource was constructed in three phases between 1938 and 1953. It is significant, and important to us, for its association with transportation planning in the Los Angeles Basin and roadway construction from Los Angeles to Pasadena, as well as with Los Angeles City Engineer Lloyd Alrich; it also represents an innovative and original highway engineering design in Los Angeles.

We are specifically concerned because some improvements and modifications proposed under the TSM/TDM Alternative would alter or destroy character-defining features that contribute to the significance of the Arroyo Seco Parkway Historic District. Chapter 4, Use of Section 4(f) Property, provides a breakdown of TSM/TDM Alternative projects and an assessment of how proposed changes would potentially adversely affect the Arroyo Seco Parkway Historic District. This chapter also provides reasons why each project would not compromise the listing status of the Arroyo Seco Parkway Historic District. The piecemeal analysis provided in this chapter is not acceptable and we request that the Section 4(f) Evaluation be revised to include an evaluation of the cumulative effect of these changes on the integrity of the historic district as a whole.

We further worry about how the above changes, in conjunction with other improvements and modifications that are not addressed in the Section 4(f) Evaluation but are presently being implemented, or will be implemented in the future, could further detract from the historic district's integrity. These improvements and modifications should be identified and addressed in the cumulative effects analysis.

Minimizing Impacts

Pasadena Heritage believes that the TSM/TDM Alternative is the least harmful Alternative of those proposed by Caltrans. However, Caltrans has a responsibility to ensure that harm resulting from the TSM/TDM Alternative is minimized and all adverse effects are appropriately mitigated. Moreover, as mentioned above, Chapter 4, Use of Section 4(f) Property, identifies various TSM/TDM Alternative projects and provides an assessment of their potential to adversely affect the Arroyo Seco Parkway Historic District. Pasadena Heritage urges Caltrans to solicit comments from communities that are directly affected by these projects.

Conclusion

Pasadena Heritage appreciates this opportunity to provide comments on the Draft 4(f) Section 4(f) Evaluation. As a 501(c) (3) non-profit historic preservation organization, we continue to be concerned about how this project could impact our community and our valued historic resources for many years to come. We thank you for considering our comments and concerns.

Sincerely yours,



Susan N. Mossman
Executive Director



Adam F. Rajper
Preservation Director



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April 23, 2018

Ron Kosinski
Caltrans, District 7
100 South Main Street, Suite 100
Los Angeles, CA 90012

Re: SR-710 North Project Section 4(f) Evaluation Comment Letter

Dear Mr. Kosinski,

Thank you for the opportunity to provide public comment on the State Route 710 (SR-710) North Project Section 4(f) Evaluation. The preservation of historic resources is of paramount importance to the City of South Pasadena (City) and the City is pleased to see that the California Department of Transportation has re-evaluated the impacts associated with the Draft Section 4(f) De Minimis Finding. The City reiterates the comments that were submitted on March 1, 2018, in response to the Findings of Adverse Effect (FOAE) which included comments regarding Section 4(f).

Section 4(f) of the Department of Transportation (DOT) Act is one of the most stringent federal environmental and historic preservation statutes ever enacted by Congress. The statute explicitly prohibits the Secretary of Transportation from approving any project that requires the “use” of historic sites, *unless* (1) there is no “prudent and feasible” alternative to the use of the sites, and (2) “all possible planning” has been taken to minimize harm to the sites.¹ Section 4(f) imposes a substantive constraint on the exercise of agency discretion. Section 4(f) operates as a “plain and explicit bar to the use of federal funds” for transportation projects that would use historic sites; “only the most unusual situations are exempted.”² Indeed, the language of Section 4(f) shows that Congress intended the protection of historic sites to be given “paramount importance” in the planning of federal transportation projects.³

The circumstances under which an avoidance alternative can be rejected as not “feasible and prudent” have been very narrowly defined by the United States Supreme Court. The Secretary of Transportation is not permitted to “engage in a wide-ranging balancing of competing interests.”⁴

¹ 28 U.S.C. § 138; 49 U.S.C. § 303(c).

² *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 402, 411 (1972).

³ *Id.* at 412-13.

⁴ *Id.* at 413.

An avoidance alternative is “infeasible” only if it cannot be built “as a matter of sound engineering.”⁵ And in order to find an avoidance alternative “not prudent” under Section 4(f), the Secretary must find that “truly unusual factors” are present, or that “alternative routes present unique problems,” or that the “cost or community disruption” resulting from the avoidance alternative would reach “extraordinary magnitudes.”⁶ Without such a showing, even the asserted “need” for the project cannot suffice to rule out alternatives that would avoid using protected sites.⁷

The Code of Federal Regulations regarding Section 4(f) approvals states:

The Administration may not approve the use, as defined in §774.17, of Section 4(f) property unless a determination is made under paragraph (a) or (b) of this section.

(a) The Administration determines that:

- (1) There is no feasible and prudent avoidance alternative, as defined in §774.17, to the use of land from the property; and
- (2) The action includes all possible planning, as defined in §774.17, to minimize harm to the property resulting from such use.⁸

The City is eager to move forward with the Transportation System Management/Transportation Demand Management (TSM/TDM) Alternative including the regionally significant State Route 110 (SR-110) Fair Oaks Avenue Hook Ramp Project. As an initial matter, the Section 4(f) Evaluation should clearly state that the TSM/TDM Alternative is the focus of the Section 4(f) Evaluation because the other alternatives would be more harmful to historic resources. In addition, the Section 4(f) should also state that the TSM/TDM Alternative is the Environmentally Superior Alternative as it would generally result in the least adverse environmental impacts. If the Section 4(f) Evaluation is intended as a statement of impacts of all alternatives, additional detailed evaluation of them is required as stated in our comments submitted on March 1, 2018.

While the City believes the TSM/TDM Alternative is the least damaging among those proposed, its impacts must still be minimized and further mitigated. The City is not in support of projects that would widen the existing roadway or remove substantial parking. On May 25, 2017, the Los Angeles Metropolitan Transportation Authority’s (Metro) Board made an unanimous decision to adopt the TSM/TDM Alternative as the Locally Preferred Alternative for the SR-710 North Project; allocate \$105 million in remaining Measure R funds to the development and implementation of the projects listed in the TSM/TDM Alternative; and allocate the remaining Measure R funds towards new mobility improvement projects in the corridor. Consequently, on December 14, 2017, the City submitted to Metro a list of SR-710 Early Action Projects (EAP). The EAP list was created in collaboration with the Cities of Alhambra and Pasadena to ensure regional mobility benefits. In addition, the EAP list incorporated city-appropriate projects derived from the TSM/TDM Alternative to develop a comprehensive list of projects that will improve cross jurisdictional traffic flow while minimizing cut-through traffic impacts on residential neighborhoods and improve transportation safety. On April 10, 2018, the Los Angeles County Superior Court upheld the validity of the Metro Board’s decision to reallocate the funds.

⁵ *Id.* at 411.

⁶ *Id.*

⁷ See *Stop H-3 Ass’n v. Dole*, (9th Cir. 1984) 740 F.2d 1442, 1450-58.

⁸ 23 C.F.R. §774.3.

In light of the important Metro Board decision, the City would like to request that the following language be included in Section 2.1 Project Background of the Final Section 4(f):

On August 5, 2015, Metro and Caltrans received approximately 8,000 comments at the close of the public comment period. All of the comments received during the public comment period are required to be addressed in the Final EIR/EIS. Many of these comments identified deficiencies in the Draft EIR/EIS, specifically the evaluation of the Tunnel Alternative. On July 23, 2015, the San Gabriel Valley Council of Governments unanimously voted to remove the SR-710 North Study from its Measure M Priority Project List. This decision highlighted the lack of local commitment to fund and implement the Tunnel Alternative. On May 25, 2017, the Metro Board made an unanimous decision to adopt the TSM/TDM Alternative as the Locally Preferred Alternative for the State Route 710 (SR-710) North Project; allocate \$105 million in remaining Measure R funds to the development and implementation of the projects listed in the TSM/TDM Alternative; and allocate the remaining Measure R funds towards new mobility improvement projects in the corridor.

Elimination of the previously identified funding source for the Tunnel Alternative has resulted in the Tunnel Alternative being economically infeasible. Thus in addition to having more impacts to resources protected by Section 4(f), it is unlikely that the Tunnel Alternative would be technically feasible because funding for measures required to overcome the engineering challenges of the Tunnel Alternative is not available. The City and other reviewing agencies, including the South Coast Air Quality Management District and the United States Environmental Protection Agency, have previously made clear during the Draft SR-710 North Environmental Impact Report/Environmental Impact Statement (EIR/EIS) public review period that there are enormous unresolved technical deficiencies associated with the Tunnel Alternative. Consequently, the Tunnel Alternative must be considered technically and legally infeasible.

Table 4.2-1: Proposed TSM/TDM Alternative Features and Assessment of Potential Effects on the Arroyo Seco Parkway Historic District failed to include the Adverse Effects that were identified in Table 5.3.4-3 of the FOAE regarding the construction activity for the SR-110 State Street on- and off-ramps.

While Section 5.4 SR-710 North Study Alternatives Analysis includes a discussion of the different alternatives that were considered for the SR-710, there is no discussion of the alternatives considered under the TSM/TDM Alternative. As many jurisdictions have already submitted EAP lists to Metro for funding consideration, Caltrans should include a discussion of how the implementation of those projects will impact the SR-710 North Study.

Section 5.6 Design Changes to Avoid Use of Section 4(f) Property states that the City favored the current SR-110 Hook Ramp design. Unfortunately, delivery of the SR-110 Hook Ramp project has been significantly delayed since its inception and the project design has not been finalized. The City is currently working with Caltrans and Metro to develop a strategy to finalize the design and construction of this important regional project.

Section 6.4 Measures to Mitigate Demolition or Destruction to All or Part of a Historic Property includes a list of mitigation measures and also states that "Additional mitigation measures may be identified in consultation with the Consulting Parties to mitigate the adverse effect to the Arroyo Seco Parkway Historic District." However, Section 6.4 fails to identify whether the

mitigation measures would minimize or mitigate the effects on the Arroyo Seco Parkway Historic District. Section 6.5 Property-Specific Protection Plans (PSPP) then specifies that during the final design a PSPP will be created. Alluding to the creation of a PSPP without further discussion does not provide the public with a clear understanding of the impacts associated with the TSM/TDM Alternative. Any PSPP would need to be developed in coordination with local jurisdictions and preservation groups to ensure the most appropriate mitigation measures are established.

Section 7.3.3 Issues Raised by the Public Regarding Historic Properties highlights some of the comments that were provided by the public regarding historic properties associated with the SR-710 North Draft EIR/EIS. However, a response to these comments, beyond that which was provided in Section 7.3.5 Resolution of Comments Received, must be provided in the Final EIR/EIS.

Chapter 8 Least Overall Harm Analysis states that “After circulation of the Draft Section 4(f) evaluation... Caltrans will consider comments received on the evaluation and will prepare and finalize the comparison of all factors listed in 23 CFR 774.3(c)(1) for all of the alternatives. The analysis and identification of the alternative that has the least overall harm will be documented in the Final Section 4(f) evaluation.” The previous Section 4(f) associated with the Draft EIR/EIS was circulated among the general public. However, this Individual Section 4(f) evaluation was only provided to those listed as a consulting party. The Individual Section 4(f) evaluation should be circulated to the public as a Supplemental EIR/EIS or by some other means to ensure the public is able to review it, as was the case with the previous Section 4(f) analysis. The Final EIR/EIS will include the Final Section 4(f) and will only be required to provide a 30-day public comment period. Caltrans should extend the public comment period for the Final EIR/EIS to ensure the general public has had sufficient time to review and provide comments.

The Section 4(f) evaluation also fails to consider cumulative impacts associated with the SR-110. Caltrans is currently performing an environmental review for the proposed SR-110 Arroyo Seco Parkway High Friction Surface Treatment Project. The impacts associated with this project in conjunction with the TSM/TDM Alternative may result in a cumulative impact that has not been evaluated in the Section 4(f). Piecemeal analysis that fails to capture the full impacts of a proposed project is prohibited. (*Named Individual Members of San Antonio Conservation Society*, 446 F.2d at 1023 [Secretary may not take a single project and divide it into “segments” for purposes of section 4(f) approval]. *See also Atchison, Topeka & Santa Fe Railway Co.*, 382 F.Supp. at 620–21 [NEPA “requires that agencies of the Federal government consider the impact of an overall program and not just isolated aspects of facilities. A restricted impact analysis is prohibited because it ‘would frustrate the vitality of NEPA by allowing piecemeal decisions.’ ”]; *Stop H-3 Ass'n v. Dole* (9th Cir. 1989) 870 F.2d 1419, 1427.)

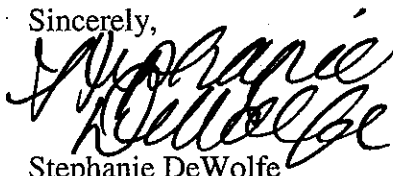
The Individual Section 4(f) evaluation is limited to the impacts of the TSM/TDM Alternative on the Arroyo Seco Parkway Historic District. Consequently, the City’s previous comments regarding its concerns with the other build alternatives have not been addressed. These concerns include the construction and operational vibration impacts of the other build alternatives on the Oaklawn Historic District, Rialto Theater, Fair Hope Building, and Oaklawn Bridge and Waiting Station. If the Tunnel Alternative is pursued, additional, more adequate analysis, must be supplied. We reserve the right to comment on such a future proposal but do not submit such detailed comments about the alternatives other than the TSM/TDM Alternative because it is our understanding those alternatives are not being proposed. In view of the Section 4(f) Evaluation,

no other alternative than the TSM/TDM Alternative can be pursued because they would be more damaging to resources protected by Section 4(f).

Beyond the TSM/TDM Alternative comments presented, there are still numerous questions regarding the analysis for the Tunnel Alternative that must be addressed. The Draft EIR/EIS failed to provide sufficient information regarding the duration of tunnel boring under each area and the potential contingency plans related to a breakdown of the tunnel boring machines. These potential impacts would extend beyond the recent impact analysis associated with the TSM/TDM Alternative in the Section 4(f). Again, the Section 4(f) Evaluation should be explicitly clear that only the TSM/TDM Alternative may be proposed because it is the least harmful to resources protected by Section 4(f). The City is anxious for Caltrans to move forward with the TSM/TDM Alternative as it is economical, legally feasible, the Environmentally Superior Alternative, and the Locally Preferred Alternative.

Thank you for your consideration of our comments and we look forward to our continued partnership in preserving our historic resources while working towards solutions to local and regional mobility.

Sincerely,

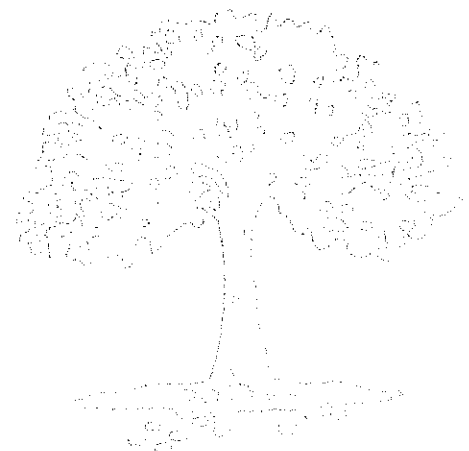


Stephanie DeWolfe
South Pasadena City Manager

Attachments:

1. SR-710 Early Action Projects List
2. FOAE Comment Letter

cc: South Pasadena City Council



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Appendix B.2

Section 4(f) De Minimis Analysis and Resources Evaluated Relative to the Requirements of Section 4(f)

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SR 710 North Project

Final Section 4(f) De Minimis Analysis and Resources Evaluated Relative to the Requirements of Section 4(f)

E.A. 187900

EFIS 0700000191

07-LA-710 (SR 710)

Prepared for



The environmental review, consultation, and any other action required in accordance with the applicable federal laws for this project are being, or have been, carried out by the California Department of Transportation under its assumption of responsibility pursuant to 23 United States Code 327.

Submitted pursuant to 49 United States Code 303.

November 2018

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Acronyms and Abbreviations

ac	acre/acres
ACHP	Advisory Council on Historic Preservation
APE	Area of Potential Effects
APN	Assessor's Parcel Number
ATM	Active Traffic Management
Ave.	Avenue
Blvd.	Boulevard
BRT	Bus Rapid Transit
BSA	Biological Study Area
Cal State LA	California State University, Los Angeles
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CMS	changeable message signs
COZEEP	Construction Zone Enhanced Enforcement Program
dba	A-weighted decibels
DOI	United States Department of the Interior
Dr.	Drive
E.	East
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
El Encanto	Jardin del Encanto
Express	Express Bus
FHWA	Federal Highway Administration
FOE	Finding of Effects
Foothill	Foothill Transit
ft	foot/feet
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
FY	Fiscal Year
GIS	Geographic Information System

HPSR	Historic Property Survey Report
I-10	Interstate 10
I-105	Interstate 105
I-110	Interstate 110
I-210	Interstate 210
I-405	Interstate 405
I-5	Interstate 5
I-605	Interstate 605
I-710	Interstate 710
ID No.	Identification Number
IEN	Information Exchange Network
ITS	Intelligent Transportation Systems
L&WCF Act	Land and Water Conservation Fund Act
L _{max}	maximum instantaneous noise level
LRT	Light Rail Transit
LRTP	Long Range Transportation Plan
MDL	maximum disturbance limits
Metro	Los Angeles County Metropolitan Transportation Authority
mi	mile, miles
mph	miles per hour
MSA	Metropolitan Statistical Area
National Register	National Register of Historic Places
NB	northbound
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NPS	National Park Service
O&M	operations and maintenance
Pl.	Place
Rapid	Bus Rapid Transit
ROW	right-of-way
RTP	Regional Transportation Plan
S.	South

SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SB	southbound
SCAG	Southern California Association of Governments
SCS	Sustainable Communities Strategy
SHPO	State Historic Preservation Officer
sq mi	square miles
SR 110	State Route 110
SR 118	State Route 118
SR 134	State Route 134
SR 170	State Route 170
SR 2	State Route 2
SR 22	State Route 22
SR 57	State Route 57
SR 60	State Route 60
SR 710	State Route 710
SR 91	State Route 91
St.	Street
TAP	Transit Access Pass
TBM	tunnel boring machine
TCE, TCEs	temporary construction easement, easements
TDM	Transportation Demand Management
TMP	Transportation Management Plan
TSM	Transportation System Management
TSSP	Traffic Signal Synchronization Program
US-101	United States Route 101
USC	United States Code
USDOT	United States Department of Transportation

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1. Introduction

1.1 Project Overview

The California Department of Transportation (Caltrans), in cooperation with the Los Angeles County Metropolitan Transportation Authority (Metro), proposes transportation improvements to improve mobility and relieve congestion in the area between State Route 2 (SR 2) and Interstates 5, 10, 210 and 605 (I-5, I-10, I-210, and I-605, respectively) in east/northeast Los Angeles and the western San Gabriel Valley. The study area for the State Route 710 (SR 710) North Project covers approximately 100 square miles (sq mi) and is generally bounded by I-210 on the north, I-605 on the east, I-10 on the south, and I-5 and SR 2 on the west. The general study area for the SR 710 North Project includes all or parts of the Cities of Alhambra, Arcadia, Duarte, El Monte, Glendale, La Cañada Flintridge, Los Angeles, Monrovia, Monterey Park, Pasadena, Rosemead, San Gabriel, San Marino, Sierra Madre, South Pasadena, and Temple City. It also includes several distinct neighborhoods in the City of Los Angeles, including El Sereno and Highland Park, and parts of several unincorporated communities (e.g., La Crescenta-Montrose and Altadena) in the western San Gabriel Valley and foothills.

Caltrans is the Lead Agency under the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) for the proposed project.

The purpose of the proposed project is to improve the efficiency of the existing regional freeway and transit networks, reduce congestion on local arterials adversely affected due to accommodating regional traffic volumes, and minimize environmental impacts related to mobile sources. The alternatives considered in this Section 4(f) Evaluation are the No Build, Transportation Systems Management/Transportation Demand Management (TSM/TDM), Bus Rapid Transit (BRT), Light Rail Transit (LRT), and Freeway Tunnel Alternatives. Subsequent to circulation of the *Draft Section 4(f) De Minimis analysis*, the TSM/TDM Alternative was identified as the Preferred Alternative for the proposed project.

1.2 Requirements of Sections 4(f) and 6(f)

1.2.1 Section 4(f)

Section 6009(a) of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) amended Section 4(f) legislation at 23 United States Code (USC) 138 and 49 USC 303 to simplify the processing and approval of projects that have only *de minimis* impacts on lands protected by Section 4(f). This revision provides that once the United States Department of Transportation (USDOT) determines that a transportation use of Section 4(f) property, after consideration of any impact avoidance, minimization, and mitigation or enhancement measures, results in a *de minimis* impact on that property, an analysis of avoidance alternatives is not required and the Section 4(f) evaluation process is complete. The Federal Highway Administration (FHWA) final rule on Section 4(f) *de minimis* analysis is codified in 23 Code of Federal Regulations (CFR) 774.3 and CFR 774.17.

Responsibility for compliance with Section 4(f) has been assigned to Caltrans pursuant to 23 USC 326 and 327, including determinations and approval of Section 4(f) evaluations, as well as coordination

with those agencies that have jurisdiction over a Section 4(f) resource that may be affected by a project action.

1.2.2 Section 6(f)

State and local governments can obtain grants through the Land and Water Conservation Fund (L&WCF) Act to acquire land for or make improvements to public parks and recreation areas. Section 6(f) of the L&WCF Act prohibits the conversion of property acquired or developed with these grants to a nonrecreation or nonparkland purpose without the approval of the United States Department of the Interior (DOI) National Park Service (NPS). Section 6(f) directs the DOI to ensure that replacement lands of equal value, location, and usefulness are provided as conditions to the conversion of lands acquired or developed with L&WCF Act funds to nonparkland uses. Consequently, where conversions of Section 6(f) lands are proposed for highway projects, replacement of the affected land is required.

Properties in which Section 6(f) funds were used were identified in “Land and Water Conservation Fund – All Funded Projects (3-2-2013)”¹ and the “Land and Water Conservation Fund” website home page.² Based on those sources, L&WCA funds were used at several parks in the study area (i.e., Alhambra Park, Almansor Park, Belvedere Community Regional Park, Brookside Park, El Sereno North Park, Emery Park, Santa Fe Dam Recreation Area, and Smith Park). The applicability of Section 6(f) is discussed by resource below in the following chapters of this *Final Section 4(f) De Minimis Analysis*: Chapter 2, Section 4(f) *De Minimis* Analysis, and Chapter 3, Other Resources Evaluated Relative to the Requirements of Sections 4(f) and 6(f).

1.3 Definitions of Permanent Incorporation, Temporary Occupancy, and Constructive Use of Section 4(f) Properties

As defined in 23 CFR 774.17, there is a use of land from a Section 4(f) property when one of the following occurs:

1. When land is permanently incorporated into a transportation facility.
2. When there is a temporary occupancy of land that is adverse in terms of the statute’s preservation purpose as determined by the criteria in Section 774.13(d). Section 774.13(d) indicates that temporary occupancies of land that are so minimal as to not constitute a use within the meaning of Section 4(f) are exceptions to the requirement for Section 4(f) approval. Specifically, for the purposes of Section 4(f), such temporary occupancy of a Section 4(f) resource does not normally constitute use if each of the following five conditions is met (23 CFR 774.13(d)):
 - a. Duration must be temporary (i.e., less than the time needed for construction of the project), and there should be no change in ownership of the land;
 - b. Scope of the work must be minor (i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal);

¹ California Department of Parks and Recreation. Land and Water Conservation Fund. http://www.parks.ca.gov/?Page_id+21360, accessed October 17, 2013.

² Ibid.

- c. There are no anticipated permanent adverse physical impacts, nor would there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis;
 - d. The land being used must be fully restored (i.e., the property must be returned to a condition that is at least as good as that which existed prior to the project); and
 - e. There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.
3. When there is a constructive use of a Section 4(f) property as determined by the criteria in Section 774.15. Section 774.15(a) indicates a constructive use occurs when the transportation project does not incorporate land from a Section 4(f) property, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired. Substantial impairment occurs only when the protected activities, features, or attributes of the property are substantially diminished.

1.4 Identification of Section 4(f) Resources

The following study areas were used for the identification of Section 4(f) and 6(f) resources:

- The area within 0.5 mile (mi) of the maximum disturbance limits for the Build Alternatives was used to define the study area for existing publicly owned recreation and park resources, including local, regional, State, and federal resources; existing play and sports fields of public schools with public access (because many public schools and school districts use or allow the use of public school play and sports fields for nonschool activities, such as organized youth sports, all public schools with play and sports fields were considered as possible Section 4(f) resource properties for this analysis); publicly owned wildlife and water fowl refuges and conservation areas; and existing off-street public bicycle, pedestrian, and equestrian trails.
- The Area of Potential Effects (APE) identified in the *Historic Property Survey Report* (HPSR) (2014) and *Supplemental Historic Property Survey Report* (SHPSR) (2017) was used to define the study area for properties listed, eligible for listing, or determined eligible for listing on the National Register of Historic Places (National Register).

The areas within the anticipated permanent rights-of-way for the Build Alternatives and the APE were the basis for identifying the potential permanent incorporation of land from properties protected under the requirements of Sections 4(f) and 6(f) by the Build Alternatives. Areas of permanent easements and areas proposed for temporary occupancy for temporary construction easements (TCEs) during project construction were also evaluated to assess the potential effects of those project features under the requirements of Sections 4(f) and 6(f). Resources within the 0.5 mi study area and the APEs were also assessed to determine whether indirect impacts of the Build Alternatives would result in constructive use of those resources.

In response to comments received on the Draft EIR/EIS for the SR 710 North Project, a minor refinement was made to the APE, additional properties were evaluated in the SHPSR, and a *Finding of Adverse Effect* (FOAE) (2017), was prepared. Based on these updates, it was determined that the TSM/TDM Alternative (T-2 Other Road Improvements) would cause a direct impact to the Arroyo Seco Parkway Historic District resulting in an adverse effect and a use under Section 4(f) due to the

removal of character-defining features and from construction of retaining walls and hook ramps. To address the use of the Arroyo Seco Parkway Historic District, a Draft Individual Section 4(f) Evaluation was prepared and circulated to the SHPO, DOI and the ACHP on February 22, 2018 and to the Consulting Parties who requested to review the Draft Individual Section 4(f) on March 21, 2018. No comments were received from the SHPO, ACHP or DOI. Comments were received from the Consulting Parties on April 23, 2018. Please see the Final Individual Section 4(f) Evaluation for copies of the correspondence. A *Final Individual Section 4(f) Evaluation* was prepared in June 2018 and is provided as Appendix B.1 in the Final EIR/EIS. This Final *De Minimis* Analysis has also been updated to include the additional properties identified in the revised APE and is consistent with the findings of the SHPSR and the FOAE for the SR 710 North Project.

1.5 Summary of Effects

Based on the list of Section 4(f) resources identified in the study areas described above, the BRT Alternative was determined to result in the permanent incorporation of land from, and temporary occupancy of land in, the following resource, thereby triggering the requirements for protection under Section 4(f) for that resource:

- Jardin Del Encanto and Cascades Park

As discussed later in Section 2.1.5, Potential *De Minimis* Use, the permanent incorporation of land from and the temporary occupancy of land in this Section 4(f) resource as a result of the BRT Alternative would have only minor effects on that resource, and Caltrans previously made a preliminary *de minimis* analysis regarding those effects.

None of the other Build Alternatives would result in the permanent incorporation or temporary occupancy of land from Jardin Del Encanto and Cascades Park. With the exception of the Arroyo Seco Parkway Historic District, all the Build Alternatives were also determined not to result in the permanent incorporation, temporary occupancy, or constructive use of any other resources in the study area. Those resources are described in detail in Chapter 3, Other Resources Evaluated Relative to the Requirements of Sections 4(f) and 6(f), which also provides analysis documenting why the Build Alternatives would not result in the permanent incorporation, temporary occupancy, or constructive use of those resources under Section 4(f).

As discussed in Chapters 2 and 3, the SR 710 North Project Build Alternatives would not result in the conversion of any Section 6(f) lands to nonparkland uses.

1.5.1 Preferred Alternative

Caltrans, as the Lead Agency under CEQA/NEPA, has identified the TSM/TDM Alternative as the Preferred Alternative. Refer to Chapter 2.0 of the Final EIR/EIS for a full discussion of the Preferred Alternative. The TSM/TDM Alternative is an avoidance alternative for the potential effects on Jardin Del Encanto and Cascades Park. Because the TSM/TDM Alternative would avoid the use of Jardin Del Encanto and Cascades Park, no further coordination and concurrence was sought. A *de minimis* determination is no longer needed.

2. Section 4(f) *De Minimis* Analysis

2.1 Jardin Del Encanto and Cascades Park

2.1.1 Description of Jardin Del Encanto and Cascades Park

Jardin Del Encanto and Cascades Park consists of the El Encanto Building south of El Mercado Avenue and Cascades Park, including the Cascades, which is located within the median of El Portal Place in the City of Monterey Park as shown on Figure 2.1-1. The City of Monterey Park is in the southern part of the State Route 710 (SR 710) North Project area, generally between Interstate 10 (I-10) to the north and State Route 60 (SR 60) to the south. The City of Monterey Park is bounded on the east by Atlantic Boulevard, and SR 710 is located in the westernmost part of the City of Monterey Park.

Cascades Park extends along the median of El Portal Place from De La Fuente Street on the northwest to El Mercado Avenue on the southeast. Cascades Park extends northwest of De La Fuente Street to Kingsford Street, and part of Cascades Park is bounded by the extensions of El Portal Place, but those extensions are not public roads. Cascades Park consists of five discontinuous parcels that are separated from each other by De La Fuente Street, Atlantic Boulevard, and two alleys where they cross/intersect with El Portal Place. Figure 2.1-1 shows the location of Cascades Park in the City of Monterey Park, and Figure 2.1-2 shows the individual parcels that make up Cascades Park. The Cascades is an Art Deco-style water feature.

The area around Cascades Park was one of many subdivisions developed in the City of Monterey Park beginning in the early 1920s. Midwick View Estates was proposed by Peter N. Snyder to provide a garden community designed to rival Bel-Air and Beverly Hills. Mr. Snyder's efforts included building Atlantic Boulevard to bring industry to the east side of the City of Monterey Park along with residential and commercial development projects along Atlantic Boulevard, including the Midwick View Estates. The focal point of the Midwick View Estates was the El Encanto, a Spanish Colonial Revival building at 700 El Mercado Avenue that was intended to serve as the administration building and community center for Midwick View Estates. The Cascades, a fountain with water cascading down in stepped pools, was visible to viewers from the observation terrace at the administration building. When the planned residential development failed during the depression, Mr. Snyder donated the land occupied by Cascades Park to the City of Monterey Park in approximately 1938.

Cascades Park covers approximately 1.3 acres (ac). The four Cascades Park parcels southeast of De La Fuente Street are turf/grass with scattered trees for passive recreation uses. There are no amenities such as benches or picnic tables in these sections of Cascades Park. As shown on Figure 2.1-2, there is an extensive water feature referred to as the Cascades on approximately 0.7 ac of the northwesternmost part of Cascades Park. The parcel occupied by the Cascades is bounded on the northwest by Kingsford Street, on the southeast by De La Fuente Street, and on the northeast and southwest by existing development. There are broad walkways extending from Kingsford Street southeast to De La Fuente Street along both sides of the Cascades. The Cascades is below the grade of Kingsford Street, and the stairs at the end of each walkway lead to Kingsford Street. The southeast part of the parcel occupied by the Cascades is above the grade of De La Fuente Street, and the stairs at the end of each walkway lead to that street. There are trees and large shrubs in this part of Cascades Park. The Cascades part of Cascades Park is a scenic location and is frequently used as a background for wedding and other special event photographs. As a publicly owned recreational resource, Cascades Park is eligible for protection under Section 4(f).

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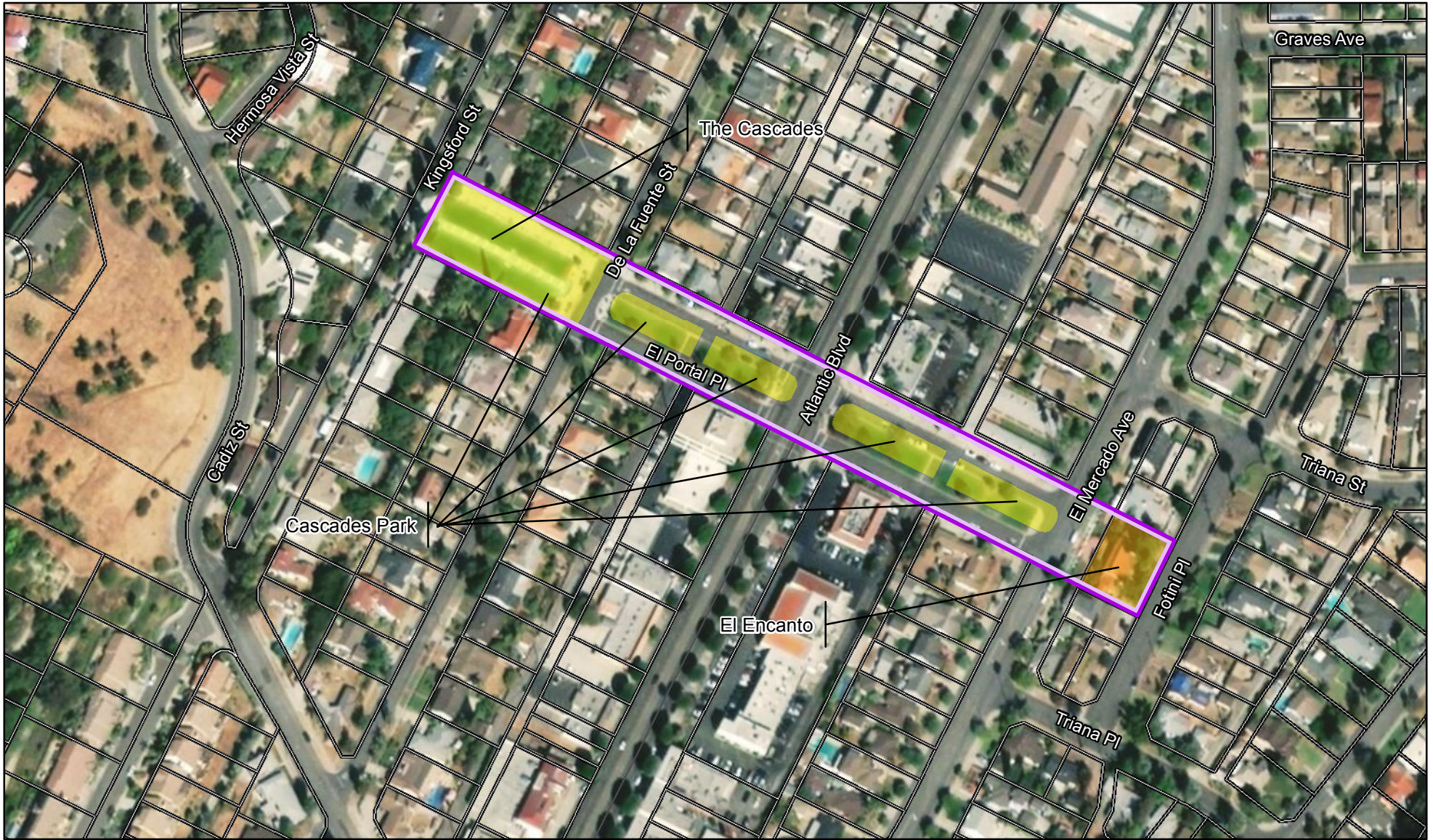
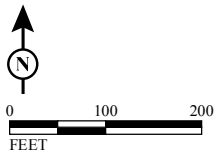


FIGURE 2.1-1

LEGEND

- Parcel Lot Lines
- Jardine Del Encanto and Cascades Park
- Cascades Park
- El Encanto



SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2Mhill (2013); ESRI (2007)
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SR 710 North Project
 Location of Jardin Del Encanto and Cascades Park
 in the City of Monterey Park

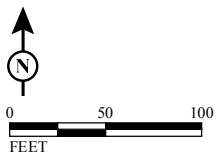
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LEGEND

- Cascades Park Boundary
- Parcel Lot Lines



SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)
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FIGURE 2.1-2

SR 710 North Project
 Cascades Park
 07-LA-710 (SR 710)
 EA 187900
 EFIS 0700000191

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No Section 6(f) funds were used for the acquisition of any land or the construction of any improvements at Cascades Park. As a result, the requirements of Section 6(f) are not applicable at Cascades Park; therefore, no further discussion regarding Section 6(f) at Cascades Park is provided in this analysis.

Cascades Park is within a large parcel of land owned by the City of Monterey Park. The property owned by the City of Monterey Park includes the parcels occupied by all of Cascades Park and the public streets and alleys in the vicinity of and crossing Cascades Park (refer to Figure 2.1-1). El Encanto is also owned by the City of Monterey Park. That building is currently used by the Monterey Park Chamber of Commerce.

2.1.2 Section 106

As documented in the *Historic Property Survey Report (HPSR)* (2015) for the SR 710 North Project, Jardin Del Encanto and Cascades Park was determined to be eligible for the National Register of Historic Places (National Register) under Criterion A (California Historical Resource [CHR] Status Code 2S2, Individual property determined eligible for the National Register by a consensus through the Section 106 process). As a result, Jardin Del Encanto and Cascades Park is eligible for protection under Section 4(f). Analyses of the potential effects of the SR 710 North Project Build Alternatives on Jardin Del Encanto and Cascades Park from the *Finding of Adverse Effect for the State Route 710 North Project* (2017) are incorporated in the analysis of the project effects on that property under Section 4(f) described in this section.

The character-defining features of Cascades Park include the long, broad axial plan beginning at the observation deck and descending through the park to the El Encanto Building. Other character-defining features include: broad concrete stairs and landings; stucco piers; broad stuccoed fountainhead with polychrome tile decoration; cascading fountain; lawns; street trees; planting strips; scored concrete and flagstone curbs, sidewalks, and walkways; streetlights from 1929; flagpole; original Midwick View Estates plaque; and board foam concrete retaining walls.

The character-defining features of Jardin Del Encanto and the El Encanto Building include: neon signage (reading “El Encanto”); buttressed stucco walls; Mission tile roof; elaborately carved wood doors; intricately carved ceiling and wood beams; elaborate wrought-iron fencing; fixtures; hand-decorated nautical-themed and Spanish tiles; small tile fountain; and colored patterns on poured concrete. The streetlights, sidewalk patches, and Americans with Disabilities Act (of 1990) (ADA) ramps installed after the period of significance are not character-defining features of the historic property. The aspects of integrity that are essential to conveying the property’s historic significance include its location, design, association, feeling, and materials.

2.1.3 Use of Cascades Park

The Bus Rapid Transit (BRT) Alternative proposes the addition of dedicated bus lanes on Atlantic Boulevard. At the crossing of El Portal Place, the BRT Alternative would require widening of Atlantic Boulevard and, consequently, encroachment into two of the parcels in Cascades Park. Figure 2.1-3 shows the limits of construction of the bus lane improvements and the edge of the limits of the dedicated bus lanes at the two locations where the bus lanes will encroach into Cascades Park.

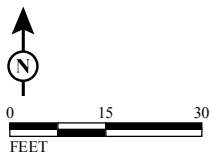
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FIGURE 2.1-3

LEGEND

- Cascades Park Boundary
- Parcel Lot Lines
- BRT Alternative
- Limits of Construction
- Limits of Dedicated Bus Lanes



SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)
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SR 710 North Project
 BRT Alternative at Cascades Park
 07-LA-710 (SR 710)
 EA 187900
 EFIS 0700000191

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The Transportation System Management/Transportation Demand Management (TSM/TDM), Light Rail Transit (LRT), and Freeway Tunnel Alternatives would not result in permanent incorporation or temporary occupancy of any land from Cascades Park. In addition, the nearest improvements in these Build Alternatives are more than 0.5 mile (mi) from Cascades Park; therefore, there is no potential for those alternatives to result in constructive use of Cascades Park. As a result, these alternatives are not discussed further in this analysis of the potential effects on Cascades Park.

The limits of construction are the areas within which project construction activities could occur and are defined as the largest area where those activities could occur under the BRT Alternative. As a result, they are similar to temporary construction easements (TCEs), which are areas that would be used temporarily during construction and then returned to their original owners when construction in that area is complete. For this Section 4(f) analysis, the limits of construction were interpreted to represent TCEs at the locations where those limits fall within Cascades Park as shown on Figure 2.1-3.

The limits of the dedicated bus lanes shown on Figure 2.1-3 show the areas in Cascades Park that would be permanently incorporated into those lanes after project construction is complete. For this Section 4(f) evaluation, the edges of the limits of the bus lanes within Cascades Park were interpreted to represent the edge of the permanent right-of-way for Atlantic Boulevard in the vicinity of Cascades Park.

The potential permanent incorporation and temporary occupancy of land from Cascades Park (recreational resource) and Jardin del Encanto Cascades Park (historical property) are described in the following sections.

2.1.3.1 Permanent Incorporation of Land from Jardin Del Encanto and Cascades Park

As shown on Figure 2.1-3, the BRT Alternative would result in the permanent incorporation of a total of 0.011 ac of land from two areas in Cascades Park (the City-owned recreational resource) and Jardin Del Encanto and Cascades Park (the historic property). The discussion provided below addresses both aspects of the resource that are protected under Section 4(f),

As shown, these acquisitions would affect grass/turf areas and existing sidewalks in Cascades Park. The sidewalks would be replaced within the boundary of Cascades Park as part of the BRT Alternative in order to maintain safe locations for crossing Atlantic Boulevard and accessing those parts of Cascades Park, as described in Measures Cascades-1 and Cascades-2. The existing crosswalks across El Portal Place and Atlantic Boulevard shown on Figure 2.1-3 would be modified to connect with the new sidewalks in Cascades Park. Although the volume of buses on Atlantic Boulevard may increase with the BRT Alternative, access to and from Cascades Park at the locations shown on Figure 2.1-3 would be as good as the existing sidewalk access, and patrons of Cascades Park would be able to continue to access the Park via crosswalks and sidewalks just as they do now.

As documented in the *Finding of Adverse Effect for the State Route 710 North Project*, construction activities that have the potential to result in indirect visual effects on Jardin Del Encanto and Cascades Park include restriping, sidewalk modifications, and widening of South Atlantic Boulevard. However, restriping within existing roadways does not meet the threshold for an indirect visual effect on historic properties. Therefore, restriping lanes and crosswalks would not have an indirect visual effect on Jardin Del Encanto and Cascades Park. In addition, changes to existing, non-historic, infrastructure elements like sidewalk alterations, narrowing existing sidewalks, removing planting

strips, widening existing roadways, adding accessible pedestrian access ramps, road widening and moving of street lights do not meet the threshold for an indirect visual effect, as long as the property's immediate setting is not an essential aspect of integrity for the property to convey its historic significance. The setting is not an essential aspect of integrity for Jardin Del Encanto and Cascades Park, and the features that will be replaced are non-original, non-historic existing sidewalks and ramps. Jardin Del Encanto and Cascades Park is an urban park, and its setting is not an essential aspect of its integrity. Therefore, the road and sidewalk reconfiguration would not have an indirect visual effect on Jardin Del Encanto and Cascades Park.

Construction activities that have the potential to result in direct effects on Jardin Del Encanto and Cascades Park include those associated with the proposed widening of South Atlantic Boulevard. The proposed construction would take place within the boundaries of Jardin Del Encanto and Cascades Park and would require a permanent sliver acquisition of land within the National-Register-eligible property. Only a small amount of land from the park would be taken and the bull-nose median curbing would be recessed 6 feet from the current location. The curbs and sidewalks that would be replaced are non-historic and non-character-defining. Any new features or landscaping would be designed in a manner that is consistent with the existing historic features. Therefore, with the conditions imposed in Measure CUL-3 (Jardin Del Encanto and Cascades Park), the proposed alteration of the median would not cause an adverse effect on Jardin Del Encanto and Cascades Park.

Construction activities with the potential to result in direct vibratory effects include restriping, sidewalk modifications, and widening of South Atlantic Boulevard. However, construction activities associated with restriping asphalt, such as cold planing or milling, do not meet the threshold for a potential direct vibratory effect. Therefore, restriping would not have a direct vibratory effect on Jardin Del Encanto and Cascades Park. In addition, the closest areas of demolition for reconfiguring the sidewalk and widening of South Atlantic Boulevard are several hundred feet from the building or structures in the historic property. The construction activities are too far away from the historic building and structures to cause a potential vibratory effect, based on the thresholds established for the Undertaking. Therefore, the proposed construction activities would not cause an adverse direct vibratory effect on Jardin Del Encanto and Cascades Park.

Increased operations would have the potential to result in indirect visual and indirect noise effects. However, increasing the frequency of buses on an existing bus route, in an urban setting, would not affect historic properties. This location currently has a bus route and is a busy, urban commercial district. Therefore, increasing the frequency of buses would not have an indirect visual effect on Jardin Del Encanto and Cascades Park. The current noise level in the vicinity of Jardin Del Encanto and Cascades Park is 64 A-weighted decibels (dBA), and the BRT Alternative would increase the noise level to 65 dBA. This level of increase for an urban setting would not have an effect on the significance of historic properties. Therefore, the increased noise associated with the BRT Alternative would not have an indirect noise effect on Jardin Del Encanto and Cascades Park under Section 106.

As a result, with the implementation of avoidance and minimization measure CUL-1 (Pre-Construction Surveys), CUL-3 (Jardin Del Encanto and Cascades Park), and CUL-13 (Post-Construction Surveys), the BRT Alternative improvements would have a Conditional No Adverse Effect on Jardin Del Encanto and Cascades Park. Therefore, with respect to its eligibility for protection under Section 4(f) as a historic resource, the use would have the potential to be found to be de minimis.

As a result, the use of land from the project features at this property under the BRT Alternative would not result in a substantial impairment of the property's activities, features, or attributes that qualify Cascades Park and Jardin Del Encanto for protection under Section 4(f).

2.1.3.2 Temporary Occupancy of Land in Cascades Park and Jardin Del Encanto

The TCEs for the BRT Alternative in Cascades Park would result in temporary occupancy of land extending beyond the road right-of-way limits to accommodate the construction of the dedicated bus lanes and the replacement of sidewalks at two areas in Jardin Del Encanto and Cascades Park. As shown on Figure 2.1-3, the two TCEs would total 0.02 ac of land in Jardin Del Encanto and Cascades Park. The land temporarily occupied by the TCEs would be returned to a condition that is at least as good as that which existed prior to the project at the completion of the construction of the BRT Alternative in this area. The existing sidewalks will be replaced within the boundary of Jardin Del Encanto and Cascades Park, and the grass/turf areas affected by project construction would be re-landscaped and returned to a condition at least as good as prior to the project and consistent with the existing landscaping and spatial orientation of the existing landscape design, as outlined in Measure Cascades-1 (for the recreational resource) and CUL-3 (for the historic property).

2.1.4 Public Notice

The Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) and the *Draft Section 4(f) De Minimis Analysis* were distributed to a large number of agencies and members of the general public for review and comment. In addition, notices regarding the completion of the Draft EIR/EIS and *Draft Section 4(f) De Minimis Analysis* were published. A large number of Notices of Availability of the Draft EIR/EIS were distributed to interested parties. The distribution of the Draft EIR/EIS including the *Draft Section 4(f) De Minimis Analysis* provided agencies and members of the general public opportunities to provide comments on the *Draft Section 4(f) De Minimis Analysis* for the SR 710 North Project supporting the preliminary *de minimis* analysis for the permanent and temporary uses of land from Cascades Park.

The California Department of Transportation (Caltrans) and the Los Angeles County Metropolitan Transportation Authority (Metro) has prepared a Final EIR/EIS for the SR 710 North Project, which includes this *Final Section 4(f) De Minimis Analysis*. The comments received by Caltrans and Metro from agencies and members of the general public on the Draft EIR/EIS and Focused Recirculated Draft EIR/SDEIS, including any comments regarding the preliminary *de minimis* analysis, and responses to those comments have been included in this *Final Section 4(f) De Minimis Analysis* and the Final EIR/EIS.

2.1.5 Potential *De Minimis* Use

As shown on Figure 2.1-3, the BRT Alternative would result in the permanent incorporation of approximately 0.011 ac of land and the temporary occupancy of approximately 0.02 ac of land for use as TCEs during construction from Cascades Park (recreational resource) and Jardin Del Encanto (historic property).

A *de minimis* use is defined as a minimal impact to a Section 4(f) resource that is not considered to be adverse. For parks and recreation areas, a *de minimis* impact is one that will not adversely affect the activities, features, and attributes that give the property protection under Section 4(f). For Cascades Park (recreational resource), implementation of Measures Cascades-1 and Cascades-2 would reduce the effects of the BRT Alternative on this resource. The use of a small portion of the

park (0.011 ac) and modification of the sidewalk and the minor temporary uses would not result in a more than de minimis use of the resource since it would not cause adverse effects to the key recreational activities, features, and attributes (see Sections 2.1.3.1 and 2.1.3.2).

For historic resources, an analysis of *de minimis* impact on a historic site may be made when:

- Caltrans, as assigned under its assumption of responsibility pursuant to 23 United States Code (USC) 327, has considered the views of any consulting parties participating in the consultation required by Section 106 of the National Historic Preservation Act;
- The State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation (ACHP) if participating in the Section 106 consultation, are informed of Caltrans' analysis of a *de minimis* impact based on their written concurrence in the Section 106 determination of "no adverse effect;" and
- The Section 106 process results in a determination of "no adverse effect" with the written concurrence of the SHPO and ACHP, if participating in the Section 106 consultation.
- The official with jurisdiction over the property (the City of Monterey Park) is formally requested to provide its concurrence with the temporary and permanent impacts of the BRT Alternative on El Encanto/Cascades Park and the preliminary *de minimis* analysis for those effects.

The *Finding of Adverse Effect for the State Route 710 North Project* indicates the BRT Alternative would result in a Conditional No Adverse Effect on Jardin Del Encanto and Cascades Park with implementation of Measures CUL-1 (Pre-Construction Surveys), CUL-3 (Jardin Del Encanto and Cascades Park), and CUL-13 (Post-Construction Surveys). Therefore, the potential use of a small portion of the property (0.011 ac) and modifications to the median and the minor temporary uses in Cascades Park and Jardin Del Encanto would have had the potential to be identified as de minimis use of the historic resource.

Lastly, there would be no constructive use of the resource since there would be no proximity impacts that rise to the level of substantial impairment of the property's recreational and historic activities, features, or attributes that qualify Cascades Park and Jardin Del Encanto for protection under Section 4(f).

As stated in Section 1.5.1 in Chapter 1, above, the TSM/TDM Alternative has been identified as the Preferred Alternative. The Preferred Alternative would not result in permanent acquisition of land or temporary or constructive use of Jardin Del Encanto and Cascades Park and avoids impacts to this resource. Because no impact to this resource would occur and no use under Section 4(f) would occur, there is no *de minimis* finding. Concurrence from the City of Monterey Park was not requested because no *de minimis* finding is needed for the TSM/TDM Alternative.

2.2 Avoidance, Minimization, and/or Mitigation Measures

2.2.1 Measures

The following avoidance, minimization, and/or mitigation measures are included in the BRT Alternative to reduce the effects of the temporary occupancy and permanent incorporation of land from Jardin Del Encanto and Cascades Park:

CUL-1

Pre-Construction Surveys. Pre-construction surveys are required and shall be conducted on all historic properties with a finding of Adverse Effect or Conditional No Adverse Effect before any construction activities commence. The pre-construction surveys will be performed by licensed Structural Engineers (with a specialization in historic buildings) in collaboration with a qualified Architectural Historian and/or Historic Architect. The qualifications for the Structural Engineer, Architectural Historian, and/or Historic Architect shall be approved by a California Department of Transportation (Caltrans) PQS in collaboration with Metro.

The pre-construction condition assessment shall be carried out during the final project design phase when more data on site-specific geotechnical conditions are available. The surveys shall document the baseline physical conditions of each historic property (with a finding of Adverse Effect or Conditional No Adverse Effect) to better understand the building's structure and condition. Additional localized geotechnical studies shall be performed near each historic property to identify additional strategies and control measures to better protect each historic property during construction. The condition assessment reports shall document all aspects of known structural conditions through observations and measurements, plans, photographs, and any other data the qualified preparer may deem appropriate.

Photos and plans may also be used to indicate existing damage on the historic property. The information developed in the pre-construction surveys shall be integrated into the Property-Specific Protection Plans described later in Section 3.7.4.8.

The pre-construction condition assessment reports shall be prepared according to an agreed-upon template and level of detail to provide sufficient baseline information for historic properties to: (a) assess their existing structural condition, and (b) determine the safe threshold of a historic property when compared to the proposed activity at that location. The pre-construction condition assessment reports shall be completed at least two months prior to construction in the vicinity of the property. The pre-construction surveys will include, but not be limited to, inspection of building foundations, exterior walls, driveways, sidewalks, hardscape elements, and interior floors and walls, and documentation of any pre-existing defects such as cracks, settlement, subsidence, bulges, walls out of plumb, sticking windows and doors, corrosion, and water damage. The inspection can be documented by, but not limited to, measured drawings, sketches, or CAD drawings of all cracks, or photographing or videotaping the elements of the property under inspection. Evaluation of the risk from construction activities may also be incorporated into the reports.

Immediately prior to the initiation of construction, the properties where pre-construction surveys were completed as part of the studies for the EIR/EIS will be revisited to confirm the information in the surveys remains valid. The pre-construction surveys will be used as the baseline in the post-

construction surveys (discussed later in Section 3.7.4.9), which will document in a report any evidence of change in the physical condition of historic properties following completion of construction.

A copy of the pre-construction survey will be made available to the property owner(s). A copy of each survey will also be kept on file with the appropriate municipal department as well as at Caltrans and/or Metro for the duration of the project. If requested by SHPO, its office may also receive copies of the pre-construction surveys.

CUL-3

Jardin Del Encanto and Cascades Park – SOIS Plan. The SOIS Plan will be prepared in consultation with Caltrans CSO and SHPO, as required. The BRT Alternative would remove 6 feet of park land from a character-defining median within Jardin Del Encanto and Cascades Park. The BRT Alternative would require widening of the existing roadway to accommodate a proposed new bus lane. Therefore, the physical destruction of the 6 feet of sidewalk and park land in that area cannot be avoided.

Parts of the sidewalk and park, including the planting strip, in this area have previously been altered.

Caltrans shall prepare a SOIS Plan for Jardin Del Encanto and Cascades Park that shall include the following measures:

- The design of the BRT Alternative shall recreate the same curb plan and profile for the median. The final improvement plans within and near the historic property shall be made in collaboration among the Project Engineer, the Architectural Historian, and/or Historic Architect, and Caltrans and/or Metro. The Architectural Historian and/or Historic Architect shall approve the final plans before project-related activity in this area commences.
- Confirm the curved bull nose on the median that would be removed is not historic (e.g., ensure that the materials have been replaced within the past ten years). The proposed new curb shall match the existing curb's bull-nose plan. Additionally, the new curb materials shall match the existing curb materials, aggregate size, dimension of curb, shape, color, profile, etc.;
- The sign shall be relocated with the same relationship to the sidewalk;
- The new sidewalk shall match the historic sidewalk's color, aggregate, finish, and surface scoring patterns; and
- The width of the new planting area between the inner edge of the sidewalk and the grassy area shall be consistent with the historical design.

A revegetation and irrigation plan for the new planting areas will be prepared in collaboration and agreement with the City of Monterey Park

(City) Public Works Director. The new planting areas will be similar to the existing, non-character-defining plantings. The cost of the revegetation plans would be borne by Caltrans and/or Metro.

CUL-13

Post-Construction Building Surveys. Post-construction building surveys (which would be equal in their level of effort, qualifications or preparers, scope and implementation as the pre-construction surveys described earlier in Section 3.7.4.2) will be conducted for the properties listed in Section 3.7.4.2 which would be adversely affected by the project. The post-construction surveys would be completed within 2 months or 60 days following completion of the work in a specific area. The Construction Contractor and the Resident Engineer will notify the Structural Engineer and Architectural Historian when construction in the vicinity of specified historic property or properties is completed. At that time, the Structural Engineer, the Historic Architect, the Architectural Historian, and the Geotechnical Engineer, and other appropriate qualified specialists will conduct the post-construction surveys. The results of the survey will be documented in a written report, illustrated with photographs and drawings, as appropriate.

If the post-construction survey identifies damage to historic properties as a result of project-related activities, the Structural Engineer and Caltrans and/or Metro will consult with the Historic Architect to collaborate on a plan to repair the damage per the SOIS. The repairs will be performed by a qualified Rehabilitation General Contractor who has completed a certified rehabilitation on historic structures. That Rehabilitation General Contractor will perform those repairs under the direction of the Resident Engineer, with oversight by the Structural Engineer and the Historic Architect. The cost of the repairs will be paid by Caltrans and/or Metro or the Construction Contractor, depending on the contract provisions. Due to the gradual nature of ground settlement, post-construction settlement monitoring of properties will be ongoing for up to 3 years. Damage connected to slow excavation-induced ground settlement would be addressed using SOIS.

Cascades-1

Temporary Construction Easements (applies to the Bus Rapid Transit [BRT] Alternative only): The Los Angeles County Metropolitan Transportation Authority (Metro) Resident Engineer will require the Construction Contractor to return land in Cascades Park that would be occupied for temporary construction easements (TCEs) to a condition that is at least as good as that which existed prior to the project at the completion of the construction of the BRT Alternative in this area. At a minimum, as part of the construction of the BRT Alternative, the Construction Contractor will replace the existing sidewalks within the boundary of Cascades Park and re-landscape grass/turf areas in the TCEs disturbed by the project construction. Metro will require the Construction Contractor to review the plans for the proposed replacement sidewalks and grass/turf landscaping with the City of Monterey Park prior to installation of those improvements. If any trees are removed from the TCEs, those trees will be replaced elsewhere in Cascades Park after consultation with the City of Monterey Park. The replacement

trees, grass, and turf will be similar to the existing plant materials in Cascades Park. The replacement sidewalks, walkways, and accessible pedestrian ramps will be designed to be consistent with the historic sidewalks in Jardin Del Encanto and Cascades Park.

Metro will require the Construction Contractor to fence and properly secure all active construction areas in and adjacent to Cascades Park within the limits of construction to protect the safety of park patrons during construction.

When the sidewalks in Cascades Park at Atlantic Boulevard are temporarily closed during construction, Metro will require the Construction Contractor to develop and clearly sign pedestrian detours prior to the intersections of Atlantic Boulevard and El Portal Place to avoid making pedestrians backtrack to get to a safe crossing.

Cascades-2

Permanent Incorporation of Land (applies to the BRT Alternative only):

Metro will include the replacement of sidewalks affected by the permanent incorporation of land in the adjacent areas of Cascades Park as part of the final design. These sidewalks are expected to be in areas within the TCEs. If any shrubs and/or trees are removed from the areas that will be permanently incorporated, the Construction Contractor will replace those trees elsewhere in Cascades Park after consultation with the City of Monterey Park. The replacement shrubs and trees will be similar to the existing plant materials in Cascades Park.

Parks-1

Compliance with the Public Park Preservation Act (California Public Resources Code Sections 5400–5409) (applies to the Bus Rapid Transit [BRT] Alternative only): As part of the right-of-way acquisition process for the BRT Alternative, the Los Angeles County Metropolitan Transportation Authority (Metro) Division of Right of Way personnel will coordinate with the City of Monterey Park to provide compensation for the acquisition of land from Cascades Park as required under the Public Park Preservation Act. In the event that funds from FHWA are used for improvements in the BRT Alternative, Caltrans will participate in the negotiations with the City of Monterey Park and the land acquisition process for the acquisition of land from Cascades Park.

2.3 Consultation and Coordination with the City of Monterey Park

An initial meeting with the City of Monterey Park was held on November 12, 2014 at the City of Monterey Park. The meeting attendees included:

- Amy Ho, Program Management Analyst, City of Monterey Park
- Samantha Tewart, Senior Planner, City of Monterey Park
- Ray Alfonso, Assistant City Engineer, City of Monterey Park
- Cesar Vega, Associate Engineer, City of Monterey Park

- Jason Roach, Environmental, Caltrans
- Michelle Smith, Project Manager, Metro
- Aziz Elattar, Executive Officer-Highway Programs, Metro
- Yoga Chandran, CH2M Hill, consultant to Caltrans and Metro
- Lily Acuna, Project Assistant, CH2M Hill, consultant to Caltrans and Metro
- Deborah Pracilio, Environmental Studies, LSA Associates, Inc., consultant to Caltrans and Metro

The purpose of the meeting was to confirm the boundaries of Jardin Del Encanto and Cascades Park with the City and to discuss the potential effects of the proposed BRT Alternative on those resources. The resource boundaries confirmed by the City are shown on the figures included in this chapter.

As stated above, no further consultation with the City of Monterey Park was conducted as the TSM/TDM Alternative was identified as the Preferred Alternative and would avoid the potential effects on and use of Jardin Del Encanto and Cascades Park.

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3. Other Resources Evaluated Relative to the Requirements of Sections 4(f) and 6(f)

3.1 Introduction

This section discusses parks, recreation areas, recreation areas at publicly owned schools, wildlife refuges, and National Register of Historic Places (National Register) listed and eligible properties within 0.5 mile (mi) of the State Route 710 (SR 710) North Project Build Alternatives that were determined not to trigger the requirements for approval under Section 4(f) protection because:

1. They are not publicly owned;
2. They are not open to the public;
3. They are not historic sites listed on or eligible for listing on the National Register;
4. The Build Alternatives do not permanently incorporate land from the property and do not hinder the preservation of the property; or
5. The proximity impacts of the Build Alternatives do not result in constructive use.

Permanent use of land from, temporary occupancies, and constructive uses of a Section 4(f) resource were defined in detail in Chapter 1. The tables cited in this section are provided following the last page of text in this section. The locations of the resources described in Tables 3.2.1, 3.3.1, 3.4.1, and 3.5.1 in relation to the four Build Alternatives are shown on Figures 3.2-1, 3.3-1, 3.4-1, and 3.5-1. The figures cited in this section follow the tables by alternative (e.g., Table 3.2.1 for the Transportation System Management/Transportation Demand Management [TSM/TDM] Alternative is followed by Figure 3.2-1 for the TSM/TDM Alternative).

Tables 3.2.1 through 3.5.1 and Figures 3.2-1 through 3.5-1 focus on parks and recreation resources as discussed below in Sections 3.2 through 3.5. Tables 3.6.1 through 3.6.4 and Figures 3.6-1 through 3.6-4 focus on National Register listed and eligible properties as discussed in Section 3.6.

This section discusses why a use under Section 4(f) would not occur under the Build Alternatives for the resources described in Tables 3.2.1, 3.3.1, 3.4.1, and 3.5.1, based on the environmental analyses provided in Chapter 3 (Affected Environment, Environmental Consequences, and Avoidance, Minimization, and Mitigation Measures) of the Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS) addressing permanent and temporary direct impacts related to property acquisition and indirect air quality, settlement, ground-borne noise and vibration, noise, traffic and access, and aesthetics impacts.

Properties in which Section 6(f) funds were used were identified in “Land and Water Conservation Fund – All Funded Projects (3-2-2013)”¹ and on the Land and Water Conservation Fund website home page.² Based on those sources, Land and Water Conservation Fund Act (L&WCF Act) funds were determined to have been used at several parks in the study area. The applicability of Section 6(f) is discussed in the tables in this section for the following resources: Alhambra Park, Almansor Park, Belvedere Community Regional Park, Brookside Park, El Sereno North Park, Emery Park,

¹ California Department of Parks and Recreation. Land and Water Conservation Fund. http://www.parks.ca.gov/?Page_id+21360, accessed October 17, 2013.

² Ibid.

Santa Fe Dam Recreation Area, and Smith Park. These resources are also shown on Figures 3.2-1, 3.3-1, 3.4-1, and 3.5-1.

3.2 TSM/TDM Alternative

Table 3.2.1 and Figure 3.2-1 (provided following the last page of Table 3.2.1) show the resources within 0.5 mi of improvements in the TSM/TDM Alternative. As discussed in Table 3.2.1, those improvements would not result in permanent use of land from, permanent easements, temporary occupancies (temporary construction easements [TCEs]), or constructive uses at any Section 4(f) resources. As a result, the TSM/TDM Alternative would not trigger the requirements for approval under Section 4(f) at any of the resources evaluated in Table 3.2.1 and shown on Figure 3.2-1.

The improvements in the TSM/TDM Alternative are also incorporated in the Bus Rapid Transit (BRT), Light Rail Transit (LRT), and Freeway Tunnel Alternatives. The inclusion of the TSM/TDM Alternative improvements in those Build Alternatives would not result in permanent use of land from, permanent easements, temporary occupancies (TCEs), or constructive uses at any Section 4(f) resources. As a result, the incorporation of the TSM/TDM Alternative improvements in the other Build Alternatives would not trigger the requirements for approval under Section 4(f) at any of the resources evaluated in Table 3.2.1 and shown on Figure 3.2-1. As described in Section 1.5.1 in Chapter 1, above, the TSM/TDM Alternative was identified as the Preferred Alternative.

3.3 BRT Alternative

Table 3.3.1 and Figure 3.3-1 (provided following the last page of Table 3.3.1) show the resources within 0.5 mi of improvements in the BRT Alternative. As discussed in Table 3.3.1, those improvements would not result in permanent use of land from, permanent easements, TCEs, or constructive uses at any Section 4(f) resources. The BRT Alternative would also include all the improvements in the TSM/TDM Alternative, with the exception of Other Road Improvement T-1 (Valley Boulevard to Mission Road Connector Road) and Local Street Improvement L-8 (Fair Oaks Avenue from Grevelia Street to Monterey Road). As described above for the TSM/TDM Alternative, those improvements would not trigger the requirements for approval under Section 4(f) as shown in Table 3.2.1. As a result, the improvements included in the BRT Alternative would not trigger the requirements for approval under Section 4(f) at any of the resources evaluated in Tables 3.2.1 and 3.3.1 and shown on Figures 3.2-1 and 3.3-1, respectively. However, as described earlier in Chapter 2, Section 4(f) Resources, the BRT Alternative would trigger the requirements for approval under Section 4(f) at Jardin Del Encanto and Cascades Park in the City of Monterey Park.

3.4 LRT Alternative

Table 3.4.1 and Figure 3.4-1 (provided following the last page of Table 3.4.1) show the resources within 0.5 mi of improvements in the LRT Alternative. As discussed in Table 3.4.1, those improvements would not result in permanent use of land from, permanent easements, TCEs, or constructive uses at any Section 4(f) resources. The LRT Alternative would also include all the improvements in the TSM/TDM Alternative, with the exception of Other Road Improvement T-1 (Valley Boulevard to Mission Road Connector Road). As described above for the TSM/TDM Alternative, those improvements would not trigger the requirements for approval under Section 4(f) for the resources shown in Table 3.2.1. As a result, the improvements included in the LRT Alternative

would not trigger the requirements for approval under Section 4(f) at any of the resources evaluated in Tables 3.2.1 and 3.4.1 and shown on Figures 3.2-1 and 3.4-1, respectively.

3.5 Freeway Tunnel Alternative

Tables 3.5.1 and 3.5.2 and Figure 3.5-1 (provided following the last page of Table 3.5.2) show the resources within 0.5 mi of improvements in the Freeway Tunnel Alternative. As discussed in Table 3.5.1, those improvements would not result in permanent use of land from, permanent easements, TCEs, or constructive uses at any Section 4(f) resources. The Freeway Tunnel Alternative would also include all the improvements in the TSM/TDM Alternative, with the exception of Other Road Improvements T-1 (Valley Boulevard to Mission Road Connector Road) and T-3 (St. John Avenue Extension between Del Mar Boulevard and California Avenue). As described above for the TSM/TDM Alternative, those improvements would not trigger the requirements for approval under Section 4(f) as shown in Table 3.2.1. As a result, the improvements included in the Freeway Tunnel Alternative would not trigger the requirements for approval under Section 4(f) at any of the resources evaluated in Tables 3.2.1 and 3.5.1 and shown on Figures 3.2-1 and 3.5-1, respectively.

3.6 National Register of Historic Places Listed, Eligible, and Potentially Eligible Historic Properties

The potential for the Build Alternatives to result in the permanent use of land from or constructive use of National Register listed, eligible, or potentially eligible historic properties is evaluated in Tables 3.6.1, 3.6.2, 3.6.3, and 3.6.4 below for the TSM/TDM, BRT, LRT, and Freeway Tunnel Alternatives, respectively. The locations of the historic properties in the APEs for the Build Alternatives are shown on Figures 3.6-1 through 3.6-4. The potential for the SR 710 North Project Build Alternatives to affect National Register listed and eligible properties is based on the *Finding of Adverse Effect for the State Route 710 North Project (2017)* and the analyses in other sections of the Final EIR/EIS, as summarized in the tables in this section. Consultation with the State Historic Preservation Offices (SHPO) regarding the *Finding of Adverse Effect for the State Route 710 North Project* was conducted and concurrence with SHPO was received on May 3, 2018. See Chapter 5, Comments and Coordination, of the Final EIR/EIS for the SHPO concurrence letter.

As shown on Tables 3.6.1 and 3.6.2 and on Figures 3.6-1 and 3.6-2, the improvements in the TSM/TDM and BRT Alternatives, respectively, are primarily at-grade in the vicinity of National Register listed or eligible historic properties, with the exception of improvements near the Arroyo Seco Parkway Historic District. The analyses in Tables 3.6.1 and 3.6.2 individually consider the effects of the improvements in those alternatives on historic properties.

As shown in Table 3.6.3 and on Figure 3.6-3, both underground and aerial improvements in the LRT Alternative are located in the vicinity of the National Register listed or eligible historic properties along the alignment of that alternative. Table 3.6.1 lists the historic properties along the LRT Alternative alignment and summarizes the effects for all those properties. Table 3.6.3 also discusses two prehistoric village sites that may be within the boundary of the improvements in the LRT Alternative. The locations of these sites are not provided in this report to avoid vandalism or other potential damage to the sites.

As shown in Table 3.6.4 and on Figure 3.6-4, the improvements in the Freeway Tunnel Alternative are at or slightly below grade in the vicinity of National Register listed or eligible historic properties in the City of Pasadena. Figure 3.6-4 also shows the State (California Department of Transportation

[Caltrans]) owned National Register listed or eligible historic properties above the Freeway Tunnel Alternative. The analysis in Table 3.6.4 individually considers the effects of the improvements in the Freeway Tunnel Alternatives on twenty-one cultural properties.

In addition, improvements in the Freeway Tunnel Alternative are in a tunnel and under a large number of National Register listed or eligible historic properties along the alignment of that alternative in the Cities of Pasadena, South Pasadena, and Los Angeles. However, the Freeway Tunnel Alternative would have No Effect on each historic property listed in Table 3.6.5, and that table summarizes the effects for all those historic properties without repeating the impacts for each single resource.

3.7 Other Resources Considered That Did Not Trigger the Requirements for Approval Under Section 4(f)

In addition to the Section 4(f) resources discussed above, other resources in the SR 710 North Project study area within 0.5 mi of the Build Alternatives were evaluated and determined to be either privately owned or not used by the SR 710 North Project Build Alternatives. Those resources and the reasons why they did not trigger the requirements for approval under Section 4(f) are discussed in Table 3.7.1 (provided at the end of the text in this chapter).

3.8 Avoidance, Minimization, and/or Mitigation Measures

The following avoidance and minimization measures in this section are provided below as they were included in this analysis to determine whether proximity effects would rise to the level of substantial impairment under Section 4(f). These measures are organized by effect types (direct and indirect) and subtype, where appropriate (settlement, vibratory, auditory, or visual). Each historic property that is adversely affected is identified and measures to avoid those effects are identified, where possible. Where avoidance and minimization measures are not possible, mitigation measures are proposed for each adversely affected property.

The requirements regarding public outreach, the discovery of cultural resources, discovery of human remains, and construction worker training to all four Build Alternatives and are not property-specific. Therefore, these measures are not cited in the property-specific discussions in Tables 3.6.1 through 3.6.4 below.

CUL-1 **Pre-Construction Surveys.** Pre-construction surveys are required and shall be conducted on all historic properties with a finding of Adverse Effect or Conditional No Adverse Effect before any construction activities commence. The pre-construction surveys will be performed by licensed Structural Engineers (with a specialization in historic buildings) in collaboration with a qualified Architectural Historian and/or Historic Architect. The qualifications for the Structural Engineer, Architectural Historian, and/or Historic Architect shall be approved by a California Department of Transportation (Caltrans) PQS in collaboration with Metro.

The pre-construction condition assessment shall be carried out during final project design phase when more data on site-specific geotechnical conditions are available. The surveys shall document the baseline physical

conditions of each historic property (with a finding of Adverse Effect or Conditional No Adverse Effect) to better understand the building's structure and condition. Additional localized geotechnical studies shall be performed near each historic property to identify additional strategies and control measures to better protect each historic property during construction. The condition assessment reports shall document all aspects of known structural conditions through observations and measurements, plans, photographs, and any other data the qualified preparer may deem appropriate.

Photos and plans may also be used to indicate existing damage on the historic property. The information developed in the pre-construction surveys shall be integrated into the Property-Specific Protection Plans described below.

The pre-construction condition assessment reports shall be prepared according to an agreed-upon template and level of detail to provide sufficient baseline information for historic properties to: (a) assess their existing structural condition, and (b) determine the safe threshold of a historic property when compared to the proposed activity at that location. The pre-construction condition assessment reports shall be completed at least two months prior to construction in the vicinity of the property. The pre-construction surveys will include, but not be limited to, inspection of building foundations, exterior walls, driveways, sidewalks, hardscape elements, and interior floors and walls, and documentation of any pre-existing defects such as cracks, settlement, subsidence, bulges, walls out of plumb, sticking windows and doors, corrosion, and water damage. The inspection can be documented by, but not limited to, measured drawings, sketches, or CAD drawings of all cracks, or photographing or videotaping the elements of the property under inspection. Evaluation of the risk from construction activities may also be incorporated into the reports.

Immediately prior to the initiation of construction, the properties where pre-construction surveys were completed as part of the studies for the EIR/EIS will be revisited to confirm the information in the surveys remains valid. The pre-construction surveys will be used as the baseline in the post-construction surveys (discussed below), which will document in a report any evidence of change in the physical condition of historic properties following completion of construction.

A copy of the pre-construction survey will be made available to the property owner(s). A copy of each survey will also be kept on file with the appropriate municipal department as well as at Caltrans and/or Metro for the duration of the project. If requested by SHPO, its office may also receive copies of the pre-construction surveys.

This measure applies to the following properties and Build Alternatives which were determined to have adverse or conditional Adverse Effects on historic properties.

CUL-3

Jardin Del Encanto and Cascades Park – SOIS Plan. The SOIS Plan will be prepared in consultation with Caltrans CSO and SHPO, as required. The BRT Alternative would remove 6-feet of park land from a character-defining median within the Jardin del Encanto and Cascades Park. The BRT Alternative would require widening of the existing roadway to accommodate a proposed new bus lane. Therefore, the physical destruction of the 6 feet of sidewalk and park land in that area cannot be avoided.

Parts of the sidewalk and park, including the planting strip, in this area have previously been altered.

Caltrans shall prepare a SOIS Plan for the Jardin del Encanto and Cascades Park that shall include the following measures:

- The final improvement plans within and near the historic property shall be made in collaboration among the Project Engineer, the Architectural Historian, and/or Historic Architect, and Caltrans and/or Metro. The Architectural Historian and/or Historic Architect shall approve the final plans before project-related activity in this area commences.
- Confirm the curved bull nose on the median that would be removed is not historic (e.g., ensure that the materials have been replaced within the past ten years). The proposed new curb shall match the existing curb's bull-nose plan. Additionally, the new curb materials shall match the existing curb materials, aggregate size, dimension of curb, shape, color, profile, etc.;
- The sign shall be relocated with the same relationship to the sidewalk;
- The new sidewalk shall match the historic sidewalk's color, aggregate, finish, and surface scoring patterns; and
- The width of the new planting area between the inner edge of the sidewalk and the grassy area shall be consistent with the historical design.

A revegetation and irrigation plan for the new planting areas will be prepared in collaboration and agreement with the City of Monterey Park (City) Public Works Director. The new planting areas will be similar to the existing, non-character-defining plantings. The cost of the revegetation plans would be borne by Caltrans and/or Metro.

CUL-4

Settlement Monitoring Plan. The Settlement Monitoring Plan will be prepared in consultation with Caltrans CSO and SHPO. The objective of the Settlement Monitoring Plan will be to establish reasonable and feasible ground improvement measures and alternative approaches for minimizing settlement to ensure that historic properties sustain the minimum amount of settlement to prevent damage, and to identify persons who are responsible for developing, reviewing, and approving aspects of the Settlement Monitoring Plan. The results of the pre-construction surveys described in Measure CUL-1 will be used to develop the appropriate level of effort to manage and monitor settlement on a case-by-case basis. The

Settlement Monitoring Plan will be collaboratively prepared, reviewed, approved, and administered by a qualified Geotechnical Engineer, with input from the designated Structural Engineer and the designated Historic Architect. The Settlement Monitoring Plan will be developed and prepared by the Structural Engineer, Historic Architect, and Geotechnical Engineer. The Settlement Monitoring Plan will be approved by the Structural Engineer, Historic Architect, Geotechnical Engineer, and as required, by Caltrans CSO and SHPO, prior to any construction or demolition near the historic properties identified in that plan.

The primary objective of monitoring is to verify that safe, acceptable levels of settlement resulting from construction-related activities are not exceeded. Monitoring at selected historic properties will be based on the expected level of settlement from excavation and the sensitivity of the historic property including, but not limited to, its method of construction, building height, foundation type (e.g., slab, footer, post-and-pier, or piles), materials, existing overall condition, and overall sensitivity. Any areas identified in the pre-construction surveys that show damage that may be aggravated by construction-related activities would warrant continuous monitoring during construction. The monitors will be installed prior to construction or demolition, and the continuous monitoring at those locations will be documented. The settlement management and continuous monitoring will be a combined approach. At the discretion of the Resident Engineer, the Structural Engineer, and the Geotechnical Engineer, with input from the Historic Architect and the Architectural Historian and using information from the pre-construction surveys, survey targets and monitors will be placed across existing building cracks to monitor, observe crack behavior, and quantify changes during construction. The monitors can be both attended (monitoring with a technician present) and unattended (automated). Unattended monitors should be located outside buildings in locked cases. The Settlement Monitoring Plan shall be ongoing for up to three years. The Settlement Monitoring Plan shall include advanced monitoring instrumentation, identification of the proper locations for monitors, process for data acquisition, and exceedance notification and reporting procedures, as described in detail below.

- **Instrumentation:** Settlement monitors common to these applications shall be selected based on consultation between the Geotechnical Engineer and the Structural Engineer.
- **Locations of Settlement Monitors:** A scaled plan indicating the specific monitoring locations (including measurements to be taken at construction site boundaries and at nearby historic and non-historic properties) shall be prepared by the Structural Engineer, Geotechnical Engineer, and the Historic Architect. Those proposed locations will be submitted to Caltrans and/or Metro for approval.
- **Data Acquisition:** The information that will be included in the data reports, at a minimum, shall be ground movement readings at the same time of day from multiple locations, the maximum settlement for each

direction, and additional information as deemed appropriate by the Geotechnical Engineer and Structural Engineer in consultation with the Historic Architect. If warranted, and as requested at the discretion of the Structural Engineer, Geotechnical Engineer, and the Historic Architect, and as approved by Caltrans and/or Metro, the data reports may be expanded to include a requirement for preparing a daily log of vibration activity and readings of appropriate crack monitors at specific properties.

- **Exceedance Notification and Reporting Procedures:** The notification of exceedance and reporting procedures shall be described in the Settlement Monitoring Plan. Those procedures shall include follow up actions to be taken to reduce settlement levels to below allowable limits. In the event the measured settlement levels exceed allowable limits, the Structural Engineer or designated representative shall be notified immediately. Exceedance notices should trigger needed actions, including a potential stop work order to prevent unanticipated damage to a historic property. Work shall be permitted to resume when the Geotechnical Engineer, Structural Engineer, Historic Architect, and Architectural Historian have determined that the appropriate modifications to stabilize the ground have been incorporated into the construction work plan to ensure that no further damage at the affected historic property would likely result.

CUL-5

SOIS Plans (Settlement). Where established damage levels for the project are exceeded due to settlement (slight, moderate, and severe as delineated in Table 5.1.1-2 of the FOAE), measures to address that damage will be required, including the restoration of historic properties following property specific SOIS Plans.

Damage to historic properties shall be identified using the baseline information recorded in the pre-construction surveys. That information shall be compared to the series of post-construction surveys (described below). If damage is identified that is a result of settlement effects, then a property-specific SOIS Plan shall be prepared for the damaged historic property. SOIS Plans are required to address Adverse Effects to built-environment historic properties and to ensure the requirements for protection are met, as required under Stipulation X.B.1.b and Attachment 5 of the Caltrans Section 106 Programmatic Agreement, and the 5024 Memorandum of Understanding (MOU). The SOIS Plans shall conform to the format specified in Exhibit 7.5 of Caltrans Volume 2 – Standard Environmental Reference (as updated) and include a title page, a summary of the SOIS Plan, a project description, an historic properties description effects and conditions proposed, the qualified monitors, this responsible parties, and any specified attachments.

The SOIS Plans shall be prepared by the Project Engineer, Structural Engineer, Landscape Architect, Architectural Historian, Historic Architect, and other appropriate design, engineering, cultural resources specialists, as appropriate, and in consultation with Caltrans CSO and SHPO, as required. The

SOIS Plans will be reviewed and approved by the Architectural Historian, the Historic Architect, and Caltrans and/or Metro. Final approval of the SOIS Plans would be indicated when the Caltrans Environmental Branch signs it. During the pre-construction phase, a review of any proposed project improvements covered by an SOIS Plan must be completed by a PQS who meets the Caltrans Professional Qualifications Standards as Principal Architectural Historian and has the experience and expertise to ensure conformance with the Standards.

During meetings in the final design/pre-construction phase, the Architectural Historian and Historic Architect shall verify that the SOIS Plans meet the SOIS for Rehabilitation. The Resident Engineer will require the Construction Contractor to give notice with a specific timetable before the start of rehabilitation-related construction in the vicinity of historic properties to ensure that the Historic Architect or qualified staff under the supervision of the Historic Architect are available to conduct an advance field inspection and to monitor proposed work for conformance with the Standards for Rehabilitation at the identified locations.

CUL-6

Vibratory Effects of Demolition. Vibratory effects caused by project-related demolition activities can be avoided if jackhammers are not used for demolition activities within 15 feet of historic properties. Avoidance measures for vibratory effects include the required use of alternative types of equipment during demolition within 15 feet of a historic property. Specific required equipment and techniques to avoid vibration include the use of concrete saws instead of jackhammers (or other heavy pavement breaking machinery) within 15 feet of any historic properties. Requirements for in-field monitoring by the Acoustical Engineer with a Historic Architect during demolition and concrete surfacing activities shall be included in the project plans, specifications, and estimates to ensure that the concrete and curb removal is conducted in a manner that generates ground-borne vibration levels that would avoid damage to historic properties.

Pile driving is not proposed to be used during construction of any of the Build Alternatives. Should that change, the potential for vibratory effects from pile driving on historic properties shall be evaluated and no pile driving shall take place within 50 feet of historic properties.

CUL-7

Vibration Management and Monitoring Plan (Raymond Florist Historic District). The remaining, identified adverse vibratory effect that cannot be avoided would be caused by the cut-and-cover excavations in the vicinity of the Raymond Florist Historic District. To minimize damage that results from vibratory effects on that property, a pre-construction survey will be required, followed by implementation of a Vibration Management and Monitoring Plan (Vibration Monitoring Plan). The Vibration Monitoring Plan will be prepared, reviewed, approved, and administered collaboratively by a qualified Acoustical Engineer, the Structural Engineer, and the Historic Architect, in consultation with Caltrans CSO and SHPO, as required. The objectives of the Vibration Monitoring Plan are to: (a) establish damage

thresholds for various building types; (b) develop procedures and alternative approaches for construction/demolition to ensure that historic properties sustain the minimum amount of vibration to prevent damage; and (c) identify those persons who are responsible for developing, reviewing, and approving aspects of the Vibration Monitoring Plan. The results of the pre-construction surveys will be used to develop the appropriate level of effort to manage and monitor vibration on a case-by-case basis.

The primary objective of vibration monitoring is to verify that safe, acceptable levels of vibration by construction-related activities are not exceeded. Vibration monitoring at selected historic properties will be based on the expected level of vibration of a particular activity and the sensitivity of the historic property to vibration effects including, but not limited to, the method of construction, building height, foundation type (e.g., slab, footer, post-and-pier, or piles), overall existing condition, and overall sensitivity. Any structural areas identified in the pre-construction surveys that show existing damage or that may be aggravated by vibration generated by construction-related activities would warrant continuous monitoring during construction. At the discretion of the Structural Engineer and the Acoustical Engineer, survey equipment will monitor existing cracks to observe any changes during construction. Monitoring can be both attended (monitoring with a technician present) and unattended (automated). Unattended monitors should be located outside the buildings in a locked case.

Unattended monitors should be capable of monitoring continuous data and send the data in real time to several different parties including, but not limited to, the Structural Engineer and the Acoustical Engineer to ensure that vibration levels do not exceed the thresholds in the Vibration Monitoring Plan. The vibration monitors should generate an instant email alert when the thresholds are exceeded so that immediate corrective action is taken. The vibration monitors will provide alerts when vibration events approach 0.120 in/sec PPV. If a second exceedance occurs, a stop work order shall be issued by the Resident Engineer, the potential damage to historic properties from vibration shall be assessed by the Structural Engineer and Historic Architect, and ways to avoid exceeding the vibration limits must be adopted to avoid future exceedances. A visual inspection of the property shall be made by the Structural Engineer in consultation with the Historic Architect to verify that no damage is developing, spreading, or occurring as a result of the vibration. A report shall be prepared that documents the cause of the damage, and what measures were taken to ensure it does not continue. The resulting report shall be filed with the Resident Engineer, Caltrans and/or Metro, and SHPO, if SHPO indicates it would like to receive those reports.

The Vibration Monitoring Plan shall include the following vibration instrumentation, location of vibration monitors, data acquisition, and exceedance notification and reporting procedures:

- **Vibration Instrumentation:** Vibration monitors common to these applications shall be selected based on consultation among the Resident Engineer, Structural Engineer, the Acoustical Engineer, and Caltrans and/or Metro. The monitors will be equipped with cellular modems for internet communication and use of automatic call-home feature to provide real-time notification of vibration level exceedance to the Structural Engineer or their designated representative. The vibration monitor will be set to automatically record daily events during working (construction) hours and to record peak PPV values in short, regular intervals not greater than 30 minutes during construction activities.
- **Location of Vibration Monitors:** A scaled plan indicating the specific monitoring locations (including measurements to be taken at construction site boundaries and at nearby historic and non-historic properties) shall be prepared by the Acoustical Engineer and submitted to the qualified Historic Architect and Architectural Historian for review and approval.
- **Data Acquisition:** Information that will be provided in the data reports will include, at a minimum, daily PPV readings at the same time of day from multiple locations, the maximum peak-vector-sum PPV, the maximum frequency for each direction, and a United States Bureau of Mining R18507 compliance chart of maximum PPV versus frequency. At a minimum, vibration-monitoring data shall be sent to the Structural Engineer or their designated representative once a week, or more frequently if needed. The reports shall also identify the construction equipment operating during the monitoring period, and the locations and distances of those pieces of equipment from the vibration-sensitive locations being monitored. The reports shall be reviewed by the Structural Engineer, Acoustical Engineer, and Historic Architect to interpret the findings.
- **Exceedance Notification and Reporting Procedures:** The Vibration Monitoring Plan procedures shall include follow up actions to be taken to reduce vibration levels to below allowable limits. Alarmed monitoring systems shall signal any vibration event that equals or exceeds a threshold of 80 percent of the PPV limit. In the event the measured vibration levels exceed allowable limits, the Structural Engineer or designated representative shall be notified immediately. The exceedance notice will trigger needed actions, including a potential stop work order to prevent unanticipated damage to a historic property. A survey of any potentially affected historic structure will be undertaken by the Structural Engineer and the Historic Architect at this time to ascertain whether any damage to the property has occurred and identify actions that will be undertaken to address this damage and/or future damage. Work shall be permitted to resume when the Structural Engineer, Acoustical Engineer, Historic Architect, and Architectural Historian have determined that the appropriate modifications to the

Vibration Monitoring Plan have been made to ensure that no further damage at the affected historic property would likely result.

CUL-8

SOIS Plan (Raymond Florist Historic District). Where damage to the Raymond Florist Historic District results from vibration, measures to address that damage will be required including the restoration of historic properties following the SOIS.

Damage to historic properties shall be identified using the baseline information recorded in the pre-construction surveys (identified in Measure CUL-1). That information shall be compared to the series of post-construction surveys (Measure CUL-13). If damage is identified that is a result of vibratory effects, then a property-specific SOIS Plan shall be prepared for the damaged historic property.

SOIS Plans are required to address Adverse Effects to built-environment historic properties and to ensure the requirements for protection are met, as required under Stipulation X.B.1.b and Attachment 5 of the Caltrans Section 106 Programmatic Agreement, and the 5024 Memorandum of Understanding (MOU). The SOIS Plans shall conform specifically to the format specified in Exhibit 7.5 of Caltrans Volume 2 – Standard Environmental Reference (as updated) and include a title page, a summary of the SOIS Plan, a project description, an historic properties description, effects and conditions proposed, the qualified monitors, this responsible parties, and any specified attachments.

The SOIS Plans shall be prepared by the Project Engineer, Structural Engineer, Landscape Architect, Architectural Historian, Historic Architect, and other appropriate design, engineering, cultural resources specialists, as appropriate, and in consultation with Caltrans CSO and SHPO, as required. The SOIS Plans will be reviewed and approved by the Architectural Historian, the Historic Architect, and Caltrans and/or Metro. Final approval of the SOIS Plans would be indicated when the Caltrans Environmental Branch signs it. During the pre-construction phase, a review of any proposed project improvements covered by an SOIS Plan must be completed by a PQS who meets the Caltrans Professional Qualifications Standards as Principal Architectural Historian and has the experience and expertise to ensure conformance with the Standards.

Plans meet the SOIS for Rehabilitation. The Resident Engineer will require the Construction Contractor to give notice with a specific timetable before the start of rehabilitation-related construction in the vicinity of historic properties to ensure that the Historic Architect or qualified staff under the supervision of the Historic Architect are available to conduct an advance field inspection and to monitor proposed work for conformance with the Standards for Rehabilitation at the identified locations.

CUL-9

Indirect Visual Effects (Maravilla Handball Court and El Centro Grocery). For the aerial segments of the light rail line in the LRT Alternative, it is not possible to avoid or minimize the indirect visual effect of the aerial light rail

line on the Maravilla Handball Court and El Centro Grocery. For the LRT Alternative, measures to address the indirect visual effect from aerial light rail line structure will be developed in consultation with the Consulting Parties as part of the MOA, if the LRT Alternative is selected as the Preferred Alternative. Preliminary ideas can include research projects, interpretative panels, or art installations.

For the potential light/shadow effect during operation of the LRT Alternative, additional studies and consultation with Consulting Parties should be completed to identify methods for minimizing the light/shadow effects on the Maravilla Handball Court.

CUL-10

Indirect Visual Effects (Old Pasadena Historic District). Measures for the proposed ventilation structure adjacent to West Colorado Boulevard near the Old Pasadena Historic District will involve context sensitive design during the pre-construction/final design phase. The ventilation structure at West Colorado Boulevard is near the Old Pasadena Historic District and will adversely affect the setting of the historic district. If this location is chosen for the ventilation structure in the Freeway Tunnel Alternative, to minimize that adverse visual effect, the ventilation structure must be designed to conform to the SOIS. The final design team members working on the ventilation structure design will include the Project Engineer, Structural Engineer, Acoustical Engineer, the Architectural Historian, the Historic Architect, and Caltrans and/or Metro Staff. The design will:

- Refine the proposed ventilation structure locations to avoid effects to the settings of the Old Pasadena Historic District. A charrette-style meeting shall be conducted that would include appropriate final design team members, including the Architectural Historian and Historic Architect as well as representatives from the City of Pasadena. The focus of this meeting will be to identify where these issues would be addressed to avoid proposed placement of this ventilation structure in areas where historic properties would be adversely affected and to specifically solicit public input regarding the design and materials to be used in the construction of the ventilation structure.
- The final design team will ensure that the ventilation structure will be designed and/or set back to minimize the visual and setting effects.
- As part of the final design team, the Historic Architect and Architectural Historian will review and comment on the proposed location for the ventilation structure and will participate in the development of designs and identification of appropriate building materials to ensure conformance with the Standards for the Treatment of Historic Properties-Preservation. A report outlining how the final design complies with the SOIS will be prepared by the Historic Architect and submitted to Caltrans and/or Metro and SHPO for review, comment, and approval.

CUL-11

Ground-Borne Noise Effects (100 North Fremont Avenue and Rialto Theatre). Where properties are located above the underground portion of the LRT Alternative, the Project Engineer will ensure that the final design of the LRT Alternative complies with appropriate FTA operational ground-borne noise criteria, based on the type of land use activities being undertaken at the property. Where the potential for exceedance for the FTA ground-borne noise criteria is identified, the Project Engineer will ensure that appropriate abatement measures are incorporated into the design of the rail track to meet FTA criteria for the associated land use. Abatement measures that could be incorporated into the track design to achieve the FTA criteria include, but are not limited to, high resilience direct fixation fasteners (HRDF), rail suspension fasteners (RSF), isolated slab track (IST), or floating slab track (FDT).

CUL-12

Property-Specific Protection Plans. The intent of the Property-Specific Protection Plan is to ensure that the potential effects of the preferred alternative on each adversely affected property are addressed by specific measures implemented as part of the project pre-construction, construction, and post-construction phases. These include:

At a minimum, the Property-Specific Protection Plan for the properties adversely affected by the selected alternative will include the following for each affected property:

- Name, address, boundary, and description of the historic property
- List of potential Adverse Effects of the selected alternative on each historic property and the measures included in that alternative to address those effects
- Key actions required in each measure
- Party/parties responsible for implementing each key action in each measure
- Other party/parties involved in implementing, overseeing, and/or documenting the implementation of the key actions in each measure
- Timing of the implementation of the key actions in each measure (final design/pre-construction, construction, and/or post-construction)
- Requirements for documenting compliance with the requirements of each measure
- Other relevant technical and supporting information

During final design, the Project Engineer, in consultation with the Historic Architect, the Architectural Historian, the Structural Engineer, the Acoustical Engineer, and the Geotechnical Engineer, will prepare a Property-Specific Protection Plan for all properties adversely affected by the project. Properties subject to this measure are the historic properties that would be adversely affected by the Build Alternatives. The Property-Specific

Protection Plans shall be prepared in consultation with Caltrans CSO and SHPO, as required.

A Property-Specific Protection Plan will be prepared during the final design for each of the historic properties adversely affected by the selected alternative. The Project Engineer, Resident Engineer, and the Construction Contractor will be required to implement the Property-Specific Protection Plans for each property during the appropriate project phases (pre-construction, construction, and/or post-construction).

CUL-13

Post-Construction Building Surveys. Post-construction building surveys (which would be equal in their level of effort, qualifications or preparers, scope and implementation as the pre-construction surveys described above) will be conducted for the properties which would be adversely affected by the project. The post-construction surveys would be completed within 2 months or 60 days following completion of the work in a specific area. The Construction Contractor and the Resident Engineer will notify the Structural Engineer and Architectural Historian when construction in the vicinity of specified historic property or properties is completed. At that time, the Structural Engineer, the Historic Architect, the Architectural Historian, and the Geotechnical Engineer, and other appropriate qualified specialists will conduct the post-construction surveys. The results of the survey will be documented in a written report, illustrated with photographs and drawings, as appropriate.

If the post-construction survey identifies damage to historic properties because of project-related activities, the Structural Engineer and Caltrans and/or Metro will consult with the Historic Architect to collaborate on a plan to repair the damage per the SOIS. The repairs will be performed by a qualified Rehabilitation General Contractor who has completed a certified rehabilitation on historic structures. That Rehabilitation General Contractor will perform those repairs under the direction of the Resident Engineer, with oversight by the Structural Engineer and the Historic Architect. The cost of the repairs will be paid by Caltrans and/or Metro or the Construction Contractor, depending on the contract provisions. Due to the gradual nature of ground settlement, post-construction settlement monitoring of properties will be ongoing for up to 3 years. Damage connected to slow excavation-induced ground settlement would be addressed using SOIS.

CUL-14

Post-Review Discovery and Monitoring Plan. The Post-Review Discovery and Monitoring Plan (PRDMP) for the proposed project is included in Volume III of the FOAE. The PRDMP specifies procedures to be followed prior to and during construction activities to ensure compliance with Caltrans Section 106 PA. The policies and procedures in the PRDMP will apply during ground-disturbing activities in areas deemed sensitive for subsurface archaeological deposits, particularly in the vicinity of the Horatio Rust Site and Otsungna Village Site. Archaeological Monitoring Areas are further specified in the PRDMP.

The Resident Engineer will require the Construction Contractor to implement the policies and procedures of the PRDMP detailed in Appendix I. The implementation of those requirements will be overseen by a Qualified Archaeological Monitor or a consultant who meets the PQS requirements for a Qualified Archaeological Monitor.

CUL-15

Public Outreach. Community outreach will be conducted by Caltrans and/or Metro or their designated representative to educate the public about the project and its expected effects and shall include individual consultation with the owners and occupants of historic properties that are likely to be subjected to project-related settlement and/or ground-borne vibration or any other construction or operational effect described in this document and the FOAE. This consultation would provide information demonstrating the relationship between ground settlement, ground-borne noise and vibration, human perception, and superficial and structural damage related to tunnel boring and other construction activities associated with the Build Alternatives. Community outreach methods will consist of certified correspondence, public meetings, or in-person meetings. As part of this outreach, Caltrans and/or Metro or their designated representative will provide a procedure for obtaining feedback and maintaining a registry for ensuring that public comments are addressed. The registry will be updated routinely and will contain the responses provided by appropriate staff based on the nature of the inquires, questions, and requests in a deliberate, timely fashion.

The requirements for public outreach apply to all four Build Alternatives.

CUL-16

Discovery of Cultural Resources. If cultural materials are discovered during ground disturbance and earthmoving, the Los Angeles County Metropolitan Transportation Authority (Metro) (TSM/TDM, BRT, and LRT Alternatives) or the Caltrans (Freeway Tunnel Alternative) will require the Construction Contractor to divert all such activity within and around the immediate discovery area until a qualified archaeologist can assess the nature and significance of the find.

The requirements regarding the discovery of cultural resources apply to all four Build Alternatives.

CUL-17

Discovery of Human Remains. If human remains are discovered during project construction, 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 Los Angeles 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), which will then notify the Most Likely Descendant (MLD). The person who discovered the remains will also contact the Caltrans and/or Metro staff 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. The PRDMP

provides more guidance for following the provisions in State Health and Safety Code Section 7050.5 and California PRC Section 5097.98.

The requirements regarding the discovery of human remains apply to all four Build Alternatives.

CUL-18

Construction Worker Training. Following the Notice to Proceed but before work begins, the Resident Engineer and the Construction Contractor will provide cultural resources training to key personnel and supervisors. The training will be prepared and conducted by an Archaeologist, Architectural Historian, and Historic Architect. The training, which may be in person or via video, will describe the applicable measures for treatment and protection of historic properties in compliance with the SOIS. The training will present and discuss applicable laws, their penalties, and examples of artifacts that may be encountered and potential conditions where historic resources can be damaged during construction. The training will also outline the steps, as per the PRDMP, that must be taken should work crews encounter cultural resources during project-related activities, including the authority of archaeological monitors in conjunction with the Resident Engineer to halt work in the area of a discovery to ensure the resource is protected against further effects.

The requirements for construction worker training apply to all four Build Alternatives.

TABLE 3.2.1:

TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
CITY OF ALHAMBRA	
<p>Alhambra Municipal Golf Course 630 South Almansor Street</p> <p>Owner/Operator: City of Alhambra</p> <p>Description: This 18-hole golf course features a three-level lighted driving range, two chipping greens, a large putting green and a practice bunker. The facility also includes a restaurant, a golf shop, and the Almansor Court Banquet and Conference Center which has indoor and outdoor areas available for weddings, parties, and corporate events.</p> <p>Distance: This golf course is approximately:</p> <ul style="list-style-type: none"> • 1,545 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Garfield Avenue/Mission Road (<i>I-16</i>); • 1,850 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 1,855 feet from the nearest new right of way needed to accommodate the improvements in this Alternative. 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this golf course from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this golf course would not experience short- or long-term operation air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance of this golf course from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this golf course would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this golf course, this golf course would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance of this golf course from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this golf course would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of Alhambra Municipal Golf Course because it would not result in proximity impacts on that that golf course.</p>
<p>Alhambra Park 500 North Palm Avenue</p> <p>Owner/Operator: City of Alhambra</p> <p>Description: This 15.0-acre park provides picnic tables with covered shelters, playground equipment, barbecues, tennis courts, volleyball courts, an outdoor basketball court, a meeting room, an activity room, a swimming pool, an open grass area, a band shell, and restrooms. The Alhambra Veteran’s Memorial Wall is located at the north end of the park.</p> <p>Approximately \$5,922 of L&WCF Act funds were used to renovate the band shell, replace its wood floor, and add electricity at this park in FY 1991/1992. As a result, the band</p>	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p>

TABLE 3.2.1:

TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>shell at Alhambra Park is subject to the requirements for protection under Section 6(f).</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 1,590 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Fremont Avenue from Huntington Drive to Alhambra Road (L-2a); • 5,090 feet from the nearest new right of way needed to accommodate the improvements in this Alternative; and • 6,760 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>Visual Resources: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of Alhambra Park because it would not result in proximity impacts on that park.</p> <p>Section 6(f): Because the TSM/TDM Alternative would not require the permanent acquisition of any land from Alhambra Park, the requirements of Section 6(f) would not apply to this park.</p>
<p>Almansor Park 800 South Almansor Avenue</p> <p>Owner/Operator: City of Alhambra</p> <p>Description: This 29.2-acre park provides picnic tables with covered shelters, playground equipment, barbecues, ball fields, tennis courts, an outdoor basketball court, horseshoe pits, an exercise par course, a meeting room, an activity room, a gymnasium, a jogging course, trails, an open grass area, and restrooms.</p> <p>Approximately \$52,350 of L&WCF Act funds were used to construct a picnic pavilion, a bird observation area, and support facilities at this park in FY 1991/1992, and \$50,014 in L&WCF Act funds were used to rehabilitate the existing trails at this park in FY 1994/1995. As a result, these improvements at Almansor Park are subject to the requirements for protection under Section 6(f).</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 1,590 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Garfield Avenue/Mission Road (I-16); • 1,790 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of Almansor Park because it would not result in proximity impacts on that park.</p> <p>Section 6(f): Because the TSM/TDM Alternative would not require the permanent acquisition of any land from Almansor Park, the requirements of Section 6(f) would not apply to this park.</p>

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<ul style="list-style-type: none"> 1,795 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative. 	
<p>Emery Park 2709 Mimosa Street</p> <p>Owner/Operator: City of Alhambra</p> <p>Description: This 0.7-acre park provides picnic tables, playground equipment, barbecues, an activity room, a kitchen facility, an open grass area, and restrooms.</p> <p>Approximately \$100,800 of L&WCF Act funds were used to construct picnic areas, a play area, restrooms, irrigation, landscaping, turf, parking, and lighting at this park in FY 1982/1983. As a result, these improvements at Emery Park are subject to the requirements for protection under Section 6(f).</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> 1,600 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Fremont Avenue from Mission Road to Valley Boulevard (L-2c); 3,050 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and 3,055 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of Emery Park because it would not result in proximity impacts on that park.</p> <p>Section 6(f): Because the TSM/TDM Alternative would not require the permanent acquisition of any land from Emery Park, the requirements of Section 6(f) would not apply to this park.</p>
<p>Granada Park 2000 West Hellman Avenue</p> <p>Owner/Operator: City of Alhambra</p> <p>Description: This 17.3-acre park provides picnic tables with covered shelters, playground equipment, barbecues, ball fields, tennis courts, a meeting room, a kitchen facility, a heated swimming pool, an open grass area, and restrooms.</p>	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p>

TABLE 3.2.1:

TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 1,305 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Hellman Avenue/Fremont Avenue (<i>I-44</i>); • 4,880 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 5,535 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of Granada Park because it would not result in proximity impacts on that park.</p>
<p>Gateway Plaza Park Northwest corner of West Valley Boulevard and South Fremont Avenue</p> <p>Owner/Operator: City of Alhambra</p> <p>Description: This 0.5-acre park at the corner of Valley Boulevard and South Fremont Avenue welcomes visitors to the City with a Moorish-style arch that symbolizes Alhambra as the “Gateway to the San Gabriel Valley.” The park also includes landscaping and walkways.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • Adjacent to the nearest limit for permanent improvements in the TSM/TDM Alternative on Fremont Avenue from Mission Road to Valley Boulevard (<i>L-2c</i>); • 2,180 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 2,450 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Construction of the improvements in the TSM/TDM Alternative adjacent to this park could result in short-term dust and equipment emissions that could extend into the park property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of Alhambra. Compliance with those measures during construction of the TSM/TDM Alternative improvements adjacent to Gateway Plaza Park would substantially reduce the short-term air quality effects on the park.</p> <p>In the long term, operation of the TSM/TDM Alternative would result in reduced regional vehicle and GHG emissions in 2020 and 2035 compared to existing 2012 and 2020 and 2035 No Build Alternative conditions. Operation of the TSM/TDM Alternative in 2020 and 2035 would result in reduced MSAT emissions compared to existing 2012 conditions; no change or minor reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2020 No Build Alternative conditions; and no change or minor increases or reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2035 No Build Conditions. As a result, operation of the TSM/TDM Alternative would not result in adverse air quality impacts on Gateway Plaza Park.</p> <p>Noise: Construction of the improvements in the TSM/TDM Alternative adjacent to this park could result in short-term noise levels that could impact the park. Those construction activities would be required to comply with the City of Alhambra Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the TSM/TDM Alternative improvements adjacent to Gateway Plaza Park would substantially reduce the short-term noise effects on the park.</p> <p>The TSM/TDM Alternative improvements (L-2c) in the vicinity of this park will not substantially increase travel speeds or shift travel lanes closer to this park or increase the capacity of roads in the vicinity of this park. As a</p>

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>result, the operation of the TSM/TDM Alternative would not result in long-term noise impacts on Gateway Plaza Park.</p> <p>Traffic: Construction of the improvements in the TSM/TDM Alternative adjacent to Gateway Plaza Park could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the TSM/TDM Alternative would not result in short-term adverse impacts related to traffic and transportation at Gateway Plaza Park. The TSM/TDM Alternative improvements in the vicinity of Gateway Plaza Park will not modify the access to/from that park and, therefore, would not result in long-term adverse impacts related to traffic and transportation at Gateway Plaza Park.</p> <p>Visual Resources: Gateway Plaza Park is adjacent to West Valley Boulevard and South Fremont Avenue, and visitors to the park currently have views of those roads from areas within this park. During construction of the TSM/TDM Alternative improvements in this area, park patrons would have views of construction equipment and activities and areas within those existing roads disturbed during construction. In the long-term park, visitors would have views of West Valley Boulevard and South Fremont Avenue similar to the existing views of those streets from within the park. As a result, the TSM/TDM Alternative improvements in the vicinity of Gateway Plaza Park would not result in short- or long-term visual impacts for park visitors.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of Gateway Plaza Park because the proximity impacts of that Alternative would not substantially impair the protected activities, features, or attributes of that park.</p>
<p>Moor Field 1008 South Eighth Street</p> <p>Owner/Operator: City of Alhambra</p> <p>Description: This 20.3-acre property provides a wide range of facilities for the City and the Alhambra Unified School District, including a baseball field, track, and several other sports fields.</p> <p>Distance: Moor Field is approximately:</p> <ul style="list-style-type: none"> • 870 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Atlantic Boulevard from Glendon Way to I-10 (L-3); • 3,090 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and 	<p>Use of Land for a TCE: No TCEs are proposed at Moor Field under the TSM/TDM Alternative.</p> <p>Air Quality: Based on the distance of Moor Field from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this resource would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance of Moor Field from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this resource would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance of Moor Field from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this resource would not</p>

TABLE 3.2.1:

TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<ul style="list-style-type: none"> 3,095 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative. 	<p>experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of Moor Field because it would not result in proximity impacts on that facility.</p>
<p>Recreation Resources at Baldwin Elementary School (K to 8th) 900 South Almansor Street</p> <p>Owner/Operator: Alhambra Unified School District</p> <p>Distance: The recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> 2,280 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Garfield Avenue/Mission Road (<i>I-16</i>); 2,510 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and 2,515 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Baldwin Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at Fremont Elementary School (K to 8th) 2001 South Elm Street</p> <p>Owner/Operator: Alhambra Unified School District</p> <p>Distance: The recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> 270 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Hellman Avenue/Fremont Avenue (<i>I-44</i>); 3,645 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Construction of the improvements in the TSM/TDM Alternative approximately 300 feet from Fremont Elementary School could result in short-term traffic impacts in that area. Based on implementation of TMPs</p>

TABLE 3.2.1:

TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Alternative; and</p> <ul style="list-style-type: none"> 4,230 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>and requirements to maintain access to all adjacent properties, construction of the TSM/TDM Alternative would not result in short-term adverse impacts related to traffic and transportation at the recreation resources at Fremont Elementary School. Based on the distance from the nearest operation of any TSM/TDM Alternative improvements and that the TSM/TDM Alternative would not result in any permanent changes in access to/from the recreation facilities at this school, they would not experience long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Fremont Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at Garfield Elementary School (K to 8th) 110 West McLean Street</p> <p>Owner/Operator: Alhambra Unified School District</p> <p>Distance: The recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> 1,615 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Huntington Drive/Garfield Avenue (<i>I-13</i>), Huntington Drive/Atlantic Boulevard (<i>I-14</i>), and Atlantic Boulevard/Garfield Avenue (<i>I-15</i>); 1,725 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and 1,740 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Garfield Elementary School because it would not result in proximity impacts on those recreation resources.</p>

TABLE 3.2.1:

TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Recreation Resources at Marguerita Elementary School (K to 8th) 1603 South Marguerita Avenue</p> <p>Owner/Operator: Alhambra Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,130 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Atlantic Boulevard from Glendon Way to I-10 (L-3); • 6,895 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 7,080 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Marguerita Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at Ramona Elementary School (K to 8th) 509 West Norwood Place</p> <p>Owner/Operator: Alhambra Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,610 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Garfield Avenue from Valley Boulevard to Glendon Way (L-4); • 5,085 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p>

TABLE 3.2.1:

TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<ul style="list-style-type: none"> 5,090 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative. 	<p>Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Ramona Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at Alhambra High School (9th to 12th) 101 South 2nd Street</p> <p>Owner/Operator: Alhambra Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> 1,515 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Garfield Avenue/Mission Road (<i>I-16</i>); 1,595 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and 1,600 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation uses at Alhambra High School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at Mark Keppel High School (9th to 12th) 501 East Hellman Avenue</p> <p>Owner/Operator: Alhambra Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p>	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p>

TABLE 3.2.1:

TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<ul style="list-style-type: none"> • 2,435 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Garfield Avenue from Valley Boulevard to Glendon Way (L-4); • 7,240 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 7,245 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative. 	<p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Mark Keppel High School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at San Gabriel High School (9th to 12th) 801 Ramona Street</p> <p>Owner/Operator: Alhambra Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 2,600 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Del Mar Avenue/Mission Road (I-19); • 2,710 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 2,715 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at San Gabriel High School because it would not result in proximity impacts on those recreation resources.</p>

TABLE 3.2.1:

TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
EAGLE ROCK (COMMUNITY IN THE CITY OF LOS ANGELES)	
<p>Eagle Rock Recreation Center 1100 Eagle Vista Drive</p> <p>Owner/Operator: City of Los Angeles</p> <p>Description: This 24.1-acre recreation center includes a gymnasium, an auditorium, barbecue pits, three baseball diamonds (lighted/unlighted), basketball courts (lighted/indoor, unlighted/outdoor), a children’s play area, two football fields (unlighted), an indoor gym (without weights), two picnic areas with picnic tables, and tennis courts (unlighted). The gymnasium at the Recreation Center was designed by architect Richard Nuetra in the International Style in 1953 and was designated as cultural historical monument #536 in 1991 by the City of Los Angeles. The facility also includes restrooms and on-site parking.</p> <p>Distance: This recreation center is:</p> <ul style="list-style-type: none"> • Immediately adjacent to the nearest limit for permanent improvements in the TSM/TDM Alternative on Figueroa Street from SR 134 to Colorado Boulevard (L-1); • 430 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • Approximately 2.5 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Construction of the improvements in the TSM/TDM Alternative adjacent to this recreation center could result in short-term dust and equipment emissions that could extend into the center property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of Los Angeles. Compliance with those measures during construction of the TSM/TDM Alternative improvements adjacent to the Eagle Rock Recreation Center would substantially reduce the short-term air quality effects on the center.</p> <p>In the long term, operation of the TSM/TDM Alternative would result in reduced regional vehicle and GHG emissions in 2020 and 2035 compared to existing 2012 and 2020 and 2035 No Build Alternative conditions. Operation of the TSM/TDM Alternative in 2020 and 2035 would result in reduced MSAT emissions compared to existing 2012 conditions; no change or minor reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2020 No Build Alternative conditions; and no change or minor increases or reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2035 No Build Conditions. As a result, operation of the TSM/TDM Alternative would not result in adverse air quality impacts on Eagle Rock Recreation Center.</p> <p>Noise: Construction of the improvements in the TSM/TDM Alternative in the vicinity of this recreation center could result in short-term noise levels that could impact the center. Those construction activities would be required to comply with the City of Los Angeles Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the TSM/TDM Alternative improvements adjacent to the Eagle Rock Recreation Center would substantially reduce the short-term noise effects on the center.</p> <p>The recreation uses at Eagle Rock Recreation Center are active uses. The TSM/TDM Alternative improvements (L-1) in the vicinity of this recreation center will not substantially increase travel speeds or shift travel lanes closer to this recreation center or increase the capacity of roads in the vicinity of this recreation center. As a result, the operation of the TSM/TDM Alternative would not result in long-term noise impacts on Eagle Rock Recreation Center.</p> <p>Traffic: Construction of the improvements in the TSM/TDM Alternative adjacent to the Eagle Rock Recreation Center could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the TSM/TDM Alternative would not result in short-term adverse impacts related to traffic and transportation at the Eagle Rock Recreation</p>

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>Center. Because the operation of the nearest improvements in the TSM/TDM Alternative is not expected to result in substantial volumes of traffic on local streets that provide access to this recreation center, this resource would not experience long-term traffic effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Views from the Eagle Rock Recreation Center are not an important feature of this recreation center. The TSM/TDM Alternative improvements (L-1) in the vicinity of this recreation center consist of improvements to existing Figueroa Street. Views of Figueroa Street from this recreation center would not change substantially during the construction and operation of this improvement. As a result, the TSM/TDM Alternative would not result in short- or long-term adverse visual impacts at Eagle Rock Recreation Center.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of Eagle Rock Recreation Center because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that recreation center.</p>
<p>Lanark/Shelby Mini Park Lanark Street and Shelby Place</p> <p>Owner/Operator: City of Los Angeles</p> <p>Description: This 0.4-acre mini park provides a children’s play area.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 710 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Figueroa Street from SR 134 to Colorado Boulevard (L-1); • 2,845 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • More than 2 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of Lanark/Shelby Mini Park because it would not result in proximity impacts on that park.</p>

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Richard Alatorre Park Figueroa and 134 Freeway</p> <p>Owner/Operator: City of Los Angeles</p> <p>Description: This 1.8-acre park provides picnic tables and dirt walkways through a nature area.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • Adjacent to the nearest limit for permanent improvements in the TSM/TDM Alternative on Figueroa Street from SR 134 to Colorado Boulevard (L-1); • 70 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • More than 2 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Construction of the improvements in the TSM/TDM Alternative adjacent to this park could result in short-term dust and equipment emissions that could extend into the park property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of Los Angeles. Compliance with those measures during construction of the TSM/TDM Alternative improvements adjacent to Richard Alatorre Park would substantially reduce the short-term air quality effects on the park.</p> <p>In the long term, operation of the TSM/TDM Alternative would result in reduced regional vehicle and GHG emissions in 2020 and 2035 compared to existing 2012 and 2020 and 2035 No Build Alternative conditions. Operation of the TSM/TDM Alternative in 2020 and 2035 would result in reduced MSAT emissions compared to existing 2012 conditions; no change or minor reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2020 No Build Alternative conditions; and no change or minor increases or reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2035 No Build Conditions. As a result, operation of the TSM/TDM Alternative would not result in adverse air quality impacts on Richard Alatorre Park.</p> <p>Noise: Construction of the improvements in the TSM/TDM Alternative adjacent to this park could result in short-term noise levels that could impact the park. Those construction activities would be required to comply with the City of Los Angeles Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the TSM/TDM Alternative improvements adjacent to Richard Alatorre Park would substantially reduce the short-term noise effects on the park.</p> <p>The TSM/TDM Alternative improvements (L-1) in the vicinity of this park will not substantially increase travel speeds on SR 134, Figueroa Street, or other local streets in the area, or shift travel lanes closer to this park or increase the capacity of roads in the vicinity of this park. As a result, the operation of the TSM/TDM Alternative would not result in long-term noise impacts on Richard Alatorre Park.</p> <p>Traffic: Construction of the improvements in the TSM/TDM Alternative adjacent to Richard Alatorre Park could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the TSM/TDM Alternative would not result in short-term adverse impacts related to traffic and transportation at Richard Alatorre Park. Because the operation of the nearest improvements in the TSM/TDM Alternative is not expected to result in substantial volumes of traffic on local streets that provide access to this park, this resource would not experience long-term traffic effects under the TSM/TDM Alternative.</p>

TABLE 3.2.1:

TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>Visual Resources: Views from Richard Alatorre Park are not an important feature of this park. The TSM/TDM Alternative improvements (L-1) in the vicinity of this park consist of improvements to existing Figueroa Street. Views of Figueroa Street from this park would not change substantially during the construction and operation of this improvement. As a result, the TSM/TDM Alternative would not result in short- or long-term adverse visual impacts at Richard Alatorre Park.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of Richard Alatorre Park because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that park.</p>
<p>Yosemite Recreation Center 1840 Yosemite Drive</p> <p>Owner/Operator: City of Los Angeles</p> <p>Description: This 5.1-acre recreation center provides an auditorium/two indoor meeting rooms (one seats 150 people and one seats 250 people), two basketball courts (lighted/outdoor), a children’s play area, a community room, handball courts (lighted), an indoor gym (without weights), an outdoor gym (without weights), picnic tables, two lighted baseball diamonds, seasonal swimming pool, an outdoor stone amphitheater, and tennis courts (lighted). The facility also includes restrooms and on- site parking.</p> <p>Distance: This recreation center is approximately:</p> <ul style="list-style-type: none"> • 2,450 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Eagle Rock Boulevard/Colorado Boulevard (<i>I-45</i>); • 7,600 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • Over 5 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this recreation center from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this recreation center would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance of this recreation center from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this recreation center would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this recreation center, this recreation center park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance of this recreation center from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this recreation center would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of Yosemite Recreation Center because it would not result in proximity impacts on that recreation center.</p>

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Recreation Resources at Delevan Drive Elementary School 4168 West Avenue 42</p> <p>Owner/Operator: Los Angeles Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,940 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Eagle Rock Boulevard/York Boulevard (<i>I-2</i>); • More than 2 miles from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • Nearly 5 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of recreation resources at Delevan Drive Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at Eagle Rock Elementary School 2057 Fair Park Avenue</p> <p>Owner/Operator: Los Angeles Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,110 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Eagle Rock Boulevard/Colorado Boulevard (<i>I-45</i>); • 8,800 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • Nearly 4 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p>

TABLE 3.2.1:

TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of recreation resources at Eagle Rock Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at Rockdale Elementary School 1303 Yosemite Drive</p> <p>Owner/Operator: Los Angeles Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 2,230 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Figueroa Street from SR 134 to Colorado Boulevard (<i>L-1</i>); • 4,395 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • Nearly 5 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Rockdale Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at Toland Way Elementary School 4545 Toland Way</p> <p>Owner/Operator: Los Angeles Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,190 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Eagle Rock Boulevard/York Boulevard (<i>I-2</i>); • More than 2 miles from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p>

TABLE 3.2.1:

TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<ul style="list-style-type: none"> Nearly 4 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Toland Way Elementary School because it would not result in proximity impacts on those recreation resources.</p>
EL SERENO (COMMUNITY IN THE CITY OF LOS ANGELES)	
<p>El Sereno Arroyo Playground 5520 Concord Avenue</p> <p>Owner/Operator: City of Los Angeles</p> <p>Description: This 1-acre park provides grassy hills, a playground, a Fitness Zone for adults, walking paths, picnic tables, mosaics, decorative fencing, and a garden. The park, which opened in December 2012, includes safety features such as fences with gates that lock automatically when the park is closed, solar powered security cameras, and lighting. The park is located on land owned by Caltrans and provided to the City for use as a park for a lease period of 25 years.</p> <p>Distance: This park is adjacent to the:</p> <ul style="list-style-type: none"> Nearest edge of the nearest TCE for the TSM/TDM Alternative; and Nearest limit for permanent improvements in the TSM/TDM Alternative for the Valley Boulevard to Mission Road Connector Road (T-1). <p>The land on which this playground is located is owned by the State of California (Caltrans) and is leased to the City of Los Angeles for the playground use. Under the lease agreement (January 23, 2012), "It is agreed and understood, the creation of a publicly accessible park by this agreement does not create a public park within the meaning of Section 4(f)...said park is specifically exempt from the application of Section 4(f)." As a result, the El Sereno Arroyo Playground</p>	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Construction of the improvements in the TSM/TDM Alternative adjacent to this playground could result in short-term dust and equipment emissions that could extend into the park property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of Los Angeles. Compliance with those measures during construction of the TSM/TDM Alternative improvements adjacent to the El Sereno Arroyo Playground would substantially reduce the short-term air quality effects on the playground.</p> <p>In the long term, operation of the TSM/TDM Alternative would result in reduced regional vehicle and GHG emissions in 2020 and 2035 compared to existing 2012 and 2020 and 2035 No Build Alternative conditions. Operation of the TSM/TDM Alternative in 2020 and 2035 would result in reduced MSAT emissions compared to existing 2012 conditions; no change or minor reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2020 No Build Alternative conditions; and no change or minor increases or reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2035 No Build Conditions. As a result, operation of the TSM/TDM Alternative would not result in adverse air quality impacts on El Sereno Arroyo Playground.</p> <p>Noise: Construction of the improvements in the TSM/TDM Alternative adjacent to this playground could result in short-term noise levels that could impact the park. Those construction activities would be required to comply with the City of Los Angeles Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the TSM/TDM Alternative improvements adjacent to the El Sereno Arroyo Playground would substantially reduce the short-term noise effects on the playground.</p> <p>The recreation uses at El Sereno Arroyo Playground are active uses. The TSM/TDM Alternative improvements (T-1) in the vicinity of this park would result in a permanent noise level of 61 dBA, which is an increase of 2 dBA at this park in 2035, compared to the No Build Alternative at 59 dBA. However, because this increase</p>

TABLE 3.2.1:

TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>would not be subject to the requirements for protection under Section 4(f). However, this playground was included in this analysis to assess the potential for direct and indirect adverse impacts on this playground by the TSM/TDM Alternative. The inclusion of this playground in this analysis does not trigger the requirements for protection under Section 4(f).</p>	<p>would not exceed the applicable NAC, the TSM/TDM Alternative would not result in long-term adverse noise effects on this park.</p> <p>Traffic: Construction of the improvements in the TSM/TDM Alternative adjacent to the El Sereno Arroyo Playground could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the TSM/TDM Alternative would not result in short-term adverse impacts related to traffic and transportation at the El Sereno Arroyo Playground. Because the operation of the nearest improvements in the TSM/TDM Alternative is not expected to result in substantial volumes of traffic on local streets that provide access to this park, this resource would not experience long-term traffic effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Views from El Sereno Arroyo Playground are not an important feature of this park. The TSM/TDM Alternative improvements (T-1) in the vicinity of this park consist of improvements to existing Valley Boulevard. Views of local streets from this park would not change substantially during the construction and operation of this improvement. As a result, the TSM/TDM Alternative would not result in short- or long-term adverse visual impacts at El Sereno Arroyo Playground.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of El Sereno Arroyo Playground because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that playground.</p>
<p>Recreation Resources at El Sereno Elementary School 3838 Rosemead Avenue</p> <p>Owner/Operator: Los Angeles Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,430 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Eastern Avenue/Huntington Drive (I-3); • 6,410 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 6,515 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p>

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at El Sereno Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at El Sereno Middle School 2839 North Eastern Avenue</p> <p>Owner/Operator: Los Angeles Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 2,580 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Eastern Avenue/Huntington Drive (<i>I-3</i>); • 4,465 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 4,900 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at El Sereno Middle School because it would not result in proximity impacts on those resources.</p>
<p>Recreation Resources at Sierra Park Elementary School 3170 Budau Avenue</p> <p>Owner/Operator: Los Angeles Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 2,040 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative for the Valley Boulevard to Mission Road Connector Road (<i>T-1</i>); • 2,470 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 2,580 feet from the nearest new right of way needed to 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation</p>

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
accommodate the improvements in the TSM/TDM Alternative.	effects under the TSM/TDM Alternative. Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative. Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Sierra Park Elementary School because it would not result in proximity impacts on those resources.
<p>Recreation Resources at Sierra Vista Elementary School 4342 Alpha Street</p> <p>Owner/Operator: Los Angeles Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 2,000 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Fremont Avenue from Huntington Drive to Alhambra Road (L-2a); • 5,930 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 5,945 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Sierra Vista Elementary School because it would not result in proximity impacts on those resources.</p>

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
CITY OF GLENDALE	
<p>Carr Park 1615 East Colorado Boulevard</p> <p>Owner/Operator: City of Glendale</p> <p>Description: This 3.2-acre park includes a basketball court, a children’s play area, and picnic areas.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 1,200 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at West Broadway/Colorado Boulevard (<i>I-1</i>); • 2.5 miles from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 4.8 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of Carr Park because it would not result in proximity impacts on that park.</p>
CITY OF PASADENA	
<p>Allendale Park 1130 South Marengo Avenue</p> <p>Owner/Operator: City of Pasadena</p> <p>Description: This 2.9-acre park provides a lighted tennis court, a lighted softball diamond/multi-purpose field with bleachers, playground equipment, on-site parking, picnic tables, and drinking fountains. There is a public library within the boundary of this park.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 235 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative for the SR 110 (Arroyo Seco Parkway) hook ramps concept (<i>T-2</i>); 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Construction of the improvements in the TSM/TDM Alternative approximately 235 feet from Allendale Park could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the TSM/TDM Alternative would not result in short-term adverse impacts related to traffic and transportation at Allendale Park. Based on the</p>

TABLE 3.2.1:

TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<ul style="list-style-type: none"> • 350 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 355 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>distance of this park from the nearest operation of any TSM/TDM Alternative improvements and because the TSM/TDM Alternative would not result in any permanent changes in access to/from this park, this park would not experience long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: The nearest construction of TSM/TDM Alternative improvements would be for the SR 110/Fair Oaks Avenue hook ramps southwest of Allendale Park. Based on the distance of this park from the nearest construction and operation of that improvement in the TSM/TDM Alternative, as well as the presence of intervening land uses, including south Marengo Avenue and Blair High School, the SR 110/Fair Oaks hook ramps would not be visible or would be visible only briefly from areas within Allendale Park. The changes in views from the park would not be expected to be substantial because they would be views of urban structures and features in a viewshed which already contains urban structures and features. As a result, the TSM/TDM Alternative improvements would not result in temporary construction or long-term operation visual effects at Allendale Park.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of Allendale Park because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that park.</p>
<p>Central Park 275 South Raymond Avenue</p> <p>Owner/Operator: City of Pasadena</p> <p>Description: This 9.2-acre park provides 6 horseshoe pits, 2 lawn bowling courts, an open area, playground equipment, walkway lighting, restrooms, picnic tables, a rose garden, benches, and a clubhouse for the Pasadena Lawn Bowling Club, an affiliate of the American Lawn Bowling Association.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 1,435 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative for the St. John Avenue extension between Del Mar Boulevard and California Avenue (T-3); • 1,580 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 5,510 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of Central Park because it would not result in proximity impacts on that park.</p>

TABLE 3.2.1:

TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Defenders Park Orange Grove Boulevard/Colorado Boulevard</p> <p>Owner/Operator: City of Pasadena</p> <p>Description: This 1.8-acre passive neighborhood park contains a walkway, multiple monuments, a limestone bench, a wall recognizing the City’s founders, a small open grassy area, some trees and shrubbery, and a drinking fountain.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 1,665 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative for the St. John Avenue extension between Del Mar Boulevard and California Avenue (T-3); • 1,955 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 1.5 miles feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of Defenders Park because it would not result in proximity impacts on that park.</p>
<p>San Rafael Park Colorado Boulevard/Melrose Boulevard</p> <p>Owner/Operator: City of Pasadena</p> <p>Description: This 0.9-acre park provides benches, grass areas, playground equipment, picnic facilities, and a drinking fountain.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 2,190 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Figueroa Street from SR 134 to Colorado Boulevard (L-1); • 2,370 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p>

TABLE 3.2.1:

TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<ul style="list-style-type: none"> Nearly 2 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>Visual Resources: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of San Rafael Park because it would not result in proximity impacts on that park.</p>
<p>Singer Park California Boulevard/St. John Avenue</p> <p>Owner/Operator: City of Pasadena</p> <p>Description: This 2.9-acre neighborhood park includes an open grass area with a number of well-established trees and rose beds, a children’s play area, picnic tables, benches, restrooms, and a drinking fountain.</p> <p>Distance: This park is:</p> <ul style="list-style-type: none"> Adjacent to the nearest limit for permanent improvements in the TSM/TDM Alternative for the St. John Avenue extension between Del Mar Boulevard and California Avenue (T-3); Approximately 35 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and Approximately 4,210 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Construction of the improvements in the TSM/TDM Alternative adjacent to this park could result in short-term dust and equipment emissions that could extend into the park property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of Pasadena. Compliance with those measures during construction of the TSM/TDM Alternative improvements adjacent to Singer Park would substantially reduce the short-term air quality effects on the park.</p> <p>In the long term, operation of the TSM/TDM Alternative would result in reduced regional vehicle and GHG emissions in 2020 and 2035 compared to existing 2012 and 2020 and 2035 No Build Alternative conditions. Operation of the TSM/TDM Alternative in 2020 and 2035 would result in reduced MSAT emissions compared to existing 2012 conditions; no change or minor reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2020 No Build Alternative conditions; and no change or minor increases or reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2035 No Build Conditions. As a result, operation of the TSM/TDM Alternative would not result in adverse air quality impacts on San Rafael Park.</p> <p>Noise: Construction of the improvements in the TSM/TDM Alternative adjacent to this park could result in short-term noise levels that could impact the park. Those construction activities would be required to comply with the City of Pasadena Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the TSM/TDM Alternative improvements adjacent to Singer Park would substantially reduce the short-term noise effects on the park.</p> <p>The recreation uses at Singer Park are active uses. The TSM/TDM Alternative improvements (T-3) in the vicinity of this park will not substantially increase travel speeds on local streets adjacent to this park or shift travel lanes closer to this park and would result in only a minimal increase in noise levels at this park. As a result, the operation of the TSM/TDM Alternative would not result in long-term noise impacts on Singer Park.</p> <p>Traffic: Construction of the improvements in the TSM/TDM Alternative adjacent to Singer Park could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain</p>

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TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>access to all adjacent properties, construction of the TSM/TDM Alternative would not result in short-term adverse impacts related to traffic and transportation at Singer Park. Because the operation of the nearest improvements in the TSM/TDM Alternative is not expected to result in substantial volumes of traffic on local streets that provide access to this park, this resource would not experience long-term traffic effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Existing views from Singer Park include views of West California Boulevard, St. John Avenue, and SR 710 north of California Boulevard. There are views of residential uses outside the park to the north, west, east, and south. Views of the surrounding areas are not expected to be a primary reason for users to visit this park. The nearest construction of a TSM/TDM Alternative improvement to Singer Park would be immediately north and east of the park for improvement T-3, the St John Avenue extension between Del Mar Boulevard and California Avenue. As a result, some construction activities would be visible to patrons in the north and east parts of the park, although trees and shrubs along those sides of the park would partially shield views from those areas in the park. The nearest permanent feature of that TSM/TDM Alternative improvement to Singer Park would be the St. John Avenue extension north of California Avenue. The changes in views from the park would not be expected to be substantial because they would be views of urban structures and features in a viewshed that already contains urban structures and features. As a result, the TSM/TDM Alternative improvements would not result in temporary construction or long-term operation visual effects at Singer Park.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of Singer Park because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that park.</p>
<p>Recreation Resources at Blair High School 1201 South Marengo Avenue</p> <p>Owner/Operator: Pasadena Unified School District</p> <p>Distance: This school and the recreation uses at this school are:</p> <ul style="list-style-type: none"> • Adjacent to the nearest limit for permanent improvements in the TSM/TDM Alternative for the SR 110 (Arroyo Seco Parkway) hook ramps concept (T-2); • Approximately 345 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • Approximately 350 feet from the nearest edge of the 	<p>The TSM/TDM Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Construction of the improvements in the TSM/TDM Alternative adjacent to the recreation resources at this school could result in short-term dust and equipment emissions that could extend onto the school property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of Pasadena. Compliance with those measures during construction of the TSM/TDM Alternative improvements adjacent to the recreation resources at Blair High School would substantially reduce the short-term air quality effects on those resources.</p> <p>In the long term, operation of the TSM/TDM Alternative would result in reduced regional vehicle and GHG emissions in 2020 and 2035 compared to existing 2012 and 2020 and 2035 No Build Alternative conditions. Operation of the TSM/TDM Alternative in 2020 and 2035 would result in reduced MSAT emissions compared</p>

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TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>nearest TCE for the TSM/TDM Alternative.</p>	<p>to existing 2012 conditions; no change or minor reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2020 No Build Alternative conditions; and no change or minor increases or reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2035 No Build Conditions. As a result, operation of the TSM/TDM Alternative would not result in adverse air quality impacts on the recreation resources at Blair High School.</p> <p>Noise: Construction of the improvements in the TSM/TDM Alternative adjacent to the recreation resources at this school could result in short-term noise levels that could impact those resources. Those construction activities would be required to comply with the City of Pasadena Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the TSM/TDM Alternative improvements adjacent to Blair High School would substantially reduce the short-term noise effects on the recreation resources at the school.</p> <p>The recreation resources at Blair High School are active uses that include tennis courts and a pool. The 2035 predicted noise levels at the tennis courts and pool would be the same under the No Build and TSM/TDM Alternatives at 61 dBA, which is less than the 67 dBA NAC for Activity Category C uses. As a result, the operation of the TSM/TDM Alternative would not result in long-term noise impacts on the recreation resources at Blair High School.</p> <p>Traffic: Construction of the improvements in the TSM/TDM Alternative adjacent to the recreation resources at Blair High School could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the TSM/TDM Alternative would not result in short-term adverse impacts related to traffic and transportation at the recreation facilities at Blair High School. Because the operation of the nearest improvements in the TSM/TDM Alternative is not expected to result in substantial volumes of traffic on local streets that provide access to those resources, they would not experience long-term traffic effects under the TSM/TDM Alternative.</p> <p>Visual Resources: The sports facilities on the Blair High School campus have existing views of SR 110, Marengo Avenue, and residential and other urban land uses and structures to the east, south, west, and north. Users of the on-campus sports facilities outside school hours typically would not use these types of recreation facilities to view off-campus land uses and, therefore, are not considered sensitive viewers. The patrons of the recreation uses on the Blair High School campus already have views of urban land uses and structures, so the addition of the TSM/TDM Alternative improvements on SR 110 would not substantially change the character of views from this facility. As a result, the TSM/TDM Alternative improvements would not result in temporary construction or long-term operation visual effects at the recreation facilities on the Blair High School campus.</p>

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TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Blair High School because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of those recreation resources.</p>
CITY OF ROSEMEAD	
<p>Garvey Park and Splash Zone at Garvey Park 7933 Emerson Place</p> <p>Owner/Operator: City of Rosemead</p> <p>Description: This 1.8-acre park provides two water slides, a splash play area, and a 2,500-square-foot lesson pool.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 2,450 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at San Gabriel Boulevard/Marshall Street (<i>I-22</i>); • 2,700 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 1.5 miles from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of Garvey Park and Splash Zone at Garvey Park Alhambra Park because it would not result in proximity impacts on that park.</p>
<p>Rosemead Aquatic Center 9155 East Mission Drive</p> <p>Owner/Operator: City of Rosemead</p> <p>Description: This 2.9-acre aquatic center provides a 25-yard x 40-meter swimming pool with 13 competition lanes, water polo facilities, diving boards, instruction, a recreation and wading pool, bleachers, shelters, and a picnic area.</p> <p>Distance: This aquatic center is approximately:</p> <ul style="list-style-type: none"> • 1,280 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on 	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this aquatic center from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this aquatic center would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance of this aquatic center from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this aquatic center would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this aquatic</p>

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TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Rosemead Boulevard from Lower Azusa Road to Marshall Street (L-5);</p> <ul style="list-style-type: none"> 1,345 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and 1.5 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>center, this aquatic center would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance of this aquatic center from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this aquatic center would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of Rosemead Aquatic Center because it would not result in proximity impacts on that facility.</p>
<p>Rosemead Park 4343 Encinita Avenue</p> <p>Owner/Operator: City of Rosemead</p> <p>Description: This 62-acre park provides three playground areas, picnic shelters with barbeques, two lighted softball/baseball fields, restrooms, and a 0.5-mile-long walking trail, open space, and on-site parking.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> 860 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Rosemead Boulevard from Lower Azusa Road to Marshall Street (L-5); 925 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and 6,935 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of Rosemead Park because it would not result in proximity impacts on that park.</p>
<p>Recreation Resources at Encinita Elementary School (7th and 8th) 4515 North Encinita Avenue</p> <p>Owner/Operator: Rosemead School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> 1,380 feet from the nearest limit for permanent 	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not</p>

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>improvements in the TSM/TDM Alternative on Rosemead Boulevard from Lower Azusa Road to Marshall Street (L-5);</p> <ul style="list-style-type: none"> • 2,120 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • Over 1.5 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Encinita Elementary School because it would not result in proximity impacts on those resources.</p>
<p>Recreation Resources at Janson Elementary School (K to 6th) 4022 North Rosemead Boulevard</p> <p>Owner/Operator: Rosemead School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 2,135 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Rosemead Boulevard from Lower Azusa Road to Marshall Street (L-5); • 2,940 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 3,110 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Janson Elementary School because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of those resources.</p>
<p>Recreation Resources at Savannah Elementary School (K to 6th) 3720 Rio Hondo Avenue</p>	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not</p>

TABLE 3.2.1:

TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Owner/Operator: Rosemead School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 2,655 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Rosemead Boulevard from Lower Azusa Road to Marshall Street (L-5); • 3,335 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 1.5 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Savannah Elementary School because it would not result in proximity impacts on those resources.</p>
<p>Recreation Resources at Muscatel Middle School 4201 North Ivar Avenue</p> <p>Owner/Operator: Rosemead School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 680 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Rosemead Boulevard from Lower Azusa Road to Marshall Street (L-5); • 870 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 1 mile from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Muscatel Middle School because it would not result in proximity impacts on those resources.</p>

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Recreation Resources at Rosemead High School 9063 East Mission Drive</p> <p>Owner/Operator: El Monte Union High School District</p> <p>Distance: This school and the recreation uses at this school are:</p> <ul style="list-style-type: none"> • Adjacent to the nearest limit for permanent improvements in the TSM/TDM Alternative on Rosemead Boulevard from Lower Azusa Road to Marshall Street (L-5); • 780 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 1.3 miles from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Construction of the improvements in the TSM/TDM Alternative adjacent to the recreation resources at this school could result in short-term dust and equipment emissions that could extend onto the school property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of Rosemead. Compliance with those measures during construction of the TSM/TDM Alternative improvements adjacent to the recreation resources at Rosemead High School would substantially reduce the short-term air quality effects on the recreation resources at the school.</p> <p>In the long term, operation of the TSM/TDM Alternative would result in reduced regional vehicle and GHG emissions in 2020 and 2035 compared to existing 2012 and 2020 and 2035 No Build Alternative conditions. Operation of the TSM/TDM Alternative in 2020 and 2035 would result in reduced MSAT emissions compared to existing 2012 conditions; no change or minor reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2020 No Build Alternative conditions; and no change or minor increases or reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2035 No Build Conditions. As a result, operation of the TSM/TDM Alternative would not result in adverse air quality impacts on Rosemead High School.</p> <p>Noise: Construction of the improvements in the TSM/TDM Alternative adjacent to the recreation resources at this school could result in short-term noise levels that could impact those resources. Those construction activities would be required to comply with the City of Rosemead Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the TSM/TDM Alternative improvements adjacent to the recreation resources at Rosemead High School would substantially reduce the short-term noise effects on the school.</p> <p>The recreation resources at Rosemead High School are active uses that include an athletic field. The 2035 predicted noise level at the athletic field under the TSM/TDM Alternative would be 64 dBA, 1 dBA higher than the predicted 2035 noise level under the No Build Alternative (63 dBA). Because the 2035 predicted noise level at the athletic field under the TSM/TDM Alternative would be less than the 67 dBA NAC for Activity Category C uses, the operation of the TSM/TDM Alternative would not result in long-term noise impacts on the recreation resources at Rosemead High School.</p> <p>Traffic: Construction of the improvements in the TSM/TDM Alternative in the immediate vicinity of the recreation resources at Rosemead High School could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the TSM/TDM Alternative would not result in short-term adverse impacts related to traffic and transportation</p>

TABLE 3.2.1:

TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>at the recreation facilities at Rosemead High School. Because the operation of the nearest improvements in the TSM/TDM Alternative is not expected to result in substantial volumes of traffic on local streets that provide access to this school, this resource would not experience long-term traffic effects under the TSM/TDM Alternative.</p> <p>Visual Resources: The sports facilities on the Rosemead High School campus have existing views of Rosemead Boulevard, Mission Drive, and residential and other urban land uses and structures to the east, south, west, and north. Users of the on-campus sports facilities outside school hours typically would not use these types of recreation facilities to view off-campus land uses and, therefore, are not considered sensitive viewers. The patrons of the recreation uses on the Rosemead High School campus already have views of urban land uses and structures, so the addition of the TSM/TDM Alternative improvements on Rosemead Boulevard would not substantially change the character of views from this facility. As a result, the TSM/TDM Alternative improvements would not result in temporary construction or long-term operation visual effects at the recreation facilities on the Rosemead High School campus.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Rosemead High School because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of those resources.</p>
CITY OF SAN GABRIEL	
<p>Marshall Community Park Jackson Avenue and Norwood Place</p> <p>Owner/Operator: City of San Gabriel</p> <p>Description: Construction of this 2.0-acre park on the former Marshall School site will be completed in 2014. Features of this park will include multi-purpose areas (game courts, synthetic turf field, and grass areas); playground equipment with shade structures; walking/jogging trail; outdoor fitness equipment; picnic structures with picnic tables; restrooms; pedestrian, security and athletic field lighting; seating areas; enhanced native landscaping and demonstration garden; and sustainability elements that demonstrate efficient use of water and other natural elements.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 1,620 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Del Mar 	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p>

TABLE 3.2.1:

TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Avenue/Valley Boulevard (<i>I-43</i>);</p> <ul style="list-style-type: none"> 4,060 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and 7,145 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative. 	<p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of Marshall Community Park because it would not result in proximity impacts on that park.</p>
<p>Plaza Park 428 South Mission Drive</p> <p>Owner/Operator: City of San Gabriel</p> <p>Description: The historic San Gabriel Mission (owned by the Catholic Church) is located within the approximately 0.7-acre Plaza Park. The Mission was founded in 1771 and is currently an active Roman Catholic Church. It is a historic landmark in the City, is California Historical Landmark #161, and is listed on the National Register of Historic Places. The park provides views of the Mission Church building.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> 2,140 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Del Mar Avenue/Mission Road (<i>I-19</i>); 2,200 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and 2,210 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of Plaza Park because it would not result in proximity impacts on that park.</p>
<p>Smith Park 232 West Broadway</p> <p>Owner/Operator: City of San Gabriel</p> <p>Description: This 6.1-acre park provides a tiny tot playground for children ages 6 years and under, a children’s playground for children ages 7 years and older, a lighted basketball court, two lighted tennis courts, four lighted handball courts, three picnic areas, an outdoor pool, an</p>	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements and the operation of those improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p>

TABLE 3.2.1:

TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>amphitheater, restrooms, and on-site parking.</p> <p>Approximately \$510,980 of L&WCF Act funds were used to construct the pool and amphitheater at this park in FY 1978/1979. As a result, these improvements at Smith Park are subject to the requirements for protection under Section 6(f).</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 1,220 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Del Mar Avenue/Mission Road (I-19); • 1,290 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 1,295 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative. 	<p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of Smith Park because it would not result in proximity impacts on that park.</p> <p>Section 6(f): Because the TSM/TDM Alternative would not require the permanent acquisition of any land from Smith Park, the requirements of Section 6(f) would not apply to this park.</p>
<p>Vincent Lugo Park Wells Street and Ramona Street</p> <p>Owner/Operator: City of San Gabriel</p> <p>Description: This 11.3-acre park includes a dry riverbed designed to drain to Alhambra Wash, pedestrian lighting, multipurpose trails along the wash and throughout the park, native landscaping, an athletic field/open space, an outdoor classroom, and vehicular and pedestrian bridges. This park is also the home of the La Laguna de San Gabriel, which is a nautical themed play area with sea creatures made of concrete that was constructed approximately 45 years ago. The La Laguna de San Gabriel is on the California Register of Historical Resources and is a City of San Gabriel local landmark.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 1,250 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Del Mar Avenue/Valley Boulevard (I-43); 	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of Vincent Lugo Park because it would not result in proximity impacts on that park.</p>

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TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<ul style="list-style-type: none"> • 4,695 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and • 3,900 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative. 	
<p>Recreation Resources at Del Mar High School 312 South Del Mar Avenue</p> <p>Owner/Operator: San Gabriel Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,280 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Del Mar Avenue/Mission Road (I-19); and • 1,370 feet from the nearest edge of the nearest TCE and from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Del Mar High School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at Dewey Elementary School 525 Dewey Avenue</p> <p>Owner/Operator: San Gabriel Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,035 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at San Gabriel Boulevard/Marshall Street (I-22); • 1,425 feet from the nearest edge of the nearest TCE for 	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative</p>

TABLE 3.2.1:

TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>the TSM/TDM Alternative; and</p> <ul style="list-style-type: none"> 6,095 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative. 	<p>are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Dewey Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at Gabrielino High School 1440 Lafayette Street</p> <p>Owner/Operator: San Gabriel Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> 2,085 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Del Mar Avenue/Valley Boulevard (<i>I-43</i>); 2,555 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and 4,875 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Gabrielino High School because it would not result in proximity impacts on those resources.</p>
<p>Recreation Resources at McKinley Elementary School 1425 Manley Drive</p> <p>Owner/Operator: San Gabriel Unified School District</p> <p>Distance: This school and the recreation resources at this</p>	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not</p>

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>school are approximately:</p> <ul style="list-style-type: none"> • 1,080 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Del Mar Avenue/Valley Boulevard (<i>I-43</i>); and • 3,945 feet from the nearest edge of the nearest TCE and from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative. 	<p>experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to the recreation facilities at this school, they would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at McKinley Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p>CITY OF SAN MARINO</p>	
<p>Lacy Park and the Thurnher House 1485 Virginia Road</p> <p>Owner/Operator: City of San Marino</p> <p>Description: Originally Wilson Lake (1875), the site for Lacy Park, was purchased by the City in 1925 and dedicated as a park. This 30-acre park provides a picnic area, nearly 2 miles of walking trails, 6 championship tennis courts, and a 60-year old rose arbor. A wide range of public and civic events are held in Lacy Park. The park also includes restrooms and on-site parking.</p> <p>The historic Thurnher House, at the front entrance of Lacy Park, has a tile roof, graceful arches, and quaint patio areas. Built in 1929, the house currently serves as a community meeting location (but is not available for private parties). It includes a large conference room and table (which seats 20 people), a working fireplace, and a kitchen. The history of Lacy Park is depicted on the walls throughout the House.</p>	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the construction and operation of the nearest improvements in the TSM/TDM Alternative are not expected to result in substantial volumes of traffic on local streets that provide access to this park, this park would not experience short- or long-term traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience short- or long-term visual effects under the TSM/TDM Alternative.</p>

TABLE 3.2.1:

TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Distance: This park and Thurnher House are approximately:</p> <ul style="list-style-type: none"> • 2,115 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Huntington Drive/Oak Knoll Avenue (<i>I-24</i>); • 5,750 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 5,770 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of Lacy Park and the Thurnher House because it would not result in proximity impacts on that park.</p>
<p>Recreation Resources at Carver Elementary School 3100 Huntington Drive</p> <p>Owner/Operator: San Marino Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 25 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at San Gabriel Boulevard/Huntington Drive (<i>I-18</i>); • 11,430 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 11,435 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Construction of the improvements in the TSM/TDM Alternative in the vicinity of the recreation resources at this school could result in short-term dust and equipment emissions that could extend onto the school property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of San Marino. Compliance with those measures during construction of the TSM/TDM Alternative improvements in the vicinity of Carver Elementary School would substantially reduce the short-term air quality effects on the recreation resources at the school.</p> <p>In the long term, operation of the TSM/TDM Alternative would result in reduced regional vehicle and GHG emissions in 2020 and 2035 compared to existing 2012 and 2020 and 2035 No Build Alternative conditions. Operation of the TSM/TDM Alternative in 2020 and 2035 would result in reduced MSAT emissions compared to existing 2012 conditions; no change or minor reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2020 No Build Alternative conditions; and no change or minor increases or reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2035 No Build Conditions. As a result, operation of the TSM/TDM Alternative would not result in adverse air quality impacts on the recreation resources at Carver Elementary School.</p> <p>Noise: Construction of the improvements in the TSM/TDM Alternative in the vicinity of the recreation resources at this school could result in short-term noise levels that could impact those resources. Those construction activities would be required to comply with the City of San Marino Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the TSM/TDM Alternative improvements in the vicinity of Carver Elementary School would substantially reduce the short-term noise effects on the recreation resources at the school.</p>

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>The recreation uses at Carver Elementary School are active uses. The TSM/TDM Alternative improvements (I-18) in the vicinity of these uses will not substantially increase travel speeds on streets adjacent to this school or shift travel lanes closer to this school. As a result, the operation of the TSM/TDM Alternative would not result in long-term noise impacts on the recreation uses at Carver Elementary School.</p> <p>Traffic: Construction of the improvements in the TSM/TDM Alternative in the immediate vicinity of the recreation resources at Carver Elementary School could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the TSM/TDM Alternative would not result in short-term adverse impacts related to traffic and transportation at the recreation facilities at Carver Elementary School. Because the operation of the nearest improvements in the TSM/TDM Alternative is not expected to result in substantial volumes of traffic on local streets that provide access to this school, this resource would not experience long-term traffic effects under the TSM/TDM Alternative.</p> <p>Visual Resources: The sports facilities on the Carver Elementary School campus have existing views of Huntington Drive, South San Gabriel Boulevard, and residential and other urban land uses and structures to the east, south, west, and north. Users of the on-campus sports facilities outside school hours typically would not use these types of recreation facilities to view off-campus land uses and, therefore, are not considered sensitive viewers. The patrons of the recreation uses on the Carver Elementary School campus already have views of urban land uses and structures, so the addition of the TSM/TDM Alternative improvements on Huntington Boulevard and South San Gabriel Boulevard would not substantially change the character of views from this facility. As a result, the TSM/TDM Alternative improvements would not result in temporary construction or long-term operation visual effects at the recreation facilities on the Carver Elementary School campus.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Carver Elementary School because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of those recreation resources.</p>
<p>Recreation Resources at Huntington Middle School 1700 Huntington Drive</p> <p>Owner/Operator: San Marino Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 2,050 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at 	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not</p>

TABLE 3.2.1:

TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Huntington Drive/Sierra Madre Boulevard (<i>I-25</i>);</p> <ul style="list-style-type: none"> 7,620 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and 7,625 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>experience temporary construction or long-term operation noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the TSM/TDM Alternative improvements or by traffic during operation of those improvements, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance of the recreation resources at this school from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Huntington Middle School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at San Marino High School 2701 Huntington Drive</p> <p>Owner/Operator: San Marino Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> 1,840 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Huntington Drive/Sierra Madre Boulevard (<i>I-25</i>); and 11,245 feet from the nearest new right of way and the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the TSM/TDM Alternative improvements or by traffic during operation of those improvements, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction of any TSM/TDM Alternative improvements and the operation of those improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at San Marino High School because it would not result in proximity impacts on those recreation resources.</p>

TABLE 3.2.1:

TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Recreation Resources at Valentine Elementary School 1650 Huntington Drive</p> <p>Owner/Operator: San Marino Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 2,610 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Huntington Drive/Sierra Madre Boulevard (<i>I-25</i>); • 7,065 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 7,080 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the TSM/TDM Alternative improvements or by traffic during operation of those improvements, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Valentine Elementary School because it would not result in proximity impacts on those recreation resources.</p>
CITY OF SOUTH PASADENA	
<p>Eddie Park and House 2017 Edgewood Drive</p> <p>Owner/Operator: City of South Pasadena</p> <p>Description: This 0.75-acre park includes the historic Eddie House, a group barbecue area, a playground, and an open lawn area. The park site is surrounded by a 3-foot-high brick wall. The Eddie House and grounds were donated to the City by the Eddie family. The 2,200-square-foot house is an example of Transitional Craftsman architecture. The first floor of the house is available as a meeting space and includes a kitchen and restrooms.</p> <p>Distance: The Eddie Park and House are approximately:</p>	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the TSM/TDM Alternative improvements or by traffic during operation of those improvements, this park would not experience temporary construction or long-term operation traffic and transportation effects under the TSM/TDM Alternative.</p>

TABLE 3.2.1:

TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<ul style="list-style-type: none"> 1,820 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Huntington Drive/Garfield Avenue (<i>I-13</i>), Huntington Drive/Atlantic Boulevard (<i>I-14</i>), and Atlantic Boulevard/Garfield Avenue (<i>I-15</i>); 1,855 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and 1,900 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>Visual Resources: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of Eddie Park and House because it would not result in proximity impacts on that park.</p>
<p>Garfield Park 1750 Mission Street</p> <p>Owner/Operator: City of South Pasadena</p> <p>Description: This 7.6-acre park provides tennis courts, a playground, and a garden area.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> 600 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative on Fair Oaks Avenue from Grevelia Street to Monterey Road (<i>L-8</i>); and 2,020 feet from the nearest new right of way and the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the TSM/TDM Alternative improvements or by traffic during operation of those improvements, this park would not experience temporary construction or long-term operation traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of Garfield Park because it would not result in proximity impacts on those recreation resources.</p>
<p>Library Park 1102 Oxley Street</p> <p>Owner/Operator: City of South Pasadena</p> <p>Description: This 3.2-acre park provides tennis courts, a half basketball court, a playground, and a baseball field.</p>	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the TSM/TDM Alternative.</p>

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> 770 feet from the nearest limit for permanent improvements at Fremont Street/Monterey Road (<i>I-9</i>), and the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative. 	<p>Noise: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the TSM/TDM Alternative improvements or by traffic during operation of those improvements, this park would not experience temporary construction or long-term operation traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Library Park because it would not result in proximity impacts on that park.</p>
<p>Orange Grove Park and Recreation Building 815 Mission Street</p> <p>Owner/Operator: City of South Pasadena</p> <p>Description: This 2.5-acre park provides a lighted softball and soccer field, two lighted tennis courts, picnic tables, a small playground, drinking fountains, bleachers, and a bicycle rack.</p> <p>The Orange Grove Park Recreation Building is a 9,500-square-foot facility located in Orange Grove Park. A wide range of programs for families and children are offered at this Recreation Center. The first floor of the Recreation Center is used for recreation and day care programs. The second floor contains a meeting room and a small teen center.</p> <p>Distance: This park and recreation building are approximately:</p> <ul style="list-style-type: none"> 2,305 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; 2,775 feet from the nearest limit for permanent 	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the TSM/TDM Alternative improvements or by traffic during operation of those improvements, this park would not experience temporary construction or long-term operation traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the Orange Grove Park and Recreation Center because it would not result in proximity impacts at that facility.</p>

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TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>improvements in the TSM/TDM Alternative at Fremont Street/Monterey Road (I-9); and</p> <ul style="list-style-type: none"> 5,020 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	
<p>War Memorial Park 435 Fair Oaks Avenue</p> <p>Owner/Operator: City of South Pasadena</p> <p>Description: This 1.8-acre park includes the two-story, 12,000-square-foot War Memorial Building, which was constructed in 1921 and is a City of South Pasadena cultural heritage landmark. The Memorial was constructed on the site of the former Oak Lawn Park. The large multipurpose room on the second floor is used for events (e.g., banquets and meetings) for large groups and includes a kitchen. The first floor contains smaller meeting rooms, storage space, and restrooms. The park also includes a landscaped memorial garden and on-site parking.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> Adjacent to the nearest limit for permanent improvements in the TSM/TDM Alternative at the SR 110 (Arroyo Seco Parkway) hook ramp concept (T-2); Approximately 1,400 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative; and Approximately 1,405 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Construction of the improvements in the TSM/TDM Alternative adjacent to this park could result in short-term dust and equipment emissions that could extend into the park property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of South Pasadena. Compliance with those measures during construction of the TSM/TDM Alternative improvements adjacent to War Memorial Park would substantially reduce the short-term air quality effects on the park.</p> <p>In the long term, operation of the TSM/TDM Alternative would result in reduced regional vehicle and GHG emissions in 2020 and 2035 compared to existing 2012 and 2020 and 2035 No Build Alternative conditions. Operation of the TSM/TDM Alternative in 2020 and 2035 would result in reduced MSAT emissions compared to existing 2012 conditions; no change or minor reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2020 No Build Alternative conditions; and no change or minor increases or reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2035 No Build Conditions. As a result, operation of the TSM/TDM Alternative would not result in adverse air quality impacts on War Memorial Park.</p> <p>Noise: Construction of the improvements in the TSM/TDM Alternative adjacent to this park could result in short-term noise levels that could impact the park. Those construction activities would be required to comply with the City of South Pasadena Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the TSM/TDM Alternative improvements adjacent to War Memorial Park would substantially reduce the short-term noise effects on the park.</p> <p>The recreation uses at War Memorial Park are active uses. The TSM/TDM Alternative improvements (T-2) in the vicinity of this park will not substantially increase travel speeds on streets adjacent to this park or shift travel lanes closer to this park. As a result, the operation of the TSM/TDM Alternative would not result in long-term noise impacts on the recreation uses at War Memorial Park.</p> <p>Traffic: Construction of the improvements in the TSM/TDM Alternative adjacent to War Memorial Park could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the TSM/TDM Alternative would not result in</p>

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>short-term adverse impacts related to traffic and transportation at War Memorial Park. Because the operation of the nearest improvements in the TSM/TDM Alternative is not expected to result in substantial volumes of traffic on local streets that provide access to this park, this resource would not experience long-term traffic effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Views from War Memorial Park are not an important feature of this park and currently include views of existing streets adjacent to the park. The TSM/TDM Alternative improvements (T-2) in the vicinity of this park consist of the SR 110/Oaks Avenue hook ramps, which may be visible from the southernmost part of this park. However, those views would not substantially change the character of views from within War Memorial Park during the construction and operation of this improvement. As a result, the TSM/TDM Alternative would not result in short- or long-term adverse visual impacts at War Memorial Park.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of War Memorial Park because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that park.</p>
<p>Recreation Resources at Marengo Elementary School 1400 Marengo Avenue</p> <p>Owner/Operator: South Pasadena Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,395 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Fair Oaks Avenue/Monterey Road (I-8); • 2,150 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 3,360 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the TSM/TDM Alternative improvements or by traffic during operation of those improvements, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at Marengo Elementary School because it would not result in proximity impacts on those recreation resources.</p>

TABLE 3.2.1:

TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Recreation Resources at South Pasadena High School 1401 Fremont Avenue</p> <p>Owner/Operator: South Pasadena Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 595 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Fremont Street/Monterey Road (J-9); • 835 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and • 5,580 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the TSM/TDM Alternative improvements or by traffic during operation of those improvements, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at South Pasadena High School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at South Pasadena Middle School 1500 Fair Oaks Avenue</p> <p>Owner/Operator: South Pasadena Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,195 feet from the nearest limit for permanent improvements in the TSM/TDM Alternative at Fair Oaks Avenue/Monterey Road (J-8); • 1,555 feet from the nearest new right of way needed to accommodate the improvements in the TSM/TDM Alternative; and 	<p>The TSM/TDM Alternative would not result in permanent uses, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the TSM/TDM Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the TSM/TDM Alternative.</p> <p>Traffic: Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the TSM/TDM Alternative improvements or by traffic during</p>

TABLE 3.2.1:
TSM/TDM Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of This Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<ul style="list-style-type: none"> 4,315 feet from the nearest edge of the nearest TCE for the TSM/TDM Alternative. 	<p>operation of those improvements, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the TSM/TDM Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction and operation of any TSM/TDM Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the TSM/TDM Alternative.</p> <p>Summary: In summary, the TSM/TDM Alternative would not cause a constructive use of the recreation resources at South Pasadena Middle School because it would not result in proximity impacts on those recreation resources.</p>

Source: LSA Associates, Inc. (2014). Refer also to Chapter 5, References and Preparers, for a list of references used to research resources potentially protected under the requirements of Sections 4(f) and 6(f).

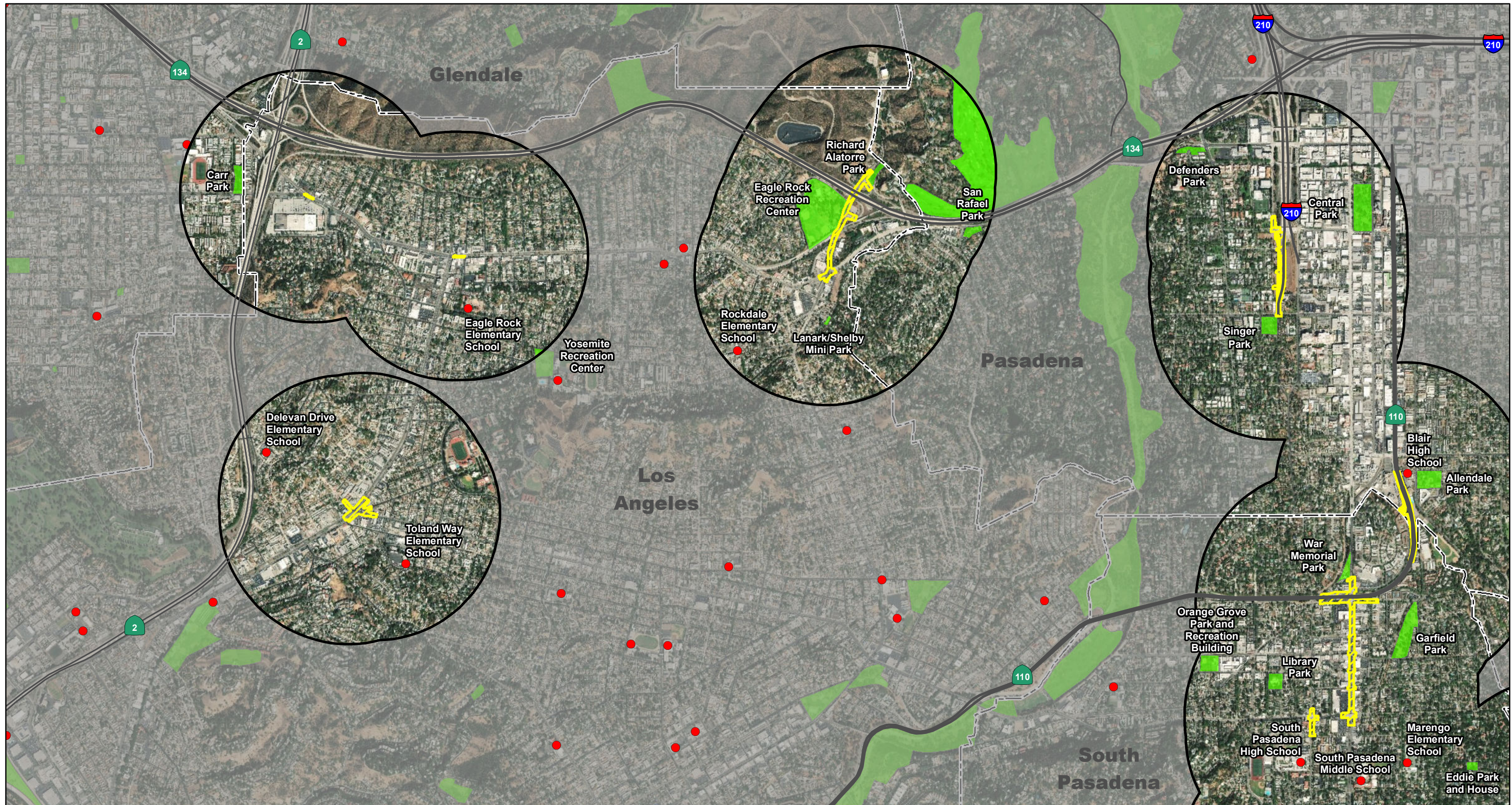
¹ Only resources within 0.5 mile of improvements in the TSM/TDM Alternative are evaluated in this table. Cities and communities that do not contain TSM/TDM Alternative improvements are not included in this table. Refer to Figure 3.2-1 for the locations of the resources discussed in this table.

² The following distances were measured to assess the potential for short- and long-term proximity impacts on Section 4(f) resources under the TSM/TDM Alternative:

- Permanent Impacts:** This is an area defined on the ground surface as the maximum limits of the permanent improvements under the TSM/TDM Alternative. The permanent impacts will include areas within existing public rights of way as well as areas within new rights of way acquired specifically for the TSM/TDM Alternative.
- Right of Way:** This is the area defined on the ground surface as the maximum limits of new right of way acquired for the improvements under the TSM/TDM Alternative. The limits of the new right of way may be further from a Section 4(f) resource than the area of permanent impacts because permanent improvements constructed in areas within existing public right of way may be closer to the resource than the improvements constructed in areas of new right of way.
- Temporary Construction Easement:** This is a specific area defined on the ground surface that is anticipated to be disturbed during construction of improvements in the TSM/TDM Alternative. This may include areas needed temporarily for materials or equipment storage, or construction of the improvements. The defined TCEs are areas outside the limits of the permanent improvements and permanent right of way for the TSM/TDM Alternative. Areas used for TCEs would be restored to their original or better condition prior to returning those areas to the property owners.

Caltrans = California Department of Transportation
 FY = Fiscal Year
 GHG = greenhouse gas
 I-10 = Interstate 10
 K = Kindergarten
 L&WCF Act = Land and Water Conservation Fund Act

MSAT = mobile source air toxics
 SR 110 = State Route 110
 SR 134 = State Route 134
 TCE = temporary construction easement
 TMP = Transportation Management Plan
 TSM/TDM = Transportation Systems Management/Transportation Demand Management



LEGEND

- TSM/TDM Alternative Limits of Construction
- Parks and Recreation
- 0.5 Mile from the Project Improvements
- City Boundary
- Public School with Recreation Resources



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FEET

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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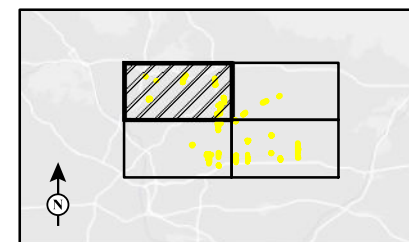
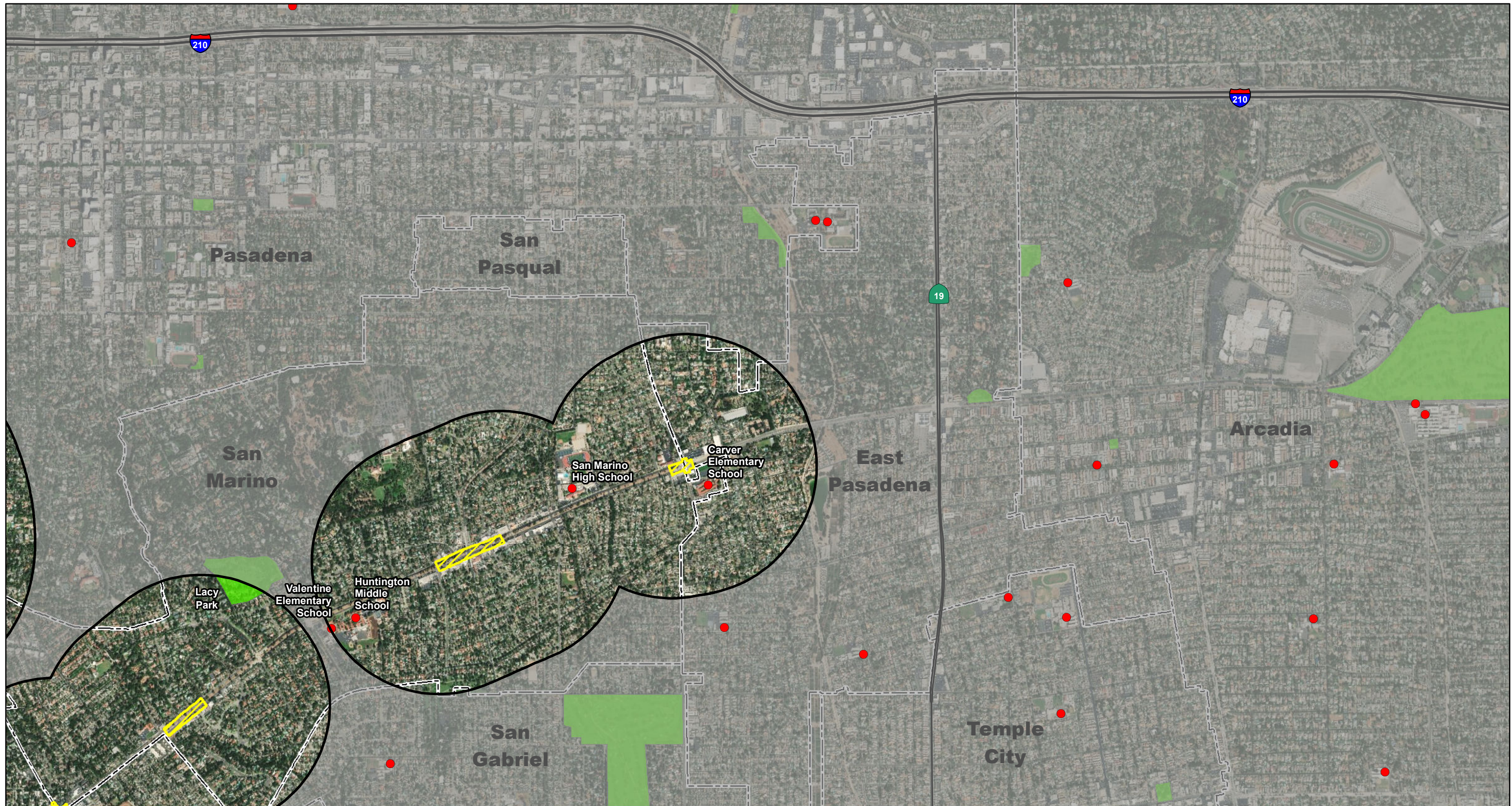


FIGURE 3.2-1

Sheet 1 of 4

SR 710 North Project
Resources within a Half-Mile of
the TSM/TDM Alternative

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LEGEND

- TSM/TDM Alternative Limits of Construction
- 0.5 Mile from the Project Improvements
- Public School with Recreation Resources
- Parks and Recreation
- City Boundary



SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)
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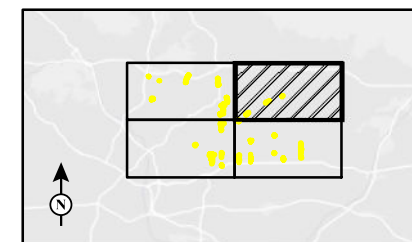
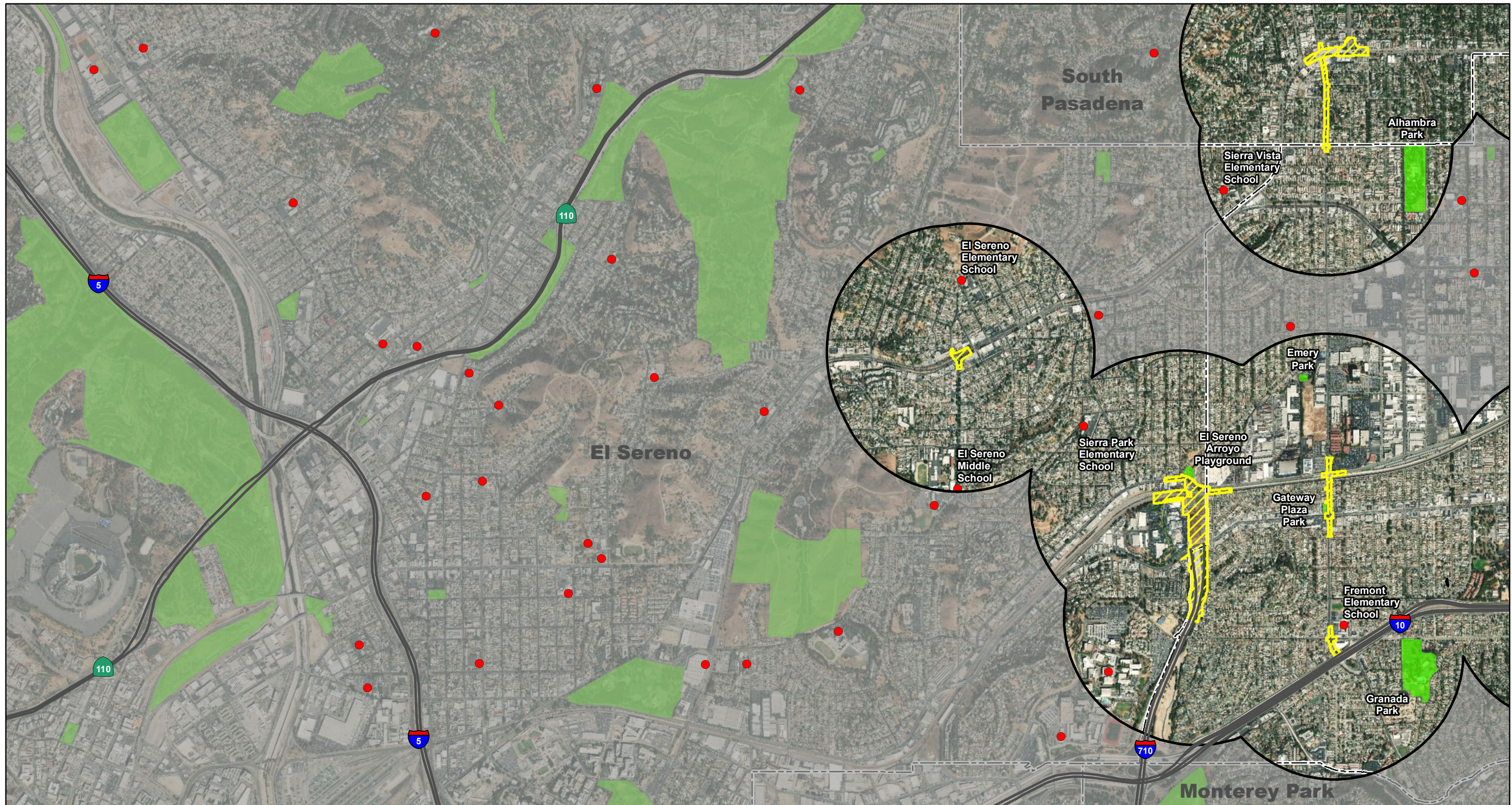


FIGURE 3.2-1
 Sheet 2 of 4

SR 710 North Project
 Resources within a Half-Mile of
 the TSM/TDM Alternative

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LEGEND

- TSM/TDM Alternative Limits of Construction
- Parks and Recreation
- 0.5 Mile from the Project Improvements
- City Boundary
- Public School with Recreation Resources



0 1000 2000
FEET

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)

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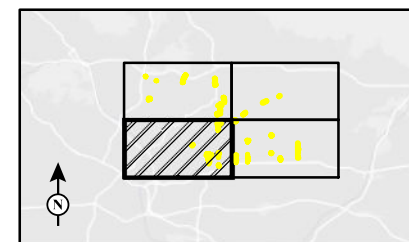
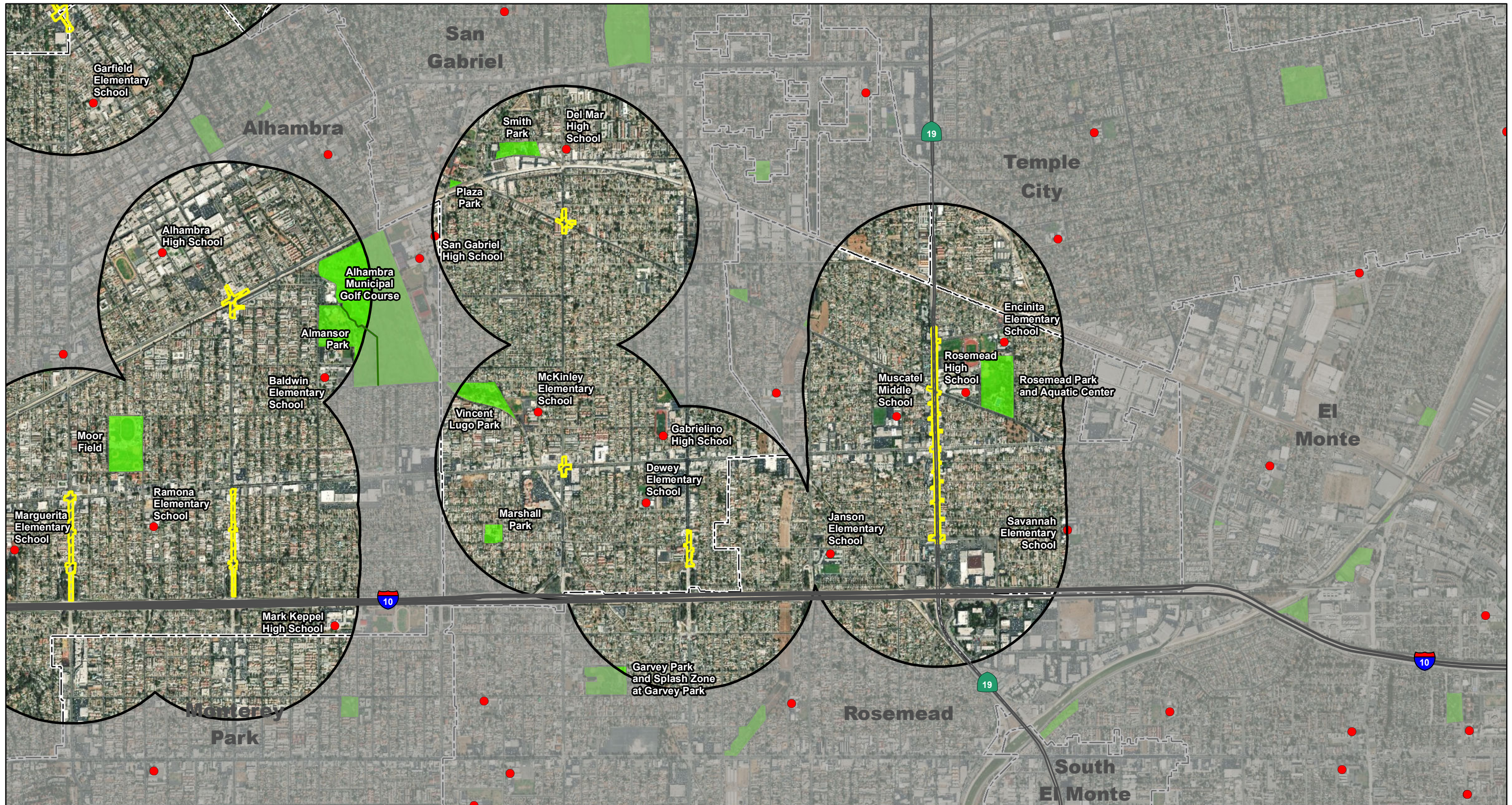


FIGURE 3.2-1

Sheet 3 of 4

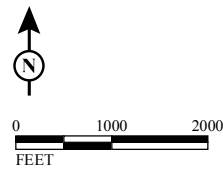
SR 710 North Project
Resources within a Half-Mile of
the TSM/TDM Alternative

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LEGEND

- TSM/TDM Alternative Limits of Construction
- Parks and Recreation
- 0.5 Mile from the Project Improvements
- City Boundary
- Public School with Recreation Resources



SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)
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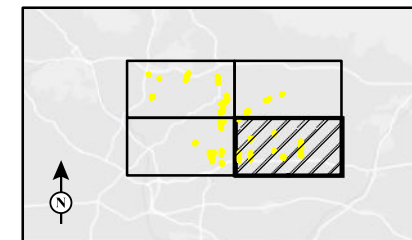


FIGURE 3.2-1
 Sheet 4 of 4

SR 710 North Project
 Resources within a Half-Mile of
 the TSM/TDM Alternative

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TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
CITY OF ALHAMBRA	
<p>Alhambra Park 500 North Palm Avenue</p> <p>Owner/Operator: City of Alhambra</p> <p>Description: This 15.0-acre park provides picnic tables with covered shelters, playground equipment, barbecues, tennis courts, volleyball courts, an outdoor basketball court, a meeting room, an activity room, a swimming pool, an open grass area, a band shell, and restrooms. The Alhambra Veteran’s Memorial Wall is in the north end of the park.</p> <p>Approximately \$5,922 of L&WCF Act funds were used to renovate the band shell, replace its wood floor, and add electricity at this park in FY 1991/1992. As a result, the band shell at Alhambra Park is subject to the requirements for protection under Section 6(f).</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 1,940 feet from the edge of the nearest construction limits for the BRT Alternative; • 1,950 feet from the nearest dedicated bus lanes and station (Huntington Drive at Marengo Avenue) in the BRT Alternative; and • 2,875 feet from the nearest TCE for the BRT Alternative. 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, this park would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of Alhambra Park because it would not result in proximity impacts on that park.</p> <p>Section 6(f): Because the BRT Alternative would not require the permanent acquisition of any land from Alhambra Park, the requirements of Section 6(f) would not apply to this park.</p>
<p>Burke Heritage Park and Alhambra Historical Society Museum 1550 West Alhambra Road</p> <p>Owner/Operator: City of Alhambra</p> <p>Description: Burke Heritage Park is a 2.3-acre xeriscape garden adjacent to the Alhambra Historical Society Museum. The Museum includes a collection of memorabilia, period clothing, furnishings, and books. The Museum is open on Thursdays and the second and fourth</p>	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative bus facilities and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p>

TABLE 3.3.1:

BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Sundays of each month, from 2:00 p.m. to 4:00 p.m. Admission is free.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 1,930 feet from the edge of the nearest construction limits for the BRT Alternative; • 1,945 feet from the nearest dedicated bus lanes in the BRT Alternative; and • 2,580 feet from the nearest station (Huntington Drive at Garfield Road) in the BRT Alternative. 	<p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, this park would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative bus facilities and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of Burke Heritage Park and Alhambra Historic Society Museum because it would not result in proximity impacts on those facilities.</p>
<p>Moor Field 1008 South Eighth Street</p> <p>Owner/Operator: City of Alhambra</p> <p>Description: This 20.3-acre property provides a wide range of facilities for the City and the Alhambra Unified School District, including large and small baseball/softball diamonds, a football/soccer field with bleachers, a running track, restrooms, and a PACE Head Start child care facility.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 535 feet from the edge of the nearest construction limits for the BRT Alternative; • 785 feet from the edge of the nearest TCE for the BRT Alternative; and • 880 feet from the nearest dedicated bus lanes and station (Atlantic Boulevard at Valley Boulevard) in the BRT Alternative. 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this property from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses on this property would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance of this property from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses on this property would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this property are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses on this property would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance of this property from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses on this property would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of Moor Field because it would not result in proximity impacts on that facility.</p>

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Recreation Resources at Garfield Elementary School (K to 8th) 110 West McLean Street</p> <p>Owner/Operator: Alhambra Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,490 feet from the edge of the nearest construction limits for the BRT Alternative; • 1,520 feet from the nearest station (Huntington Drive at Garfield Road) in the BRT Alternative; • 1,750 feet from the edge of the nearest TCE for the BRT improvements; and • 1,930 feet from the nearest dedicated bus lanes in the BRT Alternative. 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and bus operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Garfield Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at Marguerita Elementary School (K to 8th) 1603 South Marguerita Avenue</p> <p>Owner/Operator: Alhambra Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,140 feet from the nearest limits of construction for the BRT Alternative; • 1,160 feet from the nearest TCE for the BRT Alternative; • 1,168 feet from the nearest dedicated bus lanes in the 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this school are not expected to be used by</p>

TABLE 3.3.1:

BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>BRT Alternative; and</p> <ul style="list-style-type: none"> 1,485 feet from the nearest station (Atlantic Boulevard at Valley Boulevard) in the BRT Alternative. 	<p>construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Marguerita Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p>William Northrup Elementary School (K to 8th) 409 South Atlantic Boulevard</p> <p>Owner/Operator: Alhambra Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> 85 feet from the nearest limits of construction for the BRT Alternative; 280 feet from the nearest dedicated bus lanes in the BRT Alternative; and 1,750 feet from the nearest station (Atlantic Boulevard at Main Street) in the BRT Alternative. 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Construction of the improvements in the BRT Alternative in the vicinity of the recreation uses at this school could result in short-term dust and equipment emissions that could extend onto the school property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of Alhambra. Compliance with those measures during construction of the BRT Alternative facilities in the vicinity of the recreation uses at William Northrup Elementary School would substantially reduce the short-term air quality effects on those resources.</p> <p>Operation of the BRT Alternative in 2020 would result in reduced regional vehicle and GHG emissions compared to existing 2012 and 2020 No Build Alternative conditions. Operation of the BRT Alternative in 2035 would result in decreases in regional vehicle emissions compared to existing 2012 conditions and minor increases or decreases in regional vehicle emissions compared to the 2035 No Build Alternative conditions. Operation of the BRT Alternative in 2020 and 2035 would result in reductions in MSAT emissions compared to existing 2012 conditions. In 2020, the BRT Alternative would result in no change or minor reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2020 No Build Alternative conditions. In 2035, the BRT Alternative would result in minor increases or decreases or no change in MSAT emissions (depending on the individual MSAT pollutants) compared to the 2035 No Build Condition. As a result, operation of the BRT Alternative would not result in adverse air quality impacts on the recreation uses at William Northrup Elementary School.</p> <p>Noise: Construction of the improvements in the BRT Alternative in the vicinity of the recreation uses at this school could result in short-term noise levels that could impact those resources. Those construction activities would be required to comply with the City of Alhambra Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated</p>

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>during construction. Compliance with those requirements during construction of the BRT Alternative facilities in the vicinity of William Northrup Elementary School would substantially reduce the short-term noise effects on the recreation uses at the school.</p> <p>The recreation uses at William Northrup Elementary School are active uses. The 2035 predicted noise levels at this school would be the same under the No Build and BRT Alternatives at 63 dBA, which is less than the 67 dBA NAC for activity category C uses. The operation of the BRT Alternative would not result in long-term noise impacts on the recreation uses at William Northrup Elementary School.</p> <p>Traffic: Construction of the improvements in the BRT Alternative within approximately 85 feet of the recreation uses at William Northrup Elementary School could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the BRT Alternative would not result in short-term adverse impacts related to traffic and transportation at the recreation facilities at William Northrup Elementary School. The BRT Alternative improvements in the vicinity of William Northrup Elementary School would not modify the access to/from that school and, therefore, would not result in long-term adverse impacts related to traffic and transportation at the recreation facilities at this school.</p> <p>Visual Resources: Based on the distance from the nearest operation of any BRT Alternative improvements and because the BRT Alternative would not result in any permanent changes in access to/from this school, the recreation facilities at this school would not experience short- or long-term traffic and transportation effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of the recreation resources at William Northrup Elementary School because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of those resources.</p>
<p>Recreation Resources at Park Elementary School (K to 8th) 301 North Marengo Avenue</p> <p>Owner/Operator: Alhambra Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 2,395 feet from the nearest limits of construction for the BRT Alternative; • 2,790 feet from the nearest station (Atlantic Boulevard at Main Street) in the BRT Alternative; and • 4,290 feet from the nearest dedicated bus lanes in the 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative bus stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative bus stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p>

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
BRT Alternative.	<p>Traffic: Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative bus stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Park Elementary School because it would not result in proximity impacts on those resources.</p>
<p>Recreation Resources at Ramona Elementary School (K to 8th) 509 West Norwood Place</p> <p>Owner/Operator: Alhambra Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,690 feet from the nearest limits of construction in the BRT Alternative; • 1,730 feet from the nearest TCE for the BRT Alternative; • 1,805 feet from the nearest dedicated bus lanes in the BRT Alternative; and • 1,870 feet from the nearest station (Atlantic Boulevard at Valley Boulevard) in the BRT Alternative. 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative bus stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative bus stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Ramona Elementary School because it would not result in proximity impacts on those resources.</p>

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Recreation Resources at Alhambra High School (9th to 12th) 101 South 2nd Street</p> <p>Owner/Operator: Alhambra Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,685 feet from nearest limits of construction for the BRT Alternative; • 1,970 feet from the nearest station (Atlantic Boulevard at Main Street) in the BRT Alternative; • 3,160 feet from the nearest dedicated bus lanes in the BRT Alternative; and • 3,510 to the nearest TCE in the BRT Alternative. 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Alhambra High School because it would not result in proximity impacts on those resources.</p>
<i>EAST LOS ANGELES (UNINCORPORATED LOS ANGELES COUNTY)</i>	
<p>Atlantic Avenue Park 570 South Atlantic Boulevard</p> <p>Owner/Operator: Los Angeles County Department of Parks and Recreation</p> <p>Description: This 3.0-acre park provides a splash pad for younger children and a 50-meter, six-lane swimming pool that are open during the summer. There is a rose garden around the Veteran’s Memorial in the park. The park also includes a covered picnic area with picnic tables, a children’s playground area, and restrooms.</p> <p>Distance: This park is:</p>	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Construction of the improvements in the BRT Alternative adjacent to this park could result in short-term dust and equipment emissions that could extend into the park property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes East Los Angeles. Compliance with those measures during construction of the BRT Alternative facilities adjacent to Atlantic Avenue Park would substantially reduce the short-term air quality effects on the park.</p> <p>Operation of the BRT Alternative in 2020 would result in reduced regional vehicle and GHG emissions compared to existing 2012 and 2020 No Build Alternative conditions. Operation of the BRT Alternative in 2035 would result in decreases in regional vehicle emissions compared to existing 2012 conditions and minor increases or decreases in regional vehicle emissions compared to the 2035 No Build Alternative conditions.</p>

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<ul style="list-style-type: none"> • Directly adjacent to the limits of construction and the nearest dedicated bus lanes in the BRT Alternative; • 45 feet from the nearest TCE in the BRT Alternative; and • 1,515 feet from the nearest bus station (Atlantic Boulevard at Whittier Boulevard) in the BRT Alternative. 	<p>Operation of the BRT Alternative in 2020 and 2035 would result in reductions in MSAT emissions compared to existing 2012 conditions. In 2020, the BRT Alternative would result in no change or minor reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2020 No Build Alternative conditions. In 2035, the BRT Alternative would result in minor increases or decreases or no change in MSAT emissions (depending on the individual MSAT pollutants) compared to the 2035 No Build Condition. As a result, operation of the BRT Alternative would not result in adverse air quality impacts on Atlantic Avenue Park.</p> <p>Noise: Construction of the improvements in the BRT Alternative adjacent to this park could result in short-term noise levels that could impact the park. Those construction activities would be required to comply with the County of Los Angeles Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the BRT Alternative facilities adjacent to this park would substantially reduce the short-term noise effects on Atlantic Avenue Park.</p> <p>The recreation uses at Atlantic Avenue Park are active uses. The operation of the BRT Alternative improvements in the vicinity of this park in 2035 would increase noise levels by 1 dBA at Atlantic Avenue Park compared to the No Build Alternative in 2035 (from 61 dBA to 62 dBA), which would not be perceptible to park users and which is less than the 67 dBA NAC for activity category C uses. As a result, the operation of the BRT Alternative would not result in long-term noise impacts on Atlantic Avenue Park.</p> <p>Traffic: Construction of the improvements in the BRT Alternative adjacent to Atlantic Avenue Park could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the BRT Alternative would not result in short-term adverse impacts related to traffic and transportation at Atlantic Avenue Park. The BRT Alternative improvements in the vicinity of Atlantic Avenue Park would not modify the access to/from that park and, therefore, would not result in long-term adverse impacts related to traffic and transportation at this park.</p> <p>Visual Resources: Atlantic Avenue Park is directly adjacent to South Atlantic Boulevard, East 6th Street, Amalia Avenue, and Hasting Street, and visitors to the park currently have views of those roads from areas within this park. During construction of the BRT Alternative improvements in this area, park patrons would have views of construction equipment and activities and areas within South Atlantic Boulevard disturbed during construction. In the long-term park, visitors would have views of South Atlantic Boulevard similar to the existing views of that street from within the park. As a result, the BRT Alternative improvements in the vicinity of Atlantic Avenue Park would not result in short- or long-term visual impacts for park visitors.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of Atlantic Avenue Park because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that park.</p>

TABLE 3.3.1:

BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Belvedere Community Regional Park 4914 East Cesar E. Chavez Avenue</p> <p>Owner/Operator: Los Angeles County Department of Parks and Recreation</p> <p>Description: This approximately 31-acre park serves as the recreation hub of the East Los Angeles community. The park includes a skate park, a children’s play area with playground equipment, tennis courts, sports fields, a swimming pool, covered picnic tables, landscaped areas that include large trees shading the landscaped areas, restrooms, and on-site parking.</p> <p>L&WCF Act funds were used at this park as follows:</p> <ul style="list-style-type: none"> • \$172,930 to construct the lighted ball field, soccer field, landscaping, and irrigation in FY 1976/1977. • \$197,969 to construct restrooms and parking spaces in FY 1978/1979. • \$98,314 to construct swimming pool facilities in FY 1982/1983. <p>These improvements at Belvedere Community Regional Park are subject to the requirements for protection under Section 6(f).</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 1,115 feet from the nearest limits of construction for the BRT Alternative; • 1,150 feet from the nearest dedicated bus lanes in the BRT Alternative; • 1,155 feet from the nearest TCE for the BRT Alternative; and • 1,200 feet from the nearest station (Atlantic Boulevard between Pomona Boulevard and Beverly Boulevard) in the BRT Alternative. 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the BRT Alternative and would not be used by buses operating under the BRT Alternative, this park would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of Belvedere Community Regional Park because it would not result in proximity impacts on that park.</p> <p>Section 6(f): Because the BRT Alternative would not require the permanent acquisition of any land from Belvedere Community Regional Park, the requirements of Section 6(f) would not apply to this park.</p>

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Recreation Resources at David Wark Griffith Middle School (6th to 8th) 4765 East Fourth Street</p> <p>Owner/Operator: Los Angeles Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 2,425 feet from the nearest limits of construction and TCE for the BRT Alternative; • 2,500 feet from the nearest dedicated bus lanes in the BRT Alternative; and • 2,805 feet from the nearest station (Atlantic Boulevard between Pomona Boulevard and Beverly Boulevard) in the BRT Alternative. 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of the recreation resources at David Wark Griffith Middle School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at Fourth Street Elementary School (K to 5th) 420 South Amalia Avenue</p> <p>Owner/Operator: Los Angeles Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 420 feet from the nearest TCE in the BRT Alternative; • 435 feet from the nearest limits of construction in the BRT Alternative; • 440 feet from the nearest improvements (dedicated 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any BRT Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any BRT Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term noise effects under the BRT Alternative.</p> <p>Traffic: Construction of the improvements in the BRT Alternative within approximately 420 feet of Fourth Street Elementary School could result in short-term traffic impacts in that area. Based on implementation of</p>

TABLE 3.3.1:

BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>bus lanes) in the BRT Alternative; and</p> <ul style="list-style-type: none"> 1,445 feet from the nearest station (Atlantic Boulevard between Pomona Boulevard and Beverly Boulevard) in the BRT Alternative. 	<p>TMPs and requirements to maintain access to all adjacent properties, construction of the BRT Alternative would not result in short-term adverse impacts related to traffic and transportation at the recreation facilities at Fourth Street Elementary School. Based on the distance of this school from the nearest operation of any BRT Alternative improvements and because the BRT Alternative would not result in any permanent changes in access to/from this school, the recreation facilities at this school would not experience long-term traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction and operation of any BRT Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Fourth Street Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at Garfield High School (9th to 12th) 5101 East 6th Street</p> <p>Owner/Operator: Los Angeles Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> 805 feet from the limits of construction in the BRT Alternative; 815 feet from the nearest TCE in the BRT Alternative; 895 feet from the nearest improvements (dedicated bus lanes) in the BRT Alternative; and 1,830 feet from the nearest station (Atlantic Boulevard at Whittier Boulevard) in the BRT Alternative. 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Garfield High School because it would not result in proximity impacts on those resources.</p>

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Recreation Resources at Morris K. Hamasaki Elementary School (K to 6th) 4865 East First Street</p> <p>Owner/Operator: Los Angeles Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 2,400 feet from the nearest limits of construction for the BRT Alternative; • 2,550 feet from the edge of the nearest TCE for the BRT Alternative; and • 2,550 feet from for the nearest dedicated bus lanes and station (Atlantic Boulevard between Pomona Boulevard and Beverly Boulevard) in the BRT Alternative. 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Morris K. Hamasaki Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at Winter Gardens Elementary School (K to 5th) 1277 South Clela Avenue</p> <p>Owner/Operator: Montebello Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,930 feet from the nearest limits of construction in the BRT Alternative; and • 2,085 feet from the nearest dedicated bus lanes and station (Atlantic Boulevard at Whittier Boulevard) in 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p>

TABLE 3.3.1:

BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>the BRT Alternative.</p>	<p>Traffic: Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance o from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Winter Gardens Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p>CITY OF MONTEREY PARK</p>	
<p>Barnes Memorial Park and Community Center 350 South McPherrin Avenue</p> <p>Owner/Operator: City of Monterey Park</p> <p>Description: This 11.5-acre park provides a community center, basketball gym, Memorial Bowl, sheltered picnic pavilion, Olympic-sized pool, lighted softball field, tennis courts, a children's play area, restrooms, and on-site parking.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 1,795 feet from the nearest limits of construction for the BRT Alternative; • 1,820 from the nearest TCE for the BRT Alternative; • 1,890 feet from the nearest dedicated bus lanes in the BRT Alternative; and • 2,355 feet from the nearest station (Atlantic Boulevard at Garvey Avenue) in the BRT Alternative. 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, this park would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of Barnes Memorial Park and Community Center because it would not result in proximity impacts on that park and community center.</p>

TABLE 3.3.1:

BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Bella Vista Park 400 Pomona Boulevard</p> <p>Owner/Operator: City of Monterey Park</p> <p>Description: This 4.0-acre park provides a softball field, a children's play area, outdoor basketball, picnic facilities, lighted tennis courts, and restrooms.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 2,545 from the nearest limits of construction for the BRT Alternative; • 2,550 feet from the nearest dedicated bus lanes in the BRT Alternative; • 2,665 from the nearest TCE for the BRT Alternative; and • 2,865 feet from the nearest station (Atlantic Boulevard at Cesar Chavez Avenue/Riggin Street) in the BRT Alternative. 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, this park would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of Bella Vista Park because it would not result in proximity impacts on that park.</p>
<p>Sequoia Park 750 Ridgcrest Avenue</p> <p>Owner/Operator: City of Monterey Park</p> <p>Description: This 6.8-acre park provides a Japanese garden with the Azumaya View Deck, a softball field, a children's play area, lighted tennis courts, outdoor basketball court, restrooms, picnic facilities, and on-site parking.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 1,330 feet from the nearest TCE and limits of construction for the BRT Alternative; • 1,340 feet from the nearest dedicated bus lanes in the BRT Alternative; and 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, this park would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p>

TABLE 3.3.1:

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Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<ul style="list-style-type: none"> 3,120 feet from the nearest station (Atlantic Boulevard at Garvey Avenue) in the BRT Alternative. 	<p>the BRT Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of Sequoia Park because it would not result in proximity impacts on that park.</p>
<p>Recreation Resources at Bella Vista Elementary School (K to 5th) 2410 Findlay Avenue</p> <p>Owner/Operator: Montebello Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> 2,575 feet from the nearest limits of construction and TCE for the BRT Alternative; 2,480 feet from the nearest dedicated bus lanes in the BRT Alternative; and 2,745 feet from the nearest station (Atlantic Boulevard at Cesar Chavez Avenue/Riggin Street) in the BRT Alternative. 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and bus operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Bella Vista Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at Robert Hill Lane Elementary School (K to 6th) 1500 Cesar Chavez Avenue</p> <p>Owner/Operator: Los Angeles Unified School District</p>	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at</p>

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BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,700 feet from the nearest limits of construction for the BRT Alternative; • 1,740 feet from the nearest dedicated bus lanes in the BRT Alternative; • 1,755 feet from the nearest TCE for the BRT Alternative; and • 1,810 feet from the nearest station (Atlantic Boulevard at Cesar Chavez Avenue/Riggin Street) in the BRT Alternative. 	<p>this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Robert Hill Lane Elementary School because it would not result in proximity impacts on those resources.</p>
<p>Recreation Resources at Repetto Elementary School (K to 8th) 650 South Grandridge Avenue</p> <p>Owner/Operator: Alhambra Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 2,385 feet from the nearest TCE and the nearest dedicated bus lanes for the BRT Alternative; • 2,440 feet from the nearest limits of construction for the BRT Alternative; and • 3,525 feet from the nearest station (Atlantic Boulevard at Garvey Avenue) in the BRT Alternative. 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction of any BRT Alternative improvements</p>

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Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Repetto Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at Ynez Elementary School (K to 8th) 120 South Ynez Avenue</p> <p>Owner/Operator: Alhambra Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,550 feet from the nearest limits of construction for the BRT Alternative; • 1,615 feet from the nearest dedicated bus lanes and station (Atlantic Boulevard at Garvey Avenue) in the BRT Alternative; and • 1,650 feet from the nearest TCE for the BRT Alternative. 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Ynez Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at East Los Angeles College (2-year college) 1301 Avenida Cesar Chavez</p> <p>Owner/Operator: Los Angeles Community College District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p>	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p>

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Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<ul style="list-style-type: none"> • 885 feet from nearest limits of construction for the BRT Alternative; • 910 feet from the nearest TCE for the BRT Alternative; and • 920 feet from the nearest dedicated bus lanes and station (Atlantic Boulevard at Cesar Chavez Avenue/Riggin Street) in the BRT Alternative. 	<p>Noise: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of the recreation resources at East Los Angeles College because it would not result in proximity impacts on those recreation resources.</p>
CITY OF PASADENA	
<p>Allendale Park 1130 South Marengo Avenue</p> <p>Owner/Operator: City of Pasadena</p> <p>Description: This 2.9-acre park provides a lighted tennis court, a lighted softball diamond/multi-purpose field with bleachers, playground equipment, on-site parking, picnic tables, and drinking fountains. There is a public library within the boundary of this park.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 1,305 feet from the nearest limits of construction for the BRT Alternative; • 1,320 feet from the nearest TCE for the BRT Alternative; • 1,340 feet from the nearest dedicated bus lanes in the BRT Alternative; and • 1,410 feet from the nearest station (Fair Oaks Avenue at Glenarm Street) in the BRT Alternative. 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, this park would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the BRT</p>

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Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of Allendale Park because it would not result in proximity impacts on that park.</p>
<p>Central Park 275 South Raymond Avenue</p> <p>Owner/Operator: City of Pasadena</p> <p>Description: This 9.2-acre park provides 6 horseshoe pits, 2 lawn bowling courts, an open area, playground equipment, walkway lighting, restrooms, picnic tables, a rose garden, benches, and a clubhouse for the Pasadena Lawn Bowling Club, an affiliate of the American Lawn Bowling Association.</p> <p>Distance: This park is:</p> <ul style="list-style-type: none"> • Adjacent to the limits of construction for the BRT Alternative; • 40 feet from the nearest dedicated bus lanes in the BRT Alternative; • 45 feet from the nearest TCE for the BRT Alternative; and • 60 feet from the nearest station (Fair Oaks Avenue at Del Mar Boulevard) in the BRT Alternative. 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Construction of the improvements in the BRT Alternative adjacent to this park could result in short-term dust and equipment emissions that could extend into the park property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of Pasadena. Compliance with those measures during construction of the BRT Alternative facilities adjacent to this park would substantially reduce the short-term air quality effects on Central Park.</p> <p>Operation of the BRT Alternative in 2020 would result in reduced regional vehicle and GHG emissions compared to existing 2012 and 2020 No Build Alternative conditions. Operation of the BRT Alternative in 2035 would result in decreases in regional vehicle emissions compared to existing 2012 conditions and minor increases or decreases in regional vehicle emissions compared to the 2035 No Build Alternative conditions. Operation of the BRT Alternative in 2020 and 2035 would result in reductions in MSAT emissions compared to existing 2012 conditions. In 2020, the BRT Alternative would result in no change or minor reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2020 No Build Alternative conditions. In 2035, the BRT Alternative would result in minor increases or decreases or no change in MSAT emissions (depending on the individual MSAT pollutants) compared to the 2035 No Build Condition. As a result, operation of the BRT Alternative would not result in adverse air quality impacts on Central Park.</p> <p>Noise: Construction of the improvements in the BRT Alternative adjacent to this park could result in short-term noise levels that could impact the park. Those construction activities would be required to comply with the City of Pasadena Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the BRT Alternative facilities in the vicinity of Central Park would substantially reduce the short-term noise effects on the school.</p> <p>The recreation uses at Central Park are active uses. The operation of the BRT Alternative improvements in the vicinity of this park in 2035 will not increase the noise levels at the recreation resources at the park compared to the No Build Alternative in 2035 (53 dBA under both alternatives). The future predicted noise level at this park under the BRT Alternative (53 dBA) is less than the 67 dBA NAC for activity category C uses. As a result, the operation of the BRT Alternative would not result in long-term noise impacts on Central Park.</p> <p>Traffic: Construction of the improvements in the BRT Alternative adjacent to Central Park could result in</p>

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	<p>short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the BRT Alternative would not result in short-term adverse impacts related to traffic and transportation at Central Park. In the long term, the operation of the BRT Alternative along Fair Oaks Avenue will not affect existing pedestrian access to/from Central Park. Although bus volumes on Fair Oaks Avenue may change as a result of the BRT Alternative, the pedestrian access to and from Central Park would be the same as the existing access.</p> <p>Visual Resources: Central Park is in the northeast corner of the intersection of Fair Oaks Avenue and Del Mar Boulevard. The BRT Alternative includes an exclusive BRT lane on Fair Oaks Avenue south of Del Mar Boulevard and BRT service in mixed-flow lanes on Del Mar Boulevard east of Fair Oaks Avenue. Those improvements would result in minor modifications to existing Fair Oaks Avenue and Del Mar Boulevard but would not result in physical changes that would substantially change views of those street segments from within Central Park. BRT stations would be provided at the intersections of Fair Oaks Avenue/Del Mar Boulevard and Del Mar Boulevard/Los Robles Boulevard. The stations would consist of modest shelters, seating, and signing for the BRT services operating on those streets. The stations would not substantially change views of those intersections from within Central Park. The changes in views from the park would not be expected to be substantial because they would be views of urban structures and features in a viewshed that already contains urban structures and features. As a result, the BRT Alternative improvements would not result in temporary construction or long-term operation visual effects at Central Park.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of Central Park because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that park.</p>
<p>Grant Park 232 South Michigan Avenue</p> <p>Owner/Operator: City of Pasadena</p> <p>Description: This 2.5 ac neighborhood park provides two lighted tennis courts, half basketball courts, a multi-purpose/softball field, three horseshoe pits, an open grass area with trees, restrooms, drinking fountains, picnic tables with canopies, barbeque pits, and a large area with playground equipment for children.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 705 feet from nearest limits of construction for the 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience short-term construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, this park would not experience short-term construction or long-term operation traffic and</p>

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<p>BRT Alternative;</p> <ul style="list-style-type: none"> 720 feet from the nearest station (Del Mar Avenue at Hill Avenue) in the BRT Alternative; and 7,400 feet from the nearest TCE and nearest dedicated bus lane for the BRT Alternative. 	<p>transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience short-term construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of Grant Park because it would not result in proximity impacts on that park.</p>
<p>Memorial Park 85 East Holly Street</p> <p>Owner/Operator: City of Pasadena</p> <p>Description: This 5.3-acre park is characterized by extensive shrubbery, landscaping, large trees, and a number of monuments. Other facilities provided at this park include a band shell with an audience capacity of 400 persons, picnic facilities, benches, a large open grass area, an exercise walk, restrooms, and drinking fountains. The Pasadena Senior Center is immediately adjacent to the south side of this park.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> 2,090 feet from the nearest limits of construction for the BRT Alternative; 2,630 feet from the nearest TCE for the BRT Alternative; and 2,650 feet from the nearest dedicated bus lanes and station (Fair Oaks Avenue at Del Mar Boulevard) in the BRT Alternative. 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, this park would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of Memorial Park because it would not result in proximity impacts on that park.</p>
<p>Singer Park California Boulevard/St. John Avenue</p> <p>Owner/Operator: City of Pasadena</p> <p>Description: This 2.9-acre neighborhood park includes an open grass area with a number of well-established trees</p>	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT</p>

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Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>and rose beds, a children’s play area, picnic tables, benches, restrooms, and a drinking fountain.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 1,510 feet from the nearest limits of construction and TCE for the BRT Alternative; • 1,520 feet from the nearest station (Fair Oaks Avenue at California Boulevard) in the BRT Alternative; and • 1,595 feet from the nearest dedicated bus lanes in the BRT Alternative. 	<p>Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, this park would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of Singer Park because it would not result in proximity impacts on that park.</p>
<p>Recreation Resources at Blair High School (6th to 12th) 1201 South Marengo Avenue</p> <p>Owner/Operator: Pasadena Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,135 feet from the nearest TCE for the BRT Alternative; • 1,230 feet from the nearest station (Fair Oaks Avenue at Glenarm Avenue) in the BRT Alternative; • 1,445 feet from the nearest limits of construction for the BRT Alternative; and • 1,450 feet from the nearest dedicated bus lanes in the BRT Alternative. 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the</p>

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Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Blair High School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at Rose City High School (10th to 12th) 351 Hudson Avenue</p> <p>Owner/Operator: Pasadena Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 570 feet from the nearest limits of construction for the BRT Alternative; • 580 feet from the nearest station in the BRT Alternative; and • 4,770 feet from the nearest TCE and station (Del Mar Boulevard at Lake Avenue) for the BRT Alternative. 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience short-term construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience short-term construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience short-term construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Rose City High School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at Pasadena City College (2-year college) 1570 East Colorado Boulevard</p> <p>Owner/Operator: Pasadena Area Community College District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,690 feet from the limits of construction for the BRT Alternative; 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this school from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the BRT</p>

TABLE 3.3.1:

BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<ul style="list-style-type: none"> 1,700 feet from the nearest station (Del Mar Boulevard at Hill Avenue) in the BRT Alternative; and 10,260 feet from the nearest TCE and dedicated bus lanes in the BRT Alternative. 	<p>Alternative.</p> <p>Traffic: Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations or operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Pasadena City College because it would not result in proximity impacts on those recreation resources.</p>
CITY OF SOUTH PASADENA	
<p>Eddie Park and House 2017 Edgewood Drive</p> <p>Owner/Operator: City of South Pasadena</p> <p>Description: This 0.75-acre park includes the historic Eddie House, a group barbeque area, a playground, and an open lawn area. The park site is surrounded by a 3-foot-high brick wall. The Eddie House and grounds were donated to the City by the Eddie family. The 2,200-square-foot house is an example of Transitional Craftsman architecture. The first floor of the house is available as a meeting space and includes a kitchen and restrooms.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> 1,670 feet from the nearest limits of construction for the BRT Alternative; 1,685 feet from the nearest dedicated bus lanes in the BRT Alternative; 1,850 feet from the nearest TCE for the BRT Alternative; and 1,960 feet from the nearest station (Huntington Drive at Marengo Avenue) in the BRT Alternative. 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, this park would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of Eddie Park and House because it would not result in proximity impacts on that park.</p>

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Garfield Park 1750 Mission Street</p> <p>Owner/Operator: City of South Pasadena</p> <p>Description: This 7.6-acre park provides tennis courts, a playground, and a garden area.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 760 feet from the nearest limits of construction for the BRT Alternative; • 790 feet from the nearest dedicated bus lanes and station (Fair Oaks Avenue at Mission Street) in the BRT Alternative; and • 840 feet from the nearest TCE for the BRT Alternative. 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the BRT Alternative and would not be used by buses operating under the BRT Alternative, this park would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of Garfield Park because it would not result in proximity impacts on that park.</p>
<p>Library Park 1102 Oxley Street</p> <p>Owner/Operator: City of South Pasadena</p> <p>Description: This 3.2-acre park provides tennis courts, a half basketball court, a playground, and a baseball field.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 1,400 feet from the nearest limits of construction for the BRT Alternative; • 1,430 feet from the nearest TCE and dedicated bus lanes in the BRT Alternative; and • 1,460 feet from the nearest station (Fair Oaks Avenue at Mission Street) in the BRT Alternative. 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, this park would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p>

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>Visual Resources: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of Library Park because it would not result in proximity impacts on that park.</p>
<p>Orange Grove Park and Recreation Building 815 Mission Street</p> <p>Owner/Operator: City of South Pasadena</p> <p>Description: This 2.5-acre park provides a lighted softball and soccer field, two lighted tennis courts, picnic tables, a small playground, drinking fountains, bleachers, and a bicycle rack.</p> <p>The Orange Grove Park Recreation Center is a 9,500-square-foot facility located in Orange Grove Park. A wide range of programs for families and children are offered at this Recreation Center. The first floor of the Recreation Center is used for recreation and day care programs. The second floor contains a meeting room and a small teen center.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 2,790 feet from the nearest TCE for the BRT Alternative; • 2,800 feet from the nearest limits of construction for the BRT Alternative; and <p>2,810 feet from the nearest dedicated bus lanes and station (Fair Oaks Avenue at Mission Street) in the BRT Alternative.</p>	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, this park would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of Orange Grove Park and Recreation Building because it would not result in proximity impacts on those facilities.</p>
<p>War Memorial Park 435 Fair Oaks Avenue</p> <p>Owner/Operator: City of South Pasadena</p>	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Construction of the improvements in the BRT Alternative adjacent to this park could result in short-term dust and equipment emissions that could extend into the park property. However, there are</p>

TABLE 3.3.1:

BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Description: This 1.8-acre park includes the two-story, 12,000-square-foot War Memorial Building that was constructed in 1921 on the site of the former Oak Lawn Park. It is a City of South Pasadena cultural heritage landmark. On the second floor of the building, there is a multipurpose room with a kitchen, which is used for events such as banquets and meetings for large groups. The first floor contains smaller meeting rooms, storage space, and restrooms. The Park also includes a landscaped memorial garden and on-site parking. War Memorial Park is located between Fair Oaks Avenue on the east and the Metro Gold Line tracks on the west.</p> <p>Distance: This park is:</p> <ul style="list-style-type: none"> • Adjacent to the limits of construction and the dedicated bus lanes in the BRT Alternative; • Approximately 100 feet from the nearest TCE for the BRT Alternative; and • Approximately 1,475 feet from the nearest station (Fair Oaks Avenue at Mission Street) in the BRT Alternative. 	<p>extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of South Pasadena. Compliance with those measures during construction of the BRT Alternative facilities adjacent to War Memorial Park would substantially reduce the short-term air quality effects on the park.</p> <p>Operation of the BRT Alternative in 2020 would result in reduced regional vehicle and GHG emissions compared to existing 2012 and 2020 No Build Alternative conditions. Operation of the BRT Alternative in 2035 would result in decreases in regional vehicle emissions compared to existing 2012 conditions and minor increases or decreases in regional vehicle emissions compared to the 2035 No Build Alternative conditions. Operation of the BRT Alternative in 2020 and 2035 would result in reductions in MSAT emissions compared to existing 2012 conditions. In 2020, the BRT Alternative would result in no change or minor reductions in MSAT emissions (depending on the individual MSAT pollutants) compared to 2020 No Build Alternative conditions. In 2035, the BRT Alternative would result in minor increases or decreases or no change in MSAT emissions (depending on the individual MSAT pollutants) compared to the 2035 No Build Condition. As a result, operation of the BRT Alternative would not result in adverse air quality impacts on War Memorial Park.</p> <p>Noise: Construction of the improvements in the BRT Alternative adjacent to this park could result in short-term noise levels that could impact the park. Those construction activities would be required to comply with the City of South Pasadena Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the BRT Alternative facilities adjacent to War Memorial Park would substantially reduce the short-term noise effects on the school.</p> <p>The uses at War Memorial Park largely occur within the War Memorial Building. There is a landscaped memorial garden on the northern part of the site occupied by the War Memorial Park. The 2035 noise level at this park under the BRT Alternative would be 67 dBA, 2 dBA higher than the 2035 noise level under the No Build Alternative (65 dBA). Although the 2035 predicted noise levels at this park under the BRT Alternative would be at the 67 dBA NAC for Activity Category C uses, the 2 dBA increase over the No Build Alternative would not be perceptible and therefore would not be expected to result in long-term noise impacts on the recreation resources at War Memorial Park.</p> <p>Traffic: Construction of the improvements in the BRT Alternative adjacent to War Memorial Park could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the BRT Alternative would not result in short-term adverse impacts related to traffic and transportation at War Memorial Park. In the long term, the operation of the BRT Alternative along Fair Oaks Avenue will not affect existing pedestrian access to/from War Memorial Park and will not affect vehicle access to the park to/from Mound Avenue. Although bus volumes on Fair Oaks</p>

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>Avenue may change as a result of the BRT Alternative, the pedestrian and vehicle access to and from War Memorial Park would be the same as the existing access.</p> <p>Visual Resources: Patrons of War Memorial Park currently have views of at-grade Fair Oaks Avenue to the east, elevated Oak Lawn Avenue to the south, and railroad tracks to the west. As a result, views from within War Memorial Park are not an important feature of this park. During construction, park visitors will have views of construction equipment and activities within Fair Oaks Avenue. In the long term, views of Fair Oaks Avenue from within War Memorial Park will be very similar to existing views of that roadway. In addition, visitors will see more buses operating along Fair Oaks Avenue compared to existing conditions.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of War Memorial Park because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that park.</p>
<p>Recreation Resources at Marengo Elementary School (K to 5th) 1400 Marengo Avenue</p> <p>Owner/Operator: South Pasadena Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,135 feet from the nearest TCE for the BRT Alternative; • 1,145 feet from the nearest limits of construction for the BRT Alternative; • 1,165 feet from the nearest dedicated bus lanes in the BRT Alternative; and • 2,550 feet from the nearest station (Huntington Drive at Marengo Avenue) in the BRT Alternative. 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative or by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of the recreation resources at Marengo Elementary School because it would not result in proximity impacts on those recreation resources.</p>

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Recreation Resources at South Pasadena High School (9th to 12th) 1401 Fremont Avenue</p> <p>Owner/Operator: South Pasadena Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 990 feet from the nearest limits of construction for the BRT Alternative; • 1,010 feet from the nearest dedicated bus lanes in the BRT Alternative; • 1,035 feet from the nearest TCE for the BRT Alternative; and • 2,450 feet from the nearest station (Huntington Drive at Marengo Avenue) in the BRT Alternative. 	<p>The BRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation noise effects under the BRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the BRT Alternative and would not be used by buses operating under the BRT Alternative, the recreation uses at this school would not experience temporary construction or long-term operation traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction of any BRT Alternative improvements and BRT Alternative stations and operations, and the presence of intervening land uses, the recreation uses at this school would not experience temporary construction or long-term operation visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of the recreation resources at South Pasadena High School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at South Pasadena Middle School (6th to 8th) 1500 Fair Oaks Avenue</p> <p>Owner/Operator: South Pasadena Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 165 feet from the nearest limits of construction for the BRT Alternative; • 170 feet from the nearest TCE for the BRT Alternative; • 180 feet from the nearest dedicated bus lanes in the BRT Alternative; and • 2,620 feet from the nearest station (Huntington Drive 	<p>Use of Land for a TCE: The BRT Alternative would not result in permanent incorporation of land or permanent easements at this resource. The construction of the BRT Alternative would require an approximately 284-square-foot (0.006-acre) TCE at South Pasadena Middle School, on the east side of Fair Oaks Avenue and the north side of the school property. The TCE would be approximately 300 feet west of any recreation uses on the school property, would not affect access to those recreation uses, and would be separated from those recreation uses by intervening school buildings. Because the TCE would not affect the recreation uses at South Pasadena Middle School, it would not trigger the requirements for approval under Section 4(f) and no further analysis of that TCE is needed.</p> <p>Air Quality: Based on the distance from the nearest construction and operation of any BRT Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term air quality effects under the BRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction and operation of any BRT Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not</p>

TABLE 3.3.1:
BRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
at Marengo Avenue) in the BRT Alternative.	<p>experience short- or long-term noise effects under the BRT Alternative.</p> <p>Traffic: Construction of the improvements in the BRT Alternative within approximately 165 feet of South Pasadena Middle School could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the BRT Alternative would not result in short-term adverse impacts related to traffic and transportation at the recreation facilities at South Pasadena Middle School. Based on the distance from the nearest operation of any BRT Alternative improvements and because the BRT Alternative would not result in any permanent changes in access to/from this school, the recreation facilities at this school would not experience long-term traffic and transportation effects under the BRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction and operation of any BRT Alternative improvements, and the presence of intervening land uses, the recreation facilities at this school would not experience short- or long-term visual effects under the BRT Alternative.</p> <p>Summary: In summary, the BRT Alternative would not cause a constructive use of the recreation resources at South Pasadena Middle School because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of those recreation resources.</p>

Source: LSA Associates, Inc. (2014). Refer also to Chapter 5, References and Preparers, for a list of references used to research resources potentially protected under the requirements of Sections 4(f) and 6(f).

¹ Only resources within 0.5 mile of improvements in the BRT Alternative are evaluated in this table. Cities and communities that do not contain BRT Alternative improvements are not included in this table. Refer to Figure 3.3-1 for the locations of the resources discussed in this table.

² The following distances were measured to assess the potential for short-term proximity impacts on Section 4(f) resources under the BRT Alternative:

- **Limits of Construction:** This is the area anticipated to be disturbed during construction of the improvements in the BRT Alternative.
- **Temporary Construction Easement:** This is a specific area that is anticipated to be disturbed during construction of improvements in the BRT Alternative. This may include areas needed temporarily for materials or equipment storage, or construction of the improvements. The defined TCEs are areas outside the limits of the permanent improvements and permanent right of way for the BRT Alternative. Areas used for TCEs would be restored to their original or better condition prior to returning those areas to the property owners.

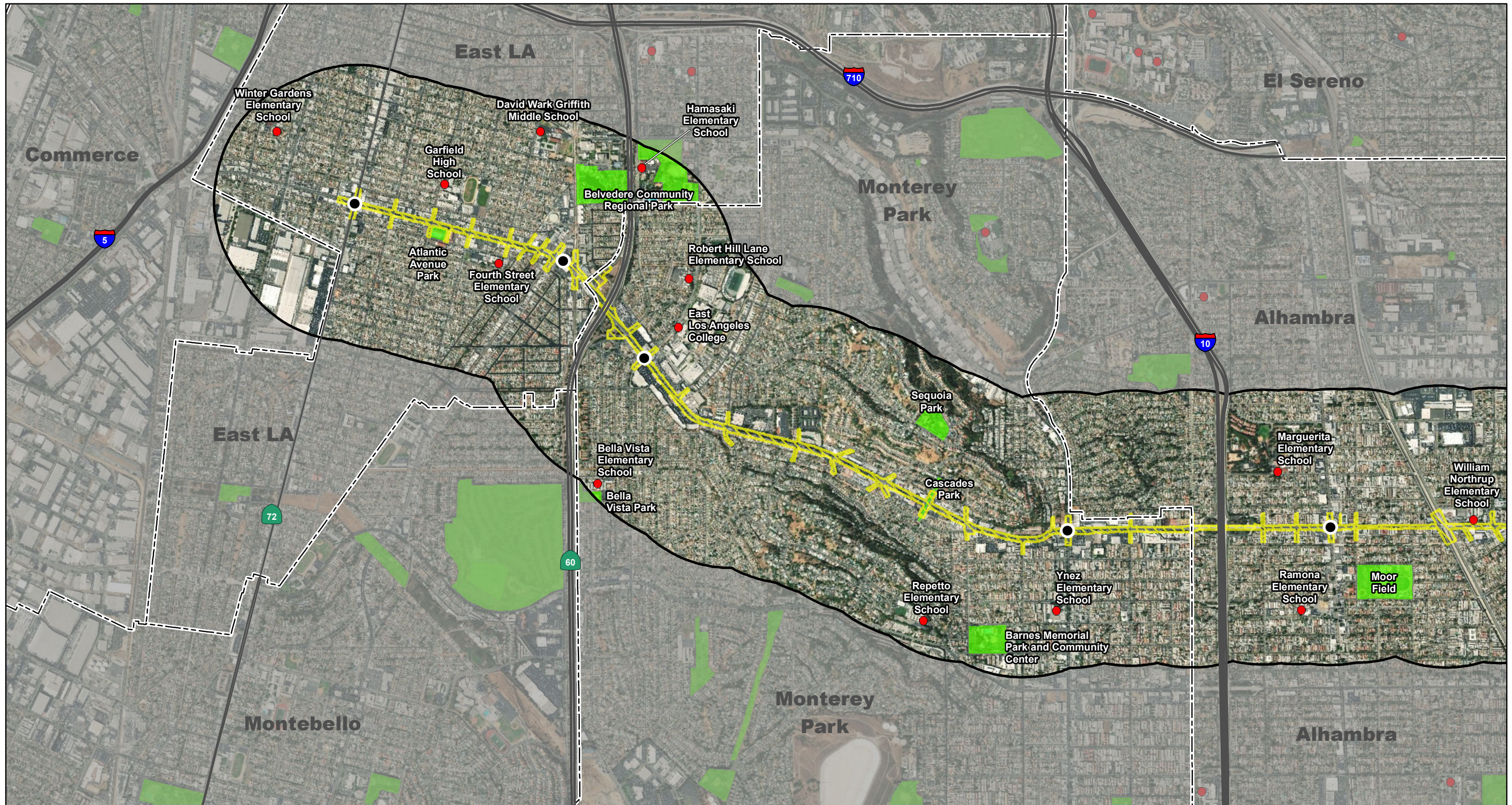
The following distances were measured to assess the potential for long-term proximity impacts on Section 4(f) resources under the BRT Alternative:

- **Limits of Dedicated Bus Lanes:** This defines the edges of the dedicated bus lanes.
- **Bus Station:** This defines a designated bus stop for express services operating in the dedicated bus lanes provided in the BRT Alternative.
- **Right of Way:** This is the area defined as the maximum limits of new right of way acquired for the improvements under the BRT Alternative. The limits of the new right of way may be farther from a Section 4(f) type resource than the limits of the dedicated bus lanes because BRT improvements constructed in areas within existing public right of way may be closer to the resource than the improvements constructed in areas of new right of way.

BRT = Bus Rapid Transit
 dBA = A-weighted decibels
 FY = Fiscal Year

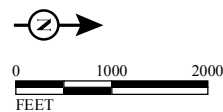
GHG = greenhouse gas
 L&WCF Act = Land and Water Conservation Fund Act
 MSAT = mobile source air toxics

NAC = noise abatement criteria
 TCE = temporary construction easement
 TMP = Transportation Management Plan



LEGEND

- BRT Alternative Limits of Construction
- BRT Station
- 0.5 Mile from the Project Improvements
- Public School with Recreation Resources
- Parks and Recreation
- City Boundary



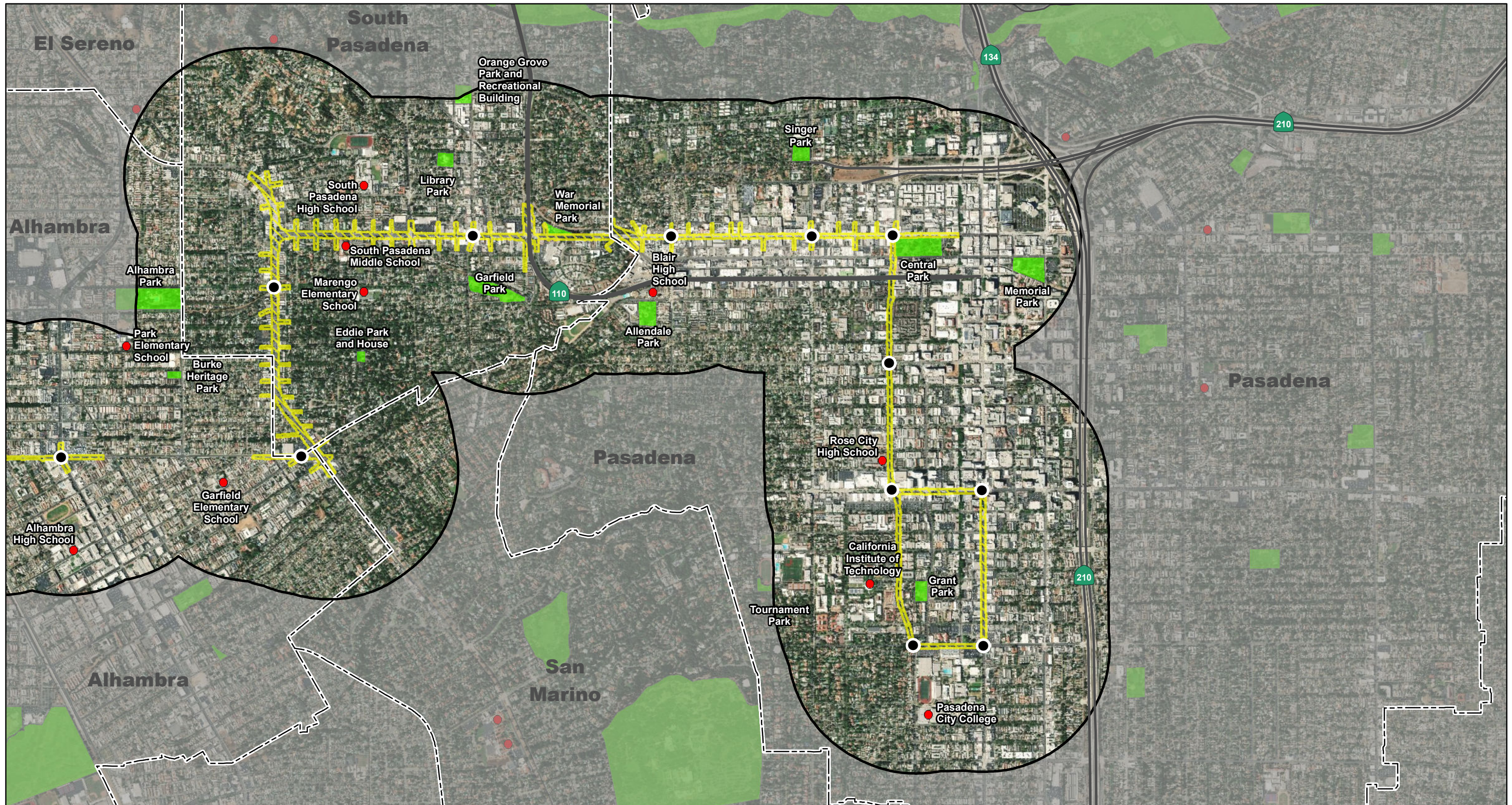
SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)
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FIGURE 3.3-1
 Sheet 1 of 2

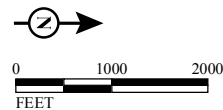
SR 710 North Project
 Resources within a Half-Mile of
 the BRT Alternative

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LEGEND

- BRT Alternative Limits of Construction
- BRT Station
- 0.5 Mile from the Project Improvements
- Public School with Recreation Resources
- Parks and Recreation
- City Boundary



SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)
 I:\CHM1105\GIS\MXD\EIR_EIS\App_B\BRT_SchoolsParksRec.mxd (7/8/2018)

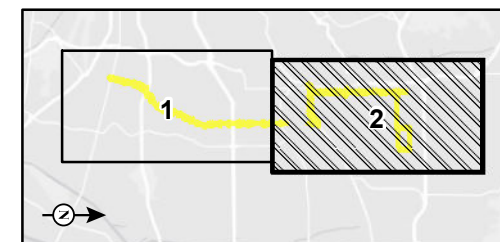


FIGURE 3.3-1
 Sheet 2 of 2

SR 710 North Project
 Resources within a Half-Mile of
 the BRT Alternative

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TABLE 3.4.1:

LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
CITY OF ALHAMBRA	
<p>Alhambra Park 500 North Palm Avenue</p> <p>Owner/Operator: City of Alhambra</p> <p>Description: This 15.0-acre park provides picnic tables with covered shelters, playground equipment, barbecues, tennis courts, volleyball courts, an outdoor basketball court, a meeting room, an activity room, a swimming pool, an open grass area, a band shell, and restrooms. The Alhambra Veteran’s Memorial Wall is located at the north end of the park.</p> <p>Approximately \$5,922 of L&WCF Act funds were used to renovate the band shell, replace its wood floor, and add electricity at this park in FY 1991/1992. As a result, the band shell at Alhambra Park is subject to the requirements for protection under Section 6(f).</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 1,600 feet from the nearest part of the tunnel alignment in the LRT Alternative and the zone of disturbance for the tunnel; and • 2,250 feet from the nearest station (Huntington Station). 	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of LRT Alternative tunnel improvements and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the LRT Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of LRT Alternative tunnel improvements and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the LRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, this park would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of this park from the tunnel construction and operations in the LRT Alternative, this park would not experience ground-borne noise or vibration effects during the construction and operations of the LRT Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the LRT Alternative.</p> <p>Fremont Avenue Haul Route³: Alhambra Park is approximately 0.3 mile east of the haul route alignment on Fremont Avenue. Based on the distance of this park from that haul route and the presence of intervening land uses, the use of Fremont Avenue as a spoils material haul route would not result in short-term air quality, noise, traffic, or visual effects on Alhambra Park. The Fremont Avenue haul route would not be used during the operation of the LRT Alternative; therefore, there would be no long-term impacts on Alhambra Park as a result of the use of that haul route.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of Alhambra Park because it would not result in proximity impacts on that park.</p>

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	Section 6(f): Because the LRT Alternative would not require the permanent acquisition of any land from Alhambra Park, the requirements of Section 6(f) would not apply to this park.
<p>Emery Park 2709 Mimosa Street</p> <p>Owner/Operator: City of Alhambra</p> <p>Description: This 0.7-acre park provides picnic tables, playground equipment, barbecues, an activity room, a kitchen facility, an open grass area, and restrooms.</p> <p>Approximately \$100,800 of L&WCF Act funds were used to construct picnic areas, a play area, restrooms, irrigation, landscaping, turf, parking, and lighting at this park in FY 1982/1983. As a result, these improvements at Emery Park are subject to the requirements for protection under Section 6(f).</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 350 feet from the nearest part of the zone of disturbance of the tunnel alignment; • 430 feet from the nearest part of the tunnel alignment and the nearest station excavation area; and • 450 feet from the nearest station (Alhambra Station). 	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel and station) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the LRT Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel and station) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the LRT Alternative.</p> <p>Traffic: Construction of the improvements in the LRT Alternative within approximately 350 feet of Emery Park could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the LRT Alternative would not result in short-term adverse impacts related to traffic and transportation at Emery Park. Based on the distance of this park from the nearest operation of any LRT Alternative improvements and because the LRT Alternative would not result in any permanent changes in access to/from this park, this park would not experience long-term traffic and transportation effects under the LRT Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of this park from the nearest tunnel construction and operations in the LRT Alternative, this park would not experience ground-borne noise or vibration effects during the construction and operations of the LRT Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel and station) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the LRT Alternative.</p> <p>Fremont Avenue Haul Route³: Emery Park is approximately 0.1 mile west of the haul route alignment on Fremont Avenue. Based on the distance of this park from that haul route and the presence of intervening land uses, the use of Fremont Avenue as a spoils material haul route would not result in short-term air quality, noise, traffic, or visual effects on Emery Park. The Fremont Avenue haul route would not be used during the operation of the LRT Alternative; therefore, there would be no long-term impacts on Emery Park as a result of the use of that haul route.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of Emery Park because it would</p>

TABLE 3.4.1:

LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	not result in proximity impacts on that park. Section 6(f): Because the LRT Alternative would not require the permanent acquisition of any land from Emery Park, the requirements of Section 6(f) would not apply to this park.
<p>Gateway Plaza Park Northwest corner of West Valley Boulevard and South Fremont Avenue</p> <p>Owner/Operator: City of Alhambra</p> <p>Description: This 0.5-acre park at the corner of Valley Boulevard and South Fremont Avenue welcomes visitors to the City with a Moorish-style arch that symbolizes Alhambra as the “Gateway to the San Gabriel Valley.” The park also includes landscaping and walkways.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 2,500 feet from the nearest part of the zone of disturbance for the tunnel and the tunnel alignment in the LRT Alternative; and • 2,800 feet from the nearest station (Alhambra Station). 	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the LRT Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the LRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, this park would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of this park from the tunnel construction and operations in the LRT Alternative, this park would not experience ground-borne noise or vibration effects during the construction and operations of the LRT Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the LRT Alternative.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of Gateway Plaza Park because it would not result in proximity impacts on that park.</p>
<p>Recreation Resources at Emery Park Elementary School (K to 8th) 2821 West Commonwealth Avenue</p> <p>Owner/Operator: Alhambra Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 770 feet from the nearest part of the zone of 	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the LRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would</p>

TABLE 3.4.1:

LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>disturbance for the tunnel and the tunnel alignment in the LRT Alternative;</p> <ul style="list-style-type: none"> • 880 feet from the parking facility for the Alhambra Station; • 960 feet from the nearest part of the excavation area for the Alhambra Station; and • 1,280 feet from the nearest station (Alhambra Station). 	<p>not experience temporary construction or long-term operation noise effects under the LRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of the recreation resources at this school from the tunnel construction and operations in the LRT Alternative, the recreation facilities at this school would not experience ground-borne noise or vibration effects during the construction and operations of the LRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the LRT Alternative.</p> <p>Fremont Avenue Haul Route³: Emery Park Elementary School is approximately 0.2 mile west of the haul route alignment on Fremont Avenue. Based on the distance of the recreation resources at this school from that haul route and the presence of intervening land uses, the use of Fremont Avenue as a spoils material haul route would not result in short-term air quality, noise, traffic, or visual effects on the recreation resources at this school. The Fremont Avenue haul route would not be used during the operation of the LRT Alternative; therefore, there would be no long-term impacts on the recreation resources at this school as a result of the use of that haul route.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of the recreation resources at Emery Park Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p>CITY OF AZUSA (ALONG THE LRT SPOILS DISPOSAL HAUL ROUTES)³</p>	
<p>Valleydale Park 5525 North Lark Ellen Avenue</p> <p>Owner/Operator: Los Angeles County Department of Parks and Recreation</p> <p>Description: This park provides a wide range of amenities, including a baseball diamond, basketball court, children’s play area, community room, computer center, fitness zone, picnic shelter, senior center, splash pad, and a walking path.</p>	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest haul routes for the LRT Alternative, and the presence of intervening land uses, this park would not experience short-term air quality effects as a result of the use of the haul routes under the LRT Alternative. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term air quality impacts on the park associated with the haul routes.</p> <p>Noise: Based on the distance of this park from the nearest haul routes for the LRT Alternative, and the presence of intervening land uses, this park would not experience short-term noise effects as a result of the</p>

TABLE 3.4.1:

LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Distance: This park is 0.5 mile from the haul routes on Arrow Highway and Vincent Avenue. No other activities or facilities in the LRT Alternative are located in the vicinity of this park.</p>	<p>haul routes under the LRT Alternative. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term noise impacts on the park associated with the haul routes.</p> <p>Traffic: Because the streets that provide access to this park would not be used by haul trucks during construction of the LRT Alternative, this park would not experience temporary traffic effects as a result of haul route traffic. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term traffic impacts on the park as a result of the use of the haul routes.</p> <p>Visual Resources: Based on the distance of this park from the haul route for the LRT Alternative, and the presence of intervening land uses, this park would not experience short-term visual effects as a result of the use of the haul routes under the LRT Alternative.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of Valleydale Park because the proximity impacts of that Alternative would not substantially impair the protected activities, features, or attributes of that park.</p>
<p><i>CITY OF BALDWIN PARK (ALONG THE LRT SPOILS DISPOSAL HAUL ROUTES)³</i></p>	
<p>Recreation Resources at Margaret Heath Elementary School (K to 6th) 14321 School Street</p> <p>Owner/Operator: Baldwin Park Unified School District</p> <p>Description: The school includes both asphalt and grass outdoor play areas.</p> <p>Distance: This school is approximately 0.3 mile from the haul routes on Live Oak Avenue and Arrow Highway. No other activities or facilities in the LRT Alternative are located in the vicinity of this school.</p>	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of the recreation resources at this school from the nearest haul routes for the LRT Alternative, and the presence of intervening land uses, these resources would not experience short-term air quality effects as a result of the use of the haul routes under the LRT Alternative. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term air quality impacts on the recreation resources at the school associated with the haul routes.</p> <p>Noise: Based on the distance of the recreation resources at this school from the nearest haul routes for the LRT Alternative, and the presence of intervening land uses, the recreation resources at this school would not experience short-term noise effects as a result of the haul routes under the LRT Alternative. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term noise impacts on the recreation resources at the school associated with the haul routes.</p> <p>Traffic: Because the streets that provide access to the recreation resources at this school would not be used by haul trucks during construction of the LRT Alternative, they would not experience temporary traffic effects as a result of haul route traffic. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term traffic impacts on the recreation resources at the school as a result of the use of the haul routes.</p> <p>Visual Resources: Based on the distance of this school from the haul route for the LRT Alternative, and the</p>

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LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>presence of intervening land uses, the recreation resources at this school would not experience short-term visual effects as a result of the use of the haul routes under the LRT Alternative.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of the recreation resources at Margaret Heath Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at Olive Middle School (6th to 8th) 13701 East Olive Street</p> <p>Owner/Operator: Baldwin Park Unified School District</p> <p>Description: The school includes both asphalt and grass outdoor play areas.</p> <p>Distance: This school is approximately 0.4 mile from the haul route on Live Oak Avenue. No other activities or facilities in the LRT Alternative are located in the vicinity of this school.</p>	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of the recreation resources at this school from the nearest haul route for the LRT Alternative, and the presence of intervening land uses, the recreation resources at this school would not experience short-term air quality effects as a result of the use of the haul routes under the LRT Alternative. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term air quality impacts on the recreation resources at the school associated with the haul routes.</p> <p>Noise: Based on the distance from the nearest haul route for the LRT Alternative, and the presence of intervening land uses, the recreation resources at this school would not experience short-term noise effects as a result of the haul routes under the LRT Alternative. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term noise impacts on the recreation resources at the school associated with the haul routes.</p> <p>Traffic: Because the streets that provide access to the recreation resources at this school would not be used by haul trucks during construction of the LRT Alternative, they would not experience temporary traffic effects as a result of haul route traffic. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term traffic impacts on the recreation resources at the school as a result of the use of the haul routes.</p> <p>Visual Resources: Based on the distance of the recreation resources at this school from the haul route for the LRT Alternative, and the presence of intervening land uses, the recreation resources at this school would not experience short-term visual effects as a result of the use of the haul routes under the LRT Alternative.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of the recreation resources at Olive Middle School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at Pleasant View Elementary School (K to 6th) 14900 East Nubia Street</p> <p>Owner/Operator: Baldwin Park Unified School District</p>	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of the recreation resources at this school from the nearest haul route for the LRT Alternative, and the presence of intervening land uses, they would not experience short-term air</p>

TABLE 3.4.1:

LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Description: The school includes both asphalt and grass outdoor play areas with sports courts and fields.</p> <p>Distance: This school is approximately 0.3 mile from the haul route on Arrow Highway. No other activities or facilities in the LRT Alternative are located in the vicinity of this school.</p>	<p>quality effects as a result of the use of the haul routes under the LRT Alternative. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term air quality impacts on the recreation resources at the school associated with the haul routes.</p> <p>Noise: Based on the distance of the recreation resources at this school from the nearest haul route for the LRT Alternative, and the presence of intervening land uses, the recreation resources at this school would not experience short-term noise effects as a result of the haul routes under the LRT Alternative. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term noise impacts on the recreation resources at the school associated with the haul routes.</p> <p>Traffic: Because the streets that provide access to the recreation resources at this school would not be used by haul trucks during construction of the LRT Alternative, they would not experience temporary traffic effects as a result of haul route traffic. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term traffic impacts on the recreation resources at the school as a result of the use of the haul routes.</p> <p>Visual Resources: Based on the distance of the recreation resources at this school from the haul route for the LRT Alternative, and the presence of intervening land uses, they would not experience short-term visual effects as a result of the use of the haul routes under the LRT Alternative.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of the recreation resources at Pleasant View Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p><i>CITY OF COVINA/UNINCORPORATED LOS ANGELES COUNTY (ALONG THE LRT SPOILS DISPOSAL HAUL ROUTES ALONG VINCENT AVENUE)³</i></p>	
<p>Recreation Resources at Alice M. Ellington Elementary School (K to 5th) 5034 North Clydebank Avenue</p> <p>Owner/Operator: Azusa Unified School District</p> <p>Description: The school includes both asphalt and grass outdoor play areas.</p> <p>Distance: This school is approximately 0.25 mile east of the segment of the haul route on Vincent Avenue. No other activities or facilities in the LRT Alternative are located in the vicinity of this school.</p>	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest haul route for the LRT Alternative, and the presence of intervening land uses, the recreation resources at this school would not experience short-term air quality effects as a result of the use of the haul routes under the LRT Alternative. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term air quality impacts on the recreation resources at the school associated with the haul routes.</p> <p>Noise: Based on the distance from the nearest haul route for the LRT Alternative, and the presence of intervening land uses, the recreation resources at this school would not experience short-term noise effects as a result of the haul routes under the LRT Alternative. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term noise impacts on the recreation resources at the school associated with the haul routes.</p>

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>Traffic: Because the streets that provide access to the recreation resources at this school would not be used by haul trucks during construction of the LRT Alternative, they would not experience temporary traffic effects as a result of haul route traffic. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term traffic impacts on the recreation resources at the school as a result of the use of the haul routes.</p> <p>Visual Resources: Based on the distance from the haul route for the LRT Alternative, and the presence of intervening land uses, the recreation resources at this school would not experience short-term visual effects as a result of the use of the haul routes under the LRT Alternative.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of the recreation resources at Alice M. Ellington Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<i>EAST LOS ANGELES (UNINCORPORATED LOS ANGELES COUNTY)</i>	
<p>Belvedere Community Regional Park 4914 East Cesar E. Chavez Avenue</p> <p>Owner/Operator: Los Angeles County Department of Parks and Recreation</p> <p>Description: This approximately 31-acre park serves as the recreation hub of the East Los Angeles community. The park includes a skate park, a children’s play area with playground equipment, tennis courts, sports fields, a swimming pool, covered picnic tables, landscaped areas that include large trees shading the landscaped areas, restrooms, and on-site parking.</p> <p>L&WCF Act funds were used at this park as follows:</p> <ul style="list-style-type: none"> • \$172,930 to construct the lighted ball field, soccer field, landscaping, and irrigation in FY 1976/1977. • \$197,969 to construct restrooms and parking spaces in FY 1978/1979. • \$98,314 to construct swimming pool facilities in FY 1982/1983. <p>These improvements at Belvedere Community Regional Park are subject to the requirements for protection under</p>	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Construction of the light rail facilities in Mednik Avenue west of Belvedere Community Regional Park could result in short-term dust and equipment emissions that could extend into the park property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes Los Angeles County. Compliance with those measures during construction of the LRT Alternative facilities west of Belvedere Community Regional Park would substantially reduce the short-term air quality effects on the park. As a result, the construction of the LRT Alternative facilities west of Belvedere Community Regional Park would not interfere with the protected activities, features, and attributes of Belvedere Community Regional Park on a temporary basis.</p> <p>Operation of the LRT Alternative in 2025 would result in reduced regional vehicle and GHG emissions compared to existing 2012 and 2025 No Build Alternative conditions. Operation of the LRT Alternative in 2035 would result in reduced regional vehicle emissions compared to existing 2012 and 2035 No Build Alternative conditions. Operation of the LRT Alternative in 2025 and 2035 would result in reductions in MSAT emissions compared to existing 2012 conditions. In 2025, the LRT Alternative would result in no change or minor reductions or increases in MSAT emissions (depending on the individual MSAT pollutants) compared to 2025 No Build Alternative conditions. In 2035, the LRT Alternative would result in reduced MSAT emissions (depending on the individual MSAT pollutants) compared to the 2035 No Build conditions. Operation of the LRT Alternative would result in reduced GHG emissions in 2025 and 2035, compared to existing 2012, and No Build Alternative conditions. As a result, operation of the LRT Alternative would not result in adverse air quality impacts on Belvedere Community Regional Park.</p>

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Section 6(f).</p> <p>Distance: The west side of this park is:</p> <ul style="list-style-type: none"> • Adjacent to the eastern edge of the right of way for Mednik Avenue; and • Approximately 65 feet east of the nearest part of the elevated LRT structure which is within the right of way for Mednik Avenue approximately 0.25 mile south of an LRT station at Floral Avenue and approximately 0.25 mile north of an LRT station at 3rd Street near an existing Metro Gold Line station. 	<p>Noise: Construction of the light rail facilities in Mednik Avenue west of Belvedere Community Regional Park could result in short-term noise levels that could impact the park. Those construction activities would be required to comply with the County of Los Angeles Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the LRT Alternative facilities west of Belvedere Community Regional Park would substantially reduce the short-term noise effects on the park. As a result, the construction of the LRT Alternative facilities west of Belvedere Community Regional Park would not interfere with the protected activities, features, and attributes of Belvedere Community Regional Park on a temporary basis.</p> <p>The recreation uses at Belvedere Community Regional Park are active uses. The 2035 noise level during the operation of the elevated segment of the LRT facility on Mednik Avenue west of Belvedere Community Regional Park, between East 1st Street and Cesar Chavez Avenue, is estimated to be 62 dBA. Because the future predicted noise level at this park under the LRT Alternative (62 dBA) is less than the 67 dBA NAC for Activity Category C uses, the LRT Alternative operational noise would not result in long-term noise impacts at Belvedere Community Regional Park.</p> <p>Traffic: The two existing driveways into the parking area on the west side of Belvedere Community Regional Park from Mednik Avenue would be closed temporarily as the street and sidewalk improvements in the adjacent right of way for Mednik Avenue are constructed during the street modifications to accommodate the elevated light rail structure in the middle of Mednik Avenue. Only one driveway will be closed at a time, and signing will be provided along Mednik Avenue and within Belvedere Community Regional Park that directs park patrons to the open driveway. If warranted, based on the construction activities adjacent to and in the vicinity of the open driveway, flag persons will be provided to ensure that pedestrians and vehicles traverse those areas safely. The existing crosswalks across East 1st Street, Mednik Avenue, and Cesar Chavez Avenue may be temporarily closed during construction of the LRT Alternative facilities. This could affect pedestrian access to Belvedere Community Regional Park. Alternative pedestrian routes will be provided to ensure that park patrons continue to have access to/from Belvedere Community Regional Park. The existing crosswalks across East 1st Street, Mednik Avenue, and Cesar Chavez Avenue would be returned to their original conditions after the completion of construction of the LRT Alternative facilities in those areas, thereby restoring the existing pedestrian access points to/from Belvedere Community Regional Park from the adjoining neighborhoods. Although traffic volumes on 1st Street and Mednik Avenue may change as a result of the LRT Alternative, the pedestrian access to and from Belvedere Community Regional Park would be the same as existing access via the existing crosswalks and sidewalks. Operation of the light rail facility would not interfere with pedestrian and vehicular access to/from Belvedere Community Regional Park.</p> <p>There are two light rail stations in the vicinity of Belvedere Community Regional Park, one approximately 0.25</p>

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LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>mile to the north at Floral Avenue and one approximately 0.25 mile to the south at 3rd Street near an existing Metro Gold Line station. As a result, the LRT Alternative would provide improved accessibility to Belvedere Community Regional Park for patrons who do not live in the immediate vicinity of Belvedere Community Regional Park. As a result, the construction and operation of the elevated segment of the LRT facility west of Belvedere Community Regional Park would not interfere with the protected activities, features, and attributes of Belvedere Community Regional Park on either a temporary or permanent basis.</p> <p>Vibration: The construction and operation of the elevated segment of the LRT facility on support columns in the center of the right of way for Mednik Avenue would not result in ground-borne noise or vibration effects that could be felt by patrons in, or otherwise affect patrons of, Belvedere Community Regional Park. As a result, the construction and operation of the elevated segment of the LRT facility west of Belvedere Community Regional Park would not interfere with the protected activities, features, and attributes of Belvedere Community Regional Park on either a temporary or permanent basis.</p> <p>Visual Resources: Existing views from the western part of Belvedere Community Regional Park include views of Mednik Avenue, and residential and non-residential uses on the west side of Mednik Avenue. Traffic on Mednik Avenue would be approximately 20 feet closer to viewers in Belvedere Community Regional Park, and the elevated LRT facility would be an additional urban feature in views from Belvedere Community Regional Park. The changes in views from Belvedere Community Regional Park as a result of the LRT Alternative are not considered adverse because, as an active use park, patrons of Belvedere Community Regional Park do not visit Belvedere Community Regional Park to view areas outside Belvedere Community Regional Park and are not likely to be particularly sensitive to views of Belvedere Community Regional Park property.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of Belvedere Community Regional Park because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that park.</p>
<p>Los Angeles County CSS-Centro Maravilla Service Center 4716 East Cesar E. Chavez Avenue</p> <p>Owner/Operator: Los Angeles County</p> <p>Description: The Centro Maravilla Service Center is a multi-purpose facility that provides a range of educational, social, and recreational services and activities, comprehensive information and referrals, and translation services.</p> <p>Distance: This Service Center is approximately:</p> <ul style="list-style-type: none"> • 785 feet from the temporary impact area for the aerial 	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this Service Center from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, this Service Center would not experience temporary construction or long-term operation air quality effects under the LRT Alternative.</p> <p>Noise: Based on the distance of this Service Center from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, this Service Center would not experience temporary construction or long-term operation noise effects under the LRT Alternative.</p>

TABLE 3.4.1:

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Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>LRT facility;</p> <ul style="list-style-type: none"> • 820 feet from the nearest part of the aerial LRT facility; and • 1,810 feet from the nearest station (Civic Center Station). 	<p>Traffic: Because the local streets that provide access to this Service Center are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations, this Service Center would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative.</p> <p>Ground-Borne Noise and Vibration: The construction of the aerial LRT facility would not result in any vibration effects and, therefore, would not result in those types of short-term effects on this Service Center. Based on the distance of this Service Center from the operations in the LRT Alternative, this Service Center would not experience ground-borne noise or vibration effects during the operations of the LRT Alternative.</p> <p>Visual Resources: Based on the distance of this Service Center from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, this Service Center would not experience temporary construction or long-term operation visual effects under the LRT Alternative.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of the recreation resources at the Los Angeles County CSS-Centro Maravilla Service Center because it would not result in proximity impacts on those resources.</p>
<p>Recreation Resources at Alfonso Perez Special Education Center (elementary and secondary) 4540 Michigan Avenue</p> <p>Owner/Operator: Los Angeles Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,850 feet from the temporary impact area for the nearest part of the aerial LRT facility; • 1,880 feet from the permanent impact area and the nearest part of the aerial LRT facility; and • 2,100 feet from the nearest station (Civic Center Station). 	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the LRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the LRT Alternative.</p> <p>Traffic: Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative.</p> <p>Ground-Borne Noise and Vibration: The construction of the aerial LRT facility would not result in any vibration effects and, therefore, would not result in those types of short-term effects on the recreation resources at this school. Based on the distance of the recreation resources at this school from the operations in the LRT</p>

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Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>Alternative, the recreation facilities at this school would not experience ground-borne noise or vibration effects during operation of the LRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the LRT Alternative.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of the recreation uses at the Alfonso Perez Special Education Center because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at Brooklyn Avenue Elementary School (K to 8th) 4620 East Cesar E. Chavez Avenue</p> <p>Owner/Operator: Los Angeles Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,400 feet from the temporary impact area for the aerial LRT facility; • 1,425 feet from the nearest part of the aerial LRT facility; and • 2,100 feet from the nearest station (Civic Center Station). 	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the LRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the LRT Alternative.</p> <p>Traffic: Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative.</p> <p>Ground-Borne Noise and Vibration: The construction of the aerial LRT facility would not result in any vibration effects and, therefore, would not result in those types of short-term effects on the recreation resources at this school. Based on the distance from the operations in the LRT Alternative, the recreation facilities at this school would not experience ground-borne noise or vibration effects during the operations of the LRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the LRT Alternative.</p>

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LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>Summary: In summary, the LRT Alternative would not cause a constructive use of the recreation resources at Brooklyn Avenue Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at City Terrace Elementary School (K to 5th) 4350 City Terrace Drive</p> <p>Owner/Operator: Los Angeles Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,800 feet from the temporary impact area and the nearest part of the aerial LRT facility; and • 2,800 feet from the nearest station (Civic Center Station). 	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the LRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the LRT Alternative.</p> <p>Traffic: Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative.</p> <p>Ground-Borne Noise and Vibration: The construction of the aerial LRT facility would not result in any vibration effects and, therefore, would not result in those types of short-term effects on the recreation resources at this school. Based on the distance from the operations in the LRT Alternative, the recreation facilities at this school would not experience ground-borne noise or vibration effects during the operations of the LRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the LRT Alternative.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of the recreation resources at City Terrace Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at David Wark Griffith Middle School (6th to 8th) 4765 East Fourth Street</p>	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of LRT Alternative improvements (aerial</p>

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Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Owner/Operator: Los Angeles Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> 915 feet from the southern end of the aerial LRT facility and the nearest station (Civic Center Station). 	<p>facility and station) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the LRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of LRT Alternative improvements (aerial facility and station) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the LRT Alternative.</p> <p>Traffic: Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative.</p> <p>Ground-Borne Noise and Vibration: The construction of the aerial LRT facility would not result in any vibration effects and, therefore, would not result in those types of short-term effects on the recreation resources at this school. Based on the distance of this school from the operations in the LRT Alternative, the recreation facilities at this school would not experience ground-borne noise or vibration effects during the operations of the LRT Alternative.</p> <p>Visual Resources: Based on the distance of the recreation resources at this school from the nearest construction of LRT Alternative improvements (aerial facility and station) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the LRT Alternative.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of the recreation resources at David Wark Griffith Middle School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at Morris K. Hamasaki Elementary School (K to 6th) 4865 East First Street Owner/Operator: Los Angeles Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> 470 feet from the temporary impact area for the aerial LRT facility; 	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of LRT Alternative improvements (aerial facility and station) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the LRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of LRT Alternative improvements (aerial facility and station) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise</p>

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<ul style="list-style-type: none"> • 690 feet from the nearest part of the aerial LRT facility; and • 1,000 feet from the nearest station (Civic Center Station). 	<p>effects under the LRT Alternative.</p> <p>Traffic: Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative.</p> <p>Ground-Borne Noise and Vibration: The construction of the aerial LRT facility would not result in any vibration effects and, therefore, would not result in those types of short-term effects on the recreation resources at this school. Based on the distance of the recreation resources at this school from the operations in the LRT Alternative, the recreation facilities at this school would not experience ground-borne noise or vibration effects during the operations of the LRT Alternative.</p> <p>Visual Resources: Based on the distance of the recreation resources at this school from the nearest construction of LRT Alternative improvements (aerial facility and station) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the LRT Alternative.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of the recreation resources at Morris K. Hamasaki Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<i>EL SERENO (COMMUNITY IN THE CITY OF LOS ANGELES)</i>	
<p>El Sereno Arroyo Playground 5520 Concord Avenue</p> <p>Owner/Operator: City of Los Angeles</p> <p>Description: This 1-acre park provides grassy hills, a playground, a Fitness Zone for adults, walking paths, picnic tables, mosaics, decorative fencing, and a garden. The park, which opened in December 2012, includes safety features such as fences with gates that lock automatically when the park is closed, solar powered security cameras, and lighting. The park is located on land owned by Caltrans and provided to the City for use as a park for a lease period of 25 years.</p> <p>Distance: This park is approximately:</p>	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of LRT Alternative tunnel improvements and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the LRT Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of LRT Alternative tunnel improvements and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the LRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, this park would not experience temporary construction or long-term</p>

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<ul style="list-style-type: none"> • 300 feet from the zone of disturbance for the nearest improvement in the LRT Alternative; • 335 feet from the tunnel alignment; • 500 feet from the nearest part of the LRT maintenance yard; and • 3,560 feet from the nearest station (Alhambra Station). <p>The land on which this playground is located is owned by the State of California (Caltrans) and is leased to the City of Los Angeles for the playground use. Under the lease agreement (January 23, 2012), “It is agreed and understood, the creation of a publicly accessible park by this agreement does not create a public park within the meaning of Section 4(f)...said park is specifically exempt from the application of Section 4(f).” As a result, the El Sereno Arroyo Playground would not be subject to the requirements for approval under Section 4(f). However, this playground was included in this analysis to assess the potential for direct and indirect adverse impacts on this playground by the LRT Alternative. The inclusion of this playground in this analysis does not trigger the requirements for approval under Section 4(f).</p>	<p>operation traffic and transportation effects under the LRT Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of this park from the tunnel construction and operations in the LRT Alternative, this park would not experience ground-borne noise or vibration effects during the construction and operations of the LRT Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the LRT Alternative.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of El Sereno Arroyo Playground because it would not result in proximity impacts on that playground.</p>
<p>Recreation Resources at the Billie Jean King Sports Complex at California State University-Los Angeles (Cal State LA) 5151 State University Drive</p> <p>Owner/Operator: The California State University System</p> <p>Distance: This Sports Center is:</p> <ul style="list-style-type: none"> • Adjacent to the right of way limits for the Cal State LA Station and parking area for the Cal State LA Station, and to the temporary impact area for the aerial LRT facility. 	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>The permanent right of way and the temporary disturbance areas will be adjacent to, but not encroach into, the part of the Cal State LA property occupied by the Billie Jean King Sports Complex.</p> <p>Air Quality: Construction of the improvements in the LRT Alternative in the vicinity of this Sports Complex could result in short-term dust and equipment emissions that could extend into the Sports Complex property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of Los Angeles. Compliance with those measures during construction of the LRT Alternative facilities in the vicinity of the Sports Complex would substantially reduce the short-term air quality effects on the Sports Complex.</p> <p>Operation of the LRT Alternative in 2025 would result in reduced regional vehicle emissions compared to existing 2012 and 2025 No Build Alternative conditions. Operation of the LRT Alternative in 2035 would result</p>

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	<p>in reduced regional vehicle emissions compared to existing 2012 and 2035 No Build Alternative conditions. Operation of the LRT Alternative in 2025 and 2035 would result in reductions in MSAT emissions compared to existing 2012 conditions. In 2025, the LRT Alternative would result in no change or minor reductions or increases in MSAT emissions (depending on the individual MSAT pollutants) compared to 2025 No Build Alternative conditions. In 2035, the LRT Alternative would result in reduced MSAT emissions (depending on the individual MSAT pollutants) compared to the 2035 No Build conditions. Operation of the LRT Alternative would result in reduced GHG emissions in 2025 and 2035, compared to existing 2012, and No Build Alternative conditions. As a result, operation of the LRT Alternative would not result in adverse air quality impacts on the Billie Jean King Sports Complex.</p> <p>Noise: Construction of the improvements in the LRT Alternative in the vicinity of this Sports Complex could result in short-term noise levels that could impact the Sports Complex. Those construction activities would be required to comply with the City of Los Angeles Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the LRT Alternative facilities in the vicinity of the Sports Complex would substantially reduce the short-term noise effects on the Sports Complex.</p> <p>The recreation uses at the Sports Complex are active uses. The 2035 noise level during operation of the LRT Alternative improvements in the vicinity of the Sports Complex would be 53.1 dBA. Because the future predicted noise level at this sports complex under the LRT Alternative (53.1 dBA) is less than the 67 dBA NAC for activity category C uses, the operation of the LRT Alternative would not result in long-term noise impacts on the Sports Complex.</p> <p>Traffic: Construction of the improvements in the LRT Alternative adjacent to this Sports Complex could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the LRT Alternative would not result in short-term adverse impacts related to traffic and transportation at this Sports Complex. In the long term, students, faculty, and visitors will be able to access the recreation uses at the Sports Complex from Circle Drive the same as under existing conditions. Pedestrian and vehicle access to the Sports Complex will be the same as under existing conditions during operation of the LRT Alternative.</p> <p>Ground-Borne Noise and Vibration: Because the Sports Complex is not a very sensitive receptor (e.g., a residence or a performing arts center), potential ground-borne noise and vibration associated with the construction and operation of the LRT Alternative adjacent to the Sports Complex would not result in adverse effects on the recreation facilities at this Sports Complex.</p> <p>Visual Resources: The closest parts of the Billie Jean King Sports Complex to the proposed light rail alignment and station are tennis courts, the Jesse Owens track and field, and a baseball diamond. Patrons of these types</p>

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	<p>of recreation uses would typically not use these recreation facilities to view land uses outside the recreation facility and, therefore, are not considered sensitive viewers. The patrons of these recreation uses already have views of urban land uses and structures, so the addition of the light rail line and station would not substantially change the character of views from this facility. As a result, the LRT Alternative improvements would not result in temporary construction or long-term operation visual effects at the Billie Jean King Sports Complex.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of the Billie Jean King Sports Complex because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that sports complex.</p>
<p>Recreation Resources at Sierra Vista Elementary School (K to 6th) 4342 Alpha Street</p> <p>Owner/Operator: Los Angeles Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 2,155 feet from the zone of disturbance limits for the nearest part of the LRT Alternative tunnel; • 2,165 feet from the nearest part of the LRT Alternative tunnel; and • 4,000 feet from the nearest part of the parking lot for the Huntington Station. 	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of the recreation resources at this school from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the LRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the LRT Alternative.</p> <p>Traffic: Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance from the tunnel construction and operations in the LRT Alternative, the recreation facilities at this school would not experience ground-borne noise or vibration effects during the construction and operations of the LRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction of any LRT Alternative improvements and LRT Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the LRT Alternative.</p> <p>Fair Oaks Avenue Haul Route³: Sierra Vista Elementary School is approximately 0.4 mile west of the haul route</p>

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	<p>alignment on Fair Oaks Avenue. Based on the distance from that haul route and the presence of intervening land uses, the use of Fair Oaks Avenue as a spoils material haul route would not result in short-term air quality, noise, traffic, or visual effects on the recreation resources at this school. The Fair Oaks Avenue haul route would not be used during the operation of the LRT Alternative and, therefore, there would be no long-term impacts on the recreation resources at Sierra Vista Elementary School as a result of the use of that haul route.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of the recreation resources at Sierra Vista Elementary School because it would not result in proximity impacts on those recreation resources.</p>
CITY OF IRWINDALE (ALONG THE LRT SPOILS DISPOSAL HAUL ROUTES)³	
<p>Santa Fe Dam Recreation Area 15501 East Arrow Highway</p> <p>Owner/Operator: Los Angeles County Department of Parks and Recreation</p> <p>Description: Santa Fe Dam Recreational Area, at the foot of the San Gabriel Mountains, is an 836-acre facility with a 70-acre lake (Santa Fe Flood Control Basin) with year-round fishing and non-motorized watercraft usage. During the summer, the recreation area includes a 5-acre chlorinated swim beach and a children’s water play area. The recreation area is home to many protected native plants and animals. A Nature Center operated and staffed by volunteers of the San Gabriel Mountains Regional Conservancy offers educational, interpretive and walking tours throughout the year. The recreation area also includes bicycle, walking, and equestrian trails; a snack bar; organized youth camping; and a bait and tackle shop.</p> <p>Approximately \$72,100 of L&WCF Act funds were used to develop support facilities at the Santa Fe Dam Recreation Area in FY 1999-2000. As a result, these improvements at the Santa Fe Dam Recreation Area are subject to the requirements of Section 6(f).</p> <p>Distance: The nearest part of the recreation area is</p>	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: These haul routes would be used only during construction of the LRT Alternative. The operation of trucks hauling spoils material to the disposal site and empty trucks returning to the construction sites could result in short-term dust and equipment emissions that could extend into the recreation area property. However, there are extensive requirements for the control of dust and equipment emissions during construction, including along haul routes, in the South Coast Air Basin. Compliance with those measures during the use of the spoils disposal haul routes for the LRT Alternative in the vicinity of the Santa Fe Dam Recreation Area would substantially reduce the short-term air quality effects of trucks operating on the haul routes on the recreation area. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term air quality impacts on the recreation area associated with the haul routes.</p> <p>Noise: During construction of the LRT Alternative, debris from the construction activities will be taken to off-site disposal sites. Typically, haul trucks (dump trucks) are loaded on the site and then follow a specific haul route to the disposal destination. In the City of Irwindale, the haul route will pass by the Santa Fe Dam Recreation Area. The number of haul truck trips will be small compared to the daily traffic volumes on East Arrow Highway. While a pass-by of a haul truck may be noticed due to the use of air brakes or the acceleration of the truck engine, the overall peak-hour and daily noise levels are not expected to increase substantially as a result of haul route traffic during construction of the LRT Alternative. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term noise impacts on the recreation area associated with the haul routes.</p> <p>Traffic: As noted above, the haul route traffic during construction of the LRT alternative would be only a small amount of the daily traffic volumes on East Arrow Highway. As a result, that haul route traffic would not adversely affect travel to/from and access to/from the Santa Fe Dam Recreation Area. The haul routes would</p>

TABLE 3.4.1:

LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>immediately adjacent to the north side of Arrow Highway, from approximately Azusa Canyon Road to I-605. No other activities or facilities in the LRT Alternative are located in the vicinity of this recreation area.</p>	<p>not be used during the operation of the LRT Alternative; therefore, there would be no long-term traffic impacts on the recreation area associated with the haul routes.</p> <p>Visual Resources: Trucks using the haul routes will be similar to trucks currently using Arrow Highway and Live Oak Avenue. Patrons of the recreation area currently have views of traffic, including trucks on Arrow Highway and I-605. As a result, views from within this recreation area are not an important feature of this recreation area. During the use of the haul routes, visitors to the recreation area will have views of haul trucks on I-605 and Arrow Highway similar to existing views of traffic on those roads. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term visual impacts on the recreation area associated with the haul routes.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of the Santa Fe Dam Recreation Area because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that recreation area.</p> <p>Section 6(f): Because the LRT Alternative would not require the permanent acquisition of any land from the Santa Fe Dam Recreation Area, the requirements of Section 6(f) would not apply to this Recreation Area.</p>
<p>Irwindale Park and Jardin de Roca Park/Irwindale Skatepark (these facilities are across the street from each other)</p> <ul style="list-style-type: none"> • <i>Irwindale Park:</i> 5050 North Irwindale Avenue • <i>Jardin de Roca Park/Irwindale Skatepark:</i> 5051 North Irwindale Avenue <p>Owner/Operator: City of Irwindale</p> <p>Descriptions:</p> <ul style="list-style-type: none"> • <i>Irwindale Park:</i> This park includes a swimming pool, the Alfred F. Herrera softball field, playground, picnic shelter, picnic areas, outdoor basketball court, volleyball sand court, and the Dan Diaz Recreation Center. • <i>Jardin de Roca Park/Irwindale Skatepark:</i> This skatepark includes a tear-drop-shaped concrete bowl and a “street” section with ledges, stairs, rails, and banks. The park also includes tennis courts, a tot lot, walking path, picnic areas, and outdoor basketball 	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at these resources.</p> <p>Air Quality: Based on the distance of these parks from the nearest haul route for the LRT Alternative, and the presence of intervening land uses, these parks would not experience short-term air quality effects as a result of the use of the haul routes under the LRT Alternative. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term air quality impacts on these parks associated with the haul routes.</p> <p>Noise: Based on the distance of these parks from the nearest haul route for the LRT Alternative, and the presence of intervening land uses, these parks would not experience short-term noise effects as a result of the haul routes under the LRT Alternative. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term noise impacts on these parks associated with the haul routes.</p> <p>Traffic: Because the streets that provide access to these parks would not be used by haul trucks during construction of the LRT Alternative, these parks would not experience temporary traffic effects as a result of haul route traffic. The haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term traffic impacts on these parks as a result of the use of the haul routes.</p> <p>Visual Resources: Based on the distance of these parks from the haul route for the LRT Alternative, and the presence of intervening land uses, these parks would not experience short-term visual effects as a result of</p>

TABLE 3.4.1:

LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>courts.</p> <p>Distance: The nearest parts of these parks are 0.2 mile south of the haul route on Arrow Highway.</p>	<p>the use of the haul routes under the LRT Alternative.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of Irwindale Park and Jardin de Roca Park/Irwindale Skatepark because it would not result in proximity impacts on those facilities.</p>
CITY OF MONTEREY PARK	
<p>Highlands Park 400 Casuda Canyon Drive</p> <p>Owner/Operator: City of Monterey Park</p> <p>Description: This 8.3-acre park adjacent to Monterey Highlands School provides lighted tennis courts, a children's area, open and shady space, restrooms, and on-site parking.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 2,490 feet from the nearest part of the aerial LRT facility and the temporary disturbance limits for the LRT Alternative improvements; and • 3,900 feet from the nearest station (CSULA Station). 	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the LRT Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the LRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, this park would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative.</p> <p>Ground-Borne Noise and Vibration: The construction of the aerial LRT facility would not result in any vibration effects and, therefore, would not result in those types of short-term effects on this park. Based on the distance of this park from the operations in the LRT Alternative, this park would not experience ground-borne noise or vibration effects during the operations of the LRT Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the LRT Alternative.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of Highlands Park because it would not result in proximity impacts on that park.</p>
<p>Pine Tree Park 2167 Arriba Drive</p> <p>Owner/Operator: City of Monterey Park</p>	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, this</p>

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LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Description: This 0.5-acre neighborhood park provides a picnic table and a children's play area.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 1,935 feet from the maximum disturbance limits for the LRT Alternative and from the nearest part of the aerial LRT facility; and • 3,370 feet from the nearest station (Floral Station). 	<p>park would not experience temporary construction or long-term operation air quality effects under the LRT Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the LRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, this park would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative.</p> <p>Ground-Borne Noise and Vibration: The construction of the aerial LRT facility would not result in any vibration effects and, therefore, would not result in those types of short-term effects on this park. Based on the distance of this park from the operations in the LRT Alternative, this park would not experience ground-borne noise or vibration effects during the operations of the LRT Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of LRT Alternative improvements (aerial facility) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the LRT Alternative.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of Pine Tree Park because it would not result in proximity impacts on that park.</p>
CITY OF PASADENA	
<p>Allendale Park 1130 South Marengo Avenue</p> <p>Owner/Operator: City of Pasadena</p> <p>Description: This 2.9-acre park provides a lighted tennis court, a lighted softball diamond/multi-purpose field with bleachers, playground equipment, on-site parking, picnic tables, and drinking fountains. There is a public library within the boundary of this park.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 1,325 feet from the zone of disturbance for the 	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the LRT Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the LRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT</p>

TABLE 3.4.1:

LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>nearest part of the tunnel in the LRT Alternative and from the nearest part of the LRT Alternative tunnel; and</p> <ul style="list-style-type: none"> • 2,400 feet from the nearest station (Fillmore Station). 	<p>Alternative stations during operations, this park would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of this park from the tunnel construction and operations in the LRT Alternative, this park would not experience ground-borne noise or vibration effects during the construction and operations of the LRT Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the LRT Alternative.</p> <p>Fair Oaks Avenue Haul Route³: Allendale Park is approximately 0.3 mile east of the haul route alignment on Fair Oaks Avenue. Based on the distance of this park from that haul route and the presence of intervening land uses, the use of Fair Oaks Avenue as a spoils material haul route would not result in short-term air quality, noise, traffic, or visual effects on this park. The Fair Oaks Avenue haul route would not be used during the operation of the LRT Alternative; therefore, there would be no long-term impacts on Allendale Park as a result of the use of that haul route.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of Allendale Park because it would not result in proximity impacts on that park.</p>
<p>Central Park 275 South Raymond Avenue</p> <p>Owner/Operator: City of Pasadena</p> <p>Description: This 9.2-acre park provides 6 horseshoe pits, 2 lawn bowling courts, an open area, playground equipment, walkway lighting, restrooms, picnic tables, a rose garden, benches, and a clubhouse for the Pasadena Lawn Bowling Club, an affiliate of the American Lawn Bowling Association.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 1,430 feet from the zone of disturbance for the nearest part of the tunnel in the LRT Alternative; and • 1,505 feet from the nearest part of the LRT Alternative tunnel and the nearest station (Fillmore Station). 	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the LRT Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the LRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, this park would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of this park from the tunnel construction and operations in the LRT Alternative, this park would not experience ground-borne noise or vibration effects</p>

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>during the construction and operations of the LRT Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the LRT Alternative.</p> <p>Fair Oaks Avenue Haul Route³: Central Park is immediately northeast of the haul route alignment on Fair Oaks Avenue. During construction of the LRT Alternative, debris from the construction activities will be taken to off-site disposal sites. Typically, haul trucks (dump trucks) are loaded on the site and then follow a specific haul route to the disposal destination. In the City of Pasadena, the haul route will pass by Central Park. The number of haul truck trips will be small compared to the daily traffic volumes on Fair Oaks Avenue. While a pass-by of a haul truck may be noticed due to the use of air brakes or the acceleration of the truck engine, the overall peak-hour and daily noise levels are not expected to increase substantially as a result of haul route traffic during construction of the LRT Alternative. The Fair Oaks Avenue haul route would not be used during the operation of the LRT Alternative; therefore, there would be no long-term impacts on Central Park as a result of the use of that haul route.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of Central Park because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that park.</p>
<p>Singer Park California Boulevard/St. John Avenue</p> <p>Owner/Operator: City of Pasadena</p> <p>Description: This 2.9-acre neighborhood park includes an open grass area with a number of well-established trees and rose beds, a children’s play area, picnic tables, benches, restrooms, and a drinking fountain.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 1,940 feet from the zone of disturbance for the nearest part of the tunnel in the LRT Alternative; and • 2,020 feet from the nearest part of the LRT Alternative tunnel and from the nearest station (Fillmore Station). 	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the LRT Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the LRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT stations during operations, this park would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of this park from the tunnel construction and operations in the LRT Alternative, this park would not experience ground-borne noise or vibration effects</p>

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>during the construction and operations of the LRT Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the LRT Alternative.</p> <p>Fair Oaks Avenue Haul Route³: Singer Park is approximately 0.1 mile southwest of the haul route alignment on California Avenue. Based on the distance of this park from that haul route and the presence of intervening land uses, the use of California Avenue as part of the Fair Oaks Avenue haul route would not result in short-term air quality, noise, traffic, or visual effects on this park. The Fair Oaks Avenue haul route would not be used during the operation of the LRT Alternative; therefore, there would be no long-term impacts on Allendale Park as a result of the use of that haul route.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of Singer Park because it would not result in proximity impacts on that park.</p>
<p>Recreation Resources at Blair High School (6th to 12th) 1201 South Marengo Avenue</p> <p>Owner/Operator: Pasadena Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,440 feet from the zone of disturbance for the nearest part of the tunnel in the LRT Alternative; • 1,450 feet from the nearest part of the tunnel in the LRT Alternative; and • 2,400 feet from the nearest station (Fillmore Station). 	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the LRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the LRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this school are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance from the tunnel construction and operations in the LRT Alternative, the recreation facilities at this school would not experience ground-borne noise or vibration effects during the construction and operations of the LRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation</p>

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LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>facilities at this school would not experience temporary construction or long-term operation visual effects under the LRT Alternative.</p> <p>Fair Oaks Avenue Haul Route³: Blair High School is approximately 0.25 mile east of the haul route alignment on Fair Oaks Avenue. Based on the distance of the recreation resources at this school from that haul route and the presence of intervening land uses, the use of Fair Oaks Avenue as a spoils material haul route would not result in short-term air quality, noise, traffic, or visual effects on those resources. The Fair Oaks Avenue haul route would not be used during the operation of the LRT Alternative; therefore, there would be no long-term impacts on the recreation resources at Blair High School as a result of the use of that haul route.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of the recreation resources at Blair High School because it would not result in proximity impacts on those recreation resources.</p>
CITY OF SOUTH PASADENA	
<p>Eddie Park and House 2017 Edgewood Drive</p> <p>Owner/Operator: City of South Pasadena</p> <p>Description: This 0.75-acre park includes the historic Eddie House, a group barbeque area, a playground, and an open lawn area. The park site is surrounded by a 3-foot-high brick wall. The Eddie House and grounds were donated to the City by the Eddie family. The 2,200-square-foot house is an example of Transitional Craftsman architecture. The first floor of the house is available as a meeting space and includes a kitchen and restrooms.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 2,340 feet from the zone of disturbance for the nearest part of the tunnel in the LRT Alternative; • 2,450 feet from the nearest part of the LRT Alternative tunnel; and • 1.5 miles from the nearest station (Huntington Station). 	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the LRT Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the LRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, this park would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of this park from the tunnel construction and operations in the LRT Alternative, this park would not experience ground-borne noise or vibration effects during the construction and operations of the LRT Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the LRT Alternative.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of Eddie Park and House</p>

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LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Garfield Park 1750 Mission Street</p> <p>Owner/Operator: City of South Pasadena</p> <p>Description: This 7.6-acre park provides tennis courts, a playground, and a garden area.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 590 feet from the zone of disturbance for the nearest part of the tunnel in the LRT Alternative; and • 780 feet from the nearest part of the LRT Alternative tunnel and from the nearest station (South Pasadena Station). 	<p>because it would not result in proximity impacts on those recreation facilities.</p> <p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the LRT Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the LRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, this park would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of this park from the tunnel construction and operations in the LRT Alternative, this park would not experience ground-borne noise or vibration effects during the construction and operations of the LRT Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the LRT Alternative.</p> <p>Fair Oaks Avenue Haul Route³: Garfield Park is approximately 0.25 mile east of the haul route alignment on Fair Oaks Avenue. Based on the distance of this park from that haul route and the presence of intervening land uses, the use of Fair Oaks Avenue as a spoils material haul route would not result in short-term air quality, noise, traffic, or visual effects on this park. The Fair Oaks Avenue haul route would not be used during the operation of the LRT Alternative; therefore, there would be no long-term impacts on Garfield Park as a result of the use of that haul route.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of Garfield Park because it would not result in proximity impacts on that park.</p>

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LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Library Park 1102 Oxley Street</p> <p>Owner/Operator: City of South Pasadena</p> <p>Description: This 3.2-acre park provides tennis courts, a half basketball court, a playground, and a baseball field.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 1,430 feet from the zone of disturbance for the nearest part of the tunnel in the LRT Alternative; and • 1,500 feet from the nearest part of the LRT Alternative tunnel and the nearest station (South Pasadena Station). 	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the LRT Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the LRT Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, this park would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of this park from the tunnel construction and operations in the LRT Alternative, this park would not experience ground-borne noise or vibration effects during the construction and operations of the LRT Alternative.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the LRT Alternative.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of Library Park because it would not result in proximity impacts on that park.</p>
<p>War Memorial Park 435 Fair Oaks Avenue</p> <p>Owner/Operator: City of South Pasadena</p> <p>Description: This 1.8-acre park includes the two-story, 12,000-square-foot War Memorial Building that was constructed in 1921 and is a City of South Pasadena cultural heritage landmark. The War Memorial Building was constructed on the site of the former Oak Lawn Park. The large multipurpose room on the second floor is used for events (e.g., banquets and meetings) for large groups</p>	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest surface construction and operation of any LRT Alternative improvements, this park would not experience short- or long-term air quality effects under the LRT Alternative.</p> <p>Noise: Construction of the improvements in the LRT Alternative adjacent to this park could result in short-term noise levels that could impact the park. Those construction activities would be required to comply with the City of South Pasadena and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the LRT Alternative facilities adjacent to this park would substantially</p>

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>and includes a kitchen. The first floor contains smaller meeting rooms, storage space, and restrooms. The park also includes a landscaped memorial garden and on-site parking.</p> <p>Distance: This park is:</p> <ul style="list-style-type: none"> • Adjacent to the zone of disturbance and above the below grade LRT Alternative tunnel; • No at-grade construction in the vicinity of this park; and • Approximately 1,630 feet from the nearest station (South Pasadena Station). 	<p>reduce the short-term noise effects on War Memorial Park.</p> <p>The LRT alignment would be in tunnel in the vicinity of War Memorial Park and the operation of the LRT Alternative in that tunnel would not increase noise levels at this park. As a result, the operation of the LRT Alternative would not result in long-term noise impacts on War Memorial Park.</p> <p>Traffic: Based on the distance of this park from the nearest surface construction and operation of any LRT Alternative improvements and because the LRT Alternative would not result in any permanent changes in access to/from this park, this park would not experience short- or long-term traffic and transportation effects under the LRT Alternative.</p> <p>Ground-Borne Noise and Vibration: Because War Memorial Park is not a very sensitive receptor (e.g., a residence or a performing arts center), potential ground-borne noise and vibration associated with the construction and operation of the LRT Alternative adjacent to War Memorial Park would not result in adverse effects on this resource.</p> <p>Visual Resources: Based on the distance of this park from the nearest surface construction and operation of any LRT Alternative improvements, this park would not experience short- or long-term visual effects under the LRT Alternative.</p> <p>Fair Oaks Avenue Haul Route³: War Memorial Park is immediately west of the haul route alignment on Fair Oaks Avenue. During construction of the LRT Alternative, debris from the construction activities will be taken to off-site disposal sites. Typically, haul trucks (dump trucks) are loaded on the site and then follow a specific haul route to the disposal destination. In the City of South Pasadena, the haul route will pass by War Memorial Park. The number of haul truck trips will be small compared to the daily traffic volumes on Fair Oaks Avenue. While a pass-by of a haul truck may be noticed due to the use of air brakes or the acceleration of the truck engine, the overall peak-hour and daily noise levels are not expected to increase substantially as a result of haul route traffic during construction of the LRT Alternative. The Fair Oaks Avenue haul route would not be used during the operation of the LRT Alternative; therefore, there would be no long-term impacts on War Memorial Park as a result of the use of that haul route.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of War Memorial Park because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that park.</p>

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Recreation Resources at Marengo Elementary School (K to 5th) 1400 Marengo Avenue</p> <p>Owner/Operator: South Pasadena Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,170 feet from the zone of disturbance for the nearest part of the tunnel in the LRT Alternative; • 1,180 feet from the nearest part of the tunnel in the LRT Alternative; and • 1,340 feet from the nearest station (South Pasadena Station) and the parking for that station. 	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the LRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the LRT Alternative.</p> <p>Traffic: Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance from the tunnel construction and operations in the LRT Alternative, the recreation facilities at this school would not experience ground-borne noise or vibration effects during the construction and operations of the LRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the LRT Alternative.</p> <p>Fair Oaks Avenue Haul Route³: Marengo Elementary School is approximately 0.5 mile southeast of the haul route alignment on Fair Oaks Avenue. Based on the distance of the recreation resources at this school from that haul route and the presence of intervening land uses, the use of Fair Oaks Avenue as a spoils material haul route would not result in short-term air quality, noise, traffic, or visual effects on the recreation resources at this school. The Fair Oaks Avenue haul route would not be used during the operation of the LRT Alternative; therefore, there would be no long-term impacts on the recreation resources at Marengo Elementary School as a result of the use of that haul route.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of the recreation resources at Marengo Elementary School because it would not result in proximity impacts on those recreation resources.</p>

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Recreation Resources at South Pasadena High School (9th to 12th) 1401 Fremont Avenue</p> <p>Owner/Operator: South Pasadena Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,015 feet from the zone of disturbance for the nearest part of the tunnel in the LRT Alternative; • 1,025 feet from the nearest part of the tunnel in the LRT Alternative; and • 1,690 feet from the nearest station (Huntington Station) and the parking for that station. 	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the LRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the LRT Alternative.</p> <p>Traffic: Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance from the tunnel construction and operations in the LRT Alternative, the recreation facilities at this school would not experience ground-borne noise or vibration effects during the construction and operations of the LRT Alternative.</p> <p>Visual Resources: Based on the distance from the nearest construction of any LRT Alternative improvements and LRT Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the LRT Alternative.</p> <p>Fair Oaks Avenue and Fremont Avenue Haul Routes³: South Pasadena High School is approximately 0.5 mile southwest and 0.5 mile northwest of the haul route alignments on Fair Oaks Avenue and Fremont Avenue, respectively. Based on the distance of the recreation resources at this school from that haul route and the presence of intervening land uses, the use of Fair Oaks Avenue and Fremont Avenue as spoils material haul routes would not result in short-term air quality, noise, traffic, or visual effects on the recreation resources at this school. These haul routes would not be used during the operation of the LRT Alternative; therefore, there would be no long-term impacts on the recreation resources at South Pasadena High School as a result of the use of that haul route.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of the recreation resources at South Pasadena High School because it would not result in proximity impacts on those resources.</p>

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Recreation Resources at South Pasadena Middle School (6th to 8th) 1500 Fair Oaks Avenue</p> <p>Owner/Operator: South Pasadena Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 190 feet from the zone of disturbance for the nearest part of the tunnel in the LRT Alternative; • 200 feet from the nearest part of the tunnel in the LRT Alternative; and • 1,250 feet from the nearest station (Huntington Station). 	<p>The LRT Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the LRT Alternative.</p> <p>Noise: Based on the distance from the nearest construction of LRT Alternative improvements (tunnel) and LRT Alternative stations and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the LRT Alternative.</p> <p>Traffic: Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the LRT Alternative or by substantial volumes of trips to/from the nearest LRT Alternative stations during operations, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the LRT Alternative.</p> <p>Ground-Borne Noise and Vibration: Because South Pasadena Middle School is approximately 200 feet from the LRT Alternative and is not a very sensitive receptor (e.g., a residence or a performing arts center), potential ground-borne noise and vibration associated with the construction and operation of the LRT Alternative would not result in adverse effects on the recreation facilities at this school.</p> <p>Visual Resources: Based on the distance of this school from the nearest construction of any LRT Alternative improvements and LRT Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the LRT Alternative.</p> <p>Fremont Avenue Haul Route³: South Pasadena Middle School is approximately 0.5 mile northeast of the haul route alignment on Fremont Avenue. Based on the distance of the recreation resources at this school from that haul route and the presence of intervening land uses, the use of Fremont Avenue as a spoils material haul route would not result in short-term air quality, noise, traffic, or visual effects on this school. The Fremont Avenue haul route would not be used during the operation of the LRT Alternative; therefore, there would be no long-term impacts on the recreation resources at South Pasadena Middle School as a result of the use of that haul route.</p> <p>Summary: In summary, the LRT Alternative would not cause a constructive use of the recreation resources at South Pasadena Middle School because it would not result in proximity impacts on those recreation resources.</p>

Table footnotes are provided on the following page.

TABLE 3.4.1:
LRT Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
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Source: LSA Associates, Inc. (2014). Refer also to Chapter 5, References and Preparers, for a list of references used to research resources potentially protected under the requirements of Sections 4(f) and 6(f).

¹ Only resources within 0.5 mile of improvements in the LRT Alternative are evaluated in this table. Cities and communities that do not contain LRT Alternative improvements are not included in this table. Refer to Figure 3.4-1 for the locations of the resources discussed in this table.

² The following distances were measured to assess the potential for short-term proximity impacts on Section 4(f) resources under the LRT Alternative:

- **Zone of Potential Disturbance:** This is an area defined on the ground surface above subsurface areas that would be disturbed during construction of the tunnel segment of the LRT Alternative. The elevated segment of the LRT Alternative does not have a zone of potential disturbance.
- **Station Excavation Impact:** This is an area on the ground surface above a subsurface tunnel section where the surface features of a station would be constructed.
- **Temporary Impact:** This is an area on the ground surface that would be disturbed temporarily during construction of non-tunnel features of the LRT Alternative (e.g., the elevated segment, bridges, and the O&M buildings). Areas used for TCEs would be restored to their original or better condition prior to returning those areas to the property owners.

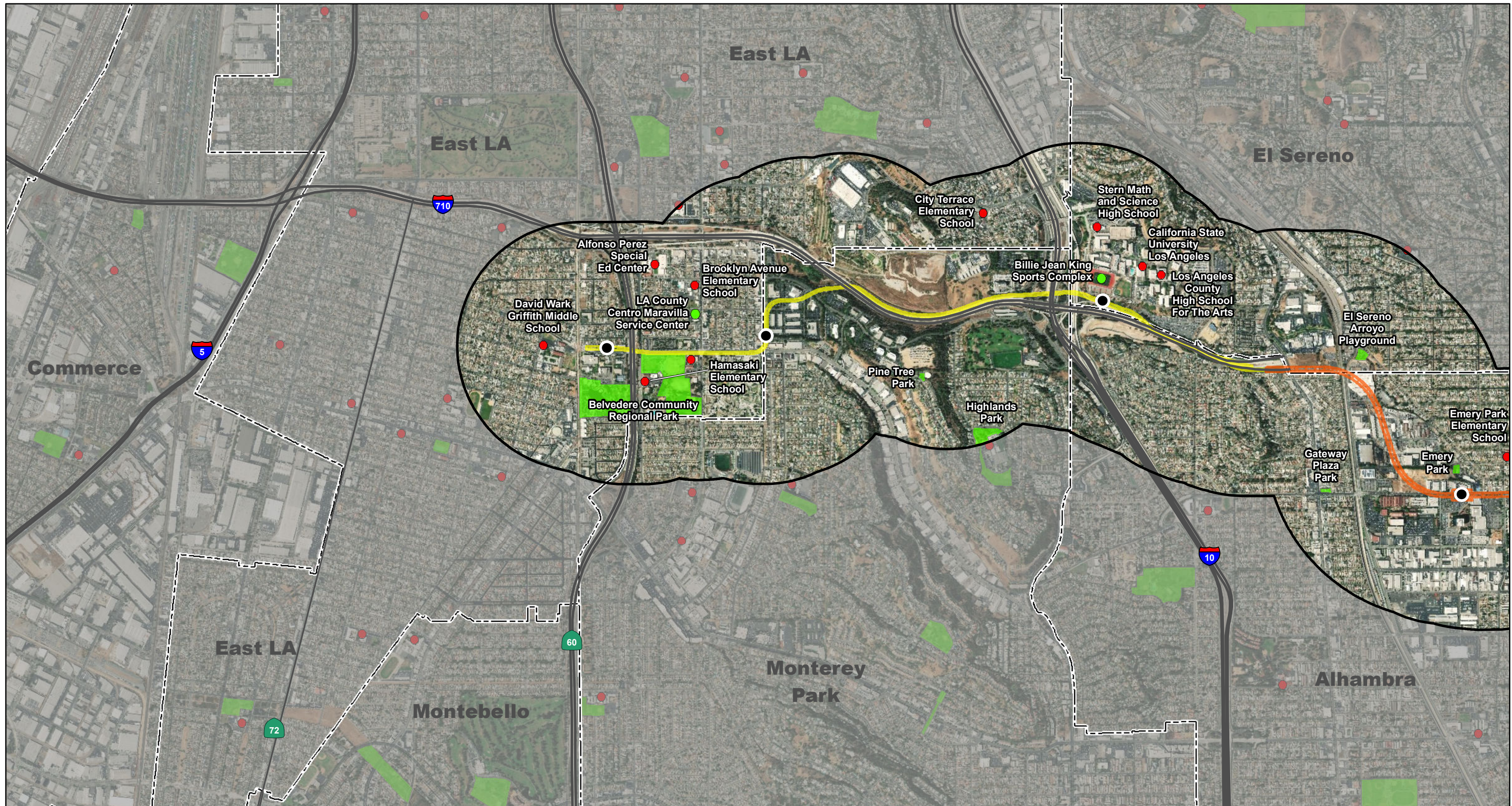
The following distances were measured to assess the potential for long-term proximity impacts on Section 4(f) resources under the LRT Alternative:

- **Permanent Impact:** These are areas on the ground surface that would be permanently incorporated in the project limits. They include parking areas, stations, the alignment of the elevated segment of the LRT Alternative, and the O&M buildings.
- **Aerial Alignment:** This is the alignment of the elevated segment of the LRT Alternative.
- **Tunnel Alignment:** This is the alignment of the tunnel segment of the LRT Alternative.

³ The preliminary routes for hauling spoils material generated during construction of the LRT Alternative tunnel include segments on Fair Oaks Avenue (from the northern tunnel portal) and Fremont Avenue (from the southern portal); on Arrow Highway and Live Oak Avenue (to/from I-605 at the disposal end of the haul trips), and Azusa Canyon Road (to access the Olive Pit) and Vincent Avenue (to access the Manning Pits). The haul routes will be used only during construction of the LRT Alternative tunnel.

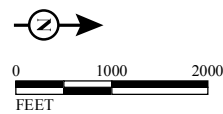
Caltrans = California Department of Transportation
 Cal State LA = California State University-Los Angeles
 dBA = A-weighted decibels
 FY = Fiscal Year
 GHG = greenhouse gas
 I-605 = Interstate 605
 K = Kindergarten
 L&WCF Act = Land and Water Conservation Fund Act
 LRT = Light Rail Transit
 MSAT = mobile source air toxics
 TCE = temporary construction easement
 TMP = Transportation Management Plan

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LEGEND

- LRT Alternative At and Above Grade Limits of Construction
- LRT Alternative Tunnel Section Limits of Construction
- LRT Station
- 0.5 Mile from the Project Improvements
- Public School with Recreation Resources
- Parks and Recreation
- City Boundary



SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)
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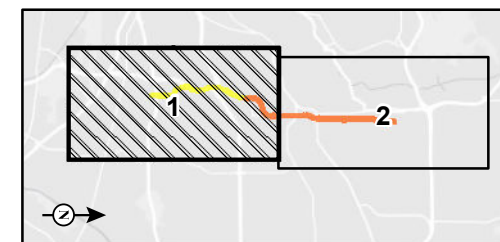
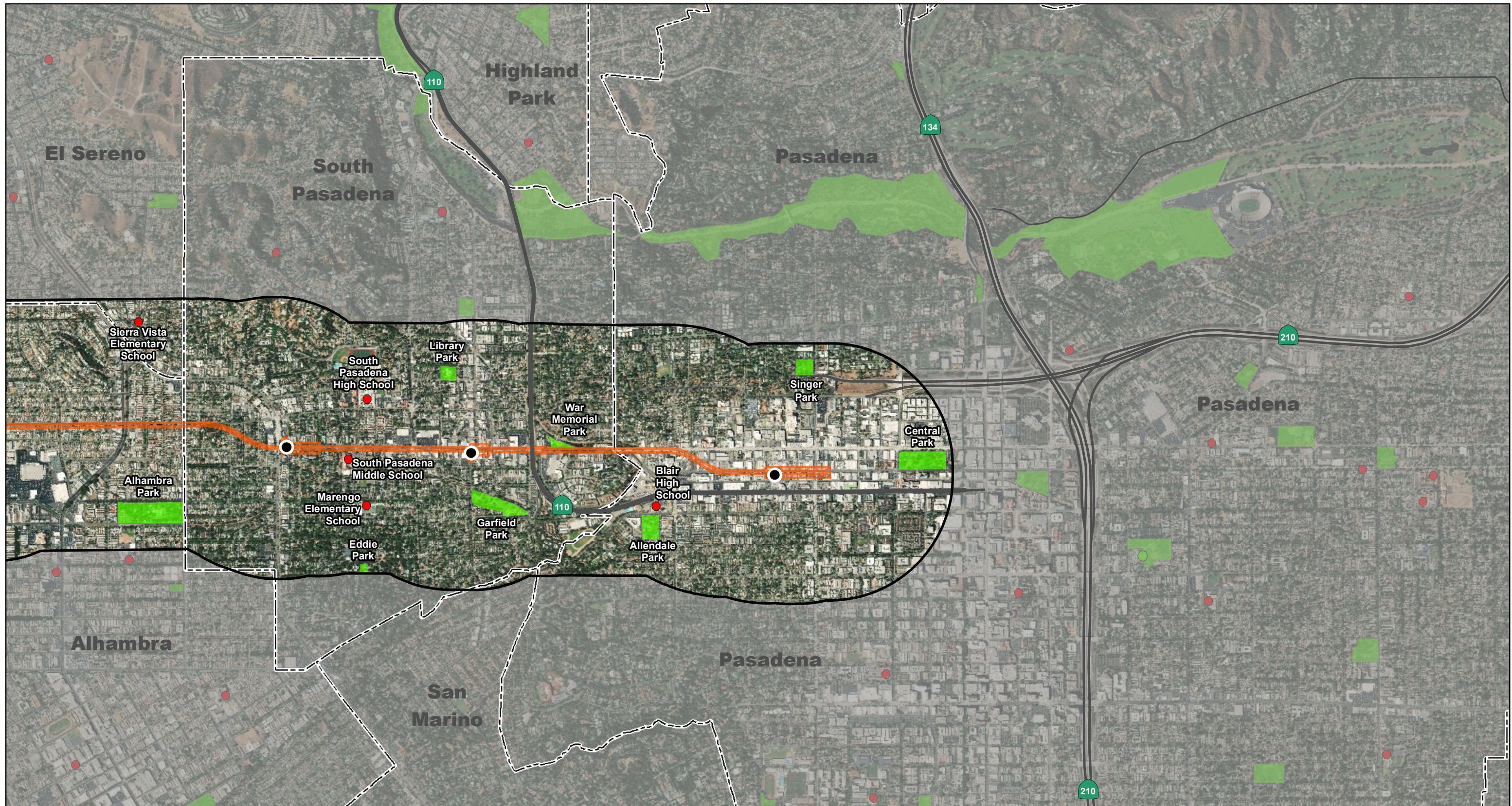


FIGURE 3.4-1
 Sheet 1 of 2

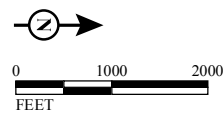
SR 710 North Project
 Resources within a Half-Mile of
 the LRT Alternative

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LEGEND

- LRT Alternative At and Above Grade Limits of Construction
- LRT Alternative Tunnel Section Limits of Construction
- LRT Station
- 0.5 Mile from the Project Improvements
- Public School with Recreation Resources
- Parks and Recreation
- City Boundary



SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)
 I:\CHM1105\GIS\MXD\EIR_EIS\App_B\LRT_SchoolsParksRec.mxd (7/8/2018)

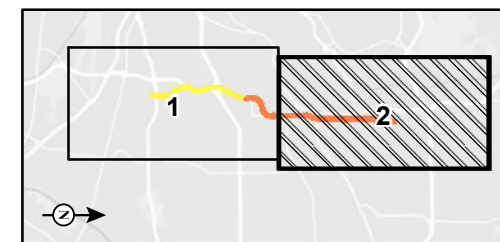


FIGURE 3.4-1
 Sheet 2 of 2

SR 710 North Project
 Resources within a Half-Mile of
 the LRT Alternative

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TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
CITY OF ALHAMBRA	
<p>Emery Park 2709 Mimosa Street</p> <p>Owner/Operator: City of Alhambra</p> <p>Description: This 0.7-acre park provides picnic tables, playground equipment, barbecues, an activity room, a kitchen facility, an open grass area, and restrooms.</p> <p>Approximately \$100,800 of L&WCF Act funds were used to construct picnic areas, a play area, restrooms, irrigation, landscaping, turf, parking, and lighting at this park in FY 1982/1983. As a result, these improvements at Emery Park are subject to the requirements for protection under Section 6(f).</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 2,065 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; • 2,120 feet from the nearest tunnel section improvements; • 2,475 feet from the nearest edge of the MDL and the right of way for the freeway segment improvements; and • 4,120 feet from the nearest tunnel portal (South Portal). 	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of tunnel section and freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of this park from the tunneling activities under the Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of Emery Park because it would not result in proximity impacts on that park.</p> <p>Section 6(f): Because the Freeway Tunnel Alternative would not require the permanent acquisition of any land from Emery Park, the requirements of Section 6(f) would not apply to this park.</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Gateway Plaza Park Northwest corner of West Valley Boulevard and South Fremont Avenue</p> <p>Owner/Operator: City of Alhambra</p> <p>Description: This approximately 0.5-park at the corner of Valley Boulevard and South Fremont Avenue welcomes visitors to the City with a Moorish-style arch that symbolizes Alhambra as the “Gateway to the San Gabriel Valley.” The park also includes landscaping and walkways.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 2,335 feet from the edge of the nearest TCE for the nearest freeway segment improvements • 2,380 feet from the nearest edge of right of way for the freeway segment improvements; • 2,415 feet from the edge of the MDL for the nearest freeway segment improvements; • 2,575 feet from the potential settlement zone above the tunnel segment and the nearest tunnel segment improvement; and • 2,770 feet from the nearest tunnel portal (South Portal). 	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by substantial volumes of trips to/from the construction areas and the tunnel portals, this park would not experience short or long-term traffic operations effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of this park from the tunneling activities under the Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of Gateway Plaza Park because it would not result in proximity impacts on that park.</p>
<p>Recreation Resources at Emery Park Elementary School (K to 8th) 2821 West Commonwealth Avenue</p> <p>Owner/Operator: Alhambra Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,920 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; 	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<ul style="list-style-type: none"> • 1,975 feet from the nearest tunnel section improvements; and • 4,940 feet from the nearest tunnel portal (South Portal). 	<p>construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to this recreation resource are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, the recreation facilities at this school would not experience temporary construction or long-term operation traffic effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance from the tunneling activities under the Freeway Tunnel Alternative, the recreation facilities at this school are not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at Emery Park Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p>CITY OF AZUSA (ALONG THE FREEWAY TUNNEL ALTERNATIVE SPOILS DISPOSAL HAUL ROUTES)³</p>	
<p>Valleydale Park 5525 North Lark Ellen Avenue</p> <p>Owner/Operator: Los Angeles County Department of Parks and Recreation</p> <p>Description: This park provides a wide range of amenities, including a baseball diamond, basketball court, children’s play area, community room, computer center, fitness zone, picnic shelter, senior center, splash pad, and a walking path</p> <p>Distance: This park is 0.5 mile from the haul routes on Arrow Highway and Vincent Avenue. No other activities or facilities in the Freeway Tunnel Alternative are located in the vicinity of this park.</p>	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest haul routes for the Freeway Tunnel Alternative and the presence of intervening land uses, this park would not experience short-term air quality effects as a result of the use of the haul routes under the Freeway Tunnel Alternative. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term air quality impacts on the park associated with the haul routes.</p> <p>Noise: Based on the distance of this park from the nearest haul routes for the Freeway Tunnel Alternative and the presence of intervening land uses, this park would not experience short-term noise effects as a result of the haul routes under the Freeway Tunnel Alternative. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term noise impacts on the park associated with the haul routes.</p> <p>Traffic: Because the streets that provide access to this park would not be used by haul trucks during construction of the Freeway Tunnel Alternative, this park would not experience temporary traffic effects as a</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>result of haul route traffic. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term traffic impacts on the park as a result of the use of the haul routes.</p> <p>Visual Resources: Based on the distance of this park from the haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, this park would not experience short-term visual effects as a result of the use of the haul routes under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of Valleydale Park because it would not result in proximity impacts on that park.</p>
<i>CITY OF BALDWIN PARK (ALONG THE FREEWAY TUNNEL ALTERNATIVE SPOILS DISPOSAL HAUL ROUTES)³</i>	
<p>Recreation Resources at Margaret Heath Elementary School (K to 6th) 14321 School Street</p> <p>Owner/Operator: Baldwin Park Unified School District</p> <p>Description: The school includes both asphalt and grass outdoor play areas.</p> <p>Distance: This school is approximately 0.3 mile from the haul routes on Live Oak Avenue and Arrow Highway. No other activities or facilities in the Freeway Tunnel Alternative are located in the vicinity of this school.</p>	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest haul routes for the Freeway Tunnel Alternative and the presence of intervening land uses, this recreation resource would not experience short-term air quality effects as a result of the use of the haul routes under the Freeway Tunnel Alternative. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term air quality impacts on the school associated with the haul routes.</p> <p>Noise: Based on the distance from the nearest haul routes for the Freeway Tunnel Alternative and the presence of intervening land uses, this recreation resource would not experience short-term noise effects as a result of the haul routes under the Freeway Tunnel Alternative. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term noise impacts on the school associated with the haul routes.</p> <p>Traffic: Because the streets that provide access to this recreation resource would not be used by haul trucks during construction of the Freeway Tunnel Alternative, it would not experience temporary traffic effects as a result of haul route traffic. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term traffic impacts on this recreation resource as a result of the use of the haul routes.</p> <p>Visual Resources: Based on the distance of this recreation resource from the haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, this recreation resource would not experience short-term visual effects as a result of the use of the haul routes under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at Margaret Heath Elementary School because it would not result in proximity impacts on those recreation resources.</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Recreation Resources at Olive Middle School (6th to 8th) 13701 East Olive Street</p> <p>Owner/Operator: Baldwin Park Unified School District</p> <p>Description: The school includes both asphalt and grass outdoor play areas.</p> <p>Distance: This school is approximately 0.4 mile from the haul route on Live Oak Avenue. No other activities or facilities in the Freeway Tunnel Alternative are located in the vicinity of this school.</p>	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, this recreation resource would not experience short-term air quality effects as a result of the use of the haul routes under the Freeway Tunnel Alternative. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term air quality impacts on the recreation resources at this school associated with the haul routes.</p> <p>Noise: Based on the distance from the nearest haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, this recreation resource would not experience short-term noise effects as a result of the haul routes under the Freeway Tunnel Alternative. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term noise impacts on the recreation resources at this school associated with the haul routes.</p> <p>Traffic: Because the streets that provide access to this recreation resource would not be used by haul trucks during construction of the Freeway Tunnel Alternative, it would not experience temporary traffic effects as a result of haul route traffic. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term traffic impacts on the recreation resources at this school as a result of the use of the haul routes.</p> <p>Visual Resources: Based on the distance of this recreation resource from the haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, this recreation resource would not experience short-term visual effects as a result of the use of the haul routes under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at Olive Middle School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at Pleasant View Elementary School (K to 6th) 14900 East Nubia Street</p> <p>Owner/Operator: Baldwin Park Unified School District</p> <p>Description: The school includes both asphalt and grass outdoor play areas with sports courts and fields.</p> <p>Distance: This school is approximately 0.3 mile from the haul route on Arrow Highway. No other activities or facilities in the Freeway Tunnel Alternative are located in the vicinity</p>	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, the recreation resources at this school would not experience short-term air quality effects as a result of the use of the haul routes under the Freeway Tunnel Alternative. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term air quality impacts on the recreation resources at this school associated with the haul routes.</p> <p>Noise: Based on the distance from the nearest haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, the recreation resources at this school would not experience short-term noise effects as a result of the haul routes under the Freeway Tunnel Alternative. The haul routes would not</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>of this school.</p>	<p>be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term noise impacts on the recreation resources at this school associated with the haul routes.</p> <p>Traffic: Because the streets that provide access the recreation resources at this school would not be used by haul trucks during construction of the Freeway Tunnel Alternative, this school would not experience temporary traffic effects as a result of haul route traffic. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term traffic impacts on the recreation resources at this school as a result of the use of the haul routes.</p> <p>Visual Resources: Based on the distance from the haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, the recreation resources at this school would not experience short-term visual effects as a result of the use of the haul routes under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at Pleasant View Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p><i>CITY OF COVINA/UNINCORPORATED LOS ANGELES COUNTY (ALONG THE FREEWAY TUNNEL ALTERNATIVE SPOILS DISPOSAL HAUL ROUTES ALONG VINCENT AVENUE)</i>³</p>	
<p>Recreation Resources at Alice M. Ellington Elementary School (K to 5th) 5034 North Clydebank Avenue</p> <p>Owner/Operator: Azusa Unified School District</p> <p>Description: The school includes both asphalt and grass outdoor play areas.</p> <p>Distance: This school is approximately 0.25 mile east of the segment of the haul route on Vincent Avenue. No other activities or facilities in the Freeway Tunnel Alternative are located in the vicinity of this school.</p>	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, the recreation resources at this school would not experience short-term air quality effects as a result of the use of the haul routes under the Freeway Tunnel Alternative. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term air quality impacts on the recreation resources at this school associated with the haul routes.</p> <p>Noise: Based on the distance from the nearest haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, this school would not experience short-term noise effects as a result of the haul routes under the Freeway Tunnel Alternative. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term noise impacts on the recreation resources at this school associated with the haul routes.</p> <p>Traffic: Because the streets that provide access to this recreation resource would not be used by haul trucks during construction of the Freeway Tunnel Alternative, it would not experience temporary traffic effects as a result of haul route traffic. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term traffic impacts on this recreation resource as a result of the use of the haul routes.</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>Visual Resources: Based on the distance from the haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, this recreation resource would not experience short-term visual effects as a result of the use of the haul routes under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at Alice M. Ellington Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<i>EAST LOS ANGELES (UNINCORPORATED LOS ANGELES COUNTY)</i>	
<p>Recreation Resources at City Terrace Elementary School (K to 5th) 4350 City Terrace Drive</p> <p>Owner/Operator: Los Angeles Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,135 feet from the edge of the MDL for the nearest freeway segment improvements; • 1,310 feet from the edge of right of way for the nearest freeway segment improvements; • 2,350 feet from the nearest TCE for freeway segment improvements; and • 7,085 feet from the nearest tunnel portal (South Portal). 	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, the recreation facilities at this school would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance from the tunneling activities under the Freeway Tunnel Alternative, the recreation facilities at this school are not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at City Terrace Elementary School because it would not result in proximity impacts on those recreation resources.</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
EL SERENO (COMMUNITY IN THE CITY OF LOS ANGELES)	
<p>El Sereno Arroyo Playground 5520 Concord Avenue</p> <p>Owner/Operator: Caltrans/City of Los Angeles</p> <p>Description: This 1-acre park provides grassy hills, a playground, a Fitness Zone for adults, walking paths, picnic tables, mosaics, decorative fencing, and a garden. The park, which opened in December 2012, includes safety features such as fences with gates that lock automatically when the park is closed, solar-powered security cameras, and lighting. The park is located on land owned by Caltrans and provided to the City for use as a park for a lease period of 25 years.</p> <p>Distance:</p> <ul style="list-style-type: none"> • Approximately 1/3 of this park is above the tunnel section and the potential settlement zone in the Freeway Tunnel Alternative. • This park is approximately: <ul style="list-style-type: none"> - 1,135 feet from the edge of the MDL for the nearest freeway segment improvements; and - 1,380 feet from the nearest tunnel portal (South Portal). <p>The land on which this playground is located is owned by the State of California (Caltrans) and is leased to the City of Los Angeles for the playground use. Under the lease agreement (January 23, 2012), "it is agreed and understood, the creation of a publicly accessible park by this agreement does not create a public park within the meaning of Section 4(f)...said park is specifically exempt from the application of Section 4(f)." As a result, the El Sereno Arroyo Playground would not be subject to the requirements for approval under Section 4(f). However, this playground was included in this analysis to assess the potential for direct and indirect adverse impacts on this playground by the Freeway Tunnel</p>	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this playground from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this playground would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance of this playground from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this playground would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to this playground are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, this playground would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Because El Sereno Arroyo Playground is not a very sensitive receptor (e.g., a residence or a performing arts center), potential ground-borne noise and vibration associated with the construction and operation of the Freeway Tunnel Alternative adjacent to this park would not result in adverse effects on this resource.</p> <p>Visual Resources: Based on the distance of this playground from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this playground would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of El Sereno Arroyo Playground because it would not result in proximity impacts on that playground.</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Alternative. The inclusion of this playground in this analysis does not trigger the requirements for approval under Section 4(f).</p>	
<p>El Sereno North Park 4410 Garden Homes Avenue</p> <p>Owner/Operator: City of Los Angeles</p> <p>Description: This 4.2-acre park provides picnic tables with covered shelters, playground equipment, barbecues, ball fields, tennis courts, a meeting room, a kitchen facility, a heated swimming pool, an open grass area, and restrooms. Approximately \$233,681 of L&WCF Act funds were used to acquire 3.2 acres for this park in FY 1976/1977. As a result, El Sereno North Park is subject to the requirements for protection under Section 6(f).</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 1,780 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; • 1,845 feet from the nearest tunnel section improvements; and • 7,950 feet from the nearest tunnel portal (South Portal). 	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of this park from the tunneling activities under the Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of El Sereno North Park because it would not result in proximity impacts on that park.</p> <p>Section 6(f): Because the Freeway Tunnel Alternative would not require the permanent acquisition of any land from El Sereno North Park, the requirements of Section 6(f) would not apply to this park.</p>
<p>Recreation Resources at the Billie Jean King Sports Complex at California State University-Los Angeles (Cal State LA) 5151 State University Drive</p>	<p>Use of Land for a TCE: The Freeway Tunnel Alternative would not result in permanent incorporation of land or permanent easements at this resource. Approximately 1.18 acres of land on the southeast part of the University property, south of Campus Road, would be used as a TCE during construction of the freeway improvements in that area. The Billie Jean Sports Complex is north of Campus Road, and no part of the</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Owner/Operator: The California State University System</p> <p>Description: This is an undergraduate and graduate university. The approximately 11-acre Billie Jean King Sports Complex, located in the northwest quadrant of the I-710/I-10 freeway to freeway interchange, includes the Eagles Nest Gymnasium, University Stadium, Jesse Owens Track and Field, Reeder Field (baseball), a swimming pool, tennis courts, basketball courts, and on-site parking.</p> <p>Distance: The Sports Complex and those recreation uses on the Cal State LA campus are approximately:</p> <ul style="list-style-type: none"> • 800 feet from the nearest part of the MDL for the freeway segment improvements; • 1,162 feet from the nearest part of a TCE for the freeway segment improvements; • 1,293 feet from the nearest part of the right of way for the freeway segment improvements; and • 3,520 feet from the nearest tunnel portal (South Portal). 	<p>University property occupied by the Sports Complex would be used as a TCE. As a result, no land occupied by the Sports Complex would be used as a TCE during construction of the freeway improvements in that area.</p> <p>Air Quality: Construction of the improvements in the Freeway Tunnel Alternative in the vicinity of this Sports Complex could result in short-term dust and equipment emissions that could extend into the Sports Complex property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of Los Angeles. Compliance with those measures during construction of the Freeway Tunnel Alternative facilities in the vicinity of the Sports Complex would substantially reduce the short-term air quality effects on the Sports Complex.</p> <p>Operation of the Freeway Tunnel Alternative in 2025 and 2035 would result in reduced regional vehicle emissions compared to existing 2012 conditions. Operation of the Freeway Tunnel Alternative in 2025 and 2035 would result in increases and decreases in regional vehicle emissions depending on the individual design variations (single and dual bore, with and without tolls, etc.). Operation of the Freeway Tunnel Alternative in 2025 and 2035 would result in reductions in MSAT emissions compared to existing 2012 conditions. In 2025 and 2035, the Freeway Tunnel Alternative would result in some minor increases in MSAT emissions compared to the No Build Alternative conditions. Operation of the Freeway Tunnel Alternative would result in reduced GHG emissions in 2025 and 2035 compared to existing 2012 conditions and in 2025 compared to 2025 No Build conditions. In 2035, the Freeway Tunnel Alternative would result in reductions in GHG emissions compared to 2035 No Build Alternative conditions except for the Dual-Bore No Tolls and Dual-Bore No Trucks design variations that would result in some increases in GHG emissions in 2035. The increases in regional vehicle, MSAT, and GHG emissions would be minor compared to the No Build Alternatives and, as a result, operation of the Freeway Tunnel Alternative would not result in adverse air quality impacts on the Billie Jean King Sports Complex.</p> <p>Noise: Construction of the improvements in the Freeway Tunnel Alternative in the vicinity of this Sports Complex could result in short-term noise levels that could impact the Sports Complex. Those construction activities would be required to comply with the City of Los Angeles Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the Freeway Tunnel Alternative facilities in the vicinity of the Sports Complex would substantially reduce the short-term noise effects on the Sports Complex.</p> <p>The recreation resources at the Sports Complex are active uses. The 2035 noise levels under the dual-bore design variation of the Freeway Tunnel Alternative without tolls and the single-bore design variation of the Freeway Tunnel Alternative with tolls and trucks (the operational variations that would result in the largest traffic volume increases and related noise level increases under each respective design variation) are predicted to be 62 dBA and 59 dBA, respectively, at this Sports Complex, which would be higher than the</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>predicted noise levels under the No Build Alternative (57 dBA). Because the 2035 predicted noise levels at this Sports Complex under both design variations of the Freeway Tunnel Alternative would be less than the 67 dBA NAC for Activity Category C uses, the operation of both design variations of the Freeway Tunnel Alternative would not result in long-term noise impacts on the recreation resources at this Sports Complex.</p> <p>Traffic: Because the local streets that provide access to this Sports Complex are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative and would not be used by substantial volumes of trips to/from the tunnel portals, this Sports Complex would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of the Sports Complex from the tunneling activities under the Freeway Tunnel Alternative, the Sports Complex school is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance of this school from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this Sports Complex would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of the Billie Jean King Sports Complex because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that sports complex.</p>
<p>Recreation Resources at Chavez Elementary School (K to 6th) 5243 Oakland Street</p> <p>Owner/Operator: Los Angeles Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,885 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; • 1,940 feet from the nearest tunnel section improvements; and • 5,220 feet from the nearest tunnel portal (South Portal). 	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, they would not experience temporary construction or</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance from the tunneling activities under the Freeway Tunnel Alternative, the recreation facilities at this school are not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at Chavez Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at Sierra Park Elementary School (K to 6th) 3170 Budau Avenue</p> <p>Owner/Operator: Los Angeles Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 2,225 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; • 2,280 feet from the nearest tunnel section improvements; and • 3,240 feet from the nearest tunnel portal (South Portal). 	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, they would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of the recreation resources at this school from the tunneling activities under the Freeway Tunnel Alternative, they are not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance of this school from the nearest construction of any freeway segment</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at Sierra Park Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Facilities at Sierra Vista Elementary School (K to 6th) 4342 Alpha Street</p> <p>Owner/Operator: Los Angeles Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 385 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; • 430 feet from the nearest tunnel section improvements; and • 7,310 feet from the nearest tunnel portal (South Portal). 	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any Freeway Tunnel Alternative improvements and operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any Freeway Tunnel Alternative improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to the recreation facilities at this school are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, they would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance from the tunneling activities under the Freeway Tunnel Alternative, the recreation facilities at this school are not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance from the nearest construction of any Freeway Tunnel Alternative improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at Sierra Vista Elementary School because it would not result in proximity impacts on those recreation resources.</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
CITY OF IRWINDALE (ALONG THE FREEWAY TUNNEL ALTERNATIVE SPOILS DISPOSAL HAUL ROUTES) (3)	
<p>Santa Fe Dam Recreation Area 15501 East Arrow Highway</p> <p>Owner/Operator: Los Angeles County Department of Parks and Recreation</p> <p>Description: Santa Fe Dam Recreational Area, at the foot of the San Gabriel Mountains, is an 836-acre facility with a 70-acre lake (Santa Fe Flood Control Basin) with year-round fishing and non-motorized watercraft usage. During the summer, the recreation area includes a 5-acre chlorinated swim beach and a children’s water play area. The recreation area is home to many protected native plants and animals. A Nature Center operated and staffed by volunteers of the San Gabriel Mountains Regional Conservancy offers educational, interpretive, and walking tours throughout the year. The recreation area also includes bicycle, walking, and equestrian trails; a snack bar; organized youth camping; and a bait and tackle shop.</p> <p>Approximately \$72,100 of L&WCF Act funds were used to develop support facilities at the Santa Fe Dam Recreation Area in FY 1999-2000. As a result, these improvements at the Santa Fe Dam Recreation Area are subject to the requirements of Section 6(f).</p> <p>Distance: The nearest part of the recreation area is immediately adjacent to the north side of Arrow Highway from approximately Azusa Canyon Road to I-605. No other activities or facilities in the Freeway Tunnel Alternative are located in the vicinity of this recreation area.</p>	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: The haul routes would be used only during construction of the Freeway Tunnel Alternative. The operation of trucks hauling spoils material to the disposal site and empty trucks returning to the construction sites could result in short-term dust and equipment emissions that could extend into the recreation area property. However, there are extensive requirements for the control of dust and equipment emissions during construction, including along haul routes, in the South Coast Air Basin. Compliance with those measures during the use of the spoils disposal haul routes for the Freeway Tunnel Alternative in the vicinity of the Santa Fe Dam Recreation Area would substantially reduce the short-term air quality effects of trucks operating on the haul routes on the recreation area. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term air quality impacts on the recreation area associated with the haul routes.</p> <p>Noise: During construction of the Freeway Tunnel Alternative, debris from the construction activities will be taken to off-site disposal sites. Typically, haul trucks (dump trucks) are loaded on the site and then follow a specific haul route to the disposal destination. In the City of Irwindale, the haul route will pass by the Santa Fe Dam Recreation Area. The number of haul truck trips will be small compared to the daily traffic volumes on East Arrow Highway. While a pass-by of a haul truck may be noticed due to the use of air brakes or the acceleration of the truck engine, the overall peak-hour and daily noise levels are not expected to increase substantially as a result of haul route traffic during construction of the Freeway Tunnel Alternative. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term noise impacts on the recreation area associated with the haul routes.</p> <p>Traffic: As noted above, the haul route traffic during construction of the Freeway Tunnel Alternative would be only a small amount of the daily traffic volumes on East Arrow Highway. As a result, that haul route traffic would not adversely affect travel to/from and access to/from the Santa Fe Dam Recreation Area. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term traffic impacts on the recreation area associated with the haul routes.</p> <p>Visual Resources: Trucks using the haul routes will be similar to trucks currently using Arrow Highway and Live Oak Avenue. Patrons of the recreation area currently have views of traffic, including trucks on Arrow Highway and I-605. As a result, views from within this recreation area are not an important feature of this recreation area. During the use of the haul routes, visitors to the recreation area will have views of haul trucks on I-605 and Arrow Highway, similar to existing views of traffic on those roads. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term visual</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>impacts on the recreation area associated with the haul routes.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of the Santa Fe Dam Recreation Area because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of that recreation area.</p> <p>Section 6(f): Because the Freeway Tunnel Alternative would not require the permanent acquisition of any land from the Santa Fe Dam Recreation Area, the requirements of Section 6(f) would not apply to this Recreation Area.</p>
<p>Irwindale Park and Jardin de Roca Park/Irwindale Skatepark (these facilities are across the street from each other)</p> <ul style="list-style-type: none"> • <u>Irwindale Park:</u> 5050 North Irwindale Avenue • <u>Jardin de Roca Park/Irwindale Skatepark:</u> 5051 North Irwindale Avenue <p>Owner/Operator: City of Irwindale</p> <p>Descriptions:</p> <ul style="list-style-type: none"> • <u>Irwindale Park:</u> This park includes a swimming pool, the Alfred F. Herrera softball field, playground, picnic shelter, picnic areas, outdoor basketball court, volleyball sand court, and the Dan Diaz Recreation Center. • <u>Jardin de Roca Park/Irwindale Skatepark:</u> This skatepark includes a tear-drop-shaped concrete bowl and a “street” section with ledges, stairs, rails, and banks. The park also includes tennis courts, a tot lot, walking path, picnic areas, and outdoor basketball courts. <p>Distance: The nearest parts of these parks are 0.2 mile south of the haul route on Arrow Highway.</p>	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at these resources.</p> <p>Air Quality: Based on the distance of these parks from the nearest haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, these parks would not experience short-term air quality effects as a result of the use of the haul routes under the Freeway Tunnel Alternative. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term air quality impacts on these parks associated with the haul routes.</p> <p>Noise: Based on the distance of these parks from the nearest haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, these parks would not experience short-term noise effects as a result of the haul routes under the Freeway Tunnel Alternative. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term noise impacts on these parks associated with the haul routes.</p> <p>Traffic: Because the streets that provide access to these parks would not be used by haul trucks during construction of the Freeway Tunnel Alternative, these parks would not experience temporary traffic effects as a result of haul route traffic. The haul routes would not be used during the operation of the Freeway Tunnel Alternative; therefore, there would be no long-term traffic impacts on these parks as a result of the use of the haul routes.</p> <p>Visual Resources: Based on the distance of these parks from the haul route for the Freeway Tunnel Alternative and the presence of intervening land uses, these parks would not experience short-term visual effects as a result of the use of the haul routes under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of Irwindale Park and the Jardin de Roca Park/Irwindale Skatepark because it would not result in proximity impacts on those facilities.</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
CITY OF MONTEREY PARK	
<p>Highlands Park 400 Casuda Canyon Drive</p> <p>Owner/Operator: City of Monterey Park</p> <p>Description: This 8.3-acre park adjacent to Monterey Highlands School provides lighted tennis courts, a children's area, open and shady space, restrooms, and on-site parking.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 1,930 feet from the edge of the MDL and right of way limits for the nearest freeway segment improvements; • 2,705 feet from the edge of the nearest freeway segment improvements; and • 6,300 feet from the nearest tunnel portal (South Portal). 	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any Freeway Tunnel Alternative improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative and would not be used by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of this park from the tunneling activities under the Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any Freeway Tunnel Alternative improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of Highlands Park because it would not result in proximity impacts on that park.</p>
<p>Pine Tree Park 2167 Arriba Drive</p> <p>Owner/Operator: City of Monterey Park</p> <p>Description: This 0.5-acre neighborhood park provides a picnic table and a children's play area.</p> <p>Distance: This park is approximately:</p>	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any Freeway Tunnel Alternative</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<ul style="list-style-type: none"> • 655 feet from the edge of the MDL for the nearest freeway segment improvements; • 995 feet from the edge of right of way for the nearest freeway segment improvements; • 3,525 feet from the edge of the nearest TCE for freeway segment improvements; and • 7,800 feet from the nearest tunnel portal (South Portal). 	<p>improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative and would not be used by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of this park from the tunneling activities under the Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any Freeway Tunnel Alternative improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of Pine Tree Park because it would not result in proximity impacts on that park.</p>
<p>Recreation Resources at Monterey Highlands Elementary School (K to 6th) 400 Casuda Canyon Drive</p> <p>Owner/Operator: Garvey School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 2,680 feet from the edge of the MDL and right of way for the nearest freeway segment improvements; • 3,148 feet from the edge of the nearest TCE for freeway segment improvements; and • 6,420 feet from the nearest tunnel portal (South Portal). 	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, they would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance from the tunneling activities under the Freeway Tunnel Alternative, the recreation facilities at this school is not expected to experience ground-borne noise or</p>

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Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance of the recreation resources at this school from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at Monterey Highlands Elementary School because it would not result in proximity impacts on that school.</p>
CITY OF PASADENA	
<p>Allendale Park 1130 Marengo Avenue</p> <p>Owner/Operator: City of Pasadena</p> <p>Description: This 2.9-acre park provides a lighted tennis court, a lighted softball diamond/multi-purpose field with bleachers, playground equipment, on-site parking, picnic tables, and drinking fountains. There is a public library within the boundary of this park.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 2,575 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; • 2,640 feet from the nearest tunnel section improvements; and • 4,295 feet from the nearest tunnel portal (North Portal). 	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative and would not be used by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of this school from the tunneling activities under the Freeway Tunnel Alternative, this school is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any freeway segment and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of Allendale Park because it would not result in proximity impacts on that park.</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Arlington Garden 275 Arlington Drive</p> <p>Owner/Operator: Caltrans/City of Pasadena</p> <p>Description: This approximately 3-acre public garden is open 7 days a week during daylight hours. It is a community-supported, water-efficient garden. Community events and weddings are also held at the garden. The park is located on land owned by Caltrans and provided to the City for use as a park for a lease period of 5 years.</p> <p>Distance:</p> <ul style="list-style-type: none"> This garden is approximately 105 feet above the tunnel section and the potential settlement zone for the Dual Bore Variation only. <p>The land on which this playground is located is owned by the State of California (Caltrans) and is leased to the City of Pasadena for a drought tolerant garden and passive recreational uses (walking, running, sitting, or similar types of uses). Under the lease agreement (December 2013), "It is agreed and understood, the creation of a publicly accessible park by this agreement does not create a public park within the meaning of Section 4(f)...said park is specifically exempt from the application of Section 4(f)." As a result, the Arlington Garden would not be subject to the requirements for approval under Section 4(f). However, this playground was included in this analysis to assess the potential for direct and indirect adverse impacts on this garden by the Freeway Tunnel Alternative. The inclusion of this garden in this analysis does not trigger the requirements for approval under Section 4(f).</p>	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the depth of the Freeway Tunnel at this location, this garden would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the depth of the Freeway Tunnel at this location, this garden would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: This garden would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Because Arlington Garden is not a very sensitive receptor (e.g., a residence or a performing arts center), potential ground-borne noise and vibration associated with the construction and operation of the Freeway Tunnel Alternative adjacent to the garden are negligible.</p> <p>Visual Resources: Based on the depth of the Freeway Tunnel at this location, this garden would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of Arlington Garden because it would not result in proximity impacts on that garden.</p>
<p>Brenner Park 235 Barthe Drive</p> <p>Owner/Operator: City of Pasadena</p>	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Description: This 1.75-acre neighborhood park provides a softball diamond with bleacher seating, a lighted tennis court, a lighted basketball court, an open play area, a tot lot, picnic tables, restrooms, and drinking fountains.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 370 feet from the edge of the MDL for the nearest freeway segment improvements; • 1,440 feet from the edge of right of way for the nearest freeway segment improvements; and • 8,980 feet from the nearest tunnel portal (North Portal). 	<p>park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of this park from the tunneling activities under the Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of Brenner Park because it would not result in proximity impacts on that park.</p>
<p>Brookside Park 360 North Arroyo Boulevard</p> <p>Owner/Operator: City of Pasadena</p> <p>Description: This 62-acre park is in the Central section of the Arroyo Seco. It includes a Jackie Robinson Field, a lighted regulation baseball diamond with seating for 4,200 spectators; two lighted softball fields each with seating for 240 spectators; a lighted multi-purpose field for flag football and soccer; a speaker’s platform with permanent seating; picnic tables; a play area; restrooms; drinking fountains; barbeque pits; on-site parking; an aquatic center; open areas; and a dog area.</p> <p>Approximately \$152,550 of L&WCF Act funds were used to</p>	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or would not be used by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>develop soccer and baseball fields and to install irrigation systems in FY 1977-1978. Approximately \$50,800 of L&WCF Act funds were used to construct restrooms at this park in FY 1979-1980. As a result, these improvements at Brookside Park are subject to the requirements of Section 6(f).</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 725 feet from the edge of the MDL for the nearest freeway segment improvements and from the right of way for the nearest freeway segment improvements; • 2,848 feet from the edge of the nearest TCE for freeway segment improvements; and • 4,805 feet from the nearest tunnel portal (North Portal). 	<p>operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of this park from the tunneling activities under the Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of Brookside Park because it would not result in proximity impacts on that park.</p> <p>Section 6(f): Because the Freeway Tunnel Alternative would not require the permanent acquisition of any land from Brookside Park, the requirements of Section 6(f) would not apply to this park.</p>
<p>Central Park 275 South Raymond Avenue</p> <p>Owner/Operator: City of Pasadena</p> <p>Description: This 9.2-acre park provides 6 horseshoe pits, 2 lawn bowling courts, an open area, playground equipment, walkway lighting, restrooms, picnic tables, a rose garden, benches, and a clubhouse for the Pasadena Lawn Bowling Club, an affiliate of the American Lawn Bowling Association.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 930 feet from the edge of the MDL and right of way for the nearest freeway segment improvements; • 1,600 feet from the nearest freeway segment improvements; • 1,645 feet from the nearest edge of the potential settlement zone; and • 2,320 feet from the nearest tunnel portal (North Portal). 	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of this park from the tunneling activities under the Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of Central Park because it would not result in proximity impacts on that park.</p>
<p>Defenders Park Orange Grove Boulevard/Colorado Boulevard</p> <p>Description: Defenders Park is a 1.8-acre passive use park. The park contains a walkway, multiple monuments, a limestone bench, a wall recognizing the founders of Pasadena, a small open grassy area, some trees and shrubbery, and a drinking fountain.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 300 feet from the edge of the MDL and right of way for the nearest freeway segment improvements; • 3,230 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; and • 3,950 feet from the nearest tunnel portal (North Portal). 	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of Freeway Tunnel Alternative improvements (freeway segment), and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of the Freeway Tunnel Alternative improvements (freeway segment), and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: The nearest construction for the Freeway Tunnel Alternative to this park would occur within the existing right of way on SR 134. Construction- and operation-related traffic under the Freeway Tunnel Alternative in this area would be on SR 134 and would not be expected to affect traffic and transportation on local streets in the vicinity of Defenders Park. As a result, this park would not experience temporary construction or long-term traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of Defenders Park from the tunneling activities under the Freeway Tunnel Alternative, the park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: The nearest construction of a freeway segment of the Freeway Tunnel Alternative to Defenders Park would be on SR 134 north of Colorado Boulevard and east of North Orange Grove Boulevard. Based on the distance of this park from the nearest construction and operation of that freeway segment of the Freeway Tunnel Alternative; the presence of intervening land uses, including Colorado Boulevard; and that SR 134 at North Orange Grove Boulevard is depressed and not visible from Defenders Park, the improvements on SR 134 east of North Orange Grove Boulevard would not be visible from Defenders Park. As a result, the Freeway Tunnel Alternative would not result in temporary construction or long-term operation visual effects at Defenders Park.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at Defenders Park because it would not result in proximity impacts on that park.</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Lower Arroyo Seco Park Arroyo Boulevard/Norwood Drive</p> <p>Owner/Operator: City of Pasadena</p> <p>Description: This 150-acre park contains a natural park, a lighted fly-casting pond and clubhouse, an archery range and clubhouse, a system of rubble walls that retains the slopes and helps define paths, multi-use trails, the La Casita del Arroyo Community Center, the Aids Memorial Grove, several promontory outlook points (e.g., Bird Sanctuary), on-site parking, restrooms, and benches.</p> <p>Distance: This park is:</p> <ul style="list-style-type: none"> • Approximately 2,875 feet from the edge of right of way for the nearest freeway segment improvements; • Approximately 2,580 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; • Approximately 2,620 feet from the nearest tunnel section improvements; and • Approximately 3,370 feet from the nearest tunnel portal (North Portal). 	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of this park from the tunneling activities under the Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of Lower Arroyo Seco Park because it would not result in proximity impacts on that park.</p>
<p>Memorial Park 85 East Holly Street</p> <p>Owner/Operator: City of Pasadena</p> <p>Description: This 5.3-acre park is characterized by extensive shrubbery, landscaping, large trees, and a number of monuments. Other facilities provided at this park include a band shell with an audience capacity of 400 persons, picnic facilities, benches, a large open grass area, an exercise walk, restrooms, and drinking fountains. The Pasadena Senior</p>	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the Freeway</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Center is immediately adjacent to the south side of this park.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 610 feet from the edge of the MDL for the nearest freeway segment improvements; • 750 feet from the edge of right of way for the nearest freeway segment improvements; and • 4,710 feet from the nearest tunnel portal (North Portal). 	<p>Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of this park from the tunneling activities under the Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of Memorial Park because it would not result in proximity impacts on that park.</p>
<p>Singer Park California Boulevard/St. John Avenue</p> <p>Owner/Operator: City of Pasadena</p> <p>Description: This 2.9-acre neighborhood park includes an open grass area with a number of well-established trees and rose beds, a children’s play area, picnic tables, benches, restrooms, and a drinking fountain.</p> <p>Distance: This park is:</p> <ul style="list-style-type: none"> • Adjacent to the edge of the MDL and right of way for the nearest freeway segment improvements; • Approximately 85 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; • Approximately 110 feet from the nearest tunnel section improvements; and • Approximately 120 feet from the nearest tunnel portal (North Portal). 	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Construction of the improvements in the Freeway Tunnel Alternative in the vicinity of this park could result in short-term dust and equipment emissions that could extend into the park property. However, there are extensive requirements for the control of dust and equipment emissions during construction in the South Coast Air Basin, which includes the City of Pasadena. Compliance with those measures during construction of the Freeway Tunnel Alternative facilities in the vicinity of the park would substantially reduce the short-term air quality effects on Singer Park.</p> <p>Operation of the Freeway Tunnel Alternative in 2025 and 2035 would result in reduced regional vehicle emissions compared to existing 2012 conditions. Operation of the Freeway Tunnel Alternative in 2025 and 2035 would result in increases and decreases in regional vehicle emissions depending on the individual design variations (single and dual bore, with and without tolls, etc.). Operation of the Freeway Tunnel Alternative in 2025 and 2035 would result in reductions in MSAT emissions compared to existing 2012 conditions. In 2025 and 2035, the Freeway Tunnel Alternative would result in some minor increases in MSAT emissions compared to the No Build Alternative conditions. Operation of the Freeway Tunnel Alternative would result in reduced GHG emissions in 2025 and 2035 compared to existing 2012 conditions and in 2025 compared to 2025 No Build conditions. In 2035, the Freeway Tunnel Alternative would result in reductions in GHG emissions compared to 2035 No Build Alternative conditions except for the Dual-Bore No Tolls and Dual-Bore No Trucks design variations that would result in some increases in GHG emissions in 2035. The increases in regional</p>

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>vehicle, MSAT, and GHG emissions would be minor compared to the No Build Alternatives and, as a result, operation of the Freeway Tunnel Alternative would not result in adverse air quality impacts on Singer Park.</p> <p>Noise: Construction of the improvements in the Freeway Tunnel Alternative in the vicinity of this park could result in short-term noise levels that could impact the park. Those construction activities would be required to comply with the City of Pasadena Noise Ordinance and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the Freeway Tunnel Alternative facilities in the vicinity of this park would substantially reduce the short-term noise effects on Singer Park.</p> <p>The recreation uses at Singer Park are active uses. The 2035 noise levels under the dual-bore design variation of the Freeway Tunnel Alternative without tolls and the single-bore design variation of the Freeway Tunnel Alternative with tolls and trucks (the operational variations that would result in the largest traffic volume increases and related noise level increases under each respective design variation) are predicted to be 65 dBA and 67 dBA, respectively, at this park, which would be lower than the predicted noise levels under the No Build Alternative at 68 dBA. As a result, the Freeway Tunnel Alternative would not result in long-term noise impacts on the recreation uses at Singer Park.</p> <p>Traffic: Construction of the improvements in the Freeway Tunnel Alternative adjacent to Singer Park could result in short-term traffic impacts in that area. Based on implementation of TMPs and requirements to maintain access to all adjacent properties, construction of the Freeway Tunnel Alternative would not result in short-term adverse impacts related to traffic and transportation at Singer Park. In the long term, the Freeway Tunnel Alternative would not result in increased traffic on streets used to access Singer Park. As a result, the operation of the Freeway Tunnel Alternative would not result in long-term traffic impacts on Singer Park.</p> <p>Ground-Borne Noise and Vibration: Because Singer Park is not a very sensitive receptor (e.g., a residence or a performing arts center), potential ground-borne noise and vibration associated with the construction and operation of the Freeway Tunnel Alternative adjacent to this park would not result in adverse effects on this resource.</p> <p>Visual Resources: Existing views from Singer Park include views of West California Boulevard, St. John Avenue, and SR 710 north of California Boulevard. There are views of residential uses outside the park to the north, west, east, and south. Views of the surrounding areas are not expected to be a primary reason for users to visit this park. The nearest surface construction of the Freeway Tunnel Alternative to Singer Park would be immediately north and east of the park on California Boulevard and St. John Avenue. As a result, some construction activities would be visible to patrons in the north and east parts of the park, although trees and shrubs along those sides of the park would partially shield views from those areas in the park. The nearest surface feature of the Freeway Tunnel Alternative to Singer Park would be approximately 120 feet north of</p>

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Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>the park, within the existing SR 710 alignment. Views of the Freeway Tunnel Alternative improvements from the northeast corner of the park would be similar to existing views with the addition of the portal structure. The changes in views from the park would not be expected to be substantive because they would be views of urban structures and features in a viewshed that already contains urban structures and features. As a result, the Freeway Tunnel Alternative would not result in temporary construction or long-term operation visual effects at Singer Park.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of Singer Park because the proximity impacts of that Alternative would not substantially impair the protected activities, features, or attributes of that park.</p>
<p>Villa-Parke 363 East Villa Street</p> <p>Owner/Operator: City of Pasadena</p> <p>Description: The 11.9-acre Villa-Parke provides a basketball court, a baseball diamond, sport court lighting, bleachers, soccer and football field overlays, playground equipment, an open area, and restrooms.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 565 feet from the edge of the MDL for the nearest freeway segment improvements; • 585 feet from the nearest freeway segment improvements; and • 7,465 feet from the nearest tunnel portal (North Portal). 	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or would not be used by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of this park from the tunneling activities under the Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of Villa-Parke because it would not result in proximity impacts on that park.</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Villa-Parke Community Center 363 East Villa Street</p> <p>Owner/Operator: City of Pasadena</p> <p>Description: The 41,475-square-foot Community Center is on an 8.1-acre site. The building includes a large auditorium with a stage and storage area, a social/recreation room, weight and boxing rooms, and a gymnasium with showers and dressing rooms. Activities offered at the Community Center include recreation activities for children, adults, and families; a Farmers’ Market; and support for a wide range of social service needs. There is also a public library on this site.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 905 feet from the edge of the MDL for the nearest freeway segment improvements; • 945 feet from the edge of the nearest freeway segment improvements; and • 7,465 feet from the nearest tunnel portal (North Portal). 	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this Community Center from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this Community Center would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance of this Community Center from the nearest construction of any freeway segment and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this Community Center would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to this Community Center are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, this Community Center would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of this Community Center from the tunneling activities under the Freeway Tunnel Alternative, this Community Center is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance of this Community Center from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, this Community Center would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at the Villa-Parke Community Center because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at Blair High School 1201 South Marengo Avenue</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 2,385 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; • 2,455 feet from the nearest tunnel section 	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance of the recreation resources at this school from the nearest construction of any</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>improvements; and</p> <ul style="list-style-type: none"> 4,235 feet from the nearest tunnel portal (North Portal). 	<p>freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, they would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, they would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of the recreation resources at this school from the tunneling activities under the Freeway Tunnel Alternative, they are not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at Blair High School because it would not result in proximity impacts on those resources.</p>
<p>Recreation Resources at Madison Elementary School (K to 5th) 515 Ashtabula Street</p> <p>Owner/Operator: Pasadena Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> 2,375 feet from the edge of the MDL for the nearest freeway segment improvements; 2,510 feet from the edge of the nearest freeway segment improvements; and 9,635 feet from the nearest tunnel portal (North Portal). 	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, they would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance from the tunneling activities under the Freeway</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>Tunnel Alternative, the recreation facilities at this school is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at Madison Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at Roosevelt Elementary School (K to 5th) 315 North Pasadena Avenue</p> <p>Owner/Operator: Pasadena Unified School District</p> <p>Distance: This school and the recreation resources at this school are:</p> <ul style="list-style-type: none"> • Approximately 550 feet west of mainline SR-710 north of SR 134; and • Approximately 650 feet northwest of mainline SR 134 south of West Walnut Street. 	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Construction of the improvements in the Freeway Tunnel Alternative adjacent to the recreation resources at this school could result in short-term noise levels that could impact those recreation uses. Those construction activities would be required to comply with the City of Pasadena and other restrictions regarding the use of construction equipment during certain hours and days and restrictions on noise levels generated during construction. Compliance with those requirements during construction of the Freeway Tunnel Alternative facilities adjacent to this school would substantially reduce the short-term noise effects on the recreation uses at Roosevelt Elementary School.</p> <p>The recreation resources at Roosevelt Elementary School are active uses. The 2035 noise levels under the dual-bore design variation of the Freeway Tunnel Alternative without tolls and the single-bore design variation of the Freeway Tunnel Alternative with tolls and trucks (the operational variations that would result in the largest traffic volume increases and related noise level increases under each respective design variation) are predicted to be 68 dBA and 67 dBA, respectively, at this school, which would be higher than the predicted noise levels under the No Build Alternative (66 dBA). Although the 2035 predicted noise levels at this school under both design variations of the Freeway Tunnel Alternative would approach or exceed the 67 dBA NAC for Activity Category C uses, it was determined that construction of a noise barrier in the vicinity of this school would be unreasonable due to costs.</p> <p>Traffic: Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>substantial volumes of trips to/from the tunnel portals, they would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance from the freeway construction and improvements under the Freeway Tunnel Alternative, the recreation facilities at this school are not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resource at Roosevelt Elementary School because the proximity impacts of that alternative would not substantially impair the protected activities, features, or attributes of the recreation resources at that school.</p>
<p>Recreation Resources at San Rafael Elementary School (K to 5th) 1090 Nithsdale Road</p> <p>Owner/Operator: Pasadena Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 2,220 feet from the edge of the MDL and right of way for the nearest freeway segment improvements; • 2,380 feet from the nearest freeway segment improvements; and • 8,610 feet from the nearest tunnel portal (North Portal). 	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, they would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance from the tunneling activities under the Freeway Tunnel Alternative, the recreation facilities at this school are not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance of the recreation resources at this school from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, and the presence of intervening land uses, they would not experience temporary construction or long-term operation</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	visual effects under the Freeway Tunnel Alternative. Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at San Rafael Elementary School because it would not result in proximity impacts on those recreation resources.
CITY OF SOUTH PASADENA	
<p>Garfield Park 1750 Mission Street</p> <p>Owner/Operator: City of South Pasadena</p> <p>Description: This 7.6-acre park provides tennis courts, a playground, and a garden area.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 2,555 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; • 2,630 feet from the nearest tunnel section improvements; and • 6,700 feet from the nearest tunnel portal (North Portal). 	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of this park from the tunneling activities under the Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of Garfield Park because it would not result in proximity impacts on that park.</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Library Park 1102 Oxley Street</p> <p>Owner/Operator: City of South Pasadena</p> <p>Description: This 3.2-acre park provides tennis courts, a half basketball court, a playground, and a baseball field.</p> <p>Distance: This park is:</p> <ul style="list-style-type: none"> • Adjacent to the nearest edge of the potential settlement zone above the tunnel section improvements; • Approximately 75 feet from the nearest tunnel section improvements; and • Approximately 7,645 feet from the nearest tunnel portal (North Portal). 	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction and operation of this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of this park from the tunneling activities under the Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of Library Park because it would not result in proximity impacts on that park.</p>
<p>Orange Grove Park and Recreation Center 815 Mission Street</p> <p>Owner/Operator: City of South Pasadena</p> <p>Description: This 2.5-acre park provides a lighted softball and soccer field, two lighted tennis courts, picnic tables, a small playground, drinking fountains, bleachers, and a bicycle rack.</p>	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any freeway segment</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>The Orange Grove Park and Recreation Center is a 9,500-square-foot facility located in Orange Grove Park. A wide range of programs for families and children are offered at this Recreation Center. The first floor of the Recreation Center is used for recreation and day care programs. The second floor contains a meeting room and a small teen center.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 720 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; • 800 feet from the nearest tunnel section improvements; and • 7,410 feet from the nearest tunnel portal (North Portal). 	<p>improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of this park from the tunneling activities under the Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of Orange Grove Park and Recreation Center because it would not result in proximity impacts on those facilities.</p>
<p>War Memorial Park 435 Fair Oaks Avenue</p> <p>Owner/Operator: City of South Pasadena</p> <p>Description: This 1.8-acre park includes the two-story, 12,000-square-foot War Memorial Building, which was constructed in 1921 and is a City of South Pasadena cultural heritage landmark. The Memorial was constructed on the site of the former Oak Lawn Park. The large multipurpose room on the second floor is used for events (e.g., banquets and meetings) for large groups, and includes a kitchen. The first floor contains smaller meeting rooms, storage space, and restrooms. The Park also includes a landscaped memorial garden and on-site parking.</p> <p>Distance: This park is approximately:</p> <ul style="list-style-type: none"> • 1,140 feet from the nearest edge of the potential settlement zone above the tunnel section 	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to this park are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, this park would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance of this park from the tunneling activities under the</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>improvements;</p> <ul style="list-style-type: none"> • 1,130 feet from the nearest tunnel section improvements; and • 5,180 feet from the nearest tunnel portal (North Portal). 	<p>Freeway Tunnel Alternative, this park is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance of this park from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, this park would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of War Memorial Park because it would not result in proximity impacts on that park.</p>
<p>Recreation Resources at Monterey Hills Elementary School (K to 5th) 1624 Via Del Rey</p> <p>Owner/Operator: South Pasadena Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 1,295 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; • 1,370 feet from the nearest tunnel section improvements; and • 9,515 feet from the nearest tunnel portal (North Portal). 	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance of the recreation resources at this school from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, they would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, they would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance from the tunneling activities under the Freeway Tunnel Alternative, the recreation facilities at this school are not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p>

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
	<p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at Monterey Hills Elementary School because it would not result in proximity impacts on those recreation resources.</p>
<p>Recreation Resources at South Pasadena High School (9th to 12th) 1401 Fremont Avenue Owner/Operator: South Pasadena Unified School District Distance: This school and the recreation resources at this school are:</p> <ul style="list-style-type: none"> • Adjacent to the nearest edge of the potential settlement zone above the tunnel section improvements; • Approximately 60 feet from the nearest tunnel section improvements; and • Approximately 9,565 feet from the nearest tunnel portal (North Portal). 	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction and operation of this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative and would not be used by substantial volumes of trips to/from the tunnel portals, they would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance from the tunneling activities under the Freeway Tunnel Alternative, the recreation facilities at this school are not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at South Pasadena High School because it would not result in proximity impacts on those recreation resources.</p>

TABLE 3.5.1:
Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
<p>Recreation Resources at South Pasadena Middle School (6th to 8th) 1500 Fair Oaks Avenue</p> <p>Owner/Operator: South Pasadena Unified School District</p> <p>Distance: This school and the recreation resources at this school are approximately:</p> <ul style="list-style-type: none"> • 25 feet from the nearest edge of the potential settlement zone above the tunnel section improvements; • 35 feet from the nearest tunnel section improvements; and • 10,075 feet from the nearest tunnel portal (North Portal). 	<p>The Freeway Tunnel Alternative would not result in permanent incorporation of land, permanent easements, or temporary occupancies (TCEs) at this resource.</p> <p>Air Quality: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation air quality effects under the Freeway Tunnel Alternative.</p> <p>Noise: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction and operation of this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation noise effects under the Freeway Tunnel Alternative.</p> <p>Traffic: Because the local streets that provide access to the recreation resources at this school are not expected to be used by construction traffic during construction of the Freeway Tunnel Alternative or by substantial volumes of trips to/from the tunnel portals, they would not experience temporary construction or long-term operation traffic and transportation effects under the Freeway Tunnel Alternative.</p> <p>Ground-Borne Noise and Vibration: Based on the distance from the tunneling activities under the Freeway Tunnel Alternative, the recreation facilities at this school is not expected to experience ground-borne noise or vibration effects during tunnel construction and operations.</p> <p>Visual Resources: Based on the distance from the nearest construction of any freeway segment improvements and Freeway Tunnel Alternative operations, the presence of intervening land uses, and that the nearest construction for this Alternative would be in the tunnel, the recreation facilities at this school would not experience temporary construction or long-term operation visual effects under the Freeway Tunnel Alternative.</p> <p>Summary: In summary, the Freeway Tunnel Alternative would not cause a constructive use of the recreation resources at South Pasadena Middle School because it would not result in proximity impacts on those recreation resources.</p>

Table footnotes are provided on the following page.

TABLE 3.5.1:

Freeway Tunnel Alternative – Resources Determined Not to Trigger the Requirements for Approval Under Section 4(f)

Resource ¹	Analysis of Why the Impacts of this Alternative Do Not Trigger the Requirements for Approval Under Section 4(f) ²
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Source: LSA Associates, Inc. (2014). Refer also to Chapter 5, References and Preparers, for a list of references used to research resources potentially protected under the requirements of Sections 4(f) and 6(f).

Note 1: Cities and communities which do not contain Freeway Tunnel Alternative improvements are not included in this table.

Note 2: As used in this analysis, “tunnel segment” refers to the segments of the Freeway Tunnel Alternative that would be in the tunnel, and “freeway segment” refers to segments of the freeway that would at at-grade or above grade.

¹ Only resources within 0.5 mile of the project improvements in the Freeway Tunnel Alternative are evaluated in this table. Refer to Figure 3.5-1 for the locations of the resources discussed in this table.

² The following distances were measured to assess the potential for short-term proximity impacts on Section 4(f) resources under the Freeway Tunnel Alternative:

- **Maximum Disturbance Limit:** This is an area defined on the ground surface as the maximum area that may be disturbed during construction of the Freeway Tunnel Alternative. This represents a worst case of potential temporary impacts during construction.
- **Temporary Construction Easement:** This is a specific area defined on the ground surface that is anticipated to be disturbed temporarily during construction of the Freeway Tunnel Alternative. This may include areas needed temporarily for materials or equipment storage, or construction of at-grade and elevated freeway segments. The defined TCEs are areas outside the maximum disturbance limits (MDLs). Areas used for TCEs would be restored to their original or better condition prior to returning those areas to the property owners.
- **Potential Settlement:** This is an area above the tunnel alignment defined as potentially subject to settlement as a result of the operation of the tunnel boring machine and the construction of the tunnel/tunnels in the Freeway Tunnel Alternative.

The assessment of the potential for long-term proximity impacts on Section 4(f) resources under the Freeway Tunnel Alternative was based on the limits of the MDLs described above because the permanent improvements would not be any closer to a Section 4(f) resource than the nearest limits of an MDL. In cases where the ultimate right of way would be closer to the Section 4(f) resource than the MDL, the nearest right-of-way limit was used to assess the potential for long-term proximity impacts. The following distances were measured to assess the potential for long-term proximity impacts on Section 4(f) resources under the Freeway Tunnel Alternative:

- **Freeway Segment:** This defines the non-tunnel, elevated and at-grade freeway segment improvements in the Freeway Tunnel Alternative.
- **Tunnel Alignment:** This is the alignment of the tunnel segment of the Freeway Tunnel Alternative.
- **Right-of-Way Limit:** This is the boundary of permanent right of way of the Freeway Tunnel Alternative.

³ **South Portal Haul Route:** The preliminary route for hauling spoils material generated at the south portal of the tunnel during construction of the Freeway Tunnel Alternative includes a short segment on Fremont Avenue south of Valley Boulevard and then a short segment on I-710 south to I-10. There are no parks or other Section 4(f) properties within 0.5 mile of the non-freeway part of that segment of the haul route; therefore, no discussion is provided regarding that segment of the haul route. The preliminary route at the disposal end of the trip includes Live Oak Avenue and Arrow Highway (to/from I-605 at the disposal end of the haul trips), and Azusa Canyon Road (to access the Olive Pit) and Vincent Avenue (to access the Manning Pits). The haul routes will be used only during construction of the Freeway Tunnel Alternative tunnel.

North Portal Haul Route: At the north portal, haul trucks will enter SR 710 without traveling on local streets. As a result, there will be no truck traffic in that area on non-freeway segments; therefore, no evaluation of potential effects on Section 4(f) properties was needed. The preliminary route at the disposal end of the trip includes Arrow Highway (to/from I-605 at the disposal end of the haul trips), and Azusa Canyon Road (to access the Olive Pit) and Vincent Avenue (to access the Manning Pits). The haul routes will be used only during construction of the Freeway Tunnel Alternative tunnel.

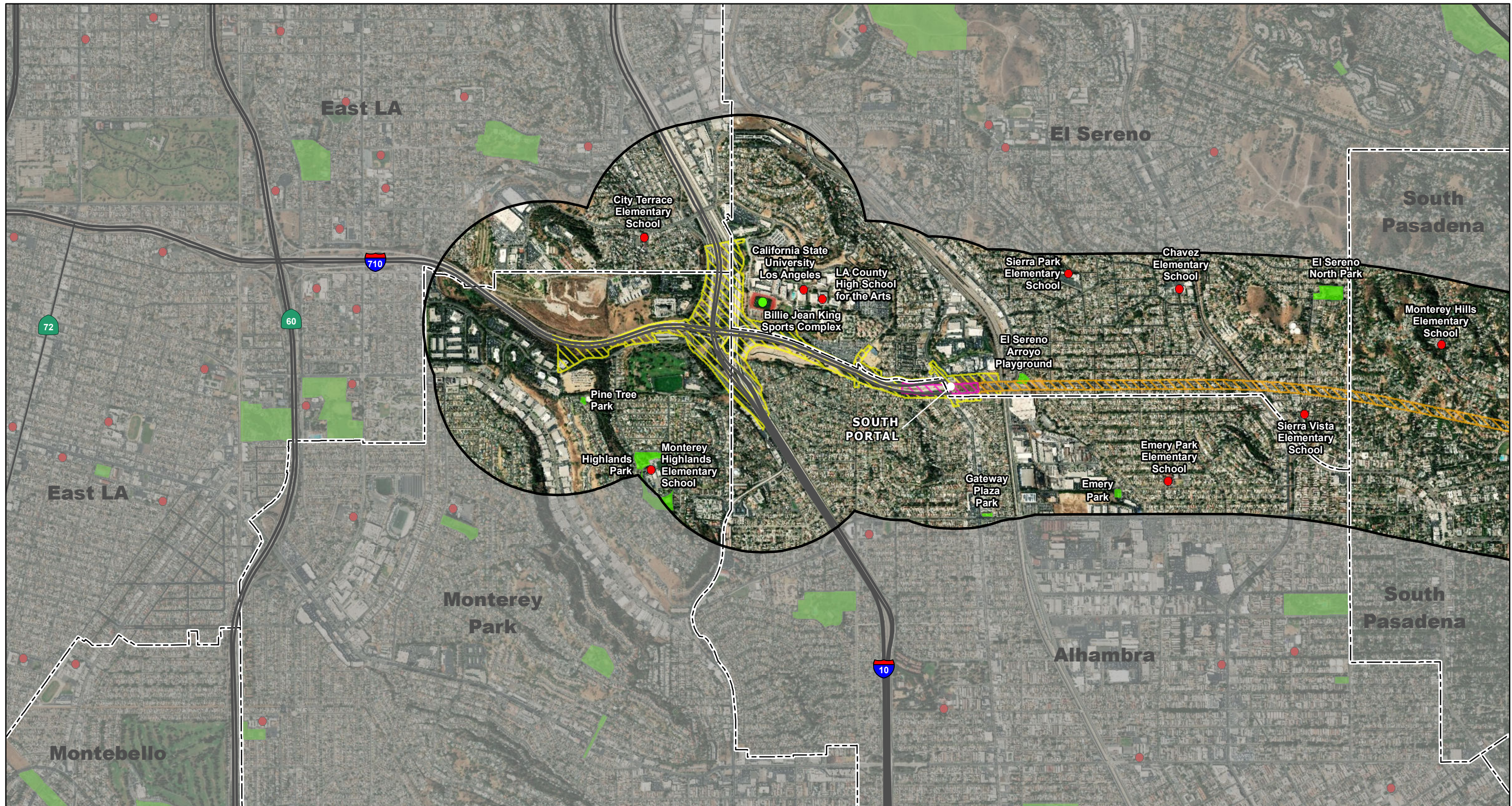
Caltrans = California Department of Transportation
 dBA = A-weighted decibels
 FY = Fiscal Year
 GHG = greenhouse gas

I-10 = Interstate 10
 I-605 = Interstate 605
 I-710 = Interstate 710
 K = Kindergarten

L&WCF Act = Land and Water Conservation Fund Act
 MDL = maximum disturbance limit
 MSAT = mobile source air toxics
 NAC = Noise Abatement Criteria

SR 710 = State Route 710
 TCE = temporary construction easement
 TMP = Transportation Management Plan

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LEGEND

- At-grade Section
- Bored Tunnel Section
- Cut & Cover Tunnel Section
- 0.5 Mile from the Project Improvements
- Public School with Recreation Resources
- Parks and Recreation
- City Boundary

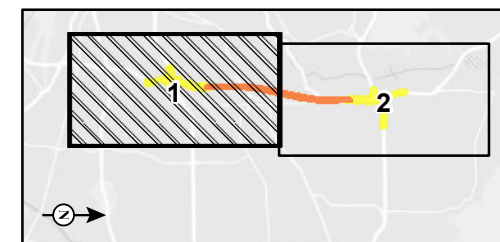
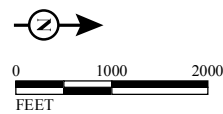
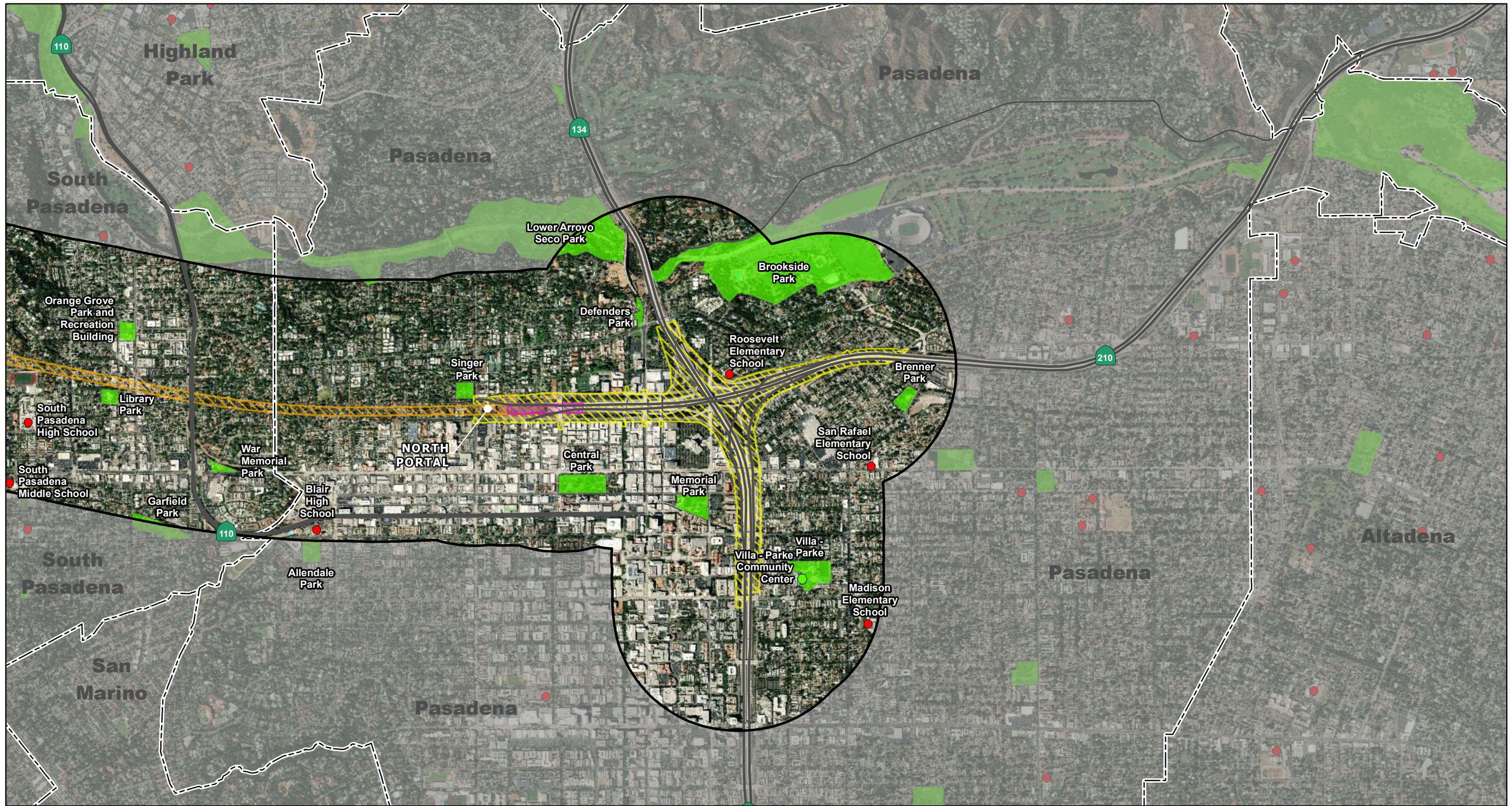


FIGURE 3.5-1

Sheet 1 of 2

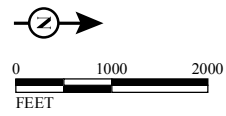
SR 710 North Project
Resources within a Half-Mile of
the Freeway Tunnel Alternative

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LEGEND

- At-grade Section
- Bored Tunnel Section
- Cut & Cover Tunnel Section
- 0.5 Mile from the Project Improvements
- Public School with Recreation Resources
- Parks and Recreation
- City Boundary



SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)
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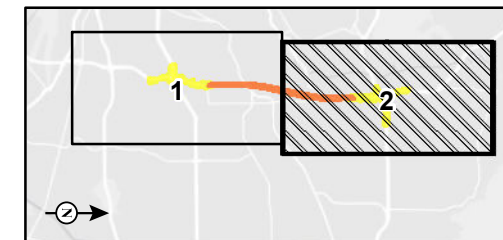


FIGURE 3.5-1

Sheet 2 of 2

SR 710 North Project
 Resources within a Half-Mile of
 the Freeway Tunnel Alternative

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TABLE 3.6.1:

TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
CITY OF PASADENA	
<p>Arroyo Seco Parkway Historic District (includes the route of the Arroyo Seco Freeway from the four-level interchange in the City of Los Angeles, through South Pasadena to East Glenarm Street in Pasadena, and the bridges along that route). The Arroyo Seco Parkway is also a segment of Historic Route 66. The State-owned bridge at the Fair Oaks Avenue Overcrossing (Bridge No. 53 0440) is listed in the Caltrans Bridge Inventory and is a contributing element of this Historic District.</p> <p>CHR Status Code: 1S (Individual property listed in the National Register by the Keeper); listed under Criteria A (Association with events), B (Association with Significant Persons), and C (Architecture)</p>	<p>Section 106 Effect: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> would have an Adverse Effect and a use under Section 4(f) due to the removal of character-defining features and from construction retaining walls and hook ramps.</p> <p>Use Under Section 4(f): To address the use of the Arroyo Seco Parkway Historic District under Section 4(f), an Individual Section 4(f) Evaluation has been prepared and is included in Appendix B.1 of the Final EIR/EIS.</p>
<p>Markham Place Historic District: Generally bounded by West California Boulevard on the north, South Pasadena Avenue on the east, Bellefontaine Street on the south, and South Orange Grove Boulevard on the west</p> <p>CHR Status Code: 1S (Individual property listed in the National Register by the Keeper); listed under Criteria A (Association with events) and C (Architecture)</p> <p>The following improvements would be constructed outside the northern boundary of the Markham Place Historic District under the TSM/TDM Alternative:</p> <ul style="list-style-type: none"> • Remove the fence on the east side of South St. John Avenue • Relocate existing SR 710 southbound off-ramp onto California Boulevard, widen South St. John Avenue, and add two traffic signals at the new-off ramp • Reconfigure South St. John Avenue by extending it south to create intersections with West Del Mar Boulevard, Palmetto Drive, and West California Boulevard • Restripe South St. John Avenue and the SR 710 off-ramp 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-1, the improvements in the TSM/TDM Alternative would be at the South St. John Avenue/West California Boulevard intersection, north of and outside the northern boundary of this Historic District.</p> <p>Construction activities that may result in indirect visual effects under the TSM/TDM Alternative include the removal of a fence on the east side of South St. John Avenue, relocation of the existing SR 710 southbound off-ramp onto California Boulevard, reconfiguration of South St. John Avenue, and restriping of South St. John Avenue and the SR 710 off-ramp. The fence and new infrastructure elements that replace, move, or alter existing non-historic elements are not considered contributing features that characterize the historic district. In addition, the reconfigured roadway would not be visible from the historic district. The proposed new 6-foot-wide sidewalk is not within the boundaries of the historic district, and small-scale infrastructure alterations within the existing right-of-way would not result in a visual effect to historic properties. Similarly, the proposed restriping would not result in an indirect visual effect.</p> <p>Construction activities that might result in direct vibratory effects include the relocation of the existing SR 710 southbound off-ramp, reconfiguration of South St. John Avenue, and restriping of South St. John Avenue and the SR 710 off-ramp. Construction activities associated with restriping would not result in a potential vibratory effect on historic properties. Furthermore, the closest area of demolition for the widening is approximately 100 feet north from the closest contributing building in the Markham Place Historic District. The construction activities are too far</p>

TABLE 3.6.1:
TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>away from the Markham Place Historic District to cause a potential vibratory effect on historic properties. Therefore, the TSM/TDM Alternative would not have an adverse direct vibratory effect on the Markham Place Historic District.</p> <p>In addition, the current noise levels in the vicinity of the Markham Place Historic District range from 56 and 60 dBA, and the TSM/TDM Alternative would increase the noise levels by 2 dBA. This level of increase for residential properties would not affect historic properties. Therefore, the increased noise associated with the TSM/TSM Alternative would not have an adverse indirect noise effect on the Markham Place Historic District.</p> <p>Section 106 Effect: As a result, the proposed improvements under the TSM/TDM Alternative would result in No Adverse Effect on this resource under Section 106.</p> <p>Use Under Section 4(f): The TSM/TDM Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the TSM/TDM Alternative would result in No Adverse Effect on this property. The TSM/TDM Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify the Markham Place Historic District for protection under Section 4(f).</p>
<p>Neighborhood Church/Sequoyah School 535 S. Pasadena Avenue (Three buildings: Children’s Chapel, Nursery School, and Religious Education Building)</p> <p>CHR Status Code: 2S2 (Individual property determined to be eligible for the National Register by a consensus through the Section 106 process); listed under Criterion C (Architecture)</p> <p>The following improvements would be constructed within the existing publicly owned right of way at the South St. John Avenue/West California Boulevard intersection, west of and outside the western boundary of the Sequoyah School/ Neighborhood Church property:</p> <ul style="list-style-type: none"> • Remove the fence on the east side of South St. John Avenue • Relocate existing SR 710 southbound off-ramp onto California Boulevard, widen South St. John Avenue, and add two traffic signals at the new-off ramp • Reconfigure South St. John Avenue by extending it south to create intersections 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-1, there would be improvements in the TSM/TDM Alternative in the vicinity of the Neighborhood Church/Sequoyah School.</p> <p>Construction activities that may result in indirect visual effects under the TSM/TDM Alternative include the removal of a fence on the east side of South St. John Avenue, relocation of the existing SR 710 southbound off-ramp onto California Boulevard, reconfiguration of South St. John Avenue, and restriping of South St. John Avenue and the SR 710 off-ramp. Removal of a fence outside of the boundaries of the historic property would not result in a visual effect because the fence is not a contributing feature that characterizes the historic property. In addition, the new road would not be visible from the historic property, and would not add a new or obtrusive element into the viewshed or setting of the historic property. The new road would not diminish the integrity of the property’s significant historic features. Furthermore, the proposed new 6-foot-wide sidewalk would not be within the boundaries of the historic property. Therefore, construction activities under the TSM/TDM Alternative would not have an adverse indirect visual effect.</p>

TABLE 3.6.1:

TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<p>with West Del Mar Boulevard, Palmetto Drive, and West California Boulevard</p> <ul style="list-style-type: none"> Restripe South St. John Avenue and the SR 710 off-ramp 	<p>Construction activities that might result in direct vibratory effects include the relocation of the existing SR 710 southbound off-ramp, reconfiguration of South St. John Avenue, and restriping of South St. John Avenue and the SR 710 off-ramp. The closest area of demolition for the relocation is approximately 130 feet from the closest contributing building within the Neighborhood Church/Sequoiah School boundaries. In addition, the closest area of demolition for the reconfiguration is 100 feet from the Neighborhood Church/Sequoiah School boundary. Therefore, construction activities are too far away to cause potential direct vibratory effects, and no adverse direct vibratory effects would occur. Construction activities associated with restriping would not result in a potential vibratory effect on historic properties.</p> <p>The current noise levels in the vicinity of the Neighborhood Church/Sequoiah School range from 62 and 68 dBA, and the TSM/TDM Alternative would increase the noise levels by 1 dBA. This level of increase for an institutional property would have no indirect noise effect on historic properties.</p> <p>Section 106 Effect: The TSM/TDM Alternative improvements would have No Adverse Effect on the Neighborhood Church/Sequoiah School under Section 106.</p> <p>Use Under Section 4(f): The TSM/TDM Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the TSM/TDM Alternative would have No Adverse Effect on the Neighborhood Church/Sequoiah School. The TSM/TDM Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify the Neighborhood Church/Sequoiah School for protection under Section 4(f).</p>
<p>Ambassador West Cultural Landscape Historic District Former campus of Ambassador College, located in the City of Pasadena and bounded by West Green Street, South St. John Avenue, West Del Mar Boulevard, and South Orange Grove Boulevard.</p> <p>CHR Status Code: 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criterion C (Architecture)</p> <p>The following improvements would be constructed in the vicinity of the Ambassador West Cultural Landscape Historic District :</p>	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-1, there would be improvements in the TSM/TDM Alternative in the vicinity of the Ambassador West Cultural Landscape Historic District.</p> <p>Construction activities that might result in indirect visual effects include the removal of fence on the east side of South St. John Avenue, restriping of South St. John Avenue, widening of the east side of southbound South St. John Avenue, replacement of an existing metal bridge sign, and reconstruction of an existing curb, gutter, and sidewalk. Removing a fence across the street from the historic property would not result in a visual effect because the fence is not a contributing feature that</p>

TABLE 3.6.1:

TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<ul style="list-style-type: none"> • Remove the fence on the east side of South St. John Avenue, east of Maranatha High School • Restripe the existing South St. John Avenue pedestrian crosswalk on the north side of West Del Mar Boulevard and paint a median of tapered chevrons on South St. John Avenue north of the West Del Mar Boulevard intersection. • Widen the east side of the southbound South St. John Avenue north of West Del Mar Boulevard to create a through lane and a combination through/left-turn lane. The widening would begin approximately 140 feet north of the South St. John Avenue/West Del Mar Boulevard intersection and would widen the road up to approximately 20 feet at the intersection. • Replace the existing metal bridge sign located approximately 55 feet north of the intersection with a wider metal sign at the same location. • Reconstruct the existing curb, gutter, and sidewalk along the east side of South St. John Avenue. The proposed sidewalk would be 6 feet wide and tie into the existing sidewalk along the north side of West Del Mar Boulevard. 	<p>characterizes the historic property. In addition, restriping within existing roadways would not result in an indirect visual effect to historic properties. The proposed small-scale infrastructure improvements are not within the boundaries of the historic district and the proposed widening would be more than 75 feet from the Ambassador West Cultural Landscape Historic District boundary. The proposed sign relocation would be outside of the historic district boundaries and would not affect the setting of the historic district. Therefore, these construction activities would have no visual effect on the Ambassador West Cultural Landscape Historic District.</p> <p>Construction activities that might result in direct vibratory effects include restriping of South St. John Avenue, widening of the east side of southbound South St. John Avenue, and reconstruction of an existing curb, gutter, and sidewalk. However, construction activities associated with restriping asphalt, such as cold planing or milling, would not result in a potential direct vibratory effect. In addition, the closest area of demolition for the proposed widening is approximately 75 feet from the boundary of the Ambassador West Cultural Landscape Historic District. The construction activities are too far away from the historic district to cause a potential vibratory effect on the historic properties. Therefore, the proposed construction activities would not cause an adverse direct vibratory effect on the Ambassador West Cultural Landscape Historic District.</p> <p>The current noise level in the vicinity of the Ambassador West Cultural Landscape Historic District is 66 dBA, and the TSM/TDM Alternative would increase the noise level to 67 dBA. This level of increase for an institutional property would not have an effect on historic properties. Therefore, any increased noise associated with the TSM/TSM Alternative would not cause an indirect noise effect on the Ambassador West Cultural Landscape Historic District.</p> <p>Section 106 Effect: The TSM/TDM Alternative improvements would have No Adverse Effect on the Ambassador West Cultural Landscape Historic District under Section 106.</p> <p>Use Under Section 4(f): The TSM/TDM Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the TSM/TDM Alternative would have No Adverse Effect on the Ambassador West Cultural Landscape Historic District. The TSM/TDM Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property's activities,</p>

TABLE 3.6.1:

TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	features, or attributes that qualify the Ambassador West Cultural Landscape Historic District for protection under Section 4(f).
<p>Ambassador Auditorium Performing Arts Center 131 South Street</p> <p>CHR Status Code: 2S2/2D/2B (Individual property determined eligible for the National Register by a consensus through the Section 106 process/Contributor to a district determined eligible for the National Register by the Keeper/Determined eligible for the National Register as an individual property and as a contributor to an eligible district in a federal regulatory process); listed under Criterion C (Architecture)</p> <p>The following improvements would be constructed near the Ambassador Auditorium under the TSM/TDM Alternative:</p> <ul style="list-style-type: none"> • Remove the fence on the east side of South St. John Avenue, east of Maranatha High School • Restripe the existing South St. John Avenue pedestrian crosswalk on the north side of West Del Mar Boulevard and paint a median of tapered chevrons on South St. John Avenue north of the West Del Mar Boulevard intersection. • Widen the east side of the southbound South St. John Avenue north of West Del Mar Boulevard to create a through lane and a combination through/left-turn lane. The widening would begin approximately 140 feet north of the South St. John Avenue/West Del Mar Boulevard intersection and would widen the road up to approximately 20 feet wide at the intersection. • Replace the existing metal bridge sign located approximately 55 feet north of the intersection with a wider sign at the same location. • Reconstruct the existing curb, gutter, and sidewalk along the east side of South St. John Avenue. The proposed sidewalk would be 6 feet wide and tie into the existing sidewalk along the north side of West Del Mar Boulevard. 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-1, there would be improvements in the TSM/TDM Alternative in the vicinity of the Ambassador Auditorium Performing Arts Center.</p> <p>Construction activities that might result in indirect visual effects include the removal of fence on the east side of South St. John Avenue, restriping of South St. John Avenue, widening of the east side of the southbound South St. John Avenue, replacement of an existing metal bridge sign, and reconstruction of an existing curb, gutter, and sidewalk. Removing a fence across the street from the historic property would not result in a visual effect because the fence is not a contributing feature that characterizes the historic property. In addition, restriping within existing roadways would not result in an indirect visual effect to historic properties. The proposed small-scale infrastructure improvements are not within the boundaries of a historic district and the proposed widening would be more than 400 feet southeast of the property boundary and are not likely visible from the historic property due to mature plantings and intervening buildings. Modifications to existing, non-historic transportation infrastructure, including signage, would not result in an indirect visual effect, as long as the property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. The setting is not an essential aspect of integrity for the Ambassador Auditorium Performing Arts Center. Therefore, these construction activities would have no indirect visual effects on the Ambassador Auditorium.</p> <p>Construction activities that might result in direct vibratory effects include restriping of South St. John Avenue, widening of the east side of the southbound South St. John Avenue, and reconstruction of an existing curb, gutter, and sidewalk. However, construction activities associated with restriping asphalt, such as cold planing or milling, would not result in a potential direct vibratory effect. In addition, the closest area of demolition for the proposed widening is approximately 400 feet from the Ambassador Auditorium Performing Arts Center boundary. The construction activities are too far away from the Ambassador Auditorium Performing Arts Center to cause a potential vibratory effect on the historic property. Therefore, the proposed construction activities would not cause an adverse direct vibratory effect on the Ambassador Auditorium Performing Arts Center.</p>

TABLE 3.6.1:
TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>The current noise level in the vicinity of the Ambassador Auditorium Performing Arts Center is 66 dBA, and the TSM/TDM Alternative would merely increase the noise level to 67 dBA. This level of increase for an institutional property would not have an effect on the significance of the historic property and the TSM/TSM Alternative would not cause an indirect noise effect on the Ambassador Auditorium Performing Arts Center.</p> <p>Section 106 Effect: The TSM/TDM Alternative improvements would have No Adverse Effect on the Ambassador Auditorium Performing Arts Center under Section 106.</p> <p>Use Under Section 4(f): The TSM/TDM Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the TSM/TDM Alternative would have No Adverse Effect on the Ambassador Auditorium Performing Arts Center. The TSM/TDM Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify the Ambassador Auditorium Performing Arts Center for protection under Section 4(f).</p>
<p>Ambassador College Dining Hall 169 South St. John Avenue</p> <p>CHR Status Code: 2S2/2D/2B (Individual property determined eligible for the National Register by a consensus through the Section 106 process/Contributor to a district determined eligible for the National Register by the Keeper/Determined eligible for the National Register as an individual property and as a contributor to an eligible district in a federal regulatory process; listed under Criterion C [Architecture])</p> <p>The following improvements would be constructed near the Ambassador College Dining Hall under the TSM/TDM Alternative:</p> <ul style="list-style-type: none"> • Remove the fence on the east side of South St. John Avenue, east of Maranatha High School. • Restripe the existing South St. John Avenue pedestrian crosswalk on the north side of West Del Mar Boulevard and paint a median of tapered chevrons on South St. John Avenue north of the West Del Mar Boulevard intersection. • Widen the east side of the southbound South St. John Avenue north of West Del Mar Boulevard to create a through lane and a combination through/left-turn 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-1, there would be improvements in the TSM/TDM Alternative in the vicinity of the Ambassador College Dining Hall.</p> <p>Construction activities that might result in indirect visual effects include the removal of fence on the east side of South St. John Avenue, restriping of South St. John Avenue, widening of the east side of the southbound South St. John Avenue, replacement of an existing metal bridge sign, and reconstruction of an existing curb, gutter, and sidewalk. Removing a fence across the street from the historic property would not result in a visual effect because the fence is not a contributing feature that characterizes the historic property. In addition, restriping within existing roadways would not result in an indirect visual effect to historic properties. The proposed small-scale infrastructure improvements are not within the boundaries of the historic district and the proposed widening would be more than 100 feet southeast of the property boundary and are not likely visible from the historic property due to mature plantings and intervening buildings. Modifications to existing, non-historic transportation infrastructure, including signage, would not result in an indirect visual effect, as long as the property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. The setting is not an</p>

TABLE 3.6.1:

TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<p>lane. The widening would begin approximately 140 feet north of the South St. John Avenue/West Del Mar Boulevard intersection and will widen the road up to approximately 20 feet wide at the intersection.</p> <ul style="list-style-type: none"> • Replace the existing metal bridge sign located approximately 55 feet north of the intersection with a wider sign at the same location. • Reconstruct the existing curb, gutter, and sidewalk along the east side of South St. John Avenue. The proposed sidewalk would be 6 feet wide and tie into the existing sidewalk along the north side of West Del Mar Boulevard. 	<p>essential aspect of integrity for the Ambassador College Dining Hall. Therefore, these construction activities would have no indirect visual effect on the Ambassador College Dining Hall.</p> <p>Construction activities that might result in direct vibratory effects include restriping of South St. John Avenue, widening of the east side of the southbound South St. John Avenue, and reconstruction of an existing curb, gutter, and sidewalk. However, construction activities associated with restriping asphalt, such as cold planing or milling, would not result in an adverse direct vibratory effect. In addition, the closest area of demolition for the proposed widening is approximately 100 feet from the Ambassador College Dining Hall boundary. The construction activities are too far away from the Ambassador College Dining Hall to cause a potential vibratory effect on the historic property. Therefore, the proposed construction activities would not cause an adverse direct vibratory effect on the Ambassador College Dining Hall.</p> <p>The current noise level in the vicinity of the Ambassador College Dining Hall is 66 dBA, and the TSM/TDM Alternative would increase the noise level to 67 dBA. This level of increase for an institutional property would not have an effect on its historic significance. Therefore, the increased noise associated with the TSM/TSM Alternative would not cause an indirect noise effect on the Ambassador College Dining Hall.</p> <p>Section 106 Effect: The TSM/TDM Alternative improvements would have No Adverse Effect on the Ambassador College Dining Hall.</p> <p>Use Under Section 4(f): The TSM/TDM Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the TSM/TDM Alternative would have No Adverse Effect on the Ambassador College Dining Hall. The TSM/TDM Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify the Ambassador College Dining Hall for protection under Section 4(f).</p>
CITY OF SOUTH PASADENA	
<p>Rialto Theatre 1019 Fair Oaks Avenue</p> <p>CHR Status Code: 1S (Individual property listed in the National Register by the Keeper); listed under Criteria A (Association with events) and C (Architecture)</p> <p>The following improvements would be constructed on Fair Oaks Avenue adjacent to</p>	<p>Effects Under Section 106: As described in detail in the <i>Finding of No Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-1, the Rialto Theatre is on the northwest corner of the intersection of Oxley Street and Fair Oaks Avenue. As shown on Figure 3.6-1, the improvements in the TSM/TDM Alternative would be along Fair Oaks Avenue, east of and outside the property boundary of the Rialto Theatre. The primary access to the theater property is from the main driveway on</p>

TABLE 3.6.1:

TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<p>the Rialto Theatre under the TSM/TDM Alternative:</p> <ul style="list-style-type: none"> • Removal of the existing median and restriping of Fair Oaks Avenue to accommodate a reversible lane and restripe crosswalks on Fair Oaks Avenue • Installation of two overhead reversible lane assignment indicators in the sidewalk along Fair Oaks Avenue • Installation of traffic control management equipment within an existing traffic signal controller cabinet 	<p>Fair Oaks Avenue.</p> <p>Construction activities that have the potential for indirect visual effects include the restriping of lanes on Fair Oaks Avenue, removal of the median, installation of overhead message boards, and installation of traffic control management equipment. However, restriping within existing roadways as well as minor changes to existing, non-historic, infrastructure elements including medians, signage, and traffic control equipment within existing roadways, would not result in an indirect visual effect, as long as the property’s immediate setting is not an essential aspect of integrity for the property to convey its historical significance. The setting is not an essential aspect of integrity for the Rialto Theatre. Therefore, these construction activities would have no indirect visual effect on the Rialto Theatre.</p> <p>Construction activities that have the potential for direct vibratory effects include the restriping of lanes on Fair Oaks Avenue, removal of the median, and installation of overhead message boards. The construction activities associated with restriping asphalt, such as cold planing or milling, would not result in a direct vibratory effect. In addition, the closest area of demolition for the removal of the median is approximately 75 feet from the Rialto Theatre and the closest area of demolition for the installation of signage is approximately 90 feet from the Rialto Theatre. These construction activities are too far away from the Rialto Theatre to cause a potential vibratory effect.</p> <p>The current noise level in the vicinity of the Rialto Theatre is 70 dBA, and the TSM/TDM Alternative would increase the noise level to 73 dBA. This level of increase for a commercial property would not have an effect on the significance of a historic property. Therefore, the increased noise associated with the TSM/TSM Alternative would not have an adverse indirect noise effect on the Rialto Theatre.</p> <p>Section 106 Effect: In summary, the TSM/TDM Alternative improvements would have No Adverse Effect on the Rialto Theatre.</p> <p>Use Under Section 4(f): The TSM/TDM Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the TSM/TDM Alternative would have No Adverse Effect on the Rialto Theatre. The TSM/TDM Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify the Rialto Theatre for protection under Section 4(f).</p>

TABLE 3.6.1:
TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<p>Fair Hope Building 800 Fair Oaks Avenue</p> <p>CHR Status Code: 2S2 (Individual property determined to be eligible for the National Register by a consensus through the Section 106 process); listed under Criteria A (Association with events) and C (Architecture)</p> <p>The following improvements would be constructed within Fair Oaks Avenue adjacent to the Fair Hope Building under the TSM/TDM Alternative:</p> <ul style="list-style-type: none"> • Restriping of Fair Oaks Avenue to accommodate a reversible lane and restripe crosswalks on Fair Oaks Avenue • Installation of two overhead reversible lane assignment indicators in the sidewalk along Fair Oaks Avenue • Installation of traffic management equipment in an existing traffic signal pull box in the sidewalk approximately 16 feet from the north-west corner of the Fair Hope Building • Installation of traffic management equipment in an existing traffic controller cabinet across Hope Street and approximately 60 feet from the northwest corner of the Fair Hope Building 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-1, the Fair Hope Building is on the southeast corner of the intersection of Hope Street and Fair Oaks Avenue. As shown on Figure 3.6-1, the improvements in the TSM/TDM Alternative would be along Fair Oaks Avenue, west of and outside the property boundary of the Fair Hope Building. The primary access to the property is from the main driveway on Fair Oaks Avenue.</p> <p>Construction activities that have the potential for indirect visual effects include the restriping of lanes on Fair Oaks Avenue, installation of overhead message boards, and installation of traffic control management equipment. Minor changes to existing, non-historic, infrastructure elements like adding new signage or equipment to existing poles or cabinets, would not result in an indirect visual effect on historic properties, as long as the property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. The setting is not an essential aspect of integrity for the Fair Hope Building. In addition, restriping would not result in an indirect visual effect on historic properties.</p> <p>Construction activities that have the potential for direct vibratory effects include the restriping of lanes on Fair Oaks Avenue and installation of overhead message boards. The construction activities associated with restriping asphalt, such as cold planing or milling, would not result in a potential direct vibratory effect. In addition, the proposed demolition for installing signage would be approximately 100 feet from the Fair Hope Building. The construction activities are too far away from the Fair Hope Building to cause a potential vibratory effect. Therefore, the proposed construction activities would not have an adverse direct vibratory effect on Fair Hope Building.</p> <p>The current noise level in the vicinity of the Fair Hope Building is 69 dBA, and the TSM/TDM Alternative would increase the noise level to 72 dBA. This level of increase for a commercial property would not have an effect on historic properties. Therefore, the increased noise associated with the TSM/TSM Alternative would not have an indirect noise effect on the Fair Hope Building.</p> <p>Section 106 Effect: In summary, the TSM/TDM Alternative improvements would have No Adverse Effect on the Rialto Theatre.</p> <p>Use Under Section 4(f): The TSM/TDM Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the TSM/TDM Alternative would have No</p>

TABLE 3.6.1:

TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	Adverse Effect on the Fair Hope Building. The TSM/TDM Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify the Fair Hope Building for protection under Section 4(f).
<p>Segment of Route 66 West Huntington Drive between Fair Oaks Avenue and Fremont Avenue</p> <p>CHR Status Code: Assumed eligible for listing in the National Register for the purpose of this project only; under Criteria A (Association with events) and C (Architecture)</p> <p>The following improvements would be constructed on West Huntington Drive at the foot of Fair Oaks Avenue under the TSM/TDM Alternative:</p> <ul style="list-style-type: none"> • Remove approximately 12 feet of the existing landscape island on the west side of the Fair Oaks Avenue/West Huntington Drive intersection to accommodate a new southbound left turn lane on Fair Oaks Avenue • Install new crosswalks from both the west and east existing landscaped islands across West Huntington Drive • Install a new crosswalk between the existing landscaped islands • Remove approximately 3-4 feet of the existing west and east landscape islands at the Fair Oaks Avenue and West Huntington Drive intersection and widen West Huntington Drive on the north side of the street to match modified landscaped islands; • Modify the existing traffic control box on the west side of the north-west island of the intersection • Relocate two signal poles on the south side of the northwest islands slightly to the north and south, respectively • Restripe lanes 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-1, there would be improvements in the TSM/TDM Alternative in the vicinity of the former segment of Route 66/West Huntington Drive at the intersections of Fair Oaks Avenue and Fremont Avenue.</p> <p>Construction activities including roadway reconfiguration, restriping, relocation of signal poles, and installation of a pedestrian crosswalk have the potential to result in direct effects to the character-defining features of this former segment of Route 66 that support its eligibility for the National Register. These construction activities would modify existing, non-contributing elements. The proposed roadway reconfiguration, restriping, relocating signal poles, and installing a pedestrian crosswalk would not damage or destroy any contributing elements to Route 66. Therefore, the proposed construction activities would not have an adverse direct effect on Route 66.</p> <p>Construction activities including roadway reconfiguration, restriping, relocation of signal poles, and installation of a pedestrian crosswalk also have the potential to result in indirect visual effects. Changes to existing, non-historic, infrastructure elements like existing traffic lanes, restriping, new infrastructure elements that replace, move, or alter existing non-historic elements that are not character-defining, and infrastructure elements like curbs, crosswalks, and ramps would not result in an indirect visual effect, as long as the property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. The setting is not an essential aspect of integrity for the Route 66. Therefore, the construction activities would not have indirect visual effects on Route 66.</p> <p>The current noise levels in the vicinity of this Segment of Route 66 is 69 to 70 dBA and the TSM/TDM Alternative would increase the noise levels by approximately 1dBA. This level of increase in noise would not have an effect on historic properties. Therefore, the increased noise associated with the TSM/TDM Alternative would not have an indirect noise effect on this segment of Route 66.</p> <p>Section 106 Effect: The TSM/TDM Alternative improvements would have No Adverse Effect on the segment of historic Route 66 at the intersections of Fair Oaks Avenue</p>

TABLE 3.6.1:

TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>and Fremont Avenue.</p> <p>Use Under Section 4(f): The TSM/TDM Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the TSM/TDM Alternative would have No Adverse Effect on this segment of Route 66. The TSM/TDM Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify Route 66 for protection under Section 4(f).</p>
CITIES OF PASADENA AND SOUTH PASADENA	
<p>Segment of Route 66 South Fair Oaks Avenue/Fair Oaks Avenue</p> <p>CHR Status Code: Assumed eligible for listing in the National Register for the purpose of this project only; under Criteria A (Association with events) and C (Architecture)</p> <p>The following improvements would be constructed on South Fair Oaks Avenue/Fair Oaks Avenue under the TSM/TDM Alternative:</p> <ul style="list-style-type: none"> • Replace the existing median with one dedicated left-turn • Convert two existing dedicated left-turn lanes and median areas into a reversible directional lane • Eliminate parking on the west side of southbound Fair Oaks Avenue • Add a 12-foot wide southbound through lane on Fair Oaks Avenues south of Grevelia Street • Replace existing dedicated left-turn lane and one combination through/left-turn lane on northbound Fair Oaks Avenue with two through lanes south of Grevelia Street • Add one southbound through lane on Fair Oaks Avenue south of State Street • Replace outer northbound through lane with a dedicated right-turn lane south of the State Street intersection • Remove existing pork chop and associated traffic signal at the Fair Oaks Avenue and State Street intersection • Eliminate two dedicated left-turn lanes to prohibit left turns onto southbound SR 110 on-ramp and replace with one northbound through lane on Fair Oaks Avenue south of State Street • Remove raised median on Fair Oaks Avenue Overcrossing and construct raised median island on Fair Oaks Avenue Overcrossing up to adjacent intersections 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-1, there would be improvements in the TSM/TDM Alternative along the approximately 2.9-mile-long segment of Fair Oaks Avenue/South Fair Oaks Avenue between the intersection of West Huntington Drive in South Pasadena and Colorado Boulevard in Pasadena.</p> <p>Construction activities including roadway reconfiguration, restriping, and installation of traffic management equipment have the potential to result in direct effects to the character-defining features of this former segment of Route 66 that support its eligibility for the National Register. Although the TSM/TDM Alternative calls for reconfiguring the roadway, restriping of lanes, and additional lane poles and equipment within the boundaries of the district, it is modifying existing, non-contributing elements. The proposed roadway reconfiguration, restriping, and traffic control equipment would not damage or destroy any contributing elements to Route 66. Therefore, these construction activities would not cause adverse direct effects on Route 66.</p> <p>Construction activities including roadway reconfiguration, restriping, and installation of traffic management equipment also have the potential to result in indirect visual effects. Changes to existing, non-historic, infrastructure elements like existing traffic lanes, restriping roadways, or traffic control equipment would not result in an indirect visual effect, as long as the property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. The setting is not an essential aspect of integrity for the Route 66.</p> <p>The current noise level in the vicinity of this segment of Route 66 is 69 to 70 dBA, and the TSM/TDM Alternative would increase the noise level by approximately 1 dBA. This level of increase in noise would not have an effect on historic properties.</p>

TABLE 3.6.1:

TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<ul style="list-style-type: none"> • Construct raised median island on Fair Oaks Avenue, south of Grevelia Street • Restripe lanes • Modify and install TSM/TDM equipment 	<p>Therefore, the increased noise associated with the TSM/TDM Alternative would not have an indirect noise effect on this segment of Route 66.</p> <p>Section 106 Effect: In summary, the TSM/TDM Alternative improvements would have No Adverse Effect on the segment of historic Route 66 on Fair Oaks Avenue/South Fair Oaks Avenue between the intersection of West Huntington Drive in South Pasadena and Colorado Boulevard in Pasadena.</p> <p>Use Under Section 4(f): The TSM/TDM Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the TSM/TDM Alternative would have No Adverse Effect on this segment of Route 66. The TSM/TDM Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify Route 66 for protection under Section 4(f).</p>
CITY OF LOS ANGELES	
<p>Segment of Route 66 West Huntington Drive and North Eastern Avenue</p> <p>CHR Status Code: Assumed eligible for listing in the National Register for the purpose of this project only; Criteria A (Association with events) and C (Architecture)</p> <p>The following improvements would be constructed on West Huntington Drive and North Eastern Avenue under the TSM/TDM Alternative:</p> <ul style="list-style-type: none"> • Replace existing median with one dedicated left-turn lane on westbound Huntington Drive to accommodate traffic flows to Eastern Avenue • Add one dedicated right-turn lane to the northbound direction of Eastern Avenue • Replace the existing southbound through lane with one dedicated left-turn lane, and one combination of through and right-turn lane on southbound El Sereno Avenue • Restripe lanes 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-1, there would be improvements in the TSM/TDM Alternative in the vicinity of the former segment of Route 66 at the West Huntington Drive intersection of North Eastern Avenue.</p> <p>Construction activities have the potential to result in direct effects to the character-defining features of this former segment of Route 66 that qualify it for eligibility for National Register. Although the TSM/TDM Alternative calls for reconfiguring the roadway and restriping within the boundaries of the district, it is modifying existing, non-contributing elements. The proposed roadway reconfiguration and restriping would not damage or destroy any contributing elements to Route 66. Therefore, the proposed roadway reconfigurations and restriping would not cause an adverse direct effect on Route 66.</p> <p>Construction activities including roadway reconfiguration and restriping also have the potential to result in indirect visual effects. Changes to existing, non-historic, infrastructure elements like existing traffic lanes and restriping roadways would not result in an indirect visual effect, as long as the property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. The setting is not an essential aspect of integrity for the Route 66. Therefore, roadway reconfiguration and restriping would not have indirect visual effects on Route 66.</p>

TABLE 3.6.1:

TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>Section 106 Effect: The TSM/TDM Alternative improvements would have No Adverse Effect on the former segment of Route 66 at the West Huntington Drive intersection of North Eastern Avenue.</p> <p>Use Under Section 4(f): The TSM/TDM Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the TSM/TDM Alternative would have No Adverse Effect on this segment of Route 66. The TSM/TDM Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify Route 66 for protection under Section 4(f).</p>
CITY OF SAN MARINO	
<p>San Marino Municipal Building (City Hall and Fire Station) 2200 Huntington Drive</p> <p>CHR Status Code: 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criterion C (Architecture)</p> <p>The following improvements would be constructed in the vicinity of the San Marino City Hall and Fire Station under the TSM/TDM Alternative:</p> <ul style="list-style-type: none"> Alter the existing through and right turn combination lane with one 13-foot eastbound through lane on northbound West Huntington Drive Modify diagonal parking striping to parallel parking striping to accommodate a new dedicated right-turn lane for southbound turning movements onto San Marino Avenue Modify diagonal parking striping to parallel parking striping on northbound and southbound Huntington Drive east of San Marino Avenue Reconfigure adjacent lanes on West Huntington Drive accordingly 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-1, there would be improvements in the TSM/TDM Alternative in the vicinity of the San Marino City Hall and Fire Station.</p> <p>Construction activities that have the potential for indirect visual effects include the restriping of lanes on West Huntington Drive. However, restriping within existing roadways would not result in for an indirect visual effect on historic properties.</p> <p>In addition, the construction activities associated with restriping asphalt, such as cold planing or milling, would not result in a potential direct vibratory effect.</p> <p>Based on the type of historic property and the fact that the building contains a firehouse where frequent sirens and firetrucks leave the building, it is expected that an increase in noise caused by street traffic would not diminish the qualities that characterize the historic property, since a quiet environment is not a characteristic of the building’s significance. Therefore, any increased noise associated with the TSM/TSM Alternative would not have an indirect noise effect on the San Marino Municipal Building.</p> <p>Section 106 Effect: The TSM/TDM Alternative improvements would have No Effect on the San Marino Municipal Building (City Hall and Fire Station).</p> <p>Use Under Section 4(f): The TSM/TDM Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the TSM/TDM Alternative would have No Effect on the San Marino Municipal Building (City Hall and Fire Station) that qualify it</p>

TABLE 3.6.1:
TSM/TDM Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	for inclusion in the National Register. The TSM/TDM Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify the San Marino Municipal Building (City Hall and Fire Station) for protection under Section 4(f).

Sources: *Historic Property Survey Report (2014)*; *Supplemental Historic Property Survey Report (2017)*; *Finding of Adverse Effect for the State Route 710 North Project (2017)*; and LSA Associates, Inc. (2018).

¹ Only properties within the Area of Potential Effects for the TSM/TDM Alternative are evaluated in this table. Refer to Figure 3.6-1 for the locations of the resources discussed in this table.

APN = Assessor’s Parcel Number

Caltrans = California Department of Transportation

CHR = California Historical Resource

Keeper = Keeper of the National Register of Historic Places

National Register = National Register of Historic Places

sf = square feet

SR 110 = State Route 110

TCE = temporary construction easement

TSM/TDM = Transportation System Management/Transportation Demand Management

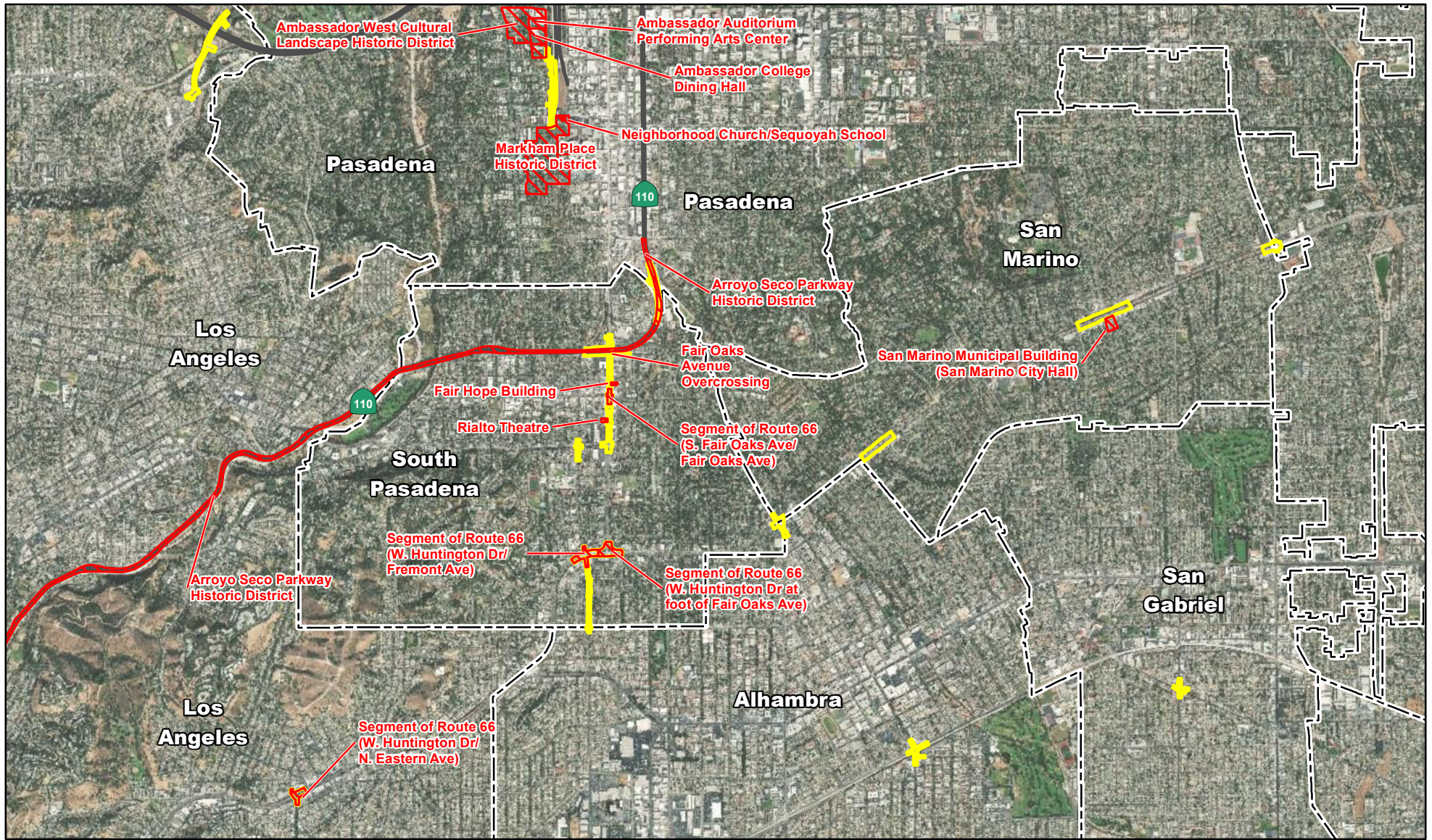


FIGURE 3.6-1

LEGEND

- TSM/TDM Alternative Limits of Construction
- Cultural Resource
- City Boundary



SOURCE: Bing (c.2012); NRHP (2014); CH2MHill (2014)
 I:\CHM1105\GIS\MXD\EIR_EIS\App_B\NRHP_TSM_TDM.mxd (7/25/2018)

SR 710 North Project

Historic Properties for the TSM/TDM Alternative

07-LA-710 (SR 710)
 EA 187900
 EFIS 0700000191

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TABLE 3.6.2:

BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
UNINCORPORATED LOS ANGELES COUNTY	
<p>Golden Gate Theater 909 South Atlantic Boulevard</p> <p>CHR Status Code: 1S (Individual property listed in National Register by the Keeper); listed under Criteria A (Association with events) and C (Architecture)</p> <p>The following improvements would be constructed in the vicinity of the Golden Gate Theater under the BRT Alternative:</p> <ul style="list-style-type: none"> • Construct the Whittier BRT Station and bus pad, replacing the existing Whittier Metro bus stop • Build two accessible pedestrian ramps at the northwest and southwest corners of the East Whittier Boulevard and South Atlantic Boulevard intersection • Restripe South Atlantic Boulevard vehicular lanes to add an exclusive northbound right-turn lane for buses within the existing right-of-way and restripe pedestrian crosswalks 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-2, the Golden Gate Theater faces north, fronting on Whittier Boulevard. It is on the southwest corner of the Whittier Boulevard/South Atlantic Boulevard intersection. Access to the property is from driveways on Whittier and South Atlantic Boulevards.</p> <p>Construction activities with the potential to result in indirect visual effects include construction of the Whittier BRT Station and bus pad, pedestrian ramps, and restriping. Operation would increase bus frequency, which also have the potential to result in indirect visual effects. However, new bus stations within a one-block radius, where the station does not block the view of an individually significant building, would not have an adverse effect if the property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. The setting of the Golden Gate Theater is not an essential aspect of the property’s integrity. The proposed bus station would not block the view of the Golden Gate Theater, as it is approximately 50 feet away and separated by a surface parking lot. In addition, restriping and small-scale infrastructure elements that replace existing non-historic elements, like accessible pedestrian ramps at existing crosswalks, would not result in indirect visual effects. This location currently has a bus route and is a busy, urban commercial district. Increasing the frequency of buses would not have an indirect visual effect on the Golden Gate Theater.</p> <p>These construction activities also have the potential to result in direct vibratory effects. However, construction activities for the Station are too far away from the Golden Gate Theater (more than 50 feet) and for the pedestrian ramps are too far away (more than 200 feet) to cause an adverse vibratory effect. Construction activities associated with restriping, such as cold planing or milling, asphalt, would not result in an adverse direct vibratory effect.</p> <p>The increase in bus frequency has the potential for indirect noise effects. The current noise level in the vicinity of the Golden Gate Theater is 68 dBA, and the BRT Alternative would increase the noise level to 69 dBA. This level of increase for a commercial property would not result in an indirect noise effect on the Golden Gate Theater.</p> <p>Section 106 Effect: In summary, the BRT Alternative would have No Adverse Effect on the Golden Gate Theater.</p>

TABLE 3.6.2:

BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>Use Under Section 4(f): The BRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, The BRT Alternative would have No Adverse Effect on the Golden Gate Theater. The changes in views from and to the Golden Gate Theater would not affect the occupation and intended uses of any of the contributing elements of the property. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property’s activities, features, or attributes that qualify the Golden Gate Theater for protection under Section 4(f).</p>
<p>St. Alphonsus Church 532 South Atlantic Boulevard</p> <p>CHR Status Code: 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criterion C (Architecture)</p> <p>The following improvements would be implemented in the vicinity of St. Alphonsus Church under the BRT Alternative:</p> <ul style="list-style-type: none"> • Widen South Atlantic Boulevard by reducing the width of the sidewalk width in both directions of travel to accommodate a dedicated bus lane. • Restripe South Atlantic Boulevard from four to five lanes to accommodate a northbound dedicated bus lane. • Restripe pedestrian crosswalk at the South Atlantic Boulevard/Hastings Street intersection • Install an accessible pedestrian ramps (at the Hastings Street and South Atlantic Boulevard intersection) and reduce the sidewalk width from 77 feet to 70 feet • Install two reconfigured driveway curb cut outs • Relocate a modern metal streetlight to a location approximately 25 feet from the northwest corner of the church building • Relocate a modern street sign to a location approximately 25 feet from the southwest corner of the church building. 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-2, St. Alphonsus Church faces west, fronting on South Atlantic Boulevard. The church building is on the northeast corner of the South Atlantic Boulevard/Hastings Street intersection. Access to the property is from driveways on South Atlantic Boulevard and Hastings Street.</p> <p>Construction activities that have the potential to result in indirect visual effects include restriping, widening of South Atlantic Boulevard, reconfiguration of sidewalk and installation of ramps, and relocation of a streetlight and removal of a street tree. However, construction activities associated with restriping asphalt, such as cold planing or milling, would not have a potential direct vibratory effect. Restriping would not have a direct vibratory effect on Saint Alphonsus Church. In addition, minor changes to existing, non-historic, infrastructure elements like narrowing or reconfiguring existing sidewalks and widening existing roadways, installing accessible pedestrian ramps, reconfiguring curb-outs, and replacement of modern street lamps, traffic signs, and street trees would not result in an indirect visual effect, as long as the property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. The setting is not an essential aspect of integrity for Saint Alphonsus Church to convey its historic significance. In addition, this location currently has a bus route and is a busy, urban commercial district. Increasing the frequency of buses during operation would not have an indirect visual effect on the Saint Alphonsus Church.</p> <p>The construction activities described above also have the potential to result in direct vibratory effects. However, construction activities associated with restriping asphalt, such as cold planing or milling, would not result in an adverse direct vibratory effect. In addition, closest area of demolition for the proposed construction is approximately</p>

TABLE 3.6.2:

BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>25 feet from the building. The construction activities are too far away from Saint Alphonsus Church to cause an adverse vibratory effect on Saint Alphonsus Church.</p> <p>The increase in operational activity also has the potential to result in indirect noise effects. The current noise level in the vicinity of Saint Alphonsus Church is 64 dBA, and the BRT Alternative would increase the noise level to 66 dBA. This level of increase for a commercial property would not have an effect on historic properties. Therefore, the increased noise associated with the BRT Alternative would not have an indirect noise effect on Saint Alphonsus Church.</p> <p>Section 106 Effect: In summary, the BRT Alternative would result in No Adverse Effect on the St. Alphonsus Church.</p> <p>Use Under Section 4(f): The BRT Alternative would not result in the permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the BRT Alternative would result in No Adverse Effect on St. Alphonsus Church. The changes in views from and to St. Alphonsus Church would not affect the occupation and intended uses of any of the contributing elements of the property. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property’s activities, features, or attributes that qualify St. Alphonsus Church for protection under Section 4(f).</p>
CITY OF MONTEREY PARK	
<p>Dr. Henry K. Kawamoto Office Building 823 South Atlantic Boulevard</p> <p>CHR Status Code: 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criteria B (Association with Significant Persons) and C (Architecture)</p> <p>The following improvements would be implemented in the vicinity of the Dr. Henry K. Kawamoto Office Building under the BRT Alternative:</p> <ul style="list-style-type: none"> • Widen South Atlantic Boulevard reducing sidewalk width directions of travel and narrowing the median • Remove striping and restripe adjacent lanes on South Atlantic Boulevard from four lanes to six lanes • Narrow the sidewalk from 14 feet to 8 feet by moving two curb cuts, removing two ficus trees, and relocating a street light and wayfinding sign 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-2, the two-story commercial building at 823 South Atlantic Boulevard faces east, fronting on South Atlantic Boulevard. The building is north of the northwest corner of the South Atlantic Boulevard/Cadiz Street intersection. Access to the property is from one driveway on South Atlantic Boulevard and another on an unnamed alley west of and behind the building.</p> <p>Construction activities with the potential to result in indirect visual effects include restriping, widening of South Atlantic Boulevard, reconfiguration of a sidewalk, tree removal, and sign relocation. However, construction activities associated with restriping asphalt, such as cold planing or milling, would not result in a potential indirect visual effect. In addition, changes to existing, non-historic, infrastructure elements like widening existing roadways and narrowing or reconfiguring sidewalks, and movement of signs and removal of street trees would not result in an indirect</p>

TABLE 3.6.2:

BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>visual effect, as long as the property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. The setting is not an essential aspect of integrity for the Dr. Henry K. Kawamoto Office Building to convey its historic significance. Therefore, these construction activities would not have an indirect visual effect on the Dr. Henry K. Kawamoto Office Building. In addition, this location currently has a bus route and is a busy, urban commercial district. Increasing the frequency of buses during operation would not have an indirect visual effect on the Dr. Henry K. Kawamoto Office Building.</p> <p>Construction activities with the potential for direct vibratory effects include restriping and the sidewalk reconfiguration, signage, and tree removal. However, construction activities associated with restriping asphalt, such as cold planing or milling, would not result in a potential direct vibratory effect. Construction activities associated with the sidewalk reconfiguration are planned immediately adjacent to character-defining features of the historic property (the planters) and within approximately 5 feet of the building. Based on the type of work, it is assumed that jackhammering would be used to demolish the existing sidewalk. Use of a jackhammer at a distance of 6 feet has a vibration level of 0.30 PPV (in/sec), which would result in a potential direct vibratory effect (0.30 PPV [in/sec]) for concrete buildings. Therefore, demolition activities associated with the reconfiguration of sidewalk immediately adjacent to the Dr. Henry K. Kawamoto Office Building have the potential to cause an adverse direct vibratory effect on this property if a jackhammer is used. However, that effect would be avoided if alternative construction machinery were used near the Dr. Henry K. Kawamoto Office Building, such as saw cutting, in accordance with Measure CUL-6 outlined in Section 3.8. With the conditions imposed in Measure CUL-6, the sidewalk reconfiguration would not have an adverse direct vibratory effect on the Dr. Henry K. Kawamoto Office Building.</p> <p>An increase in bus operations also has the potential to result in indirect noise effects. The current noise level in the vicinity of the Dr. Henry K. Kawamoto Office Building is 68 dBA, and the BRT Alternative would increase the noise level to 70 dBA. This level of increase for a commercial property would not affect the significance of the historic property. Therefore, the increased noise associated with the BRT Alternative would not have an indirect noise effect on the Dr. Henry K. Kawamoto Office Building.</p> <p>Section 106 Effect: The BRT Alternative would result in a Conditional No Adverse Effect with the implementation of Measures CUL-1 (Pre-Construction Surveys), CUL-6 (Vibratory Effects of Demolition), and CUL-13 (Post-Construction Surveys) on the Dr.</p>

TABLE 3.6.2:

BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>Henry K. Kawamoto Office Building.</p> <p>Use Under Section 4(f): The BRT Alternative would not result in the permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the BRT Alternative would result in a Conditional No Adverse Effect on the Dr. Henry K. Kawamoto Office Building with implementation of Measures CUL-1, CUL-6, and CUL-13. The changes in views from and to the Dr. Henry K. Kawamoto Office Building would not permanently affect the occupation and intended uses of any of the property. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property’s activities, features, or attributes that qualify the Dr. Henry K. Kawamoto Office Building for protection under Section 4(f).</p>
CITY OF PASADENA	
<p>Old Pasadena Historic District (Generally bounded by Fair Oaks Avenue, Raymond Avenue, Colorado Boulevard, and Green Street)</p> <p>CHR Status Code: 1S (Individual property listed in National Register by the Keeper); listed under Criteria A (Association with Events) and C (Architecture)</p> <p>The following improvements would be implemented in the vicinity of the contributing element to the Old Pasadena Historic District under the BRT Alternative:</p> <ul style="list-style-type: none"> • Build the Fair Oaks/Del Mar BRT Station and reconstruct the existing bus pad on the western and eastern sides of South Fair Oaks Avenue • Widen South Fair Oaks Avenue by narrowing the travel lanes and eliminating parking in the northbound direction • Widen the sidewalk on the east side of South Fair Oaks Avenue by 1 foot and the west by 2 feet • Restripe South Fair Oaks Avenue from four lanes to five lanes to accommodate dedicated bus lanes in the northbound direction • Install pedestrian access ramps at the intersection of South Fair Oaks Avenue/Del Mar Boulevard and modified driveway curb cuts 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-2, the Old Pasadena Historic District contains 180 mostly commercial and some residential parcels and is generally bounded on the north by Corson Street, on the east by Raymond Avenue and SR 110/Arroyo Seco Parkway, on the south by East Del Mar Boulevard, and on the west by South Pasadena Avenue. This Historic District is centered on the Fair Oaks Avenue/Colorado Boulevard intersection.</p> <p>Construction activities with the potential to result in direct effects on the Old Pasadena Historic District include the construction of the Fair Oaks/Del Mar Boulevard stations. The proposed bus station and pad on the east side of Fair Oaks Avenue are located within with Old Pasadena Historic District. However, the sidewalks and roadways are not contributing elements to the historic district. Therefore, the physical alteration of the sidewalk and roadway would not cause an adverse visual effect on the Old Pasadena Historic District.</p> <p>Construction activities with the potential to result in indirect visual effects include the construction of the Fair Oaks/Del Mar Boulevard stations, widening of South Fair Oaks Avenue, sidewalk reconfiguration, and restriping. The introduction of new bus stations within a one-block radius of a historic property, where the station is immediately adjacent to or within 10 feet of, the National Register boundaries of the historic property or where the new structure obstructs the view of a primary elevation of the historic property would constitute a potential adverse effect. However, the proposed bus station on the east side of Fair Oaks Avenue would not obstruct the view of the District or its contributing resources. The new bus station</p>

TABLE 3.6.2:

BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>and pad, on both sides of the street, would not add any new or obtrusive elements to the streetscape of the historic district in a manner that would diminish the significance of the district as a whole. Therefore, the construction of the bus stations and pads would not cause an adverse indirect visual effect on the Old Pasadena Historic District. In addition, changes to existing, non-historic, infrastructure elements like widening existing roadways and sidewalks would not result in an indirect visual effect, as long as they are not character-defining features of the historic district. The sidewalks and roadways are not character-defining to the Old Pasadena Historic District nor is the setting an essential aspect of integrity for the Old Pasadena Historic District. Restriping within existing roadways would not result in an indirect visual effect to historic properties.</p> <p>These construction activities also have the potential to result in direct vibratory effects. However, construction activities for the widening of South Fair Oaks are more than 25 feet away from the Old Pasadena Historic District and would not cause an adverse potential vibratory effect. The construction activities associated with restriping, such as cold planing or milling, asphalt, would not result in an adverse direct vibratory effect.</p> <p>To construct the new bus station and bus pad, demolition activities would occur immediately adjacent to 330 South Fair Oaks Avenue and construction of the sidewalk alterations would occur immediately adjacent to 300-330 South Fair Oaks, which are contributors to the district. A distance of 25 feet is used to evaluate the potential vibratory effects from construction machinery. Based on the type of work, it is assumed that jackhammering would be used to demolish the existing sidewalk. Use of a jackhammer at a distance of 6 feet has a vibration level of 0.30 PPV (in/sec), which would result in potential direct vibratory effects for historic buildings (0.120 PPV [in/sec]). Extrapolating the vibrations from jackhammering, it is assumed that any jackhammering within 10 feet exceeds 0.120 PPV (in/sec) and has the potential to cause a direct vibratory effect on historic properties. Therefore, the demolition of sidewalk adjacent to the contributing building has the potential to cause an adverse direct vibratory effect. However, that effect would be avoided if alternative construction machinery were used near 330 South Fair Oaks Avenue, such as saw cutting, in accordance with the avoidance Measure CUL-6 (Vibratory Effects of Demolition), described in Section 3.8. With the conditions imposed in Measure CUL-6 the bus pad demolition and construction would not cause an adverse effect to the Old Pasadena Historic District.</p>

TABLE 3.6.2:

BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>An increase in operations has the potential to result in indirect visual and indirect noise effects. Increasing the frequency of buses on an existing bus route, in an urban setting, would not affect historic properties. This location currently has a bus route and is a busy, urban commercial district. The current noise levels measured in at two points within the Old Pasadena Historic District and the current noise levels are 63 and 64 dBA. The BRT Alternative would increase the noise level by 1 dBA. This level of increase for a commercial property would not have an effect on historic properties.</p> <p>Section106 Effect: The BRT Alternative would result in a Conditional No Adverse Effect with implementation of Measures CUL-1 (Pre-Construction Surveys), CUL-6 (Vibratory Effects of Demolition), and CUL-13 (Post-Construction Surveys) on the Old Pasadena Historic District.</p> <p>Use Under Section 4(f): The BRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property and in the Old Pasadena Historic District. As described above, the improvements in the BRT Alternative in the vicinity of the Old Pasadena Historic District would result in a Conditional No Adverse Effect with implementation of Measures CUL-1, CUL-6, and CUL-13. The changes in the Historic District resulting from the BRT Alternative improvements would not affect the occupation and intended uses of any of the contributing elements of the property and the Old Pasadena Historic District. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the activities, features, or attributes that qualify the Old Pasadena Historic District for protection under Section 4(f).</p>
<p>Glenarm Building and Electric Fountain 72 E. Glenarm Street/1124 S. Fair Oaks Avenue</p> <p>CHR Status Code: 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criterion A (Association with Events)</p> <p>The following improvements would be implemented in the vicinity of 72 E. Glenarm Street under the BRT Alternative:</p> <ul style="list-style-type: none"> • Widen South Fair Oaks Avenue by reducing the sidewalk width in both directions of travel • Restripe Fair Oaks Avenue from four lanes to five lanes and restripe Fair Oaks Avenue crosswalks 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-2, the Glenarm Building, a municipal utility building, and its associated electric fountain at 72 E. Glenarm Street in Pasadena face west, fronting on both South Fair Oaks Avenue and E. Glenarm Street, both of which are four-lane surfaces street with a central left-turn lane. Pedestrian access to the property is near the South Fair Oaks Avenue/E. Glenarm Street intersection where paved walks lead to the large, circular, raised decorative electric fountain. There is no pedestrian access into the municipal utility building.</p> <p>Construction activities with the potential to result in direct effects include the reconfiguration of the sidewalk and installation of pedestrian ramps. The Glenarm Building and Electric Fountain’s existing sidewalks and landscaping are not identified</p>

TABLE 3.6.2:

BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<ul style="list-style-type: none"> • Reconfigure the sidewalk and install an accessible pedestrian access ramp at the South Fair Oaks Avenue/East Glenarm Street intersection • Relocate a modern metal streetlight approximately 3 feet to the east along the new sidewalk • Relocate traffic signals at South Fair Oaks Avenue/East Glenarm Street intersection • Build a northbound and southbound Glenarm BRT Station • Construct an 8-foot-wide raised median in South Fair Oaks Avenue 	<p>as contributing elements to the historic property nor are they identified as character-defining features. The proposed sidewalk replacement that is planned within the boundaries of the Glenarm Building and Electric Fountain would replace the existing sidewalk in kind. Replacing existing sidewalk in kind would not have an adverse direct effect on the Glenarm Building and Electric Fountain.</p> <p>Construction activities with the potential to result in indirect visual effects include restriping, widening of South Fair Oaks Avenue, reconfiguration of the sidewalk and installation of a pedestrian ramp, relocation of streetlights and traffic signals, construction of a northbound and southbound station, and an 8-foot-wide raised median. However, restriping within existing roadways would not result in an indirect visual effect. In addition, minor changes to existing, non-historic, infrastructure elements like sidewalk reconfiguration, narrowing existing sidewalks and widening existing roadways, installing pedestrian access ramps, movement of street lights and traffic signals, and the construction of medians would not result in an indirect visual effect, as long as the property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. The setting is not an essential aspect of integrity for the Glenarm Building and Electric Fountain. New bus stations within a one-block radius of a historic property, when the station does not block the view of an individually significant building, would not have an adverse effect on a historic property. The proposed bus stations would not block the view of the Glenarm Building and Electric Fountain as they are located across one or more streets and are at least 60 feet away from the property boundaries. Therefore, the construction of new bus stations would not cause an adverse indirect visual effect on the Glenarm Building and Electric Fountain.</p> <p>These construction activities also have the potential to result in direct vibratory effects. However, restriping asphalt, such as cold planing or milling, would not result in an adverse direct vibratory effect on historic properties. In addition, the closest area of demolition for reconfiguring the sidewalk is approximately 30 feet from the Glenarm Building and Electric Fountain. The closest area of demolition for reconfiguring the sidewalk, the streetlight and traffic signal work, and construction of the stations is approximately 60 feet from this property. The closest area of demolition of the construction work for the proposed raised median is approximately 80 feet from this property. The construction activities are too far away from the Glenarm Building and Electric Fountain to cause an adverse vibratory effect.</p> <p>Increased operations also have the potential to result in indirect visual and indirect</p>

TABLE 3.6.2:

BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>noise effects. Increasing the frequency of buses on an existing bus route, in an urban setting, would not affect historic properties. This location currently has a bus route and is a busy, urban commercial area. The current noise levels in the vicinity of the Glenarm Building and Electric Fountain is 60 dBA and the BRT Alternative would increase the noise levels to 61 dBA. This level of increased noise for a commercial property would not have an effect on historic properties. Therefore, the increased noise associated with the BRT Alternative would not have an indirect noise effect on the Glenarm Building and Electric Fountain.</p> <p>Section 106 Effect: The BRT Alternative would result in No Adverse Effect on the Glenarm Building and Electric Fountain.</p> <p>Use Under Section 4(f): The BRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the improvements in the BRT Alternative would have No Adverse Effect on the Glenarm Building and Electric Fountain. The changes in the historic sidewalk adjacent to the boundary of the Glenarm Building and Electric Fountain property resulting from the BRT Alternative improvements would not affect the occupation and intended uses of any of the contributing elements of that property. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property’s activities, features, or attributes that qualify the Glenarm Building and Electric Fountain for protection under Section 4(f).</p>
<p>Bekins Storage Company Roof Sign 511 Fair Oaks Avenue</p> <p>CHR Status Code: 1S (Individual property listed in the National Register by the Keeper); listed under Criteria A (Association with events) and C (Architecture)</p> <p>The following improvements would be constructed in the vicinity of 511 Fair Oaks Avenue under the BRT Alternative:</p> <ul style="list-style-type: none"> • Widen South Fair Oaks Avenue by reducing the sidewalk width in both directions of travel, narrowing the travel lanes, and eliminating parking in both directions of travel • Restripe South Fair Oaks Avenue from four lanes to five lanes to accommodate dedicated bus lanes in the northbound direction • Install an accessible pedestrian access ramp with tactile paving at the South Fair Oaks Avenue/Palmetto Drive intersection approximately 145 feet north and 60 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-2, the Bekins Storage Company Roof Sign was constructed in 1926, on top of a five-story building at the southeast corner of the Palmetto Drive/South Fair Oaks Avenue intersection. Access to the property is from the main entrance along Palmetto Drive. The Roof Sign faces Fair Oaks Avenue, a four-lane surface street with a central left-turn lane and paved median. The former Bekins sign and its related components, rather than the building itself (built 1915), are the historic property at this location.</p> <p>The Bekins Storage Company Roof Sign was individually listed in the National Register under Criteria A for its association with the development of the automobile as the chief mode of transportation and its impact on commercial history, and as only remaining pre-war example in Pasadena of the once-popular massive projecting roof signs designed to attract motorists; and under Criterion C as an early example of the use of neon lighting in advertising. The character-defining features that convey the</p>

TABLE 3.6.2:

BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<p>below the Bekins Storage Company Roof Sign</p> <ul style="list-style-type: none"> Install a reconfigured driveway curb cut out at the parking lot entrance approximately 65 feet from and 60 feet below the southwest corner of the Bekins Storage Company Roof Sign 	<p>significance of this property are the steel frame mounting; two-sided signage with individual, open channel, metal can letters with white returns; and neon capital letters. The Roof Sign is approximately 60 feet above Fair Oaks Avenue and will not be directly or indirectly affected by the improvements in the BRT Alternative on Fair Oaks Avenue.</p> <p>Section 106 Effect: The BRT Alternative would have No Effect on this historic property.</p> <p>Use Under Section 4(f): The BRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. The BRT Alternative would have No Effect on the Bekins Storage Co. Roof Sign. The changes that would occur on the street below the sign would not affect the intended uses of any of the Roof Sign. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property’s activities, features, or attributes that qualify the Bekins Storage Co. Roof Sign for protection under Section 4(f).</p>
<p>Segment of Route 66 East Colorado Boulevard</p> <p>CHR Status Code: Assumed eligible for listing in the National Register for the purpose of this project only; Criteria A (Association with events) and C (Architecture)</p> <p>The following improvements would be constructed on East Colorado Boulevard under the BRT Alternative:</p> <ul style="list-style-type: none"> Construct the northbound Colorado/Hill BRT Station at the East Colorado Boulevard/North Hill Avenue intersection including installation of a concrete bus pad in the street; these improvements would replace an existing Colorado/Hill Metro bus stop. 	<p>Effects under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-2, the improvements under the BRT Alternative on the segment of the former Route 66 along East Colorado Boulevard would occur at the intersection of North Hill Avenue and East Colorado Boulevard.</p> <p>Construction activities that have the potential to result in direct effects include construction of the northbound Colorado/Hill BRT station and installation of a concrete bus pad. Although the BRT Alternative calls for a new bus station located within the boundaries of the district, it is replacing an existing, non-contributing bus station. The proposed station would not damage or destroy any contributing elements to Route 66. The proposed bus station would not cause an adverse direct effect.</p> <p>The construction of this station would also have the potential to result in indirect visual effects. However, new bus stations in an urban setting that replace existing non-historic elements that are not character-defining to the setting of a historic district do not cause an effect as long as the property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. The setting of the Route 66 is not an essential aspect of the property’s integrity. The proposed bus station would not block primary views of Route 66. The construction of a new bus station and pad would not cause an adverse indirect visual effect on</p>

TABLE 3.6.2:

BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>Route 66.</p> <p>Increased operations have the potential to result in indirect noise effects. The current noise levels at this location range from 69 to 70 dBA. The noise levels will either remain the same or decrease by 1 dBA. This noise change would not have an effect on the Route 66.</p> <p>Section 106 Effects: The BRT Alternative would result in No Adverse Effect to this property.</p> <p>Use Under Section 4(f): The BRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the BRT Alternative would have No Adverse Effect on the former segment of Route 66 along East Colorado Boulevard. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property’s activities, features, or attributes that qualify this former segment of Route 66 for protection under Section 4(f).</p>
CITY OF SOUTH PASADENA	
<p>Fair Hope Building 800 Fair Oaks Avenue</p> <p>CHR Status Code: 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criteria A (Association with Events) and C (Architecture)</p> <p>The following improvements would be implemented in the vicinity of the Fair Hope Building under the BRT Alternative:</p> <ul style="list-style-type: none"> • Widen Fair Oaks Avenue by reducing the sidewalk width in both directions of travel • Restripe Fair Oaks Avenue from four lanes to six lanes to accommodate dedicated bus lanes in both directions of travel, eliminating peak period on-street parking in both directions of travel • Reduce the sidewalk on the eastern side of Fair Oaks Avenue • Remove the bulb-out at the northwestern corner of the building • Remove two street trees • Reconstruct the sidewalk and driveway curb cut • Replace accessible pedestrian access ramp, moving a streetlight and traffic signal closer 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-2, the Fair Hope Building is on the southeast corner of the intersection of Hope Street and Fair Oaks Avenue. The Fair Hope Building faces west, fronting on Fair Oaks Avenue. Access to the property is from the main entrance on Fair Oaks Avenue, several side entrances on Hope Street, and a service entrance on Raymond Lane, which is an alley at the rear of the building.</p> <p>Construction activities with the potential to result in indirect visual effects include removal of striping and restriping, widening Fair Oaks Avenue, and sidewalk modifications and reconstruction. However, restriping within existing roadways would not result in an indirect visual effect. In addition, changes to existing, non-historic, infrastructure elements like widening existing roadways and narrowing sidewalks, sidewalk modifications, streetlight changes, pedestrian ramps, and removal of street trees would not result in an indirect visual effect, as long as the property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. The setting is not an essential aspect of integrity for the Fair Hope Building to convey its significance under Criterion C. Although the setting is important for its significance under Criterion A, it has already been significantly altered, and its previous loss of setting does not diminish the building’s</p>

TABLE 3.6.2:

BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>ability to convey its overall significance because the other aspects of integrity are intact. Therefore, the construction activities would not have an indirect visual effect on the Fair Hope Building.</p> <p>Construction activities with the potential to result in direct vibratory effects include restriping and the sidewalk modifications and associated work. However, construction activities associated with restriping asphalt, such as cold planing or milling, would not result in a direct vibratory effect on historic buildings. Construction activities for the sidewalk modifications are planned within 4 feet of the Fair Hope Building. Based on the type of work, it is assumed that jackhammering would be used to demolish the existing sidewalk. A distance of 25 feet is used to evaluate the potential vibratory effects from construction machinery. However, use of a jackhammer at a distance of 6 feet has a vibration level of 0.30 PPV [in/sec], which would result in a potential direct vibratory effect (0.120 PPV [in/sec]). The demolition activities associated with the reconfiguration of sidewalk within 10 feet has the potential to cause an adverse direct vibratory effect on the Fair Hope Building. However, that effect would be avoided if alternative construction machinery were used near the Fair Hope Building, such as saw cutting in accordance with Measure CUL-6 (Vibratory Effects of Demolition), described in Section 3.8. With the conditions imposed in Measure CUL-6, the sidewalk reconfiguration would not cause an adverse effect on the Fair Hope Building.</p> <p>Increased operations have the potential to result in indirect visual effects. Increasing the frequency of buses on an existing bus route, in an urban setting, would not affect historic properties. This location currently has a bus route and is a busy, urban commercial district. The current noise level in the vicinity of the Fair Hope Building is 68 dBA, and the BRT Alternative would increase the noise level to 71 dBA. This level of increase for a commercial property would not have an effect on historic properties. Therefore, the increased noise associated with the BRT Alternative would not have an indirect noise effect on the Fair Hope Building.</p> <p>Section 106 Effect: The BRT Alternative would have a Conditional No Adverse Effect on the Fair Hope Building with implementation of Measures CUL-1 (Pre-Construction Surveys), CUL-6 (Vibratory Effects of Demolition), and CUL-13 (Post-Construction Surveys).</p> <p>Use Under Section 4(f). The BRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this historic property. As described above, the improvements in the BRT</p>

TABLE 3.6.2:

BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>Alternative would result in a Conditional No Adverse Effect on the Fair Hope Building with implementation of Measures CUL-1, CUL-6, and CUL-13. The changes in the vicinity of this property resulting from the BRT Alternative improvements would not affect the occupation and intended uses of any of the contributing elements of the property. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property’s activities, features, or attributes that qualify the Fair Hope Building for protection under Section 4(f).</p>
<p>Rialto Theatre 1019 Fair Oaks Avenue</p> <p>CHR Status Code: 1S (Individual property listed in the National Register by the Keeper); listed under Criteria A (Association with Events) and C (Architecture)</p> <p>The following improvements would be implemented in the vicinity of the Rialto Theatre under the BRT Alternative:</p> <ul style="list-style-type: none"> • Restripe Fair Oaks Avenue from four to five lanes and restripe crosswalks across Fair Oaks Avenue and Oxley Street • Narrow the pedestrian bulb-out at the northwest corner of the Fair Oaks/Oxley Street intersection • Install an accessible pedestrian access ramp at the Fair Oaks/Oxley Street intersection 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-2, the Rialto Theatre faces east, fronting on Fair Oaks Avenue. The building is on the northwest corner of the Oxley Street/Fair Oaks Avenue intersection. Access to the property is from the main entrance on Fair Oaks Avenue, a side entrance on Oxley Street, and a service entrance on an alley at the rear of the building.</p> <p>Construction activities with the potential for indirect visual effects include restriping and narrowing of the pedestrian bulb-out and installation of a pedestrian access ramp. However, restriping within existing roadways would not result in an indirect visual effect. In addition, small-scale infrastructure elements that replace existing non-historic elements, like accessible pedestrian ramps at existing crosswalks and reconfiguring bulb-outs, would not result in an indirect visual effect.</p> <p>These construction activities also have the potential to result in direct vibratory effects. The construction activities associated with restriping, such as cold planing or milling, asphalt, would not result in a potential direct vibratory effect. The proposed construction activities associated with the narrowing of the pedestrian bulb-out and installation of pedestrian access ramps would be approximately 7 feet from the Rialto Theatre. A distance of 25 feet is used to evaluate the potential vibratory effects from construction machinery. Based on the type of work, it is assumed that jackhammering would be used to demolish the existing sidewalk. Use of a jackhammer at a distance of 6 feet has a vibration level of 0.30 PPV (in/sec), which would result in potential direct vibratory effects for historic buildings (0.120 PPV [in/sec]). Extrapolating the vibrations from jackhammering, it is assumed that any jackhammering within 10 feet exceeds 0.120 PPV (in/sec) and has the potential to cause a direct vibratory effect on historic buildings. Therefore, the demolition of sidewalk 7 feet away from the Rialto Theatre could cause an adverse direct vibratory effect. However, that effect would be avoided if alternative construction machinery were used near the Rialto Theater, such as saw cutting, in accordance with Measure CUL-6 (Vibratory Effects of Demolition), described in Section 3.8. With the conditions</p>

TABLE 3.6.2:

BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>imposed by Measure CUL-6, the sidewalk reconfiguration would not cause an adverse effect on the Rialto Theatre.</p> <p>Increased operations have the potential to result in indirect visual. Increasing the frequency of buses on an existing bus route, in an urban setting, would not affect historic properties. This location currently has a bus route and is a busy, urban commercial district. The current noise level in the vicinity of the Rialto Theatre is 69 dBA, and the BRT Alternative would increase the noise level to 72 dBA. This level of increase in a commercial area would not have an effect on historic properties. Therefore, increased noise associated with the BRT Alternative would not have an indirect noise effect on the Rialto Theatre.</p> <p>Section 106 Effect: The BRT Alternative would have a Conditional No Adverse Effect on the Rialto Theatre with implementation of Measures CUL-1 (Pre-Construction Surveys), CUL-6 (Vibratory Effects of Demolition), and CUL-13 (Post-Construction Surveys).</p> <p>Use Under Section 4(f): The BRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at the Rialto Theater. As described above, the BRT Alternative in the vicinity of would result in a Conditional No Adverse Effect with implementation of Measures CUL-1, CUL-6, and CUL-13. The changes in the vicinity of this property resulting from the BRT Alternative improvements would not affect the occupation and intended uses of any of the contributing elements of the property. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property’s activities, features, or attributes that qualify the Rialto Theater for protection under Section 4(f).</p>
<p>Oaklawn Bridge and Waiting Station 435 Fair Oaks Avenue</p> <p>CHR Status Code: 1S/2D2 (Individual property listed in National Register by the Keeper/Contributor to a district deemed eligible for the National Register by consensus through the Section 106 process); listed under Criterion C (Architecture)</p> <p>The following improvements would be implemented in the vicinity of the Oaklawn Waiting Station under the BRT Alternative:</p> <ul style="list-style-type: none"> Remove 7-foot-wide bulb out at the Fair Oaks Avenue/Mound Avenue approximately 14 to 18 feet south of the southeast corner of Oaklawn Waiting 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-2, the Oaklawn Bridge and Waiting Station was constructed in 1905, near the northwest corner of the Fair Oaks Avenue/Mound Avenue intersection. The front facade of this building faces Fair Oaks Avenue, a four-lane surface street with a central left-turn lane and paved median.</p> <p>Construction activities with the potential to result in indirect visual effects include restriping, sidewalk modifications and associated work, and construction of a raised median. However, restriping within existing roadways would not result in an indirect visual effect. In addition, changes to existing, non-historic, infrastructure elements like narrowing existing sidewalks, widening existing roadways, removing bump-outs,</p>

TABLE 3.6.2:

BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<p>Station</p> <ul style="list-style-type: none"> • Modify the curb return and install pedestrian access ramps at the Fair Oaks Avenue/Mound Avenue intersection • Relocate a light post closer to the Oaklawn Waiting Station • Restripe Fair Oaks Avenue from four lanes to six lanes to accommodate dedicated bus lanes in both directions of travel by reducing the sidewalk on the east side of Fair Oaks Avenue, narrowing the travel lanes, and eliminating peak period on-street parking in both directions of travel • Construct an 8-foot-wide raised median with a left-turn cut-out for traffic onto State Street 	<p>replacing curbing, modifying the stormwater gutter, adding accessible pedestrian access ramps, and adding a median to an existing non-historic roadway would not result in an indirect visual effect, as long as the property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. The setting is not an essential aspect of integrity for the Oaklawn Bridge and Waiting Station under Criterion C.</p> <p>These construction activities also have the potential to result in direct vibratory effects. However, construction activities associated with restriping asphalt, such as cold planing or milling, would not result in an adverse direct vibratory effect on historic properties. The proposed construction of the new median would be more than 50 feet from the Oaklawn Bridge and Waiting Station. The construction activities are too far away from the Oaklawn Bridge and Waiting Station to cause an adverse vibratory effect. Therefore, the proposed construction activities would not cause an adverse direct vibratory effect on the Oaklawn Bridge and Waiting Station.</p> <p>Construction activities for the sidewalk modifications and associated work are planned within 10 feet of the Oaklawn Bridge and Waiting Station. A distance of 25 feet is used to evaluate the potential vibratory effects from construction machinery. Based on the type of work, it is assumed that jackhammering would be used to demolish the existing sidewalk. Use of a jackhammer at a distance of 6 feet has a vibration level of 0.30 PPV (in/sec), which would result in potential direct vibratory effects for historic or fragile buildings (0.120 PPV [in/sec]). Extrapolating the vibrations from jackhammering, it is assumed that any jackhammering within 10 feet exceeds 0.120 PPV (in/sec) and has the potential to cause a direct vibratory effect on the historic property. Therefore, the demolition of sidewalk within 10 feet of the Oaklawn Bridge and Waiting Station has the potential to cause an adverse direct vibratory effect on the Oaklawn Bridge and Waiting Station. However, that effect would be avoided if alternative construction machinery were used near the historic property, such as saw cutting, in accordance with avoidance and minimization Measure CUL-6 (Vibratory Effects of Demolition), described in Section 3.8. With the conditions imposed in Measure CUL-6, the construction activities would not cause an adverse effect on the Oaklawn Bridge and Waiting Station.</p> <p>Increased operations have the potential to result in indirect visual and indirect noise effects. Increasing the frequency of buses on an existing bus route, in an urban setting, would not affect historic properties. This location currently has a bus route and is a busy, urban commercial district. The current noise levels in the vicinity of the</p>

TABLE 3.6.2:

BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>Oaklawn Bridge and Waiting Station is 65 dBA and the BRT Alternative would increase the noise levels to 67 dBA. This level of increased noise for a non-habitable structure would not have an effect on historic properties because a quiet environment is not a characteristic of its historic significance. Therefore, the increased noise associated with the BRT Alternative would not have an indirect noise effect on the Oaklawn Bridge and Waiting Station.</p> <p>Section 106 Effect: The BRT Alternative would have a Conditional No Adverse Effect with implementation of Measures CUL-1(Pre-Construction Surveys), CUL-6 (Vibratory Effects of Demolition), and CUL-13 (Post-Construction Surveys), on the Oaklawn Bridge and Waiting Station.</p> <p>Use Under Section 4(f): The BRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at the Oaklawn Bridge Waiting Station. As described above, the BRT Alternative would result in a Conditional No Adverse Effect with implementation of Measures CUL-1, CUL-6, and CUL-13. The changes in the vicinity of this property resulting from the BRT Alternative improvements would not affect the occupation and intended uses of Oaklawn Bridge and Waiting Station. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property’s activities, features, or attributes that qualify the Oaklawn Bridge and Waiting Station for protection under Section 4(f).</p>
<p>Oaklawn Historic District Residential district within South Pasadena comprising residential properties facing Oakland Avenue between Columbia Street and Fair Oaks Avenue.</p> <p>CHR Status Code: 2S2 (Individual property determined to be eligible for the National Register by a consensus through the Section 106 process); listed under Criterion C (Architecture)</p> <p>The following improvements would be constructed in the vicinity of the Oaklawn Historic District under the BRT Alternative:</p> <ul style="list-style-type: none"> • Restripe Fair Oaks Avenue from four lanes to six lanes and restripe the crosswalks • Modify the sidewalk at the northwest corner of Mound Avenue and Fair Oaks Avenue • Replace the sidewalk in kind (immediately to the east of the waiting station and 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-2, there would be improvements in the BRT Alternative in the vicinity of the Oaklawn Historic District.</p> <p>Construction activities with the potential to result in indirect visual effects include restriping, sidewalk modifications, and a raised median. However, restriping within existing roadways would not result in an indirect visual effect to historic properties. Therefore, restriping lanes and crosswalks would not have an indirect visual effect on the Oaklawn Historic District. In addition, changes to transportation infrastructure like adding a median and changes to existing, non-historic, infrastructure elements like narrowing existing sidewalks, widening existing roadways, removing bump-outs, replacing curbing, modifying the storm water gutter, and adding accessible pedestrian access ramps, would not result in an indirect visual effect to historic properties, as long as the property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. The streetscape setting is not an essential aspect of integrity for the Oaklawn Historic District. The construction</p>

TABLE 3.6.2:

BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<p>bridge)</p> <ul style="list-style-type: none"> • Install a bulb out and an accessible pedestrian access ramp, eliminate a bulb out and sidewalk along Fair Oaks Avenue (to widen the roadway to accommodate a bus lane), and relocate an existing non-historic light pole • Narrow the sidewalks along Fair Oaks Avenue from 12 feet to 8 feet. • Build an 8-foot-wide raised median along Fair Oaks Avenue 	<p>activities would not have an indirect visual effect on the Oaklawn Historic District.</p> <p>These construction activities also have the potential to result in direct vibratory effects. However, construction activities associated with restriping asphalt, such as cold planing or milling, would not result in an adverse direct vibratory effect. In addition, the proposed construction for the raised median would be more than 50 feet from the Oaklawn Historic District, which is too far away from the Oaklawn Historic District to cause an adverse vibratory effect.</p> <p>Construction activities for the sidewalk modification activities are planned within 10 feet of the Oaklawn Bridge and Waiting Station, a contributing feature of the Oaklawn Historic District. A distance of 25 feet is used to evaluate the potential vibratory effects from construction machinery. Based on the type of work, it is assumed that jackhammering would be used to demolish the existing sidewalk. Use of a jackhammer at a distance of 6 feet has a vibration level of 0.30 PPV (in/sec), which would result in a potential direct vibratory effect for historic or fragile buildings (0.120 PPV [in/sec]). Extrapolating the vibrations from jackhammering, it is assumed that any jackhammering within 10 feet exceeds 0.120 PPV (in/sec) and has the potential to cause a direct vibratory effect on historic properties. Therefore, the demolition of sidewalk within 10 feet has the potential to cause an adverse direct vibratory effect on the Oaklawn Historic District. However, that effect would be avoided if alternative construction machinery were used near the Oaklawn Historic District, such as saw cutting, in accordance with Measure CUL-6 (Vibratory Effects of Demolition) described in Section 3.8. With the implementation of Measure CUL-6, the demolition of sidewalk would not cause an adverse effect on the Oaklawn Historic District.</p> <p>Increased operations have the potential to result in indirect visual effects and indirect noise effects. Increasing the frequency of buses on an existing bus route, in an urban setting, would not affect historic properties. This location currently has a bus route and is a busy, urban commercial district. The current noise level in the vicinity of the Oaklawn Historic District is 65 dBA, and the BRT Alternative would increase the noise level to 67 dBA. This level of increase for an urban streetscape would not have an effect on the significance of historic properties.</p> <p>Section 106 Effect: The BRT Alternative would result in a Conditional No Adverse Effect with implementation of Measures CUL-1 (Pre-Construction Surveys), CUL-6 (Vibratory Effects of Demolition), and CUL-13 (Post-Construction Surveys) on the</p>

TABLE 3.6.2:

BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>Oaklawn Historic District.</p> <p>Use Under Section 4(f): The BRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the BRT Alternative would have a Conditional No Adverse Effect on the Oaklawn Historic District with implementation of Measures CUL-1, CUL-6, and CUL-13. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property’s activities, features, or attributes that qualify this property for protection under Section 4(f).</p>
<p>War Memorial Building 435 Fair Oaks Avenue</p> <p>CHR Status Code: 2S2 (Individual property determined eligible for National Register by a consensus through the Section 106 process); listed under Criterion C (Architecture)</p> <p>The following improvements would be implemented in the vicinity of War Memorial Building under the BRT Alternative:</p> <ul style="list-style-type: none"> • Restripe Fair Oaks Avenue from four lanes to six lanes to accommodate dedicated bus lanes in both directions of travel by reducing the sidewalk on the east side of Fair Oaks Avenue, narrowing the travel lanes, and eliminating peak period on-street parking in both directions of travel • Reduce the width of the sidewalk on the eastern side of Fair Oaks Avenue • Construct an 8-foot-wide raised median along Fair Oaks Avenue 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-2, the War Memorial Building was constructed in 1921, near the northwest corner of the Fair Oaks Avenue/Mound Avenue intersection. The front façade of this building faces Fair Oaks Avenue, a four-lane surface street with a central left-turn lane and paved median.</p> <p>Construction activities with the potential to result in indirect visual effects include removal of striping and restriping, reduction of sidewalk width, and construction of a raised median. However, restriping within existing roadways would not result in an indirect visual effect. In addition, changes to existing, non-historic, infrastructure elements like narrowing existing sidewalks or adding a median to an existing non-historic roadway would not result in an indirect visual effect, as long as the property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. The setting is not an essential aspect of integrity for the War Memorial Building to convey its significance.</p> <p>These construction activities also have the potential to result in direct vibratory effects. However, construction activities associated with restriping asphalt, such as cold planing or milling, would not result in an adverse direct vibratory effect. In addition, construction activities for the sidewalk modification and median planned are more than 100 feet from the War Memorial Building and are therefore too far away from the War Memorial Building to cause an adverse vibratory effect. Therefore, the proposed construction activities would not cause an adverse direct vibratory effect on the War Memorial Building.</p> <p>Increased operations have the potential to result in indirect visual and indirect noise effects. Increasing the frequency of buses on an existing bus route, in an urban setting, would not affect historic properties. This location currently has a bus route and is a busy, urban commercial district. The current noise level in the vicinity of the</p>

TABLE 3.6.2:

BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>War Memorial Building is 65 dBA, and the BRT Alternative would increase the noise level to 67 dBA. This level of increase for a commercial property would not have an effect on historic properties. Therefore, the increased noise associated with the BRT Alternative would not have an indirect noise effect on the War Memorial Building.</p> <p>Section 106 Effect: The BRT Alternative would have No Adverse Effect on the War Memorial Building.</p> <p>Use Under Section 4(f): The BRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs), or any indirect effects at the Warm Memorial Building. As stated above, the BRT Alternative would have No Adverse Effect on the War Memorial Building. The changes in the vicinity of this property resulting from the BRT Alternative improvements would not affect the occupation and intended uses of the War Memorial Building. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property’s activities, features, or attributes that qualify the War Memorial Building for protection under Section 4(f).</p>
<p>Raymond Hill Waiting Station Southeast corner of Fair Oaks Avenue/Raymond Hill Road Intersection</p> <p>CHR Status Codes: 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criteria A (Association with Events) and C (Architecture)</p> <p>The following improvements would be implemented in the vicinity of Raymond Hill Waiting Station under the BRT Alternative:</p> <ul style="list-style-type: none"> • Restripe a Fair Oaks Avenue from four lanes to five lanes and restripe the crosswalk at the end of Fair Oaks Avenue and Columbia Street/Raymond Hills Road • Widen the street by gradually tapering the sidewalk from 12 feet to 8 feet over a length of more than 120 feet. 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-2, the Raymond Hill Waiting Station faces west, fronting on Fair Oaks Avenue. That one-story shelter structure is on the southeast corner of the Raymond Hill Road/Fair Oaks Avenue intersection.</p> <p>Construction activities with the potential to result in indirect visual effects include restriping and street widening. However, restriping within existing roadways would not result in an indirect visual effect. In addition, minor changes to existing, non-historic, infrastructure elements like narrowing existing sidewalks and widening existing roadways would not result in an indirect visual effect, as long as the property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. The setting is not an essential aspect of integrity for Raymond Hill Waiting Station to convey its historic significance. Furthermore, the intervening distance of the proposed work and the existing, mature vegetation makes it unlikely that this work would be visible from the Raymond Hill Waiting Station. Therefore, the road and sidewalk reconfiguration would not have an indirect visual effect on Raymond Hill Waiting Station.</p> <p>These construction activities also have the potential to result in direct vibratory effects. However, construction activities associated with restriping asphalt, such as</p>

TABLE 3.6.2:

BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>cold planing or milling, would not result in an adverse direct vibratory effect. In addition, the closest area of demolition for reconfiguring the sidewalk is approximately 75 feet from the structure. The construction activities are too far away from the Raymond Hill Waiting Station to cause an adverse vibratory effect.</p> <p>Increased operations have the potential to result in indirect visual and indirect noise effects. Increasing the frequency of buses on an existing bus route, in an urban setting, would not affect historic properties. This location currently has a bus route and is a busy, urban commercial district. The current noise level in the vicinity of the Raymond Hill Waiting Station is 65 dBA, and the BRT Alternative would increase the noise level to 67 dBA. This level of increase for a non-habitable structure would not have an effect on the historic property. Therefore, the increased noise associated with the BRT Alternative would not have an indirect noise effect on the Raymond Hill Waiting Station.</p> <p>Section 106 Effect: The BRT Alternative would have No Adverse Effect on the Raymond Hill Waiting Station.</p> <p>Use Under Section 4(f): The BRT Alternative would not result in the permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the BRT Alternative would have No Adverse Effect on the Raymond Hill Waiting Station. The changes in views from and to the Raymond Hill Waiting Station would not affect the occupation and intended uses of this property. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property’s activities, features, or attributes that qualify the Raymond Hill Waiting Station for protection under Section 4(f).</p>
<p>South Pasadena Middle School 1500 Fair Oaks Avenue</p> <p>CHR Status Code: 2S2/5S1 (Individual property determined eligible for the National Register by a consensus through the Section 106 process/Individual property that is listed or designated locally); listed under Criterion C (Architecture)</p> <p>The following improvements would be constructed in the vicinity of South Pasadena Middle School under the BRT Alternative:</p> <ul style="list-style-type: none"> Widen Fair Oaks Ave by reducing the sidewalk in both directions and raised median and removing the planting strip 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-2, the Mission Revival-designed South Pasadena Middle School campus faces west, fronting on Fair Oaks Avenue. The campus is on the southeast corner of the Fair Oaks Avenue/Oak Street intersection. Access to the campus is provided at a number of locations on Fair Oaks Avenue and Oak Street.</p> <p>Construction activities with the potential to result in indirect visual effects include restriping, widening of Fair Oaks Avenue, and sidewalk modifications. However, restriping within existing roadways would not result in an indirect visual effect. In addition, changes to existing, non-historic, infrastructure elements like widening existing roadways and narrowing sidewalks and modifications to existing, non-</p>

TABLE 3.6.2:

BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<ul style="list-style-type: none"> • Restripe Fair Oaks Avenue from six lanes to eight lanes to accommodate dedicated bus lanes in both directions of travel • Retain the existing left-turn cut-outs on Fair Oaks Avenue • Remove a 9-foot-wide landscaped area adjacent to the sidewalk • Construct a narrowed raised median along Fair Oaks Avenue • Install accessible pedestrian access ramps at the intersection of Fair Oaks/Oaks and at the intersection of Fair Oaks Avenue/Rollin Street • Install a reconfigured driveway curb cut out at the parking lot entrance • Relocate traffic signals and pull box at the Fair Oaks Avenue/Oaks Street intersection approximately 5 feet to the northeast and approximately 20 feet from the southwest corner of the building; • Relocate traffic signals at the Fair Oaks/Rollin intersection approximately 5 feet to the east and approximately 140 feet from the northwest corner of the building 	<p>historic transportation infrastructure including sidewalks, streetlights, or pedestrian ramps, would not result in an indirect visual effect, as long as the property's immediate setting is not an essential aspect of integrity for the property to convey its historic significance. The setting is not an essential aspect of integrity for the South Pasadena Middle School.</p> <p>Construction activities with the potential to result in direct vibratory effects include restriping and the sidewalk modification and associated work. However, construction activities associated with restriping asphalt, such as cold planing or milling, would not result in an adverse direct vibratory effect. In addition, the closest area of demolition for reducing the width of the sidewalk is approximately 75 feet from the main school building and approximately 20 feet from the reinforced concrete building located at the southern edge of the parcel. In the case of the main building, the construction activities are too far away from the South Pasadena Middle School to cause an adverse vibratory effect. Jackhammers at 25 feet have a vibration level of 0.035 PPV (in/sec). Buildings constructed of reinforced concrete can withstand higher levels of vibration before damage could occur (0.50 PPV [in/sec]). Based on the building materials utilized in the South Pasadena Middle School and the distance from the proposed construction activities, the vibration levels from demolition would not be high enough to cause vibratory damage to the historic property. Therefore, the proposed construction activities would not cause an adverse direct vibratory effect on the South Pasadena Middle School.</p> <p>Increasing the frequency of buses on an existing bus route, in an urban setting, would not affect this historic property. This location currently has a bus route and is a busy, urban commercial and residential district. The current noise level in the vicinity of the South Pasadena Middle School is 65 dBA, and the BRT Alternative would increase the noise level to 68 dBA. This level of increase for a commercial or institutional property would not have an effect on historic properties. Therefore, the increased noise associated with the BRT Alternative would not have an indirect noise effect on the South Pasadena Middle School.</p> <p>Section 106 Effect: The improvements in the BRT Alternative in the vicinity of South Pasadena Middle School would result in No Adverse Effect on that property.</p> <p>Use Under Section 4(f): The BRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the BRT Alternative would have No Adverse Effect on the South Pasadena Middle School. The changes in views from and</p>

TABLE 3.6.2:

BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	to the South Pasadena Middle School campus would not affect the occupation and intended uses of any of the contributing elements of the property. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property’s activities, features, or attributes that qualify South Pasadena Middle School for protection under Section 4(f).
<p>Community Facilities Planners Building (aka Fair Oaks Professional Group) 1414 Fair Oaks Avenue</p> <p>CHR Status Codes: 2S2/5S1 (Individual property determined eligible for the National Register by a consensus through the Section 106 process/Individual property that is listed or designated locally); listed under Criterion C (Architecture)</p> <p>The following improvements would be constructed in the vicinity of the Community Facilities Planners Building under the BRT Alternative:</p> <ul style="list-style-type: none"> • Widen Fair Oaks Avenue by reducing the width of the sidewalk and landscaping in both directions of travel and narrowing the median • Restripe Fair Oaks Avenue from six lanes to eight lanes and restripe pedestrian crosswalks at Fair Oaks Avenue and Bank Street • Remove the planting strip adjacent to the sidewalk • Install a reconfigured driveway curb cut out at the parking lot entrance • Install an accessible pedestrian access ramp at the Fair Oaks Avenue/Bank Street intersection • Construct a raised median along Fair Oaks Avenue • Relocate traffic signals at Fair Oaks Avenue/Rollin Street intersection • Relocate two street lights 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-2, the Modern-styled Community Facilities Planners Building built in 1958 faces west fronting on Fair Oaks Avenue. The Community Facilities Planners Building is on the southeast corner of the Fair Oaks Avenue/Bank Street intersection. Access to the property is from various locations on Fair Oaks Avenue and Bank Street.</p> <p>Construction activities with the potential to result in indirect visual effects include restriping, widening of Fair Oaks Avenue, and result in an indirect visual effect. In addition, changes to existing, non-historic, infrastructure elements like widening existing roadways and narrowing sidewalks, and medians would not result in an indirect visual effect, as long as the property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. The setting is not an essential aspect of integrity for the Community Facilities Planners Building to convey its historical significance and the proposed work takes place on a secondary elevation.</p> <p>Construction activities including restriping and sidewalk reconfigurations also have the potential to result in direct vibratory effects. However, construction activities associated with restriping asphalt, such as cold planing or milling, would not result in an adverse direct vibratory effect on historic properties. In addition, construction activities are planned immediately adjacent to character-defining features of the historic property (the landscaping) and within approximately 10 feet of the building. Because this post-and-beam building is constructed of modern materials (glass and concrete), the level at which vibrations could affect the building is higher, at 0.50 PPV (in/sec) not 0.120 PPV (in/sec). It is assumed that jackhammering would be used to demolish the existing sidewalk. The use of a jackhammer at a distance of 6 feet has a vibration level of 0.30 PPV (in/sec), which would not result in a potential direct vibratory effect for post and beam building (0.50 PPV [in/sec]). Therefore, the demolition activities associated with the reconfiguration of sidewalk immediately adjacent to the Community Facilities Planners Building would not cause an adverse direct vibratory effect on Community Facilities Planners Building.</p>

TABLE 3.6.2:

BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>Increased operations have the potential to result in indirect visual effects. Increasing the frequency of buses on an existing bus route, in an urban setting, would not affect historic properties and this location currently has a bus route within a busy, urban commercial district. The current noise level in the vicinity of the Community Facilities Planners Building is 67 dBA, and the BRT Alternative would increase the noise level to 70 dBA. This level of increase in noise for a commercial property would not have an effect on historic properties. Therefore, the increased noise associated with the BRT Alternative would not have an indirect noise effect on the Community Facilities Planners Building.</p> <p>Section 106 Effect: The BRT Alternative would have No Adverse Effect on the Community Facilities Planners Building.</p> <p>Use Under Section 4(f): The BRT Alternative would not result in permanent use of land from, or permanent easements or temporary occupancies (TCEs) at, this property. As stated above, the BRT Alternative would have No Adverse Effect on the Community Facilities Planners Building. The changes in views from and to the Community Facilities Planners Building would not affect the occupation and intended uses of any of the contributing elements of the property. The BRT Alternative improvements in this area would not result in use or proximity impacts that would substantially impair the property's activities, features, or attributes that qualify the Community Facilities Planners Building for protection under Section 4(f).</p>
<p>Segment of Route 66 West Huntington Drive and Fair Oaks Avenue</p> <p>CHR Status Code: Assumed eligible for listing in the National Register for the purpose of this project only; listed under Criteria A (Association with events) and C (Architecture)</p> <p>The following improvements would be constructed on West Huntington Drive and Fair Oaks Avenue under the BRT Alternative:</p> <ul style="list-style-type: none"> • Restripe the West Huntington Drive/Fair Oaks Avenue intersection to create three reconfigured left-turn lanes for traffic onto West Huntington Drive • Realign the median curb on curved turn lanes for northbound traffic from West Huntington Drive onto Fair Oaks Avenue by 5 feet to the west and southbound traffic from Fair Oaks Avenue onto eastbound West Huntington Drive 2 feet to the west • Reduce the width of the median along southbound Fair Oaks Avenue 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-2, there would be improvements in the BRT Alternative in the vicinity of this segment of Route 66.</p> <p>Construction activities with the potential to result in direct effects include restriping, realignment of the median curb, and installation of pedestrian crosswalks and ramps. Although the BRT Alternative calls for restriping, modifying a median and curb, and new crosswalks and ramps within the boundaries of the district, these activities are modifying existing, non-contributing elements. The proposed construction activities would not damage or destroy any contributing elements to Route 66. Therefore, the proposed construction activities would not cause an adverse direct effect on Route 66.</p> <p>These construction activities also have the potential to result in indirect visual effects. However, changes to existing, non-historic, infrastructure elements like restriping existing roadways, modifying existing medians and curbs, and pedestrian crosswalks and ramps, would not result in an indirect visual effect, as long as the</p>

TABLE 3.6.2:

BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<ul style="list-style-type: none"> Install a reconfigured median and pedestrian crosswalks with accessible pedestrian curb ramps across West Huntington Drive and between the existing landscaped islands across the foot of Fair Oaks Avenue. 	<p>property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. The setting is not an essential aspect of integrity for the Route 66.</p> <p>Increased operations have the potential to result in indirect noise effects. The current noise levels at this location range from 61 to 71 dBA. The noise levels will remain the same or decrease by 1 dBA. Therefore, the noise change would not have an adverse effect on the Route 66.</p> <p>Section 106 Effect: The BRT Alternative would result in No Adverse Effect on this historic property.</p> <p>Use Under Section 4(f): The BRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the BRT Alternative would have No Adverse Effect on the former segment of Route 66 on West Huntington Drive and Fair Oaks Avenue. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property’s activities, features, or attributes that qualify this segment of Route 66 for protection under Section 4(f).</p>
<p>Horatio Rust Site</p> <p>CHR Status Code: Assumed eligible for listing in the National Register for the purpose of this project only; listed under Criterion A (Association with events)</p> <p>The following improvements would be constructed in the vicinity of the Horatio Rust Site under the BRT Alternative:</p> <ul style="list-style-type: none"> Restripe Fair Oaks Avenue from four lanes to six lanes and restripe the crosswalks Build an 8-foot-wide raised median along Fair Oaks Avenue 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> there would be improvements in the BRT Alternative in the vicinity of the Horatio Rust Site. However, this site is not shown on Figure 3.6-2 due to location sensitivity.</p> <p>Construction activities with the potential to result in direct and indirect effects include restriping and construction of a raised median. However, based on the Criteria of Adverse Effect applied to the Horatio Rust Site pursuant to 36 CFR 800.5, it has been determined that restriping lanes and crosswalks within existing roadways would not have an indirect or direct effect on the site. In addition, the proposed construction of the raised median would be immediately east (and outside) of the recorded location of the Horatio Rust Site. Development in the area since the original recordation of the site in 1897, and continued maintenance and improvements to Fair Oaks Avenue have not uncovered additional archaeological materials. This suggests that intact cultural deposits associated with the site are unlikely to be located within the APE; however, this cannot be verified through archaeological excavations because of the inaccessible nature of the area, i.e., highly built up.</p> <p>Therefore, the proposed construction activities do have the potential to cause a direct adverse effect if intact archaeological deposits are encountered during</p>

TABLE 3.6.2:

BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>construction. However, the effect could be avoided or minimized by following specific archaeological monitoring guidelines identified in Measure CUL-14 (Post-Review Discovery and Monitoring Plan [PRDMP]).</p> <p>Increased operations have the potential to result in direct and indirect effects. However, this location currently has a bus route and is a busy, urban commercial district. Therefore, increasing the frequency of buses would not have an indirect or direct effect on the Horatio Rust Site.</p> <p>Section 106 Effect: The BRT Alternative would result in a Conditional No Adverse Effect with implementation of Measure CUL-14 (Post-Review Discovery and Monitoring Plan) on the Horatio Rust Site.</p> <p>Use Under Section 4(f): The BRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the BRT Alternative would have a Conditional No Adverse Effect on the Horatio Rust Site with implementation of Measures CUL-14. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property’s activities, features, or attributes that qualify this property for protection under Section 4(f).</p>
CITIES OF SOUTH PASADENA AND PASADENA	
<p>Segment of Route 66 South Fair Oaks Avenue/Fair Oaks Avenue</p> <p>CHR Status Code: Assumed eligible for listing in the National Register for the purpose of this project only; listed under Criteria A (Association with events) and C (Architecture)</p> <p>The following improvements would be constructed on South Fair Oaks Avenue/Fair Oaks Avenue under the BRT Alternative:</p> <ul style="list-style-type: none"> • Widen and restripe a 1.6-mile-long segment of Fair Oaks Avenue • Construct the northbound and southbound Mission BRT Stations, and install a concrete bus pad in the street and pedestrian access ramps • Construct the northbound and southbound Glenarm BRT Stations at the South Fair Oaks Avenue/Glenarm Street intersection, and install concrete bus pads in the street and pedestrian access ramps • Construct the northbound and southbound California BRT Station at the South Fair Oaks Avenue/California Boulevard intersection, and install concrete bus pads in the street and pedestrian access ramps 	<p>Effects under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-2, there would be improvements in the BRT Alternative in the vicinity of this segment of Route 66.</p> <p>Construction activities with the potential to result in direct effects include restriping, construction of the northbound and southbound Mission Street, Glenarm Street, California Boulevard, and Fair Oaks Avenue/Del Mar Boulevard stations, and relocation of traffic signals and streetlights. Although the BRT Alternative calls for widening and restriping of the roadway within the boundaries of the district, it is planned to take place on existing, non-contributing elements. The widening and restriping would not damage or destroy any contributing elements to Route 66. Similarly, although the BRT Alternative calls for new bus stations located within the boundaries of the district, they are planned for a section of non-historic sidewalk and roadway or they replace existing, non-contributing bus stations. The proposed stations would not damage or destroy any contributing elements to Route 66. Similarly, new pedestrian access ramps that replace non-historic elements would not cause an adverse direct effect. The proposed bus station and pad would not cause an adverse direct effect on Route 66. All work for the relocation of traffic signals and</p>

TABLE 3.6.2:

BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<ul style="list-style-type: none"> • Construct the northbound and southbound Fair Oaks/Del Mar BRT Station, and install a concrete bus pad in the street and pedestrian access ramps • Relocate traffic signals and streetlights 	<p>streetlights is planned in areas of already replaced sidewalk and roadway. The construction of the proposed lights and signals would not damage or destroy any contributing elements to Route 66.</p> <p>These construction activities also have the potential to result in indirect visual effects. However, minor alterations to existing transportation infrastructure in an urban setting do not constitute an effect. The proposed widening and restriping is planned for existing non-historic, non-character-defining features and would not cause an effect because the property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. New bus stations in an urban setting that replace existing non-historic elements that are not character-defining to the setting of a historic district do not cause an effect as long as the property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. As stated prior, the setting of the Route 66 is not an essential aspect of the property’s integrity. The proposed bus station would not block primary views of Route 66. Similarly, new pedestrian access ramps that replace non-historic elements would not cause an indirect effect. The construction of a new bus station, pad, and pedestrian access ramps would not cause an indirect visual effect on Route 66; new infrastructure elements in an urban setting that replace existing, non-historic elements that are not character-defining to a district do not constitute an indirect visual effect.; and the relocation of traffic signals and streetlights would not cause an indirect visual effect on Route 66.</p> <p>Increased operations have the potential to result in indirect noise effects. The current noise levels at this location range from 65 to 70 dBA. The noise levels will increase by 1 to 4 dBA. This level of increase for a commercial zone would not result in an adverse indirect noise effect on Route 66.</p> <p>Section 106 Effect: The BRT Alternative would result in No Adverse Effect on this segment of Route 66.</p>

TABLE 3.6.2:

BRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>Use Under Section 4(f): The BRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the BRT Alternative would result in No Adverse Effect on this segment of Route 66. The BRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property’s activities, features, or attributes that qualify this segment of Route 66 for protection under Section 4(f).</p>

Sources: *Historic Property Survey Report (2014)*; *Supplemental Historic Property Survey (2017)*; *Finding of Adverse Effect for the State Route 710 North Project (2017)*; and LSA Associates, Inc. (2018).

¹ Only properties within the Area of Potential Effects for the BRT Alternative are evaluated in this table. Refer to Figure 3.6-2 for the locations of the resources discussed in this table.

BRT = Bus Rapid Transit

sf = square feet

UPRR = Union Pacific Railroad

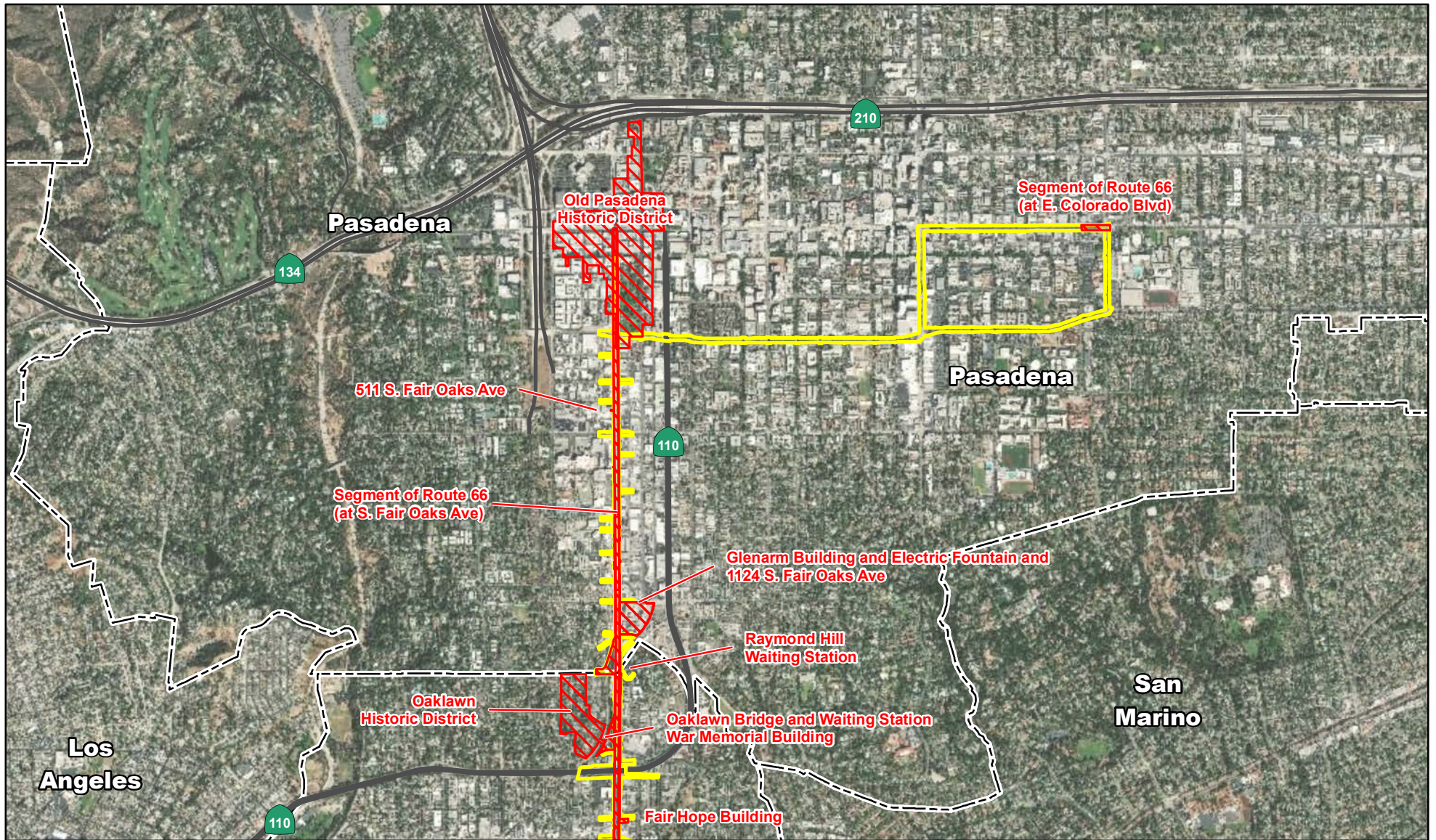
CHR = California Historical Resource

SR 110 = State Route 110




National Register = National Register of Historic Places

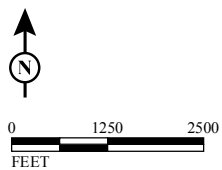
TCE = temporary construction easements

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LEGEND

-  Cultural Resource
-  BRT Alternative Limits of Construction
-  City Boundary



SOURCE: Bing (c.2012); NRHP (2014); CH2MHill (2014)
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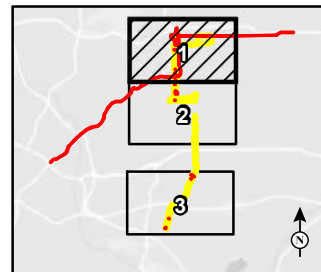


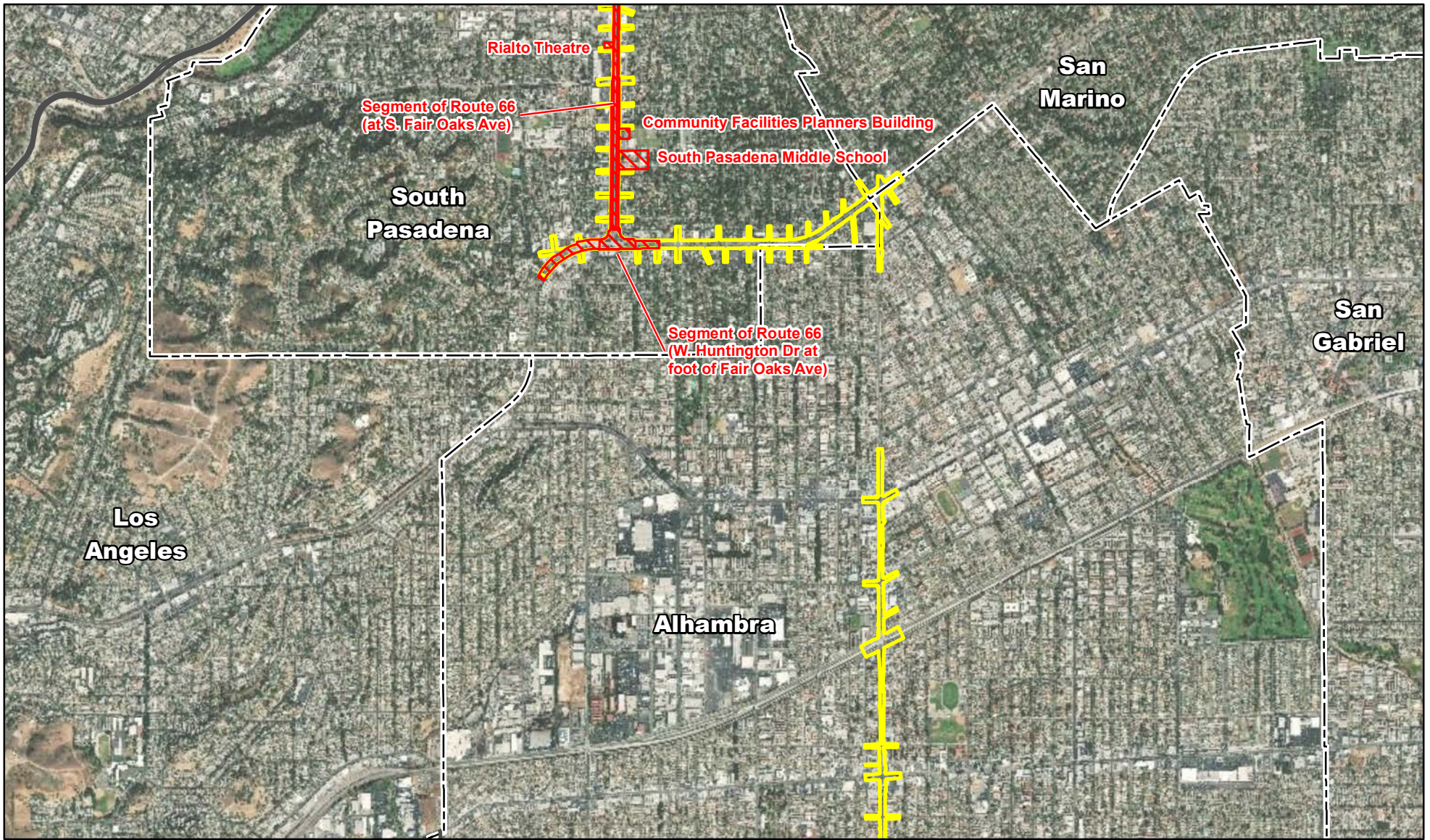
FIGURE 3.6-2
Sheet 1 of 3

SR 710 North Project




Historic Properties for the BRT Alternative

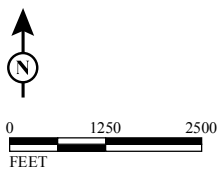
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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LEGEND

-  Cultural Resource
-  BRT Alternative Limits of Construction
-  City Boundary



SOURCE: Bing (c.2012); NRHP (2014); CH2MHill (2014)
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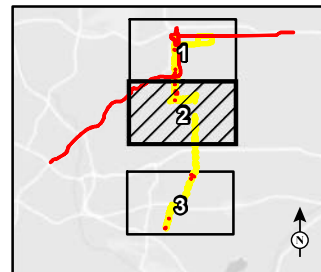


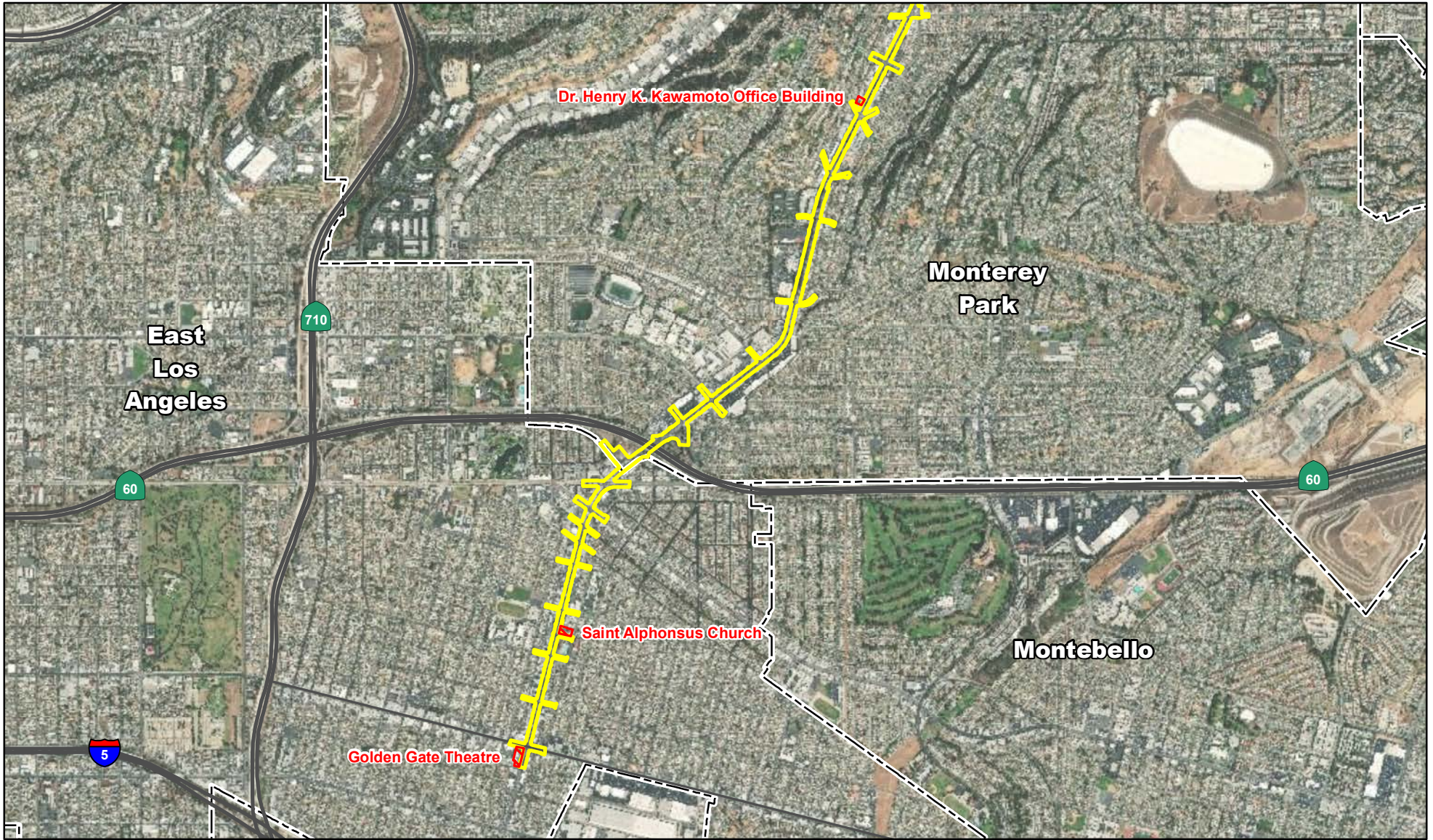
FIGURE 3.6-2
 Sheet 2 of 3

SR 710 North Project




Historic Properties for the BRT Alternative

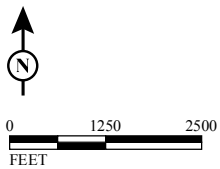
07-LA-710 (SR 710)
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LEGEND

-  Cultural Resource
-  BRT Alternative Limits of Construction
-  City Boundary



SOURCE: Bing (c.2012); NRHP (2014); CH2MHill (2014)
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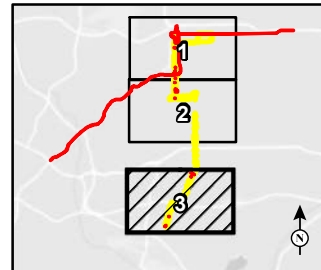


FIGURE 3.6-2
 Sheet 3 of 3

SR 710 North Project

Historic Properties for the BRT Alternative

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 EA 187900
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TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<p>CITY OF ALHAMBRA</p> <p>100 North Fremont Avenue Northeast corner of North Fremont Avenue and West Grand Avenue</p> <p>CHR Status Code: 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criterion C (Architecture)</p> <p>The following improvements would be constructed in the vicinity of 100 North Fremont Avenue under the LRT Alternative:</p> <ul style="list-style-type: none"> Excavation of two approximately 20-foot diameter tunnels below the median of North Fremont Avenue west of this historic property. The outer edge of the nearest tunnel would be approximately 60 feet below the ground surface 	<p>Effects Under Section 106: As described in detail in the preliminary <i>Finding of No Adverse Effect for the State Route 710 North Study</i> and as shown on Figure 3.6-3, there would be improvements in the LRT Alternative in the vicinity of 100 North Fremont Avenue.</p> <p>Construction activities with potential to result in direct settlement effects include the excavation of two tunnels. However, during the preliminary settlement assessment phase, the predicted settlement from the TBM drilling site was so minimal that it did not merit evaluation as part of the secondary settlement assessment. Therefore, the construction of the proposed LRT tunnels would not cause an adverse direct settlement effect on 100 North Fremont Avenue.</p> <p>The excavation of the two tunnels would also have the potential to result in direct ground-borne vibratory effects. However, the projected ground-borne vibration level caused by tunneling to 100 North Fremont Avenue is 0.025 PPV (in/sec), which is below the FTA criteria for potential damage to historic properties. The boring of the LRT tunnels would therefore not cause an adverse direct vibratory effect on 100 North Fremont Avenue.</p> <p>Increased operations would have the potential to result in indirect ground-borne noise effects and direct ground-borne vibratory effects. Although the proposed 20-foot diameter LRT tunnels are located at a depth of approximately 60 feet below 100 North Fremont Avenue, there is a potential for operational noise effects at this multi-residential property. Ground-borne noise levels were evaluated for the historic property and the anticipated levels for the LRT Alternative are between 46 dBA and 49 dBA, which are above the Federal Transit Administration (FTA) criteria of 40 dBA. Although a quiet atmosphere is not necessarily a characteristic of the property's significance, the historic property's use is residential. The ground-borne noise increase could cause an ongoing annoyance to the residents of the apartment building and cause the property to be potentially less habitable. Therefore, the operation of light rail vehicles under North Fremont Avenue has the potential to cause an adverse indirect ground-borne noise effect on 100 North Fremont Avenue. This ground-borne noise effect would be avoided or minimized if different tracks are used in accordance with Measure CUL-11 (Ground-Borne Noise Effects [100 North Fremont Avenue and Rialto Theatre]). With implementation of Measure CUL-11, the proposed operations would not cause an adverse effect on 100 North Fremont</p>

TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>Avenue.</p> <p>Ground-borne vibration caused from the operation of light rail vehicles would not cause a direct vibratory effect on 100 North Fremont Avenue.</p> <p>Section 106 Effect: The LRT Alternative improvements would result in a Conditional No Adverse Effect with implementation of Measures CUL-1 (Pre-Construction Surveys), CUL-11 (Ground-Borne Noise Effects [100 North Fremont Avenue and Rialto Theatre]), and CUL-13 (Post-Construction Surveys) on 100 North Fremont Avenue.</p> <p>Use Under Section 4(f): The LRT Alternative would not result in the permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the LRT Alternative would have a Conditional No Adverse Effect with implementation of Measures CUL-1, CUL-11, and CUL-13. The LRT Alternative improvements would not affect the occupation and intended uses of this historic property. The LRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property’s activities, features, or attributes that qualify 100 North Fremont Avenue for protection under Section 4(f).</p>
CITY OF PASADENA	
<p>Glenarm Building and Electric Fountain 1124 South Fair Oaks Avenue/72 East Glenarm Street</p> <p>CHR Status Code: 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criterion A (Association with events)</p> <p>The following improvements would be constructed in the vicinity of the Glenarm Building and Electric Fountain under the LRT Alternative:</p> <ul style="list-style-type: none"> Excavate two tunnels, utilizing TBMS, approximately 20 feet in diameter, below the median of South Fair Oaks Avenue. The tops of the tunnels would be approximately 60 to 75 feet below grade 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-3, there would be improvements in the LRT Alternative in the vicinity of the Glenarm Building and Electric Fountain.</p> <p>Construction activities including the excavation of two tunnels have the potential to result in direct settlement effects. During the preliminary settlement assessment phase, the predicted settlement from the TBM drilling site was so minimal near the Glenarm Building and Electric Fountain, that it did not merit evaluation as part of the secondary settlement assessment. Therefore, the construction of the proposed LRT tunnels would not cause an adverse direct settlement effect on the on the Glenarm Building and Electric Fountain.</p> <p>Construction activities including the excavation of two tunnels and operation activities including increased operation within the tunnel have the potential to result in direct ground-borne vibratory effects. The projected ground-borne vibration level caused by tunneling under the Glenarm Building and Electric Fountain would be 0.023 PPV (in/sec), which is below the FTA criteria for damage to historic buildings.</p>

TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>Therefore, boring the LRT tunnels would not cause an adverse direct vibratory effect on the Glenarm Building and Electric Fountain. In addition, vibration caused from the operation of light rail vehicles would not cause a direct ground-borne vibration effect on the Glenarm Building and Electric Fountain.</p> <p>Increased operations within the tunnel would also have the potential for indirect noise effects. The LRT Alternative tunnels would be at a depth of approximately 60 to 75 feet below Glenarm Building and Electric Fountain so the potential for operational noise and ground-borne noise effects were not evaluated. Therefore, the operation of light rail vehicles under Fair Oaks Avenue would not cause indirect noise or ground-borne noise effects on the Glenarm Building and Electric Fountain.</p> <p>Section 106 Effect: The LRT Alternative improvements would have No Adverse Effects on the Glenarm Building and Electric Fountain.</p> <p>Use Under Section 4(f): The LRT Alternative would not result in the permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the LRT Alternative would have No Adverse Effect on this property. In summary, the LRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property’s activities, features, or attributes that qualify the Glenarm Building and Electric Fountain for protection under Section 4(f).</p>
<p>Raymond Florist Historic District 60–62 East California Boulevard and 597 South Raymond Avenue</p> <p>CHR Status Code: 2S2 (Individual property determined eligible for the National Register through the Section 106 process); listed under Criteria A (Association with events) and B (Association with persons).</p> <p>The following improvements would be constructed in the vicinity of the Raymond Florist Historic District under the LRT Alternative:</p> <ul style="list-style-type: none"> • Construct the Fillmore LRT Station, tunnel, and crossover utilizing cut-and-cover excavation • The underground portion of the Fillmore LRT Station and the crossover are approximately 1,300 feet long and 60 feet wide, requiring a total excavation depth of 80 feet below ground surface. • The top of the as-built underground station platform and track tunnel would be 45 feet below the ground surface 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-3, the main facades of the Raymond Florist Historic District (a mixed-use residential and commercial property) face north, fronting on East California Boulevard, and east, fronting on South Raymond Avenue. The District is on the southwest corner of the East California Boulevard/South Raymond Avenue intersection. Access to the property is from several locations along East California Boulevard.</p> <p>Construction activities with the potential to result direct settlement effects include the excavation required for the Fillmore LRT station, tunnel, and crossover. The proposed cut-and-cover excavation of the Fillmore LRT Station’s underground platform would necessitate cut-and-cover excavations immediately adjacent to the historic district’s eastern boundary along South Raymond Avenue. Based on the secondary settlement assessment results, the predicted damage level classification is “moderate” for the Raymond Florist Historic District. Therefore, the cut-and-cover excavations have the potential to cause an adverse direct settlement effect on the</p>

TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<ul style="list-style-type: none"> Build the proposed surface station component of the Fillmore LRT Station. The proposed station is a one-story building that would be diagonally across the street from the Raymond Florist Historic District, with an entrance midblock 	<p>Raymond Florist Historic District. However, that effect would be avoided and/or minimized with the implementation of Measures CUL-4 (Settlement Monitoring Plan) and CUL-5 (SOIS Plans [Settlement]), outlined described in Section 3.8. With implementation of Measures CUL-4 and CUL-5, construction would not cause an adverse settlement effect on the Raymond Florist Historic District.</p> <p>This excavation also has the potential to result in direct ground-borne vibration effects. The projected ground-borne vibration level caused by the excavation of the Fillmore LRT Station and tunnel is 0.293 PPV (in/sec) at one of the contributors to the historic district (62 East California Boulevard), which exceeds the FTA criteria for damage. The cut-and-cover excavations have the potential to cause a direct vibratory effect on the Raymond Florist Historic District. However, with the conditions imposed in avoidance and minimization Measure CUL-7 (Vibration Management and Monitoring Plan [Raymond Florist Historic District]) and CUL-8 (SOIS Plan [Raymond Florist Historic District]) described in Section 3.8, the construction would not cause an adverse effect on the Raymond Florist Historic District.</p> <p>Construction of the proposed surface station component also has the potential to result in indirect visual effects. However, new light rail stations within a one-block radius of individually significant buildings will not have an adverse effect on historic properties, so long as the shelter does not block the view and the immediate setting of the property is not an essential aspect of integrity. Although the Raymond Florist Historic District is a district, and not individually eligible, the setting is not an essential aspect of integrity. The proposed station is more than 700 feet away from the district boundaries, with no potential to block the view of the district. Furthermore, the historic district is located within an urban context with existing transportation and transit infrastructure in the area (a Gold Line Station is located two blocks south and one block west). The proposed light rail station would not have an adverse indirect visual effect on the Raymond Florist Historic District.</p> <p>The LRT Alternative tunnels will be at a depth of approximately 45 feet below this historic property and because of the proximity of the station, trains will be traveling at slow speeds during operation. Therefore, the operation of light rail vehicles under South Raymond Avenue would not cause indirect noise, ground-borne noise, or ground-borne vibrations effects on the Raymond Florist Historic District.</p> <p>Section 106 Effect: The LRT Alternative improvements would result in a Conditional No Adverse Effect with the implementation of Measures CUL-1 (Pre-Construction</p>

TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>Surveys), CUL-4 (Settlement Monitoring Plan), CUL-5 (SOIS Plans [Settlement]), CUL-7 (Vibration Management and Monitoring Plan [Raymond Florist Historic District]), CUL-8 (SOIS Plan [Raymond Florist Historic District]), and CUL-13 (Post-Construction Surveys) on this historic property.</p> <p>Use Under Section 4(f): The LRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the LRT Alternative would result in a Conditional No Adverse Effect with implementation of Measures CUL-1, CUL-4, CUL-5, CUL-7, CUL-8, and CUL-13. The changes in the Historic District resulting from the LRT Alternative improvements would not affect the occupation and intended uses of any of the contributing elements of the property. The LRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property’s activities, features, or attributes that qualify the Raymond Florist Historic District for protection under Section 4(f).</p>
<p>Hospital Veterinary 959 South Raymond Avenue</p> <p>CHR Status Code: 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criteria B (Association with persons) and C (Architecture)</p> <p>The following improvements would be constructed in the vicinity of the Hospital Veterinary under the LRT Alternative:</p> <ul style="list-style-type: none"> Excavate two tunnels, utilizing TBMS, approximately 20 feet in diameter, below the median of South Fair Oaks Avenue. The tops of the tunnels would be approximately 60 feet below ground surface 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-3, the Hospital Veterinary faces east, fronting and slightly set back from South Raymond Avenue. Access to the property is from the main entrance on South Raymond Avenue.</p> <p>Construction activities including the excavation of two tunnels have the potential to result in direct settlement and vibration effects. Based on the findings summarized in the preliminary settlement assessment, the proposed TBM drilling would cause “negligible” settlement on the Hospital Veterinary building. Therefore, the construction of the proposed LRT tunnels would not cause an adverse direct settlement effect on the Hospital Veterinary building. The projected ground-borne vibration level to the Hospital Veterinary building caused by tunneling would be 0.023 PPV (in/sec), which is below the FTA criteria for damage to historic buildings. Therefore, boring LRT tunnels would not cause an adverse vibratory effect on the Hospital Veterinary building.</p> <p>Increased operations have the potential to result in direct noise effects and direct vibration effects. The LRT Alternative 20-foot diameter tunnels would be located at a depth of approximately 60 feet below the Hospital Veterinary building, so the noise impact was not evaluated. Ground-borne noise levels were evaluated for the property and the anticipated levels for the LRT Alternative are between 33 and 38 dBA, which is below 40 dBA. Therefore, the operation of light rail vehicles under the Hospital Veterinary would not cause an indirect noise or ground-borne noise effects</p>

TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>on the Hospital Veterinary building.</p> <p>Operation of light rail vehicles under the Hospital Veterinary building would not cause a direct vibratory effect on the Hospital Veterinary building.</p> <p>Section 106 Effect: The LRT Alternative would result in No Adverse Effect on this historic property.</p> <p>Use Under Section 4(f): The LRT Alternative would not result in the permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the LRT Alternative would result in No Adverse Effect on this property. The changes in the Hospital Veterinary building as a result of the LRT Alternative improvements would not affect the occupation and intended uses of any of the contributing elements of the property. The LRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property’s activities, features, or attributes that qualify the Hospital Veterinary building for protection under Section 4(f).</p>
<p>Segment of Route 66 South Fair Oaks Avenue/Fair Oaks Avenue</p> <p>CHR Status Code: Assumed eligible for listing in the National Register for the purpose of this project only; listed under Criteria A (Association with events) and C (Architecture)</p> <p>The following improvements would be constructed on South Fair Oaks Avenue/Fair Oaks Avenue under the LRT Alternative:</p> <ul style="list-style-type: none"> • Excavation of two approximately 20-foot diameter tunnels below the median of this 1.62-mile-long segment of Fair Oaks Avenue/South Fair Oaks Avenue. The approximate depth of the top of the tunnel would be 60-85 feet below the ground surface. • Construct the South Pasadena LRT Station, at a depth of 80 to 90 feet below the ground surface at the intersection of Fair Oaks Avenue/Mission Street. The top of the as-built underground station platform would be 30 feet below the ground surface. The station would be connected to a 338-space surface parking lot • Construct the Huntington LRT Station, at a depth of 80 feet below the ground surface at the foot of Fair Oaks Avenue at the West Huntington Drive intersection. The top of the as-built underground station platform would be 30 feet below the ground surface. The station entrance would be on the northwest 	<p>Effects under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-3, there would be improvements in the LRT Alternative in the vicinity of the former segment of Route 66 at Fair Oaks Avenue/South Fair Oaks Avenue.</p> <p>Construction activities with the potential to result in direct settlement effects include construction of the South Pasadena Station and construction of the Huntington Station and parking area. Based on the findings summarized in the Potential Settlement Effects on Historic Properties technical memorandum, the proposed TBM drilling and cut-and-cover excavations would have no direct effect for settlement on the Route. During the preliminary settlement assessment phase, the predicted settlement at the site was so minimal that it did not merit evaluation as part of the secondary settlement assessment. The proposed excavations for these construction activities would not have an adverse direct settlement effect on Route 66.</p> <p>These construction activities also have the potential to result in indirect visual effects. However, light rail stations within a one-block radius would not have an adverse effect on a property, as long as the stations do not block the view of an individually significant building and the property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. The stations will not block views of the Route 66. The setting of Route 66 is not an</p>

TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<p>corner of the Fair Oaks Avenue/West Huntington Drive intersection with a three-level, 400-space parking structure south of and across West Huntington Drive at the southeast corner of the West Huntington Drive/Fremont Avenue intersection.</p>	<p>essential aspect of its integrity. Therefore, the new shelters would not have an adverse visual effect on Route 66.</p> <p>These construction activities also have the potential to result in direct ground-borne vibratory effects. However, the projected ground-borne vibration level at Route 66, caused by construction of the South Pasadena Station is 0.025 PPV (in/sec), which is below the FTA criteria for damage. Similarly, the projected construction-related ground-borne vibration level at Route 66, caused by construction of the Huntington Station is 0.025 PPV (in/sec). Therefore, construction of the LRT stations would not cause an adverse direct ground-borne vibratory effect on Route 66.</p> <p>Increased operations have the potential to result in indirect noise and direct vibratory effects. The LRT Alternative tunnels would be at a depth of approximately 60 feet below this historic property so the ground-borne noise levels were not evaluated. The increase in ground-borne noise would not have an effect on the Route 66 and operation of light rail vehicles would not have a direct vibratory effect on the Route 66.</p> <p>Section 106 Effect: The LRT Alternative improvements would have No Adverse Effects on the segment of historic Route 66 between Fair Oaks Avenue/South Fair Oaks Avenue between the intersection of West Huntington Drive in South Pasadena and East Glenarm Street in Pasadena.</p> <p>Use Under Section 4(f): The LRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the LRT Alternative would have No Adverse Effect on this segment of Route 66. The LRT Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property's activities, features, or attributes that qualify Route 66 for protection under Section 4(f).</p>
CITY OF SOUTH PASADENA	
<p>Rialto Theatre 1019 Fair Oaks Avenue</p> <p>CHR Status Code: 1S (Individual property listed in the National Register by the Keeper); listed under Criteria A (Association with events and a person) and C (Architecture)</p>	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-3, the Rialto Theatre faces east, fronting on Fair Oaks Avenue. It is on the northwest corner of the Oxley Street/Fair Oaks Avenue intersection. Access to the property is from the main entrance on Fair Oaks Avenue, a side entrance on Oxley Street, and a service entrance via an alley at the rear of the building.</p>

TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<ul style="list-style-type: none"> • The LRT Alternative would result in the excavation of two approximately 20-foot diameter light rail tunnels approximately 55 feet under Fair Oaks Avenue • Construct the South Pasadena LRT Station utilizing TBMs • Construct a surface parking lot on the east side of Fair Oaks Avenue 	<p>Construction activities with the potential to result in direct settlement effects include the excavation of two tunnels. During the preliminary settlement assessment phase, the predicted settlement from the TBM drilling site was so minimal that it did not merit evaluation as part of the secondary settlement assessment. Therefore, the construction of the proposed LRT tunnels would not cause an adverse direct settlement effect on the Rialto Theatre.</p> <p>Construction activities with the potential to result in direct vibratory effects include the excavation of two tunnels and construction of the South Pasadena station. The projected ground-borne vibration caused by tunneling to the Rialto Theatre is 0.022 PPV (in/sec), which is below the FTA criteria for damage to historic properties. Therefore, boring LRT tunnels would not cause an adverse direct ground-borne vibratory effect on the Rialto Theatre. In addition, the projected ground-borne vibration level at the Rialto Theatre, resulting from the construction of the proposed South Pasadena Station would be 0.002 PPV (in/sec). Therefore, ground-borne vibration caused from constructing the South Pasadena LRT Station would not cause an adverse direct vibratory effect on the Rialto Theatre.</p> <p>Construction of the South Pasadena Station also has the potential to result indirect noise effects. However, light rail stations located within a one-block radius of a historic property would not have an adverse effect on a property, as long as the station does not block the view of an individually significant building and the property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. The station will not block the view of the Rialto Theatre because it is over 450 feet away and on the other side of Fair Oaks Avenue. The setting of the Rialto Theatre is not an aspect of its integrity that is essential to conveying its historic significance. Therefore, the new LRT station would not cause an adverse visual effect on the Rialto Theatre.</p> <p>Construction of a surface parking lot has the potential to result in indirect visual effects. However, surface parking lots within a one-block radius would not have an adverse effect on the significance of a historic property, as long as no elements of the parking area block the view of an individually significant building and the historic property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. The parking lot will not obstruct the view of the Rialto Theatre because it is on the other side of Fair Oaks Avenue and has nothing built above grade. As stated above, the setting of the Rialto Theatre is not an essential aspect of its integrity for the historic property to convey its significance. Therefore,</p>

TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>construction of the new parking area would not cause an adverse visual effect on the Rialto Theatre.</p> <p>Increased operations have the potential to result in indirect ground-borne noise and direct ground-borne vibratory effects. Operation of light rail vehicles 55 feet below the ground's surface would not cause an adverse operational direct vibratory effect on the Rialto Theatre. The LRT Alternative tunnels will be at a depth of approximately 55 feet below the Rialto Theatre, so the noise impact was not evaluated. Ground-borne noise levels were evaluated for the Rialto Theatre block and the anticipated levels for the LRT Alternative are between 44 and 47 dBA, exceeding the FTA criteria of 40 dBA. Although this building is temporarily vacant, it historically operated as a theater. The use of the Rialto Theatre as such makes the building functionally more sensitive to ground-borne noise than other commercial buildings. The LRT train operations have the potential to cause an adverse indirect ground-borne noise effect on the Rialto Theatre. However, this effect would be avoided or minimized if different tracks are used, in accordance with Measure CUL-11 (Ground-borne Noise Effects [100 North Fremont Avenue and Rialto Theatre]), described in Section 3.8.</p> <p>Section 106 Effect: The LRT Alternative would result in a Conditional No Adverse Effect with implementation of Measures CUL-1 (Pre-Construction Surveys), CUL-11 (Ground-borne Noise Effects [100 North Fremont Avenue and Rialto Theatre]), and CUL-13 (Post-Construction Surveys) on this historic property.</p> <p>Use Under Section 4(f): The LRT Alternative would not result in the permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the LRT Alternative would result in a Conditional No Adverse Effect with implementation of Measures CUL-1, CUL-11, and CUL-13. The changes in the Rialto Theatre building due to the LRT Alternative improvements would not affect the occupation and intended uses of any of the contributing elements of that property. In summary, the LRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's activities, features, or attributes that qualify the Rialto Theatre building for protection under Section 4(f).</p>
<p>Arroyo Seco Parkway Historic District (includes the route of the Arroyo Seco Freeway from the four-level interchange in the City of Los Angeles, through South Pasadena to East Glenarm Street in Pasadena, and bridges along that route). The Arroyo Seco Parkway is also a segment of Historic Route 66.</p>	<p>Section 106 Effect: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> would have an Adverse Effect and a use under Section 4(f) due to the removal of character-defining features and from construction retaining walls and hook ramps.</p>

TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<p>CHR Status Code: 1S (Individual property listed in the National Register by the Keeper); listed under Criterion A (Association with Events), Criterion B (Association with persons), and Criterion C (Architecture)</p> <p>The LRT Alternative would result in the excavation of two approximately 20-foot diameter light rail tunnels approximately 60 feet under the Arroyo Seco Parkway/SR 110 roadbed underneath the Fair Oaks overcrossing (a contributing element to the District).</p>	<p>Use Under Section 4(f): To address the use of the Arroyo Seco Parkway Historic District under Section 4(f), an Individual Section 4(f) Evaluation has been prepared and is included in Appendix B of the Final EIR/EIS.</p>
<p>Fair Hope Building 800 Fair Oaks Avenue</p> <p>CHR Status Code: 2S2 (Individual property determined to be eligible for the National Register by consensus through the Section 106 process); listed under Criteria A (Association with events) and C (Architecture)</p> <p>The following improvements in the LRT Alternative would be constructed in the vicinity of the Fair Hope Building:</p> <ul style="list-style-type: none"> • Excavation of two approximately 20-foot diameter light rail tunnels approximately 70 feet below ground surface under the centerline of Fair Oaks Avenue • Construct the South Pasadena LRT Station 80–90 feet below the ground surface. The top of the as-built underground station platform would be 30 feet below the ground surface, the above ground portion of the station would be housed within a one-story building 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-3, the Fair Hope Building faces west, fronting on Fair Oaks Avenue. It is on the southeast corner of the Hope Street/Fair Oaks Avenue intersection. Access to the property is from the main entrance on Fair Oaks Avenue, a side entrance on Hope Street, and a service entrance via Raymond Lane, an alley at the rear of the building.</p> <p>Construction activities that have the potential to result in direct settlement effects include the excavation of two tunnels. During the preliminary settlement assessment phase, the predicted settlement at the site was so minimal that it did not merit evaluation as part of the secondary settlement assessment. Therefore, the proposed TBM drilling would not cause an adverse direct settlement effect on the Fair Hope Building.</p> <p>Construction activities with the potential to result in direct vibratory effects include the excavation of two tunnels and the construction of an underground station. However, the projected ground-borne vibration caused by tunneling at the Fair Hope Building is 0.017 PPV (in/sec), which is below the FTA criteria for damage. Therefore, the boring of the LRT tunnels would not have an adverse ground-borne vibration effect on the Fair Hope Building. In addition, the projected ground-borne vibration level at the Fair Hope Building, caused by the construction of the proposed South Pasadena LRT Station would be 0.119 PPV (in/sec), which is also below the FTA criteria for damage to historic buildings. Therefore, the construction of a new LRT station would not cause an adverse direct ground-borne vibratory effect on the Fair Hope Building.</p> <p>Construction associated with the underground station also has the potential to result in indirect visual effects. Light rail stations within a one-block radius would not have an adverse effect on a property, as long as the shelter does not block the view of an individually significant building and the property's immediate setting is</p>

TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>not an essential aspect of integrity for the property to convey its historic significance. The shelter will not block the view of the Fair Hope Building because it is over 350 feet away on the same side of the street, with several buildings intervening the distance. The setting of the Fair Hope Building is not an essential aspect of its integrity for the historic property to convey its historic significance under Criterion C, and although the setting is necessary to convey its significance under Criterion A, the station is far enough away from the Fair Hope Building that it would not diminish its integrity of setting. Therefore, construction of the new LRT station shelter would not have an adverse visual effect on the Fair Hope Building.</p> <p>Increased operations have the potential to result in indirect ground-borne noise and direct ground-borne vibratory effects. However, the LRT Alternative tunnels would be constructed at a depth of approximately 60 feet below the Fair Hope Building, so the noise impact was not evaluated. The increase in ground-borne noise would not have an effect on the Fair Hope Building. Operation of light rail vehicles would not have a direct ground-borne vibratory effect on the Fair Hope Building.</p> <p>Section 106 Effect: The LRT Alternative would result in No Adverse Effect on this historic property.</p> <p>Use Under Section 4(f): The LRT Alternative would not result in the permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the LRT Alternative would result in No Adverse Effect on this historic property. The changes in the Fair Hope Building as a result of the LRT Alternative improvements would not affect the occupation and intended uses of any of the contributing elements of that property. The LRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property’s activities, features, or attributes that qualify the Fair Hope Building for protection under Section 4(f).</p>
<p>Horatio Rust Site</p> <p>This prehistoric site recorded by Horatio Rust was exposed during road grading activities in 1897. A large number of artifacts was recorded and collected including 50 hammer stones, 30 metates, over 100 manos, a bone awl, and a number of cogged and discoidal stones. Rust noted that the finds were located 2 to 3 feet beneath the ground surface and that the metates were all discovered face-down. The location of</p>	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> the Horatio Rust Site is located in the City of South Pasadena, but the location of this site is not provided to avoid vandalism or other potential damage to the site. The recorded Horatio Rust Site is fully developed and the area is not accessible for subsurface archaeological exploration.</p>

TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<p>this site is not provided in this report to avoid vandalism or other potential damage to the site.</p> <p>CHR Status Code: Assumed to be eligible for the National Register for the purpose of this project only.</p> <p>The following improvements would be implemented in the vicinity of the Horatio Rust Site under the LRT Alternative:</p> <ul style="list-style-type: none"> The LRT Alternative would result in the excavation of two directional 20-foot diameter tunnels below the centerline of Fair Oaks Avenue approximately 85 feet below the ground surface. 	<p>Part of this prehistoric site may be within the disturbance limits for the LRT Alternative. It is possible construction of the LRT Alternative could encounter prehistoric artifacts. The <i>Finding of Adverse Effect</i> determined that any potential archeological resources encountered at this site during construction of this Alternative would be important chiefly because of what can be learned from data recovery and would have minimal value for preservation in place.</p> <p>Construction activities with the potential to result in direct and indirect effects include the excavation of two tunnels. However, the proposed construction of two tunnels at a depth of about 85 feet below ground surface is well outside of the recorded site boundaries of the Horatio Rust Site, which was identified at depths of 2-3 feet below the ground surface. Intact cultural deposits associated with the site are highly unlikely to be located at greater depths as that proposed for the tunnels. Therefore, the proposed construction of the tunnels would not affect the Horatio Rust Site.</p> <p>Increased operations have the potential to result in direct and indirect effects from increased ground-borne vibration. However, based on the Criteria of Adverse Effect applied to the Horatio Rust Site pursuant to 36 CFR 800.5, it has been determined that the operation of light rail vehicles under Fair Oaks Avenue would not cause indirect or direct effects on the Horatio Rust Site.</p> <p>Section 106 Effect: The LRT Alternative improvements would result in No Effect on the Horatio Rust Site.</p> <p>Use Under Section 4(f): Section 4(f) does not apply to archaeological resources that are important chiefly because of what can be learned from data recovery and have minimal value for preservation in place (23 CFR 774.13(b)(1)). No further analysis or consideration of the effects of the LRT Alternative on the Horatio Rust Site under Section 4(f) is required.</p>
<p>Oaklawn Historic District Residential district within South Pasadena comprising residential properties facing Oakland Avenue between Columbia Street and Fair Oaks Avenue.</p> <p>CHR Status Code: 2S2 (Individual property determined to be eligible for the National Register by a consensus through the Section 106 process); listed under Criterion C (Architecture)</p> <p>The following improvements would be constructed in the vicinity of the Oaklawn</p>	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-3, improvements in the LRT Alternative would be in the vicinity of the Oaklawn Historic District.</p> <p>Construction activities with the potential to result in direct settlement effects include the excavation of two tunnels. However, during the preliminary settlement assessment phase, the predicted settlement from the TBM drilling was so minimal that it did not merit evaluation as part of the secondary settlement</p>

TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<p>Historic District under the LRT Alternative:</p> <ul style="list-style-type: none"> Excavate two tunnels, utilizing TBMS, approximately 20 feet in diameter, below the centerline of Fair Oaks Avenue. The excavated tunnel depth would be approximately 77 feet below ground surface 	<p>assessment. Therefore, the construction of the proposed LRT tunnels would not cause an adverse direct settlement effect on the Oaklawn Historic District.</p> <p>These construction activities would also have the potential to result in direct ground-borne vibratory effects. However, the projected ground-borne vibration level cause by tunneling to the Oaklawn Bridge Waiting Station is 0.014 PPV (in/sec), which is below the FTA criteria for damage to historic properties. Therefore, boring LRT tunnels would not cause an adverse ground-borne vibratory effect on the Oaklawn Historic District.</p> <p>Increased operations would have the potential to result in indirect noise and direct ground-borne vibratory effects. The LRT Alternative 20-foot diameter tunnels would be located at a depth of approximately 77 feet below Oaklawn Historic District, so the potential for operational noise effects were not evaluated. Similarly, ground-borne noise levels were not evaluated for the historic property due to the depth of the proposed tunnel below grade. The operation of light rail vehicles under Fair Oaks Avenue would not cause indirect noise or ground-borne noise effects on the Oaklawn Historic District. In addition vibration caused from the operation of light rail vehicles would not cause a direct ground-borne vibratory effect on the Oaklawn Historic District.</p> <p>Section 106 Effect: The LRT Alternative improvements would have No Adverse Effect on the Oaklawn Historic District.</p> <p>Use Under Section 4(f): The LRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the LRT Alternative improvements would have No Adverse Effect on the Oaklawn Historic District. The LRT Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify the Oaklawn Historic District for protection under Section 4(f).</p>
<p>Oaklawn Bridge and Waiting Station 435 Fair Oaks Avenue</p> <p>CHR Status Code: 1S/2D2 (Individual property listed in National Register by the Keeper/Contributor to a district determined eligible for the National Register by consensus through the Section 106 process); listed under Criterion C</p>	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-3, improvements in the LRT Alternative would be in the vicinity of the Oaklawn Bridge and Waiting Station.</p> <p>Construction activities with the potential to result in direct settlement effects</p>

TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<p>(Architecture)</p> <p>The following improvements would be implemented in the vicinity of the Oaklawn Waiting Station under the LRT Alternative:</p> <ul style="list-style-type: none"> Excavate two tunnels, utilizing TBMS, approximately 20 feet in diameter, below the centerline of Fair Oaks Avenue. The excavated tunnel depth would be approximately 77 feet below ground surface 	<p>include the excavation of two tunnels. However, during the preliminary settlement assessment phase, the predicted settlement from the TBM drilling was so minimal that it did not merit evaluation as part of the secondary settlement assessment. Therefore, the construction of the proposed LRT tunnels would not cause an adverse direct settlement effect on the Oaklawn Bridge and Waiting Station.</p> <p>These construction activities would also have the potential to result in direct ground-borne vibratory effects. However, the projected ground-borne vibration level cause by tunneling to the Oaklawn Bridge Waiting Station is 0.014 PPV (in/sec), which is below the FTA criteria for damage to historic properties. Therefore, boring LRT tunnels would not cause an adverse ground-borne vibratory effect on the Oaklawn Bridge Waiting Station.</p> <p>Increased operations would have the potential to result in indirect noise and direct ground-borne vibratory effects. The LRT Alternative 20-foot diameter tunnels would be located at a depth of approximately 77 feet below Oaklawn Bridge and Waiting Station, so the potential for operational noise effects were not evaluated. Similarly, ground-borne noise levels were not evaluated for the historic property due to the depth of the proposed tunnel below grade. The operation of light rail vehicles under Fair Oaks Avenue would not cause indirect noise or ground-borne noise effects on the Oaklawn Bridge Waiting Station. In addition vibration caused from the operation of light rail vehicles would not cause a direct ground-borne vibratory effect on the Oaklawn Bridge Waiting Station.</p> <p>Section 106 Effect: The LRT Alternative improvements would have No Adverse Effect on the Oaklawn Bridge and Waiting Station.</p> <p>Use Under Section 4(f): The LRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the LRT Alternative improvements would have No Adverse Effect on the Oaklawn Bridge and Waiting Station. The LRT Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify the Oaklawn Bridge and Waiting Station for protection under Section 4(f).</p>

TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<p>War Memorial Building 435 Fair Oaks Avenue</p> <p>CHR Status Code: 2S2 (Individual property determined eligible for National Register by consensus through the Section 106 process); listed under Criterion C (Architecture)</p> <p>The following improvements would be implemented in the vicinity of the War Memorial Building under the LRT Alternative:</p> <ul style="list-style-type: none"> Excavate two tunnels, utilizing TBMS, approximately 20 feet in diameter, below the centerline of Fair Oaks Avenue. The excavated tunnel depth would be approximately 77 feet below ground surface 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-3, the improvements in the LRT Alternative would be in the vicinity of the War Memorial Building.</p> <p>Construction activities with the potential to result in direct settlement effects include the excavation of two tunnels. However, during the preliminary settlement assessment phase, the predicted settlement from the TBM drilling was so minimal for the Oaklawn Historic District, that it did not merit evaluation as part of the secondary settlement assessment. Therefore, the construction of the proposed LRT tunnels would not cause an adverse direct settlement effect on the Oaklawn Historic District.</p> <p>Excavation of these two tunnels would also have the potential to result in direct ground-borne vibratory effects. However, the projected ground-borne vibration level cause by tunneling to the Oaklawn Historic District is 0.014 PPV (in/sec), which is below the FTA criteria for damage to historic properties. Therefore, boring the LRT tunnels would not cause an adverse ground-borne vibratory effect on the Oaklawn Historic District.</p> <p>Increased operations would have the potential to result in indirect noise and direct ground-borne vibratory effects. The LRT Alternative 20-foot diameter tunnels would be located at a depth of approximately 77 feet below Oaklawn Historic District, so the potential for operational noise effects were not evaluated. Similarly, ground-borne noise levels were not evaluated for the historic property due to the depth of the proposed tunnel below grade. Therefore, operation of light rail vehicles under Fair Oaks Avenue would not cause indirect noise or ground-borne noise effects on the Oaklawn Historic District. In addition, ground-borne vibration caused from the operation of light rail vehicles would not cause a direct vibratory effect on the Oaklawn Historic District.</p> <p>Section 106 Effect: The LRT Alternative improvements would have No Adverse Effect on the War Memorial Building.</p> <p>Use Under Section 4(f): The LRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the LRT Alternative improvements would have No Adverse Effect on the War Memorial Building. The LRT Alternative improvements in this area would not result in proximity impacts that would result in</p>

TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<p>Community Facilities Planners Building (aka Fair Oaks Professional Group) 1414 Fair Oaks Avenue</p> <p>CHR Status Code: 2S2/5S1 (Individual property determined eligible for the National Register by a consensus through the Section 106 process/Individual property that is listed or designated locally); listed under Criterion C (Architecture)</p> <p>The following improvements would be constructed in the vicinity of the Community Facilities Planners Building under the LRT Alternative:</p> <ul style="list-style-type: none"> Excavation of two approximately 20-foot diameter tunnels below the median of South Fair Oaks Avenue west of this historic property. The top of the tunnels would be 55 feet below grade 	<p>a substantial impairment of the property’s activities, features, or attributes that qualify the War Memorial Building for protection under Section 4(f).</p> <p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-3, there would be improvements in the LRT Alternative in the vicinity of the Community Facilities Planners Building. Construction activities with the potential to result in direct settlement effects include the excavation of two tunnels. During the preliminary settlement assessment phase, the predicted settlement at the site was so minimal that it did not merit evaluation as part of the secondary settlement assessment. Therefore, the construction of the proposed LRT tunnels would not cause an adverse direct settlement effect on the Community Facilities Planners Building.</p> <p>Excavation of these two tunnels also has the potential to result in direct ground-borne vibratory effects. However, the projected ground-borne vibration level caused by tunneling to the Community Facilities Planners Building is 0.016 PPV (in/sec), which is below the FTA criteria for damage to historic properties. The boring of the LRT tunnels would not cause an adverse direct ground-borne vibratory effect on the Community Facilities Planners Building.</p> <p>Increased operations have the potential to result in indirect noise and direct ground-borne vibratory effects. The LRT Alternative 20-foot diameter tunnels would be located at a depth of approximately 55 feet the Community Facilities Planners Building so the potential for operational noise effects were not evaluated. Ground-borne noise levels were evaluated for the historic property and the anticipated levels for the LRT Alternative are between 32 and 35 dBA, below the FTA criteria of 40 dBA. The operation of light rail vehicles under Fair Oaks Avenue would not cause indirect noise or ground-borne noise effects on the Community Facilities Planners Building. In addition, ground-borne vibration caused from the operation of light rail vehicles would not cause a direct vibratory effect on the Community Facilities Planners Building.</p> <p>Section 106 Effect: The LRT Alternative would result in No Adverse Effect on this historic property.</p> <p>Use Under Section 4(f): The LRT Alternative would not result in the permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the LRT Alternative would result in No</p>

TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>Adverse Effect on this historic property. The changes in the Community Facilities Planners Building as a result of the LRT Alternative improvements would not affect the occupation and intended uses of any of the contributing elements of the property. The LRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property’s activities, features, or attributes that qualify the Community Facilities Planners Building for protection under Section 4(f).</p>
<p>South Pasadena Middle School 1500 Fair Oaks Avenue</p> <p>CHR Status Code: 2S2/5S1 (Individual property determined eligible for the National Register by a consensus through the Section 106 process/Individual property that is listed or designated locally); listed under Criterion C (Architecture)</p> <p>The following improvements would be constructed in the vicinity of South Pasadena Middle School under the LRT Alternative:</p> <ul style="list-style-type: none"> Excavation of two approximately 20-foot diameter tunnels below the median of South Fair Oaks Avenue west of this historic property. The top of the tunnels would be 60 feet below grade 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-3, there would be improvements in the LRT Alternative in the vicinity of the South Pasadena Middle School.</p> <p>Construction activities with the potential to result in direct settlement effects include the excavation of two tunnels. However, during the preliminary settlement assessment phase, the predicted settlement from the TBM drilling site was so minimal that it did not merit evaluation as part of the secondary settlement assessment. Therefore, the construction of the proposed LRT tunnels would not cause an adverse direct settlement effect on the South Pasadena Middle School.</p> <p>Excavation of these two tunnels also has the potential to result in direct ground-borne vibratory effects. However, the projected ground-borne vibration level caused by tunneling to the South Pasadena Middle School is 0.016 PPV (in/sec), which is below the FTA criteria for damage to historic properties. The boring of the LRT tunnels would therefore not cause an adverse direct ground-borne vibratory effect on the South Pasadena Middle School.</p> <p>Increased operations have the potential to result in indirect noise and direct ground-borne vibratory effects. The LRT Alternative 20-foot diameter tunnels would be located at a depth of approximately 60 feet below the South Pasadena Middle School, so the potential for operational noise effects was not evaluated. Ground-borne noise levels were evaluated for the historic property and the anticipated levels for the LRT Alternative are between 32 and 35 dBA, below the FTA criteria of 40 dBA. Therefore, the operation of light rail vehicles under Fair Oaks Avenue would not cause indirect noise or ground-borne noise effects on the South Pasadena Middle School. In addition, ground-borne vibration caused by the operation of light rail vehicles would not cause a direct vibratory effect on the South Pasadena Middle School.</p>

TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>Section 106 Effect: The LRT Alternative improvements would have No Adverse Effect on the South Pasadena Middle School.</p> <p>Use Under Section 4(f): The LRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the LRT Alternative would have No Adverse Effect on the South Pasadena Middle School. The LRT Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify the South Pasadena Middle School for protection under Section 4(f).</p>
<p>Raymond Hill Waiting Station Southeast corner of Fair Oaks Avenue and Raymond Hill Road</p> <p>CHR Status Codes: 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process), listed under Criteria A (Association with Events) and C (Architecture)</p> <p>The following improvements would be implemented in the vicinity of Raymond Hill Waiting Station under the LRT Alternative:</p> <ul style="list-style-type: none"> Excavate two tunnels, utilizing TBMS, approximately 20 feet in diameter, below the centerline of Fair Oaks Avenue. The excavated tunnel depth would be approximately 90 feet below ground surface 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-3, there would be improvements in the LRT Alternative in the vicinity of the Raymond Hill Waiting Station.</p> <p>Construction activities with the potential to result in direct settlement effects include the excavation of two tunnels. However, during the preliminary settlement assessment phase, the predicted settlement from the TBM drilling was so minimal that it did not merit evaluation as part of the secondary settlement assessment. Therefore, the construction of the proposed LRT tunnels would not cause an adverse direct settlement effect on the Raymond Hill Waiting Station.</p> <p>Excavation of these two tunnels also has the potential to result in direct ground-borne vibratory effects. However, the projected ground-borne vibration level to the Raymond Hill Waiting Station caused by tunneling would be 0.020 PPV (in/sec), which is below the FTA criteria for damage to historic properties. Therefore, boring LRT tunnels would not cause an adverse direct ground-borne vibratory effect on the Raymond Hill Waiting Station.</p> <p>Increased operations have the potential to result in indirect noise and direct ground-borne vibratory effects. The LRT Alternative 20-foot diameter tunnels would be located at a depth of approximately 90 feet below Raymond Hill Waiting Station, so the potential for operational noise effects were not evaluated. Similarly, ground-borne noise levels were not evaluated for the historic property due to the depth of the proposed tunnel below grade. Operation of light rail vehicles under Fair Oaks Avenue would not cause indirect noise or ground-borne noise effects on the Raymond Hill Waiting Station. In addition, ground-borne vibration caused from the operation of light rail vehicles would not cause a direct</p>

TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>vibratory effect on the Raymond Hill Waiting Station.</p> <p>Section 106 Effect: The LRT Alternative improvements would have No Adverse Effect on the Raymond Hill Waiting Station.</p> <p>Use Under Section 4(f): The LRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the LRT Alternative improvements would have No Adverse Effect on the Raymond Hill Waiting Station. The LRT Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify the Raymond Hill Waiting Station for protection under Section 4(f).</p>
CITY OF LOS ANGELES	
<p>Segment of Route 66 West Huntington Drive and North Eastern Avenue</p> <p>CHR Status Code: Assumed eligible for listing in the National Register for the purpose of this project only; Criteria A (Association with events) and C (Architecture)</p> <p>The following improvements would be constructed on West Huntington Drive and North Eastern Avenue under the LRT Alternative:</p> <ul style="list-style-type: none"> • Construct the South Pasadena LRT Station, which is an approximately 410-foot-long by 60-foot-wide station box underneath the intersection of Fair Oaks Avenue/Mission Street. Total excavation depth for the cut-and-cover construction would be 80 to 90 feet. The top of the as built underground station platform would be 30 feet below the surface • Connect Station to a 338-space surface parking lot • Construct the Huntington Station and parking area, an approximately 825-foot-long by 60-foot-wide station box underneath the Fair Oaks Avenue/West Huntington Drive intersection. Total excavation depth for the cut-and-cover construction would be 80 feet. The top of the as-built underground station platform would be 30 feet below the surface. The station entrance would be located on the northwest corner of the Fair Oaks Avenue/West Huntington Drive intersection • A three-level parking structure with approximately 400 spaces would be located at the southeast corner of the West Huntington Drive/Fremont Avenue intersection 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-3, there would be improvements in the LRT Alternative in the vicinity of this Segment of Route 66.</p> <p>Construction activities with the potential to result in indirect visual effects include the construction of the South Pasadena LRT Station and Huntington Station and a parking structure. However, light rail stations would not have an adverse visual effect on a property as long as the station does not block the view of an individually significant building and the property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. The stations will not block the view of the Route 66. The setting of Route 66 is not an essential aspect of its integrity. The stations would not have an adverse visual effect on Route 66.</p> <p>These construction activities also have the potential to result in direct ground-borne vibration effects and direct settlement effects. However, the projected ground-borne vibration level at Route 66, caused by building the South Pasadena Station and Huntington Station is 0.025 PPV (in/sec), which is below the FTA criteria for damage. Therefore, building of the LRT stations would not cause an adverse direct vibratory effect on Route 66. In addition, during the preliminary settlement assessment phase, the predicted settlement at the site was so minimal that it did not merit evaluation as part of the secondary assessment. The proposed excavation would not have an adverse direct settlement effect on</p>

TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>Route 66.</p> <p>Increased operations have the potential to result in indirect noise and direct ground-borne vibratory effects. The LRT Alternative tunnels would be at a depth of approximately 60 feet below this historic property so the operational noise impact and groundborne noise levels were not evaluated for the Route 66. Based on the depth of the tunnels, the increase in noise would not have an effect on the Route 66. In addition, operation of light rail vehicles would not meet the criteria for a vibratory effect and would not have a direct vibratory effect on the Route 66.</p> <p>Section 106 Effect: The LRT Alternative improvements would have No Adverse Effect on this Segment of Route 66.</p> <p>Use Under Section 4(f): The LRT Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the LRT Alternative improvements would have No Adverse Effect on this Segment of Route 66. The LRT Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify Route 66 for protection under Section 4(f).</p>
UNINCORPORATED LOS ANGELES COUNTY	
<p>4777 East Cesar E. Chavez Avenue/411 North Mednik Avenue NW corner of the East Cesar E. Chavez Avenue/Mednik Avenue</p> <p>CHR Status Code: 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criterion C (Architecture)</p> <p>The following improvements would be constructed in the vicinity of the building at 4777 East Cesar E. Chavez Avenue under the LRT Alternative:</p> <ul style="list-style-type: none"> • Build elevated LRT tracks in the Mednik Avenue median. The base of the aerial structure would be approximately 25 feet above the ground surface and approximately 35 feet wide. It would be supported on concrete columns, approximately 7-foot-diameter, within a new, raised median island along Mednik Avenue • Two support columns are planned near 4777 East Cesar E. Chavez Avenue/411 North Mednik Avenue; one located approximately 90 feet southeast of the 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-3, there would be improvements in the LRT Alternative in the vicinity of the building at 4777 East Cesar E. Chavez Avenue/411 Mednik Avenue.</p> <p>Construction activities with the potential to result in indirect visual effects include the construction of elevated tracks and support columns, and widening improvements along North Mednik Avenue. In addition, a temporary construction easement on the west side of Mednik Avenue may result in a temporary indirect visual effect during construction. Construction of an elevated light rail line has the potential to cause an adverse visual effect. The proposed elevated light rail line would introduce a new visual element into the setting of the historic property 4777 East Cesar E. Chavez Avenue/411 North Mednik Avenue. The setting is not identified as an essential aspect of integrity for the historic property to convey its historic significance under Criterion C, and the proposed elevated light rail line would not significantly impact the view of the historic property because it will be</p>

TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<p>corner of the historic property building and a second approximately 70 feet northeast. Columns are planned at intervals, approximately 80-100 feet apart, along North Mednik Avenue. The support column foundations would require excavation to a maximum depth of 120 feet below the road surface</p> <ul style="list-style-type: none"> • Widen and improve North Mednik Avenue, on the eastern side of the street (opposite the historic property) • Widen North Mednik Avenue by approximately 20 feet on the eastern side of the street and a new center turn lane and new sidewalks, curbs, and gutters would be introduced • Reconfigure North Mednik Avenue and stripe to provide one automobile travel lane and a bicycle lane in each direction. • Street parking would remain on both sides of Mednik Avenue, as under the existing conditions <p>Utilize a Temporary Construction Easement (TCE) on the west side of Mednik Avenue during construction of the elevated LRT facility along Mednik Avenue</p>	<p>elevated 25 feet above the building. In addition, new road elements that are replacing existing non-historic elements do not constitute an adverse visual effect. Because the roadway would be widened on the opposite side of the street from the historic property, no new elements would be added near the historic property. Not all temporary activities associated with this property would have an effect on any characteristics that qualify a historic property for the National Register. Therefore, the TCE would not cause an adverse effect to 4777 East Cesar E. Chavez Avenue/411 North Mednik Avenue.</p> <p>Construction activities with the potential to result in direct ground-borne vibration effects include the construction of elevated tracks and support columns, and widening improvements along North Mednik Avenue. However, the support columns for the elevated light rail line would be built using caisson drilling, which typically generates 0.09 PPV (in/sec) at 25 feet. Based on the distance of the building from the proposed construction activities (more than 70 feet), the ground-borne vibration levels would be below 0.120 PPV (in/sec) and construction activities would not result in an adverse direct ground-borne vibratory effect on 4777 East Cesar E. Chavez Avenue/411 North Mednik Avenue. In addition, the construction activities associated with the proposed road widening, sidewalk, curb, and gutter improvements are too far away from the property to cause a ground-borne vibratory effect.</p> <p>Operational activity including the introduction of new, elevated, light-rail trains have the potential to result in indirect noise and direct ground-borne vibration effects. The current noise level near 4777 East Cesar E. Chavez Avenue/411 North Mednik Avenue is approximately 65 dBA and the anticipated increase from the LRT Alternative is approximately 2.5 dBA. Taking into account the commercial use of the property, the LRT Alternative would not have an adverse operational noise effect on 4777 East Cesar E. Chavez Avenue/411 North Mednik Avenue. The ground-borne vibration and noise levels were not evaluated because the guideway supports are more than 50 feet from the historic property.</p> <p>Section 106 Effect: The LRT Alternative improvements would result in a No Adverse Effect on this historic property.</p> <p>Use Under Section 4(f): The LRT Alternative would not result in the permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. The LRT Alternative improvements would have No</p>

TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>Adverse Effect on this historic property. The changes in the area as a result of the LRT Alternative improvements would not affect the occupation and intended uses of any of the contributing elements of that property. In summary, the LRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property’s activities, features, or attributes that qualify the building at 4777 East Cesar E. Chavez Avenue/411 Mednik Avenue for protection under Section 4(f).</p>
<p>Otsungna Prehistoric Village Site Eastern edge of present-day El Sereno</p> <p>CHR Status Code: Assumed to be eligible for the National Register for the purpose of this project only</p> <p>The following improvements would be constructed in the vicinity of the Otsungna Prehistoric Village Site under the LRT Alternative:</p> <ul style="list-style-type: none"> • Install a new light rail line station at California State University, Los Angeles along with a new aerial (elevated) light rail line support structure and a retaining wall along the west side of SR 710 • Construction of the support structure would entail Caisson drilling of pylons that may range from 100 to 125 feet below the ground surface 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> the Otsungna Prehistoric Village Site is located in the City of South Pasadena, but the location of this site is not provided to avoid vandalism or other potential damage to the site. Because the Area of Potential Effect (APE) for this resource is fully developed, the area is not accessible for subsurface archaeological exploration.</p> <p>Improvements proposed under the LRT Alternative may occur within the ethnographically attested area of the Otsungna Prehistoric Village site. The installation of a new light rail line station and new aerial light rail line support structure and retaining wall has the potential to result in indirect and direct effects. The light rail alignment at this location would be in an aerial configuration on the west side of SR-710 and, from south to north, would cross the I-10 freeway within the embankment adjacent to the university. The aerial structures, which includes the station, will be constructed in stages and include the installation of support piles, reinforced concrete columns, and placement of the aerial girders (precast concrete) or cast-in-place spans. Cast-in-place concrete spans would require the erection of falsework (framing), which could be several feet deep, to support the forms into which concrete is poured.</p> <p>The precise location of the Otsungna Village Site is not known. Ethnographic research suggests it would have been in the vicinity of the present-day campus of the California State University, Los Angeles, whereas Native American consultation suggests the principal settlement was some distance north of the campus. The proposed installation of the aerial light rail line, supporting structures, and associated retaining wall in the area of the campus will be generally along the SR-710 and I-10 freeway.</p> <p>Given the highly developed landscape of the project’s APE at this location, intact cultural deposits are unlikely to be present; however, this cannot be verified through archaeological excavations because of the inaccessible nature of the area. Therefore,</p>

TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>the proposed construction activities would have the potential to cause a direct adverse effect if intact archaeological deposits associated with the Otsungna Village Site are encountered. However, the effect could be avoided or minimized following specific archaeological monitoring guidelines. Specifically, Measure CUL-14 requires implementation of the Post-Review Discovery and Monitoring Plan (PRDMP) for the project that details procedures and protocols in accordance with Caltrans policy for monitoring and instances when previously unidentified cultural materials are encountered during construction.</p> <p>Section 106 Effect: The LRT Alternative improvements would result in a Conditional No Adverse Effect with implementation of Measure CUL-14 (Post-Review Discovery and Monitoring Plan) on the Otsungna Prehistoric Village Site.</p> <p>Use Under Section 4(f): Section 4(f) does not apply to archaeological resources that are important chiefly because of what can be learned from data recovery and have minimal value for preservation in place (23 CFR 774.13(b)(1)). No further analysis or consideration of the effects of the LRT Alternative on the Otsungna Prehistoric Village Site under Section 4(f) is required.</p>
<p>2020 Fremont Avenue Fremont Avenue, south of Elm Park Street and north of Alhambra Road</p> <p>CHR Status Code: Assumed eligible for the National Register for the purpose of this project only; listed under Criterion C (Architecture)</p> <p>The following improvements would be constructed in the vicinity of 2020 Fremont Avenue under the LRT Alternative:</p> <ul style="list-style-type: none"> Excavation of two approximately 20-foot diameter tunnels below the median of Fremont Avenue. The top of the tunnel would be approximately 55 feet below grade 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-3, there would be improvements in the LRT Alternative in the vicinity of 2020 Fremont Avenue.</p> <p>Construction activities with the potential to result in direct settlement effects include the excavation of two tunnels. However, during the preliminary settlement assessment phase, the predicted settlement from the TBM drilling site was so minimal that it did not merit evaluation as part of the secondary settlement assessment. Therefore, the construction of the proposed LRT tunnels would not cause an adverse direct settlement effect on 2020 Fremont Avenue.</p> <p>Excavation of these two tunnels also has the potential to result in direct ground-borne vibratory effects. However, the projected ground-borne vibration level caused by tunneling to 2020 Fremont Avenue is 0.020 PPV (in/sec), which is below the FTA criteria for damage to historic properties. Therefore, the boring of the LRT tunnels would therefore not cause an adverse direct ground-borne vibratory effect on 2020 Fremont Avenue.</p> <p>Increased operations have the potential to result in indirect noise and direct ground-borne vibratory effects. The LRT Alternative 20-foot diameter tunnels would be located at a depth of approximately 55 feet below 2020 Fremont Avenue, so the</p>

TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>potential for operational noise effects were not evaluated. Ground-borne noise levels were evaluated for the historic property and the anticipated levels for the LRT Alternative are between 22 and 25 dBA, below the FTA criteria of 40 dBA. Therefore, the operation of light rail vehicles under Fremont Avenue would not cause indirect noise or ground-borne noise effects on 2020 Fremont Avenue. In addition, ground-borne vibration caused from the operation of light rail vehicles would not cause a direct vibratory effect on 2020 Fremont Avenue.</p> <p>Section 106 Effect: The LRT Alternative improvements would result in No Adverse Effect on the residential property at 2020 Fremont Avenue.</p> <p>Use Under Section 4(f): The LRT Alternative would not result in the permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the LRT Alternative improvements would result in No Adverse Effect on this property. The LRT Alternative improvements would not affect the occupation and intended uses of this historic property. The LRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property’s activities, features, or attributes that qualify 2020 Fremont Avenue for protection under Section 4(f).</p>
<p>Maravilla Handball Court and El Centro Grocery 4787 Hammel Street</p> <p>CHR Status Code: 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criteria A (Association with events) and C (Architecture)</p> <p>The following improvements would be constructed in the vicinity of the Maravilla Handball Court and El Centro Grocery under the LRT Alternative:</p> <ul style="list-style-type: none"> • Install a new aerial (elevated) light rail line structure along North Mednik Avenue. The bottom of the aerial light rail line track would be located 30 feet above the sidewalk, 35 feet wide, and supported on 7-foot diameter, concrete columns; columns would be located within a new raised median along North Mednik Avenue • Widen North Mednik Avenue, a four-lane surface street with a central left-turn lane, involving the construction of new sidewalks, curbs, and gutters • Reconfigure North Mednik Avenue and stripe to provide one automobile travel 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-3, there would be improvements in the LRT Alternative in the vicinity of the Maravilla Handball Court and El Centro Grocery.</p> <p>Construction activities with the potential to result in indirect visual effects include the installation of a new aerial light rail line structure and widening of North Mednik Avenue. The construction of an aerial light rail line would have the potential to cause an adverse visual effect on the handball court. The introduction of a light rail line may cause a play of light/shadow on the handball court, inhibiting its intended use, but additional study is required. In the case of the Maravilla Handball Court and El Centro Grocery, the proposed aerial light rail line would introduce a new visual element into to the setting of the historic property and obscure views to and from the resource. Therefore, because the views of the historic property would be significantly obscured, the new feature would have an adverse visual effect on the Maravilla Handball Court and El Centro Grocery. Avoidance and minimization CUL-9 (Indirect Visual Effects [Maravilla Handball Court and El Centro Grocery]), described in Section 3.8 would be implemented to minimize the adverse visual effects related to light and</p>

TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<p>lane in each direction, a bicycle lane in each direction, and street parking would be added to the east side of Mednik Avenue</p>	<p>shadows.</p> <p>The widening of the roadway and construction of new infrastructure elements (sidewalks, curbs, and gutters) would not add any new elements to the viewshed of the historic property, nor would they alter the public’s ability to view Maravilla Handball Court and El Centro Grocery. Because the immediate setting is not an essential aspect of integrity for the property to convey its historic significance, the proposed road widening would not cause an adverse visual effect on the Maravilla Handball Court and El Centro Grocery.</p> <p>These construction activities also have the potential to result in direct ground-borne vibration effects. However, the support columns for the elevated light rail line will be built using caisson drilling, which typically generates 0.09 PPV (in/sec) at a distance of 25 feet. Potential damage would occur to a historic building from ground-borne vibration of 0.120 PPV (in/sec). The Maravilla Handball Court and El Centro Grocery are approximately 50 feet from the closest column. The ground-borne vibration generated from the caisson drilling are below 0.120 PPV (in/sec) and would not cause an adverse ground-borne vibratory effect on this historic property. Similarly, demolishing the existing roadway and building a new raised median would likely require the use of jackhammers, approximately 40 feet from the historic property. The vibrations generated from 25 feet away by jackhammering are approximately 0.035 PPV (in/sec), which would not cause an adverse direct ground-borne vibratory effect on historic properties. In addition, all demolition activities associated with the proposed road widening would take place approximately 75 feet from the historic resource on the eastern side of North Mednik Avenue.</p> <p>Operational activities including the introduction of new elevated light-rails trains have the potential to result in indirect noise and direct ground-borne vibratory effects. The ground-borne noise levels were not evaluated for the Maravilla Handball Court and El Centro Grocery as the property is a commercial building, eliminating the need for assessment. The train operation would not have an adverse effect for ground-borne noise on the Maravilla Handball Court and El Centro Grocery.</p> <p>The current noise level near the Maravilla Handball Court and El Centro Grocery is 67.6 dBA. After completion of the LRT, Alternative, the predicted noise level would increase to 70.6 dBA. The predicted increase in noise for a commercial property would not constitute an adverse noise effect on historic properties. Additionally, the LRT Alternative proposes to introduce 4-foot-high noise barriers on the aerial</p>

TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>structure, which would ultimately reduce the noise at this location to less than the current levels (estimated 60.4 dBA). Therefore, the operation of an elevated light rail would not cause a noise effect on the Maravilla Handball Court and El Centro Grocery. In addition, operation of light rail vehicles would not have a direct ground-borne vibratory effect on the Maravilla Handball Court and El Centro Grocery.</p> <p>Section 106 Effect: The LRT Alternative improvements would result in an Adverse Effect on the Maravilla Handball Court and El Centro Grocery. Implementation of Measures CUL-1 (Pre-Construction Surveys), CUL-9 (Indirect Visual Effects [Maravilla Handball Court and El Centro Grocery]), CUL-12 (Property-Specific Protection Plans), and CUL-13 (Post-Construction Surveys) would minimize effects, but visual effects would remain adverse.</p> <p>Use Under Section 4(f): The LRT Alternative would not result in the permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the LRT Alternative improvements would result in an Adverse Effect on this property. Implementation of Measures CUL-1, CUL-9, CUL-12, and CUL-13 would minimize effects but visual effects would remain adverse. However, the LRT Alternative improvements would not affect the occupation and intended uses of this historic property. The LRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property’s activities, features, or attributes that qualify the Maravilla Handball Court and El Centro Grocery for protection under Section 4(f).</p>
<p>Edward R. Roybal Comprehensive Health Center 245 South Fetterly Avenue</p> <p>CHR Status Code: 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criterion A (Association with events) and Criterion Consideration G at a local level (Period of significance)</p> <p>The following improvements would be constructed in the vicinity of the Edward R. Roybal Comprehensive Health Center under the LRT Alternative:</p> <ul style="list-style-type: none"> • Install a new aerial (elevated) light rail line structure at the Civic Center Station. The southern terminus of the line would be located on the opposite side of South Mednik Avenue 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-3, there would be improvements in the LRT Alternative in the vicinity of the Edward R. Roybal Comprehensive Health Center.</p> <p>Construction activities with the potential to result in indirect visual effects include the construction of a new aerial light rail line structure and the construction of a new elevated Civic Center Station. However, the construction of an aerial light rail line has the potential to cause an adverse visual effect. In the case of the Edward R. Roybal Comprehensive Health Center, the proposed aerial light rail line would introduce a new visual element into to the setting of the historic property. However, the proposed aerial light rail line would replace non-historic (late-20th-century) commercial properties within the historic property’s setting and the setting is not identified as an essential aspect of integrity for the property to convey its historic</p>

TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<ul style="list-style-type: none"> Construct a new elevated Civic Center Station, located on the west side of South Mednik Avenue, approximately 500 feet north of the Edward R. Roybal Comprehensive Health Center 	<p>significance. Although a new element, the aerial light rail line, would not diminish the associative features or design features that qualify the property for inclusion in the National Register. Therefore, the aerial rail line would not cause an adverse visual effect on the Edward R. Roybal Comprehensive Health Center. In addition, light rail stations within a one-block radius would not have an adverse effect on the significance of a historic property, as long as the station is not located within a historic district, it does not block the view of an individually significant building, or the property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. The proposed station is approximately 200 feet away from the Edward R. Roybal Comprehensive Health Center, which is sufficiently far away that it will not block any views of the historic property. Therefore, the proposed Civic Center Station would not cause an adverse visual effect on the Edward R. Roybal Comprehensive Health Center.</p> <p>These construction activities also have the potential to result in direct ground-borne vibration effects. However, the support columns for the elevated light rail line would be constructed using caisson drilling, which typically generates 0.09 PPV (in/sec) at a distance of 25 feet. Potential damage to a historic building from vibrations would result from 0.120 PPV (in/sec). The Edward R. Roybal Comprehensive Health Center is more than 100 feet from the proposed work, and the ground-borne vibration generated from the construction activity would not result in a ground-borne vibratory effect. Therefore, the construction activities would not cause an adverse direct ground-borne vibratory effect on the Edward R. Roybal Comprehensive Health Center.</p> <p>Operational activities including the introduction of new elevated light-rails trains have the potential to result in indirect operational and ground-borne noise and direct ground-borne vibratory effects. The ground-borne noise levels were not evaluated for the Edward R. Roybal Comprehensive Health Center because this property was added as a result of public outreach after the initial ground-borne noise studies had been conducted. However, it is an institutional building and the trains will be traveling at a very slow velocity because it is the southern terminus of the line. The light rail train operation would not have an adverse ground-borne noise effect on the Edward R. Roybal Comprehensive Health Center.</p> <p>The current noise level near the Edward R. Roybal Comprehensive Health Center is 54.6 dBA, and the anticipated increased noise level from the LRT Alternative would be 62.5 dBA. The introduction of a new light rail line would have a potential adverse</p>

TABLE 3.6.3:

LRT Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>operational noise effect on the Edward R. Roybal Comprehensive Health Center. However, a quiet atmosphere is not a characteristic of the historic property's significance, so an increase in noise level would not diminish its significance or the aspects of integrity that convey its significance under Criteria A and G. Therefore, the introduction of light-rail trains would not have an adverse indirect noise effect on the Edward R. Roybal Comprehensive Health Center.</p> <p>Vibration caused by the operation of new light rail vehicles would not have a direct ground-borne vibratory effect on the Edward R. Roybal Comprehensive Health Center.</p> <p>Section 106 Effect: The LRT Alternative improvements would result in No Adverse Effect on the Edward R. Roybal Comprehensive Health Center.</p> <p>Use Under Section 4(f): The LRT Alternative would not result in the permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the LRT Alternative improvements would result in No Adverse Effect on this property. The LRT Alternative improvements would not affect the occupation and intended uses of this historic property. The LRT Alternative improvements in this area would not result in proximity impacts that would substantially impair the property's activities, features, or attributes that qualify the Edward R. Roybal Comprehensive Health Center for protection under Section 4(f).</p>

Sources: *Historic Property Survey Report (2014)*; *Supplemental Historic Property Survey Report (2017)*; *Finding of Adverse Effect for the State Route 710 North Project (2017)*; and LSA Associates, Inc. (2018).

¹ Only properties within the Area of Potential Effects for the LRT Alternative are evaluated in this table. Refer to Figure 3.6-3 for the locations of the resources discussed in this table.

CHR = California Historical Resource

Keeper = Keeper of the National Register of Historic Places

LRT = Light Rail Transit

National Register = National Register of Historic Places

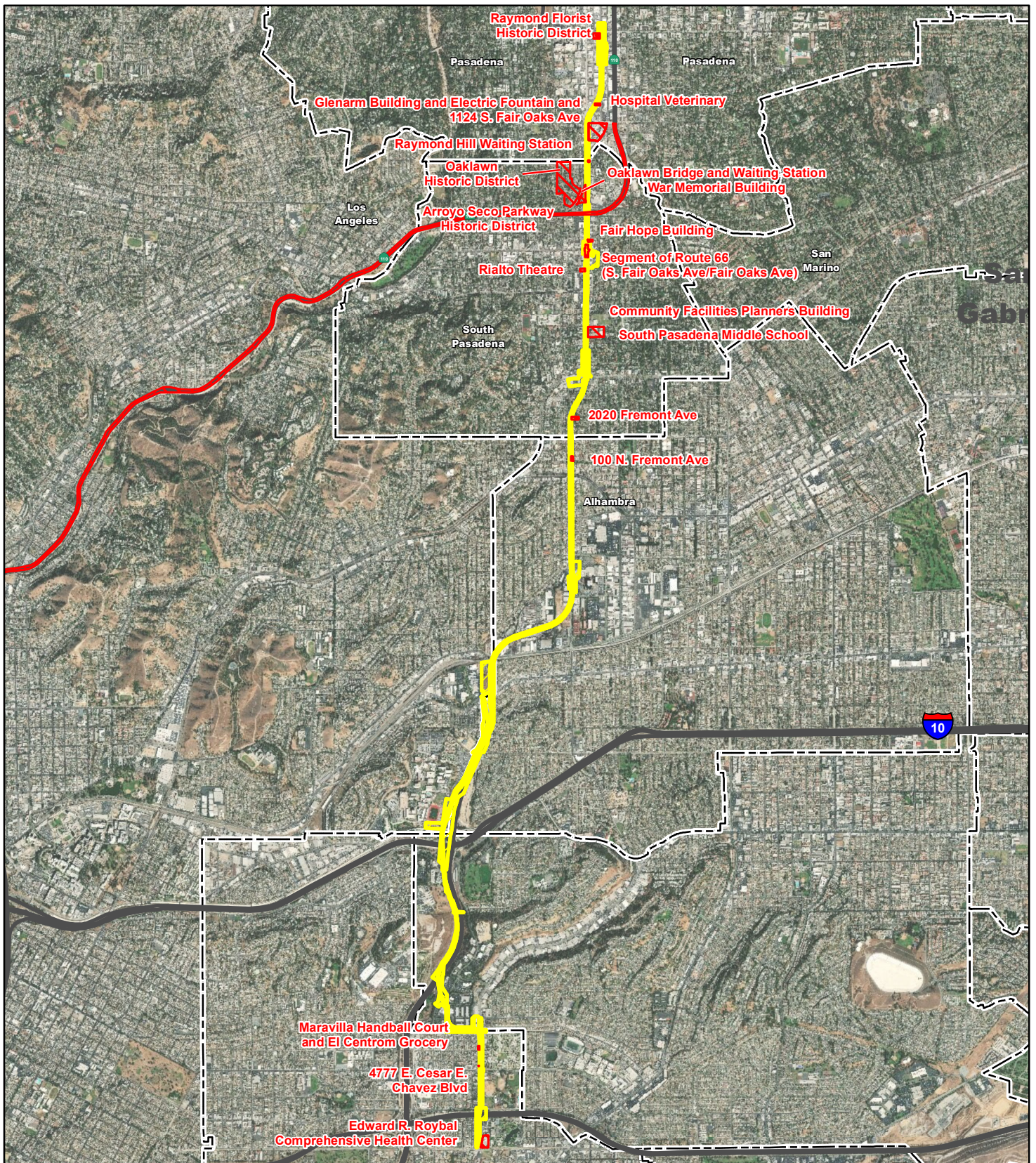
PQS = Professionally Qualified Staff

SR 110 = State Route 110




TCE = temporary construction easement

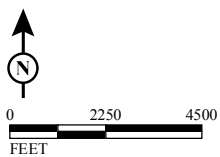
US-101 = United States Route 101

VdB = vibration velocity decibels



LEGEND

-  LRT
-  Cultural Resource
-  City Boundary



SOURCE: Bing (c.2012); NRHP (2014); CH2MHill (2014)
 F:\CHM1105\GIS\MXD\EIR_EIS\App_B\NRHP_LRT.mxd (7/27/2018)

FIGURE 3.6-3

SR 710 North Project

Historic Properties for the LRT Alternative

07-LA-710 (SR 710)
 EA 187900
 EFIS 070000191

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TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
CITY OF PASADENA	
<p>Ambassador West Cultural Landscape Historic District (Generally bounded by West Green Street to the north, South Orange Grove Boulevard to the west, South St. John Avenue to the east, and the southern parcel lines of APNs 5713-013-056 and 5713-013-058.)</p> <p>CHR Status Code: 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process); listed under Criterion C (Architecture)</p> <p>The Freeway Tunnel Alternative would provide the following improvements in the vicinity of this District, for the Dual Bore and Single Bore design variations, respectively:</p> <p>Dual Bore</p> <ul style="list-style-type: none"> • Install new southbound SR 710 on ramp from South St. John Avenue • Widen the east side of South St. John Avenue between West Green Street and West Colorado Boulevard to accommodate two additional southbound through lanes for the new southbound SR 710 on-ramp • Eliminate the existing two-lane southbound SR 710 off-ramp and construct a new re-aligned South St. John Avenue with a new South St. John Avenue/West Del Mar Boulevard intersection • Reconfigure South St. John Avenue to create a new South St. John Avenue/West Del Mar intersection. <p>Single Bore</p> <ul style="list-style-type: none"> • Eliminate the existing two lane southbound SR 710 off-ramp and replace it with a single lane, 700 feet long emergency runaway truck ramp connecting to South St. John Avenue, the lanes would be restriped accordingly • Reconfigure South St. John Avenue to create a new South St. John Avenue/West Del Mar intersection. • South St. John Street would curve east on a slightly different alignment and would be widened to four lanes, lanes would be restriped accordingly 	<p>Effects Under Section 106: The Ambassador West Cultural Landscape Historic District contains 12 contributing elements. As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-4, it is bounded by West Green Street to the north, South Orange Grove Boulevard to the west, South St. John Avenue to the east, and the southern parcel lines of APNs 5713-013-056 and 5713-013-058. There are three contributing elements to this Historic District in the APE for the Freeway Tunnel Alternative:</p> <ul style="list-style-type: none"> • Ambassador Auditorium Building, 131 South St. John Avenue • Ambassador Student Center Building, 169 South St. John Avenue • Hall of Administration Building, 300 West Green Street <p>Construction activities for both the single-bore variation and dual-bore variation have the potential to result in indirect visual effects from modifying the existing two-lane south southbound SR 710 off-ramp, reconfiguring South St. John Avenue, and constructing a new southbound SR 710 on-ramp. However, changes to existing, non-historic, infrastructure elements like existing roadways, would not result in an indirect visual effect, as long as the property's immediate setting is not an essential aspect of integrity for the property to convey its historic significance. Because the existing roadways would be modified, reconfigured and widened, no new elements would be added to the setting. Furthermore, SR 710 has been within the viewshed of the historic property since it was determined eligible for the National Register and the setting outside the district boundaries is not an essential aspect of integrity for Ambassador West Cultural Landscape Historic District to convey its significance. Therefore, the off-ramp modification and road reconfiguration would not cause an indirect visual effect on the Ambassador West Cultural Landscape Historic District.</p> <p>The same construction activities would also have the potential to result in direct ground-borne vibratory effects. However, the proposed demolition and construction activities for the ramp modifications are more than 50 feet from the closest buildings in the Ambassador West Cultural Landscape Historic District. In addition, the proposed demolition and construction activities for the roadway reconfiguration are more than 100 feet from buildings associated with this Historic District. The construction activities are too far away from the Ambassador West Cultural Landscape Historic District to cause a potential ground-borne vibratory effect on historic properties. Therefore, the proposed construction activities would not cause an adverse direct ground-borne vibratory effect on the Ambassador West Cultural Landscape Historic District.</p> <p>Freeway tunnel operations for the single-bore variation have the potential for indirect noise</p>

TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>effects, direct ground-borne vibratory effects, and indirect ground-borne noise effects. The current noise levels in the vicinity of Ambassador West Cultural Landscape Historic District are measured at 53 and 54 dBA on the interior of the campus and 63 and 64 dBA on the eastern edge of the historic district. The change in noise levels ranges from an increase of 6 dBA to a decrease of 9 dBA. Therefore, the single-bore variation of the Freeway Tunnel Alternative would cause a potential indirect noise effect on the Ambassador West Cultural Landscape Historic District. Because of the property’s historic use as an Auditorium, an increase in noise has the potential to affect historic properties. The change in noise levels ranges from operations for the dual-bore variation range from an increase of 11 dBA to a decrease of 6 dBA. Therefore, the dual-bore variation of the Freeway Tunnel Alternative would also cause a potential indirect noise effect on the Ambassador West Cultural Landscape Historic District. However, due to the time of day when the noise increase would be most prominent, and the significance criteria for the historic property, the operation of the single-bore and dual-bore variations would not cause an adverse effect on the Ambassador West Cultural Landscape Historic District. Because the historic property is eligible under only Criterion C, there is no scenario in which an increase in noise would diminish the integrity of the property’s significant historic architectural features. Therefore, operation of the Freeway Tunnel Alternative would not cause an adverse indirect noise effect on the historic significance of the Ambassador West Cultural Landscape Historic District.</p> <p>Operational ground-borne noise and vibration levels were analyzed for the Freeway Alternative and all predicted ground-borne vibrations would fall below the FTA noise vibration criteria. Therefore, the operation of the Freeway Tunnel Alternative would not cause a direct ground-borne vibration effect or an indirect ground-borne noise effect on the Ambassador West Cultural Landscape Historic District.</p> <p>Section 106 Effect: The Freeway Tunnel Alternative improvements would have No Adverse Effect on the contributing elements to the District.</p> <p>Use Under Section 4(f): The Freeway Tunnel Alternative would not result in permanent use of land from, or permanent easements or temporary occupancies (TCEs) at, this property. As described above, the Freeway Tunnel Alternative would have No Adverse Effect on the Ambassador West Cultural Landscape Historic District. The Freeway Tunnel Alternative improvements in this area would not result in proximity impacts that would substantially impair the property’s activities, features, or attributes that qualify the Ambassador West Cultural Landscape Historic District for protection under Section 4(f).</p>
Ambassador College Dining Hall	Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-4, there would be improvements in the

TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<p>169 South St. John Avenue</p> <p>CHR Status Code: 2S2/2D/2B (Individual property determined eligible for the National Register by a consensus through the Section 106 process/Contributor to a district determined eligible for the National Register by the Keeper/Determined eligible for the National Register as an individual property and as a contributor to an eligible district in a federal regulatory process; listed under Criterion C [Architecture])</p> <p>The Freeway Tunnel Alternative would provide the following improvements in the vicinity of the Ambassador College Dining Hall, for the Dual Bore and Single Bore design variations, respectively:</p> <p>Dual Bore</p> <ul style="list-style-type: none"> • Install new southbound SR 710 on ramp from South St. John Avenue • Widen the east side of South St. John Avenue between West Green Street and West Colorado Boulevard to accommodate two additional southbound through lanes for the new southbound SR 710 on-ramp • Eliminate the existing two-lane southbound SR 710 off-ramp and construct a new re-aligned South St. John Avenue with a new South St. John Avenue/West Del Mar Boulevard intersection • Reconfigure South St. John Avenue to create a new South St. John Avenue/West Del Mar intersection. <p>Single Bore</p> <ul style="list-style-type: none"> • Eliminate the existing two lane southbound SR 710 off-ramp and replace it with a single lane, 700 feet long emergency runaway truck ramp connecting to South St. John Avenue, the lanes would be restriped accordingly • Reconfigure South St. John Avenue to create a new South St. John Avenue/West Del Mar intersection. • South St. John Street would curve east on a slightly different alignment and would be widened to four lanes, lanes would be restriped accordingly 	<p>Freeway Tunnel Alternative in the vicinity of the Ambassador College Dining Hall.</p> <p>Construction activities from the single-bore and dual-bore alternatives with the potential to result in indirect visual effects include the modification of the existing SR 710 off-ramp, construction of a southbound SR 710 on-ramp, and the reconfiguration of South St. John Avenue. Changes to existing, non-historic, infrastructure elements like existing roadways do not meet the threshold for an indirect visual effect, as long as the property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. The setting is not an essential aspect of integrity for the Ambassador College Dining Hall to convey its historic significance, and the existing SR 710 was already within the viewshed of the historic property when it was determined eligible for the National Register. Because the new on-ramp would replace an existing off-ramp, no new transportation elements would be added to the setting that had not existed previously. In addition, the existing roadway would be reconfigured and widened, no new elements would be added to the building’s setting that had not existed previously, as existing SR 710 is already within the viewshed of the historic property. Therefore, the construction activities would not cause an indirect visual effect on the Ambassador College Dining Hall.</p> <p>These construction activities associated with the single-bore and dual-bore alternatives have the potential to result in direct ground-borne vibratory effects. However, the proposed demolition and construction activities are more than 300 feet from the Ambassador College Dining Hall. In addition, the demolition and construction for the reconfiguration of South St. John Avenue would be more than 100 feet from the building associated with the Ambassador College Dining Hall. Therefore, the construction activities are too far away from the Ambassador College Dining Hall to cause a potential ground-borne vibratory effect. Therefore, the proposed lane modifications would not cause an adverse direct ground-borne vibratory effect on the Ambassador College Dining Hall.</p> <p>Increased freeway tunnel operations from the single-bore alternative have the potential to result in indirect noise effects, direct ground-borne vibratory effects, and indirect ground-borne noise effects. The current noise level in the vicinity of the Ambassador College Dining Hall is 54 dBA, and the single-bore variation of the Freeway Tunnel Alternative would increase the noise level to a maximum of 56 dBA, in all potential variations. The dual-bore variation of the Freeway Tunnel Alternative would increase the noise levels to a maximum of 59 dBA, in all potential variations. Therefore, the single-bore and dual-bore variations of the Freeway Tunnel Alternative would not cause an indirect noise effect on the Ambassador College Dining Hall. Operational ground-borne vibration levels were analyzed for the Freeway Tunnel Alternative and all predicted ground-borne vibrations would fall below the FTA vibration criteria.</p>

TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>Therefore, the operation of the Freeway Tunnel Alternative would not cause a direct ground-borne vibration effect on the Ambassador College Dining Hall. Operational ground-borne noise levels were analyzed for the alternative and all predicted ground-borne noise would fall below the FTA noise criteria. Therefore, operation of the Freeway Tunnel Alternative would not cause an indirect ground-borne noise effect on the Ambassador College Dining Hall.</p> <p>Section 106 Effect: In summary, the Freeway Tunnel Alternative would have No Adverse Effect on the Ambassador College Dining Hall.</p> <p>Use Under Section 4(f): The Freeway Tunnel Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the Freeway Tunnel would have No Adverse Effect on the Ambassador College Dining Hall. The Freeway Tunnel Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify the Ambassador College Dining Hall for protection under Section 4(f).</p>
<p>Ambassador Auditorium Performing Arts Center 131 South Street</p> <p>CHR Status Code: 2S2/2D/2B (Individual property determined eligible for the National Register by a consensus through the Section 106 process/Contributor to a district determined eligible for the National Register by the Keeper/Determined eligible for the National Register as an individual property and as a contributor to an eligible district in a federal regulatory process; listed under Criterion C [Architecture])</p> <p>The Freeway Tunnel Alternative would provide the following improvements in the vicinity of the Ambassador Auditorium Performing Arts Center, for the Dual Bore and Single Bore design variations, respectively:</p> <p>Dual Bore</p> <ul style="list-style-type: none"> • Install new southbound SR 710 on ramp from South St. John Avenue • Widen the east side of South St. John Avenue between West Green Street and West Colorado Boulevard to accommodate two additional southbound through lanes for the new southbound SR 710 on-ramp • Eliminate the existing two-lane southbound SR 710 off-ramp and construct a new re-aligned South St. John Avenue with a new South St. 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-4, there would be improvements in the Freeway Tunnel Alternative in the vicinity of the Ambassador Auditorium Performing Arts Center.</p> <p>Construction activities from the single-bore and dual-bore alternatives with the potential to result in indirect visual effects include the modification of the existing SR 710 off-ramp, construction of a southbound SR-710 on-ramp, and the reconfiguration of South St. John Avenue. Changes to existing, non-historic, infrastructure elements like existing roadways would not result in an indirect visual effect, as long as the property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. Because the existing roadway would be reconfigured and widened, no new elements will be added to the setting that did not exist previously. The existing SR 710 off-ramp is already within the viewshed of the historic property and the setting is not an essential aspect of integrity for the Ambassador Auditorium Performing Arts Center to convey its historic significance. The new on-ramp would replace an existing off-ramp and the existing SR 710 is already within the viewshed of the historic property. Therefore, these construction activities would not cause an indirect visual effect on the Ambassador Auditorium Performing Arts Center.</p> <p>These construction activities associated with the single-bore and dual-bore alternatives have the potential to result in direct ground-borne vibratory effects. The proposed demolition and construction activities for the off-ramp are more than 150 feet from the Ambassador Auditorium Performing Arts Center and the proposed demolition construction activities for the</p>

TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<p>John Avenue/West Del Mar Boulevard intersection</p> <ul style="list-style-type: none"> Reconfigure South St. John Avenue to create a new South St. John Avenue/West Del Mar intersection. <p>Single Bore</p> <ul style="list-style-type: none"> Eliminate the existing two lane southbound SR 710 off-ramp and replace it with a single lane, 700 feet long emergency runaway truck ramp connecting to South St. John Avenue, the lanes would be restriped accordingly Reconfigure South St. John Avenue to create a new South St. John Avenue/West Del Mar intersection. South St. John Street would curve east on a slightly different alignment and would be widened to four lanes, lanes would be restriped accordingly 	<p>roadway reconfiguration are more than 50 feet from the site for the single-bore alternative. The proposed demolition and construction activities for the on-ramp are more than 300 feet from the Ambassador Auditorium Performing Arts Center and the proposed demolition and construction activities for the roadway reconfiguration are more than 100 feet from the site for the dual-bore alternative. Therefore, the construction activities are too far away to cause a potential ground-borne vibratory effect on the historic property. Therefore, the proposed construction activities would not cause an adverse direct ground-borne vibratory effect on the Ambassador Auditorium Performing Arts Center.</p> <p>Increased freeway tunnel operations from the single-bore and dual-bore alternatives have the potential to result in indirect noise effects, direct ground-borne vibratory effects, and indirect ground-borne noise effects. The current noise levels in the vicinity of Ambassador Auditorium Performing Arts Center is 61 dBA and the single-bore variation of the Freeway Tunnel Alternative would increase the noise levels to a maximum of 69 dBA, in all potential variations. The dual-bore variation of the Freeway Tunnel Alternative would increase the noise levels to a maximum of 72 dBA, in all potential variations. Therefore, the increase in noise for the single-bore and dual-bore variations of the Freeway Tunnel Alternative would cause a potential indirect noise effect on the Ambassador Auditorium Performing Arts Center. However, the peak times for the projected noise increase would be during the morning and evening peak traffic period, which is not likely to intersect with performances in the auditorium. Therefore, based on the use of the property, the time of day when the noise increase would be most prominent, and the significance criteria for the historic property (Criterion C), the operation of the single-bore and dual-bore variations would not cause an adverse effect on the architectural significance of the Ambassador Auditorium Performing Arts Center. Because the historic property is eligible under only Criterion C, there is no scenario in which an increase in noise would diminish the integrity of the property’s significance historic architectural features. Therefore, despite a minimal increase in noise near the auditorium, operation of the Freeway Tunnel Alternative would not cause an adverse indirect noise effect on the Ambassador Auditorium Performing Arts Center.</p> <p>Operational ground-borne vibration levels were analyzed for the Freeway Tunnel Alternative and all predicted ground-borne vibrations would fall below the FTA vibration criteria to cause effects on historic properties. Therefore, operation of the Freeway Tunnel Alternative would not cause a direct ground-borne vibration effect on the Ambassador Auditorium Performing Arts Center. Operational ground-borne noise levels were analyzed for the alternative and all predicted ground-borne noise would fall below the FTA noise criteria. Therefore, operation of the Freeway Tunnel Alternative would not cause an indirect ground-borne noise effect on the</p>

TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>Ambassador Auditorium Performing Arts Center.</p> <p>Section 106 Effect: In summary, the Freeway Tunnel Alternative would have No Adverse Effect on the Ambassador Auditorium Performing Arts Center.</p> <p>Use Under Section 4(f): The Freeway Tunnel Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the Freeway Tunnel would have No Adverse Effect on the Ambassador Auditorium Performing Arts Center. The Freeway Tunnel Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify the Ambassador Auditorium Performing Arts Center for protection under Section 4(f).</p>
<p>Markham Place Historic District (Generally bounded by West California Boulevard on the north, South Pasadena Avenue on the east, Barclay Alley on the south, and South Orange Grove Boulevard on the west.)</p> <p>CHR Status Code: 1S (Listed in the National Register by the Keeper); listed under Criteria A (Association with events) and C (Architecture)</p> <p>The Freeway Tunnel Alternative would provide the following improvements within the District:</p> <ul style="list-style-type: none"> Excavate two tunnels for the dual-bore alternative, or one tunnel for the single-bore alternative, utilizing TBMs. Each tunnel would be approximately 60 feet in diameter. In this location, the tunnels are between Saint John Avenue and South Pasadena Avenue, with the top of the tunnel approximately 90 feet below grade at the southern end of the historic district and about 45 feet at the northern end. 	<p>Effects Under Section 106: The Markham Place Historic District includes 69 mostly residential parcels, 26 of which are contributing elements. The Historic District also includes Singer Park. As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-4, the Historic District is generally bounded on the north by West California Boulevard, on the east by South Pasadena Avenue, on the south by Bellefontaine Street, and on the west by South Orange Grove Boulevard.</p> <p>Construction activities including the excavation of two tunnels for the dual-bore alternative or one tunnel for the single bore alternative have the potential to result in direct settlement effects. Based on the results of the secondary settlement assessment, the Markham Place Historic District spans Settlement Groups K, L, M, N, O, and P. The predicted damage level classification of is “slight” for Settlement Group K, “moderate” for Settlement Groups M and O, and “moderate to severe” for Groups L, N, and P. Therefore, the boring of the Freeway Tunnel Alternative would cause an adverse direct settlement effect on the Markham Place Historic District.</p> <p>These construction activities also have the potential to result in direct ground-borne vibratory effects. However, the projected ground-borne vibration level caused by tunneling on the Markham Place Historic District is 0.0237 PPV (in/sec), which is below the FTA criteria for damage. The boring of the Freeway Tunnel Alternative would not cause an adverse direct ground-borne vibratory effect on the Markham Place Historic District.</p> <p>Freeway tunnel operations have the potential to result in indirect noise effects, direct ground-borne vibratory effects, and indirect ground-borne noise effects. The current noise levels in the vicinity of the Markham Place Historic District were measured at the northern end of the district, the only area of potential noise increase. In northern end of the district, the current</p>

TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>noise levels are 59 dBA and for all variations within the Freeway Tunnel Alternative, the noise levels would either remain the same or decrease by 1 to 3 dBA. This change in noise for a residential district would not affect historic properties. Therefore, the noise change associated with the Freeway Tunnel Alternative would not cause an indirect noise effect on the Markham Place Historic District.</p> <p>Operational ground-borne vibration levels were analyzed for the Freeway Tunnel Alternative and all predicted ground-borne vibrations would fall below the FTA vibration criteria. Therefore, the operation of the Freeway Tunnel Alternative would not cause a direct ground-borne vibration effect on the Markham Place Historic District.</p> <p>Operational ground-borne noise levels were analyzed for the alternative and all predicted ground-borne noise would fall below the FTA noise criteria. Therefore, the operation of the Freeway Tunnel Alternative would not cause an indirect ground-borne noise effect on the Markham Place Historic District.</p> <p>Section 106 Effect: The Freeway Tunnel Alternative improvements would have an Adverse Effect on the Markham Place Historic District. Implementation of Measures CUL-1 (Pre-Construction Surveys), CUL-4 (Settlement Monitoring Plan), CUL-5 (SOIS Plans [Settlement]), CUL-12 (Property-Specific Protection Plans), and CUL-13 (Post-Construction Surveys) would minimize effects, but effects would remain adverse.</p> <p>Use Under Section 4(f): The Freeway Tunnel Alternative would not result in the permanent use of land from, or permanent easements or temporary occupancies (TCEs) at, this property. Based on the level of settlement during construction and the mitigation measures set forth in the FOAE, the value of these resources, in terms of their Section 4(f) purposes and significance will not be lost. The Freeway Tunnel Alternative improvements in this area would not result in proximity impacts that would result in substantial impairment of the Markham Place Historic District that would give rise to constructive use under Section 4(f).²</p>
<p>Old Pasadena Historic District The District is generally bounded by Fair Oaks and Raymond Avenues, Colorado Boulevard, and Green Street</p> <p>CHR Status Code: 1S (Individual property listed in the National register by the Keeper); listed under Criteria A (Association with events) and C (Architecture)</p> <p>Under both the Dual Bore and Single Bore design variations of the Freeway Tunnel Alternative, the following improvements would be constructed in the vicinity of the District:</p>	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-4, there would be improvements in the Freeway Tunnel Alternative in the vicinity of the Old Pasadena Historic District.</p> <p>Construction activities with the potential to result in indirect visual effects include the reconfiguration of northbound off-ramps onto SR 134 and South Pasadena Avenue, expansion of an existing parking lot, and installation one single-ventilation structure. However, the proposed roadway and ramp reconfiguration takes place outside of the Old Pasadena Historic District and modifies an existing transportation system that has been in place since the historic property was first listed in the National Register in 1983. The replacement, modification, or</p>

TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<ul style="list-style-type: none"> • Reconfigure the northbound off ramps onto SR 134 and South Pasadena Avenue • Outside of the existing SR 710, a 550-foot-long segment of South Pasadena Avenue would be widened by 12 feet to build a new northbound SR 710 off-ramp to South Pasadena Avenue by demolishing the existing northbound SR 710 off-ramp. The widening would begin where the proposed SR 710 northbound off-ramp ties into South Pasadena Avenue and would end at West Colorado Boulevard. • Widening would require removal of the existing curb, gutter, and vegetation on the shoulder south of Del Mar Boulevard • Expand the existing parking lot, located to the west of South Pasadena Avenue, between West Green Street and West Colorado Boulevard. The proposed widening of the South Pasadena Avenue would encroach on the existing parking lot, requiring an expansion to the west and the construction of an approximately 250-foot-long retaining wall on the west side of the existing parking lot • Install one single-ventilation structure. Two locations are proposed for the approximately 50-foot tall structure: either adjacent to the West Colorado Boulevard overcrossing at the SR 710/Colorado Boulevard interchange, or at the SR 710/SR 134/I-210 interchange 	<p>alteration of existing non-historic elements that are not character-defining to the setting of a historic district, would not cause an effect on historic properties. Therefore, the roadway alterations would not introduce new elements or additional elements to the viewshed of the historic district and would not cause an indirect visual effect on the Old Pasadena Historic District. Similarly, the proposed parking lot reconfiguration takes place outside of the Old Pasadena Historic District boundaries and modifies an existing element that is not character-defining to the setting of a historic district. However, the proposed retaining wall is a new element to the viewshed of this historic district. Based on the grade change between SR 710 and the historic district, the proposed retaining wall will be largely obscured, resulting in a low wall being visible from the historic district. Although a new element, the proposed retaining wall is not incongruous to the setting and it would not diminish the integrity of the district’s historic features. Therefore, the proposed retaining wall would not cause an adverse indirect visual effect on the Old Pasadena Historic District. In addition, the proposed ventilation structure is also a new element to the viewshed of this historic district. Based on the grade change between SR 710 and the historic district, the proposed location at the SR 710/SR 134/I-210 interchange would not likely be visible from the historic district. Therefore, the proposed SR 710/SR 134/I-210 interchange ventilation structure would not cause an indirect visual effect on the Old Pasadena Historic District. However, if the proposed ventilation structure were to be located adjacent to the West Colorado Boulevard overcrossing at the SR 710/Colorado Boulevard interchange, it would likely be visible from portions of the historic district. The proposed ventilation structure at this location would be incongruous to the setting if the design of the structure were not compatible with the character of the historic districts’ setting, which is an essential aspect of the district’s integrity. Therefore, the new visual element could potentially diminish the integrity of the district’s historic features. This location for the proposed ventilation structure could potentially cause an adverse indirect visual effect on the Old Pasadena Historic District. However, with implementation of Measure CUL-10 (Indirect Visual Effects [Old Pasadena Historic District]), described in Section 3.8, the structure would not cause an adverse effect on the Old Pasadena Historic District.</p> <p>These construction activities also have the potential to result in indirect ground-borne vibratory effects. However, the proposed roadway and ramp reconfigurations are all at least 100 feet from the historic property. In addition, the proposed retaining wall and parking lot reconfiguration are approximately 80 feet from the historic district. Lastly, the proposed ventilation structure locations are both more than 300 feet from the historic district. The distance of the proposed work from the historic district ensures that construction activities would not cause an adverse indirect ground-borne vibratory effect on the Old Pasadena Historic District.</p>

TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>Freeway tunnel operations have the potential to result in indirect noise effects, direct ground-borne vibratory effects, and indirect ground-borne noise effects. The current noise level in the vicinity of the western edge of the Old Pasadena Historic District is 66 dBA, and the Freeway Tunnel variations would potentially increase the noise level to a maximum of 73 dBA. It is likely that the potential noise increase inside the historic district, and away from the freeway, would be significantly less. Furthermore, the increase in noise has no potential to diminish the integrity of the property’s significant historic features, as a quiet setting is not a characteristic of the commercial historic district. The current use and significance of the district eliminate the potential for an adverse effect. Therefore, the operation of the Freeway Tunnel Alternative would not cause an adverse effect on the Old Pasadena Historic District.</p> <p>Operational ground-borne vibration levels were analyzed for the Freeway Tunnel Alternative and all predicted ground-borne vibration would fall below the FTA vibration criteria. Therefore, the operation of the Freeway Tunnel Alternative would not cause a direct ground-borne vibration effect on the Old Pasadena Historic District.</p> <p>Operational ground-borne noise levels were analyzed for the alternative and all predicted ground-borne noise would fall below the FTA noise criteria. Therefore, the operation of the Freeway Tunnel Alternative would not cause an indirect ground-borne noise effect on the Old Pasadena Historic District.</p> <p>Section 106 Effect: In summary, the Freeway Tunnel Alternative would have a Conditional No Adverse Effect with implementation of Measures 1 (Pre-Construction Surveys), CUL-10 (Indirect Visual Effects [Old Pasadena Historic District]), and CUL-13 (Post-Construction Surveys) on the Old Pasadena Historic District.</p> <p>Use Under Section 4(f): The Freeway Tunnel Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the Freeway Tunnel would have a Conditional No Adverse Effect with implementation of Measures CUL-1, CUL-10, and CUL-13. The Freeway Tunnel Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify the Old Pasadena Historic District for protection under Section 4(f).</p>
<p>206-201 West California Boulevard East of South St. John Avenue and west of South Pasadena Avenue</p> <p>CHR Status Code: 2B (determined eligible for the National Register as an individual property and as a contributor to an eligible district in a federal</p>	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-4, there would be improvements in the Freeway Tunnel Alternative in the vicinity of 206-201 West California Boulevard.</p> <p>Construction activities with the potential to result in direct settlement effects include the excavation of two tunnels for the dual-bore alternative and one tunnel for the single-bore</p>

TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<p>regulatory process); under Criterion C (Architecture)</p> <p>The Freeway Tunnel Alternative would propose the following improvements in the vicinity of 206-201 West California Boulevard:</p> <ul style="list-style-type: none"> Excavate two tunnels for the dual-bore alternative, or one tunnel for the single-bore alternative, utilizing TBMs. Each tunnel would be approximately 60 feet in diameter. In this location, the tunnels are between Saint John Avenue and South Pasadena Avenue, with the top of the tunnel approximately 50 feet below grade. 	<p>alternative. Based on the results of the secondary settlement assessment, the apartment building located at 206–216 West California Boulevard is located in Settlement Group O, with a predicted damage level classification of “moderate.” Therefore, boring the Freeway Tunnel Alternative would have the potential to cause an adverse direct settlement effect on 206–216 West California Boulevard. However, the potential effects could be avoided or minimized by following Measures CUL-4 (Settlement Monitoring Plan) and CUL-5 (SOIS Plans [Settlement]) described in Section 3.8. With the conditions imposed in Measures CUL-4 and CUL-5, the tunneling would not cause an adverse effect on 206–216 West California Boulevard.</p> <p>These construction activities would also have the potential to result in direct ground-borne vibratory effects. The projected ground-borne vibration level caused by tunneling below 206–216 West California Boulevard would be 0.0435 PPV (in/sec), which is below the FTA criteria for damage to historic properties. Therefore, boring the Freeway Tunnel Alternative would not cause an adverse direct ground-borne vibratory effect on 206–216 West California Boulevard.</p> <p>Increased freeway tunnel operations have the potential to result in indirect noise effects, direct ground-borne vibratory effects, and indirect ground-borne noise effects. The current noise level in the vicinity of 206–216 West California Boulevard is 53 dBA, and for all variations within the Freeway Tunnel Alternative the noise level would either remain the same or decrease by 1 dBA. This change in noise for a residential property would not have an effect on historic properties. Therefore, the noise change associated with the Freeway Tunnel Alternative would not cause an indirect noise effect on the 206–216 West California Boulevard due to the depth of the tunnel below the ground’s surface.</p> <p>Operational ground-borne vibration levels were analyzed for the alternative and all predicted ground-borne vibration fell below the FTA vibration criteria. Therefore, operation of the Freeway Tunnel Alternative would not cause a direct or indirect ground-borne vibration effect on 206–216 West California Boulevard.</p> <p>Section 106 Effect: In summary, the Freeway Tunnel Alternative would have a Conditional No Adverse Effect with implementation of Measures CUL-1 (Pre-Construction Surveys), CUL-4 (Settlement Monitoring Plan), CUL-5 (SOIS Plans [Settlement]), and CUL-13 (Post-Construction surveys) on 206–216 West California Boulevard.</p> <p>Use Under Section 4(f): The Freeway Tunnel Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the Freeway Tunnel would have a Conditional No Adverse Effect with implementation of Measures CUL-1 (Pre-Construction Surveys), CUL-4 (Settlement Monitoring Plan), CUL-5 (SOIS Plans [Settlement]), and CUL-13 (Post-Construction surveys). The</p>

TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	Freeway Tunnel Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify 206-201 West California Boulevard for protection under Section 4(f).
<p>801 South Pasadena Avenue Northwest corner of South Pasadena Avenue and Bellefontaine Street</p> <p>CHR Status Code: 2B (determined eligible for the National Register as an individual property and as a contributor to an eligible district in a federal regulatory process); under Criterion C (Architecture)</p> <p>The Freeway Tunnel Alternative would propose the following improvements in the vicinity of 801 South Pasadena Avenue:</p> <ul style="list-style-type: none"> Excavate two tunnels for the dual-bore alternative, or one tunnel for the single-bore alternative, utilizing TBMs. Each tunnel would be approximately 60 feet in diameter. In this location, the tunnels are between Saint John Avenue and South Pasadena Avenue, with the top of the tunnel approximately 80 feet below grade. 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-4, there would be improvements in the Freeway Tunnel Alternative in the vicinity of 801 South Pasadena Avenue.</p> <p>Construction activities with the potential to result in direct settlement effects include the excavation of two tunnels for the dual-bore alternative and one tunnel for the single bore alternative. Based on the Second Stage Assessment, 801 South Pasadena Avenue is located in Settlement Group K, with a predicted damage level classification of “slight.” Therefore, the boring of the Freeway Tunnel Alternative could cause a potential adverse direct settlement effect on 801 South Pasadena Avenue. However, the potential effects could be avoided or minimized by Measures CUL-4 (Settlement Monitoring Plan) and CUL-5 (SOIS Plans [Settlement]) described in Section 3.8. With the conditions imposed in Measures CUL-4 and CUL-5, the tunneling would not cause an adverse effect on 801 South Pasadena Avenue.</p> <p>These construction activities also have the potential to result in direct ground-borne vibratory effects. The projected ground-borne vibration level caused by tunneling on 801 South Pasadena Avenue was not calculated in the Supplemental Construction Vibration Impact Assessment for Historic Properties. However, the Tompkins House, located approximately 100 feet north of 801 South Pasadena Avenue at 779 South Pasadena Avenue, was evaluated for potential ground-borne vibration levels resulting from tunneling. The predicted vibration for the Tompkins House is 0.0244 PPV (in/sec), which is below the FTA criteria for damage. Therefore, based on the assessment to the nearby property, boring the Freeway Tunnel Alternative would not cause an adverse direct vibratory effect on 801 South Pasadena Avenue.</p> <p>Increased freeway tunnel operations have the potential to result in indirect noise effects, direct ground-borne vibratory effects, and indirect ground-borne noise effects. The 60-foot diameter tunnel(s) would be located at a depth of approximately 80 feet below 801 South Pasadena Avenue, so the potential for operational noise effects were not analyzed within the immediate proximity of 801 South Pasadena Avenue. Therefore, the operation of the Freeway Tunnel Alternative would not cause an indirect noise effect on 801 South Pasadena Avenue due to the depth of the tunnels below the surface.</p> <p>Operational ground-borne vibration levels were analyzed for the alternative and all predicted ground-borne vibration fell below the FTA vibration criteria. The operation of the Freeway Tunnel Alternative would not cause a direct or indirect ground-borne vibration effect on 801</p>

TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>South Pasadena Avenue.</p> <p>Section 106 Effect: In summary, the Freeway Tunnel Alternative would have a Conditional No Adverse Effect with implementation of Measures (Pre-Construction Surveys), CUL-4 (Settlement Monitoring Plan), CUL-5 (SOIS Plans [Settlement]), and CUL-13 (Post-Construction surveys) would have a Conditional No Adverse Effect on 801 South Pasadena Avenue.</p> <p>Use Under Section 4(f): The Freeway Tunnel Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the Freeway Tunnel would have a Conditional No Adverse Effect with implementation of Measures CUL-1, CUL-4, CUL-5, and CUL-13. The Freeway Tunnel Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify 801 South Pasadena Avenue for protection under Section 4(f).</p>
<p>West Colorado Street Auto Row Historic District 285, 297, 325, and 337 West Colorado Boulevard</p> <p>CHR Status Code: 2D (Contributor to a district determined eligible for the National Register by the Keeper); under Criteria A (Association with events) and C (Architecture)</p> <p>The Freeway Tunnel Alternative would propose the following improvements in the vicinity of the West Colorado Street Auto Row Historic District:</p> <ul style="list-style-type: none"> • Modify the existing left-turn lane on St. John Avenue to a combined through/left-turn lane • Restripe the existing ramps at the SR 710/SR 134/I-210 interchange and lanes within SR 710 • Install one single-ventilation structure. Two locations are proposed for the approximately 50-foot tall structure: either adjacent to the West Colorado Boulevard overcrossing at the SR 710/Colorado Boulevard interchange, or at the SR 710/SR 134/I-210 interchange 	<p>Effects under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-4, there would be improvements in the Freeway Tunnel Alternative in the vicinity of the West Colorado Street Auto Row Historic District.</p> <p>Construction activities with the potential to result in indirect visual effects include the modification of the existing left-turn lane on St. John Avenue, restriping, and installation of a single-ventilation structure. However, restriping within existing roadways would not result in an indirect visual effect on historic properties. In addition, changes to existing, non-historic, infrastructure elements like existing roadways do not meet the threshold for an indirect visual effect, as long as the property’s immediate setting is not an essential aspect of integrity for the property to convey its historic significance. Because the existing roadway would be modified, no new elements would be added to the historic districts’ setting. Furthermore, SR 710 has been within the viewshed of the historic property since it was determined eligible for the National Register and the setting is not an essential aspect of integrity for West Colorado Street Auto Row Historic District. Therefore, the road reconfiguration would not cause an indirect visual effect on the West Colorado Street Auto Row Historic District.</p> <p>The proposed ventilation structure would add a new element within the viewshed of the West Colorado Street Auto Row Historic District. However, based on the grade change between SR 710 and the historic district, the proposed location at the SR 710/SR 134/I-210 interchange would not likely be visible from the historic district. Therefore, the proposed SR 710/SR 134/I-210 interchange ventilation structure would not cause an indirect visual effect on the West Colorado Street Auto Row Historic District.</p>

TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>The proposed ventilation structure located adjacent to the West Colorado Boulevard overcrossing at the SR 710/Colorado Boulevard interchange would likely be visible from portions of the historic district. The proposed ventilation structure at this location, if selected, could be incongruous to the setting of the historic district if the design of the structure is not consistent with the character of the historic district. However, the districts’ setting is not an essential aspect of integrity for the property to convey its historic significance under Criteria A and C. Therefore, the new visual element would not diminish the integrity of the district’s historic features and would not cause an adverse indirect visual effect on the West Colorado Street Auto Row Historic District.</p> <p>The construction activities associated with the turn lane modification and restriping also have the potential to result in direct ground-borne vibratory effects. Construction activities associated with restriping asphalt, such as cold planing or milling, do not meet the FTA criteria for vibratory effects and would not result in an adverse direct vibratory effect on historic properties. In addition, the proposed demolition and construction activities are more than 100 feet from the closest buildings in West Colorado Street Auto Row Historic District. Therefore, the construction activities are too far away from the West Colorado Street Auto Row Historic District to cause an adverse direct vibratory effect. Therefore, the proposed construction activities would not cause an adverse direct vibratory effect on West Colorado Street Auto Row Historic District.</p> <p>Construction of the single-ventilation structure has the potential to result in indirect ground-borne vibratory effects. The proposed ventilation structure locations are both more than 200 feet from the historic district. The distance of the proposed work from the historic district ensures that construction would not cause an adverse indirect ground-borne vibratory effect on the West Colorado Street Auto Row Historic District.</p> <p>Increased freeway tunnel operations have the potential to result in indirect noise effects, direct ground-borne vibratory effects, and indirect ground-borne noise effects. The current noise levels in the vicinity of West Colorado Street Auto Row Historic District are measured at 63 and 64 dBA on the interior of the campus and 63 and 64 dBA on eastern edge of the historic district. The change in noise levels for the single-bore variation ranges from -1 to 3 dBA, and for the dual-bore 1 to 7 dBA. Therefore, the Freeway Tunnel Alternative would cause a potential indirect noise effect on the West Colorado Street Auto Row Historic District. However, based on the commercial use of the property and the significance criteria for the historic property, the operation of the Tunnel Alternative would not cause an adverse effect on the historic significance of the West Colorado Street Auto Row Historic District. Because the historic property is eligible under only Criteria A and C, there is no scenario in which an increase in</p>

TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>noise would diminish the integrity of the property’s significance historic features. Therefore, the operation of the Freeway Tunnel Alternative would not cause an adverse indirect noise effect on the West Colorado Street Auto Row Historic District. Operational ground-borne vibration levels were analyzed for the alternative and all predicted ground-borne vibrations would fall below the FTA vibration criteria. Therefore, the operation of the Freeway Tunnel Alternative would not cause a direct ground-borne vibration effect on the West Colorado Street Auto Row Historic District. Operational ground-borne noise levels were analyzed for the alternative and all predicted ground-borne noise would fall below the FTA noise criteria. Therefore, the operation of the Freeway Tunnel Alternatives would not cause an indirect ground-borne noise effect on the West Colorado Street Auto Row Historic District.</p> <p>Section 106 Effect: In summary, the Freeway Tunnel Alternative would have No Adverse Effect on the West Colorado Street Auto Row Historic District.</p> <p>Use Under Section 4(f): The Freeway Tunnel Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the Freeway Tunnel would have No Adverse Effect on the West Colorado Street Auto Row Historic District. The Freeway Tunnel Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify the West Colorado Street Auto Row Historic District for protection under Section 4(f).</p>
<p>Reverend Hiram Hill/Alonzo Beal House 866 South Pasadena Avenue</p> <p>CHR Status Code: 2S2 (Individual property determined eligible for the National register by a consensus through Section 106 process. Listed in the California Register; listed under Criterion C (Architecture))</p> <p>The Freeway Tunnel Alternative would propose the following improvements in the vicinity of the Reverend Hiram Hill/Alonzo Beal House:</p> <ul style="list-style-type: none"> Excavate two tunnels for the dual-bore alternative, or one tunnel for the single-bore alternative, utilizing TBMs. Each tunnel would be approximately 60 feet in diameter. In this location, the tunnels would either flank, or follow the eastern side of South Pasadena Avenue, with the top of the tunnel approximately 90 feet below grade. 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-4, there would be improvements in the Freeway Tunnel Alternative in the vicinity of the Reverend Hiram Hill/Alonzo Beal House.</p> <p>Construction activities that have the potential to result in direct settlement effects include excavation of two tunnels for the dual-bore alternative and one tunnel for the single-bore alternative. Based on the results of the secondary settlement assessment, the Reverend Hiram Hill/Alonzo Beal House is located in Settlement Group J, with a predicted damage level classification of “very slight.” Therefore, the boring of the Freeway Tunnel Alternative would not cause an adverse direct settlement effect on the Reverend Hiram Hill/Alonzo Beal House.</p> <p>These construction activities also have the potential to result in direct ground-borne vibratory effects. The projected ground-borne vibration level caused by tunneling on the Reverend Hiram Hill/Alonzo Beal House is 0.0216 PPV (in/sec), which is below the FTA criteria for damage. Therefore, boring the Freeway Tunnel Alternative would not cause an adverse direct ground-borne vibratory effect on the Reverend Hiram Hill/Alonzo Beal House.</p> <p>Increased operations have the potential to result in indirect noise effects, direct ground-borne</p>

TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>vibratory effects and indirect ground-borne noise effects. The 60-foot diameter tunnel(s) would be located at a depth of approximately 90 feet below the Reverend Hiram Hill/Alonzo Beal House, so the potential for operational noise effects were not analyzed. Therefore, operation of the Freeway Tunnel Alternative would not cause an indirect noise effect on the Reverend Hiram Hill/Alonzo Beal House due to the depth of the tunnels below the ground’s surface. Operational ground-borne vibration levels were analyzed for the alternative and all predicted ground-borne vibration fell below the FTA vibration criteria. Therefore, the operation of the Freeway Tunnel Alternative would not cause a direct or indirect ground-borne vibration effect on the Reverend Hiram Hill/Alonzo Beal House.</p> <p>Section 106 Effect: In summary, the Freeway Tunnel Alternative would have No Adverse Effect on the Reverend Hiram Hill/Alonzo Beal House.</p> <p>Use Under Section 4(f): The Freeway Tunnel Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the Freeway Tunnel would have No Adverse Effect on the Reverend Hiram Hill/Alonzo Beal House. The Freeway Tunnel Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify the Reverend Hiram Hill/Alonzo Beal House for protection under Section 4(f).</p>

TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<p>Hurlbut Street Fire Station No. 5 900 South Pasadena</p> <p>CHR Status Code: 2S2 (Individual property determined eligible for the National register by a consensus through Section 106 process. Listed in the California Register; listed under Criteria A (Association with events) and C (Architecture)</p> <p>The Freeway Tunnel Alternative would propose the following improvements in the vicinity of the Hurlbut Street Fire Station No. 5:</p> <ul style="list-style-type: none"> Excavate two tunnels for the dual-bore alternative, or one tunnel for the single-bore alternative, utilizing TBMs. Each tunnel would be approximately 60 feet in diameter. In this location, the tunnels would either flank, or follow the eastern side of South Pasadena Avenue, with the top of the tunnel approximately 95 feet below grade. 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-4, there would be improvements in the Freeway Tunnel Alternative in the vicinity of the Hurlbut Street Fire Station No. 5.</p> <p>Construction activities that have the potential to result in direct settlement effects include excavation of two tunnels for the dual-bore alternative and one tunnel for the single-bore alternative. Based on the results of the secondary settlement assessment, Hurlbut Street Fire Station No. 5 is located in Settlement Group J, with a predicted damage level classification of “very slight.” Therefore, the boring for the Freeway Tunnel Alternative would not cause an adverse direct settlement effect on Hurlbut Street Fire Station No. 5.</p> <p>These construction activities also have the potential to result in direct vibratory effects. The projected ground-borne vibration level caused by tunneling on Hurlbut Street Fire Station No. 5 would be 0.0204 PPV (in/sec), which is below the FTA criteria for damage. Therefore, boring the Freeway Tunnel Alternative would not cause an adverse direct ground-borne vibratory effect on Hurlbut Street Fire Station No. 5.</p> <p>Increased operations have the potential to result in indirect noise effects, direct ground-borne vibratory effects and indirect ground-borne noise effects. The 60-foot diameter tunnel(s) would be located at a depth of approximately 95 feet below Hurlbut Street Fire Station No. 5, so the potential for operational noise effects were not analyzed. The operation of the Freeway Tunnel Alternative would not cause an indirect noise effect on Hurlbut Street Fire Station No. 5 due to its depth below the historic property. Operational ground-borne vibration levels were analyzed for the Freeway Tunnel Alternative and all predicted ground-borne vibration for the Freeway Tunnel Alternative fell below the FTA vibration criteria. Therefore, the operation of the Freeway Tunnel Alternative would not cause a direct or indirect ground-borne vibration effect on Hurlbut Street Fire Station No. 5.</p> <p>Section 106 Effect: In summary, the Freeway Tunnel Alternative would have No Adverse Effect on the Hurlbut Street Fire Station No.5.</p> <p>Use Under Section 4(f): The Freeway Tunnel Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the Freeway Tunnel would have No Adverse Effect on the Hurlbut Street Fire Station No.5. The Freeway Tunnel Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify the Hurlbut Street Fire Station No. 5 for protection under Section 4(f).</p>
<p>Miss Markham House</p>	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State</i></p>

TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<p>763 South Pasadena Avenue</p> <p>CHR Status Code: 2B (determined eligible for the National Register as an individual property and as a contributor to an eligible district in a federal regulatory process); under Criterion C (Architecture)</p> <p>The Freeway Tunnel Alternative would propose the following improvements in the vicinity of the Miss Markham House:</p> <ul style="list-style-type: none"> Excavate two tunnels for the dual-bore alternative, or one tunnel for the single-bore alternative, utilizing TBMs. Each tunnel would be approximately 60 feet in diameter. In this location, the tunnels are between Saint John Avenue and South Pasadena Avenue, with the top of the tunnel approximately 75 feet below grade. 	<p><i>Route 710 North Project</i> and as shown on Figure 3.6-4, there would be improvements in the Freeway Tunnel Alternative in the vicinity of the Miss Markham House.</p> <p>Construction activities that have the potential to result in direct settlement effects include excavation of two tunnels for the dual-bore alternative and one tunnel for the single-bore alternative. Based on the results of the secondary settlement assessment, the Miss Markham House is located in Settlement Group K, with a predicted damage level classification of “slight”. Therefore, boring of the Freeway Tunnel Alternative could potentially cause an adverse direct settlement effect on the Miss Markham House. However, the potential effects could be avoided or minimized Measures CUL-4 (Settlement Monitoring Plan) and CUL-5 (SOIS Plans [Settlement]) described below in Section 3.8. With the conditions imposed in measures CUL-4 and CUL-5, the tunneling would not cause an adverse effect on the Miss Markham House.</p> <p>These construction activities also have the potential to result in direct ground-borne vibratory effects. The projected ground-borne vibration level caused by tunneling under the Miss Markham House would be 0.0274 PPV (in/sec), which is below the FTA criteria for damage to historic properties. Therefore, boring the Freeway Tunnel Alternative would not cause an adverse direct ground-borne vibratory effect on the Miss Markham House.</p> <p>Increased operations have the potential to result in indirect noise effects, direct ground-borne vibratory effects and indirect ground-borne noise effects. The 60-foot diameter tunnel(s) would be located at a depth of approximately 75 feet below the Miss Markham House, so the potential for operational noise effects were not analyzed. Therefore, operation of the Freeway Tunnel Alternative would not cause an indirect noise effect on the Miss Markham House due to the depth of the tunnel below the ground’s surface. Operational ground-borne vibration levels were analyzed for the alternative and all predicted ground-borne vibrations fell below the FTA vibration criteria. Therefore, operation of the Freeway Tunnel Alternative would not cause a direct or indirect ground-borne vibration effect on the Miss Markham House.</p> <p>Section 106 Effect: The Freeway Tunnel Alternative with implementation of Measures CUL-1 (Pre-Construction Surveys), CUL-4 (Settlement Monitoring Plan), CUL-5 (SOIS Plans [Settlement]), and CUL-13 (Post-Construction Surveys), would result in a Conditional No Adverse Effect on the Miss Markham House.</p> <p>Use Under Section 4(f): The Freeway Tunnel Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the Freeway Tunnel would have a Conditional No Adverse Effect on the Miss Markham House. The Freeway Tunnel Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s</p>

TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	activities, features, or attributes that qualify the Miss Markham House for protection under Section 4(f).
<p>Page House 765 South Pasadena Avenue</p> <p>CHR Status Code: 2B (determined eligible for the National Register as an individual property and as a contributor to an eligible district in a federal regulatory process); under Criterion C (Architecture)</p> <p>The Freeway Tunnel Alternative would propose the following improvements in the vicinity of the Page House:</p> <p>Excavate two tunnels for the dual-bore alternative, or one tunnel for the single-bore alternative, utilizing TBMs. Each tunnel would be approximately 60 feet in diameter. In this location, the tunnels are between Saint John Avenue and South Pasadena Avenue, with the top of the tunnel approximately 75 feet below grade.</p>	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-4, there would be improvements in the Freeway Tunnel Alternative in the vicinity of the Page House.</p> <p>Construction activities that have the potential to result in direct settlement effects include excavation of two tunnels for the dual-bore alternative and one tunnel for the single-bore alternative. Based on the results of the secondary settlement assessment, the Page House is located in Settlement Group K, with a predicted damage level classification of “slight.” Therefore, the boring of the Freeway Tunnel Alternative could potentially cause an adverse direct settlement effect on the Page House. However, the potential effects could be avoided or minimized by Measures CUL-4 (Settlement Monitoring Plan) and CUL-5 (SOIS Plans [Settlement]), described in Section 3.8. With the conditions imposed in measures CUL-4 and CUL-5, the tunneling would not cause an adverse effect on the Page House.</p> <p>These construction activities also have the potential to result in direct ground-borne vibratory effects. The projected ground-borne vibration level caused by tunneling under the Page House would be 0.0271 PPV (in/sec), which is below the FTA criteria for damage. Therefore, boring the Freeway Tunnel Alternative would not cause an adverse direct ground-borne vibratory effect on the Page House.</p> <p>Increased operations have the potential to result in indirect noise effects, direct ground-borne vibratory effects and indirect ground-borne noise effects. The 60-foot diameter tunnel(s) would be located at a depth of approximately 75 feet below the Page House, so the potential for operational noise effects were not analyzed within the immediate proximity of the Page House. Therefore, operation of the Freeway Tunnel Alternative would not cause an indirect noise effect on the Page House due to the depth of the tunnel below the ground’s surface. Operational ground-borne vibration levels were analyzed for the alternative and all predicted ground-borne vibrations fell below the FTA vibration criteria. Therefore, operation of the Freeway Tunnel Alternative would not cause a direct or indirect ground-borne vibration effect on the Page House.</p> <p>Section 106 Effect: In summary, the Freeway Tunnel Alternative would result in a Conditional No Adverse Effect with implementation of Measures CUL-1 (Pre-Construction Surveys), CUL-4 (Settlement Monitoring Plan), CUL-5 (SOIS Plans [Settlement]), and CUL-13 (Post-Construction Surveys) on the Page House.</p> <p>Use Under Section 4(f): The Freeway Tunnel Alternative would not result in permanent</p>

TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the Freeway Tunnel would have a Conditional No Adverse Effect with implementation of Measures CUL-1, CUL-4, CUL-5, and CUL-13 on the Page House. The Freeway Tunnel Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify the Page House for protection under Section 4(f).</p>
<p>Tompkins House 779 South Pasadena Avenue</p> <p>CHR Status Code: 2S2 (Individual property determined eligible for the National register by a consensus through Section 106 process. Listed in the California Register; listed under Criterion C (Architecture))</p> <p>The Freeway Tunnel Alternative would propose the following improvements in the vicinity of Tompkins House:</p> <ul style="list-style-type: none"> Excavate two tunnels for the dual-bore alternative, or one tunnel for the single-bore alternative, utilizing TBMs. Each tunnel would be approximately 60 feet in diameter. In this location, the tunnels are between Saint John Avenue and South Pasadena Avenue, with the top of the tunnel approximately 80 feet below grade. 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-4, there would be improvements in the Freeway Tunnel Alternative in the vicinity of the Tompkins House.</p> <p>Construction activities that have the potential to result in direct settlement effects include excavation of two tunnels for the dual-bore alternative and one tunnel for the single-bore alternative. Based on the results of the secondary settlement assessment, the Tompkins House is located in Settlement Group K, with a predicted damage level classification of “Slight”. Therefore, the boring of the Freeway Tunnel Alternative could potentially cause an adverse direct settlement effect on the Tompkins House. However, those potential effects could be avoided or minimized by Measures CUL-4 (Settlement Monitoring Plan) and CUL-5 (SOIS Plans [Settlement]), described in Section 3.7.4. With the conditions imposed in Measures CUL-4 and CUL-5, the tunneling would not cause an adverse effect on the Tompkins House.</p> <p>These construction activities also have the potential to result in direct ground-borne vibratory effects. The projected ground-borne vibration level caused by tunneling below the Tompkins House would be 0.0244 PPV (in/sec), which is below the FTA criteria for damage to historic properties. Therefore, boring the Freeway Tunnel Alternative would not cause an adverse ground-borne vibratory effect on the Tompkins House.</p> <p>Increased operations have the potential to result in indirect noise effects, direct ground-borne vibratory effects and indirect ground-borne noise effects. The 60-foot diameter tunnel(s) would be located at a depth of approximately 80 feet below the Tompkins House, so the potential for operational noise effects were not analyzed. Therefore, the operation of the Freeway Tunnel Alternative would not cause an indirect noise effect on the Tompkins House due to the depth of the tunnels below the surface.</p> <p>Operational ground-borne vibration levels were analyzed for the alternative and all predicted ground-borne vibration fell below the FTA vibration criteria. Therefore, the operation of the Freeway Tunnel Alternative would not cause a direct or indirect ground-borne vibration effect on the Tompkins House.</p> <p>Section 106 Effect: In summary, the Freeway Tunnel Alternative would result in a Conditional</p>

TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>No Adverse Effect with implementation of Measures CUL-1 (Pre-Construction Surveys), CUL-4 (Settlement Monitoring Plan), CUL-5 (SOIS Plans [Settlement]), and CUL-13 (Post-Construction Surveys) on the Tompkins House.</p> <p>Use Under Section 4(f): The Freeway Tunnel Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the Freeway Tunnel would have a Conditional No Adverse Effect with implementation of Measures CUL-1, CUL-4, CUL-5, and CUL-13 on the Tompkins House. The Freeway Tunnel Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify the Tompkins House for protection under Section 4(f).</p>
<p>Caroline Walkley/Alice and Robert Wood House 696 South St. John Avenue</p> <p>CHR Status Code: 2B (determined eligible for the National Register as an individual property and as a contributor to an eligible district in a federal regulatory process); under Criterion C (Architecture)</p> <p>The Freeway Tunnel Alternative would propose the following improvements in the vicinity of Caroline Walkley/Alice and Robert Wood House:</p> <ul style="list-style-type: none"> Excavate two tunnels for the dual-bore alternative, or one tunnel for the single-bore alternative, utilizing TBMs. Each tunnel would be approximately 60 feet in diameter. In this location, the tunnels are between Saint John Avenue and South Pasadena Avenue, with the top of the tunnel approximately 50 feet below grade. 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-4, there would be improvements in the Freeway Tunnel Alternative in the vicinity of the Caroline Walkley/Alice and Robert Wood House.</p> <p>Construction activities that have the potential to result in direct settlement effects include excavation of two tunnels for the dual-bore alternative and one tunnel for the single-bore alternative. Based on the results of the secondary settlement assessment, the Caroline Walkley/Alice and Robert Wood House is located in Settlement Group M, with a predicted damage level classification of “moderate.” Therefore, the boring of the Freeway Tunnel Alternative for the dual-bore variation only could potentially cause an adverse direct settlement effect on the Caroline Walkley/Alice and Robert Wood House. However, the potential effects could be avoided or minimized by Measures CUL-4 (Settlement Monitoring Plan) and CUL-5 (SOIS Plans [Settlement]), described in Section 3.7.4. With the conditions imposed in Measures CUL 4 and CUL-5, the tunneling would not cause an adverse effect on the Caroline Walkley/Alice and Robert Wood House.</p> <p>These construction activities also have the potential to result in direct ground-borne vibratory effects. The projected ground-borne vibration level caused by tunneling under the Caroline Walkley/Alice and Robert Wood House would be 0.0248 PPV (in/sec), which is below the FTA criteria for damage to historic properties. Therefore, boring the Freeway Tunnel Alternative would not cause an adverse direct ground-borne vibratory effect on the Caroline Walkley/Alice and Robert Wood House.</p> <p>Increased operations have the potential to result in indirect noise effects, direct ground-borne vibratory effects and indirect ground-borne noise effects. The 60-foot diameter tunnel(s) would be located at a depth of approximately 50 feet below grade, so the potential for operational noise effects were not analyzed within the immediate proximity of the Caroline Walkley/Alice</p>

TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>and Robert Wood House. Therefore, the operation of the Freeway Tunnel Alternative would not cause an indirect noise effect on the Caroline Walkley/Alice and Robert Wood House due to the depth of the tunnel below the ground’s surface. Operational ground-borne vibration levels were analyzed for the alternative and all predicted ground-borne vibration fell below the FTA vibration criteria. Therefore, operation of the Freeway Tunnel Alternative would not cause a direct or indirect ground-borne vibration effect on the Caroline Walkley/Alice and Robert Wood House.</p> <p>Section 106 Effect: In summary, the Freeway Tunnel Alternative would result in a Conditional No Adverse Effect with implementation of Measures CUL-1 (Pre-Construction Surveys), CUL-4 (Settlement Monitoring Plan), CUL-5 (SOIS Plans [Settlement]), and CUL-13 (Post-Construction Surveys) on the Walkley/Alice and Robert Wood House.</p> <p>Use Under Section 4(f): The Freeway Tunnel Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the Freeway Tunnel would have a Conditional No Adverse Effect with implementation of Measures CUL-1, CUL-4, CUL-5, and CUL-13. The Freeway Tunnel Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify the Caroline Walkley/Alice and Robert Wood House for protection under Section 4(f).</p>
<p>Driscoll House 679 South Pasadena Avenue</p> <p>CHR Status Code: 2B (determined eligible for the National Register as an individual property and as a contributor to an eligible district in a federal regulatory process); under Criterion C (Architecture)</p> <p>The Freeway Tunnel Alternative would propose the following improvements in the vicinity of the Driscoll House:</p> <ul style="list-style-type: none"> Excavate two tunnels for the dual-bore alternative, or one tunnel for the single-bore alternative, utilizing TBMs. Each tunnel would be approximately 60 feet in diameter. In this location, the tunnels are between Saint John Avenue and South Pasadena Avenue, with the top of the tunnel approximately 65 feet below grade. 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-4, there would be improvements in the Freeway Tunnel Alternative in the vicinity of the Driscoll House.</p> <p>Construction activities that have the potential to result in direct settlement effects include excavation of two tunnels for the dual-bore alternative and one tunnel for the single-bore alternative. Based on the results of the secondary settlement assessment, the Driscoll House is located in Settlement Group L, with a predicted damage level classification of “moderate to severe.” Therefore, the boring of the Freeway Tunnel Alternative would cause an adverse direct settlement effect on the Driscoll House. Measures CUL-4 (Settlement Monitoring Plan) and CUL-5 (SOIS Plans [Settlement]) would help minimize this adverse effect.</p> <p>These construction activities also have the potential to result in direct ground-borne vibratory effects. The projected ground-borne vibration level caused by tunneling on the Driscoll House would be 0.0311 PPV (in/sec), which is below the FTA criteria for damage. Therefore, boring of the Freeway Tunnel Alternative would not cause an adverse direct ground-borne vibratory effect on the Driscoll House.</p> <p>Increased operations have the potential to result in indirect noise effects, direct ground-borne</p>

TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>vibratory effects and indirect ground-borne noise effects. The 60-foot diameter tunnel(s) would be located at a depth of approximately 65 feet below the Driscoll House, so the potential for operational noise effects were not analyzed within the immediate proximity of the Driscoll House. Therefore, operation of the Freeway Tunnel Alternative would not cause an indirect noise effect on the Driscoll House due to the depth of the tunnel below the ground’s surface. Operational ground-borne vibration levels were analyzed for the alternative and all predicted ground-borne vibration fell below the FTA vibration criteria. Therefore, operation of the Freeway Tunnel Alternative would not cause a direct or indirect ground-borne vibration effect on the Driscoll House.</p> <p>Section 106 Effect: In summary, tunnel boring for the Freeway Tunnel Alternative would cause an adverse direct potential settlement effect, resulting in an Adverse Effect on the Driscoll House. Measures CUL-1 (Pre-Construction Surveys), CUL-4 (Settlement Monitoring Plan), CUL-5 (SOIS Plans [Settlement]), CUL-12 (Property-Specific Protection Plans), and CUL-13 (Post-Construction Surveys) would minimize settlement effects but effects would remain adverse.</p> <p>Use Under Section 4(f): The Freeway Tunnel Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. Based on the level of settlement during construction and the mitigation measures set forth in the FOAE, the value of these resources in terms of their Section 4(f) purposes and significance will not be lost. The Freeway Tunnel Alternative improvements in this area would not result in proximity impacts that would result in substantial impairment of the Driscoll House that would give rise to constructive use under Section 4(f).²</p>
<p>Caroline Walkley House and Small Apartment 595 South Pasadena Avenue/190 West California Boulevard</p> <p>CHR Status Code: 2B (determined eligible for the National Register as an individual property and as a contributor to an eligible district in a federal regulatory process); under Criterion C (Architecture)</p> <ul style="list-style-type: none"> The Freeway Tunnel Alternative would propose the following improvements in the vici Excavate two tunnels for the dual-bore alternative, or one tunnel for the single-bore alternative, utilizing TBMs. Each tunnel would be approximately 60 feet in diameter. In this location, the tunnels are between Saint John Avenue and South Pasadena Avenue, with the top of the tunnel approximately 50 feet below grade. 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-4, there would be improvements in the Freeway Tunnel Alternative in the vicinity of the Caroline Walkley House and Small Apartment.</p> <p>Construction activities that have the potential to result in direct settlement effects include excavation of two tunnels for the dual-bore alternative and one tunnel for the single-bore alternative. Based on the results of the secondary settlement assessment, the Caroline Walkley House and Small Apartment is located in Settlement Group N, with a predicted damage level classification of “moderate to severe”. Therefore, boring the Freeway Tunnel Alternative would cause an adverse direct settlement effect on the Caroline Walkley House and Small Apartment. Avoidance and minimization measures CUL-4 (Settlement Monitoring Plan) and CUL-5 (SOIS Plans [Settlement]) would help minimize this adverse effect.</p> <p>These construction activities also have the potential to result in direct ground-borne vibratory effects. The projected ground-borne vibration level caused by tunneling under the Caroline Walkley House and Small Apartment would be 0.0242 PPV (in/sec), which is below the FTA</p>

TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>criteria for damage to historic properties. Therefore, boring the Freeway Tunnel Alternative would not cause an adverse direct ground-borne vibratory effect on the Caroline Walkley House and Small Apartment.</p> <p>Increased operations have the potential to result in indirect noise effects, direct ground-borne vibratory effects and indirect ground-borne noise effects. The current noise levels in the vicinity of the Caroline Walkley House and Small Apartment is 59 dBA and for all variations within the Freeway Tunnel Alternative, the noise levels would either remain the same or decrease by 1 to 3 dBA. This change in noise for a residential property would not have an effect on historic properties. Therefore, the noise change caused by the Freeway Tunnel Alternative would not cause an indirect noise effect on the Caroline Walkley House and Small Apartment. Operational ground-borne vibration levels were analyzed for the alternative and all predicted ground-borne vibration fell below the FTA vibration criteria. Therefore, operation of the Freeway Tunnel Alternative would not cause a direct or indirect ground-borne vibration effect on the Caroline Walkley House and Small Apartment.</p> <p>Section 106 Effect: In summary, tunnel boring for the Freeway Tunnel Alternative would cause an adverse direct potential settlement effect, resulting in an Adverse Effect on the Caroline Walkley House and Small Apartment. Measures CUL-1 (Pre-Construction Surveys), CUL-4 (Settlement Monitoring Plan), CUL-5 (SOIS Plans [Settlement]), CUL-12 (Property-Specific Protection Plans), and CUL-13 (Post-Construction Surveys) would minimize settlement effects but effects would remain adverse.</p> <p>Use Under Section 4(f): The Freeway Tunnel Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. Based on the level of settlement during construction and the mitigation measures set forth in the FOAE, the value of these resources in terms of their Section 4(f) purposes and significance will not be lost. The Freeway Tunnel Alternative improvements in this area would not result in proximity impacts that would result in substantial impairment of the Caroline Walkley House and Small Apartment that would give rise to constructive use under Section 4(f).²</p>
<p>Neighborhood Church/Sequoyah School 535 South Pasadena Avenue</p> <p>CHR Status Code: 2S2 (Individual property determined eligible for the National Register by a consensus through the Section 106 process. Listed in the California Register; listed under Criterion C (Architecture))</p> <p>The Freeway Tunnel Alternative would propose the following improvements</p>	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-4, there would be improvements in the Freeway Tunnel Alternative in the vicinity of the Neighborhood Church/Sequoyah School.</p> <p>Construction activities that have the potential to result in direct settlement effects include excavation of two tunnels for the dual-bore alternative and one tunnel for the single-bore alternative. Based on the results of the secondary settlement assessment, the Neighborhood Church/Sequoyah School is located in Settlement Group P and has a predicted damage level</p>

TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
<p>in the vicinity of Neighborhood Church/Sequoyah School:</p> <ul style="list-style-type: none"> Excavate two tunnels for the dual-bore alternative, or one tunnel for the single-bore alternative, utilizing TBMs. Each tunnel would be approximately 60 feet in diameter. In this location, the tunnels are between Saint John Avenue and South Pasadena Avenue, with the top of the tunnel approximately 45 feet below grade. 	<p>classification of “moderate-severe.” Therefore, the Freeway Tunnel Alternative would cause an adverse direct settlement effect on the Neighborhood Church/Sequoyah School. Measures CUL-4 (Settlement Monitoring Plan) and CUL-5 (SOIS Plans [Settlement]) would help minimize this adverse effect.</p> <p>These construction activities also have the potential to result in direct ground-borne vibratory effects. The projected ground-borne vibration level caused by tunneling on the Neighborhood Church/Sequoyah School is 0.0505 PPV (in/sec), which is below the FTA criteria for damage. Therefore, boring the Freeway Tunnel Alternative would not cause an adverse direct ground-borne vibratory effect on the Neighborhood Church/Sequoyah School.</p> <p>Increased operations have the potential to result in indirect noise effects, direct ground-borne vibratory effects and indirect ground-borne noise effects. The current noise levels in the vicinity of the Neighborhood Church/Sequoyah School are 57 to 64 dBA and for all variations within the Freeway Tunnel Alternative, the noise levels would either remain the same or decrease by up to 6 dBA. This change in noise for an institutional property would not have an effect on the historic property. Therefore, the noise change associated with the Freeway Tunnel Alternative would not cause an indirect noise effect on the Neighborhood Church/Sequoyah School.</p> <p>Operational ground-borne vibration levels were analyzed for the Freeway Tunnel Alternative and all predicted ground-borne vibration would fall below the FTA vibration. Therefore, the operation of the Freeway Tunnel Alternative would not cause a direct ground-borne vibration effect on the Neighborhood Church/Sequoyah School.</p> <p>Operational ground-borne noise levels were analyzed for the alternative and all predicted ground-borne noise would fall below the FTA noise criteria. Therefore, the operation of the Freeway Tunnel Alternative would not cause an indirect ground-borne noise effect on the Neighborhood Church/Sequoyah School.</p> <p>Section 106 Effect: In summary, the Freeway Tunnel Alternative would result in an Adverse Effect on the Neighborhood Church/Sequoyah School. Measures CUL-1 (Pre-Construction Surveys), CUL-4 (Settlement Monitoring Plan), CUL-5 (SOIS Plans [Settlement]), CUL-12 (Property-Specific Protection Plans), and CUL-13 (Post-Construction Surveys) would minimize settlement effects but effects would remain adverse.</p> <p>Use Under Section 4(f): The Freeway Tunnel Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. Based on the level of settlement during construction and the mitigation measures set forth in the FOAE, the value of these resources in terms of their Section 4(f) purposes and</p>

TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	significance will not be lost. The Freeway Tunnel Alternative improvements in this area would not result in proximity impacts that would result in substantial impairment of the Neighborhood Church/Sequoyah School that would give rise to constructive use under Section 4(f). ²
<p>Arroyo Seco Parkway Historic District (includes the route of the Arroyo Seco Freeway from the four-level interchange in the City of Los Angeles, through South Pasadena to East Glenarm Street in Pasadena, and the bridges along that route). The Arroyo Seco Parkway is also a segment of Historic Route 66. The State-owned bridge at the Fair Oaks Avenue Overcrossing (Bridge No. 53 0440) is listed in the Caltrans Bridge Inventory and is a contributing element of this Historic District</p> <p>CHR Status Code: 1S (Individual property listed in the National Register by the Keeper); listed under Criteria A (Association with events), B (Association with Significant Persons), and C (Architecture)</p>	<p>Section 106 Effects: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> would have an Adverse Effect and a use under Section 4(f) due to the removal of character-defining features and from construction retaining walls and hook ramps.</p> <p>Use Under Section 4(f): To address the use of the Arroyo Seco Parkway Historic District under Section 4(f), an Individual Section 4(f) Evaluation has been prepared and is included in Appendix B.1 of the Final EIR/EIS.</p>
<p>Pasadena Avenue Historic District Along South Pasadena Avenue south of its confluence with St. John Avenue</p> <p>CHR Status Code: 1S (Individual property listed in the National Register by the Keeper); listed under Criteria A (Association with events) and C (Architecture)</p> <p>The Freeway Tunnel Alternative would propose the following improvements in the vicinity of the Pasadena Avenue Historic District:</p> <ul style="list-style-type: none"> Excavate two tunnels for the dual-bore alternative, or one tunnel for the single-bore alternative, utilizing TBMs. Each tunnel would be approximately 60 feet in diameter. In this area, the tunnel(s) are approximately 130 feet below grade. 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-4, there would be improvements in the Freeway Tunnel Alternative in the vicinity of the Pasadena Avenue Historic District.</p> <p>Construction activities that have the potential to result in direct settlement effects include the excavation of two tunnels for the dual-bore alternative and one tunnel for the single-bore alternative. Based on the results of the secondary settlement assessment, the Pasadena Avenue Historic District spans Settlement Groups H, I, and J, with predicted damage level classifications of “negligible” (Groups H and I) and “very slight” (Group J). Therefore, the boring of the Freeway Tunnel Alternative would not cause a potential adverse direct settlement effect on the Pasadena Avenue Historic District.</p> <p>These construction activities also have the potential to result in direct ground-borne vibratory effects. The projected ground-borne vibration level caused by tunneling below the Pasadena Avenue Historic District would be 0.0127 PPV (in/sec), which is below the FTA criteria for damage to historic properties. Therefore, boring the Freeway Tunnel Alternative would not cause an adverse direct ground-borne vibratory effect on the Pasadena Avenue Historic District.</p> <p>Increased operations have the potential to result in indirect noise effects, direct ground-borne vibratory effects, indirect ground-borne noise effects. The 60-foot diameter tunnel(s) would be located at a depth ranging between 90 and 140 feet below the Pasadena Avenue Historic District, so the potential for operational noise effects were not analyzed. Therefore, the</p>

TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>operation of the Freeway Tunnel Alternative would not cause an indirect noise effect on the Pasadena Avenue Historic District due to the tunnel’s depth below the ground’s surface. Operational ground-borne vibration levels were analyzed for the alternative and all predicted ground-borne vibration fell below the FTA vibration criteria. Therefore, operation of the Freeway Tunnel Alternative would not cause a direct or indirect ground-borne vibration effect on the Pasadena Avenue Historic District.</p> <p>Section 106 Effect: In summary, the Freeway Tunnel Alternative would have No Adverse Effect on the Pasadena Avenue Historic District.</p> <p>Use Under Section 4(f): The Freeway Tunnel Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the Freeway Tunnel would have No Adverse Effect on the Pasadena Avenue Historic District. The Freeway Tunnel Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property’s activities, features, or attributes that qualify the Pasadena Avenue Historic District for protection under Section 4(f).</p>
CITY OF SOUTH PASADENA	
<p>Horatio Rust Site</p> <p>This prehistoric site recorded by Horatio Rust was exposed during road grading activities in 1897. A large number of artifacts was recorded and collected including 50 hammer stones, 30 metates, over 100 manos, a bone awl, and a number of cogged and discoidal stones. Rust noted that the finds were located 2 to 3 feet beneath the ground surface and that the metates were all discovered face-down. The location of this site is not provided in this report to avoid vandalism or other potential damage to the site.</p> <p>As discussed in the <i>Historic Property Survey Report</i>, this site was determined to be eligible for the National Register as part of this undertaking.</p> <p>The Freeway Tunnel Alternative would propose the following improvements in the vicinity of the Horatio Rust Site:</p> <ul style="list-style-type: none"> Excavate two tunnels for the dual-bore alternative, or one tunnel for the single-bore alternative, utilizing TBMs. Each tunnel would be approximately 60 feet in diameter and at depths greater than 50 feet below ground surface. 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> the Horatio Rust Site is located in the City of South Pasadena, but the location of this site is not provided to avoid vandalism or other potential damage to the site. The recorded Horatio Rust Site is fully developed and the area is not accessible for subsurface archaeological exploration.</p> <p>Part of this prehistoric site may be within the disturbance limits for the Freeway Tunnel Alternative. It is possible that construction of the Freeway Tunnel Alternative could encounter prehistoric artifacts. The <i>Finding of Adverse Effect</i> determined that any potential archeological resources encountered at this site during construction of this Alternative would be important chiefly because of what can be learned from data recovery and would have minimal value for preservation in place.</p> <p>Construction activities with the potential to result in direct and indirect effects include the excavation of two tunnels. However, the proposed construction of two tunnels at a depth greater than 50 feet below ground surface is well outside of the recorded site boundaries of the Horatio Rust Site, which was identified at depths of 2-3 feet below the ground surface. Intact cultural deposits associated with the site are highly unlikely to be located at greater depths as that proposed for the tunnels. Therefore, the proposed construction of the tunnels would not affect the Horatio Rust Site.</p>

TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	<p>Section 106 Effect: The Freeway Tunnel Alternative improvements would result in No Effect on the Horatio Rust Site.</p> <p>Use Under Section 4(f): Section 4(f) does not apply to archaeological resources that are important chiefly because of what can be learned from data recovery and have minimal value for preservation in place (23 CFR 774.13(b)(1)). No further analysis or consideration of the effects of the Freeway Tunnel Alternative on the Horatio Rust Prehistoric Village Site under Section 4(f) is required.</p>
CITIES OF LOS ANGELES, PASADENA, AND SOUTH PASADENA	
<p>Segment of Route 66 West Huntington Drive between Maycrest Avenue and Lowell Avenue</p> <p>CHR Status Code: Assumed eligible for listing in the National Register for the purpose of this project only; listed under Criteria A (Association with events) and C (Architecture)</p> <p>The Freeway Tunnel Alternative would propose the following improvements along this segment of Historic Route 66:</p> <ul style="list-style-type: none"> Excavate two tunnels for the dual-bore alternative, or one tunnel for the single-bore alternative, utilizing TBMs. Each tunnel would be approximately 60 feet in diameter. In this location, the tunnels would either flank, or follow the eastern side of South Pasadena Avenue, with the top of the tunnel approximately 125 feet below grade. 	<p>Effects Under Section 106: As described in detail in the <i>Finding of Adverse Effect for the State Route 710 North Project</i> and as shown on Figure 3.6-4, there would be improvements in the Freeway Tunnel Alternative in the vicinity of the former segment of Route 66 at Fair at West Huntington Drive between Maycrest Avenue and Lowell Avenue.</p> <p>Construction activities with the potential to result in direct settlement effects include excavation of two tunnels for the dual-bore variation or one tunnel for the single-bore variation. Based on the results of the secondary settlement assessment, this segment of Route 66 is located in Settlement Group B with a predicted damage classification of negligible. Therefore, proposed excavations would not have a direct settlement effect on Route 66.</p> <p>These construction activities also have the potential to result in direct ground-borne vibratory effects. However, the projected ground-borne vibration level from tunneling at this segment of Route 66 is 0.013 PPV (in/sec), which is just below the FTA criteria for damage. Therefore, tunneling would not have a direct ground-borne vibratory effect on Route 66.</p> <p>Increased operations have the potential to result in indirect noise, direct ground-borne vibratory, and indirect groundborne noise effects. As the tunnels would be located at a depth of 90 feet below Route 66, no indirect noise effect would occur. In addition, operational ground-borne vibration levels and groundborne noise levels were analyzed for the alternative and all predicted ground-borne vibration and noise fell below the FTA vibration criteria. Therefore, no direct ground-borne vibration or indirect ground-borne noise effect would occur.</p> <p>Section 106 Effect: The Freeway Tunnel Alternative improvements would have No Effect on the segment of historic Route 66 at West Huntington Drive between Maycrest Avenue and Lowell Avenue.</p> <p>Use Under Section 4(f): The Freeway Tunnel Alternative would not result in permanent incorporation of land from, or permanent easements or temporary occupancies (TCEs) at this property. As described above, the Freeway Tunnel Alternative would have No Effect on this</p>

TABLE 3.6.4:

Freeway Tunnel Alternative – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Resource/Property ¹	Potential Effects Under Section 106 and Potential Use Under Section 4(f)
	segment of Route 66. The Freeway Alternative improvements in this area would not result in proximity impacts that would result in a substantial impairment of the property's activities, features, or attributes that qualify Route 66 for protection under Section 4(f).

Sources: *Historic Property Survey Report* (2014); *Supplemental Historic Property Survey Report* (2017); *Finding of Adverse Effect for the State Route 710 North Project* (2017); and LSA Associates, Inc. (2018).

- ¹ Only properties within the APE for the at-grade segments of the Freeway Tunnel Alternative are evaluated in this table. Refer to Figure 3.6-4 for the locations of the resources discussed in this table that are located along the at-grade segment of the Freeway Tunnel Alternative.
- ² According to the FHWA Section 4(f) Policy Paper, “A constructive use involves no actual physical use of the Section 4(f) property via permanent incorporation of land or a temporary occupancy of land into a transportation facility. A constructive use occurs when the proximity impacts of a proposed project adjacent to, or nearby, a Section 4(f) property result in substantial impairment to the property’s activities, features, or attributes that qualify the property for protection under Section 4(f). As a general matter this means that the value of the resource, in terms of its Section 4(f) purpose and significance, will be meaningfully reduced or lost.”

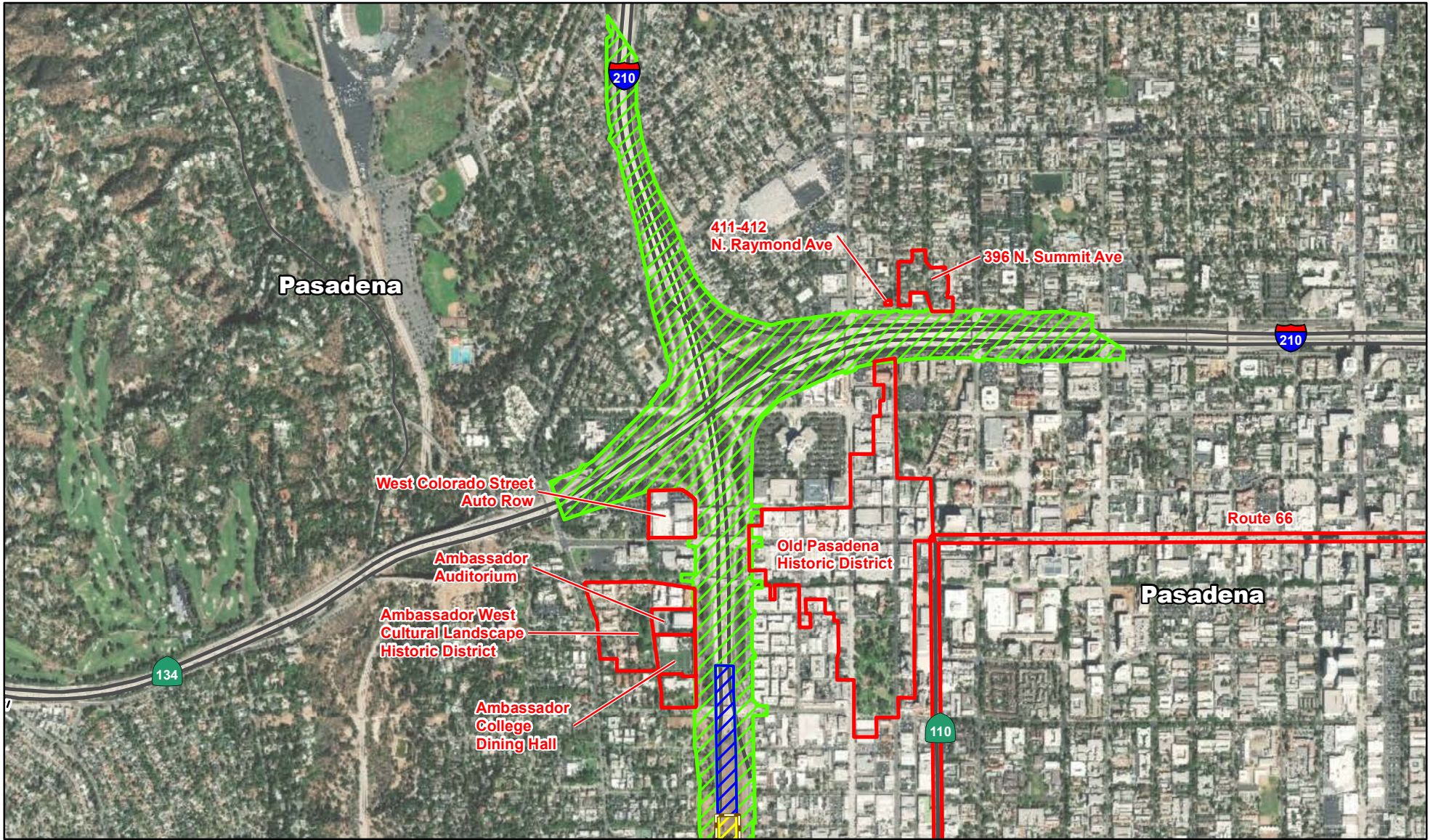
The determination of adverse effect under the Section 106 process (see 36 CFR 800.5) does not automatically mean there will be constructive use and that Section 4(f) will apply. The FHWA Section 4(f) Policy Paper states in Question and Answer 7B: “If a project does not permanently incorporate land from the historic property but results in an adverse effect, it will be necessary for to further assess the proximity impacts of the project in terms of the potential for constructive use. This analysis is necessary to determine if the proximity impact(s) substantially impair the features or attributes that contribute to the NR eligibility of the historic site. If there is no substantial impairment, notwithstanding an adverse effect determination, there is no constructive use and Section 4(f) does not apply. The FHWA determines if there is a substantial impairment by consulting with all identified officials with jurisdiction, including the SHPO/THPO and the ACHP if participating, to identify the activities, features, and attributes of the property that qualify it for Section 4(f) protection and by analyzing the proximity impacts of the project (including any mitigation) on those activities, features, and attributes (see 23 CFR 774.15(d)(3)). The determination of Section 4(f) applicability is ultimately FHWA’s decision, and the considerations and consultation that went into that decision should be documented in the project file.”

For purposes of Section 106 consultation, a finding of adverse effect was determined for construction related direct settlement effects for each of the following resources: the Markham Place Historic District, the Driscoll House, the Caroline Walkley House and Small Apartment, and the Neighborhood Church/Sequoyah School. The Potential Settlement Effects on Historic Properties technical memorandum (Jacobs Associates/CH2M Hill 2015) predicted that damage levels for these resources would range from “slight” to “moderate to severe.”

As stated in Section 1.3, the determination of substantial impairment is a high standard that also takes into account mitigation before making the determination; the Section 106 finding of effect for the resources is made without mitigation. As detailed in Section 8.5.2 of the FOAE (December 2017), Caltrans would implement a settlement monitoring plan that would include alerts when settlement approaches a level just below slight damage. At that time, potential damage from actual settlement would be assessed by the Geotechnical Engineer, Structural Engineer, historic architect, and Architectural Historian, and a plan proposed to implement the appropriate measures needed to arrest settlement trends to no more impact than very slight. If avoidance and minimization of settlement effects are not possible and established damage levels for the project are exceeded due to settlement, measures to mitigate damage will include the restoration of historic properties following Secretary of Interior Standards (SOIS) as set forth in the SOIS Action Plan and in accordance with Stipulation X.B.1.b and Attachment 5 of the Caltrans Section 106 Programmatic Agreement.

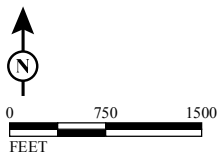
Therefore, based on the range of potential settlement during construction varying from “slight” to “moderate to severe” and with the mitigation measures set forth in the FOAE, Caltrans does not anticipate the value of these resources, in terms of their Section 4(f) purposes and significance, will be meaningfully reduced or lost. Thus, there would not be substantial impairment that would give rise to constructive use under Section 4(f).”

ACHP = Advisory Council on Historic Preservation	CHR = California Historical Resource	I-110 = Interstate 110	SHPO = State Historic Preservation Officer
APE = Area of Potential Effects	dB = decibels	Keeper = Keeper of the National Register of Historic Places	SR 134 = State Route 134
APN = Assessor’s Parcel Number	FHWA = Federal Highway Administration	National Register = National Register of Historic Places	TCE = temporary construction easement
Caltrans = California Department of Transportation	FOAE = Finding of Adverse Effect	ROW = right of way	THPO = Tribal Historic Preservation Officer
CFR = Code of Federal Regulations			



LEGEND

- Cultural Resource
- City Boundary
- Freeway Tunnel Alternative At Grade Limits of Construction
- Freeway Tunnel Alternative Bored Tunnel Limits of Construction
- Freeway Tunnel Alternative Cut & Cover Tunnel Limits of Construction
- Freeway Tunnel Alternative Potential Settlement Zone



SOURCE: Bing (c.2012); NRHP (2014); CH2MHill (2014)

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FIGURE 3.6-4

Sheet 1 of 3

SR 710 North Project

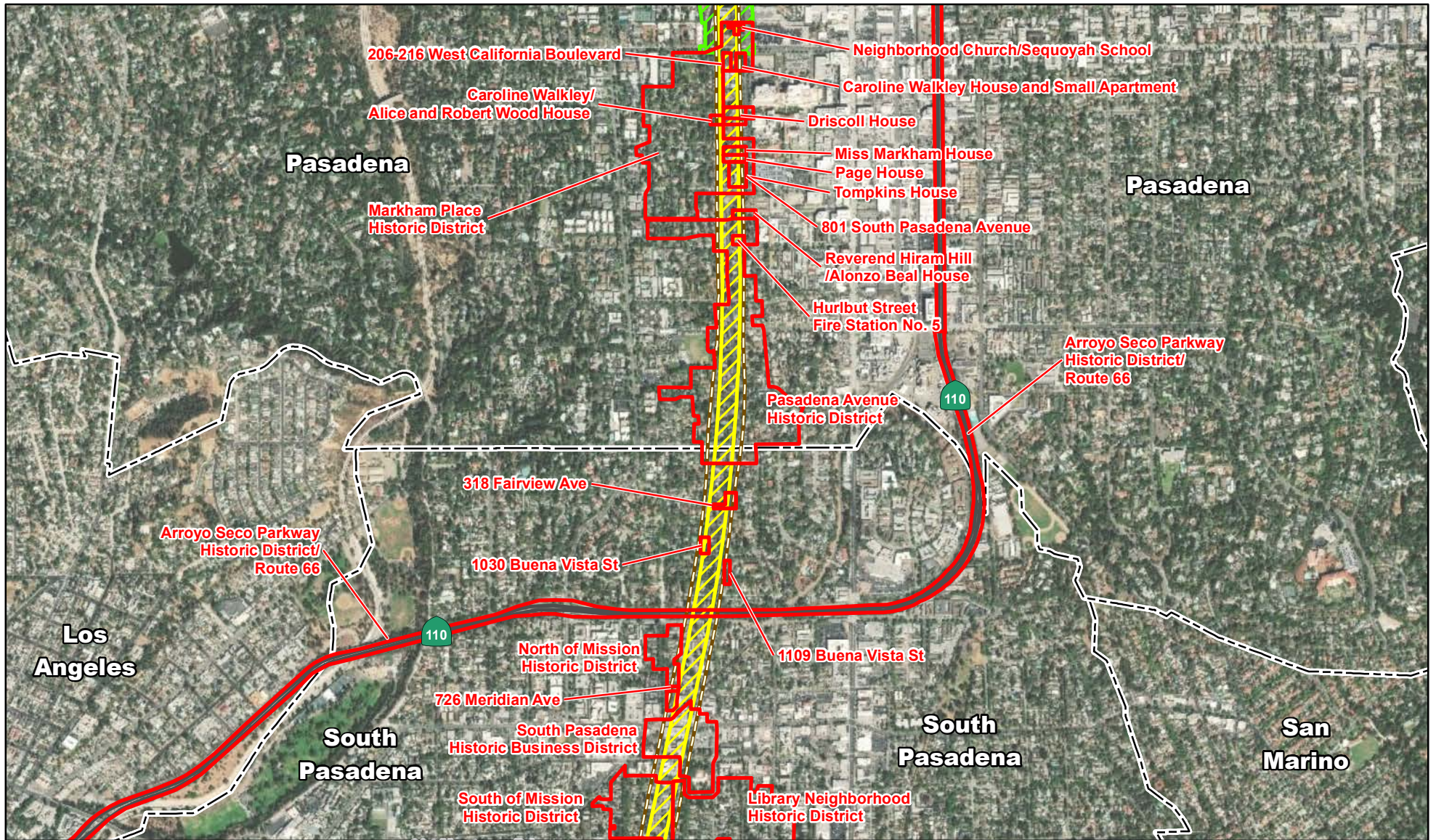
Historic Properties within the APE for the Tunnel
Segment of the Freeway Tunnel Alternative

07-LA-710 (SR 710)

EA 187900

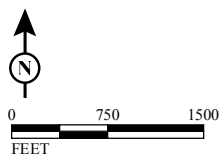
EFIS 0700000191

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LEGEND

- Cultural Resource
- Freeway Tunnel Alternative At Grade Limits of Construction
- Freeway Tunnel Alternative Bored Tunnel Limits of Construction
- Freeway Tunnel Alternative Cut & Cover Tunnel Limits of Construction
- Freeway Tunnel Alternative Potential Settlement Zone
- City Boundary



SOURCE: Bing (c.2012); NRHP (2014); CH2MHill (2014)

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FIGURE 3.6-4

Sheet 2 of 3

SR 710 North Project

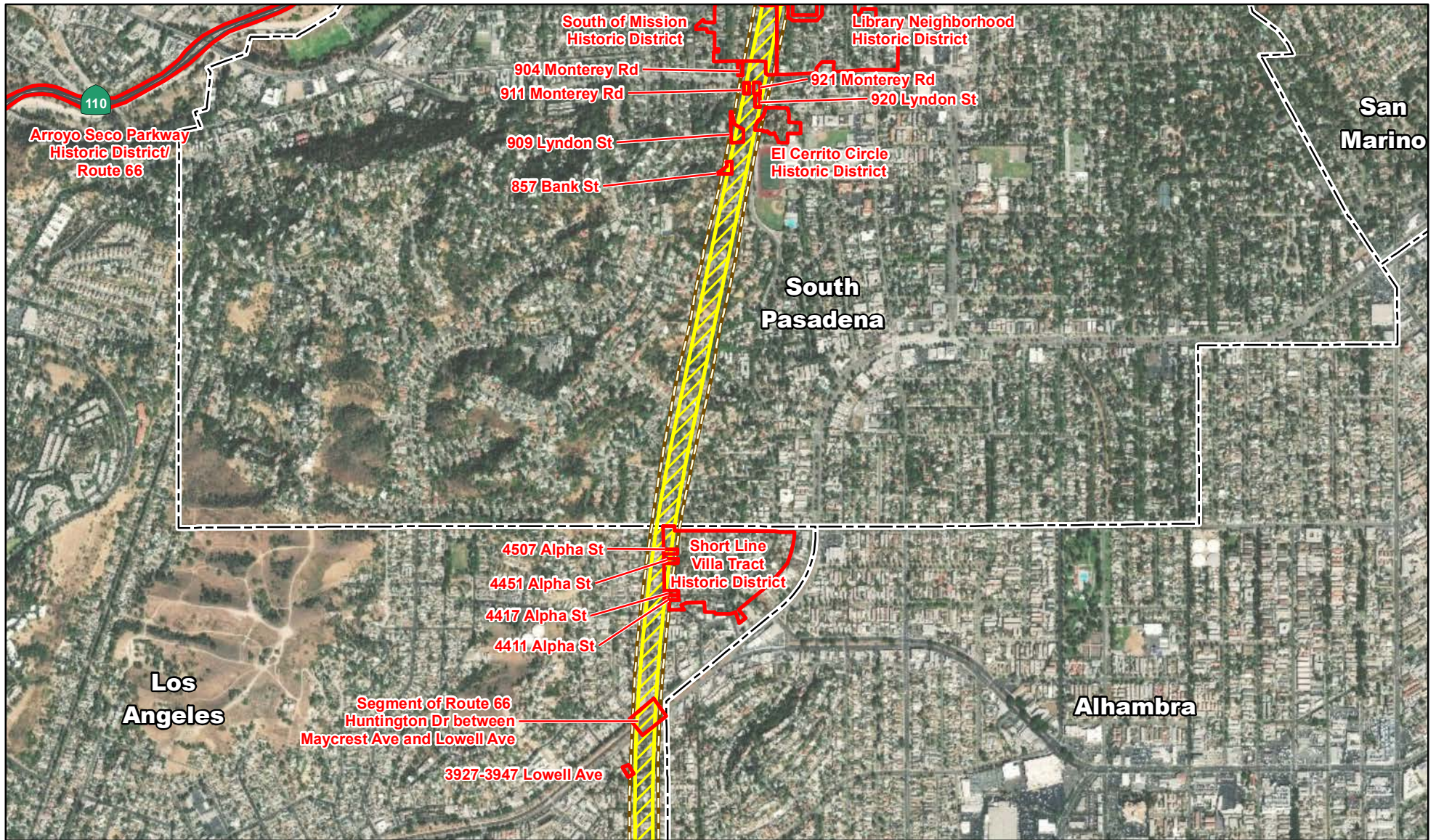
Historic Properties within the APE for the Tunnel Segment of the Freeway Tunnel Alternative

07-LA-710 (SR 710)

EA 187900

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LEGEND

- Cultural Resource
- City Boundary
- Freeway Tunnel Alternative At Grade Limits of Construction
- Freeway Tunnel Alternative Bored Tunnel Limits of Construction
- Freeway Tunnel Alternative Cut & Cover Tunnel Limits of Construction
- Freeway Tunnel Alternative Potential Settlement Zone

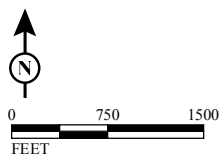


FIGURE 3.6-4
Sheet 3 of 3

SR 710 North Project
Historic Properties within the APE for the Tunnel
Segment of the Freeway Tunnel Alternative

07-LA-710 (SR 710)
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TABLE 3.6.5:
Freeway Tunnel Alternative (No Effects) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

Potential Effects		
<p>Effects Under Section 106: The historic properties listed in this table along the alignment of the Freeway Tunnel Alternative are above the tunnel segment of that alternative. As described in the <i>Finding of Adverse Effect for the State Route 710 North Project</i>, the potential effects of the Freeway Tunnel Alternative would be the same for each historic property. Because the alignment of the Freeway Tunnel Alternative will be in tunnel segment in the vicinity of these properties, there would be no surface construction in the vicinity of these properties.</p> <p>Under the either single-bore and dual-bore variations of the Freeway Tunnel Alternative, the tunnel alignment(s) would be at depths ranging from of 120 to 250 feet below the National Register listed or eligible, or contributing properties in the cities of Los Angeles, Monterey Park, Alhambra, and South Pasadena, and unincorporated Los Angeles County listed in this table. The improvements in the Freeway Tunnel Alternative would not affect the characteristics of these historic properties that qualify them for inclusion in the National Register because:</p> <ul style="list-style-type: none"> • The duration of activity underneath any given resource would be approximately 1 or 2 days and would occur at a depth of 120 to 250 feet. At that depth, the tunnel boring-related activity under these properties would be well below the level at which ground-borne vibration damage occurs to fragile buildings (0.120 PPV [in/sec]), and ground-borne vibration would be undetectable at the surface. • The Freeway Tunnel Alternative would not include any construction-related activity at the ground surface in the vicinity of these historic properties. • The tunnel excavation will be conducted using pressurized-face tunnel boring machines designed for boring in densely urbanized areas to lessen ground movements and, if necessary, additional conditions can be employed to lessen or eliminate ground movement effects. Settlement effects would all be considered “negligible” from the proposed construction activities. <p>Section 106 Effect: The Freeway Tunnel Alternative would have No Effect on these historic properties.</p> <p>Use Under Section 4(f): The Freeway Tunnel Alternative would not result in permanent use of land from, permanent easements of, or temporary occupancies (TCEs) at any of these properties. Based on the analyses described above, the Freeway Tunnel Alternative would have No Effect on these properties. The Freeway Tunnel Alternative improvements would not result in a substantial impairment of the properties’ activities, features, or attributes that qualify them for protection under Section 4(f). The construction and operation of the Freeway Tunnel Alternative would not result in use of the historic properties described in this table.</p>		
City	Resource/Property	National Register Status ¹
Los Angeles	3937-3947 North Lowell Avenue/5436 East Shelley Street	CHR Status Code: 2S2 (Individual property determined eligible for the National Register); Listed under Criteria C (Architecture)
Los Angeles	Short Line Villa Tract Historic District Approximately bounded by Kendall Avenue, Huntington Drive, Alpha Street, Newtonia Drive, and Maycrest Avenue.	CHR Status Code: 2S (Individual property determined eligible for the National Register)
Pasadena	Pasadena Art Museum (Norton Simon Museum) 411 West Colorado Boulevard	CHR Status Code: 2S2 (Individual property determined eligible for the National Register); Eligible for listing under Criteria A (Association with Events), B (Association with Persons), and C (Architecture)
Pasadena	Raymond-Summit Historic District (three blocks along North Raymond and North Summit Avenues)	CHR Status Code: 1S (Listed as an individual property); Eligible for listing under Criteria A (Association with Events) and C (Architecture)
Pasadena	Herkimer Arms 411 North Raymond Avenue	CHR Status Code: 2S2 (Individual property determined eligible for the National Register); Eligible for listing under Criteria A (Association with Events) and C (Architecture)
Pasadena	J. Durand Kennett House 1000 South Pasadena Avenue	CHR Status Code: 2B/1D (A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district); Eligible for listing under Criterion C (Architecture)

TABLE 3.6.5:
Freeway Tunnel Alternative (No Effects) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

City	Resource	National Register Status ¹
Pasadena	F.J. Kennett House 1030 South Pasadena Avenue	CHR Status Code: 2B/1D (A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district); Eligible for listing under Criterion C (Architecture)
Pasadena	Mrs. D. Hagan House 1041 South Pasadena Avenue	CHR Status Code: 2B/1D (A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district); Eligible for listing under Criterion C (Architecture)
Pasadena	James and Fanny Hale House 1051 South Pasadena Avenue	CHR Status Code: 2B/1D (A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district); Eligible for listing under Criterion C (Architecture)
Pasadena	W.W. Phelps House 1112 South Pasadena Avenue	CHR Status Code: 2B/1D (A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district);
Pasadena	A.G. Simons/John McWilliams Jr. House 1199 South Pasadena Avenue	CHR Status Code: 2S2/1D (A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district); Eligible for listing under Criterion C (Architecture)
Pasadena	Mary Werner House 1200 South Pasadena Avenue	CHR Status Code: 2S2 (A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district); Eligible for listing under Criterion C (Architecture)
Pasadena	Ralph B. Hubbard Residence 1207 South Pasadena Avenue	CHR Status Code: 2S2/1D (Individual property determined eligible for the National Register); Eligible for listing under Criteria A (Association with Events) and C (Architecture)
Pasadena	R. Sturges Cook House 180 West State Street (aka 1170 S. Pasadena Avenue) 1928 French Eclectic-style residence in the Pasadena Avenue Historic District	CHR Status Code: 2B/1D (A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district); Eligible for listing under Criterion C (Architecture)
Pasadena	Hartshorn House No. 1 224 West State Street	CHR Status Code: 2B/1D (A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district);
Pasadena	Hartshorn House No. 2 232 West State Street	CHR Status Code: 2B/1D (A multiple property listed in the National Register and determined individually eligible for the National Register and as a contributor to an eligible district)
South Pasadena	Otake-Nambu House 857 Bank Street 1890 Victorian-influenced residence	CHR Status Code: 2S2/5S1 (Individual property determined eligible for listing)
South Pasadena	East Wynyate 909 Lyndon Street 1896 residence	CHR Status Code: 2S2 (Individual property determined eligible for listing)
South Pasadena	J.G. Pierce House 911 Monterey Road	CHR Status Code: 2S2 (Individual property determined eligible for listing)

TABLE 3.6.5:
Freeway Tunnel Alternative (No Effects) – National Register of Historic Places Listed, Eligible, and Potentially Eligible Properties in the Area of Potential Effects

City	Resource	National Register Status ¹
South Pasadena	Kenneth M. Joy House 921 Monterey Road 1912 Craftsman-style residence	CHR Status Code: 2S2 (Individual property determined eligible for listing)
South Pasadena	920 Lyndon Street	CHR Status Code: 3S (Individual property determined eligible for listing)
South Pasadena	Eugene and Margaret Blanche Residence 1030 Buena Vista Street	CHR Status Code: 2S2 (Individual property determined eligible for listing)
South Pasadena	318 Fairview Avenue	CHR Status Code: Considered eligible for listing for this project under Criterion C (Architecture)
South Pasadena	Augusta Raab Home 1109 Buena Vista Street	CHR Status Code: 2S2 (Individual property determined eligible for listing)
South Pasadena	El Cerrito Circle Historic District Eight Properties on both sides of El Cerrito Circle and two properties on the west side of Diamond Avenue	CHR Status Code: 2S2 (Individual property determined eligible for listing)
South Pasadena	North of Mission Historic District Approximately bounded by Meridian Avenue north of Mission Street and south of Grevelia Street	CHR Status Code: 2S2 (Individual property determined eligible for listing); Eligible for listing under Criterion A (Association with Events)
South Pasadena	South of Mission Historic District Approximately bounded by Meridian Avenue and Glendon Way between Throop Alley and Monterey Road/Collier Alley	CHR Status Code: 2S2 (Individual property determined eligible for listing)
South Pasadena	South Pasadena Historic Business District Approximately bounded by Mission Street, Fairview Avenue, Meridian Avenue, and El Centro Street	CHR Status Code: 1S (Listed as an individual property)
South Pasadena	Library Neighborhood Historic District Generally bounded by Diamond Avenue, Oxley Street, Fremont Avenue, and Monterey Road	CHR Status Code: Considered eligible for the National Register for purposes of this project.
South Pasadena	904 Monterey Road	CHR Status Code: Considered eligible for the National Register for purposes of this project

Sources: *Historic Property Survey Report* (2014); *Supplemental Historic Property Survey Report* (2017); *Finding of Adverse Effect for the State Route 710 North Project* (2017); and technical analyses in Chapter 3, Affected Environment, Environmental Consequences, and Avoidance, Minimization and/or Mitigation Measures of the Final EIR/EIS (LSA, 2018).

¹ Only properties within the Area of Potential Effects for the Freeway Tunnel Alternative with a No Effect finding are presented in this table. Refer to Figure 3.6-4 for the locations of the resources discussed in this table.

National Register = National Register of Historic Places

TABLE 3.7.1:
Resources Not Protected under Section 4(f) and Why They are Not Protected under Section 4(f)

Resource Name	Why It is Not Protected under Section 4(f)
CITY OF ALHAMBRA	
Century High School and Independent Alternative High School	There are no recreation resources on the Century High School campus; sports fields and other recreation resources for this school are available from the adjacent Garfield High School. (The potential effects of the Build Alternatives on the recreation resources at Garfield High School were evaluated earlier in this section.)
Private schools (all levels)	Privately owned
The Winston Smoyer Memorial Community Garden	Not a recreation resource; it provides small plots for individual gardeners
YMCA West San Gabriel Valley	Privately owned non-profit organization
EAGLE ROCK (COMMUNITY IN THE CITY OF LOS ANGELES)	
California Academy for Liberal Studies and Early College High School	No recreation resources at this public high school
Private schools (all levels)	Privately owned and operated
Renaissance Arts Academy	No recreation resources at this public high school
EAST LOS ANGELES (UNINCORPORATED LOS ANGELES COUNTY)	
Bienvenidos-East Los Angeles Family Preservation	Privately owned and operated
Boys and Girls Club of East Los Angeles	Privately owned and operated
Casa Maravilla	Privately owned and operated
East Monte Community Center	Privately owned and operated
KIPP Raices Academy	No recreation resources at this public high school
Media Arts High School	No recreation resources at this public high school
Monterey Continuation High School	No recreation resources at this public high school
Private schools (all levels)	Privately owned
EL SERENO (COMMUNITY IN THE CITY OF LOS ANGELES)	
Anahuacalmecac University Preparatory High School/Xinaxcalmecac Academy	No recreation resources at this public high school
Los Angeles County High School for the Arts	No recreation resources at this public high school
Private schools (all levels)	Privately owned and operated
Stern Math and Science High School	No recreation resources at this public high school
CITY OF MONTEREY PARK	
Chinatown Service Center, Monterey Park office	Privately owned and operated
Langley Senior Center	No outdoor and very limited indoor recreation activities; open only to senior citizens
Monterey Park Golf Club	Privately owned and operated, but open to the public
Private schools (all levels)	Privately owned and operated
CITY OF PASADENA	
703 & 711 S. Pasadena Avenue	Privately owned and operated, not a historic resource
Annadale Golf Course	Privately owned and operated
Armory Center for the Arts	Privately owned and operated
Bellevue Drive Garden	Privately owned and operated
El Centro de Accion Social	Privately owned and operated
Fork in the Road	No recreation resources at this parcel with public art
Pasadena Community Garden	Privately owned and operated; not a recreation resource; provides plots for individual gardeners
Pasadena Senior Center	Privately owned and operated
Private schools (all levels)	Privately owned and operated
Rose Bowl Aquatic Center	Privately owned and operated
Rose Tree Cottage and Garden	Privately owned and operated

TABLE 3.7.1:
Resources Not Protected under Section 4(f) and Why They are Not Protected under Section 4(f)

Resource Name	Why It is Not Protected under Section 4(f)
Salvation Army Corps Community Center – Pasadena	Privately owned and operated
Storrier Stearns Gardens	Privately owned and operated, outside of the APE
Tournament Park	Privately owned and operated
Waverly School Farm	Privately owned and operated
CITY OF ROSEMEAD	
Private schools (all levels)	Privately owned and operated
Rosemead Community Recreation Center	Center is a facility for rent for public and private activities but does not provide recreation activities or facilities open to the public
CITY OF SAN GABRIEL	
Asian Youth Center	Privately owned and operated
Private schools (all levels)	Privately owned and operated
CITY OF SAN MARINO	
Huntington Botanical Gardens	Privately owned and operated
Private schools (all levels)	Privately owned and operated
San Marino Center	Privately owned and operated
CITY OF SOUTH PASADENA	
Private schools (all levels)	Privately owned and operated
South Pasadena Senior Center	No outdoor and very limited indoor recreation activities; open only to senior citizens
YMCA South Pasadena/San Marino	Privately owned and operated

Source: LSA Associates, Inc. (2018). Refer also to Chapter 5, References and Preparers, for a list of references used to research resources potentially protected under the requirements of Sections 4(f) and 6(f).

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4. References and Preparers

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4.2 List of Preparers

4.2.1 Caltrans

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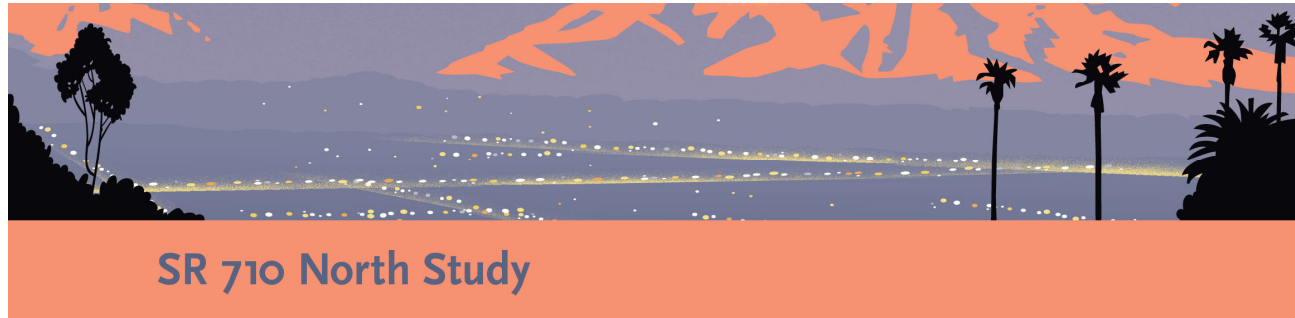
Attachment A: Documentation of Coordination and Consultation

A.1 Section 4(f) Coordination and Consultation with the City of Monterey Park

This attachment contains the following correspondence:

- November 12, 2014 – Draft Meeting Summary Notes of Status Update Meeting with the City of Monterey Park, including discussion of the potential effects of the Bus Rapid Transit (BRT) Alternative on Cascades Park, and an attendance list (4 pages)

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SR 710 North Study

Draft Meeting Summary Notes SR 710 North Study Status Update Meeting with City of Monterey Park

PREPARED FOR: Michelle Smith/Metro

PREPARED BY: CH2M HILL

DATE: November 12, 2014

TIME: 10:00 a.m.

LOCATION: City of Monterey Park
320 W. Newmark Ave., Monterey Park, CA 91754

ATTENDEES: See attached attendance sheet

OVERVIEW:

The purpose of the meeting was to discuss the proposed improvements of the Bus Rapid Transit (BRT) Alternative as it's related to potential impact to Cascade Park:

I. Overview:

- Michelle Smith/Metro gave an overview of the SR 710 North Study and the alternatives that are being considered. These alternatives include:
 - i. No Build
 - ii. Transportation System Management (TSM)/Transportation Demand Management (TDM)
 - iii. Bus Rapid Transit (BRT)
 - iv. Light Rail Transit (LRT)
 - v. Freeway Tunnel
- Yoga Chandran/CH2M HILL and Deborah Pracilio/LSA described that the BRT alternative includes a dedicated bus lane on Atlantic Boulevard through Monterey Park, which would include widening of Atlantic Boulevard by 8-ft at Cascades Park on either side. This would include removing a portion of the curb, replacing the

curb, and replacing signage and landscaping. This minor reduction would affect about 0.025 of Cascade Park.

- Deborah provided an aerial image identifying Cascades Park and asked for confirmation what exactly is considered part of the park. The City confirmed that the median is part of Cascades Park.
- The widening of Atlantic Boulevard would lead up to Cascades Park with a dedicated N/S bus lane. Yoga will confirm the peak hours are Monday through Friday, 7 am to 9 am, and 4 pm to 6 pm. (Yoga confirmed with the design lead that this is the case).
- Businesses may have an issue with a raised median and should be contacted during final design, if this becomes the preferred alternative.
- Aziz Elattar/Metro asked if the City allows turn movements without a raised median. City responded that they have allowed this in their city.
- The City asked if a hybrid solution was considered. Yoga said that the study team is not looking to combine LRT and BRT, but that all alternatives have TSM/TDM. The City asked if the LRT alternative is addressed in the EIR. Yoga stated that all alternatives are evaluated equally and nothing has been ruled out.
- Deborah stated that if the City is in agreement with the impact to Cascades Park, documentation would be provided as part of Section 4(f). The City did not have any issues with the proposed improvements, but was interested in the BRT alternative as a whole.
- The City stated that Cascades Park will be undergoing improvements including all new irrigation, refurbishing the waterfall and rose gardens, and didn't see restoring the sidewalk as an issue. Historic street lights will be removed/replaced. The City will provide as-built drawings, allowing the study team to determine any historic resources/structures under Section 106.
- These improvements by the City are scheduled in phases, with the first phase happening next month. Phase I will include planting and refurbishing the waterfall. Phase II will include repairing the concrete and asphalt sidewalk. Phase II could start in the spring/summer of 2015.
- The Draft Environmental Document will be released in February with a 90-day review period, and will be available at the library. The TAC members will be provided a copy of the document. Amy Ho/City of Monterey Park will be the point person for distribution.
- Amy said that a Class III bike plan (on Atlantic Boulevard) is going to the council in December, and will have to see how that impacts the BRT.

II. Action Items:

- Yoga to confirm that peak hours are Monday through Friday, 7 am to 9 am, and 4 pm to 6 pm. – Confirmed that this is the case

- Yoga to confirm existing curb to curb width. It was confirmed the existing curb to curb width at Cascades Park (Atlantic Boulevard/El Portal Place) is 68 feet.
- City of Monterey Park to provide as-built drawings for Cascade Park.
- City of Monterey Park to provide a copy of the grant application for proposed improvements to Cascade Park.



Appendix C: Title VI Policy Statement

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DEPARTMENT OF TRANSPORTATION

OFFICE OF THE DIRECTOR
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*Making Conservation
a California Way of Life.*

April 2018

**NON-DISCRIMINATION
POLICY STATEMENT**

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964, ensures *"No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."*

Related federal statutes and state law further those protections to include sex, disability, religion, sexual orientation, and age.

For information or guidance on how to file a complaint, please visit the following web page:
http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm.

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Business and Economic Opportunity, 1823 14th Street, MS-79, Sacramento, CA 95811. Telephone (916) 324-8379, TTY 711, email Title.VI@dot.ca.gov, or visit the website www.dot.ca.gov.

A handwritten signature in blue ink, appearing to read "Laurie Berman".

LAURIE BERMAN
Director

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Appendix D: Summary of Relocation Benefits

D.1 California Department of Transportation Relocation Assistance Program

D.1.1 Declaration of Policy

“The purpose of this title is to establish a uniform policy for fair and equitable treatment of persons displaced as a result of federal and federally assisted programs in order that such persons shall not suffer disproportionate injuries as a result of programs designed for the benefit of the public as a whole.”

The Fifth Amendment to the U.S. Constitution states, “No Person shall...be deprived of life, liberty, or property, without due process of law, nor shall private property be taken for public use without just compensation.” The Uniform Act sets forth in statute the due process that must be followed in Real Property acquisitions involving federal funds. Supplementing the Uniform Act is the government-wide single rule for all agencies to follow, set forth in 49 Code of Federal Regulations (CFR) Part 24. Displaced individuals, families, businesses, farms, and nonprofit organizations may be eligible for relocation advisory services and payments, as discussed below.

D.1.2 Fair Housing

The Fair Housing Law (Title VIII of the Civil Rights Act of 1968) sets forth the policy of the United States to provide, within constitutional limitations, for fair housing. This act, and as amended, makes discriminatory practices in the purchase and rental of most residential units illegal. Whenever possible, minority persons shall be given reasonable opportunities to relocate to any available housing regardless of neighborhood, as long as the replacement dwellings are decent, safe, and sanitary and are within their financial means. This policy, however, does not require Caltrans to provide a person a larger payment than is necessary to enable a person to relocate to a comparable replacement dwelling.

Any persons to be displaced will be assigned to a relocation advisor, who will work closely with each displacee in order to see that all payments and benefits are fully utilized and that all regulations are observed, thereby avoiding the possibility of displacees jeopardizing or forfeiting any of their benefits or payments. At the time of the initiation of negotiations (usually the first written offer to purchase), owner-occupants are given a detailed explanation of the state’s relocation services. Tenant occupants of properties to be acquired are contacted soon after the initiation of negotiations and also are given a detailed explanation of the Caltrans Relocation Assistance Program. To avoid loss of possible benefits, no individual, family, business, farm, or nonprofit organization should commit to purchase or rent a replacement property without first contacting a Caltrans relocation advisor.

D.1.3 Relocation Assistance Advisory Services

In accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, Caltrans will provide relocation advisory assistance to any person, business, farm or nonprofit organization displaced as a result of the acquisition of real property for public use, so long as they are legally present in the United States. Caltrans will assist eligible displacees in obtaining comparable replacement housing by providing current and continuing information on the

availability and prices of both houses for sale and rental units that are “decent, safe and sanitary.” Nonresidential displacees will receive information on comparable properties for lease or purchase (for business, farm and nonprofit organization relocation services, see below).

Residential replacement dwellings will be in a location generally not less desirable than the displacement neighborhood at prices or rents within the financial ability of the individuals and families displaced, and reasonably accessible to their places of employment. Before any displacement occurs, comparable replacement dwellings will be offered to displacees that are open to all persons regardless of race, color, religion, sex, national origin, and consistent with the requirements of Title VIII of the Civil Rights Act of 1968. This assistance will also include the supplying of information concerning federal and state assisted housing programs and any other known services being offered by public and private agencies in the area.

Persons who are eligible for relocation payments and who are legally occupying the property required for the project will not be asked to move without first being given at least 90 days written notice. Residential occupants eligible for relocation payment(s) will not be required to move unless at least one comparable “decent, safe and sanitary” replacement dwelling, available on the market, is offered to them by Caltrans.

D.1.4 Residential Relocation Payments

The Relocation Assistance Program will help eligible residential occupants by paying certain costs and expenses. These costs are limited to those necessary for or incidental to the purchase or rental of a replacement dwelling and actual reasonable moving expenses to a new location within 50 miles of the displacement property. Any actual moving costs in excess of the 50 miles are the responsibility of the displacee. The Residential Relocation Assistance Program can be summarized as follows.

D.1.4.1 Moving Costs

Any displaced person, who lawfully occupied the acquired property, regardless of the length of occupancy in the property acquired, will be eligible for reimbursement of moving costs. Displacees will receive either the actual reasonable costs involved in moving themselves and personal property up to a maximum of 50 miles, or a fixed payment based on a fixed moving cost schedule. Lawful occupants who move into the displacement property after the initiation of negotiations must wait until Caltrans obtains control of the property in order to be eligible for relocation payments.

D.1.4.2 Purchase Differential

In addition to moving and related expense payments, fully eligible homeowners may be entitled to payments for increased costs of replacement housing.

Homeowners who have owned and occupied their property for 90 days or more prior to the date of the initiation of negotiations (usually the first written offer to purchase the property), may qualify to receive a price differential payment and may qualify to receive reimbursement for certain nonrecurring costs incidental to the purchase of the replacement property. An interest differential payment is also available if the interest rate for the loan on the replacement dwelling is higher than the loan rate on the displacement dwelling, subject to certain limitations on reimbursement based upon the replacement property interest rate. Relocation Housing Payments are limited to \$31,000 for 90-day owner-occupants before consideration must be given to Last Resort Housing (LRH).

D.1.4.3 Rent Differential

Tenants and certain owner-occupants (based on length of ownership) who have occupied the property to be acquired by Caltrans prior to the date of the initiation of negotiations may qualify to receive a rent differential payment. This payment is made when Caltrans determines that the cost to rent a comparable “decent, safe and sanitary” replacement dwelling will be more than the present rent of the displacement dwelling. As an alternative, the tenant may qualify for a down payment benefit designed to assist in the purchase of a replacement property and the payment of certain costs incidental to the purchase, subject to certain limitations noted under the Down Payment section below. The maximum amount payable to any eligible tenant and any owner-occupant of less than 90 days, in addition to moving expenses, is \$7,200. If the total entitlement for rent supplement exceeds \$7,200, the Last Resort Housing Program will be used.

To receive any relocation benefits, the displaced person must buy or rent and occupy a “decent, safe and sanitary” replacement dwelling within one year from the date Caltrans takes legal possession of the property, or from the date the displacee vacates the displacement property, whichever is later.

D.1.4.4 Down Payment

The down payment option has been designed to aid owner-occupants of less than 90 days and tenants in legal occupancy prior to Caltrans’ initiation of negotiations. The down payment and incidental expenses cannot exceed the maximum payment of \$7,200. The one-year eligibility period in which to purchase and occupy a “decent, safe and sanitary” replacement dwelling will apply.

D.1.4.5 Last Resort Housing

Federal regulations (49 CFR 24) contain the policy and procedure for implementing the Last Resort Housing Program on federal-aid projects. Last Resort Housing benefits are, except for the amounts of payments and the methods in making them, the same as those benefits for standard residential relocation as explained above. Last Resort Housing has been designed primarily to cover situations where a displacee cannot be relocated because of lack of available comparable replacement housing, or when the anticipated replacement housing payments exceed the \$31,000 and \$7,200 limits of the standard relocation procedure, because either the displacee lacks the financial ability or other valid circumstances.

After the initiation of negotiations, Caltrans will within a reasonable length of time, personally contact the displacees to gather important information, including the following:

- Number of people to be displaced.
- Specific arrangements needed to accommodate any family member(s) with special needs.
- Financial ability to relocate into comparable replacement dwelling which will adequately house all members of the family.
- Preferences in area of relocation.
- Location of employment or school.

D.1.5 Nonresidential Relocation Assistance

The Nonresidential Relocation Assistance Program provides assistance to businesses, farms and nonprofit organizations in locating suitable replacement property, and reimbursement for certain costs involved in relocation. The Relocation Advisory Assistance Program will provide current lists of properties offered for sale or rent, suitable for a particular business’s specific relocation needs. The types of payments available to eligible businesses, farms and nonprofit organizations are: searching

and moving expenses, and possibly reestablishment expenses; or a fixed in lieu payment instead of any moving, searching and reestablishment expenses. The payment types can be summarized as follows.

D.1.5.1 Moving Expenses

Moving expenses may include the following actual, reasonable costs:

- The moving of inventory, machinery, equipment and similar business-related property, including: dismantling, disconnecting, crating, packing, loading, insuring, transporting, unloading, unpacking, and reconnecting of personal property. Items acquired in the right-of-way contract may not be moved under the Relocation Assistance Program. If the displacee buys an Item Pertaining to the Realty back at salvage value, the cost to move that item is borne by the displacee.
- Loss of tangible personal property provides payment for actual, direct loss of personal property that the owner is permitted not to move.
- Expenses related to searching for a new business site, up to \$2,500, for reasonable expenses actually incurred.

D.1.5.2 Reestablishment Expenses

Reestablishment expenses related to the operation of the business at the new location, up to \$25,000 for reasonable expenses actually incurred.

D.1.5.3 Fixed In Lieu Payment

A fixed payment in lieu of moving, searching, and reestablishment payments may be available to businesses that meet certain eligibility requirements. This payment is an amount equal to half the average annual net earnings for the last two taxable years prior to the relocation and may not be less than \$1,000 nor more than \$40,000.

D.1.6 Additional Information

Reimbursement for moving costs and replacement housing payments are not considered income for the purpose of the Internal Revenue Code of 1954, or for the purpose of determining the extent of eligibility of a displacee for assistance under the Social Security Act, or any other law, except for any federal law providing local "Section 8" Housing Programs.

Any person, business, farm or nonprofit organization that has been refused a relocation payment by the Caltrans relocation advisor or believes that the payment(s) offered by the agency are inadequate may appeal for a special hearing of the complaint. No legal assistance is required. Information about the appeal procedure is available from the relocation advisor.

California law allows for the payment for lost goodwill that arises from the displacement for a public project. A list of ineligible expenses can be obtained from Caltrans Right-of-Way. California's law and the federal regulations covering relocation assistance provide that no payment shall be duplicated by other payments being made by the displacing agency.

Attachment A:

Your Rights and Benefits as a Displaced Business, Farm, or Nonprofit Organization under the Uniform Relocation Assistance Program

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Your Rights and Benefits
as a Displaced
Business, Farm, or
Nonprofit Organization
Under the California
Department of
Transportation Relocation
Assistance Program



California Department of
Transportation

Introduction

In building a modern transportation system, the displacement of a small percentage of the population is often necessary. However, it is the policy of Caltrans that displaced persons shall not suffer unnecessarily as a result of programs designed to benefit the public as a whole.



Displaced businesses, farms, and nonprofit organizations may be eligible for relocation advisory services and payments.

This brochure provides information about available relocation services and payments. If you are required to move as the result of a Caltrans transportation project, a Relocation Agent will contact you. The Relocation Agent will be able to answer your specific questions and provide additional information.

Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as Amended "The Uniform Act"



The purpose of this Act is to provide for uniform and equitable treatment of persons displaced from their business, farm or non-profit organization, by federal and federally assisted programs and to establish uniform and equitable land acquisition policies for federal and federally assisted programs.

49 Code of Federal Regulations Part 24 implements the "Uniform Act" in accordance with the following relocation assistance objective:

To ensure that persons displaced as a direct result of federal or federally-assisted projects 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.

While every effort has been made to assure the accuracy of this booklet, it should be understood that it does not have the force and effect of law, rule, or regulation governing the payment of benefits. Should any difference or error occur, the law will take precedence.

Relocation Services

The California Department of Transportation has two programs to aid businesses, farms and nonprofit organizations which must relocate.

These are:

1. The Relocation Advisory Assistance Program, which is to aid you in locating a suitable replacement property, and
2. The Relocation Payments Program, which is to reimburse you for certain costs involved in relocating. These payments are classified as:
 - Moving and Related Expenses (costs to move personal property not acquired).
 - Reestablishment Expenses (expenses related to the replacement property).
 - In-Lieu Payment (a fixed payment in lieu of moving and related expenses, and reestablishment expenses).

Note: Payment for loss of goodwill is considered an acquisition cost. California law and the federal regulations mandate that relocation payments cannot duplicate other payments such as goodwill.

You will **not** be eligible to receive any relocation payments until the State has actually made the first written offer to purchase the property. You will also receive at least 90 days' written notice before you must move.

Some Important Definitions...

Your relocation benefits can be better understood if you become familiar with the following terms:

Business: Any lawful activity, with the exception of a farm operation, conducted primarily for the purchase, sale, lease and rental of personal or real property, or for the manufacture, processing, and/or marketing of products, commodities, or any other personal property, or for the sale of services to the public, or solely for the purpose of this Act, and outdoor advertising display or displays, when the display(s) must be moved as a result of the project.

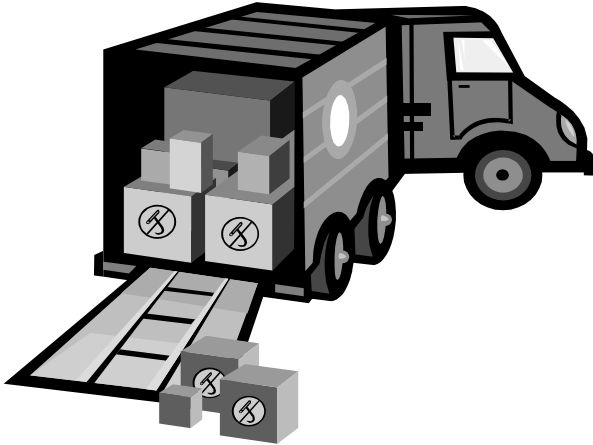
Small Business: A business having not more than 500 employees working at the site being acquired or displaced by a program or project.

Contributes Materially: A business or farm operation must have had average annual gross receipts of at least \$5,000 or average annual net earnings of at least \$1,000, in order to qualify as a bona-fide operation.

Farm Operation: Any activity conducted solely or primarily for the production of one or more agricultural products or commodities, including timber, for sale and home use, and customarily producing such products or commodities in sufficient quantity to be capable of contributing materially to the operator's support.

Nonprofit Organization: A public or private entity that has established its nonprofit status under applicable law.

MOVING EXPENSES



If you qualify as a displaced business, farm or nonprofit organization, you are entitled to reimbursement of your moving costs and certain related expenses incurred in moving. To qualify you must legally occupy the property as the owner or lessee/tenant when Caltrans initiates negotiations for the acquisition of the property **OR** at the time Caltrans acquires title or takes possession of the property. However, to assure your eligibility and prompt payment of moving expenses, you should contact your Relocation Agent before you move.

You Can Choose Either:

Actual Reasonable Moving Costs - You may be paid for your actual reasonable moving costs and related expenses when a commercial mover performs the move. Reimbursement will be limited to a move of 50 miles or less. Related expenses, with limitations, may include:

- Transportation.
- Packing and unpacking personal property.
- Disconnecting and reconnecting personal property related to the operation.
- Temporary storage of personal property.
- Insurance while property is in storage or transit, or the loss and damage of personal property if insurance is not reasonably available.
- Expenses in finding a replacement location (\$2,500 limit).
- Professional services to plan and monitor the move of the personal property to the new location.
- Licenses, permits and fees required at the replacement location.

OR

Self-Move Agreement - You may be paid to

move your own personal property based on the lower of two acceptable bids obtained by Caltrans.

Under this option, you will still be eligible for reimbursement of related expenses listed above that were not included in the bids.

OR

In-Lieu Payment – A small business may be eligible to accept a fixed payment between \$1,000 and \$40,000, based on your annual earnings IN LIEU OF the moving cost and related expenses. Consult your Relocation Agent for more information about this option.

Actual Reasonable Moving Costs

You may be paid the actual reasonable and necessary costs of your move when a professional mover performs the move. All of your moving costs must be supported by paid receipts or other evidence of expenses incurred. In addition to the transportation costs of your personal property, certain other expenses may also be reimbursable, such as packing, crating, unpacking and uncrating, and the disconnecting, dismantling, removing, reassembling, and

reinstalling relocated machinery, equipment, and other personal property.

Other expenses such as professional services necessary for planning and carrying out the move, temporary storage costs, and the cost of licenses, permits and certifications may also be reimbursable. This is not intended to be an all-inclusive list of moving related expenses. Your Relocation Agent can provide you with a complete explanation of reimbursable expenses.

Self-Move Agreement

If you agree to take full responsibility for all or part of the move of your business, farm, or nonprofit organization, the Department may approve a payment not to exceed the lower of two acceptable bids obtained by the Department from qualified moving firms or a qualified Department staff employee. A low-cost or uncomplicated move may be based on a single bid or estimate at the Department's discretion. The advantage of this moving option is the fact that it relieves the displaced business, farm, or nonprofit organization operator from documenting all moving expenses. The Department may make the payment without additional documentation as long as the payment is limited to the amount of

the lowest acceptable bid or estimate. Other expenses, such as professional services for planning, storage costs, and the cost of licenses, permits, and certifications may also be reimbursable if determined to be necessary. These latter expenses must be pre approved by the Relocation Agent.

Requirements:

Before you move, you must provide Caltrans with the:

- Certified inventory of all personal property to be moved.
- Date you intend to vacate the property.
- Address of the replacement property.
- Opportunity to monitor and inspect the move from the acquired property to the replacement property.

Related Expenses

1. Searching Expenses for Replacement

Property: Displaced businesses, farms, and nonprofit organizations are entitled to reimbursement for actual reasonable expenses incurred in searching for a replacement property, not to exceed \$2,500. Expenses may include transportation, meals, and lodging when away from home; the reasonable value of the time spent during the search; fees paid to the real estate agents, brokers or consultants; and other expenses determined to be reasonable and necessary by the Department.



2. Direct Loss of Tangible Personal Property:

Displaced businesses, farms, and nonprofit organizations may be eligible for a payment for the actual direct loss of tangible personal property which is incurred as a result of the move or discontinuance of the operation. This payment will be based upon the lesser of:

- a) The fair market value of the item for continued use at the displacement site minus the proceeds from its sale.

OR

- b) The estimated cost of moving and reinstalling the replaced item, based on the lowest acceptable bid or estimate obtained by the Department for eligible moving and related expenses, including dismantling and reassembly, but with no allowance for storage, cost of code requirement betterments or upgrades at the replacement site.

EXAMPLE:

You determine that the "document shredder" cannot be moved to the new location because of its condition, and you will not replace it at the new location.

Fair Market Value of the Document Shredder based on its use at the current location		\$ 1,500
Proceeds: Price received from selling the Document Shredder	-	<u>\$ 500</u>
Net Value		\$ 1,000

OR

Estimated cost to move	\$ 1,050
------------------------	----------

Based on the "lessor of", the amount of the "Loss of Tangible Personal Property" =	\$ 1,000
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Note: You are also entitled to all reasonable costs incurred in attempting to sell the document shredder (e.g. advertisement).

3. Purchase of Substitute Personal Property:

If an item of personal property, which is used as part of the business, farm, or nonprofit organization, is not moved but is promptly replaced with a substitute item that performs a

comparable function at the replacement site, the displacee is entitled to payment of the lesser of:

- a) The cost of the substitute item, including installation costs at the replacement site, minus any proceeds from the sale or trade-in of the replaced item;

OR

- b) The estimated cost of moving and reinstalling the replaced item, based on the lowest acceptable bid or estimate obtained by the Department for eligible moving and related expenses, including dismantling and reassembly, but with no allowance for storage, cost of code requirement betterments or upgrades at the replacement site.

EXAMPLE A:

You determine that the copying machine cannot be moved to the new location because it is now obsolete and you will replace it.

Cost of a substitute <i>Copying Machine</i> including installation costs at the replacement site.		\$ 3,000
Trade-in Allowance	-	<u>\$ 2,500</u>
Net Value		\$ 500

OR

Estimated cost to move		\$ 550
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Based on the "lesser of", the amount of the "Substitute Personal Property" = **\$ 500**

EXAMPLE B:

You determine that the chairs will not be used at the new location because they no longer match the décor and you will replace them.

Cost of substitute chairs		\$ 1,000
Proceeds: From selling the Chairs	-	<u>\$ 100</u>
Net Value		\$ 900

OR

Estimated cost to move \$ 200

Based on the "lesser of", the amount of
the "Substitute Personal Property" = \$ 200

Note: You are also entitled to all reasonable costs incurred in attempting to sell the document shredder (e.g. advertisement).

4. Disconnecting and Reinstallation: You will be reimbursed for your actual and reasonable costs to disconnect, dismantle, remove, reassemble and reinstall any machinery, equipment or other personal property in relation to its move to the new location. This includes connection to utilities available nearby and any modifications to the personalty that is necessary to adapt it to utilities at the replacement site.

5. Physical changes at the new location: You may be reimbursed for certain physical changes to the replacement property if the changes are necessary to permit the reinstallation of machinery or equipment necessary for the continued operation of the business. **Note:** *The changes cannot increase the value of the building*

for general purposes, nor can they increase the mechanical capability of the buildings beyond its normal requirements.

6. The cost of installing utilities from the right of way line to the structure(s) or improvements on the replacement site.

7. Marketing studies, feasibility surveys and soil testing.

8. One-time assessments or impact fees for anticipated heavy utility usage.

Reestablishment Expenses

A small business, farm or nonprofit organization may be eligible for a payment, not to exceed \$25,000, for expenses actually incurred in relocating and reestablishing the enterprise at a replacement site.

Reestablishment expenses may include, but are not limited to, the following:

1. Repairs or improvements to the replacement real property required by Federal, State or local laws, codes or ordinances.
2. Modifications to the replacement of real property to make the structure(s) suitable for the business operation.
3. Construction and installation of exterior signing to advertise the business.
4. Redecoration or replacement such as painting, wallpapering, paneling or carpeting when required by the condition of the replacement site or for aesthetic purposes.
5. Advertising the new business location.
6. The estimated increased costs of operation at the replacement site during the first two years, for items such as:
 - a) Lease or rental charges
 - b) Personal or real property taxes
 - c) Insurance premiums, and
 - d) Utility charges (excluding impact fees).

7. Other items that the Department considers essential for the reestablishment of the business or farm.

In-Lieu Payment (Fixed)

Displaced businesses, farms, and nonprofit organizations may be eligible for a fixed payment in lieu of (in place of) actual moving expenses, personal property losses, searching expense, and reestablishment expenses. The fixed payment may not be less than \$1,000 or more than \$40,000.

For a business to be eligible for a fixed payment, the Department must determine the following:

1. The business owns or rents personal property that must be moved due to the displacement.
2. The business cannot be relocated without a substantial loss of existing patronage.
3. The business is not part of a commercial enterprise having more than three other businesses engaged in the same or similar activity, which are under the same ownership and are not being displaced by the department.

4. The business contributed materially to the income of the displaced business operator during the two taxable years prior to displacement.

Any business operation that is engaged solely in the rental of space to others is not eligible for a fixed payment. This includes the rental of space for residential or business purposes.

Eligibility requirements for farms and nonprofit organizations are slightly different than business requirements. If you are being displaced from a farm or you represent a nonprofit organization and are interested in a fixed payment, please consult your relocation counselor for additional information.

Note: A nonprofit organization must substantiate that it cannot be relocated without a substantial loss of existing patronage (membership or clientele). The payment is based on the average of two years annual gross revenues less administrative expenses.

The Computation of Your In-Lieu Payment:

The fixed payment for a displaced business or farm is based upon the average annual net earnings of the operation for the two taxable

years immediately preceding the taxable year in which it was displaced. Caltrans can use a different two year period if it is determined that the last two taxable years do not accurately reflect the earnings of the operation.

EXAMPLE: Caltrans acquires your property and you move in 2013:

2011 Annual Net Earnings	\$ 10,500
2012 Annual Net Earnings	<u>\$ 12,500</u>
TOTAL	\$ 23,000
Average over two years	\$ 11,500

This would be the amount of your in-lieu payment. Remember - this is in-lieu of all other moving benefits. You must provide the Department with proof of net earnings to support your claim.

Proof of net earnings can be documented by income tax returns, certified financial statements, or other reasonable evidence of net earnings acceptable to the Department.

Note: The computation for nonprofit organizations differs in that the payment is computed on the basis of average annual gross revenues less administrative expenses for the two-year period specified above.

Before You Move:

- A. Complete a "Request for Determination of Entitlement" form available from your Relocation Agent, and return it promptly.
- B. Include a written statement of the reasons the business cannot be relocated without a substantial loss in net earnings.
- C. Provide certified copies of tax returns for the two tax years immediately preceding the tax year in which you move. (If you move anytime in the year 2013, regardless of when negotiations began or the State took title to the property, the taxable years would be 2011 and 2012).
- D. You will be notified of the amount you are entitled to after the application is received and approved.
- E. You cannot receive the payment until after you vacate the property, AND submit a claim for the payment within 18 months of the date of your move.

Relocation Advisory Assistance



Any business, farm or non-profit organization, displaced by Caltrans shall be offered relocation advisory assistance for the purpose of locating a replacement property. Relocation services are provided by qualified personnel employed by Caltrans. It is their goal and desire to be of service to you and assist in any way possible to help you successfully relocate.

A Relocation Agent from Caltrans will contact you personally. Relocation services and payments will be explained to you in accordance with your eligibility. During the initial interview with you, your needs and desires will be determined as well as your need for assistance.

You can expect to receive the following services, advice and assistance from your Relocation Agent who will:

- Determine your needs and preferences.
- Explain the relocation benefits and eligibility.
- Provide information on replacement properties for your consideration.
- Provide information on counseling you can obtain to help minimize hardships in adjusting to your new location.
- Assist you in completing loan documents, rental applications or Relocation Claims Forms.

AND provide information on:

- Security deposits.
- Interest rates and terms.
- Typical down payments.
- Permits, fees and local planning ordinances.
- SBA loan requirements.
- Real property taxes.
- Consumer education literature.

If you desire, your Relocation Agent will give you current listings of other available replacement property. Transportation will be provided to inspect available property, especially if you are elderly or handicapped. Though you may use the services of a real estate broker, Caltrans cannot provide a referral.

Your Relocation Agent is familiar with the services provided by others in your community and will provide information on other federal, state, and local programs offering assistance to displaced persons. If you have special needs, your Relocation Agent will make every effort to secure the services of those agencies with trained personnel who have the expertise to help you.

If the highway project will require a considerable number of people to be relocated, Caltrans will establish a temporary Relocation Field Office on or near the project. Project relocation offices will be open during convenient hours and evening hours if necessary.

In addition to these services, Caltrans is required to coordinate its relocation activities with other agencies causing displacements to ensure that all persons displaced receive fair and consistent relocation benefits.

Remember - YOUR RELOCATION AGENT is there to offer advice and assistance. Do not hesitate to ask questions. And be sure you fully understand all of your rights and available benefits.

YOUR RIGHTS AS A DISPLACEE

It is important to remember that your relocation benefits will not have an adverse effect on you:

- Social Security Eligibility
- Welfare Eligibility
- Income Taxes

In addition, the Title VIII of the Civil Rights Act of 1968 and later acts and amendments make discriminatory practices in the purchase and rental of most residential units illegal if based on race, color, religion, sex, or national origin.

Caltrans' Non-Discrimination Policy ensures that all services and/or benefits will be administered to the general public without regard to race, color, national origin, or sex in compliance with Title VI of the 1964 Civil Rights Act (42 USC 2000d. et seq.).

And you always have the Right to Appeal any decision by Caltrans regarding your relocation benefits and eligibility.

Your Right of Appeal is guaranteed in the "Uniform Act" which states that any person may file an appeal with the head of the responsible

agency if that person believes that the agency has failed to properly determine the person's eligibility or the amount of a payment authorized by the Act.

If you indicate your dissatisfaction, either verbally or in writing, Caltrans will assist you in filing an appeal and explain the procedures to be followed. You will be given a prompt and full opportunity to be heard. You have the right to be represented by legal counsel or other representative in connection with the appeal (but solely at your own expense).

Caltrans will consider all pertinent justifications and materials submitted by you and other available information needed to ensure a fair review. Caltrans will provide you with a written determination resulting from the appeal with an explanation of the basis for the decision. If you are still dissatisfied with the relief granted, Caltrans will advise you that you may seek judicial review.

Americans with Disabilities Act (ADA) Notice:

This document is available in alternative formats for people with physical disabilities. Please call (916) 654-5413, or write to 'Department of Transportation - Right of Way, MS-37, 1120 N Street, Sacramento, CA 95814,' for information.

NOTES:



Non-Residential (2nd Printing)
Effective October 1, 2014

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Sus Derechos y Beneficios
Como Negocio, Operación
Agrícola o Organización No
Lucrativa Desplazada Bajo el
Departamento de
Transportación de California,
Programa para Asistencia de
Reubicación



California Department of
Transportation

Introducción

Cuando se está construyendo un sistema de transporte moderno, el desplazamiento de un pequeño porcentaje de la población es a veces necesario. Sin embargo, es el procedimiento de Caltrans que las personas desplazadas no deben de sufrir innecesariamente como resultado de los programas diseñados para el beneficio del público en general.



Los negocios, operaciones agrícolas, y organizaciones no-lucrativas desplazadas pueden ser elegibles para servicios de reubicación y pagos.

Este libreto le provee información acerca de los servicios y pagos de reubicación disponibles. Si usted tiene que mudarse como resultado de un proyecto de transportación de Caltrans, un Agente de Reubicación lo contactará. El Agente

de Reubicación estará disponible para responderle preguntas específicas y darle información adicional.

Acta de Procedimiento Uniforme de Asistencia para Reubicación y Adquisición de Bienes Raíces de 1970, Emendada “El Acta Uniforme”



El propósito de esta Acta es de proveer uniformidad e igualdad de tratamiento a personas desplazadas de sus negocios, operaciones agrícolas, u organización no-lucrativa, por programas federales o programas asistidos con fondos federales, y de establecer uniformidad e igualdad en los procedimientos para adquisición de tierras para los programas federales y programas asistidos con fondos federales.

El Código de Regulaciones Federales 49, Parte 24 implementa el “Acta Uniforme” de acuerdo a los siguientes objetivos de asistencia de relocalización:

Para asegurar que las personas desplazados como resultado directo de proyectos federales o proyectos asistidos con fondos federales sean tratados con justicia, consistencia e igualdad de tal manera que esas personas no sufran daños desproporcionados como resultado de los proyectos diseñados para el beneficio del público en general.

Mientras se ha hecho todo esfuerzo para asegurar la veracidad de este folleto, debe entenderse que no tiene la fuerza ni efecto de la ley, regla o regulaciones que gobiernan el pago de los beneficios. Si alguna diferencia o error resulta, la ley tomará precedencia.

Servicio de Reubicación

El Departamento de Transportación tiene dos programas para de ayudar a negocios, granjas y organizaciones no-lucrativas que tienen que reubicarse.

Estas son:

1. El Programa de Consejos de Asistencia de Reubicación, que es para ayudarle en localizar una propiedad de reemplazo conveniente, y
2. El Programa de Pagos para Reubicación, que le reembolsará de ciertos costos envueltos en la reubicación. Estos pagos están clasificados como:
 - Gastos Relacionados a Mudanza (costos de mover propiedad personal no adquirida).
 - Gastos de Restablecimiento (gastos relacionados a la propiedad de reemplazo).
 - Pagos Fijos (pago fijo en vez de los gastos de mudanzas y otros gastos relacionados, y gastos de restablecimiento).

Nota: Pagos por pérdida de clientela es considerado un costo de adquisición. La ley de

California y las regulaciones federales mandan que los pagos de reubicación no pueden duplicar otros pagos, como los pagos de pérdida de clientela.

Usted **no** puede ser elegible a recibir ningún pago de reubicación hasta que el Estado haya hecho la primera oferta escrita para comprar su propiedad. Usted también recibirá un aviso escrito por lo menos 90 días antes que se tenga que mover.

Alguna Definiciones Importantes...

Sus beneficios de relocalización pueden ser entendidos mejor si usted se familiariza con los siguientes términos:

Negocio: Cualquier actividad legal, con la excepción de operaciones agrícolas, conducida principalmente para la compra, venta, arrendamiento, y alquiler de bienes personales o bienes raíces, o para la fabricación, elaboración y/o mercadotecnia de productos, mercancías, u otros bienes personales, o solamente para el propósito de ésta Acta, un rótulo con anuncio o anuncios, cuando el rótulo(s) tenga(n) que ser movido(s) como resultado del proyecto.

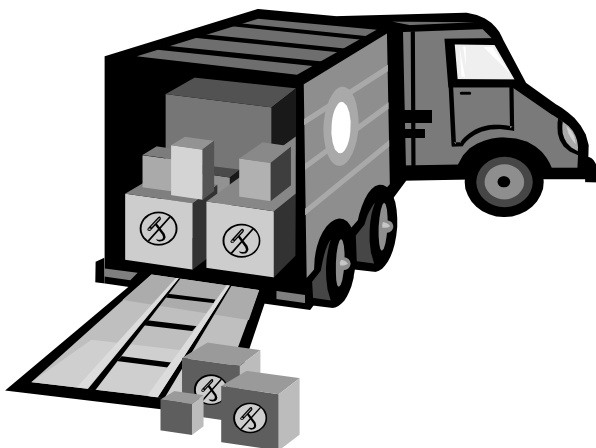
Negocio Pequeños: Un negocio que tenga no más de 500 empleados trabajando en el lugar que esta siendo adquirido o desplazado por un programa o proyecto.

Contribuye Materialmente: Un negocio u operación agrícola debe de haber tenido un ingreso bruto en recibos de al menos \$5,000 o un promedio anual de ingreso netos de al menos \$1,000, para poder calificar como una operación de buena fé.

Operación Agrícola: Cualquier actividad conducida sola o principalmente para la producción de uno o más productos de agricultura o mercancías, incluyendo venta de madera, para la venta y uso en casa, y producción ordinaria de tales productos o mercancía en cantidades suficientes para tener la capacidad de contribuir materialmente al soporte del operario.

Organización No-lucrativa: Una entidad pública o privada que haya establecido su estado de organización no-lucrativa bajo leyes aplicables.

GASTOS DE MUDANZA



Si usted califica como un negocio, operación agrícola, u organización no-lucrativa desplazada, usted puede recibir reembolso de los gastos de mudanza y ciertos gastos relacionados incurridos en la mudanza. Para calificar, usted tiene que ocupar la propiedad legalmente como dueño o inquilino cuando Caltrans inicie negociaciones para la adquisición de la propiedad, O al tiempo que Caltrans adquiera título, o tome posesión de la propiedad. Sin embargo, para asegurar su elegibilidad y el pronto pago de los gastos de mudanza, usted tiene que haber contactado a su Agente de Reubicación antes de que se mude.

Usted Puede Escoger Entre:

Gastos Razonables de Mudanza Actual –

Usted tiene que haber pagado por sus gastos de mudanza razonables y gastos relacionados cuando una compañía comercial hace la mudanza.

El reembolso será limitado a mudanza de 50 millas o menos. Los gastos relacionados, con limitaciones, ***pueden*** incluir:

- Transportación.
- Embalaje y desembalaje propiedad personal
- Desconexión y reconexión relacionada a la operación de la propiedad personal.
- Almacenamiento temporal de la propiedad personal.
- Seguros mientras la propiedad está en almacenamiento o en tránsito, o la propiedad personal es perdida y dañada, si los seguros no son razonablemente disponible.
- Gastos en encontrar un lugar de reemplazamiento (\$2500 máxima).

- Servicios profesionales para planificar y supervisar la mudanza de la propiedad personal al nuevo lugar.
- Licencias, permisos y honorarios requeridos en el lugar de reemplazamiento.
- El costo de instalación de servicios públicos desde la línea del derecho de vía a la estructura(s) o mejoramientos en el sitio de reemplazamiento.
- Estudios de mercado, estudios de factibilidad y exámen de suelo.

○

Contrato de Mudanza Propia – Usted puede ser pagado por mover su propia propiedad personal basado en la más baja de dos ofertas aceptables obtenidas por Caltrans. Bajo esta opción, usted todavía será elegible para el reembolso de los gastos relacionados arriba mencionados, que no fueron incluidos en las ofertas.

○

Pago Fijo – Usted puede aceptar un pago fijo entre \$1,000 y \$40,000 basado en sus ganancias anuales EN VEZ de los costos y gastos relacionados de la mudanza.

Costos Actuales Razonables de Mudanza

Pueden pagársele los gastos actuales razonables y necesarios de su mudanza si lo transporta con una compañía comercial de muebles y mudanzas. Todos sus gastos deben de ser respaldados con recibos u otra evidencia de gastos incurridos. Además de los gastos de transportación de su propiedad personal, ciertos otros gastos también pueden ser reembolsados, tales como empaque, embalaje, desempaque y desembalaje, desconexión, desmantelación, removimiento, reensamblamiento, y reinstalación de maquinaria relocalizada, equipos y otras propiedades personales. Otros gastos necesarios tales como servicios profesionales para planificar y supervisar la mudanza, almacenaje temporal y el costo para licencias, permisos y certificados también pueden ser reembolsables. Esta no es la intención de ser una lista inclusiva de todos los gastos relacionados de mudanza. Su Agente de Reubicación puede proveerle una explicación completa de los gastos reembolsables.

Contrato de Mudanza Propia

Si usted elige tomar la responsabilidad total o parcial para la mudanza de su negocio,

operación agrícola, u organización no-lucrativa, Caltrans puede aprobar un pago sin exceder el presupuesto más bajo de dos ofertas aceptables de una compañía comercial de muebles y mudanzas o por el Agente de Reubicación. Una mudanza a costo bajo o sin complicaciones puede ser basada en una sola oferta o estimado. En realidad, la ventaja de esta opción es que releva de la obligación al operador del negocio, operación agrícola u organización no-lucrativa desplazadas de documentar todos los gastos de mudanza. Caltrans puede hacer el pago sin documentación adicional siempre y cuando el pago sea limitado a la cantidad más baja aceptable de la oferta o del estimado. Otros gastos tales como servicios profesionales para planificar, costos de almacenaje y el costo de licencias, permisos, y certificados también pueden ser reembolsables si son necesarios. Estos gastos tienen que ser aprobados de ante mano por el Agente de Reubicación.

Requisitos:

Antes de que se mueva, usted tiene que proveer a Caltrans con:

- El inventario certificado de toda la propiedad personal que va a mover.

- La fecha que usted intenta desalojar la propiedad.
- La dirección de la propiedad de reemplazamiento.
- La oportunidad de supervisar e inspeccionar la mudanza desde la propiedad adquirida a la propiedad de reemplazo.

Gastos Relacionados

1. Gastos Para la Búsqueda de una Propiedad de Reemplazo – Negocios, operaciones agrícolas, y organizaciones no-lucrativas tienen derecho a un reembolso por gastos actuales razonables, incurridos en la búsqueda de una propiedad de reemplazo, sin exceder \$2,500. Los gastos pueden incluir transportación, alimento y alojamiento cuando esté lejos de su casa; el valor razonable del tiempo que ha gastado buscando una propiedad de reemplazo; los honorarios pagados a agentes de bienes raíces o asesores; y otros gastos determinados por Caltrans como razonables y necesarios.



2. Pérdidas Directas de Bienes Personales

Tangibles: Los negocios, operaciones agrícolas, y organizaciones no-lucrativas desplazada pueden ser elegibles para un pago por pérdidas directas de bienes personales tangibles incurrido como resultado de la mudanza o discontinuación de la operación. Este pago deberá ser basado en el menor de:

- a) El valor de mercado de un producto para uso continuo en el sitio de desplazamiento menos la ganancia por su venta.

O

- b) El costo estimado de mudanza y reinstalación de los objetos reemplazados es basado en la oferta mas baja o el estimado obtenido por Caltrans para mudanza elegible y costos relacionados, incluyendo desmantelamiento y reensamblaje, pero sin pago por almacenamiento.

POR EJEMPLO:

Usted determina que el “contador de documentos” no puede ser movido a la nueva localidad por su condición, y usted no lo va a reemplazar en la nueva localidad.

El Valor de Mercado del Cortador de Documentos basado en su uso actual en La Localidad actual es de \$1,500

Ganancia: Precio recibido por la venta Del Cortador de Documentos -\$ 500

Valor Neto \$1,000

O

El costo estimado de moverlo \$1,050

Basado en el “menor de,” la cantidad de la “Perdida de Propiedad Personal Tangible” **= \$1,000**

Nota: *Usted también tiene derecho a todos los costos razonables incurrido en su esfuerzo por vender el cortado de documentos (por ejemplo, anuncio comercial)*

3. Compra de Substitución de la Propiedad

Personal: Si un objeto de propiedad personal, el cual es usado como parte del negocio, la operación agrícola, o la organización no-lucrativa, no es movido pero es prontamente reemplazado con un objeto sustituto que hace una función comparable en el sitio de reemplazo, el desplazado tiene derecho al menor de:

- a) El costo de un objeto sustituto, incluyendo los costos de instalación en el sitio de reemplazamiento, menos cualquier ganancia por la venta o intercambio del objeto reemplazado.

O

- b) El costo estimado de mudanza y reinstalación del objeto de reemplazo, basado en la oferta mas baja aceptable o el estimado obtenido por Caltrans para una mudanza elegible y gastos relacionados, incluyendo el desmantelamiento y reensamblaje, pero sin pago por almacenamiento

EJEMPLO A:

Usted puede determinar que la máquina copiadora no puede ser movida a la nueva localidad porque es ahora obsoleta y la va a reemplazar.

Costo de substituir una Máquina Copiadora incluyendo costos de instalación en el sitio de reemplazamiento.	\$3,000
Pago por el intercambio	<u>-\$2,500</u>
Valor Neto	\$ 500

O

Costo estimado de la mudanza	\$ 550
Basado en el “menor de” la cantidad de “La Propiedad Personal Substituida.”	\$ 500

EJEMPLO B:

Usted determina que las sillas no van a ser usadas en la nueva localidad, porque ya no combinan con la decoración, y usted las quiere reemplazar.

Costo de la sillas substitutas	\$1,000
Ganancias: Por la venta de las Sillas	<u>-\$ 100</u>
Valor Neto	\$ 900

O

Costo estimado de la mudanza	\$ 200
Basado en el “menor de,” la cantidad de “La Propiedad Personal de Substitución	\$ 200

Nota: *Usted también tiene derecho a todos los gastos razonables incurridos en su esfuerzo por vender la copiadora (Ejemplo A) o las sillas (Ejemplo B).*

4. Desconexión y Reinstalación: Usted va a ser reembolsado por los costos actuales y razonables de desconexión, desmantelamiento, mudanza, reensamblaje, e reinstalación de cualquier maquinaria, equipo u otra propiedad personal en relación a la mudanza a su nuevo local. Esto incluye conexión a los servicios públicos disponibles en el lugar y a cualquier modificación de los objetos personales que sean necesario para adaptar a los servicios públicos en el sitio de reemplazamiento.

5. Cambios Físicos en el nuevo local: Usted puede ser reembolsado por cierto cambios físicos de la propiedad de reemplazamiento si los cambios son necesarios para permitir la reinstalación de la maquinaria o equipo necesario para la continua operación del negocio.

***Nota:** Los cambios no pueden incrementar el valor del edificio para propósitos generales, tampoco pueden incrementar la capacidad mecánica de los edificios más allá de los requerimientos normales.*

6. El costo de instalación de los servicios públicos desde la derecha de la línea de camino a las estructuras o mejoras en el lugar de reemplazo.

7. Los estudios de marketing, encuestas de viabilidad y análisis de suelos.

8. Evaluaciones de una sola vez o tarifas de impacto para uso pesado utilidad esperada.

Gastos De Restablecimiento

Un pequeño negocio, operación agrícola, u organización no-lucrativa puede ser elegible para un pago, que no exceda \$25,000, para los gastos actuales incurridos en la reubicación y el reestablecimiento en el sitio de reemplazo.

Gastos de reestablecimiento pueden incluir, pero no están limitado a, lo siguiente:

1. Reparación y mejoramiento de la propiedad de reemplazamiento requerido por las leyes, códigos, u ordenanzas federales, estatales o locales.
2. Modificaciones de la propiedad de reemplazamiento para hacer la estructura(s) apropiado para la operación del negocio.
3. Construcción e instalación de los letreros exteriores para anunciar el negocio.

4. Redecoración o reemplazamiento como pintura, tapizado de pared, paneles, o carpetas cuando sean requeridas por la condición del sitio de reemplazo o con propósitos estéticos.
5. Anunciar la localidad del nuevo negocio.
6. El aumento del costo estimado de operación en el lugar de reemplazo durante los primeros dos años, por objetos como:
 - a. Cargas de rentas.
 - b. Impuestos de propiedad personal o propiedad real
 - c. Prima de seguros, y
 - d. Carga de servicios públicos (excluyendo honorarios de impacto).
7. Otros objetos que el Departamento considere esenciales para el restablecimiento del negocio ú operación agrícola.

Pago De Una Vez (O Pago Fijo)

Negocios que han sido desplazados, operaciones agrícolas, y organizaciones no-lucrativas podrían ser elegibles para un pago fijo (en vez de) por los gastos actuales de mudanza, pérdida de propiedad personal, gastos de búsqueda, y gastos de restablecimiento. Los pagos fijos no podrán ser menos de \$1,000 o más de \$40,000.

Para que un negocio sea elegible por un pago fijo, Caltrans debe de determinar lo siguiente:

1. El negocio posee o renta propiedad personal que debe de ser movida debido al desplazamiento.
2. El negocio no puede ser relocalizado sin una pérdida substancial de la clientela existente.
3. El negocio no es parte de un empresa comercial que tiene más de tres otros negocios conectados en una misma o actividad similar, las cuales están bajo el mismo dueño y no estan siendo desplazadas por el Departamento.
4. El negocio contribuyó materialmente a las ganancias del operador del negocio desplazado durante los do años anteriores al desplazamiento.

Cualquier operación del negocio que está conectado solamente en la renta del espacio de otros, no es elegible para un pago fijo. Esto incluye la renta de espacio con propósitos residenciales o de negocios.

Los requerimientos de elegibilidad para las operaciones agrícolas y organizaciones no-lucrativas son un poco diferentes a los requerimientos para negocios. Si usted está siendo desplazado de una finca o usted representa una organización no-lucrativa y está interesado en un pago fijo, por favor consulte con su consejero de reubicación para información adicional.

Nota: Una organización sin fines de lucro debe corroborar que no puede ser reubicado sin una pérdida sustancial de patrocinio existente (membresía o clientela). El pago se basa en el promedio de dos años los ingresos brutos menos los gastos administrativos anuales.

La computación de Su Pago Fijo

El pago fijo para un negocio desplazado o una operación agrícola es basado en el promedio anual neto de ganancias de la operación por los dos años inmediatamente precedentes al año en el cual fue desplazado. Caltrans puede usar un período de dos años diferentes, si se determina que los dos últimos años no reflejan con certeza las ganancias de la operación.

Ejemplo: Caltrans adquiere su propiedad y usted se mueve en el 2013:

2011 Ganancias Netas Anuales	\$10,500
2012 Ganancias Netas Anuales	<u>\$12,500</u>
TOTAL	\$23,000
Promedio de los años	\$11,500

Este podría ser la cantidad de su pago fijo. Recuerde – esto es “en vez de” todos los otros beneficios de mudanza, incluyendo restablecimiento. Usted tendrá que proveer Caltrans pruebas de las ganancias netas para verificar su reclamo.

Prueba de las ganancias netas pueden ser documentas con sus declaraciones de impuestos, cartas financieras certificadas, u otra evidencia razonable de las ganancias netas aceptables por Caltrans.

Nota: La computación de las organizaciones no-lucrativas difiere en que los pagos son computados en la base del promedio anual grueso de las ganancias menos los gastos administrativos por el período de los dos años especificados arriba.

Antes de que se Mueva

- A. Completar una "Solicitud de Determinación de Titularidad" forma disponible de su agente de reubicación, y volver de inmediato.
- B. Somete una declaración escrita de las razones por las cuales su negocio no puede ser reubicado sin una pérdida substancial en la ganancia neta.
- C. Provea una copia certificada de su declaración de impuestos de los dos años inmediatamente precedentes al año en el que se va a mover. (Si usted se mueve en cualquier momento en el año 2013, sin importar de cuando comenzaron las negociaciones o cuando el Estado tomó título de su propiedad, los años serán el de 2011 y el 2012.
- D. Usted deberá ser notificado de la cantidad a la que tiene derecho después que la aplicación es recibida y aprobada.
- E. Usted no puede recibir un pago hasta que se haya movido de la propiedad, Y que haya entregado un reclamo de pago dentro de los 18 meses de la fecha de mudanza.

Asistencia de Asesoría de Reubicación



A cualquier negocio, operación agrícola, u organización no-lucrativa, desplazado por Caltrans debe de ofrecer los servicios de asistencia de reubicación con el propósito de localizar una propiedad de reemplazamiento. Los servicios de reubicación deben de ser proveídos por un empleado de Caltrans. Es la meta y el deseo de nosotros de servirle y asistirle en cualquier manera posible para ayudarle a reubicarse exitosamente.

Un Agente de Reubicación de Caltrans se comunicará con usted personalmente, Los servicios de reubicación y los pagos deberán ser explicados a usted de acuerdo con su

elegibilidad. Durante la entrevista inicial con usted, sus necesidades y deseos deberán determinarse así como su necesidad de asistencia.

Usted puede esperar recibir los siguientes servicios, consejos, y asistencia de su Agente de Reubicación quien le:

- Determinará sus necesidades y preferencias.
- Explicará los beneficios de reubicación y su elegibilidad.
- Proveerá información en las propiedades de reemplazo para su consideración.
- Proveerá información en aconsejarle como puede obtener ayuda para minimizar la adversidad en ajustarse a su nuevo local.
- Asistirá en completar los documentos de préstamos, aplicaciones de rentas o Formas de Reclamos de Reubicación.

Y puede proveerle información en:

- Depósitos de seguridad.
- Taza de intereses y términos.

- Pagos típicos de enganches.
- Permisos, honorarios, y ordenanzas locales.
- Requerimientos de préstamos SBA.
- Impuestos de bienes raíces.
- Literatura de educación al consumidor.

Si usted desea, su Agente de Reubicación le dará una lista actual de otras propiedades de reemplazamiento que estén disponibles. Se le proveerá transportación para inspeccionar la propiedad disponible, especialmente si usted es anciano o deshabilitado. Aunque usted puede usar los servicios de un vendedor de bienes raíces, Caltrans no lo puede referir a un agente específico.

Su Agente de Reubicación está familiarizado con los servicios proveído por otros en su comunidad y le proveerá información de otros programas federales, estatales y locales que ofrecen asistencia a las personas desplazadas. Si usted tiene necesidades especiales, su Agente de Reubicación hará un esfuerzo para asegurar los servicios del personal entrenado de estas agencias que tienen la experiencia para ayudarle.

Si el proyecto de carreteras requiere que un número considerable de personas sean reubicadas, Caltrans establecerá Oficinas temporales de Reubicación en o cerca del proyecto. Las oficinas de proyectos de reubicación serán abiertas durante las horas convenientes y hasta horas de la noche si es necesario.

Además de estos servicios, Caltrans será requerido a coordinar las actividades de reubicación con otras agencias causantes de desplazamiento para asegurar que todas las personas desplazadas reciban beneficios de reubicación iguales y consistentes.

Recuerde – Su Agente Reubicación está ahí para ofrecer consejos y asistencia. No tenga dudas en preguntar. Y esté seguro que usted entiende completamente todos los derechos y beneficios disponibles.

SUS DERECHOS COMO UNA PERSONA DESPLAZADA

Es importante que recuerde que los beneficios de reubicación no tendrán un efecto adverso en su:

- Elegibilidad para Seguro Social
- Elegibilidad para Asistencia Social
- Declaración de Impuestos

Además, el **Título VIII del Acta de Derechos Civiles de 1968**, y las actas anteriores y sus enmiendas hacen ilegal las prácticas en la venta y renta de las unidades residenciales que estén basadas en la raza, color, religión, sexo, u origen nacional.

Los Procedimientos No-Discriminatorios de Caltrans aseguran que todos los servicios y/o beneficios sean administrados al público en general sin diferencia de raza, color, origen nacional, o sexo en cumplimiento con el Título VI del Acta de Derechos Civiles de 1964. (42 USC 2000 (d.) et seq.).

Y usted siempre tiene el **Derecho de Apelar** una decisión de Caltrans en relación a sus beneficios de reubicación y elegibilidad.

Su Derecho de Apelación es garantizado en la “Ley Uniforme” que establece que una persona puede apelar con el responsable de la agencia si esta persona cree que la agencia ha fallado en determinar apropiadamente la elegibilidad de la persona o la cantidad de un pago autorizado por la Ley.

Si usted indica su disatisfacción, ya sea verbalmente o por escrito, Caltrans puede asistirle en entregar su caso y explicar los procedimientos a seguir. A usted le darán la oportunidad de ser oído pronta y totalmente. Usted tiene el derecho de ser representado por un consejero legal u otro representante en conexión con la apelación (pero solamente a su propio costo).

Caltrans puede considerar todas las justificaciones pertinentes y materiales entregadas por usted y cualquier otra información disponible que sea necesaria para asegurar una revisión justa. Caltrans le proveerá con una determinación de la apelación por escrito con una explicación de la base de la decisión. Si usted todavía no está satisfecho con las asistencia prestada, Caltrans le aconsejará que usted puede buscar una revisión judicial.

Noticiero de la Ley para Americanos con Incapacidades Físicas (ADA):

Para personas con incapacidades físicas, este documento es disponible en formatos alternativos. Para información llame al número (916) 654-5413, o escriba a 'Department of Transportation - Right of Way, MS-37, 1120 N Street, Sacramento, CA 95814.'



Nonresidential (Spanish)
Effective October 1, 2014

Appendix E: Environmental Commitments Record

The purpose of the Environmental Commitments Record (ECR) is to ensure that the California Department of Transportation (Caltrans) and/or the Los Angeles County Metropolitan Transportation Authority (Metro) meet their environmental commitments for the project by:

1. Identifying each environmental commitment made for the project, as shown in the Environmental Impact Report/Environmental Impact Statement (EIR/EIS)
2. Specifying how each commitment will be met
3. Documenting the completion of each commitment

The ECR provided on the following pages will be used by the project team as a detailed reference throughout all the project phases, both to identify and track commitments and as the most current detailed source of information regarding those commitments and the status of their implementation.

The California Environmental Quality Act (CEQA), Public Resources Code Section 21081, and Sections 15091 and 15097 of the CEQA Guidelines, require that a Mitigation Monitoring and Reporting Program (MMRP) be adopted when the Lead Agency (in this case, Caltrans or Metro) certifies an EIR for a project. The purpose of the MMRP is to assign responsibility for the implementation, monitoring, and timing of each measure that has been identified to avoid or substantially reduce an environmental impact of the project. The CEQA Lead Agency is required to ensure compliance with each of the adopted mitigation measures outlined in the MMRP because significant environmental impacts could result from the project if the mitigation measures are not implemented. The ECR provided in this Appendix meets the requirements for an MMRP for the project under CEQA.

Once the project is constructed, a report will be included in the project files at Caltrans or Metro, as appropriate, reporting the compliance of the project design, construction, and operations with the avoidance, minimization, and mitigation measures in the EIR/EIS.

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Task and Brief Description	Responsible Branch/Staff	Timing/ Phase	NSSP Req.	Action Taken to Comply With Task	Task Completed		Remarks	Environmental Compliance	
					Initials	Date		Initials	Date
Design Kick-Off	Project Management and Project Development	Beginning of 1 phase							
Environmental PS&E Review	Project Management and Environmental	District PS&E Circulation							
Preconstruction Meeting	Project Management	Contract Award							
Transfer Resident Engineer Book	Project Engineer	Preconstruction Meeting							
Pre-Job Meeting	Project Management and Construction	Construction							
Environmental Compliance Review	Project Management and Construction	Safety Review							
Design Features Memorandum	Project Management and Construction	Post-construction							
LAND USE									
LU-1*	General Plans (applies to all four Build Alternatives): The Build Alternatives would result in inconsistencies with local jurisdictions' General Plans and/or other local land use plans. If a Build Alternative is selected for implementation, the Los Angeles County Metropolitan Transportation Authority (for the TSM/TDM, BRT, and LRT Alternatives) and the California Department of Transportation (for the Freeway Tunnel Alternative) will request the applicable local jurisdictions to amend their General Plans and/or other local land use plans after the acquisition of land for the selected alternative to reflect the improvements in that Build Alternative.	Metro or Caltrans Project Team	After property acquisition						
LU-2	Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and Federal Transportation Improvement Program (FTIP) (applies to the Bus Rapid Transit [BRT], and Light Rail Transit [LRT] Alternatives or any Freeway Tunnel Alternative other than the Freeway Tunnel Alternative with the dual-bore tunnel design and tolled operational variation): If the BRT Alternative, LRT Alternative, or any Freeway Tunnel Alternative other than the Freeway Tunnel Alternative with the dual-bore tunnel design and tolled operational variation is selected for implementation, the Los Angeles County Metropolitan Transportation Authority will coordinate with the Southern California Association of Governments on needed amendments to the next cycle of the RTP/SCS and FTIP to reflect the selected project. Not Applicable to TSM/TDM Alternative (Preferred Alternative)	Metro or Caltrans Project Team	Prior to approval of the Final EIR/EIS						
Parks-1*	Compliance with the Public Park Preservation Act (California Public Resources Code Sections 5400–5409) (applies to the Bus Rapid Transit [BRT] Alternative only): As part of the right of way acquisition process for the BRT Alternative, the Los Angeles County Metropolitan Transportation Authority (Metro) Division of Right of Way personnel will coordinate with the City of Monterey Park to provide compensation for the acquisition of land from Cascades Park as required under the Public Park Preservation Act. In the event that funds from FHWA are used for improvements in the BRT Alternative, Caltrans will participate in the negotiations with the City of Monterey Park and the land acquisition process for the acquisition of land from Cascades Park. Not Applicable to TSM/TDM Alternative (Preferred Alternative)	Metro	During right-of-way acquisition						
Cascades-1	Temporary Construction Easements (applies to the Bus Rapid Transit [BRT] Alternative): Resident Engineer will require the Construction Contractor to return land in Cascades Park that would be occupied for temporary construction easements (TCEs) to a condition that is at least as good as that which existed prior to the project at the completion of the construction of the BRT Alternative in this area. At a minimum, as part of the construction of the BRT Alternative, the Construction Contractor will replace the existing sidewalks within the boundary of Cascades Park and re-landscape grass/turf areas in the TCEs disturbed by the project construction. Metro will require the Construction Contractor to review the plans for the proposed replacement sidewalks and grass/turf landscaping with the City of Monterey Park prior to installation of those improvements. If any trees are removed from the TCEs, those trees will be replaced elsewhere in Cascades Park after consultation with the City of Monterey Park. The replacement trees, grass, and turf will be similar to the existing plant materials in Cascades Park. The Los Angeles County Metropolitan Transportation Authority (Metro) will require the Construction Contractor to fence and properly secure all active construction areas in and adjacent to Cascades Park within the limits of construction to protect the safety of park patrons during construction. When the sidewalks in Cascades Park at Atlantic Boulevard are temporarily closed during construction, Metro will require the Construction Contractor to develop and clearly sign pedestrian detours prior to the intersections of Atlantic Boulevard and El Portal Place to avoid making pedestrians backtrack to get to a safe crossing.	Metro Resident Engineer and the Construction Contractor	During and after occupation of land for TCEs						

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply With Task	Task Completed		Remarks	Environmental Compliance	
					Initials	Date		Initials	Date
<p>In the event that funds from FHWA are used for improvements in the BRT Alternative, Caltrans will work in conjunction with Metro to ensure that the provisions of this measure that are related to returning land in Cascades Park used as a TCE to a condition at least as good as that which existed prior to the project are satisfied.</p> <p>Not Applicable to TSM/TDM Alternative (Preferred Alternative)</p>									
<p>Cascades-2 Permanent Incorporation of Land (applies to the BRT Alternative): Metro will include the replacement of the sidewalks affected by the permanent incorporation of land in Cascades Park in the adjacent areas of Cascades Park as part of final design. These are expected to be areas within the TCEs. If any shrubs and/or trees are removed from the areas that will be permanently incorporated, the Construction Contractor will replace those trees elsewhere in Cascades Park after consultation with the City of Monterey Park. The replacement shrubs and trees will be similar to the existing plant materials in Cascades Park.</p> <p>In the event that funds from FHWA are used for improvements in the BRT Alternative, Caltrans will work in conjunction with Metro to ensure that the provisions of this measure related to replacing sidewalks and shrubs/trees in Cascades Park are satisfied.</p> <p>Not Applicable to TSM/TDM Alternative (Preferred Alternative)</p>	Metro Project Engineer and the Construction Contractor	During final design and construction							
GROWTH									
No avoidance, minimization, or mitigation measures are required.									
COMMUNITY IMPACTS AND RELOCATION (INCLUDING ENVIRONMENTAL JUSTICE)									
<p>CI-1 Property Acquisition (applies to all four Build Alternatives): All acquisition of property for improvements in the Build Alternatives by the Los Angeles County Metropolitan Transportation Authority (for the Transportation System Management/Transportation Demand Management, Bus Rapid Transit, and Light Rail Transit Alternatives) or the California Department of Transportation (for the Freeway Tunnel Alternative), including any federally funded improvements, will be conducted in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act (Uniform Act) of 1970 as amended. The Uniform Act establishes minimum standards for federally funded programs and projects that require the acquisition of real property (real estate) or the displacement of persons from their homes, businesses, or farms. The Uniform Act's protections and assistance apply to the acquisition, rehabilitation, or demolition of real property for federal or federally funded projects. (Please refer to Appendix D, Summary of Relocation Benefits, for more detail.)</p>	Metro or Caltrans Right of Way	During final design							
UTILITIES AND EMERGENCY SERVICES									
No avoidance, minimization, or mitigation measures are required.									
TRAFFIC AND TRANSPORTATION/PEDESTRIAN AND BICYCLE FACILITIES									
<p>T-1 Transportation Management Plan (applies to all four Build Alternatives): Preliminary Transportation Management Plan (TMP) Data Sheets were prepared for each Build Alternative and are included in the <i>Draft Project Report</i> (2014). Once the preferred alternative is identified, the Project Engineer will prepare a revised TMP Data Sheet and the Final TMP during final design. The objectives of the TMP will be to:</p> <ul style="list-style-type: none"> • Maintain traffic safety during construction; • Effectively maintain an acceptable level of traffic flow throughout the transportation system during construction; • Minimize traffic delays and facilitate reduction of duration of construction activities; • Minimize detours and impacts to pedestrians and bicyclists; • Foster public awareness of the project and related impacts; and • Achieve public acceptance of construction of the project and the Final TMP measures. <p>The TMP will address all aspects of transportation effects of all construction activities on vehicular, pedestrian, and bicycle access and mobility, including: temporary lane, sidewalk, and ramp closures; detours; increases in traffic volumes (including regular traffic and construction traffic, construction equipment, materials delivery vehicles, waste/haul vehicles, and employee commutes); and potential effects on emergency services (e.g., fire, police, ambulances), transit services, bicyclists, and pedestrians). The development of the TMP will be closely coordinated with the California Department of Transportation (Caltrans), the Los Angeles County Metropolitan Transportation Authority (Metro), local jurisdictions (cities and the county), and other potentially affected parties (such as, but not limited to school bus and transit operators and police, fire, and emergency services providers and community</p>	Metro or Caltrans Resident Engineer, Construction Contractor and Project Team	During final design							

Task and Brief Description	Responsible Branch/Staff	Timing/ Phase	NSSP Req.	Action Taken to Comply With Task	Task Completed		Remarks	Environmental Compliance	
					Initials	Date		Initials	Date
<p>organizations). The TMP will identify specific TMP strategies, the party/parties responsible for implementing those strategies, the agencies and parties the TMP strategies will be coordinated with, and the timing of the implementation of those strategies.</p> <p>The TMP will include specific strategies to address short-term, project-related construction effects on traffic, bicyclists, pedestrians, and area residents and businesses. Table 3.5.19 lists the types of TMP strategies that would be applicable to the individual Build Alternatives. The TMP for the Preferred Alternative will include, but not be limited to, those strategies.</p> <p>Ramp Closure Plans will be prepared by a qualified traffic engineer during final design for each on- and/or off-ramp proposed to be closed temporarily for 10 or more days during construction of the Freeway Tunnel Alternative. The ramp closure plans will be implemented by the Resident Engineer during construction. <i>(This TMP component applies to the Freeway Tunnel Alternative only.)</i></p> <p>The Resident Engineer will require the Construction Contractor to implement the strategies in the TMP prior to, during, and after construction activities, as required in the TMP.</p>									
<p>T-2 Pedestrian and Bicycle Facility Closures (applies to all four Build Alternatives): When sidewalks, crosswalks, and/or bicycle facilities are temporarily closed during construction, pedestrian and bicycle detours will be developed and clearly signed prior to closing the locations.</p>	Construction Contractor	During construction							
VISUAL AND AESTHETICS									
<p>V-0 Corridor-Wide Aesthetics Master Plan (applies to Preferred Alternative): A Corridor-Wide Aesthetics Master Plan will be prepared and the detailed and specific measures provided in Measures V-1 through V-6 will be incorporated in the Plan, as appropriate, for the Preferred Alternative during final design.</p>	Metro and Caltrans	During final design							
<p>V-1 Vividness (applies to the Light Rail Transit [LRT] and Freeway Tunnel Alternatives): The Los Angeles County Metropolitan Transportation Authority (Metro) (LRT Alternative) and the California Department of Transportation (Caltrans) (Freeway Tunnel Alternative) will address effects of the Build Alternatives related to a reduction in the vividness of views based on inclusion of the following in the final design:</p> <ul style="list-style-type: none"> • A single visual element will be introduced into the affected view to serve as a visual focal point in the view. An example of this concept would be to introduce a single specimen tree or a signature architectural feature in view. • Screening to diminish distracting visual elements and increase the perception/value of another visual element will be added. An example of this concept is to add landscaping and/or architectural components to screen distracting views. • Visual elements will be added to lend additional focus to an existing accent visual element. An example of this concept is to add trees on both sides of the Key View to visually frame and emphasize an existing visual highlight in the middle of the view. <p>Not Applicable to TSM/TDM Alternative (Preferred Alternative)</p>	Metro and Caltrans	During final design							
<p>V-2 Intactness (applies to the LRT and Freeway Tunnel Alternatives): Metro (LRT Alternative) and Caltrans (Freeway Tunnel Alternative) will address effects of the Build Alternatives related to a reduction in the intactness of views based on inclusion of the following in the final design:</p> <ul style="list-style-type: none"> • Screening such as landscaping or architectural features will be added to diminish the intrusions of new structures into the view. An example of this will be to visually screen intruding power lines and support structures with landscaping. • Encroaching elements will be undergrounded or relocated. An example of this is to relocate or underground visible utility lines. • Intruding objects will be disguised with architectural features, textures, and/or colors. An example of this is to add architectural features to light fixtures or traffic signals that encroach into a view. <p>Not Applicable to TSM/TDM Alternative (Preferred Alternative)</p>	Metro and Caltrans	During final design							
<p>V-3 Unity (applies to the LRT and Freeway Tunnel Alternatives): Metro (LRT Alternative) and Caltrans (Freeway Tunnel Alternative) will address effects of the Build Alternatives related to a reduction in the unity of views based on inclusion of the following in the final design:</p> <ul style="list-style-type: none"> • Screening such as landscaping or architectural features will be added to minimize visual elements that distract from the visual flow of the View. An example of this is to add elements to screen views of new structures or buildings. • Visual elements will be emphasized to help balance the View into major masses of visual space. An 	Metro and Caltrans	During final design							

Task and Brief Description	Responsible Branch/Staff	Timing/Phase	NSSP Req.	Action Taken to Comply With Task	Task Completed		Remarks	Environmental Compliance	
					Initials	Date		Initials	Date
<p>example of this is to add visual elements such as landscaping to minimize the views of new construction and maintain the balance of the view.</p> <ul style="list-style-type: none"> Repetitive elements will be added into the view to introduce or strengthen visual patterns or rhymes of a view. An example of this is to add repetitive elements such as bollards, street trees, flagpoles, or other features to visually tie the view together. <p>Not Applicable to TSM/TDM Alternative (Preferred Alternative)</p>									
<p>V-4 Walls with Aesthetic Treatments (applies to all four Build Alternatives): The final designs of sound walls and retaining walls adjacent to identified viewer groups or within sensitive Key Views within State-owned right of way and for the Freeway Tunnel Alternative will be based on Caltrans Highway Design Manual standards and consideration of community input. Metro design standards will be used for the Transportation System Management/Transportation Demand Management, Bus Rapid Transit, and LRT Alternatives. The wall designs will include enhancements such as, but not limited to, graphic patterns and colors based on input gathered from the local community, stakeholders, and Caltrans.</p>	Metro or Caltrans Landscape Architecture and Project Team	During final design							
<p>V-5 Built Structures (applies to the LRT Alternative): Metro will design the project structures (buildings, columns, retaining walls, sound walls, tunnels, portals, and elevated LRT facilities) to blend with or enhance the surrounding areas. Design considerations such as placement, orientation, shape of structure, color, and type of materials used, and addition of decorative features will be incorporated as appropriate in the project structures.</p> <p>Not Applicable to TSM/TDM Alternative (Preferred Alternative)</p>	Metro	During final design							
<p>V-6 Landscaping (applies to the LRT and Freeway Tunnel Alternatives): Metro (LRT Alternative) and Caltrans (Freeway Tunnel Alternative) will address different levels of visual impacts related to walls and berms and for screening views of project features during final design as follows:</p> <ul style="list-style-type: none"> Low impacts will be addressed based on the incorporation of limited amounts of vines and shrubs and/or trees. Moderate impacts will be addressed with a higher concentration of vines, shrubs, trees and/or larger plant materials to minimize visual effects within 5 years. Additional modifications and/or aesthetic treatments may be incorporated into the final landscaping design based on input from viewers of moderately impacted areas. Moderately high visual impacts will be addressed with a berm planted with ground cover, shrubs, and trees where space allows. Additional modifications and/or aesthetic treatments may be incorporated into the final landscaping design with input from viewers of moderately impacted areas. <p>Not Applicable to TSM/TDM Alternative (Preferred Alternative)</p>	Metro and Caltrans	During final design							
<p>V-7 Short-Term Visual Effects (applies to all four Build Alternatives): During final design, Metro (TSM/TDM, BRT, and LRT Alternatives) and Caltrans (Freeway Tunnel Alternative) will identify land uses adjacent to construction areas that may be sensitive to views of construction, staging, and materials storage areas will be identified on the construction staging plans during the Plans, Specifications and Estimates (PS&E) phase. The final design will include features to minimize views of those areas, including but not limited to: temporary screening, installation of temporary and/or permanent landscaping (particularly trees and shrubs) as early in the construction process as feasible, and/or installation of temporary and/or permanent berms. Metro and Caltrans will require the Construction Contractor to implement and maintain these features throughout the construction period.</p>	Metro or Caltrans Environmental Planning and Design	During final design and during construction							
CULTURAL RESOURCES									
<p>CUL-1 Pre-Construction Surveys: Pre-construction surveys are required and shall be conducted on all historic properties with a finding of Adverse Effect or conditional no Adverse Effect before any construction activities commence. The pre-construction surveys will be performed by licensed Structural Engineers (with a specialization in historic buildings) in collaboration with a qualified Architectural Historian and/or Historic Architect. The qualifications for the Structural Engineer, Architectural Historian, and/or Historic Architect shall be approved by a California Department of Transportation (Caltrans) PQS in collaboration with Metro.</p> <p>The pre-construction condition assessment shall be carried out during final project design phase when more data on site-specific geotechnical conditions are available. The surveys shall document the baseline physical conditions of each historic property (with a finding of Adverse Effect or conditional No Adverse Effect) to better understand the building's structure and condition. Additional localized geotechnical studies shall be performed near each historic property to identify additional strategies and control measures to better protect each historic property during construction. The condition assessment</p>	Structural Engineer, Architectural Historian, and/or Historic Architect	Prior to construction							

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<p>reports shall document all aspects of known structural conditions through observations and measurements, plans, photographs, and any other data the qualified preparer may deem appropriate.</p> <p>Photos and plans may also be used to indicate existing damage on the historic property. The information developed in the pre-construction surveys shall be integrated into the Property-Specific Protection Plans described later in Section 3.7.4.8.</p> <p>The pre-construction condition assessment reports shall be prepared according to an agreed upon template and level of detail to provide sufficient baseline information for historic properties to: (a) assess their existing structural condition, and (b) determine the safe threshold of a historic property when compared to the proposed activity at that location. The pre-construction condition assessment reports shall be completed at least two months prior to construction in the vicinity of the property. The pre-construction surveys will include, but not be limited to, inspection of building foundations, exterior walls, driveways, sidewalks, hardscape elements, and interior floors and walls, and documentation of any pre-existing defects such as cracks, settlement, subsidence, bulges, walls out of plumb, sticking windows and doors, corrosion, and water damage. The inspection can be documented by, but not limited to, measured drawings, sketches, or CAD drawings of all cracks, or photographing or videotaping the elements of the property under inspection. Evaluation of the risk from construction activities may also be incorporated into the reports.</p> <p>Immediately prior to the initiation of construction, the properties where pre-construction surveys were completed as part of the studies for the EIR/EIS will be revisited to confirm the information in the surveys remains valid. The pre-construction surveys will be used as the baseline in the post-construction surveys (discussed later in Section 3.7.4.9), which will document in a report any evidence of change in the physical condition of historic properties following completion of construction.</p> <p>A copy of the pre-construction survey will be made available to the property owner(s). A copy of each survey will also be kept on file with the appropriate municipal department as well as at Caltrans and/or Metro for the duration of the project. If requested by SHPO, its office may also receive copies of the pre-construction surveys.</p>									
<p>CUL-2 Arroyo Seco Parkway Historic District – SOIS Plan: The plan will conform with the <i>Secretary of the Interior's Standards for the Treatment of Historic Properties</i> (SOIS) and will be prepared in consultation with Caltrans CSO and SHPO, as required. The TSM/TDM Alternative would destroy landscaped buffers, install new retaining walls within the boundaries of this historic district, move an existing off-ramp at State Street, and add a new on-ramp, and widen another off-ramp. These Adverse Effects of the TSM/TDM Alternative improvements in the historic district cannot be avoided.</p> <p>To minimize the effects on the character-defining features of the Arroyo Seco Parkway Historic District, the new construction for the TSM/TDM Alternative improvements shall be designed in a manner that is consistent with the SOIS. The project Architectural Historian shall review the final design plans, review mockups as needed, and conduct a field visit to ensure that the following work is performed in accordance with the SOIS. At a minimum, the SOIS Plan will ensure:</p> <ul style="list-style-type: none"> • New elements, like retaining walls, off-ramps, on-ramps, and curbing, will be designed to be compatible with the historic district, in terms of color, materials, profiles, dimensions, etc.; • Any work taking place on character-defining features will minimize potential damage to the historic district; and • All revegetation of buffers and planting strips will be designed to be compatible with the historic district. <p>The requirements for preparation of an SOIS Plan for the TSM/TDM Alternative improvements in the Arroyo Seco Parkway Historic District apply to all four Build Alternatives: TSM/TDM, BRT, LRT, and Freeway Tunnel Alternatives.</p> <p>Caltrans will install a highway sign near the northern entrance to the Parkway at Glenarm Street that welcomes drivers to the Arroyo Seco Parkway Historic District. The sign will be compatible with similar signage found at the southern entrance to the Parkway.</p> <p>Create and Post electronic content for a smart phone traveler application (the Clío or equal) that describes and interprets the Historic District. The content will include historical narrative information, as well as historical photographs, and other documentation. This application will be available free to the public through smartphone application stores prior to the termination of this agreement. The availability</p>	Caltrans and the Architectural Historian	During final design and during construction							

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<p>of the application will be advertised on or in Metro facilities such as bus benches, local bus lines, Gold Line Stations and rail cars within the project area.</p> <p>Caltrans shall submit design development plans for the Fair Oaks and State Street Interchanges for review and comment at 60% and 90% completion.</p> <p>All parties to the MOA will be invited to review the design development plans to determine whether the plans conform to concepts described in the SOIS Plan. All parties to the MOA will provide comments on the submittals to Caltrans within 30 calendar days of receipt. If MOA parties do not comment within the time provided. Caltrans may assume that the MOA parties concur and the package meets the cited objectives.</p> <p>Caltrans will incorporate MOA parties' comments into the project plans to the fullest extent. If Caltrans revises project plans in response to MOA parties' comments, then no further review is required for that consultation package.</p> <p>Should Caltrans object to incorporation of MOA parties' comments into consultation packages at any stage of the project, Caltrans will provide the MOA parties with written explanation of that objection. Objection to the plans shall be resolved in accordance with Stipulation IV.B of the MOA</p>									
<p>CUL-3: Jardin Del Encanto and Cascades Park – SOIS Plan. The SOIS Plan will be prepared in consultation with Caltrans CSO and SHPO, as required. The BRT Alternative would remove 6-feet of park land from a character-defining median within the Jardin del Encanto and Cascades Park. The BRT Alternative would require widening of the existing roadway to accommodate a proposed new bus lane. Therefore, the physical destruction of the 6 feet of sidewalk and park land in that area cannot be avoided.</p> <p>Parts of the sidewalk and park, including the planting strip, in this area have previously been altered.</p> <p>Caltrans shall prepare a SOIS Plan for the Jardin del Encanto and Cascades Park that shall include the following measures:</p> <ul style="list-style-type: none"> • The design of the BRT Alternative shall recreate the same curb plan and profile for the median. The final improvement plans within and near the historic property shall be made in collaboration among the Project Engineer, the Architectural Historian, and/or Historic Architect, and Caltrans and/or Metro. The Architectural Historian and/or Historic Architect shall approve the final plans before project-related activity in this area commences. • Confirm the curved bull nose on the median that would be removed is not historic (e.g., ensure that the materials have been replaced within the past ten years). The proposed new curb shall match the existing curb's bull-nose plan. Additionally, the new curb materials shall match the existing curb materials, aggregate size, dimension of curb, shape, color, profile, etc.; • The sign shall be relocated with the same relationship to the sidewalk; • The new sidewalk shall match the historic sidewalk's color, aggregate, finish, and surface scoring patterns; and • The width of the new planting area between the inner edge of the sidewalk and the grassy area shall be consistent with the historical design. <p>A revegetation and irrigation plan for the new planting areas will be prepared in collaboration and agreement with the City of Monterey Park (City) Public Works Director. The new planting areas will be similar to the existing, non-character-defining plantings. The cost of the revegetation plans would be borne by Caltrans and/or Metro.</p>	Project Engineer, the Architectural Historian, and/or Historic Architect, Caltrans and/or Metro, and the City of Monterey Park Public Works Director	During final design							
<p>CUL-4 Settlement Monitoring Plan. The Settlement Monitoring Plan will be prepared in consultation with Caltrans CSO and SHPO. The objective of the Settlement Monitoring Plan will be to establish reasonable and feasible ground improvement measures and alternative approaches for minimizing settlement to ensure that historic properties sustain the minimum amount of settlement to prevent damage, and to identify persons who are responsible for developing, reviewing, and approving aspects of the Settlement Monitoring Plan. The results of the pre-construction surveys described in Measure CUL-1 will be used to develop the appropriate level of effort to manage and monitor settlement on a case-by-case basis. The Settlement Monitoring Plan will be collaboratively prepared, reviewed, approved, and administered by a qualified Geotechnical Engineer, with input from the designated Structural Engineer and the designated Historic Architect. The Settlement Monitoring Plan will be developed and prepared by the Structural Engineer, Historic Architect, and Geotechnical Engineer. The Settlement Monitoring Plan will be approved by the Structural Engineer, Historic Architect, Geotechnical Engineer, and as required, by</p>	Geotechnical Engineer, Structural Engineer, Historic Architect, Architectural Historian	After pre-construction surveys, prior to and during construction							

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<p>Caltrans CSO and SHPO, prior to any construction or demolition near the historic properties identified in that plan.</p> <p>The primary objective of monitoring is to verify that safe, acceptable levels of settlement resulting from construction-related activities are not exceeded. Monitoring at selected historic properties will be based on the expected level of settlement from excavation and the sensitivity of the historic property including, but not limited to, its method of construction, building height, foundation type (e.g., slab, footer, post-and-pier, or piles), materials, existing overall condition, and overall sensitivity. Any areas identified in the pre-construction surveys that show damage of that may be aggravated by construction-related activities would warrant continuous monitoring during construction. The monitors will be installed prior to construction or demolition, and the continuous monitoring at those locations will be documented. The settlement management and continuous monitoring will be a combined approach. At the discretion of the Resident Engineer, the Structural Engineer, and the Geotechnical Engineer, with input from the Historic Architect and the Architectural Historian and using information from the pre-construction surveys, survey targets and monitors will be placed across existing building cracks to monitor, observe crack behavior, and quantify changes during construction. The monitors can be both attended (monitoring with a technician present) and unattended (automated). Unattended monitors should be located outside buildings in locked cases.</p> <p>The Settlement Monitoring Plan shall be ongoing for up to three years. The Settlement Monitoring Plan shall include advanced monitoring instrumentation, identification of the proper locations for monitors, process for data acquisition, and exceedance notification and reporting procedures, as described in detail below.</p> <ul style="list-style-type: none"> • Instrumentation: Settlement monitors common to these applications shall be selected based on consultation between the Geotechnical Engineer and the Structural Engineer. • Locations of Settlement Monitors: A scaled plan indicating the specific monitoring locations (including measurements to be taken at construction site boundaries and at nearby historic and non-historic properties) shall be prepared by the Structural Engineer, Geotechnical Engineer, and the Historic Architect. Those proposed locations will be submitted to Caltrans and/or Metro for approval. • Data Acquisition: The information that will be included in the data reports, at a minimum, shall be ground movement readings at the same time of day from multiple locations, the maximum settlement for each direction, and additional information as deemed appropriate by the Geotechnical Engineer and Structural Engineer in consultation with the Historic Architect. If warranted, and as requested at the discretion of the Structural Engineer, Geotechnical Engineer, and the Historic Architect, and as approved by Caltrans and/or Metro, the data reports may be expanded to include a requirement for preparing a daily log of vibration activity and readings of appropriate crack monitors at specific properties. • Exceedance Notification and Reporting Procedures: The notification of exceedance and reporting procedures shall be described in the Settlement Monitoring Plan. Those procedures shall include follow up actions to be taken to reduce settlement levels to below allowable limits. In the event the measured settlement levels exceed allowable limits, the Structural Engineer or designated representative shall be notified immediately. Exceedance notices should trigger needed actions, including a potential stop work order to prevent unanticipated damage to a historic property. Work shall be permitted to resume when the Geotechnical Engineer, Structural Engineer, Historic Architect, and Architectural Historian have determined that the appropriate modifications to stabilize the ground have been incorporated into the construction work plan to ensure that no further damage at the affected historic property would likely result. 									
<p>CUL-5 SOIS Plans (Settlement): Where established damage levels for the project are exceeded due to settlement (slight, moderate, and severe as delineated in Table 5.1.1-2 of the FOAE), measures to address that damage will be required, including the restoration of historic properties following property specific SOIS Plans.</p> <p>Damage to historic properties shall be identified using the baseline information recorded in the pre-construction surveys (Section 3.7.4.2). That information shall be compared to the series of post-construction surveys (described later in Section 3.7.4.8). If damage is identified that is a result of settlement effects, then a property-specific SOIS Plan shall be prepared for the damaged historic property. SOIS Plans are required to address Adverse Effects to built-environment historic properties and to ensure the requirements for protection are met, as required under Stipulation X.B.1.b and</p>	Project Engineer, Structural Engineer, Landscape Architect, Architectural Historian, Historic Architect, Caltrans and/or Metro	During final design, prior to and during construction							

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<p>Attachment 5 of the Caltrans Section 106 Programmatic Agreement, and the 5024 Memorandum of Understanding (MOU). The SOIS Plans shall conform to the format specified in Exhibit 7.5 of Caltrans Volume 2 – Standard Environmental Reference (as updated) and include a title page, a summary of the SOIS Plan, a project description, an historic properties description effects and conditions proposed, the qualified monitors, this responsible parties, and any specified attachments.</p> <p>The SOIS Plans shall be prepared by the Project Engineer, Structural Engineer, Landscape Architect, Architectural Historian, Historic Architect, and other appropriate design, engineering, cultural resources specialists, as appropriate, and in consultation with Caltrans CSO and SHPO, as required. The SOIS Plans will be reviewed and approved by the Architectural Historian, the Historic Architect, and Caltrans and/or Metro. Final approval of the SOIS Plans would be indicated when the Caltrans Environmental Branch signs it. During the pre-construction phase, a review of any proposed project improvements covered by an SOIS Plan must be completed by a PQS who meets the Caltrans Professional Qualifications Standards as Principal Architectural Historian and has the experience and expertise to ensure conformance with the Standards.</p> <p>the Architectural Historian and Historic Architect shall verify that the SOIS Plans meet the SOIS for Rehabilitation. The Resident Engineer will require the Construction Contractor to give notice with a specific timetable before the start of rehabilitation-related construction in the vicinity of historic properties to ensure that the Historic Architect or qualified staff under the supervision of the Historic Architect are available to conduct an advance field inspection and to monitor proposed work for conformance with the Standards for Rehabilitation at the identified locations.</p>									
<p>CUL-6 Vibratory Effects of Demolition: Vibratory effects caused by project-related demolition activities can be avoided if jackhammers are not used for demolition activities within 15 feet of historic properties. Avoidance measures for vibratory effects include the required use of alternative types of equipment during demolition within 15 feet of a historic property. Specific required equipment and techniques to avoid vibration include the use of concrete saws instead of jackhammers (or other heavy pavement breaking machinery) within 15 feet of any historic properties. Requirements for in-field monitoring by the Acoustical Engineer with a Historic Architect during demolition and concrete surfacing activities shall be included in the project plans, specifications, and estimates to ensure that the concrete and curb removal is conducted in a manner that generates ground-borne vibration levels that would avoid damage to historic properties.</p> <p>Pile driving is not proposed to be used during construction of any of the Build Alternatives. Should that change, the potential for vibratory effects from pile driving o historic properties shall be evaluated and no pile driving shall take place within 50 feet of historic properties.</p>	Construction Contractor, Acoustical Engineer, Historic Architect	During construction							
<p>CUL-7 Vibration Management and Monitoring Plan (Raymond Florist Historic District): The remaining, identified adverse vibratory effect that cannot be avoided would be caused by the cut-and-cover excavations in the vicinity of the Raymond Florist Historic District. To minimize damage that results from vibratory effects on that property, a pre-construction survey will be required, followed by implementation of a Vibration Management and Monitoring Plan (Vibration Monitoring Plan). The Vibration Monitoring Plan will be prepared, reviewed, approved, and administered collaboratively by a qualified Acoustical Engineer, the Structural Engineer, and the Historic Architect, in consultation with Caltrans CSO and SHPO, as required. The objectives of the Vibration Monitoring Plan are to: (a) establish damage thresholds for various building types; (b) develop procedures and alternative approaches for construction/demolition to ensure that historic properties sustain the minimum amount of vibration to prevent damage; and (c) identify those persons who are responsible for developing, reviewing, and approving aspects of the Vibration Monitoring Plan. The results of the pre-construction surveys will be used to develop the appropriate level of effort to manage and monitor vibration on a case-by-case basis.</p> <p>The primary objective of vibration monitoring is to verify that safe, acceptable levels of vibration by construction-related activities are not exceeded. Vibration monitoring at selected historic properties will be based on the expected level of vibration of a particular activity and the sensitivity of the historic property to vibration effects including, but not limited to, the method of construction, building height, foundation type (e.g., slab, footer, post-and-pier, or piles), overall existing condition, and overall sensitivity. Any structural areas identified in the pre-construction surveys that show existing damage or that may be aggravated by vibration generated by construction-related activities would warrant continuous monitoring during construction. At the discretion of the Structural Engineer and the Acoustical Engineer, survey equipment will monitor existing cracks to observe any changes during construction. Monitoring can be both attended (monitoring with a technician present) and unattended</p>	Structural Engineer, Acoustical Engineer, Historic Architect, and Architectural Historian	After pre-construction surveys, prior to and during construction							

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<p>(automated). Unattended monitors should be located outside the buildings in a locked case.</p> <p>Unattended monitors should be capable of monitoring continuous data and send the data in real time to several different parties including, but not limited to, the Structural Engineer and the Acoustical Engineer to ensure that vibration levels do not exceed the thresholds in the Vibration Monitoring Plan. The vibration monitors should generate an instant email alert when the thresholds are exceeded so that immediate corrective action is taken. The vibration monitors will provide alerts when vibration events approach 0.120 in/sec PPV. If a second exceedance occurs, a stop work order shall be issued by the Resident Engineer, the potential damage to historic properties from vibration shall be assessed by the Structural Engineer and Historic Architect, and ways to avoid exceeding the vibration limits must be adopted to avoid future exceedances. A visual inspection of the property shall be made by the Structural Engineer in consultation with the Historic Architect to verify that no damage is developing, spreading, or occurring as a result of the vibration. A report shall be prepared that documents the cause of the damage, and what measures were taken to ensure it does not continue. The resulting report shall be filed with the Resident Engineer, Caltrans and/or Metro, and SHPO, if SHPO indicates it would like to receive those reports.</p> <p>The Vibration Monitoring Plan shall include the following vibration instrumentation, location of vibration monitors, data acquisition, and exceedance notification and reporting procedures:</p> <ul style="list-style-type: none"> • Vibration Instrumentation: Vibration monitors common to these applications shall be selected based on consultation among the Resident Engineer, Structural Engineer, the Acoustical Engineer, and Caltrans and/or Metro. The monitors will be equipped with cellular modems for internet communication and use of automatic call-home feature to provide real-time notification of vibration level exceedance to the Structural Engineer or their designated representative. The vibration monitor will be set to automatically record daily events during working (construction) hours and to record peak PPV values in short, regular intervals not greater than 30 minutes during construction activities. • Location of Vibration Monitors: A scaled plan indicating the specific monitoring locations (including measurements to be taken at construction site boundaries and at nearby historic and non-historic properties) shall be prepared by the Acoustical Engineer and submitted to the qualified Historic Architect and Architectural Historian for review and approval. • Data Acquisition: Information that will be provided in the data reports will include, at a minimum, daily PPV readings at the same time of day from multiple locations, the maximum peak-vector-sum PPV, the maximum frequency for each direction, and a United States Bureau of Mining R18507 compliance chart of maximum PPV versus frequency. At a minimum, vibration monitoring data shall be sent to the Structural Engineer or their designated representative once a week, or more frequently if needed. The reports shall also identify the construction equipment operating during the monitoring period, and the locations and distances of those pieces of equipment from the vibration-sensitive locations being monitored. The reports shall be reviewed by the Structural Engineer, Acoustical Engineer, and Historic Architect to interpret the findings. • Exceedance Notification and Reporting Procedures: The Vibration Monitoring Plan procedures shall include follow up actions to be taken to reduce vibration levels to below allowable limits. Alarmed monitoring systems shall signal any vibration event that equals or exceeds a threshold of 80 percent of the PPV limit. In the event the measured vibration levels exceed allowable limits, the Structural Engineer or designated representative shall be notified immediately. The exceedance notice will trigger needed actions, including a potential stop work order to prevent unanticipated damage to a historic property. A survey of any potentially affected historic structure will be undertaken by the Structural Engineer and the Historic Architect at this time to ascertain whether any damage to the property has occurred and identify actions that will be undertaken to address this damage and/or future damage. Work shall be permitted to resume when the Structural Engineer, Acoustical Engineer, Historic Architect, and Architectural Historian have determined that the appropriate modifications to the Vibration Monitoring Plan have been made to ensure that no further damage at the affected historic property would likely result. 									
<p>CUL-8 SOIS Plan (Raymond Florist Historic District). Where damage to the Raymond Florist Historic District results from vibration, measures to address that damage will be required including the restoration of historic properties following the SOIS.</p> <p>Damage to historic properties shall be identified using the baseline information recorded in the pre-construction surveys (identified in Measure CUL-1). That information shall be compared to the series of</p>	Project Engineer, Structural Engineer, Landscape Architect, Architectural Historian, Historic Architect, Caltrans and/or Metro	During final design, prior to and during construction							

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<p>post-construction surveys (Measure CUL-13). If damage is identified that is a result of vibratory effects, then a property-specific SOIS Plan shall be prepared for the damaged historic property.</p> <p>SOIS Plans are required to address Adverse Effects to built-environment historic properties and to ensure the requirements for protection are met, as required under Stipulation X.B.1.b and Attachment 5 of the Caltrans Section 106 Programmatic Agreement, and the 5024 Memorandum of Understanding (MOU). The SOIS Plans shall conform specifically to the format specified in Exhibit 7.5 of Caltrans Volume 2 – Standard Environmental Reference (as updated) and include a title page, a summary of the SOIS Plan, a project description, an historic properties description, effects and conditions proposed, the qualified monitors, this responsible parties, and any specified attachments.</p> <p>The SOIS Plans shall be prepared by the Project Engineer, Structural Engineer, Landscape Architect, Architectural Historian, Historic Architect, and other appropriate design, engineering, cultural resources specialists, as appropriate, and in consultation with Caltrans CSO and SHPO, as required. The SOIS Plans will be reviewed and approved by the Architectural Historian, the Historic Architect, and Caltrans and/or Metro. Final approval of the SOIS Plans would be indicated when the Caltrans Environmental Branch signs it. During the pre-construction phase, a review of any proposed project improvements covered by an SOIS Plan must be completed by a PQS who meets the Caltrans Professional Qualifications Standards as Principal Architectural Historian and has the experience and expertise to ensure conformance with the Standards.</p> <p>Plans meet the SOIS for Rehabilitation. The Resident Engineer will require the Construction Contractor to give notice with a specific timetable before the start of rehabilitation-related construction in the vicinity of historic properties to ensure that the Historic Architect or qualified staff under the supervision of the Historic Architect are available to conduct an advance field inspection and to monitor proposed work for conformance with the Standards for Rehabilitation at the identified locations.</p>									
<p>CUL-9 Indirect Visual Effects (Maravilla Handball Court and El Centro Grocery): For the aerial segments of the light rail line in the LRT Alternative, it is not possible to avoid or minimize the indirect visual effect of the aerial light rail line on the Maravilla Handball Court and El Centro Grocery. For the LRT Alternative, measures to address the indirect visual effect from aerial light rail line structure will be developed in consultation with the Consulting Parties as part of the MOA, if the LRT Alternative is selected as the Preferred Alternative. Preliminary ideas can include research projects, interpretative panels, or art installations.</p> <p>For the potential light/shadow effect during operation of the LRT Alternative, additional studies and consultation with Consulting Parties should be completed to identify methods for minimizing the light/shadow effects on the Maravilla Handball Court.</p>	Caltrans and/or Metro	During final design							
<p>CUL-10 Indirect Visual Effects (Old Pasadena Historic District): Mitigation measures for the other proposed ventilation structure near the Old Pasadena Historic District will involve context sensitive design during the pre-construction/final design phase. The ventilation structure at West Colorado Boulevard is near the Old Pasadena Historic District and will adversely affect the settings of the historic district. If this location is chosen for the ventilation structure in the Freeway Tunnel Alternative, to minimize that adverse visual effect, the ventilation structure must be designed to conform to the SOIS. The final design team members working on the ventilation structure design will include the Project Engineer, Structural Engineer, Acoustical Engineer, the Architectural Historian, the Historic Architect, and Caltrans and/or Metro Staff. The design will:</p> <ul style="list-style-type: none"> • Refine the proposed ventilation structure locations to avoid effects to the settings of the Old Pasadena Historic District. A charrette-style meeting shall be conducted that would include appropriate final design team members, including the Architectural Historian and Historic Architect as well as representatives from the City of Pasadena. The focus of this meeting will be to identify where these issues would be addressed to avoid proposed placement of this ventilation structure in areas where historic properties would be adversely affected and to specifically solicit public input regarding the design and materials to be used in the construction of the ventilation structure. • The final design team will ensure that the ventilation structure will be designed and/or set back to minimize the visual and setting effects. <p>As part of the final design team, the Historic Architect and Architectural Historian will review and comment on the proposed location for the ventilation structure and will participate in the development of designs and identification of appropriate building materials to ensure conformance with the Standards for the Treatment of Historic Properties-Preservation. A report outlining how the final design</p>	Project Engineer, Structural Engineer, Acoustical Engineer, the Architectural Historian, the Historic Architect, and Caltrans and/or Metro Staff	During final design							

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complies with the SOIS will be prepared by the Historic Architect and submitted to Caltrans and/or Metro and SHPO for review, comment, and approval.									
CUL-11 Groundborne Noise Effects (100 North Fremont and Rialto Theatre): Where properties are located above the underground portion of the LRT Alternative, the Project Engineer will ensure that the final design of the LRT Alternative complies with appropriate FTA operational ground-borne noise criteria, based on the type of land use activities being undertaken at the property. Where the potential for exceedance for the FTA ground-borne noise criteria is identified, the Project Engineer will ensure that appropriate abatement measures are incorporated into the design of the rail track to meet FTA criteria for the associated land use. Abatement measures that could be incorporated into the track design to achieve the FTA criteria include, but are not limited to, high resilience direct fixation fasteners (HRDF), rail suspension fasteners (RSF), isolated slab track (IST), or floating slab track (FDT).	Project Engineer	During final design							
CUL-12 Property-Specific Protection Plans: The intent of the Property-Specific Protection Plan is to ensure that the potential effects of the preferred alternative on each adversely affected property are addressed by specific mitigation measures implemented as part of the project pre-construction, construction, and post-construction phases. These include: At a minimum, the Property-Specific Protection Plan for the properties adversely affected by the selected alternative will include the following for each affected property: <ul style="list-style-type: none"> Name, address, boundary, and description of the historic property List of potential Adverse Effects of the selected alternative on each historic property and the mitigation measures included in that alternative to address those effects Key actions required in each mitigation measure Party/parties responsible for implementing each key action in each mitigation measure Other party/parties involved in implementing, overseeing, and/or documenting the implementation of the key actions in each mitigation measure Timing of the implementation of the key actions in each mitigation measure (final design/pre-construction, construction, and/or post-construction) Requirements for documenting compliance with the requirements of each mitigation measure Other relevant technical and supporting information During final design, the Project Engineer, in consultation with the Historic Architect, the Architectural Historian, the Structural Engineer, the Acoustical Engineer, and the Geotechnical Engineer, will prepare a Property-Specific Protection Plan for all properties adversely affected by the project. Properties subject to this measure are the historic properties that would be adversely affected by the Build Alternatives. The Property-Specific Protection Plans shall be prepared in consultation with Caltrans CSO and SHPO, as required. A Property-Specific Protection Plan will be prepared during the final design for each of the historic properties adversely affected by the selected alternative. The Project Engineer, Resident Engineer, and the Construction Contractor will be required to implement the Property-Specific Protection Plans for each property during the appropriate project phases (pre-construction, construction, and/or post-construction).	Project Engineer, Project Team, Resident Engineer, and Construction Contractor	During final design							
CUL-13 Post-Construction Building Surveys: Post-construction building surveys (which would be equal in their level of effort, qualifications or preparers, scope and implementation as the pre-construction surveys described earlier in Section 3.7.4.2) will be conducted for the properties listed in Section 3.7.4.2 which would be adversely affected by the project. The post-construction surveys would be completed within 2 months or 60 days following completion of the work in a specific area. The Construction Contractor and the Resident Engineer will notify the Structural Engineer and Architectural Historian when construction in the vicinity of specified historic property or properties is completed. At that time, the Structural Engineer, the Historic Architect, the Architectural Historian, and the Geotechnical Engineer, and other appropriate qualified specialists will conduct the post-construction surveys. The results of the survey will be documented in a written report, illustrated with photographs and drawings, as appropriate. If the post-construction survey identifies damage to historic properties as a result of project-related activities, the Structural Engineer and Caltrans and/or Metro will consult with the Historic Architect to collaborate on a plan to repair the damage per the SOIS. The repairs will be performed by a qualified Rehabilitation General Contractor who has completed a certified rehabilitation on historic structures. That Rehabilitation General Contractor will perform those repairs under the direction of the Resident	Construction Contractor, Resident Engineer, Structural Engineer, Architectural Historian, Historic Architect, Geotechnical Engineer, and other appropriate qualified specialists	Within 2 months or 60 days following completion of the work in a specific area and ongoing for up to 3 years							

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Engineer, with oversight by the Structural Engineer and the Historic Architect. The cost of the repairs will be paid by Caltrans and/or Metro or the Construction Contractor, depending on the contract provisions. Due to the gradual nature of ground settlement, post-construction settlement monitoring of properties will be ongoing for up to 3 years. Damage connected to slow excavation-induced ground settlement would be addressed using SOIS.									
CUL-14 Post-Review Discovery and Monitoring Plan (applies to all four Build Alternatives): The Post-Review Discovery and Monitoring Plan (PRDMP) for the project is included in Appendix I of the <i>Finding of Adverse Effect</i> . The PRDMP specifies procedures to be followed prior to and during construction activities to ensure compliance with Caltrans Section 106 PA. The policies and procedures in the PRDMP will apply during ground –disturbing activities in areas deemed sensitive for subsurface archaeological deposits, particularly within the vicinity of the Horatio Rust Site and Otsungna Village Site. Archaeological Monitoring Areas are further specified in the PRDMP. The Resident Engineer will require the Construction Contractor to implement the policies and procedures of the PRDMP detailed in Appendix I. The implementation of those requirements will be overseen by a Qualified Archaeological Monitor or a consultant who meets the PQS requirements for a Qualified Archaeological Monitor.	Resident Engineer, Construction Contractor and Project Team	During PS&E phase; during and after construction							
CUL-15 Public Outreach (applies to all four Build Alternatives): Community outreach will be conducted by Caltrans and/or Metro or their designated representative to educate the public about the project and its expected effects and shall include individual consultation with the owners and occupants of historic properties that are likely to be subjected to project-related settlement and/or ground-borne vibration or any other construction or operational effect described in this document and the FOAE. This consultation would provide information demonstrating the relationship between ground settlement, ground-borne noise and vibration, human perception, and superficial and structural damage related to tunnel boring and other construction activities associated with the Build Alternatives. Community outreach methods will consist of certified correspondence, public meetings, or in-person meetings. As part of this outreach, Caltrans and/or Metro or their designated representative will provide a procedure for obtaining feedback and maintaining a registry for ensuring that public comments are addressed. The registry will be updated routinely and will contain the responses provided by appropriate staff based on the nature of the inquires, questions, and requests in a deliberate, timely fashion.	Metro or Caltrans	Prior to construction							
CUL-16 Discovery of Cultural Resources (applies to all four Build Alternatives): If cultural materials are discovered during ground disturbance and earthmoving, the Los Angeles County Metropolitan Transportation Authority (Metro) (TSM/TDM, BRT, and LRT Alternatives) or Caltrans (Freeway Tunnel Alternative) will require the Construction Contractor to divert all such activity within and around the immediate discovery area until a qualified archaeologist can assess the nature and significance of the find.	Metro or Caltrans Resident Engineer and Project Team	During construction							
CUL-17 Discovery of Human Remains (applies to all four Build Alternatives): If human remains are discovered during project construction, 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 Los Angeles 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), which will then notify the Most Likely Descendant (MLD). The person who discovered the remains will also contact Caltrans and/or Metro staff 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. The PRDMP provides more guidance for following the provisions in State Health and Safety Code Section 7050.5 and California PRC Section 5097.98.	Construction contractor	During construction							
CUL-18 Construction Worker Training (applies to all four Build Alternatives): Following the Notice to Proceed but before work begins, the Resident Engineer and the Construction Contractor will provide cultural resources training to key personnel and supervisors. The training will be prepared and conducted by an Archeologist, Architectural Historian, and Historic Architect. The training, which may be in person or via video, will describe the applicable measures for treatment and protection of historic properties in compliance with the SOIS. The training will present and discuss applicable laws, their penalties, and examples of artifacts that may be encountered and potential conditions where historic resources can be damaged during construction. The training will also outline the steps, as per the PRDMP, that must be taken should work crews encounter cultural resources during project-related activities, including the authority of archaeological monitors in conjunction with the Resident Engineer to halt work in the area of a discovery to ensure the resource is protected against further effects.	Construction contractor/Cultural resources monitor	Prior to and during construction							

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HYDROLOGY AND FLOODPLAINS									
No avoidance, minimization, or mitigation measures are required.									
WATER QUALITY AND STORM WATER RUNOFF									
WQ-1 National Pollutant Discharge Elimination (NPDES) General Permit (applies to all four Build Alternatives): The Los Angeles County Metropolitan Transportation Authority (Metro) (for the Transportation System Management/Transportation Demand Management [TSM/TDM], Bus Rapid Transit [BRT], and Light Rail Transit [LRT] Alternatives) or the California Department of Transportation (Caltrans) (Freeway Tunnel Alternative) will require the Construction Contractor to comply with the provisions of the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) Order No. 2009-0009-DWQ, as amended by 2010-2014-DWQ and 2012-0006-DWQ, NPDES No. CAS000002, or any subsequent permit. The project will comply with the Construction General Permit by preparing and implementing a Storm Water Pollution Prevention Plan (SWPPP) to address all construction-related activities, equipment, and materials that have the potential to impact water quality for the appropriate Risk Level. The SWPPP will identify the sources of pollutants that may affect the quality of storm water and include Best Management Practices (BMPs) (e.g., Erosion Control, Sediment Control, and Good Housekeeping BMPs) to control the pollutants, such as sediment control, catch basin inlet protection, temporary soil stabilization, construction materials management, and non-storm water BMPs.	Metro or Caltrans Resident Engineer, Construction Contractor and Project Team	During construction							
WQ-2 Dewatering (applies to all four Build Alternatives): If dewatering is required, Metro (TSM/TDM, BRT, and LRT Alternatives) or Caltrans (Freeway Tunnel Alternative) will require the Construction Contractor to comply with the requirements of Order No. R4-2013-0095 (NPDES No. CAG994004) for construction site dewatering. Order No. R4-2013-0095 covers general waste discharge permits for discharges to surface waters from activities involving groundwater extraction. It covers treated or untreated groundwater generated from permanent or temporary dewatering operations or other appropriate wastewater discharge not specifically covered in other general NPDES permits in the Los Angeles region. Under this order, permittees are required to monitor their discharges from groundwater extraction waste from construction to ensure that effluent limitations for constituents are not exceeded.	Metro or Caltrans Resident Engineer, Construction Contractor and Project Team	During construction							
WQ-3 Groundwater Monitoring (applies to the LRT and Freeway Tunnel Alternatives): Prior to tunneling and construction activities, Caltrans (for the Freeway Tunnel Alternative) or Metro (for the LRT Alternative) will require the Project Geotechnical Engineer and/or the Project Geologist to perform a comprehensive investigation to establish a baseline for groundwater levels and quality (chemistry) in the areas in which tunneling or excavations would occur. In addition, groundwater monitoring will be performed routinely during tunnel excavation to ensure that the activities are not affecting the local groundwater levels and quality. Not Applicable to TSM/TDM Alternative (Preferred Alternative)	Caltrans or Metro	Prior to construction and during tunnel excavation							
WQ-4 Improvements in State-Owned Right of Way (applies to the Freeway Tunnel Alternative): During construction of the improvements within State-owned right of way (ROW), the Resident Engineer will require the Construction Contractor to comply with the provisions of the NPDES Permit, Statewide Storm Water Permit, Waste Discharge Requirements (WDRs) for the State of California, Department of Transportation Order No. 2012-0011-DWQ, NPDES No. CAS000003 (Caltrans Permit) or any subsequent permit. Not Applicable to TSM/TDM Alternative (Preferred Alternative)	Caltrans Resident Engineer	During construction							
WQ-5 Improvements Outside State-Owned Right of Way (applies to the TSM/TDM, BRT, and LRT Alternatives): During construction of the improvements outside State-owned ROW, in compliance with the Standard Urban Storm Water Mitigation Plan (SUSMP) prepared for the Los Angeles Regional Water Quality Control Board WDRs for Municipal Separate Storm Sewer System Order No. R4-2012-0175, NPDES Permit No. CAS004001, as amended, the Resident Engineer will require the Construction Contractor to prepare and implement a final project-specific SUSMP. The final project-specific SUSMP will include implementation of Site Design, Source Control, and Treatment Control BMPs to the maximum extent practicable. Site Design, Source Control, and Treatment Control BMPs such as tree box filters, catch basins, curb inlet filters, media filters, and bioretention facilities.	Metro Resident Engineer	During construction							

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<p>WQ-6 Improvements in State-Owned Right of Way (applies to the Freeway Tunnel Alternative): For improvements within State-owned ROW, the Resident Engineer will require the Construction Contractor to prepare and implement Caltrans-approved Design Pollution Prevention BMPs to the maximum extent practicable consistent with the requirements of the Caltrans Permit and Project Planning and Design Guide. Design Pollution Prevention BMPs include preservation of existing vegetation, slope/surface protection systems (permanent soil stabilization and replanting of vegetation), asphalt concrete dikes, toe-of-fill ditches, and downdrains/overside drains.</p> <p>Not Applicable to TSM/TDM Alternative (Preferred Alternative)</p>	Caltrans Resident Engineer	During construction							
<p>WQ-7 Improvements in State-Owned Right of Way (applies to the Freeway Tunnel Alternative): For improvements within State-owned ROW, the Resident Engineer will require the Construction Contractor to prepare and implement Caltrans-approved Treatment BMPs to the maximum extent practicable consistent with the requirements of the Caltrans Permit and Project Planning and Design Guide. Treatment BMPs include biofiltration swales and gross solid removal devices.</p> <p>Not Applicable to TSM/TDM Alternative (Preferred Alternative)</p>	Caltrans Resident Engineer	During construction							
GEOLOGY, SOILS, SEISMIC, AND TOPOGRAPHY									
<p>GEO-1 Final Geotechnical/Baseline Report (applies to all four Build Alternatives): During preliminary and final design, a comprehensive geologic and geotechnical investigation will be conducted and design-level geotechnical/baseline reports will be prepared. This report will document and provide design recommendations for seismic hazards such as fault-induced ground rupture, ground shaking, co-seismic deformation, slope instability, seismic settlement, liquefaction, or related secondary seismic impacts that may be present along the alignment of the selected Build Alternative project. The report will also provide design recommendations for geology-related constraints such as settlement, collapse potential, expansion, landslides, erosion, and naturally occurring gas. The performance standard for this report will be the geotechnical design standards of the State of California and the California Department of Transportation (Caltrans), the Federal Highway Administration (FHWA), the Los Angeles County Metropolitan Transportation Authority (Metro), and/or the local jurisdiction, as applicable.</p> <p>The Project Engineer will incorporate the measures recommended in the design-level geotechnical report in the final design and project specifications.</p> <p>The Construction Contractor, Design/Build Contractor, or the Private Public Partnership developer, as applicable, will implement the measures recommended in the design-level geotechnical reports as included in the project design and specifications.</p>	Metro or Caltrans Project Engineer	During preliminary and final design							
<p>GEO-2 Quality Assurance/Quality Control Plan (applies to all four Build Alternatives): The Resident Engineer will maintain a quality assurance/quality control (QA/QC) plan during construction (i.e., a Metro QA/QC plan for the Transportation System Management/Transportation Demand Management [TSM/TDM], Bus Rapid Transit [BRT], and Light Rail Transit [LRT] Alternatives, and a Caltrans QA/QC plan for the Freeway Tunnel Alternative). The QA/QC plan will include observing, monitoring, and testing by the Project Geotechnical Engineer and/or the Project Geologist prior to and during construction to confirm that the geotechnical/geologic recommendations from the design-level geotechnical report and standard design and construction practices are fulfilled by the Contractor, or if different site conditions are encountered, appropriate changes are made to accommodate such issues. Comprehensive real time monitoring with geotechnical-tunnel data management software and implementation of an observational approach to construction management will be implemented during construction of the LRT or Freeway Tunnel Alternatives. The Project Geotechnical Engineer and/or the Project Geologist will submit weekly reports to Caltrans or Metro, during all project-related grading, excavation, and construction activities.</p>	Metro or Caltrans Resident Engineer	During construction							
<p>GEO-3 Tunnel Design (applies to the LRT and Freeway Tunnel Alternatives): During preliminary and final design, the Metro (LRT Alternative) or Caltrans (Freeway Tunnel Alternative) Project Engineer will make sure that the following measures are included in the comprehensive geologic and geotechnical investigation and the design-level geotechnical/baseline report and the project design and specifications:</p> <ul style="list-style-type: none"> • A comprehensive geotechnical investigation program will be developed and performed including a site-specific seismic hazards assessment and a site-specific fault characterization evaluation. • A robust construction instrumentation and monitoring program will be developed to monitor ground movements on and below the ground surface along the bored tunnel alignments, cut and cover tunnels, and at portal and underground station excavations in real time. Additionally, structures and 	Metro or Caltrans Project Engineer	During preliminary and final design							

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<p>groundwater levels will also be monitored. Warning and action levels for ground movements will be set so that during construction the contractor will be required to act if action levels are exceeded.</p> <ul style="list-style-type: none"> Pre-construction condition surveys of structures along the tunnel alignment will be performed prior to excavation to determine baseline conditions and the potential for damage of the structures along the alignment. A detailed construction methods assessment will be performed to identify construction methods required to overcome the geologic challenges along the alignment (e.g., variable ground conditions along the alignment, mixed-face conditions, high groundwater heads, and potentially gassy ground conditions). There is extensive experience with the capability of underground structures to remain stable during earthquake shaking. The tunnels, portals, and underground stations will be designed using established procedures to accommodate earthquake shaking. A fault crossing design will be evaluated to be able to accommodate the expected fault offset, maintaining the structural integrity of the tunnel lining and preventing the intrusion of surrounding groundwater into the tunnel. The design will meet the performance criteria of the operating agency. To control gas and groundwater infiltration into the tunnel, a precast concrete segmental tunnel lining with double rubber gasketed joints will be used to provide a watertight and gastight tunnel. Gas-proof and waterproof membranes will be required where applicable for underground stations, cross passages and vault excavations for the fault crossing of the LRT Alternative. <p>Not Applicable to TSM/TDM Alternative (Preferred Alternative)</p>									
<p>GEO-4 Tunnel Construction (applies to the LRT and Freeway Tunnel Alternatives): It is expected that bored tunnels for either the LRT or Freeway Tunnel Alternative would be constructed using a tunnel boring machine (TBM). During construction, the Project Engineer will select a pre-qualified contractor with experience with large, pressurized-face TBMs. The Project Engineer will ensure that the Construction Contractor implements the following measures during tunnel boring operations:</p> <ul style="list-style-type: none"> The contractor is expected to use pressurized-face TBMs for the bored tunnels which are routinely used to successfully control ground losses and the contractor will be required to use a sufficiently-stiff support system for the portal and underground station excavation support to meet specific ground loss guidelines developed in the design phase to minimize surface ground settlement, which would minimize damage to existing structures. Conservative values and techniques will be specified so that ground movements are below the levels that could cause structural damage and the TBM will be operated to comply with the requirements. The contractor will have a contingency plan of action if the instruments read that ground movements are above established action levels. During tunneling, a positive face pressure will be applied to the tunnel heading as required to limit surface settlement and loss of ground and surface settlement. The ground will be properly conditioned by injecting additives in front of the TBM to allow an adequate face pressure to be maintained. Ground treatment will be performed in areas identified during the design phase to improve ground conditions and to protect critical structures. The ground movements at the surface and above and around the tunnel will be monitored in real time. Ground movements will be controlled throughout the construction duration to confirm that ground control is being achieved and ground movements are below the acceptable levels set during design. If ground movements exceed acceptable levels set during design, then additional measures will be required to reduce excavation-induced settlement and lessen or eliminate the ground movement effects on the adjacent structures. Several methods could be employed including: <ul style="list-style-type: none"> Permeation grouting Compaction grouting Underpinning The TBM expected to be used for the running tunnels will have a comprehensive and integrated backfill grouting system to limit tail- and shield-related ground losses. <p>Not Applicable to TSM/TDM Alternative (Preferred Alternative)</p>	Metro or Caltrans Project Engineer	During construction							
PALEONTOLOGY									
<p>PAL-1* Paleontological Mitigation Plan (PMP) and Paleontological Resources Impact Mitigation Program (PRIMP). For the Transportation System Management/Transportation Demand Management (TSM/TDM), Bus Rapid Transit (BRT), Light Rail Transit (LRT), and Freeway Tunnel Alternatives, during final design, a PRIMP that follows the guidelines of the Society of Vertebrate Paleontology (2010) will be prepared. Preparation of a PMP or PRIMP, as appropriate, during Plans, Specifications, and Estimates</p>	Caltrans or Metro and Project Team	Prior to and during construction							

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<p>(PS&E) will follow the guidelines provided in the Caltrans Standard Environmental Reference Environmental Handbook, Volume 1, Chapter 8 and includes the measures listed below:</p> <ul style="list-style-type: none"> • A qualified paleontologist or representative will attend the pre-construction meeting. At this meeting, the paleontologist will conduct paleontological resources awareness training, including describing the likelihood of encountering paleontological resources during grading and excavation, what types of resources might be discovered, the roles and authorities of the paleontological resources monitors, the methods used to assess and recover discovered resources, and other information relevant to paleontological resources and the monitoring that will be conducted during project construction. • A preconstruction field survey will be conducted in areas with deposits of high paleontological sensitivity after vegetation and paving have been removed, and any observed surface paleontological resources salvaged prior to the beginning of additional grading. • In general, a qualified paleontological monitor will initially be present on a full-time basis whenever excavation would occur within the sediments that have a high paleontological sensitivity rating, and on a spot-check basis when excavating in sediments that have a low sensitivity rating. No monitoring is generally necessary in deposits with no paleontological sensitivity, such as Artificial Fill and Holocene Alluvial Fan Deposits. However, the specific monitoring levels and locations will be developed according to the final design plans and take into account the excavation methods and depths, the thickness of any Artificial Fill and/or Holocene Alluvial Fan Deposits present in the project area, and the sensitivity of the deposits underlying those two geologic units. • Full-time monitoring may be reduced to a part-time or spot-check basis if no resources are being discovered in sediments with a high sensitivity rating (monitoring reductions, when they occur, will be determined by the qualified Principal Paleontologist in consultation with the Resident Engineer). The monitor will inspect fresh cuts and/or spoils piles to recover paleontological resources and/or screen wash for smaller fossils, depending on the material available for inspection. The monitor will be empowered to temporarily divert construction equipment away from the immediate area of the discovery. The monitor will be equipped to rapidly stabilize and remove fossils to avoid prolonged delays to construction schedules. If large mammal fossils or large concentrations of fossils are encountered, heavy equipment will be used to assist in the removal and collection of large materials. • Native sediments of high and low sensitivity will occasionally be spot-screened on site through 1/8- to 1/20-inch mesh screens to determine whether microvertebrates or other small fossils are present. If small fossils are encountered, sediment samples (up to 3 cubic yards, or 6,000 pounds) will be collected and processed through 1/20-inch mesh screens to recover additional fossils. • Recovered specimens will be prepared to the point of identification and permanent preservation. This includes the sorting of any washed mass samples to recover small invertebrate and vertebrate fossils, the removal of surplus sediment from around larger specimens to reduce the volume of storage for the repository and storage cost, and the addition of approved chemical hardeners/stabilizers to fragile specimens. • Specimens will be identified to the lowest taxonomic level possible and curated into an institutional repository with retrievable storage. The repository institutions usually charge a one-time fee based on volume, so removing surplus sediment is important. The repository institution may be a local museum or university with a curator who can retrieve the specimens on request. Caltrans requires that a draft curation agreement be in place with an approved curation facility prior to the initiation of any paleontological monitoring or mitigation activities. • For the Freeway Tunnel Alternative, a Paleontological Mitigation Report will be prepared and submitted to Caltrans to document completion of the mitigation plan. For the TSM/TDM, BRT, and LRT Alternatives, a final report of findings will be prepared and submitted to Metro to document completion of the mitigation program. 									
HAZARDOUS WASTE AND MATERIALS									
<p>HW-1 Striping and Pavement Markings (applies to all four Build Alternatives): During Plans, Specifications and Estimates (PS&E), the Project Engineer will ensure that specifications related to the sampling, handling, and treatment of pavement markings are included and implemented during construction. A qualified contractor will sample and test the striping paint along roads to be disturbed as part of the project for lead chromate. Sampling will be performed on the residue after waste is generated to characterize the waste so that it can be disposed at an appropriate landfill. The field and analytical data obtained during this study will be used to provide a review of the sampling locations and descriptions, a</p>	Metro or Caltrans Project Engineer	During PS&E and prior to construction							

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summary of the analytical results, and recommendations for striping paint removal, containment, and off-site transportation and disposal, as appropriate. The sampling, handling, treatment and disposal of hazardous waste will be conducted in accordance with applicable local, State and federal regulations and requirements, prior to and during construction of the project.									
HW-2 Transformers (applies to the Transportation System Management/Transportation Demand Management [TSM/TDM], Bus Rapid Transit [BRT], and Light Rail Transit [LRT] Alternatives): During PS&E, the Project Engineer will ensure the specifications related to the handling and treatment of transformers are included and implemented if transformer removal is required. The Construction Contractor will contact Southern California Edison prior to handling or removal of electric transformers. Should wood utility poles require removal, the Resident Engineer will require the Construction Contractor to manage (handle, store, transport, and dispose) wood poles as Treated Wood Waste (TWW), a non-RCRA (California) hazardous waste. TWW is wood treated with chemical preservatives such as arsenic, chromium, copper, pentachlorophenol (often associated with the preservation of wooden electric poles) and requires appropriate disposal methods. Any hazardous transformers or poles that are disturbed/removed will be disposed of in accordance with the California Health and Safety Code and Title 22 CCR.	Metro or Caltrans Project Engineer	During PS&E and during construction							
HW-3 Aerially Deposited Lead (ADL) and Lead Compliance Plan (applies to all four Build Alternatives): Prior to construction, the Project Engineer will ensure that the specifications related to the testing and handling of soils with ADL are included during PS&E and implemented during construction. The Construction Contractors responsible for excavating, transporting, or stockpiling soil will prepare a Lead Compliance Plan in accordance with the California Department of Transportation (Caltrans) Code of Safety Practices (Freeway Tunnel Alternative), the California Code of Regulations (all four Build Alternatives), and California Occupational Safety and Health Administration (all four Build Alternatives) standards. The Lead Compliance Plan will address the presence of ADL in the soils within the project area and the health and safety of construction workers.	Metro or Caltrans Project Engineer	Prior to construction							
HW-4 Aerially-Deposited Lead Investigation (applies to all four Build Alternatives): During PS&E, the Project Engineer will ensure the specifications related to soil sampling and handling of soils with ADL are included and implemented prior to any site preparation, disturbance, grading, and construction. The qualified contractor will conduct soil sampling for ADL in unpaved locations adjacent to existing roadways within the project alignment. The analytical results of the soil sampling will determine the appropriate handling of the soil in those areas and the disposal of surplus materials. The sampling, handling, treatment and disposal of hazardous waste will be conducted in accordance with applicable local, State and federal regulations and requirements, prior to and during construction of the project.	Metro or Caltrans Project Engineer	During PS&E and prior to site preparation, disturbance, grading, and construction							
HW-5 Demolition of Structures and Bridges (applies to all four Build Alternatives): The Project Engineer will ensure the specifications related to the sampling, handling, treatment and disposal of ACM, LBP, and equipment containing CFCs, PCBs (fluorescent lights, PCB ballasts), mercury switches, timers, sensors, thermostats, and mercury vapor lamps for structures planned for demolition are included during PS&E and implemented after property acquisition and prior to demolition. The qualified contractor will assess structures planned for demolition within the project area for the possible presence of ACM, LBP, and equipment containing CFCs, PCBs (fluorescent lights, PCB ballasts), mercury switches, timers, sensors, thermostats, and mercury vapor lamps. These studies will be conducted by trained and/or licensed professionals and will comply with the EPA National Emission Standards for Hazardous Air Pollutants 40 Code of Federal Regulations (CFR), South Coast Air Quality Management District (SCAQMD) Rule 1403, Housing and Urban Development, and California Department of Public Health guidelines.	Metro or Caltrans Project Engineer	During PS&E and after property acquisition and prior to demolition							
HW-6 Demolition of Bridges (applies to all four Build Alternatives): The qualified contractor will assess bridges planned for demolition within the project area for the possible presence of ACM and LBP. These studies will be conducted by trained and/or licensed professionals and will comply with the EPA National Emission Standards for Hazardous Air Pollutants 40 CFR, SCAQMD Rule 1403, Housing and Urban Development, and California Department of Public Health guidelines. The results of these studies will provide a description of the ACM and LBP locations, estimated quantity, and recommendations for removal, containment, and off-site transportation and disposal. The sampling, handling, treatment and disposal of hazardous waste will be conducted in accordance with applicable local, State and federal regulations and requirements, prior to and during construction of the project.	Metro or Caltrans Project Engineer	During PS&E and during construction							
HW-7 Traffic Signal Upgrades (applies to all four Build Alternatives): The qualified contractor will assess planned upgrades to traffic signals for the possible presence of mercury containing equipment, mercury lamps, cathode ray tubes, etc. These studies will be conducted by trained and/or licensed professionals. The results of these studies will provide a description of the mercury containing equipment locations, estimated quantity, and recommendations for removal, containment, and off-site transportation and	Metro or Caltrans Project Engineer	During PS&E and during construction							

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					Initials	Date		Initials	Date
disposal. The sampling, handling, treatment and disposal of hazardous waste will be conducted in accordance with applicable local, State and federal regulations and requirements, prior to and during construction of the project.									
HW-8 SCAQMD Rule 1403 (applies to all four Build Alternatives): The Project Engineer will ensure the specifications related to air pollution control during demolition or renovation of a structure or bridge are included during PS&E and implemented prior to demolition or renovation of a structure or bridge. The Construction Contractor will notify the SCAQMD and submit the required fees at least 10 days prior to proceeding with the demolition work (refer to SCAQMD Rule 1403). Failure to do so may result in Los Angeles County Metropolitan Transportation Authority (Metro) or Caltrans being cited for regulatory noncompliance. Notification would fall under Section 7-1.01F, Air Pollution Control, and Section 7-1.04, Permits and Licenses of the Standard Specifications. The Construction Contractors will be required to adhere to the requirements of SCAQMD Rule 1403 during renovation/demolition activities. The sampling, handling, treatment and disposal of hazardous waste will be conducted in accordance with applicable local, State and federal regulations and requirements, prior to and during construction of the project.	Metro or Caltrans Project Engineer	During PS&E and prior to any demolition or renovation of a structure or bridge							
HW-9 Phase II Site Investigations (applies to all four Build Alternatives): The Project Engineer will ensure the specifications related to the handling, treatment, and disposal of hazardous wastes are included during PS&E and implemented prior to Phase II Site Investigations to determine if special handling, treatment, or disposal provisions associated with hazardous wastes will be required for the project and if remediation of a property prior to or after construction and protection of health and safety of workers are required. A qualified contractor will conduct Phase II Site Investigations at all parcels proposed for acquisition or easement and other properties identified in the ISA at the following locations: <ol style="list-style-type: none"> 1. Former Circle K Stores (Subject Property 1), 1000 West Valley Boulevard, Alhambra 2. Fashion Master Cleaners (Subject Property 2), 1433 Huntington Drive, South Pasadena 3. Railroad Right of Way (ROW) (Subject Property 3) north of Valley Boulevard and State Route 710 (SR 710) and immediately south of Alhambra Avenue/Mission Road 4. Elite Cleaners (Subject Property 4), 1310 Fair Oaks Avenue, South Pasadena 5. Blanchard Landfill (Subject Property 5), between Blanchard Avenue and McBride Avenue at 4531 East Blanchard Street, Monterey Park 6. Mercury Die/Mission Corrugated (Subject Property 6), 3201 West Mission Road, Alhambra 7. Arco Station (Subject Property 7), 3201 Valley Boulevard, Alhambra 8. Former Tosco/Unocal Station (Subject Property 8), 2140 Huntington Drive, South Pasadena <p>The ISA was performed to identify impacts to the project from hazardous waste and petroleum product. These impacts will be investigated through a Phase II Site Investigation. The Phase II Site Investigations will be performed prior to completion of the PS&E phase of the project for properties that may be potentially impacted by the selected Build Alternative. Based on the results of the Phase II Site Investigations, additional soil and/or groundwater sampling as well as removal and/or treatment of soil and/or groundwater prior to construction may be necessary. The sampling, handling, treatment and disposal of hazardous waste will be conducted in accordance with applicable local, State and federal regulations and requirements, prior to and during construction of the project.</p>	Metro or Caltrans Project Engineer	Prior to completion of the PS&E phase							
HW-10 Soils Adjacent to the Railroad ROW (applies to the TSM/TDM Alternative): The Project Engineer will ensure the specifications related to the sampling and handling of soils adjacent to the railroad ROW are included during PS&E and implemented prior to disturbance of soils adjacent to the railroad ROW in the Build Alternative ROW. A qualified contractor will sample those soils to determine whether they require special handling and disposal.	Metro or Caltrans Project Engineer	During PS&E and prior to disturbance of soils adjacent to the railroad ROW							
HW-11 Tunnel Construction Activities (applies to the LRT and Freeway Tunnel Alternatives): The Project Engineer will ensure the specifications related to sampling and handling of soils and water during tunnel excavation and boring activities are included during PS&E and implemented prior to the initiation of tunnel excavation and boring. The Construction Contractor will set up a temporary stockpiling area at the construction portals so that excavated material can be sampled as it is excavated. A Sampling and Analysis Plan will be required so that the excavated material is classified properly and so the correct handling methods and the appropriate disposal facility are selected according to Caltrans and State regulatory requirements. Water, including construction water, groundwater, and wet weather flows, will also be sampled. If necessary, the water can be treated at the construction portal areas by the Construction Contractor prior to discharge following an appropriate approved discharge permit into the	Caltrans or Metro Project Engineer	During PS&E and during construction							

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sewer system or discharge to the storm drain through a National Pollutant Discharge Elimination System (NPDES) permit; typically a Construction Contractor is required to have basic water treatment capabilities at the construction site. If the water cannot be treated to meet sewer discharge requirements or if the volume of water for disposal exceeds the discharge permit's capacity, it may need to be transported to an offsite disposal location. Disposal of all materials would need to meet all local, State, and federal regulations, where applicable. Not Applicable to TSM/TDM Alternative (Preferred Alternative)									
HW-12 Unknown Hazards (applies to all four Build Alternatives): The Project Engineer will ensure the specifications related to the monitoring of soil excavations for visible soil staining, odor, and the possible presence of unknown hazardous material sources and pre- and post-construction remediation are included during PS&E and implemented during construction. The Construction Contractor will monitor soil excavations for visible soil staining, odor, and the possible presence of unknown hazardous material sources. The Construction Contractor will have field monitoring equipment (e.g., photoionization detector) on site to facilitate the timely detection of potentially hazardous conditions in the field and protection of workers. If signs of potential impact (odors, discolored soil, etc.) are noted or observed during construction activity, sampling and analysis should be conducted. Soil samples should be analyzed for total petroleum hydrocarbons with carbon chain analysis using EPA Method 8015B and volatile organic compounds by EPA Method 8260B, heavy metals by EPA Method 6010/7000 series, semi-volatile organic compounds by EPA Method 8270, PAHs by EPA Method 8310, and other analytical methods depending on the suspected contaminant where run-off may have collected. If other hazardous materials contamination or sources are suspected or identified during project construction activities, an environmental professional will evaluate the course of action required. This course of action will follow the Unknown Hazards Procedures described in Chapter 7 of the Caltrans Construction Manual (August 2006) for areas within State-owned ROW. For improvements outside the State-owned ROW, applicable State and federal regulations will be followed during construction activities and if any impacts are identified. The sampling, handling, treatment and disposal of hazardous waste will be conducted in accordance with applicable local, State and federal regulations and requirements, prior to and during construction of the project.	Metro or Caltrans Project Engineer	During PS&E and during construction							
HW-13 Bridge Retaining Walls, Noise Barriers, Pile installation (applies to all four Build Alternatives): Special construction methods are to be used during construction of Bridge Retaining Walls, Noise Barriers, and Pile installation where there is contaminated soil and perched groundwater to prevent cross-contamination and creating a conduit for migration of contamination.	Metro or Caltrans Project Engineer	During PS&E and during construction							
AIR QUALITY									
AQ-1 Fugitive Dust (applies to all four Build Alternatives): During clearing, grading, earthmoving, or excavation operations, the Resident Engineer (will require the construction contractor to control excessive fugitive dust emissions by regular watering or other dust preventive measures using the following procedures, as specified in the South Coast Air Quality Management District Rule 403. The Construction Contractor will be required to: <ul style="list-style-type: none"> Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative where appropriate. This applies to both inactive and active sites during workdays, weekends, holidays, and windy conditions. Install wind fencing, phase grading operations where appropriate, and operate water trucks for stabilization of surfaces under windy conditions. When hauling material and operating non-earthmoving equipment, prevent spillage and limit off-road speeds to 15 miles per hour (mph). Limit speed of off-road earthmoving equipment to 10 mph. 	Metro or Caltrans Resident Engineer	During clearing, grading, earthmoving, or excavation							
AQ-2 Equipment and Vehicle Emissions (applies to all four Build Alternatives): During all site preparation, grading, excavation, and construction, either the Resident Engineer for the TSM/TDM, BRT, and LRT Alternatives or the Resident Engineer for the Freeway Tunnel Alternative, as applicable, will require the Construction Contractor to: <ul style="list-style-type: none"> Reduce use, trips, and unnecessary idling from heavy equipment. Use solar-powered rather than diesel-powered changeable message signs. Obtain electricity from power poles rather than from generators where feasible. Maintain and tune engines per manufacturer's specifications to perform at United States Environmental Protection Agency (EPA) certification levels and at verified standards applicable to retrofit technologies. Employ periodic, unscheduled inspections to limit unnecessary idling and to ensure that construction equipment is properly maintained, tuned, and modified consistent with 	Metro or Caltrans Resident Engineer	During site preparation, grading, excavation, and construction							

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<p>established specifications.</p> <ul style="list-style-type: none"> Prohibit any tampering with engines and require continuing adherence to manufacturer’s recommendations. Use new, clean (diesel or retrofitted diesel) equipment meeting the most stringent applicable federal or State standards and commit to the best available emissions control technology. Use Tier 3, or higher, engines for construction equipment with a rated horsepower exceeding 75. Use Tier 2, or higher, engines for construction equipment with a rated horsepower of less than 75. If non-road construction equipment that meets or exceeds Tier 2 or 3 engine standards is not available, the Construction Contractor will be required to use the best available emissions control technologies on all equipment. Utilize EPA-registered particulate traps and other appropriate controls where suitable to reduce emissions of diesel particulate matter and other pollutants at the construction site. 									
<p>AQ-3 Diesel Fuel Emissions and Sensitive Receptors (applies to all four Build Alternatives): Prior to any site disturbance, either the Resident Engineer for the TSM/TDM, BRT, and LRT Alternatives or the Resident Engineer (for the Freeway Tunnel Alternative), as applicable, will require the Construction Contractor to:</p> <ul style="list-style-type: none"> Meet EPA diesel fuel requirements off road and on highway and, where appropriate, use alternative fuels such as natural gas and electric. Identify sensitive receptors in the project area (e.g., residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes) and specify the means by which impacts to these populations will be minimized. For example, locate construction equipment and staging zones away from sensitive receptors and away from fresh air intakes to buildings and air conditioners. 	Metro or Caltrans Resident Engineer	Prior to site disturbance							
<p>AQ-4 California Department of Transportation (Caltrans) Standard Specifications for Construction (applies to the Freeway Tunnel Alternative): During all site preparation, grading, excavation, and construction, the Resident Engineer will require the Construction Contractor to adhere to Caltrans Standard Specifications for Construction (Sections 14-9 and 18 [Dust Control] and Section 39-3.06 [Asphalt Concrete Plant Emissions]).</p> <p>Not Applicable to TSM/TDM Alternative (Preferred Alternative)</p>	Caltrans Resident Engineer	During site preparation, grading, excavation, and construction							
<p>AQ-5 Metro Green Construction Policy (applies to the TSM/TDM, BRT, and LRT Alternatives): Metro will require the Construction Contractors to comply with its “Green Construction Policy” (adopted 2011, or more current) related to the use of greener, less polluting construction equipment and vehicles, and the implementation of best practices to meet or exceed air quality emission standards.</p>	Metro	During construction							
NOISE AND VIBRATION									
<p>N-1 Construction in State-Owned Rights of Way (ROW) (applies to the Freeway Tunnel Alternative only): During construction of the Freeway Tunnel Alternative, the California Department of Transportation (Caltrans) will require the Construction Contractor to control noise from construction activities within State-owned ROWs in conformance with Caltrans Standard Specifications Section (2015) 14 8.02, “Noise Control.” The noise level from the Contractor’s operations between the hours of 9:00 p.m. and 6:00 a.m. will not exceed 86 A-weighted decibels (dBA) at a distance of 50 feet. While not required under the Caltrans Specifications, the Construction Contractor will equip all internal combustion engines with the manufacturer-recommended mufflers and will not operate any internal combustion engine on the job site without the appropriate muffler.</p> <p>The contractor will be required to prepare and implement a Noise Monitoring and Noise Control Plan prior to construction, to protect sensitive receptors against excessive noise from construction activities.</p> <p>Not Applicable to TSM/TDM Alternative (Preferred Alternative)</p>	Caltrans	During Construction							
<p>N-2 Construction Outside State-Owned ROW (applies to the Transportation System Management/Transportation Demand Management [TSM/TDM], Bus Rapid Transit [BRT] and Light Rail Transit [LRT] Alternatives): During construction outside State-owned ROWs, the Los Angeles County Metropolitan Transportation Authority (Metro) will require the Construction Contractors to comply with the hours of operation, the allowable noise levels at specified distances from construction activities, and other noise reduction/avoidance requirements in the applicable jurisdiction’s Municipal Code and/or Noise Ordinance.</p>	Metro	During Construction							

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<p>N-3 Tunnel Boring Machine (applies to the LRT and Freeway Tunnel Alternatives only): Metro (LRT Alternative) or Caltrans (Freeway Tunnel Alternative), as appropriate, will require the Construction Contractor to maintain machinery in good working order during all tunnel boring activities.</p> <p>Not Applicable to TSM/TDM Alternative (Preferred Alternative)</p>	Metro or Caltrans	During Construction							
<p>N-4 Supply and Muck Trains (Applies to the LRT and Freeway Tunnel Alternatives only): The Metro (LRT Alternative) or Caltrans (Freeway Tunnel Alternative) Project Engineer will include the following measures in the Plans, Specifications, and Estimates (PS&E) if supply or muck trains are used to remove spoils:</p> <ul style="list-style-type: none"> • Resilient Mat: A resilient mat system will be used to support and fasten the tunnel train tracks to reduce the ground-borne noise by at least 4 dBA. <p>Not Applicable to TSM/TDM Alternative (Preferred Alternative)</p>	Metro or Caltrans Project Engineer	During the Plans, Specifications, and Estimates phase							
<p>N-5 Ground-Borne Noise and Vibration: For the TSM/TDM and BRT Alternatives, Caltrans or Metro will not allow the Construction Contractor to use pile driving or other activities that generate high levels of vibration during the construction of the TSM/TDM or BRT Alternatives, respectively.</p> <p>The following measures are not applicable to the TSM/TDM Alternative (Preferred Alternative).</p> <p>Metro will require the Construction Contractor to carry out construction activities for the LRT Alternative in compliance with applicable Federal Transit Administration (FTA) criteria and guidelines as well as any applicable local regulations related to ground-borne noise and vibration. Caltrans will require Construction Contractors to carry out construction activities for the Freeway Tunnel Alternative in compliance with applicable Federal Highway Administration (FHWA) and Caltrans guidelines as well as any applicable local regulations related to ground-borne noise and vibration.</p> <p>The Project Engineer will develop specific property line vibration limits during final design for inclusion in the construction vibration specifications. Metro (LRT Alternative) or Caltrans (Freeway Tunnel Alternative), as appropriate, will require the Construction Contractors to conduct regular vibration monitoring during construction to verify compliance with those limits.</p> <p>The following vibration control and minimization measures are anticipated to be applied during construction to meet the vibration limits:</p> <p>The Project Engineer may incorporate comprehensive construction vibration specifications in all construction bid documents. The Resident Engineer will require the Construction Contractor to initially conduct vibration monitoring daily at the nearest representative affected buildings during the startup of tunnel boring. The vibration measurements will be measured in the vertical direction on the ground surface and measured during peak vibration-generating construction activities. If the measured vibration data are in compliance with the vibration limits (either in terms of velocity levels in dB re: 1 micro-inch/second or peak particle velocity in inches/second), then vibration monitoring may be performed weekly instead of daily monitoring, on approval by Metro.</p> <p>The Resident Engineer will require the Construction Contractor to use pre-drilled holes for soldier piles (instead of driving them into the ground) in areas where the LRT Alternative station sites are within 200 feet of residential receptors. The use of soil mix wall for excavation methods could be used in place of pile driving activities; if soldier piles are to be placed into a soil-mix wall, this placement would be done after the excavation of the wall, so the soldier piles would not be driven into the ground.</p> <p>The Resident Engineer will require the Construction Contractor to perform vertical direction vibration root mean square monitoring on the ground at the nearest representative residential structure during supply train operations in the tunnels. These measurements will be repeated at approximately 1-mile intervals along the tunnel construction.</p> <p>The Resident Engineer will require the Construction Contractor to implement a public notification program to alert residents well in advance of construction activities that may result in vibration effects.</p> <p>The Resident Engineer will require the Construction Contractor to implement a complaint resolution procedure to rapidly address any noise and vibration problems that may develop during construction.</p> <p>The Resident Engineer will require the Construction Contractor to reduce muck train speeds in the vicinity of noise-sensitive receptors if complaints occur after the supply train is operational, reduce train speeds in the vicinity of noise-sensitive receptors, use ballast mats underneath the train rails, and/or use</p>	Metro	During Construction							

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a conveyor system to remove spoils.									
<p>N-6 Grifols Vibration Study: For the TSM/TDM Alternative, Caltrans or Metro will not allow the Construction Contractor to use pile driving or other activities that generate high levels of vibration during the construction of the TSM/TDM Alternative.</p> <p>The following measures are not applicable to the TSM/TDM Alternative (Preferred Alternative).</p> <p>During PS&E for the Freeway Tunnel Alternative, the Caltrans Project Engineer will prepare a site-specific evaluation of potential airborne dust due to vibration associated with freeway tunnel construction at the Grifols facility. The analysis will use more detailed engineering and soil conditions developed during final design. The Caltrans Project Engineer will include the results of the evaluation and any specific measures to ensure that vibration from the Project does not affect the clean room's compliance with the International Organization for Standardization (ISO) standards for airborne dust in clean rooms, if found to affect clean room compliance with ISO airborne dust standards, will be incorporated into the PS&E.</p> <p>During PS&E for the LRT Alternative, the Metro Project Engineer will prepare a site-specific evaluation of potential airborne dust due to vibration associated with the construction of the LRT Alternative at the Grifols facility based on more detailed engineering and soil conditions developed during final design. The Metro Project Engineer will include the results of the evaluation, and any specific measures to address vibration, if found to affect clean room operation, will be incorporated into the PS&E.</p>	Caltrans Project Engineer	During the Plans, Specifications, and Estimates phase							
<p>N-7 Vibration and Ground-Borne Noise during Operation (LRT Alternative): The Metro Project Engineer, during final design of the LRT Alternative, will conduct additional field testing and analysis for the specific identification of ground-borne noise impacts and will incorporate the vibration isolation system or systems to comply with FTA ground-borne noise level criteria. The vibration isolation systems could include one or a combination of the following systems:</p> <ul style="list-style-type: none"> • Highly resilient direct fixation (HRDF) fasteners (e.g., Egg Type DF fastener) • Rail suspension fastener (RSF) system (an example of which is the Panguard fastener) • Isolated slab track system (IST) – concrete slab poured on top of a continuous elastomeric mat • Floating slab track system (FST) – concrete slab supported by discrete elastomeric pads <p>Not Applicable to TSM/TDM Alternative (Preferred Alternative)</p>	Metro Project Engineer	During final design of the LRT Alternative							
<p>N-8 Abatement: Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of sound walls listed as reasonable in Table 3.14.34 (refer to Appendix N), depending on the selected alternative. During final design, Caltrans will make the final decision on noise abatement to be included in the selected build alternative, based on the final design of the proposed project and the public involvement process. If during final design, conditions have substantially changed, noise abatement at some of the locations noted above may not be necessary. Caltrans will incorporate the final noise abatement in the final project design and specifications.</p>	Caltrans	Final project design and specifications							
ENERGY									
<p>E-1 Construction Efficiency Plan (applies to all four Build Alternatives): As part of the Plans, Specifications, and Estimates phase, the Project Engineer will prepare a construction efficiency plan, which may include the following:</p> <ul style="list-style-type: none"> • Reusing existing rail, steel, and lumber wherever possible, such as for falsework, shoring, and other applications during the construction process. • Recycling of asphalt taken up from roadways, if practicable and cost-effective. • Using newer, more energy-efficient equipment where feasible and maintenance of older construction equipment to keep it in good working order. • Promoting scheduling of construction operations to efficiently use construction equipment (e.g., only haul waste when haul trucks are full and combine smaller dozer operations into a single comprehensive operation where possible). • Promoting construction employee carpooling. 	Metro or Caltrans Project Engineer	During the Plans, Specifications, and Estimates phase							

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NATURAL COMMUNITIES									
NC-1 Riparian/Riverine Habitat Protection (applies to the Freeway Tunnel Alternative): Prior to any construction or ground-disturbing activities, the California Department of Transportation (Caltrans) will require the Construction Contractor to place a highly visible barrier such as Environmentally Sensitive Area (ESA) fencing or other marker around any riparian or riverine habitats to be preserved. No grading or fill activities will be authorized within the marked areas. No structures of any kind, or incidental storage of equipment or supplies, will be allowed within the marked areas. Silt fence barriers will be installed along the ESA boundary to prevent inadvertent deposition of fill in the ESAs. Not Applicable to TSM/TDM Alternative (Preferred Alternative)	Caltrans	Prior to construction or ground-disturbing activities							
NC-2 Construction Plan (applies to the Freeway Tunnel Alternative): Caltrans will require the Construction Contractor to identify designated areas in developed or nonsensitive upland habitat areas on the construction plans for equipment maintenance, staging, fueling, and other related activities. Those areas will be selected such that spills and runoff would not enter riparian or riverine habitats or any fenced ESAs. Not Applicable to TSM/TDM Alternative (Preferred Alternative)	Caltrans	Prior to construction							
NC-3 Compliance Monitoring (applies to the Freeway Tunnel Alternative): Caltrans will require the Construction Contractor to have a qualified biologist monitor during construction in the vicinity of riparian and riverine areas consistent with the Section 404 permit (refer to Measure WET-1) or the Streambed Alteration Agreement (refer to Measure WET-2) issued for the project to ensure that all avoidance and minimization measures are properly applied and followed. Not Applicable to TSM/TDM Alternative (Preferred Alternative)	Caltrans	During construction							
WETLANDS AND OTHER WATERS									
WET-1* United States Army Corps of Engineers (USACE) Section 404 Dredge and Fill Permit (applies to the Freeway Tunnel Alternative): Areas identified as being under the jurisdiction of the USACE will be avoided wherever possible. The California Department of Transportation (Caltrans) will obtain a Dredge and Fill Permit from the USACE if any USACE jurisdictional areas are to be impacted and prior to approval of Plans, Specifications, and Estimates (PS&E). The measures specified in the Dredge and Fill Permit would minimize temporary and permanent project impacts to drainages and habitats subject to USACE jurisdiction. In addition, commonly used best management practices (BMPs) will be used to minimize project impacts. For streams, compensatory mitigation at a minimum 1:1 ratio would be required to meet the “no net loss” national goal. Compensatory measures may include restoration of previously existing waters, enhancement of the functions of existing waters, establishment of new waters, preservation of existing aquatic sites, participation in an in-lieu fee program, and/ or participation in a mitigation bank approved by the USACE. Not Applicable to TSM/TDM Alternative (Preferred Alternative)	Caltrans	During the Plans, Specifications, and Estimates phase							
WET-2* Streambed Alteration Agreement (SAA) (applies to the Freeway Tunnel Alternative): Areas identified as being under the jurisdiction of the California Department of Fish and Wildlife (CDFW) will be avoided wherever possible. Caltrans will obtain an SAA from the CDFW under Section 1600 of the Department of Fish and Game Code if any CDFW jurisdictional areas are to be impacted and prior to approval of PS&E. The measures specified in the SAA would minimize temporary and permanent project impacts to drainages and habitats subject to CDFW jurisdiction. In addition, commonly used BMPs will be used to minimize project impacts. Those measures may include restoration of previously existing waters, enhancement of the functions of existing waters, establishment of new waters, preservation of existing aquatic sites, and/or participation in a mitigation bank approved by the CDFW. Not Applicable to TSM/TDM Alternative (Preferred Alternative)	Caltrans	During the Plans, Specifications, and Estimates phase							
WET-3* Section 401 Water Quality Certification (applies to the Freeway Tunnel Alternative): Areas identified as being under the jurisdiction of the Regional Water Quality Control Board (RWQCB) will be avoided wherever possible. Caltrans will obtain a Section 401 Water Quality Certification from the RWQCB if any RWQCB jurisdictional areas are to be impacted and prior to approval of the PS&E. In addition, commonly used BMPs will be used to minimize project impacts. Compensatory mitigation may be identified to offset temporary and permanent impacts to RWQCB jurisdictional waters. The RWQCB has published preliminary draft compensatory mitigation requirements to ensure achievement of the RWQCB’s no net loss and long-term net gain policy for aquatic resources. Mitigation ratios would be determined in consultation with the RWQCB at the time of issuance of the certification. The measures specified in the Section 401 Water Quality Certification would minimize project impacts to drainages and habitats subject to RWQCB jurisdiction. Those measures may include restoration of previously existing waters,	Caltrans	During the Plans, Specifications, and Estimates phase							

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enhancement of the functions of existing waters, establishment of new waters, preservation of existing aquatic sites, and/or participation in a mitigation bank approved by the RWQCB. Not Applicable to TSM/TDM Alternative (Preferred Alternative)									
PLANT SPECIES									
PS-1 Coulter's Goldfields (applies to the LRT Alternative): Should the Light Rail Transit (LRT) Alternative be selected and documentation of the planting efforts of the population of Coulter's goldfields in the Biological Study Area (BSA) be unavailable, the Los Angeles County Metropolitan Transportation Authority (Metro) will address the effects of the LRT Alternative on the Coulter's goldfields population as follows: <ul style="list-style-type: none"> The disturbance of this population will be avoided to the greatest extent possible during final design. Prior to any construction or ground-disturbing activities near the population, the Resident Engineer will require the construction contractor to plan a highly visible barrier such as Environmentally Sensitive Area (ESA) fencing or other marker near or around any part of the population that will not be directly impacted to avoid effects on that part of the population. No access or work will be authorized within the ESA. The Resident Engineer will require the Construction Contractor to have a qualified biologist monitor construction in the vicinity of the ESA for the duration of any ground-disturbing activities in the vicinity of the ESA to ensure that indirect effects to the population are minimized. Not Applicable to TSM/TDM Alternative (Preferred Alternative)	Metro or Caltrans	Prior to and during construction or ground-disturbing activities							
PS-2 Coulter's Goldfields (applies to Freeway Tunnel Alternative): Should the Freeway Tunnel Alternative be selected and documentation of the planting efforts of the population of Coulter's goldfields in the BSA be unavailable, the California Department of Transportation (Caltrans) will address the effects of the Freeway Tunnel Alternative on the Coulter's goldfields population as follows: <ul style="list-style-type: none"> The removal of this population will be avoided to the greatest extent possible during final design. If during Plans, Specifications and Estimates (PS&E), direct impacts to Coulter's goldfields is avoided by project design, prior to any construction or ground-disturbing activities near the population, the Resident Engineer will require the construction contractor to plan a highly visible barrier (e.g., Environmentally Sensitive Area [ESA] fencing or other marker) near or around any part of the population that will not be directly impacted to avoid effects on that part of the population. No access or work will be authorized within the ESA. The Resident Engineer will require the Construction Contractor to have a qualified biologist monitor construction in the vicinity of the ESA for the duration of any ground-disturbing activities in the vicinity of the ESA to ensure that indirect effects to the population are minimized. Should removal of the Coulter's goldfields population be required, Caltrans will consult with the California Department of Fish and Wildlife (CDFW) to determine the appropriate mitigation-to-impact ratio for this population. Mitigation may include replacement within a State-owned right of way (ROW). Caltrans will coordinate with the CDFW prior to construction to determine the appropriate mitigation actions required and to ensure the actions are carried out. Not Applicable to TSM/TDM Alternative (Preferred Alternative)	Caltrans Resident Engineer	Prior to and during construction or ground disturbing activities							
PS-3* Southern California Black Walnut (applies to the Freeway Tunnel Alternative): The Caltrans Resident Engineer will require the Construction Contractor to implement the following to address the effects of the Freeway Tunnel Alternative on the Southern California black walnut: <ul style="list-style-type: none"> The removal and/or disturbance of this individual tree will be avoided to the greatest extent possible during final design and construction. A qualified arborist will establish the dripline of this tree, which will be identified on the design plans, and an ESA will be established. Prior to any construction or ground-disturbing activities, the Resident Engineer will require the Construction Contractor to plan a highly visible barrier (e.g., ESA fencing or other marker) near or around any part of the population that will not be directly impacted to avoid effects on that part of the population. No access or work will be authorized within the ESA. The Resident Engineer will require the Construction Contractor to have a qualified arborist monitor construction within the vicinity of any established ESA for the duration of any ground-disturbing activities. Not Applicable to TSM/TDM Alternative (Preferred Alternative)	Metro or Caltrans Resident Engineer	Prior to construction or ground disturbing activities							

Task and Brief Description	Responsible Branch/Staff	Timing/ Phase	NSSP Req.	Action Taken to Comply With Task	Task Completed		Remarks	Environmental Compliance	
					Initials	Date		Initials	Date
<p>PS-4 Trees Protected by City and/or County Ordinances (applies to the four Build Alternatives): The following will be required to address project effects on protected trees:</p> <ul style="list-style-type: none"> Prior to construction or ground-disturbing activities, the Resident Engineer will require the Construction Contractor to plan a highly visible barrier (e.g., ESA fencing or other marker) near or around any part of the population that will be placed around the dripline or trunk of protected trees within and adjacent to the limits of disturbance such that no work will occur within the protected area. If this is infeasible, the Resident Engineer will require the Construction Contractor to obtain appropriate tree removal permits for each impacted protected tree from the appropriate local agency (i.e., Cities of Los Angeles, Pasadena, South Pasadena, and Rosemead, or Los Angeles County). Compensatory mitigation may be required at the discretion of the agency with jurisdiction over protected trees; therefore, the compensatory mitigation would vary by jurisdiction. Compensation will be provided consistent with the requirements of the appropriate local agency's tree protection ordinance. 	Metro or Caltrans	During construction							
ANIMAL SPECIES									
<p>AS-1 Bats (applies to all four Build Alternatives): Due to the presence of marginally suitable bridge roosting habitat within the TSM/TDM and Freeway Tunnel Alternatives, the following avoidance and minimization efforts will be implemented:</p> <ul style="list-style-type: none"> The Los Angeles County Metropolitan Transportation Authority (Metro) (TSM/TDM Alternative) or the California Department of Transportation (Caltrans) (Freeway Tunnel Alternative) will have preconstruction bat surveys conducted by a qualified bat biologist prior to ground-disturbing and/or bridge construction activities. The surveys will be conducted at least 30 days prior to the start of project construction activities regardless of the time of year. The most effective dates to determine the presence of day or maternity roosts is during the breeding season (March–September). If it is determined during the preconstruction bridge surveys that a structure is being used as a bat roost site (day or night roost), work will be avoided within 100 feet (ft) of the roost site. If any active night roosts are present on site, no work will take place between 10:00 p.m. and sunrise, and airspace access to the bridge will be restricted. Lights will not be used under the structure, foot traffic and equipment use will not be allowed under the structure, and combustion equipment will not be parked or operated under the structure. If a structure is determined to be used by roosting bats, a qualified bat biologist will be on site for the duration of construction activities that may impact bats. If it is determined that the above activities cannot be avoided, bats will be excluded from the bridge using California Department of Fish and Wildlife (CDFW) approved exclusionary devices to the extent necessary to prevent mortality to the colony. Exclusion will take place prior to April 15. If a structure is determined to be in use by roosting bats, CDFW will be contacted to determine additional, appropriate avoidance and minimization measures, including exclusion measures. <p>Due to the presence of potentially impacted trees that may provide roosting habitat within the TSM/TDM, BRT, LRT, and Freeway Tunnel Alternatives, the following avoidance and minimization efforts will be implemented:</p> <ul style="list-style-type: none"> Metro (TSM/TDM Alternative, BRT Alternative, and LRT Alternative) or Caltrans (Freeway Tunnel Alternative) will have preconstruction bat surveys conducted by a qualified bat biologist prior to the removal of any large trees containing cavities that may be suitable for roosting. A qualified bat biologist will inspect the tree for roosting bats prior to tree removal. If a bat is found, tree removal will be postponed until the bat has vacated the tree, at least 24 hours. As tree-roosting bats often switch roosting trees from night to night, clearance of the tree by a qualified bat biologist immediately prior to tree removal would serve to avoid and minimize any direct impact or mortality to tree roosting bat species. 	Metro or Caltrans	Prior to ground-disturbing and/or bridge construction activities							
<p>AS-2 Monarch Butterfly (applies to all four Build Alternatives): Metro (TSM/TDM, Bus Rapid Transit [BRT], and Light Rail Transit [LRT] Alternatives) or Caltrans (Freeway Tunnel Alternative) will require the Construction Contractor to implement the following avoidance and minimization measures in areas of potentially suitable habitat for winter roosting aggregations of monarch butterfly and species' egg, caterpillar, and pupal stages:</p> <ul style="list-style-type: none"> If eucalyptus trees are to be removed or trimmed between October and March, preconstruction surveys for winter roosting aggregations of monarchs will be conducted by a qualified biologist. If a winter roosting aggregation is discovered, the area will be flagged and posted with Environmentally Sensitive Area (ESA) signs. If practicable, activities within this area will be avoided 	Metro or Caltrans	Prior to and during construction							

Task and Brief Description	Responsible Branch/Staff	Timing/ Phase	NSSP Req.	Action Taken to Comply With Task	Task Completed		Remarks	Environmental Compliance	
					Initials	Date		Initials	Date
<p>until the aggregation disperses in spring.</p> <ul style="list-style-type: none"> If any mature trees are to be removed or trimmed between September and October, preconstruction surveys for overnight fall roosts of monarchs will be conducted by a qualified biologist. If an overnight fall roost is discovered, the area will be flagged and posted with ESA signs by a qualified biologist. If practicable, activities within this area will be avoided until the fall roosting group disperses (during the day). Preconstruction surveys for milkweed plants that may support monarch eggs, caterpillars, or pupae will be conducted within grassland and riparian areas by a qualified biologist. Any milkweed plants found that may support monarch eggs, caterpillars, or pupae will be flagged and ESA signs posted by a qualified biologist. Construction in the area will be avoided and minimized. 									
<p>AS-3 Amphibians and Reptiles Avoidance and Minimization Measures (applies to all four Build Alternatives): Metro (TSM/TDM, BRT, and LRT Alternatives) will require the Construction Contractor to implement the following avoidance and minimization measures in areas of potentially suitable nonnative grassland and disturbed/developed habitat for western spadefoot and San Bernardino ring-necked snake:</p> <ul style="list-style-type: none"> Potentially suitable habitat for these species will be avoided to the greatest extent possible during construction and design. Staging areas will be confined to existing disturbed areas to the greatest extent possible. Preconstruction surveys will be conducted in areas of potentially suitable habitat by a qualified biologist. If any individuals of these species are determined to be present during the preconstruction surveys, CDFW will be notified and translocation will be conducted by a qualified biologist. The translocation process will be conducted in accordance with the guidelines outlined by CDFW. <p>The following measures are not applicable to the TSM/TDM Alternative (Preferred Alternative).</p> <p>Caltrans (Freeway Tunnel Alternative) will require the Construction Contractor to implement the following avoidance and minimization measures in areas of potentially suitable wetland complex, nonnative grassland, and disturbed/developed habitat for coast range newt, western spadefoot, two-striped garter snake, western pond turtle, San Bernardino ring-necked snake, and South Coast garter snake:</p> <ul style="list-style-type: none"> Potentially suitable habitat for these species will be avoided to the greatest extent possible during construction and design. Staging areas will be confined to existing disturbed areas to the greatest extent possible. Preconstruction surveys will be conducted in areas of potentially suitable habitat by a qualified biologist. If any individuals of these species are determined to be present during the preconstruction surveys, CDFW will be notified and translocation will be conducted by a qualified biologist. The translocation process will be conducted in accordance with the guidelines outlined by CDFW. 	Metro or Caltrans	Prior to and during construction							
<p>AS-4 Other Special-Status Bird Avoidance and Minimization Measures (applies to all four Build Alternatives): Metro (TSM/TDM, BRT, and LRT Alternatives) or Caltrans (Freeway Tunnel Alternative) will require the Construction Contractor to implement the following avoidance and minimization efforts for Cooper’s hawk, Allen’s hummingbird, Costa’s hummingbird, Lawrence’s goldfinch, merlin, Nuttall’s woodpecker, oak titmouse, and any nesting or breeding birds of prey protected under California Fish and Game Code Sections 3503 and 3503.5, and any other nesting or breeding birds protected under the Migratory Bird Treaty Act (MBTA):</p> <ul style="list-style-type: none"> The removal and/or disturbance of trees or suitable roosting shrubbery will be minimized to the greatest extent possible. Any activities in which tree or native vegetation trimming/removal or construction on bridges may occur will take place outside of the nesting bird season (February 1–August 31) where feasible. Should bridge construction be required during the nesting season, a qualified biologist will be required to inspect the construction site prior to February 1 and be present during bird nest removal. The presence of the qualified biologist is required to inspect the construction site and confirm that any nests potentially occurring are unoccupied or inactive prior to nest removal, as removing active 	Metro or Caltrans	Prior to and during construction							

Task and Brief Description	Responsible Branch/Staff	Timing/ Phase	NSSP Req.	Action Taken to Comply With Task	Task Completed		Remarks	Environmental Compliance	
					Initials	Date		Initials	Date
<p>nests violates state and federal law</p> <ul style="list-style-type: none"> If avoidance of these activities during this period is not possible, preconstruction surveys by a qualified biologist will be conducted to identify any existing nests or breeding birds within 200 feet and including the area scheduled for construction. The survey will be completed no more than 48 hours prior to the start of project activities. Additional surveys will be conducted if more than 3 days pass between preconstruction nesting bird surveys and the start of construction. If breeding/nesting birds are located within 300 ft of the limits of disturbance, a buffer will be flagged around the nest by a qualified biologist and ESA signs posted. Any work within 300 ft of the flagged area will require a qualified biologist to monitor the birds and ensure that the construction activities do not negatively impact the birds. If the biologist identifies signs of stress to any bird species, the biologist will halt activities in the immediate area until the birds resume their normal behavior or until the nest has been determined to be no longer active. This intervention will provide adequate protection to native nesting bird species under the MBTA and the California Fish and Game Code. Should breeding/nesting birds of prey be located within the area scheduled for construction, the buffer will be extended to 500 ft as birds of prey are typically more sensitive to disturbance. Unoccupied nests will be removed from the bridges prior to the colony returning to the nesting site to begin nesting (February 1–August 31). During the period of time between the removal of unoccupied nests and the start of bridge construction, bridges will be checked often and unoccupied nests that are under construction will be removed. The removal of unoccupied nests will be monitored by a qualified biologist through the duration of construction. These efforts will continue until September or until the completion of construction in order to keep the structures free of nesting birds. Nest removal will not take place for nests found in trees or other vegetation. The construction buffer limits may be modified at the discretion of a qualified biologist familiar with the specific circumstances of the situation. Coordination with CDFW will be conducted to confirm appropriate buffers and determine when it is safe to remove the buffers. If there are no breeding/nesting birds, no further action is necessary. 									
THREATENED AND ENDANGERED SPECIES									
No avoidance, minimization, or mitigation measures are required.									
INVASIVE SPECIES									
<p>IS-1 Weed Abatement Program (applies to all four Build Alternatives): During final design, the Los Angeles County Metropolitan Transportation Authority (Transportation System Management/Transportation Demand Management, Bus Rapid Transit, and Light Rail Transit Alternatives) or the California Department of Transportation (Freeway Tunnel Alternative) Project Engineer will develop a weed abatement program and will include it in the Plans, Specifications, and Estimates package. The intent of this program is to minimize the introduction and spread of nonnative plant material during construction of the selected Build Alternative. This program will include, but not be limited to, the following monitoring and eradication measures during and after construction:</p> <ul style="list-style-type: none"> Preconstruction surveys will be conducted to identify populations of invasive species within the project disturbance limits with the potential to be encouraged by construction activities such as exposure or tilling of bare ground, disturbance of adjacent habitats that are not highly invaded, and/or enhanced distribution of pollen or seeds. Such populations will be controlled by mechanical or chemical means prior to construction. Revegetation of soils will occur as soon as practical after completion of construction activities in those areas. To prevent the spread of invasive species on the project site, invasive species-free products will be exclusively used for all activities, including, but not limited to, landscaping materials and soil erosion materials (i.e., mulch, soil mats, straw fencing, or wattles). Any disturbance in any construction area not containing existing infestations of exotic plants will be monitored quarterly for 1 year post-construction to ensure that establishment of invasive plant species in the area has not occurred. If evidence of invasive plant species establishment is found, invasive species control measures will be implemented immediately. 	Metro or Caltrans Project Engineer	During final design and construction							
CUMULATIVE EFFECTS									
No avoidance, minimization, or mitigation measures beyond those listed above are required.									

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Appendix F: List of Acronyms

°F	degrees Fahrenheit
µg/L	micrograms per liter
AADT	annual average daily traffic
AB	Assembly Bill
ac	acre/acres
AC	alternating current
ACC	All Communities Convening
ACM	asbestos-containing material
ACS	American Community Survey
ADA	Americans with Disabilities Act
ADL	aerially deposited lead
ADT	average daily traffic
AFV	alternative fuel vehicle
amsl	above mean sea level
APE	Area of Potential Effects
APN	Assessor's Parcel Number
ARB	California Air Resources Board
ASA	Archaeological Survey Area
ASR	Archaeological Survey Report
ASTM	American Society for Testing and Materials
ATM	Active Traffic Management
AULs	activity and use limitations
Basin	South Coast Air Basin
Basin Plan	Los Angeles Regional Water Quality Control Board Basin Plan
bgs	below ground surface
BMPs	Best Management Practices
BRT	Bus Rapid Transit
BSA	Biological Study Area
BTEX	benzene, toluene, ethylbenzene, and total xylenes
BTU	British thermal unit
CAA	Clean Air Act
Cal State LA	California State University, Los Angeles
Cal/EPA	California Environmental Protection Agency
Cal/OSHA	California Occupational Safety and Health Administration
Cal-IPC	California Invasive Plant Council

Caltrans	California Department of Transportation
CCO	Construction Change Order
CCR	California Code of Regulations
CCTV	closed-circuit television
CDFW	California Department of Fish and Wildlife
CDMG	California Department of Mines and Geology
CDPH	California Department of Public Health
CDSM	cement deep soil mixing
CEC	California Energy Commission
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CERFA	Community Environmental Response Facilitation Act of 1992
CESA	California Endangered Species Act
CFCs	chlorofluorocarbons
CFR	Code of Federal Regulations
CGP	Construction General Permit
CH ₄	methane
CHP	California Highway Patrol
CIA	Community Impact Assessment
CIDH	cast-in-drilled-hole
CLC	Community Liaison Council
CMP	Congestion Management Program
CMS	changeable message signs
CNDDB	California Natural Diversity Database
CNG	compressed natural gas
CNPS	California Native Plant Society
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
CO-CAT	Coastal Ocean Climate Action Team
County	Los Angeles County
COZEEP	Construction Zone Enhanced Enforcement Program
CPUC	California Public Utilities Commission
CRPR	California Rare Plant Rank
CSC	California Species of Special Concern

CTP	California Transportation Plan
CWA	Clean Water Act
db	decibel/decibels
dba	A-weighted decibels
DC	direct current
Desk Guide	Environmental Justice in Transportation Planning and Investments
DGE	diesel gallon equivalent
DHHS	Department of Health and Human Services
diesel PM	diesel particulate matter plus diesel exhaust organic gases
DOI	United States Department of the Interior
DP-30	Director's Policy 30
DPM	diesel particulate matter
DRIR	Draft Relocation Impact Report
DSA	Disturbed Soil Area
DTSC	Department of Toxic Substances Control
E85	Ethanol, 85 percent
EDR	Environmental Data Resources, Inc.
EIA	Energy Information Administration
EIR	Environmental Impact Report
EIR/EA	Environmental Impact Report/Environmental Assessment
EIR/EIS	Environmental Impact Report/Environmental Impact Statement
EIS	Environmental Impact Statement
EMFAC	California Emission Factor Model
EnviroStor	California Department of Toxic Substances Control Database of Environmental Sites
EO	Executive Order
EPA	United States Environmental Protection Agency
EPACT92	Energy Policy Act of 1992
EPB	earth-pressure balance
ESA	Environmentally Sensitive Area
FACP	fire alarm control panel
CAA	Federal Clean Air Act
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FFFS	Fixed Fire Fighting System
FHWA	Federal Highway Administration
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act

FIRMs	Flood Insurance Rate Maps
FOAE	Finding of Adverse Effect for the State Route 710 North Study
FST	floating slab track
ft	foot/feet
FTA	Federal Transit Administration
FTA Manual	Transit Noise and Vibration Impact Assessment Manual
FTIP	Federal Transportation Improvement Program
FY	Fiscal Year
gal	gallon/gallons
Geotracker	Regional Water Quality Control Board Database of Environmental Sites
GGE	gasoline gallon equivalent
GHG	greenhouse gas
GSRD	gross solid removal device
H ₂ S	hydrogen sulfide
HA	Hydrologic Area
Handbook	Energy and Transportation Systems Handbook
HCM	Highway Capacity Manual 2010
HCP	Habitat Conservation Plan
HDM	Highway Design Manual
HFC-134a	s,s,s,2-tetrafluoroethane
HFC-152a	difluoroethane
HFC-23	fluoroform
HHS	United States Department of Health and Human Services
HI	Hazard Index
HIA	Hazard Index Acute
HIC	Hazard Index Chronic
HICOMP	Highway Congestion Monitoring Program
HOT	high-occupancy toll
HOV	high-occupancy vehicle
HPSR	Historic Property Survey Report
HRA	Health Risk Assessment
HRDF	highly resilient direct fixation
HRER	Historical Resources Evaluation Report
HSA	Hydrologic Subarea
HU	Hydrologic Unit
HUD	Housing and Urban Development
Hz	Hertz

I	Intactness
I-10	Interstate 10
I-105	Interstate 105
I-110	Interstate 110
I-210	Interstate 210
I-405	Interstate 405
I-5	Interstate 5
I-605	Interstate 605
I-710	Interstate 710
IEN	Information Exchange Network
IEPR	Integrated Energy Policy Report
in/yr	inches per year
IPCC	Intergovernmental Panel on Climate Change
IRIS	Integrated Risk Information System
IS	Initial Study
ISA	Initial Site Assessment
IST	isolated slab track
ITS	Intelligent Transportation Systems
JD	Jurisdictional Delineation
JPL	Jet Propulsion Laboratory
LACM	Natural History Museum of Los Angeles County
LADOT	Los Angeles Department of Transportation
LADPW	Los Angeles County Department of Public Works
LARWQCB	Los Angeles Regional Water Quality Control Board
LBP	lead-based paint
LED	light-emitting diode
LEDPA	least environmentally damaging practicable alternative
LEHD	Longitudinal Employer-Household Dynamics
L_{max}	maximum instantaneous noise level
LNG	liquefied natural gas
LOS	levels of service
LPG	liquefied petroleum gas
LRT	Light Rail Transit
LRTP	Long Range Transportation Plan
LRV	light rail vehicle
LUST	Leaking Underground Storage Tank
m	meter/meters

Ma	million years ago
MBTA	Migratory Bird Treaty Act
MBTE	methyl tertiary-butyl ether
MOA	Memorandum of Agreement
MEIR	maximally exposed individual resident
MEIW	maximally exposed individual worker
Metro	Los Angeles County Metropolitan Transportation Authority
mg/L	milligrams per liter
mi	mile/miles
MLD	Most Likely Descendant
mm/yr	millimeters per year
M _{max}	maximum moment magnitude
MOA	Memorandum of Agreement
ModCom	Modern Committee of the Los Angeles Conservancy
MOVES	Motor Vehicle Emission Simulator
mph	miles per hour
MPO	Metropolitan Planning Organization
MPR	Mobility Performance Report
MRZ	Mineral Resource Zone
MS4	Municipal Separate Storm Sewer System
MSA	Metropolitan Statistical Area
MSAT	Mobile Source Air Toxics
MSE	mechanically stabilized earth
MTBE	methyl-t-butyl ether
MW	megawatts
mya	million years ago
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NADR	Noise Abatement Decision Report
NAHC	Native American Heritage Commission
NATA	National Air Toxics Assessment
National Register	National Register of Historic Places
NCCP	Natural Community Conservation Plan
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NESHAPs	National Emission Standards for Hazardous Air Pollutants

NFPA	National Fire Protection Association
NHPA	National Historic Preservation Act of 1966
NHTSA	National Highway Traffic Safety Administration
NNL	National Natural Landmark
NO ₂	nitrogen dioxide
NOA	naturally occurring asbestos
NOAA	National Oceanic and Atmospheric Administration
NOAA Fisheries Service	National Oceanic and Atmospheric Administration, National Marine Fisheries Service
NOD	Notice of Determination
NOI	Notice of Intent
NOP	Notice of Preparation
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NSR	Noise Study Report
O&M	operations and maintenance
O ₃	ozone
OC	overcrossing
OCS	Outer Continental Shelf or overhead contact system
OHWM	ordinary high water mark
OMC	Operations and Maintenance Center
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Act
OSTP	Office of Science and Technology Policy
PA	Programmatic Agreement OR public address system
PA&ED	Project Approval and Environmental Document
PAC	Public Awareness Campaign
Pb	lead
pc/mi/ln	passenger cars per mile per lane
PCBs	polychlorinated biphenyls
PCE	perchloroethylene
PDF	project design feature
PEAR	Preliminary Environmental Analysis Report
PeMS	Performance Measurement System
PIR/PER	Paleontological Identification Report/Paleontological Evaluation Report
PM	particulate matter
PM ₁₀	particulate matter less than 10 microns in size

PM _{2.5}	particulate matter less than 2.5 microns in size
PMI	point of maximum impact
PMP	Paleontological Mitigation Plan
PMR	Paleontological Mitigation Report
POAQC	project of air quality concern
POM	polycyclic organic matter
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
ppm	parts per million
PQS	Professionally Qualified Staff
PRC	Public Resources Code
PRIMP	Paleontological Resources Impact Mitigation Program
proposed project	SR 710 North Project
Protocol	Caltrans Transportation Project-Level Carbon Monoxide Protocol
PS&E	Plans, Specifications, and Estimates
PTZ	pan-tilt-zoom
QA/QC	quality assurance/quality control
RAP	Relocation Assistance Program
RCP	Regional Comprehensive Plan
RCRA	Resource Conservation and Recovery Act of 1976
RCRA-SQG	Resource Conservation and Recovery Act – Small Quantity Generator
RECs	recognized environmental conditions
Resources Agency	California Natural Resources Agency
RMS	root mean square
ROD	Record of Decision
ROG	reactive organic gas
ROW	right of way
RSA	Resource Study Area
RSF	rail suspension fastener
RTP	Regional Transportation Plan
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SAFETEA-LU	Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users
SB	Senate Bill
SCADA	Supervisory Control and Data Acquisition
SCAG	Southern California Association of Governments

SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
SCH	State Clearinghouse
SCS	Sustainable Communities Strategy
SDC	Seismic Design Criteria
SEA	Significant Ecological Area
SEM	sequential excavation method
SER	Standard Environmental Reference
sf	square foot/feet
SF ₆	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SHPSR	Supplemental Historic Property Survey Report
SIP	State Implementation Plan
SLF	Sacred Lands File
SMARA	Surface Mining and Reclamation Act
SO ₂	sulfur dioxide
SOAC	Stakeholder Outreach Advisory Committee
SOC	Statement of Overriding Considerations
SONGS	San Onofre Nuclear Generating Station
sq mi	square mile/miles
SR 110	State Route 110
SR 118	State Route 118
SR 134	State Route 134
SR 170	State Route 170
SR 19	State Route 19
SR 2	State Route 2
SR 22	State Route 22
SR 57	State Route 57
SR 60	State Route 60
SR 7	State Route 7
SR 710	State Route 710
SR 91	State Route 91
SSP	Standard Special Provisions
SUSMP	Standard Urban Storm Water Mitigation Plan
SVP	Society of Vertebrate Paleontology
SWITRS	Statewide Integrated Traffic Records System

SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Technical Advisory Committee
TACs	toxic air contaminants
TAP	transit access pass
TASAS	Traffic Accident Surveillance and Analysis System
TBM	tunnel boring machine
TCE	temporary construction easement
TCP	traditional cultural property
TCWG	Transportation Conformity Working Group
TDM	Transportation Demand Management
TDS	total dissolved solids
TIP	transportation improvement program
Title VI	Title VI of the Civil Rights Act of 1964
TMDL	Total Maximum Daily Load
TMP	Transportation Management Plan
TNW	traditional navigable water
TPH	total petroleum hydrocarbons
TSCA	Toxic Substances Control Act
TSM	Transportation System Management
TSM/TDM	Transportation System Management/Transportation Demand Management
TSSP	Traffic Signal Synchronization Program
U	Unity
Uniform Act	Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
UPRR	Union Pacific Railroad
US-101	United States Route 101
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tanks
V	Vividness
v/c	volume/capacity

VdB	vibration velocity decibels
VHT	vehicle hours traveled
VIA	Visual Impact Assessment
VMT	vehicle miles traveled
VOCs	volatile organic compounds
WDRs	Waste Discharge Requirements
WPCP	Water Pollution Control Plan
YMCA	Young Men's Christian Association

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Appendix G: List of Technical Studies

Air Quality Assessment Report (January 2015). Prepared by LSA Associates, Inc.

Supplemental Air Quality Assessment Report (June 2018). Prepared by CH2MHILL.

Archaeological Survey Report (November 2014). Prepared by Sapphos Environmental, Inc.

Community Impact Assessment (November 2014). Prepared by LSA Associates, Inc.

Cumulative Impacts Assessment (January 2015). Prepared by LSA Associates, Inc.

Draft Relocation Impact Report (October 2014). Epic Land Solutions, Inc.

Final Relocation Impact Report (January 2018). Epic Land Solutions, Inc.

Finding of Adverse Effect for the State Route 710 North Project (December 2017). Prepared by GPA Consulting.

Energy Technical Report (October 2014). Prepared by LSA Associates, Inc.

Geologic Hazard Evaluation to Support Environmental Studies Documentation (November 2014). Prepared by CH2MHILL.

Groundborne Noise and Vibration Impacts (November 2014). Prepared by Wilson, Ihrig and Associates.

Health Risk Assessment (November 2014). Prepared by CH2MHILL.

Supplemental Health Risk Assessment Report (May 2018). Prepared by CH2MHILL.

Historic Property Survey Report (December 2014). Prepared by LSA Associates, Inc.

Historic Property Survey Report Addendum (February 2015). Prepared by LSA Associates, Inc.

Supplemental Historic Property Survey Report (September 2017). Prepared by GPA Consulting.

Historical Resources Evaluation Report (December 2014). Prepared by LSA Associates, Inc.

Jurisdictional Delineation Report: State Agencies Jurisdiction (November 2014). Prepared by Sapphos Environmental, Inc.

Jurisdictional Delineation Report: U.S. Army Corps of Engineers (October 2014). Prepared by Sapphos Environmental, Inc.

Location Hydraulic Study (February 2014). Prepared by CH2MHILL.

Natural Environment Study (November 2014). Prepared by Sapphos Environmental, Inc.

Noise Abatement Decision Report (September 2014). Prepared by LSA Associates, Inc.

Noise Study Report (October 2014) and Errata. Prepared by LSA Associates, Inc.

Paleontological Resources Identification and Evaluation Report (March 2014). Prepared by LSA Associates, Inc.

Phase I Initial Site Assessment (November 2014). Prepared by CH2MHILL.

Preliminary Drainage Report (August 2014). Prepared by CH2MHILL.

Preliminary Geotechnical Report (November 2014). Prepared by CH2MHILL.

Storm Water Data Report (September 2014). Prepared by CH2MHILL.

Summary Floodplain Encroachment Report (February 2014). Prepared by LSA Associates, Inc.

Transportation Technical Report (November 2014). Prepared by CH2MHILL.

Transportation Technical Report - Errata (October 2017). Prepared by CH2MHILL.

Tunnel Evaluation Report (September 2014). Prepared by Jacobs Associates.

Tunnel Systems Report for the Freeway Tunnel Alternative (September 2014). Prepared by ILF
Consultants, Inc.

Visual Impact Assessment (November 2014). Prepared by Tatsumi and Partners, Inc.

Water Quality Assessment Report (May 2014). Prepared by LSA Associates, Inc.

Appendix H: FTIP and RTP Project Listings

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2017 Federal Transportation Improvement Program

Los Angeles County
Local Highway
Including Amendments 1 - 21
(In \$000's)

MEASURE R 15 - LOCAL RETURN	570	610	820	2,000			500	500	500	500			2,000
PROP C"40" FUNDS	800	600	600	2,000			500	500	500	500			2,000
PROP "A" FUNDS	750	350	900	2,000			500	500		1,000			2,000
LA11G5N Total	3,030	2,660	5,418	11,108	1,108		2,500	2,500	2,000	3,000			11,108

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	Signage Begin	Signage End	System	Conformity Category	Amendment	
LA710NB	Los Angeles	SCAB		1M0101	PLN40						L	EXEMPT - 93.126	19	
Description:							PTC	111,000			Agency	VARIOUS AGENCIES		
SR Rt. 710 North - Transportation System Management (TSM) & Transportation Demand Management (TDM) as identified in the EIR/EIS.														
Fund	ENG	R/W	CON	Total	Prior		2016/2017	2017/2018		2018/2019	2019/2020	2020/2021	2021/2022	Total
MEASURE R 20H - HIGHWAY CAPITAL	20,400	9,000	81,600	111,000						20,400		90,600		111,000
LA710NB Total	20,400	9,000	81,600	111,000						20,400		90,600		111,000

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	Signage Begin	Signage End	System	Conformity Category	Amendment	
LASRTS	Los Angeles	SCAB		7120004	LUM03						L	EXEMPT - 93.126	20	
Description:							PTC	55,950			Agency	VARIOUS AGENCIES		
Grouped Projects for Safety Improvement - Safe Route to School Program (ATP Program). Projects are consistent with 40 CFR Part 93.126. Utilizing Toll Credits to match ATP.														
Fund	ENG	R/W	CON	Total	Prior		2016/2017	2017/2018		2018/2019	2019/2020	2020/2021	2021/2022	Total
STP LOCAL			95	95						95				95
CITY FUNDS	217	501	5,341	6,059			3,592	1,008		1,433	26			6,059
COUNTY	60		92	152	20		132							152
ACTIVE TRANSPORTATION PROGRAM	5,143	2,500	34,014	41,657	3,505		28,814	2,745		6,593				41,657
ACTIVE TRANSPORTATION PROGRAM - MPO	243		6,473	6,716	100		3,719	333		1,981	583			6,716
STATE CASH	98		1,173	1,271	1,271									1,271
LASRTS Total	5,761	3,001	47,188	55,950	4,896		36,257	4,086		10,102	609			55,950

ProjectID	County	Air Basin	Model	RTP ID	Program	Route	Begin	End	Signage Begin	Signage End	System	Conformity Category	Amendment	
LA0D279	Los Angeles	SCAB		LA0D279	NCR36						L	EXEMPT - 93.126	15	
Description:							PTC	26,357			Agency	VERNON		
ATLANTIC BLVD. BRIDGE OVER THE L.A RIVER 5/8 MILE N SLAUSON AVE, WIDEN 6 LANE BRIDGE TO ADD RIGHT TURN LANE (BRIDGE #53C0252)														
Fund	ENG	R/W	CON	Total	Prior		2016/2017	2017/2018		2018/2019	2019/2020	2020/2021	2021/2022	Total
DEMO-SAFETEA-LU	1,164	214		1,378	1,378									1,378
CITY FUNDS	302	343	2,165	2,810	379						2,431			2,810
LOCAL ADVANCE CONSTRUCTION			16,707	16,707							16,707			16,707
MEASURE R		139	1,931	2,070	139			1,931						2,070
BRIDGE - LOCAL	89	3,303		3,392	1,341						2,051			3,392
LA0D279 Total	1,555	3,999	20,803	26,357	3,237			1,931			21,189			26,357

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TABLE 2 Financially-Constrained RTP/SCS Projects - Continued

System	Lead Agency	RTP ID	Route #	Route Name	From	To	Description	Completion Year	Project Cost (\$1,000's)
County: Los Angeles									
STATE HIGHWAY	LOS ANGELES COUNTY MTA	1M1002	710	I-710			I-710 EARLY ACTION PROJECTS	2022	\$711,600
STATE HIGHWAY	CALTRANS	18790	710				ROUTE 710: STUDY TO PERFORM ALTERNATIVE ANALYSIS, ENGINEERING AND ENVIRONMENTAL STUDIES TO CLOSE 710 FREEWAY GAP. (EA # 187901, PPNO# 2215)	2025	\$70,454
STATE HIGHWAY	CALTRANS	LA996143	710				ROUTE 710: RTE 710 PCH TO DOWNTOWN L.B., PAVEMENT RECON, MEDIAN, LANDSCAPING IMPROVE (EA 2203U, 23640, PPNO: 2945,3248)	2016	\$7,496
STATE HIGHWAY	LONG BEACH	LA000512	710	OCEAN BOULEVARD	I-710	SR 47	BRIDGE NO. 53C0065, OCEAN BLVD, OVER ENTRANCE CHANNEL, UP RR, 1.0 MI E STATE ROUTE 47. REPLACE EXISTING 5 LANE GERALD DESMOND BRIDGE (GDB) WITH NEW 6 LANE BRIDGE.	2017	\$1,288,101
STATE HIGHWAY	LOS ANGELES COUNTY MTA	LA0B952	710				ROUTE 710: RECONSTRUCT I-710 INTERCHANGES AT I-5, AT I-405, AT SR 91, AND AT I-105. AS PART OF OF THE I-710 CORRIDOR PROGRAM PROPOSING 4 TRUCK LANES (PORTS-RAIL YARDS), 10 GENERAL LANES (PORT-SR-60)(ISTEA ID # 37)(SAFTEA-LU 3773). (SEE ADDITIONAL DESCRIPTION IN THE GENERAL COMMENTS SECTION)	2015	\$56,500
STATE HIGHWAY	LOS ANGELES COUNTY MTA	LA990921-LA0G1138	710				IMPROVEMENTS TO I-710 SOUNDWALLS. THE PURPOSE OF THIS PROJECT IS TO MITIGATE NOISE LEVELS AND PROVIDE AESTHETIC TREATMENTS ON THE 710 SOUNDWALLS.	2015	\$3,000
STATE HIGHWAY	LOS ANGELES COUNTY MTA (METRO)	1M0101	710	SR-710	VALLEY BOULEVARD	CALIFORNIA BL & PASADENA AVE	SR-710 NORTH PROJECT STUDY ALTERNATIVES (ALIGNMENT TBD)*	2025	\$5,636,000
STATE HIGHWAY	CALTRANS	LA990921-LA990921	999				ROUTE 999: ON VARIOUS HIGHWAYS. GROUPED PROJECTS FOR NOISE ATTENUATION (SOUNDWALLS) (ONLY EA00234 ON RTE 710 REMAINING. PROJECTS ARE CONSISTENT WITH 40 CFR PART 93.126 EXEMPT TABLES 2 AND TABLE 3 CATEGORIES.	2014	\$236,700

* This project is currently pending environmental review. As with other projects included within the Project List, when the SR-710 North Study EIR/EIS process is complete, the 2016 RTP/SCS will be updated to reflect the Locally Preferred Alternative (LPA) as identified in the final environmental document.

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Appendix I: Notice of Preparation and Notice of Intent

The following documents are provided in Appendix I:

1. Notice of Preparation (NOP) of a Draft Environmental Impact Report to be prepared for the State Route 710 North Gap Closure Project February 28, 2011).
2. Notice of Intent (NOI) of a Draft Environmental Impact Statement to be prepared for the State Route 710 Gap North Closure Project (March 3, 2011).

Letters received from State, federal, and local agencies, elected officials, organizations, and members of the public during the scoping process, including in response to the NOP and NOI, are discussed in detail and provided in the *710 North Gap Closure Project Scoping Summary Report* (September 2011).

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SCH NO. _____

NOTICE OF PREPARATION

To: _____

From: California Dept. of Transportation

100 S. Main Street, MS 16-A

Los Angeles, CA 90012

Subject: Notice of Preparation of a Draft Environmental Impact Report
Reference: California Code of Regulations, Title 14, (CEQA Guidelines) Sections 15082(a), 15103, 15375.

Project Title: State Route 710 North Gap Closure Project

Project Location: Depending on the alternative selected, this project would be located in the study area bordered by Interstate 10 to the south, Interstate 605 to the east, Interstate 210 to the north, and State Route 2 to the west, in Los Angeles County, California.

Project Description: The proposed project, depending on the results of a thorough environmental analysis of all possible transportation improvements during the NEPA/CEQA process, may include, but not be limited to: surface and subsurface highway/freeway construction, heavy rail and bus/light rail systems, local street upgrades, traffic management systems and a no build alternative. There currently is a gap in the I-710 corridor, for a distance of approximately 4.5 miles (7.2km), which extends between Valley Boulevard to the south and Del Mar Boulevard to the north. As originally identified in the April 13, 1998 Record of Decision for the Meridian Variation alignment, this gap contributes to congestion on local streets and the regional freeway system. The objective of this project is to relieve congestion and improve mobility within the study area.

This is to inform you that the California Department of Transportation will be the lead agency and will prepare an Environmental Impact Report (EIR) for the project described above. Your participation as a responsible agency is requested in the preparation and review of this document.

We need to know the views of your agency as to the scope and content of the environmental information that is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

A location map and the potential environmental effects are contained in the attached materials.

Caltrans will be holding public scoping meetings to provide an overview of the project, summary of the environmental process and issues addressed, and receive input regarding environmental issues and the suggested scope and content of the EIR. The Scoping meetings will be held in San Gabriel, Alhambra, Glendale, South Pasadena, El Sereno, and Pasadena. More information on the scoping meetings are in the attached materials.

A copy of the Initial Study (is) (x is not) attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please direct your response to Ron Kosinski, Deputy District Director Telephone (213) 897-0703 at the address shown above. Please supply us with the name for a contact person in your agency.

Date FEL 28, 2011

Signature Ronald Kosinski

Title DEPUTY DIST. DIR. ENV. PLANNING

Scoping Meetings: An Agency Scoping Meeting will be held in Los Angeles, March 14, 2011, 2pm to 4pm, Caltrans, District 7 Headquarters, RM 1.040 100 S. Main Street, 90012.

Public Scoping Meetings will be held at the following locations:

- **San Gabriel**, March 15, 2011, 6pm to 8pm Jefferson Middle School, 1372 East Las Tunas Drive, 91776
- **Alhambra**, March 16, 2011, 6pm to 8pm Civic Center Library, 101 S. First Street, 91801
- **Glendale**, March 22, 2011, 6pm to 8pm Glendale Community College, 1500 North Verdugo Road, 91208
- **South Pasadena**, March 23, 2011, 6pm to 8pm South Pasadena High School, 1401 Fremont Ave., 91030
- **El Sereno**, March 29, 2011, 6pm to 8pm LA Christian Presbyterian Church, 2241 N. Eastern Ave., 90032
- **Pasadena**, March 30, 2011, 6pm to 8pm Lake Avenue Church, 393 N. Lake Ave., 91101

Impacts:

Various environmental and community resources are known to exist within the limits of the study area. These resources include, but are not limited to: geotechnical, erosion, hydrology, air quality, water quality, noise, biology, public utilities, vehicle traffic patterns, parking, land use planning and hazardous waste. Displacement of businesses and homes is a significant issue. Soundwalls, relocation assistance, construction impact management and other mitigation measures will be incorporated into the proposed project.

It is anticipated that the proposed project may require the following federal approvals and permits: a Biological Opinion from the United States Fish and Wildlife Service, approval of a PM10 and PM2.5 Hot Spot Analysis by the Conformity Working Group for transportation conformity determination under the Clean Air Act. Section 404 nationwide permit from the U.S. Army Corps of Engineers, Section 401 Water Quality Certification from the California Regional Water Quality Control Board, Section 1601 Streambed Alteration Agreement from the California Department of Fish and Game, and encroachment permits from the various cities in which project construction would occur.

comments were received.¹⁵ Because proposed Section 16(a) is substantially similar to the ISE, NYSE Arca, and FINRA rules, it raises no new regulatory issues.

The Commission also believes that good cause exists to grant accelerated approval to proposed Section 16(b) to Chapter III, which conforms to the Exchange rule to the requirements of Section 6(b)(10) of the Act. Section 6(b)(10) of the Act, enacted under Section 957 of the Dodd-Frank Act, does not provide for a transition phase, and requires rules of national securities exchanges to prohibit broker voting on the election of a member of the board of directors of an issuer (except for a vote with respect to the uncontested election of a member of the board of directors of any investment company registered under the Investment Company Act of 1940), executive compensation, or any other significant matter, as determined by the Commission by rule. The Commission believes that good cause exists to grant accelerated approval to proposed Section 16(b) to Chapter III, because it will conform the Box rules to the requirements of Section 6(b)(10) of the Act.

V. Conclusion

It is therefore ordered, pursuant to Section 19(b)(2) of the Act,¹⁶ that the proposed rule change (SR-BX-2011-011) be, and it hereby is, approved on an accelerated basis.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.¹⁷

Cathy H. Ahn,

Deputy Secretary.

[FR Doc. 2011-5304 Filed 3-8-11; 8:45 am]

BILLING CODE 8011-01-P

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

Environmental Impact Statement: Los Angeles County, CA

AGENCY: Federal Highway Administration (FHWA), DOT.

ACTION: Notice of intent.

SUMMARY: The FHWA, on behalf of the California Department of Transportation (Caltrans), is issuing this notice to advise the public that a Draft Environmental Impact Statement will be prepared for a proposed highway project in Los Angeles County, California.

DATES: Public Scoping Meetings will be held at the following locations:

San Gabriel, March 15, 2011, 6 p.m. to 8 p.m.

Alhambra, March 16, 2011, 6 p.m. to 8 p.m.

Glendale, March 22, 2011, 6 p.m. to 8 p.m.

South Pasadena, March 23, 2011, 6 p.m. to 8 p.m.

El Sereno, March 29, 2011, 6 p.m. to 8 p.m.

Pasadena, March 30, 2011, 6 p.m. to 8 p.m.

An online Virtual Scoping Meeting will be held on March 21, 2011. Register to participate at metro.net/sr710conversations and click the "Participate from Home" tab. (It will begin live at 6 p.m. and continue on demand through April 14, 2011).

ADDRESSES: San Gabriel—Jefferson Middle School, 1372 East Las Tunas Drive, San Gabriel, CA 91776.

Alhambra—Civic Center Library, 101 S. First Street, Alhambra, CA 91801.

Glendale—Glendale Community College, (Student Center RM 212), 1500 North Verdugo Road, Glendale, CA 91208.

South Pasadena—South Pasadena High School, (Auditorium), 1401 Fremont Ave., South Pasadena, CA 91030.

El Sereno—LA Christian Presbyterian Church, (Gymnasium), 2241 N. Eastern Ave., Los Angeles, CA 90032.

Pasadena—Lake Avenue Church, (4th floor above Harris Hall), 393 N. Lake Ave., Pasadena, CA 91101.

FOR FURTHER INFORMATION CONTACT:

Ronald Kosinski, Deputy District Director, California Department of Transportation, District 7, Division of Environmental Planning, 100 South Main Street, Mail Stop 16A, Los Angeles, CA 90012.

SUPPLEMENTARY INFORMATION: Effective July 1, 2007, the Federal Highway Administration (FHWA) assigned, and the California Department of Transportation (Caltrans) assumed, environmental responsibilities for this project pursuant to 23 U.S.C. 327. Caltrans as the delegated National Environmental Policy Act (NEPA) agency will prepare a Draft Environmental Impact Statement on a proposal for the State Route 710 Gap North Closure project in Los Angeles County, California. The proposed project, depending on the results of a thorough environmental analysis of all possible transportation improvements during the NEPA/CEQA process, may include, but not be limited to: surface and subsurface highway/freeway construction, heavy rail and bus/light

rail systems, local street upgrades, traffic management systems and a no build alternative. There currently is a gap in the I-710 corridor, for a distance of approximately 4.5 miles (7.2 km), which extends between Valley Boulevard to the south and Del Mar Boulevard to the north. As originally identified in the April 13, 1998 Record of Decision for the Meridian Variation alignment, this gap contributes to congestion on local streets and the regional freeway system. The objective of this project is to relieve congestion and improve mobility within the study area.

It is anticipated that the proposed project may require the following federal approvals and permits: a Biological Opinion from the United States Fish and Wildlife Service, approval of a PM10 and PM2.5 Hot Spot Analysis by the Conformity Working Group for transportation conformity determination under the Clean Air Act. Section 404 nationwide permit from the U.S. Army Corps of Engineers, Section 401 Water Quality Certification from the California Regional Water Quality Control Board, Section 1601 Streambed Alteration Agreement from the California Department of Fish and Game, and encroachment permits from the various cities in which project construction would occur.

Letters describing the proposed action and soliciting comments will be sent to appropriate Federal, State, Participating Agencies, Tribal Governments and local agencies, and to private organizations and citizens who have previously expressed or are known to have interest in this proposal. The public scoping process will officially begin in March 2011. Public scoping meeting(s) will be held in San Gabriel, Alhambra, Glendale, South Pasadena, Los Angeles, El Sereno, and Pasadena in March 2011. In addition, one online Virtual Scoping Meeting will be held on March 21, 2011. (It will begin live at 6 p.m. and continue on demand through April 14, 2011). Further, a public hearing will be held once the Draft Environmental Impact Statement is completed. Public notice will be given of the time and place of the meeting and hearing. The Draft Environmental Impact Statement will be available for public and agency review and comment prior to the public hearing to ensure that the full range of issues related to this proposed action are addressed and all significant issues identified, comments, and suggestions are invited from all interested parties. Comments or questions concerning this proposed action and the EIS should be directed to Caltrans at the address provided above.

¹⁵ See note 8 *supra*.

¹⁶ 15 U.S.C. 78s(b)(2).

¹⁷ 17 CFR 200.30-3(a)(12).

(Catalog of Federal Domestic Assistance Program Number 20.205, Highway Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program.)

Issued on: March 3, 2011.

Shawn E. Oliver,

*Federal Highway Administration,
Sacramento, California.*

[FR Doc. 2011-5407 Filed 3-8-11; 8:45 am]

BILLING CODE 4910-22-P

DEPARTMENT OF THE TREASURY

Departmental Offices Proposed Collections; Comment Requests

ACTION: Notice and request for comments.

SUMMARY: The Department of the Treasury, as part of its continuing effort to reduce paperwork burdens, invites the general public and other Federal agencies to comment on a proposed information collection, as required by the Paperwork Reduction Act of 1995, Public Law 104-13 (44 U.S.C. 3506(c)(2)(A)). The Consumer Financial Protection Bureau implementation team is soliciting comments regarding forms for questions, complaints, and other information about consumer financial products and services.

DATES: Written comments should be received on or before May 9, 2011 to be assured of consideration.

ADDRESSES: Direct all written comments to Andrew Trueblood, Consumer Financial Protection Bureau implementation team, 1801 L Street, NW., Washington, DC 20036.

FOR FURTHER INFORMATION CONTACT: Requests for additional information should be directed to Andrew Trueblood in writing at Consumer Financial Protection Bureau implementation team, 1801 L Street, NW., Washington, DC 20036, by telephone at (202) 435-7070, or by e-mail at andrew.trueblood@treasury.gov.

SUPPLEMENTARY INFORMATION:

Title: Consumer Financial Protection Bureau Consumer Response Intake Fields.

OMB Control Number: NEW.

Abstract: The Dodd-Frank Wall Street Reform and Consumer Protection Act, Public Law 111-203, Title X, established the Consumer Financial Protection Bureau (CFPB). Among the CFPB's functions is to facilitate the centralized collection of, monitoring of, and response to complaints concerning consumer financial products and

services. In order to collect data about the consumer financial market and facilitate the appropriate routing of, handling of, and response to complaints, questions, and other information concerning consumer financial products and services, the CFPB is developing online and paper intake methods which will have fields for persons to complete. The fields will help document information such as the type of contact; the substance of the complaint, question, or other information; contact information for the person making the contact and/or related persons; information about any subject incident and institution; and identifying information about the consumer or consumer's household.

Type of Review: NEW.

Affected Public: Individuals and households with questions, complaints, and other information about consumer financial products and services.

Estimated Number of Respondents: Approximately 1-3 million per year. CFPB's intake of complaints, questions, and other information relating to consumer financial products and services is a new collection that may centralize intake now performed by existing agencies. As such, the projections of the number of respondents have a high level of uncertainty.

Estimated Average Time per Respondent: 10 minutes per response. The time to complete the form will depend on the nature of the contact. Simple feedback may take as little as a few minutes to complete while more complicated complaints could take longer to describe.

Estimated Total Annual Burden Hours: Approximately 330,000 burden hours.

Request for Comments: Comments submitted in response to this notice will be summarized and/or included in the request for Office of Management and Budget approval. All comments will become a matter of public record. The public is invited to submit written comments concerning: (a) Whether the intake of complaints, questions, and other information relating to consumer financial products and services is necessary for the proper performance of the functions of the Bureau, including whether the information will have practical uses; (b) the accuracy of the above estimate of the burden of the information collection; (c) ways to enhance the quality, usefulness, and clarity of the information to be collected; (d) ways to minimize the reporting and/or record keeping burdens on respondents, including the use of automated collection techniques or

other forms of information technology; (e) estimates of capital or start-up costs of operation, maintenance, and purchase of services to provide information; and (f) specific types of information that would be useful for CFPB to collect through its intake forms, in order to advance the mission of CFPB.

Robert Dahl,

Treasury Department Clearance Officer.

[FR Doc. 2011-5349 Filed 3-8-11; 8:45 am]

BILLING CODE 4810-25-P

DEPARTMENT OF THE TREASURY

Submission for OMB Review; Comment Request

March 3, 2011.

The Department of the Treasury will submit the following public information collection requirements to OMB for review and clearance under the Paperwork Reduction Act of 1995, Public Law 104-13 on or after the date of publication of this notice. A copy of the submissions may be obtained by contacting the Treasury Department Office Clearance Officers listed. Comments regarding these information collections should be addressed to the OMB reviewer listed and to the Treasury PRA Clearance Officer, Department of the Treasury, 1750 Pennsylvania Avenue, NW., Suite 11020, Washington, DC 20220.

Dates: Written comments should be received on or before April 8, 2011 to be assured of consideration.

Departmental Offices (DO)

Summary: As part of a Federal Government-wide effort to streamline the process to seek feedback from the public on service delivery, the Department of the Treasury has submitted a Generic Information Collection Request (Generic ICR): "Generic Clearance for the Collection of Qualitative Feedback on Agency Service Delivery" to OMB for approval under the Paperwork Reduction Act (PRA) (44 U.S.C. 3501 *et seq.*). Treasury is requesting clearance for eight separate OMB Control Numbers for eight bureaus and offices within the Department. Each clearance will have the same title and purpose, but will be available for use by each bureau under their control number and burden estimate, as detailed below.

Title: Generic Clearance for the Collection of Qualitative Feedback on Agency Service Delivery.

Abstract: The information collection activity will garner qualitative customer and stakeholder feedback in an efficient, timely manner, in accordance with the

Appendix J: References

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Wilson, Ihrig & Associates, Inc., ICF International, and Simpson, Gumpertz & Heger, Inc. 2012. Current Practices to Address Construction Vibration and Potential Effects to Historic Buildings Adjacent to Transportation Projects. September 2012.

Appendix K: Species Lists

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United States Department of the Interior



FISH AND WILDLIFE SERVICE
Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
Phone: (760) 431-9440 Fax: (760) 431-5901
<http://www.fws.gov/carlsbad/>

In Reply Refer To:

August 13, 2018

Consultation Code: 08ECAR00-2018-SLI-0792

Event Code: 08ECAR00-2018-E-03361

Project Name: SR 710 North Project

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Carlsbad Fish And Wildlife Office

2177 Salk Avenue - Suite 250

Carlsbad, CA 92008-7385

(760) 431-9440

Project Summary

Consultation Code: 08ECAR00-2018-SLI-0792

Event Code: 08ECAR00-2018-E-03361

Project Name: SR 710 North Project

Project Type: TRANSPORTATION

Project Description: The California Department of Transportation (Caltrans), in cooperation with the Los Angeles County Metropolitan Transportation Authority (Metro) proposes transportation improvements to improve mobility and relieve congestion in the area between State Route 2 (SR 2) and Interstates 5, 10, 210, and 605 (I-5, I-10, I-210, and I-605, respectively) in east/northeast Los Angeles and the western San Gabriel Valley. The study area for the State Route 710 (SR 710) North Study (Proposed Project) is approximately 100 square miles and generally bounded by I-210 on the north, I-605 on the east, I-10 on the south, and I-5 and SR 2 on the west.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/34.091027849376815N118.16017698140752W>



Counties: Los Angeles, CA

Endangered Species Act Species

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
California Condor <i>Gymnogyps californianus</i> Population: U.S.A. only, except where listed as an experimental population There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8193	Endangered
Coastal California Gnatcatcher <i>Polioptila californica californica</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo <i>Vireo bellii pusillus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5945	Endangered

Flowering Plants

NAME	STATUS
Braunton's Milk-vetch <i>Astragalus brauntonii</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5674	Endangered
Nevin's Barberry <i>Berberis nevinii</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8025	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

9/20/2018

Caltrans SR 710 North Corridor Project

National Marine Fisheries Service (NMFS), West Coast Region, California Species List¹

Quad Name **Pasadena**

Quad Number **34118-B2**

ESA Anadromous Fish

SONCC Coho ESU (T) -

CCC Coho ESU (E) -

CC Chinook Salmon ESU (T) -

CVSR Chinook Salmon ESU (T) -

SRWR Chinook Salmon ESU (E) -

NC Steelhead DPS (T) -

CCC Steelhead DPS (T) -

SCCC Steelhead DPS (T) -

SC Steelhead DPS (E) - **X**

CCV Steelhead DPS (T) -

Eulachon (T) -

sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -

CCC Coho Critical Habitat -

CC Chinook Salmon Critical Habitat -

CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat -

NC Steelhead Critical Habitat -

CCC Steelhead Critical Habitat -

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat -

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

¹ National Marine Fisheries Service (NIMFS), West Coast Region. September 21,2018. California Species List. Available at: https://www.westcoast.fisheries.noaa.gov/maps_data/california_species_list_tools.html

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH -
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

**See list at left and consult the NMFS Long Beach office
562-980-4000**

MMPA Cetaceans -

MMPA Pinnipeds -

Quad Name **Mount Wilson**

Quad Number **34118-B1**

ESA Anadromous Fish

SONCC Coho ESU (T) -

CCC Coho ESU (E) -

CC Chinook Salmon ESU (T) -

CVSR Chinook Salmon ESU (T) -

SRWR Chinook Salmon ESU (E) -

NC Steelhead DPS (T) -

CCC Steelhead DPS (T) -

SCCC Steelhead DPS (T) -

SC Steelhead DPS (E) - **X**

CCV Steelhead DPS (T) -

Eulachon (T) -

sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -

CCC Coho Critical Habitat -

CC Chinook Salmon Critical Habitat -

CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat -

NC Steelhead Critical Habitat -

CCC Steelhead Critical Habitat -

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat -

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH -
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

**See list at left and consult the NMFS Long Beach office
562-980-4000**

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name **Los Angeles**

Quad Number **34118-A2**

ESA Anadromous Fish

SONCC Coho ESU (T) -

CCC Coho ESU (E) -

CC Chinook Salmon ESU (T) -

CVSR Chinook Salmon ESU (T) -

SRWR Chinook Salmon ESU (E) -

NC Steelhead DPS (T) -

CCC Steelhead DPS (T) -

SCCC Steelhead DPS (T) -

SC Steelhead DPS (E) - **X**

CCV Steelhead DPS (T) -

Eulachon (T) -

sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -

CCC Coho Critical Habitat -

CC Chinook Salmon Critical Habitat -

CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat -

NC Steelhead Critical Habitat -

CCC Steelhead Critical Habitat -

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat -

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH -
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

**See list at left and consult the NMFS Long Beach office
562-980-4000**

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name **El Monte**

Quad Number **34118-A1**

ESA Anadromous Fish

SONCC Coho ESU (T) -

CCC Coho ESU (E) -

CC Chinook Salmon ESU (T) -

CVSR Chinook Salmon ESU (T) -

SRWR Chinook Salmon ESU (E) -

NC Steelhead DPS (T) -

CCC Steelhead DPS (T) -

SCCC Steelhead DPS (T) -

SC Steelhead DPS (E) - **X**

CCV Steelhead DPS (T) -

Eulachon (T) -

sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -

CCC Coho Critical Habitat -

CC Chinook Salmon Critical Habitat -

CVSR Chinook Salmon Critical Habitat -

SRWR Chinook Salmon Critical Habitat -

NC Steelhead Critical Habitat -

CCC Steelhead Critical Habitat -

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat -

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH -
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

**See list at left and consult the NMFS Long Beach office
562-980-4000**

MMPA Cetaceans -
MMPA Pinnipeds -

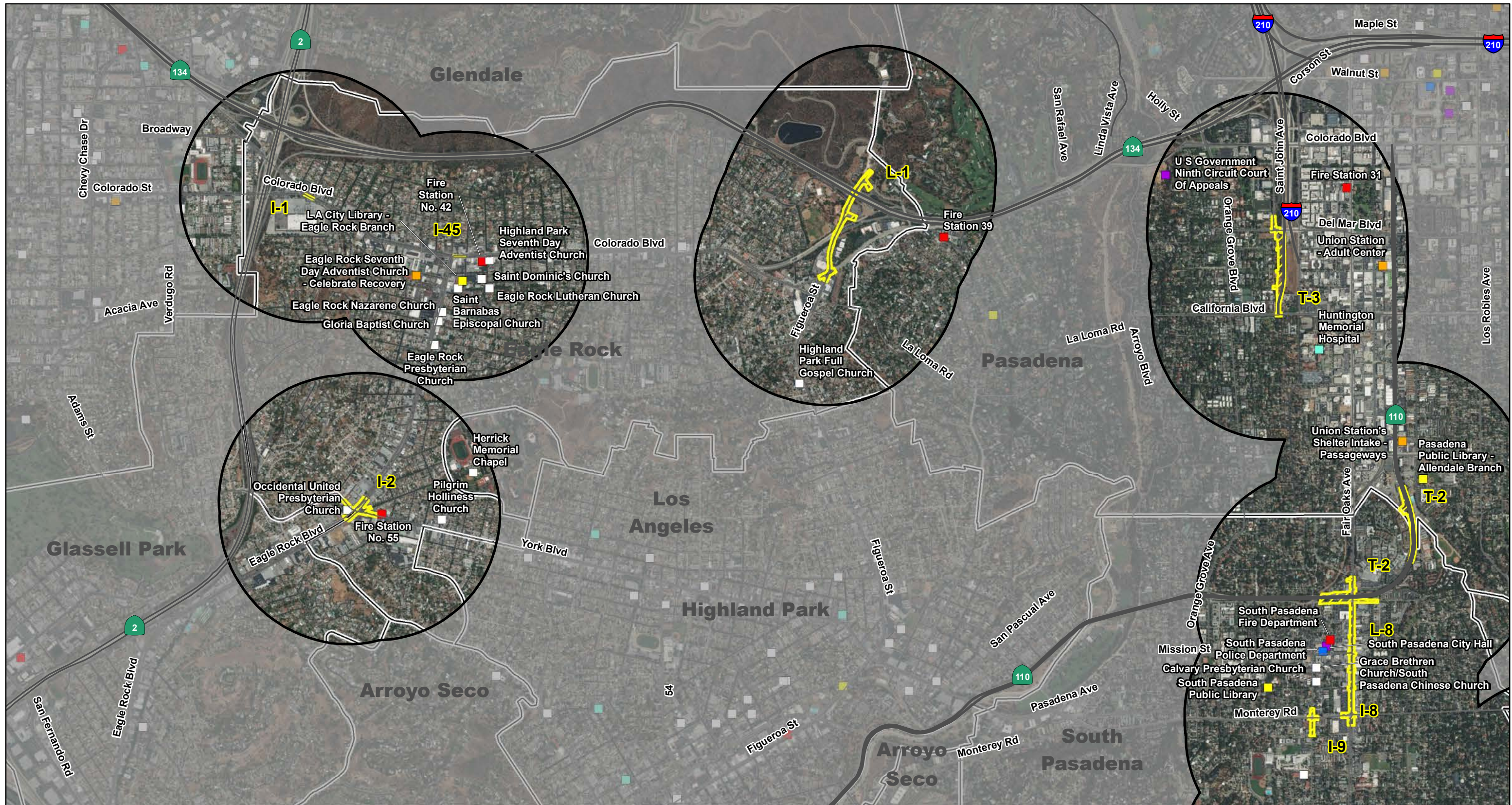
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Appendix L: Community Impacts Figures











This appendix contains the following figures, which support the analysis in Section 3.3, Community Impacts:

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Figure 3.3-17: Freeway Tunnel Alternative and Environmental Justice Populations	L-201

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LEGEND

- | | | |
|--|---|--|
|  TSM/TDM Alternative Local Street and Intersection Improvements |  Police Station |  Hospital |
|  0.5 Mile from the Project Improvements |  Fire Station |  Place of Worship |
|  Cities, Neighborhoods, and Unincorporated Communités |  Library |  Homeless Service |
| |  Other Government Facilities | |

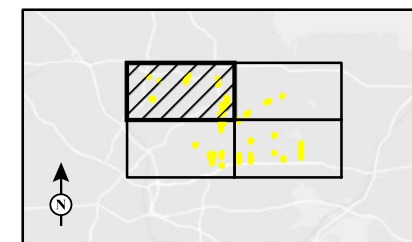
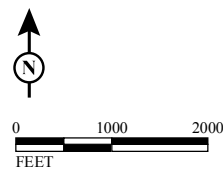
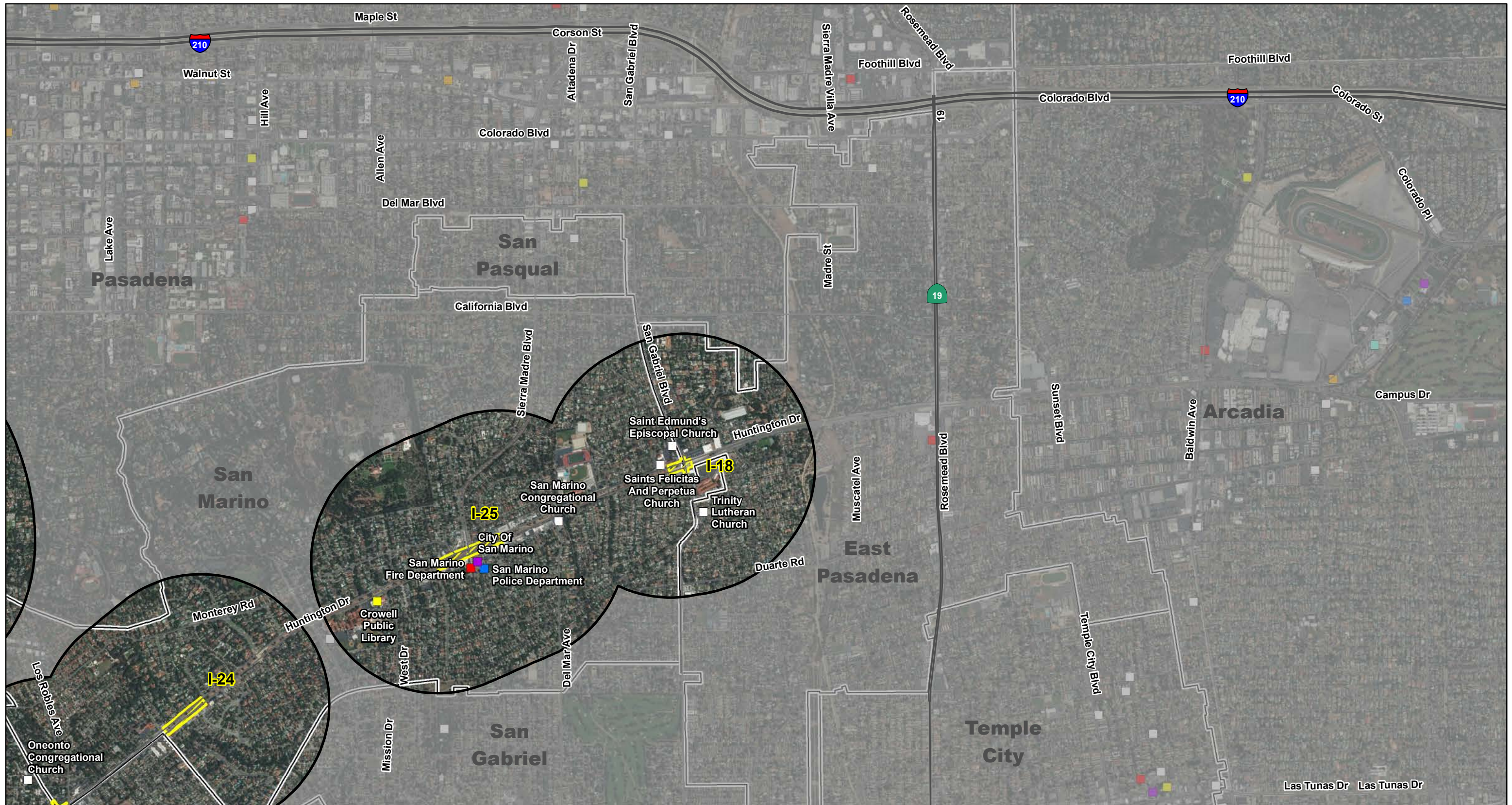


FIGURE 3.3-1
Sheet 1 of 4

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LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- 0.5 Mile from the Project Improvements
- Cities, Neighborhoods, and Unincorporated Communitites
- Police Station
- Fire Station
- Library
- Other Government Facilities
- Hospital
- Place of Worship
- Homeless Service

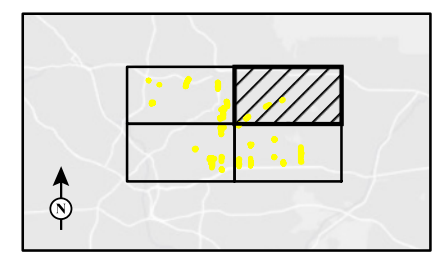
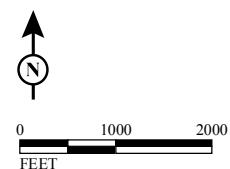
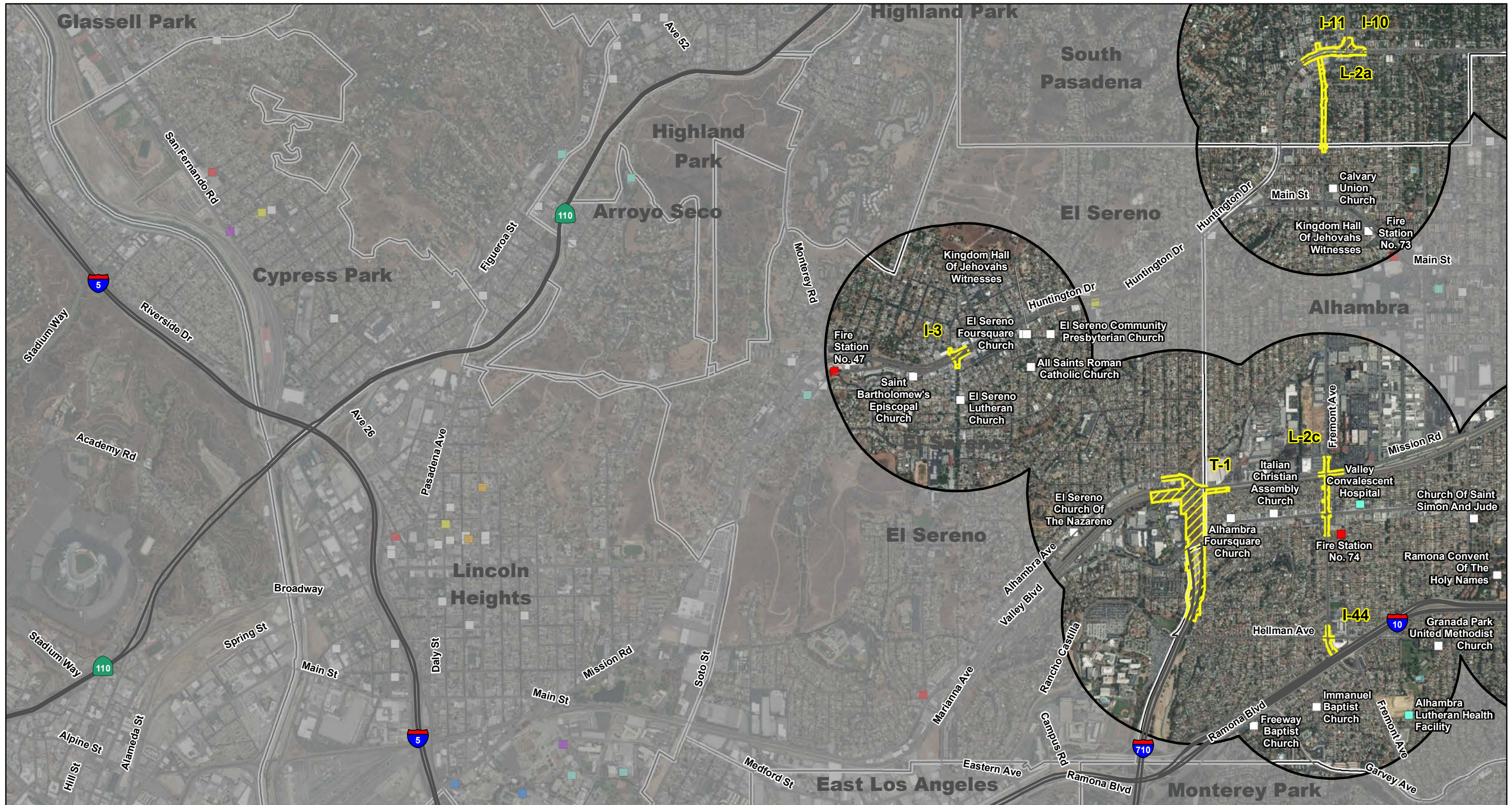


FIGURE 3.3-1
Sheet 2 of 4

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)
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LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- 0.5 Mile from the Project Improvements
- Cities, Neighborhoods, and Unincorporated Communitcs
- Police Station
- Fire Station
- Library
- Other Government Facilities
- Hospital
- Place of Worship
- Homeless Service

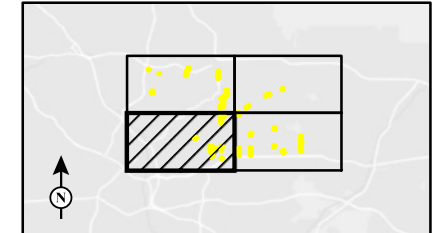
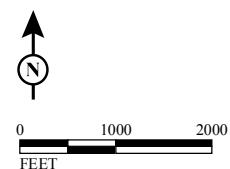
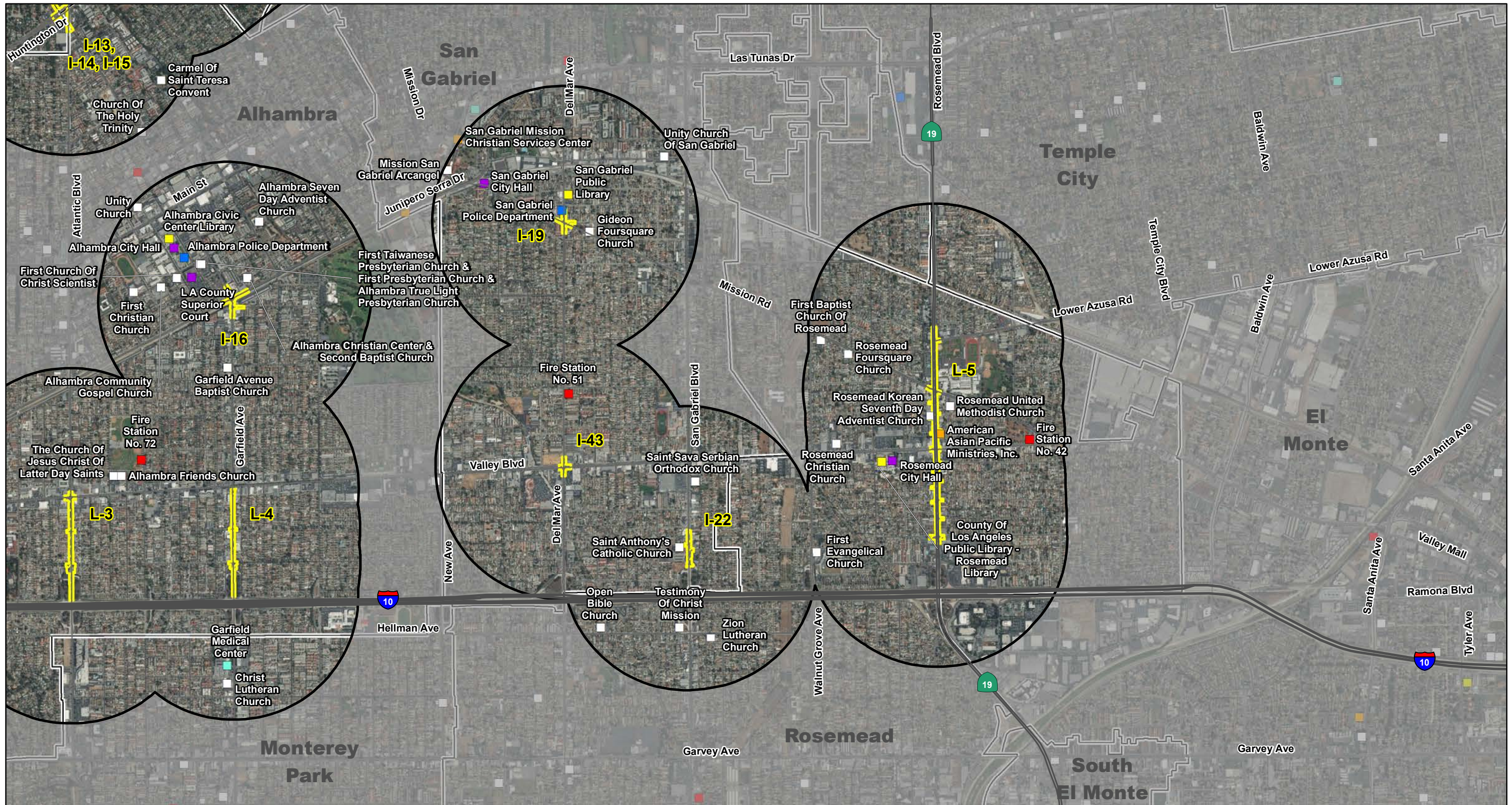


FIGURE 3.3-1
Sheet 3 of 4

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)
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LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- 0.5 Mile from the Project Improvements
- Cities, Neighborhoods, and Unincorporated Communitis
- Police Station
- Fire Station
- Library
- Other Government Facilities
- Hospital
- Place of Worship
- Homeless Service

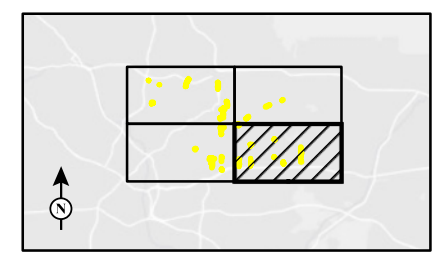
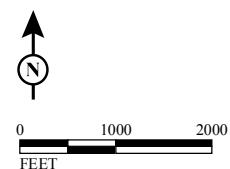
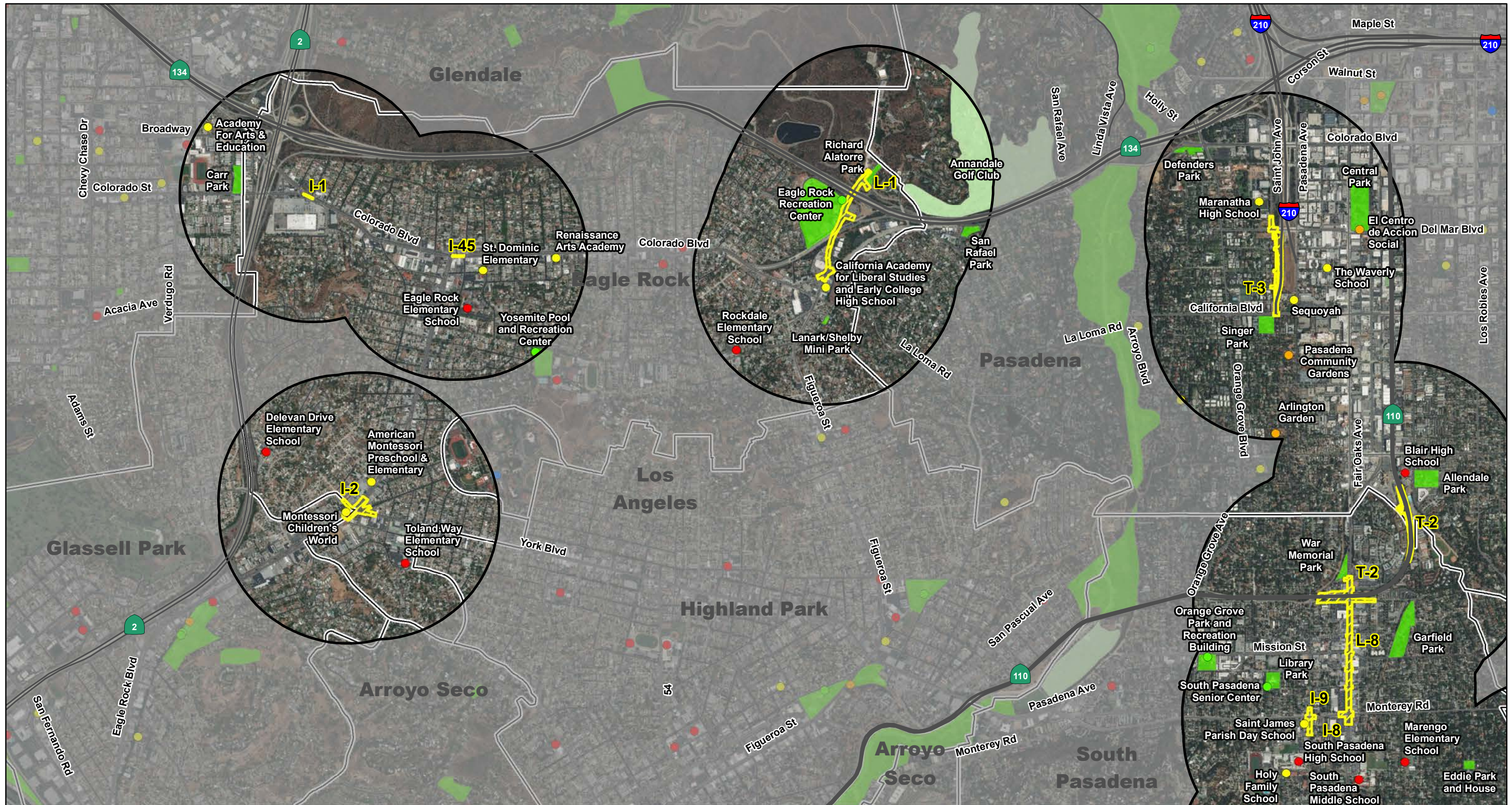


FIGURE 3.3-1
Sheet 4 of 4

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)
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LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- 0.5 Mile from the Project Improvements
- Cities, Neighborhoods, and Unincorporated Communities
- Park
- Golf Course
- Public School
- Private School
- College or University
- Community Center
- Recreation Facility

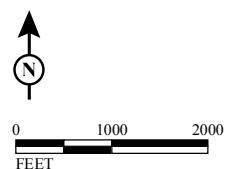
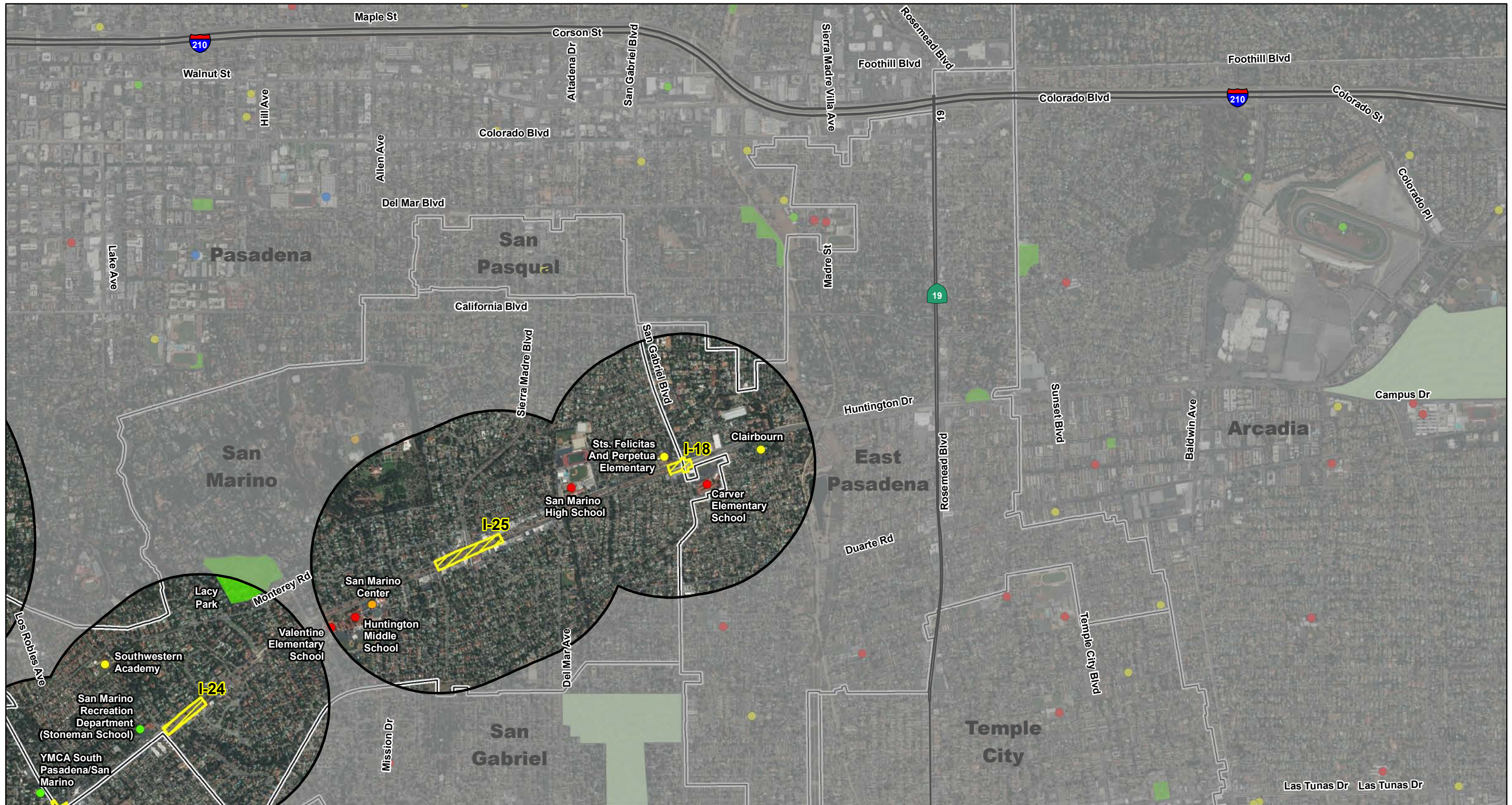


FIGURE 3.3-2
Sheet 1 of 4

SR 710 North Project
TSM/TDM Alternative
Schools, Parks, and Recreation Facilities

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)
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LEGEND

-  TSM/TDM Alternative Local Street and Intersection Improvements
-  0.5 Mile from the Project Improvements
-  Cities, Neighborhoods, and Unincorporated Communitites
-  Park
-  Golf Course
-  Public School
-  Private School
-  College or University
-  Community Center
-  Recreation Facility

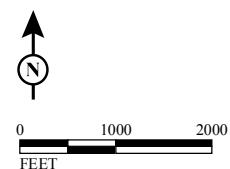
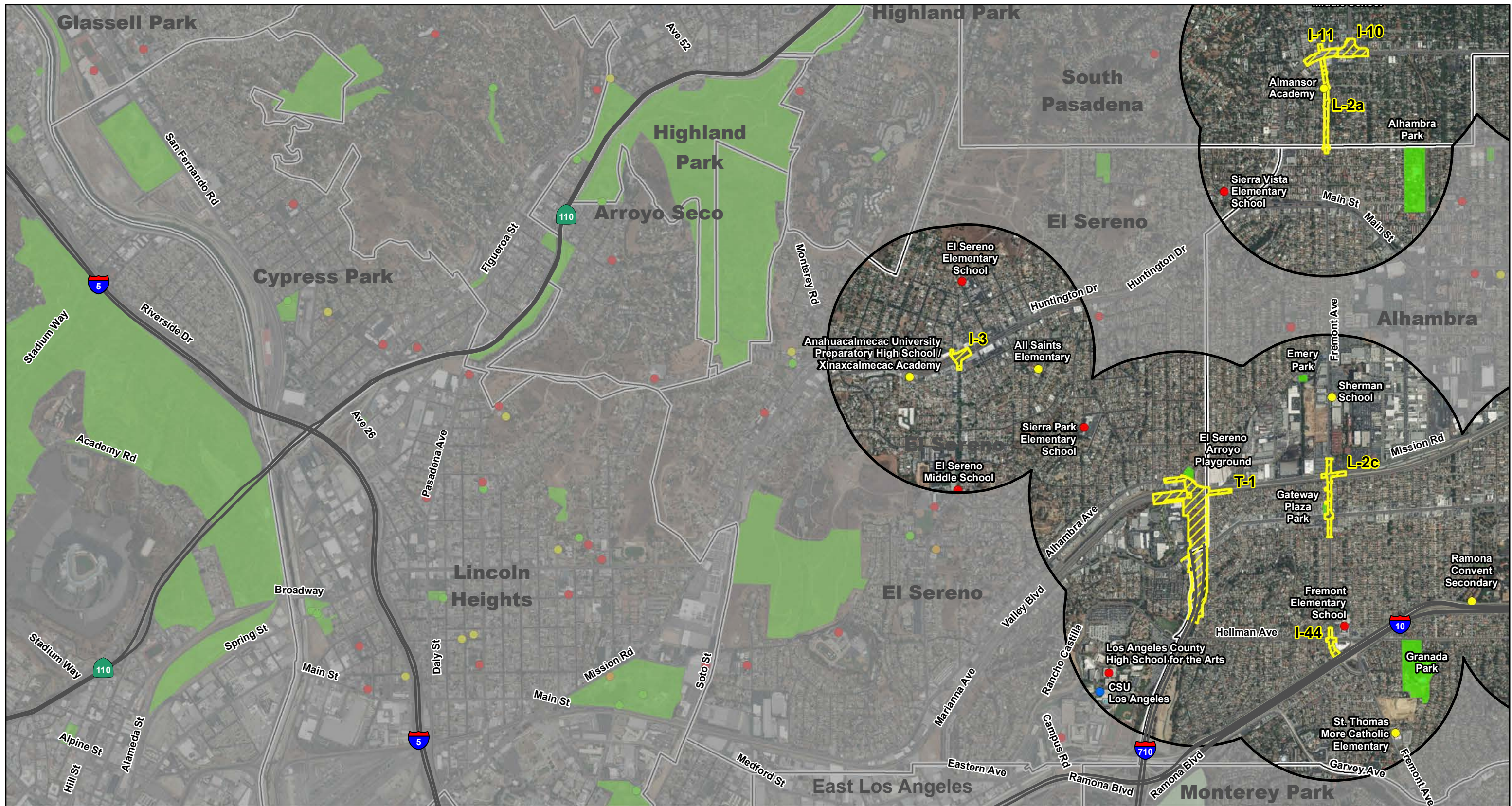


FIGURE 3.3-2
Sheet 2 of 4

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)
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LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- 0.5 Mile from the Project Improvements
- Cities, Neighborhoods, and Unincorporated Communitites
- Park
- Golf Course
- Public School
- Private School
- College or University
- Community Center
- Recreation Facility

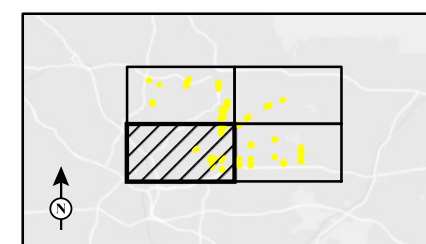
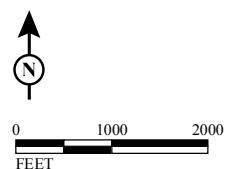
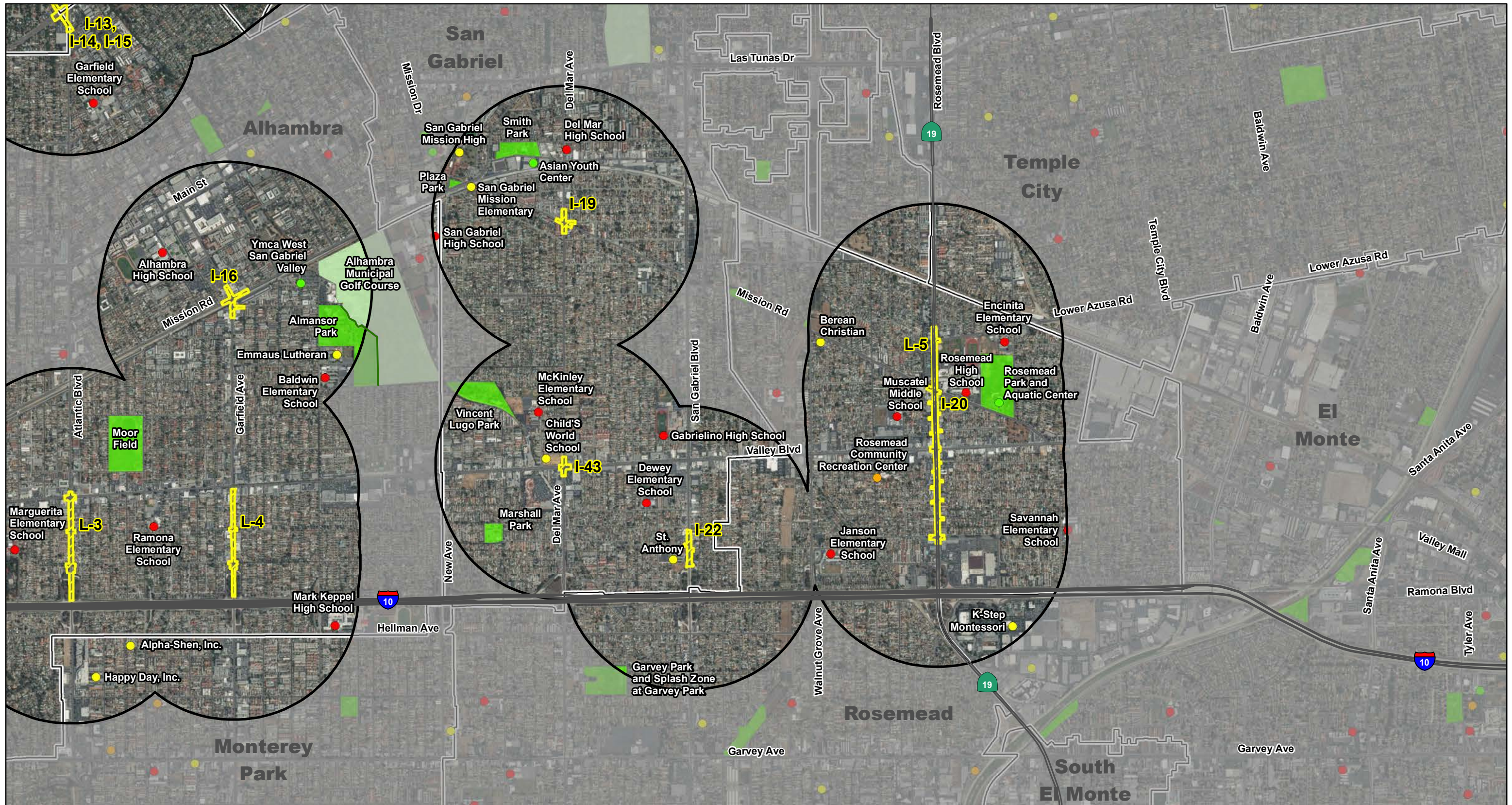


FIGURE 3.3-2
Sheet 3 of 4

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)
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LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- 0.5 Mile from the Project Improvements
- Cities, Neighborhoods, and Unincorporated Communities
- Park
- Golf Course
- Public School
- Private School
- College or University
- Community Center
- Recreation Facility

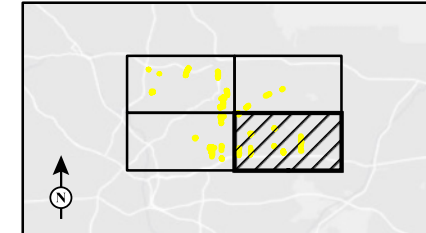
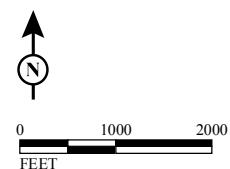
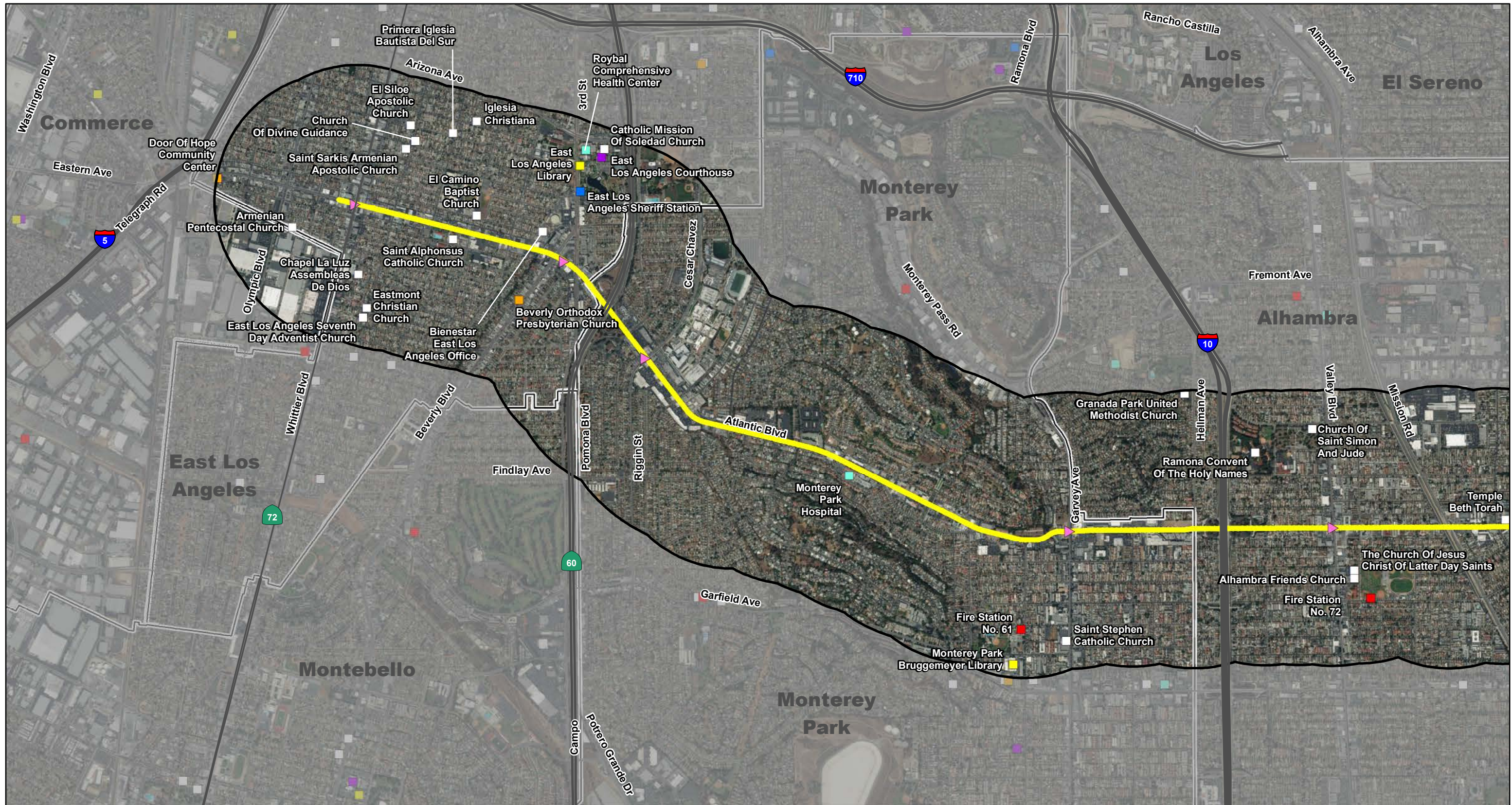


FIGURE 3.3-2
Sheet 4 of 4

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)
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LEGEND

- | | | |
|--|-----------------------------|------------------|
| BRT Alternative Alignment | Police | Hospital |
| Station | Fire Station | Place of Worship |
| 0.5 Mile from the Project Improvements | Library | Homeless Service |
| Cities, Neighborhoods, and Unincorporated Communités | Other Government Facilities | |

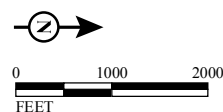
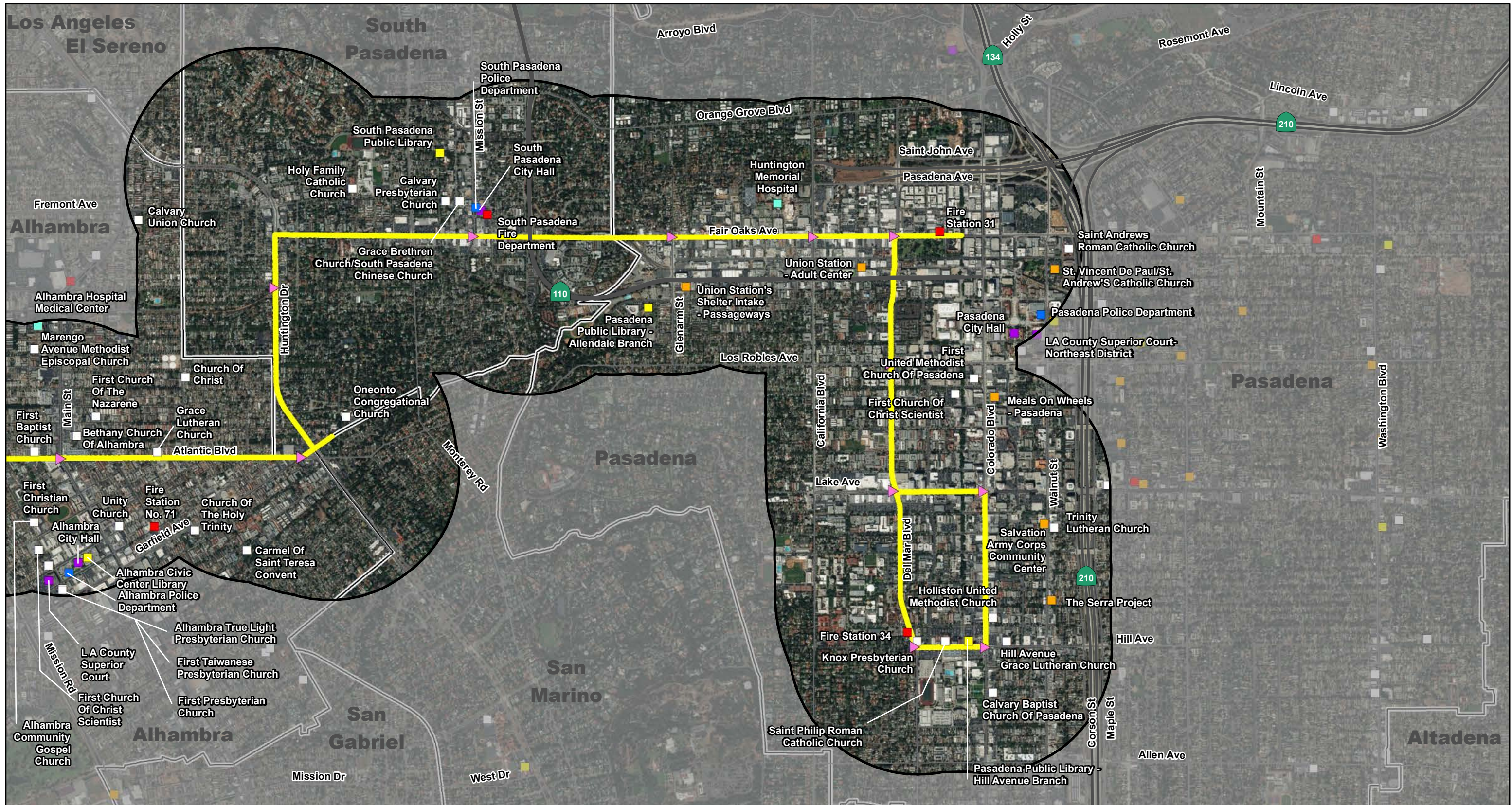


FIGURE 3.3-3
Sheet 1 of 2

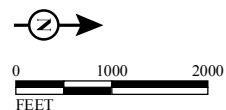
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LEGEND

- BRT Alternative Alignment
- Station
- 0.5 Mile from the Project Improvements
- Cities, Neighborhoods, and Unincorporated Communes
- Police
- Fire Station
- Library
- Other Government Facilities
- Hospital
- Place of Worship
- Homeless Service



SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)
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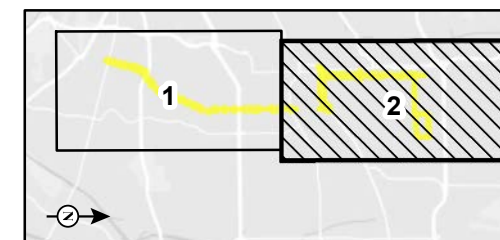
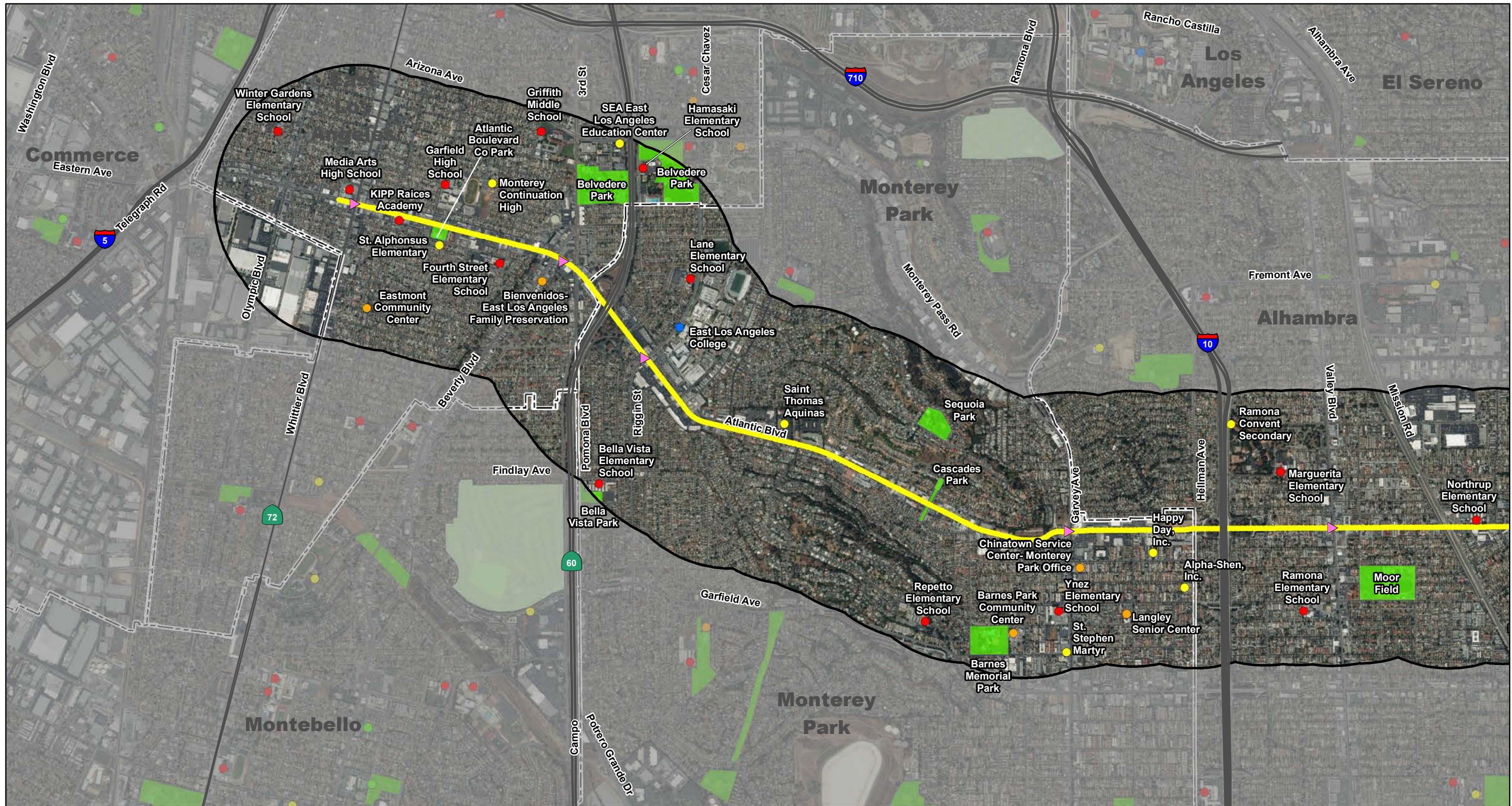


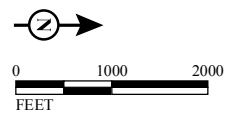
FIGURE 3.3-3
 Sheet 2 of 2

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LEGEND

- BRT Alternative Alignment
- Station
- 0.5 Mile from the Project Improvements
- Cities and Unincorporated Communities
- Park
- Golf Course
- Public School
- Private School
- College or University
- Community Center
- Recreation Facility

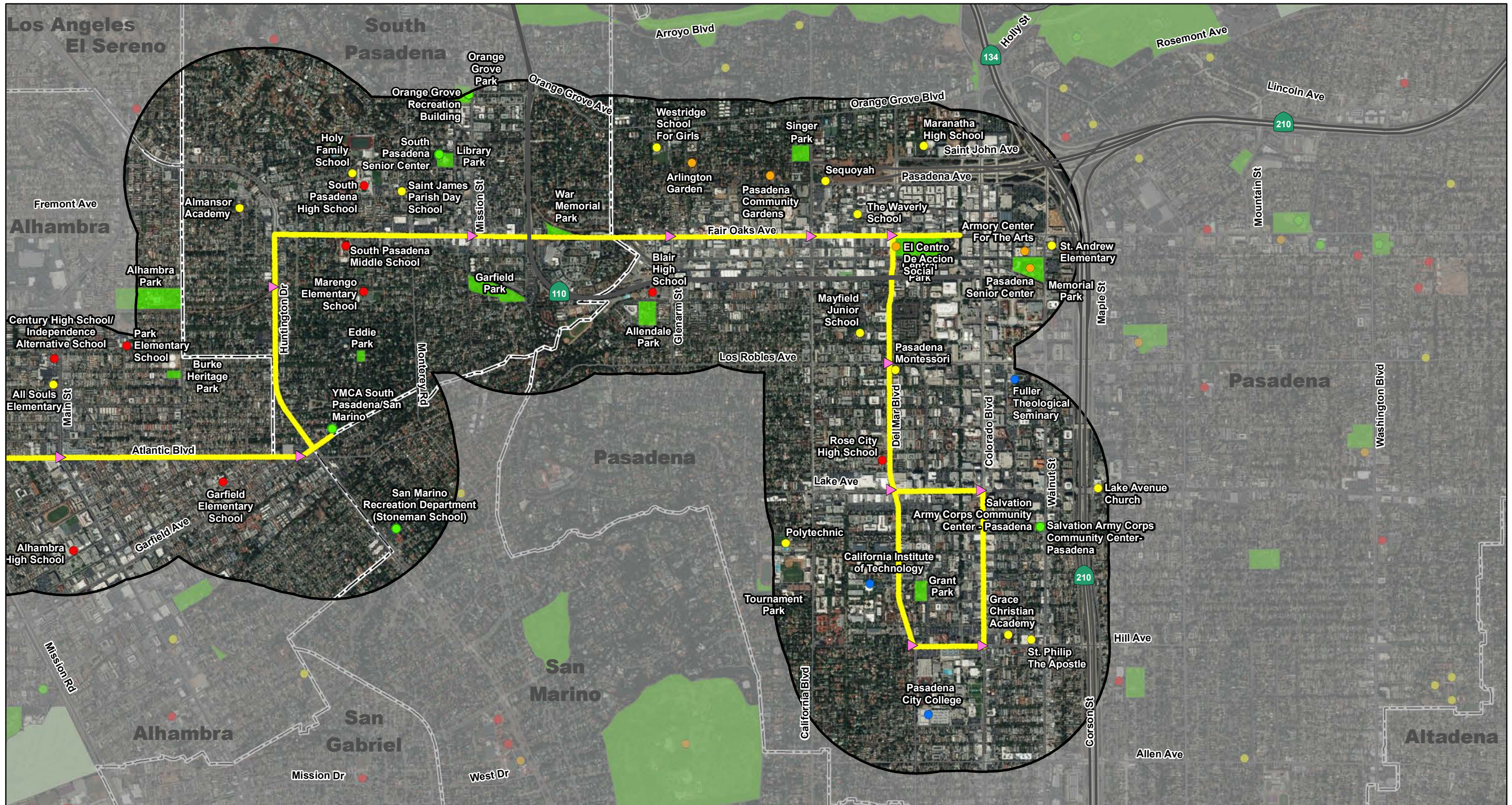


SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)
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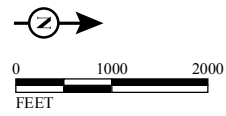
FIGURE 3.3-4
 Sheet 1 of 2

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LEGEND

- BRT Alternative Alignment
- Station
- Park
- Golf Course
- Public School
- Private School
- College or University
- Community Center
- Recreation Facility
- 0.5 Mile from the Project Improvements
- Cities and Unincorporated Communities



SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)
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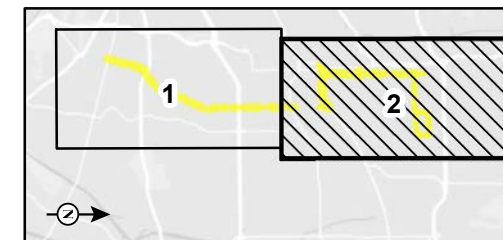
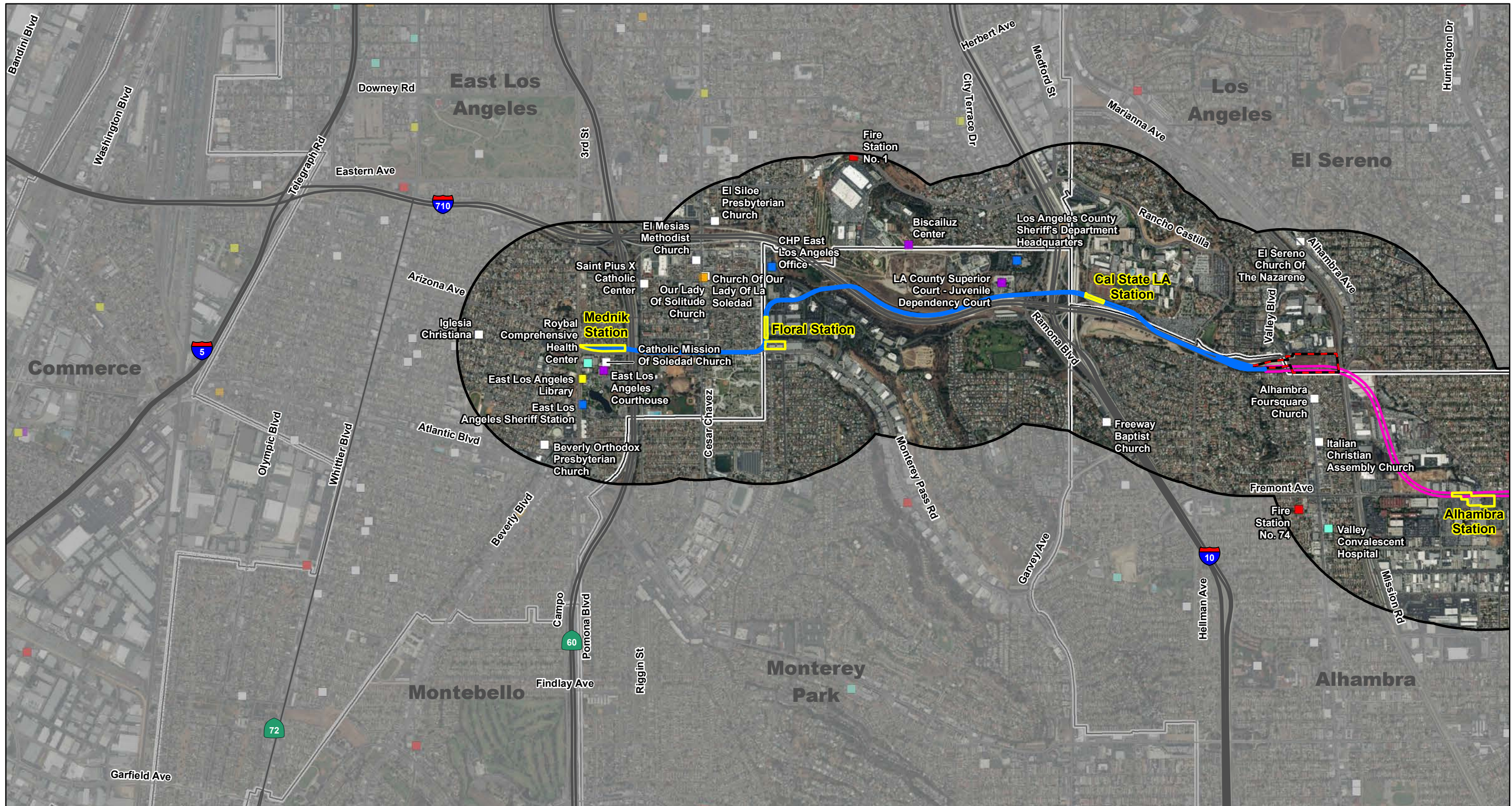


FIGURE 3.3-4
 Sheet 2 of 2

SR-710 North Project
 BRT Alternative
 Schools, Parks, and Recreation Facilities

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LEGEND

- | | | | |
|------------------|---|-----------------------------|------------------|
| Aerial Segment | 0.5 Mile from the Project Improvements | Police | Hospital |
| Tunnel Segment | Cities, Neighborhoods, and Unincorporated Communities | Fire Station | Place of Worship |
| Maintenance Yard | | Library | Homeless Service |
| Station | | Other Government Facilities | |

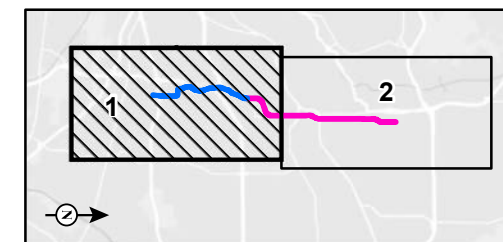
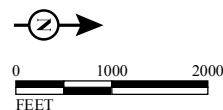
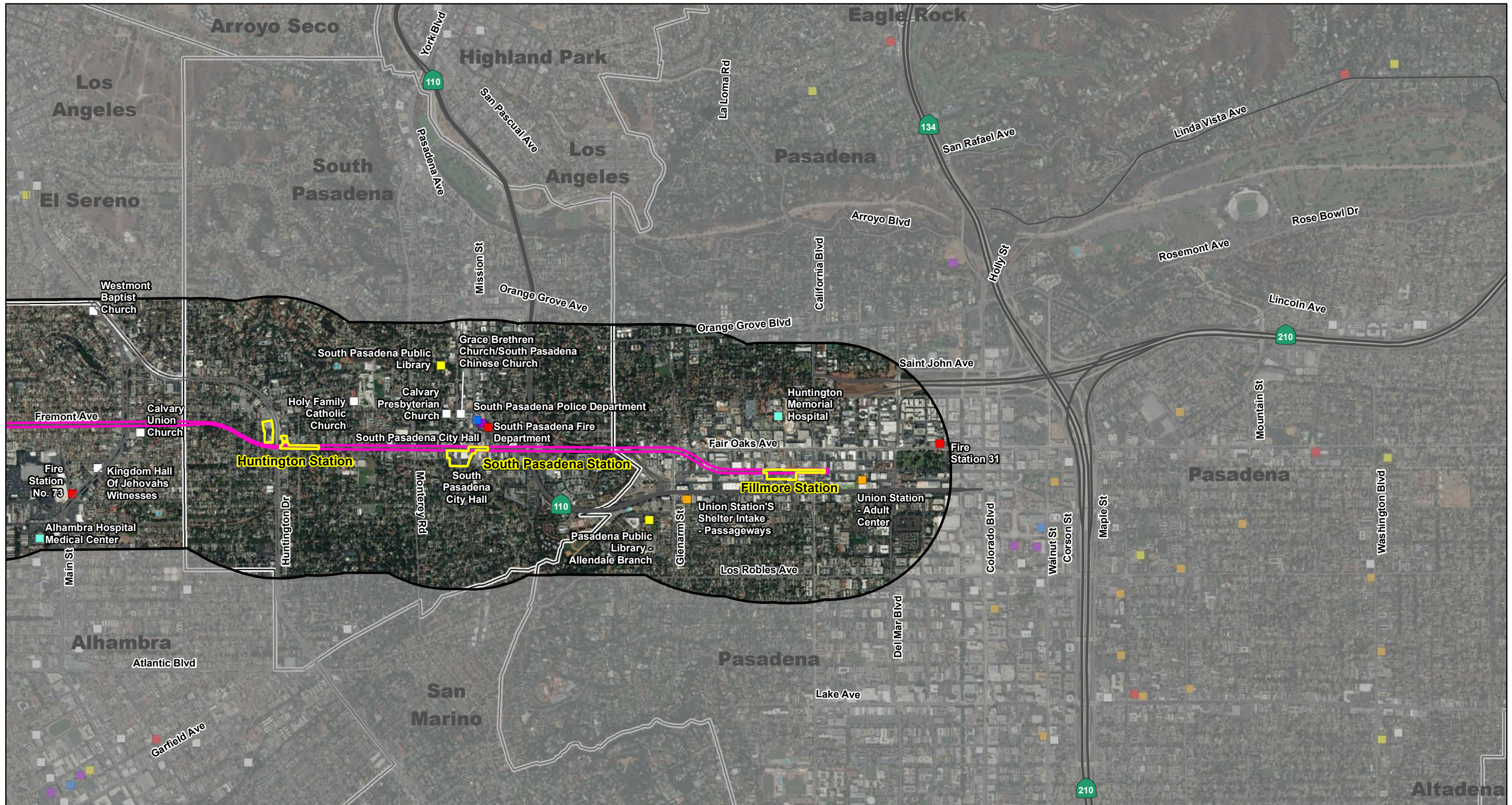


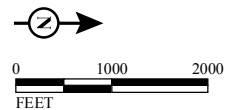
FIGURE 3.3-5
Sheet 1 of 2

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LEGEND

- | | | | |
|------------------|---|-----------------------------|------------------|
| Aerial Segment | 0.5 Mile from the Project Improvements | Police | Hospital |
| Tunnel Segment | Cities, Neighborhoods, and Unincorporated Communities | Fire Station | Place of Worship |
| Maintenance Yard | | Library | Homeless Service |
| Station | | Other Government Facilities | |



SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)
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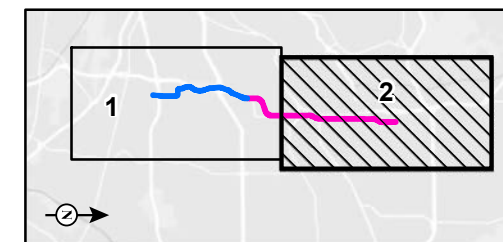
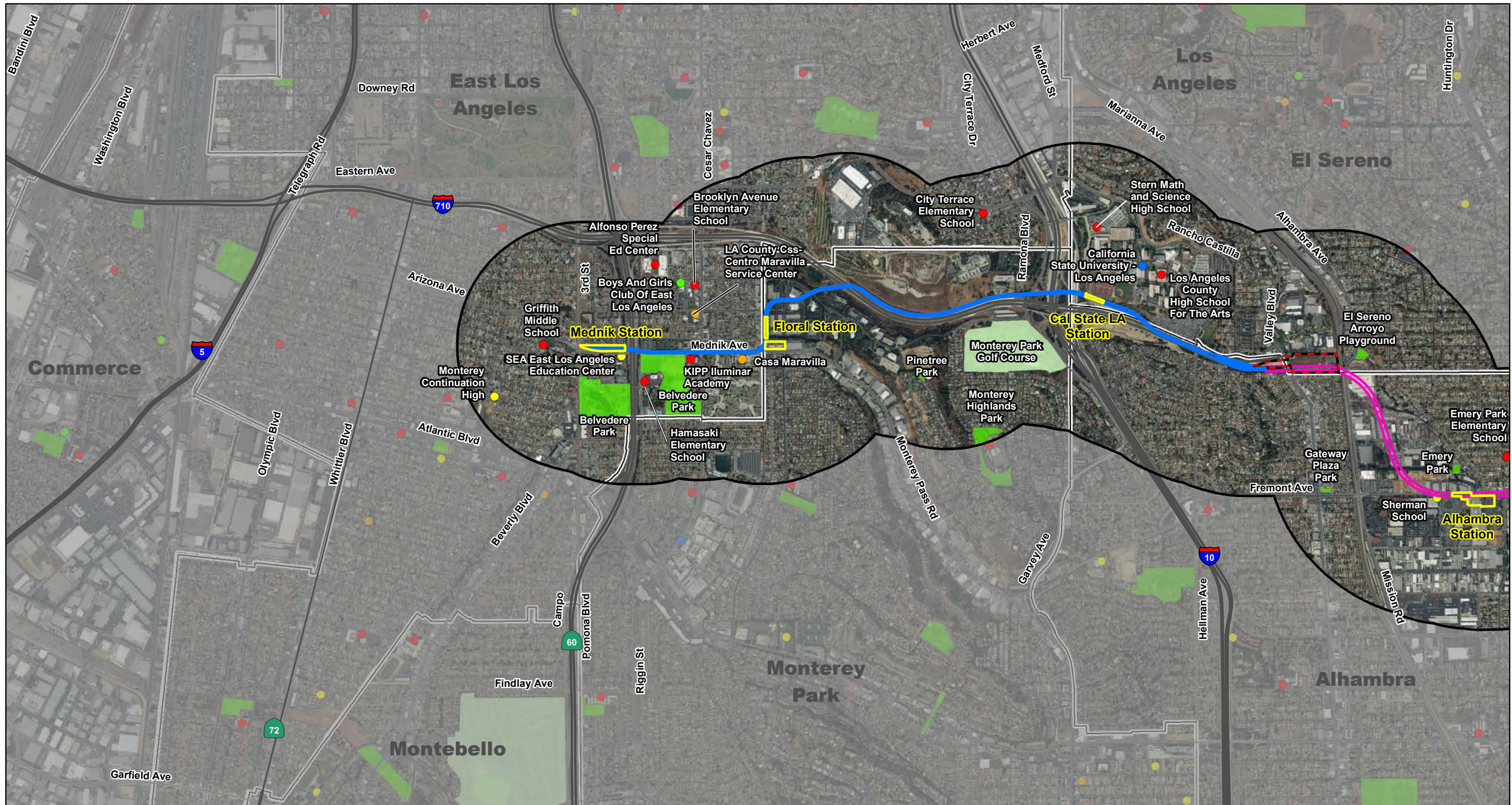


FIGURE 3.3-5
 Sheet 2 of 2

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LEGEND

- ▬ Aerial Segment
- ▬ Tunnel Segment
- Maintenance Yard
- Station
- 0.5 Mile from the Project Improvements
- Cities, Neighborhoods, and Unincorporated Communities
- Park
- Golf Course
- Public School
- Private School
- College or University
- Community Center
- Recreation Facility

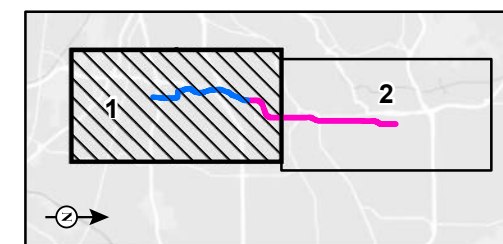
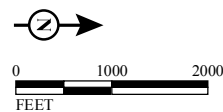
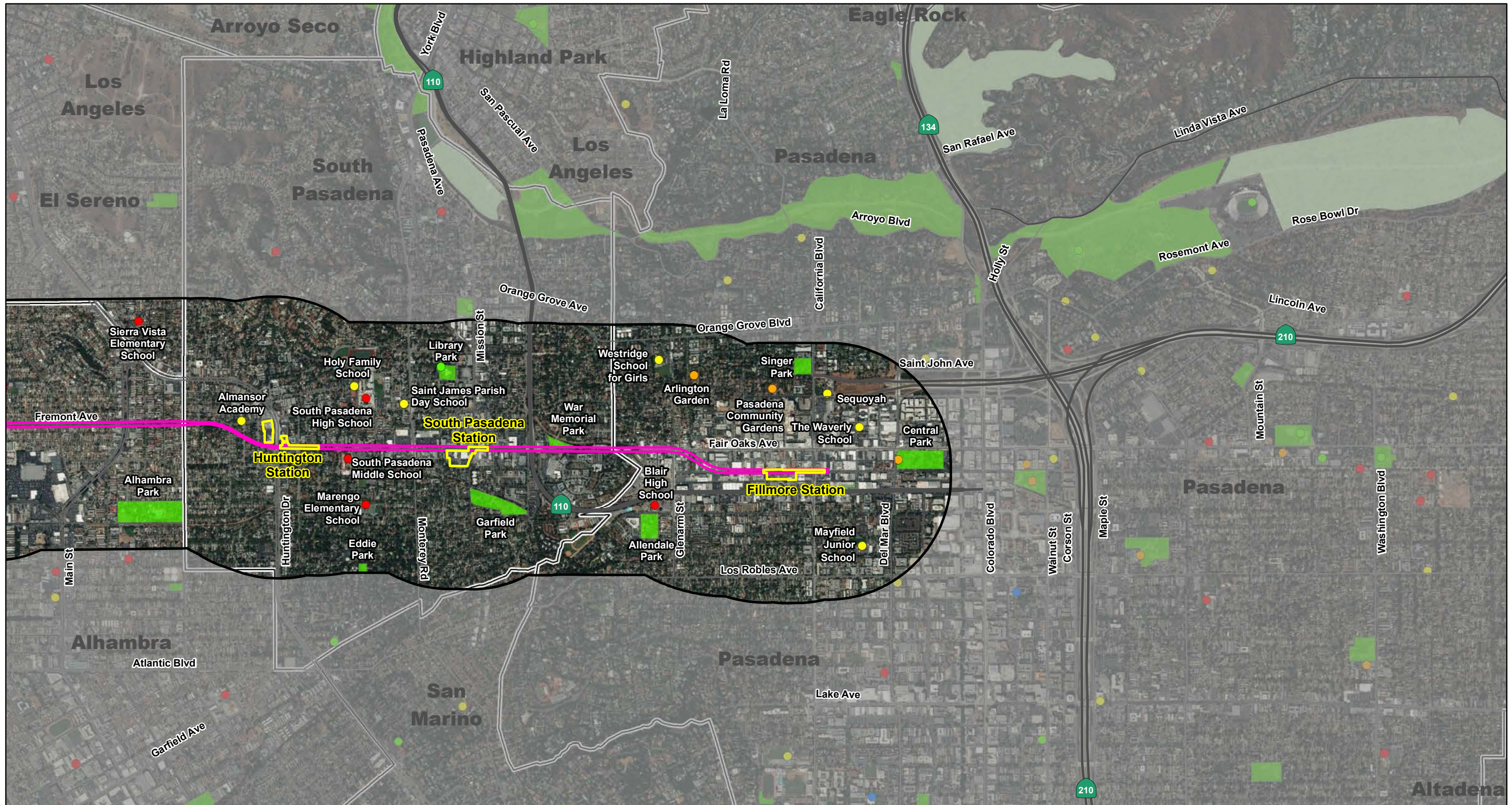

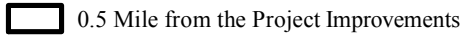
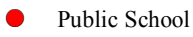
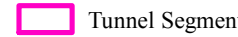
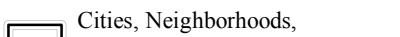
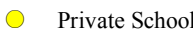
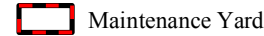

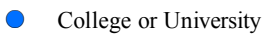

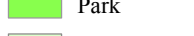
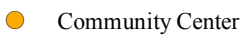
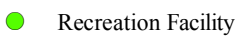


FIGURE 3.3-6
Sheet 1 of 2

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LEGEND

- | | | |
|--|--|---|
|  Aerial Segment |  0.5 Mile from the Project Improvements |  Public School |
|  Tunnel Segment |  Cities, Neighborhoods, and Unincorporated Communities |  Private School |
|  Maintenance Yard |  Park |  College or University |
|  Station |  Golf Course |  Community Center |
| | |  Recreation Facility |

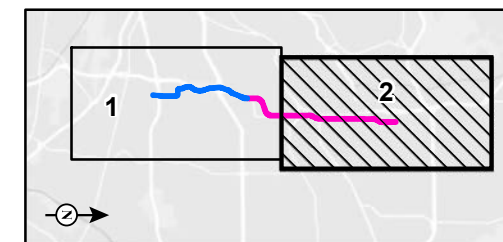
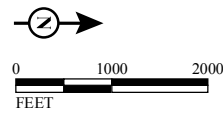
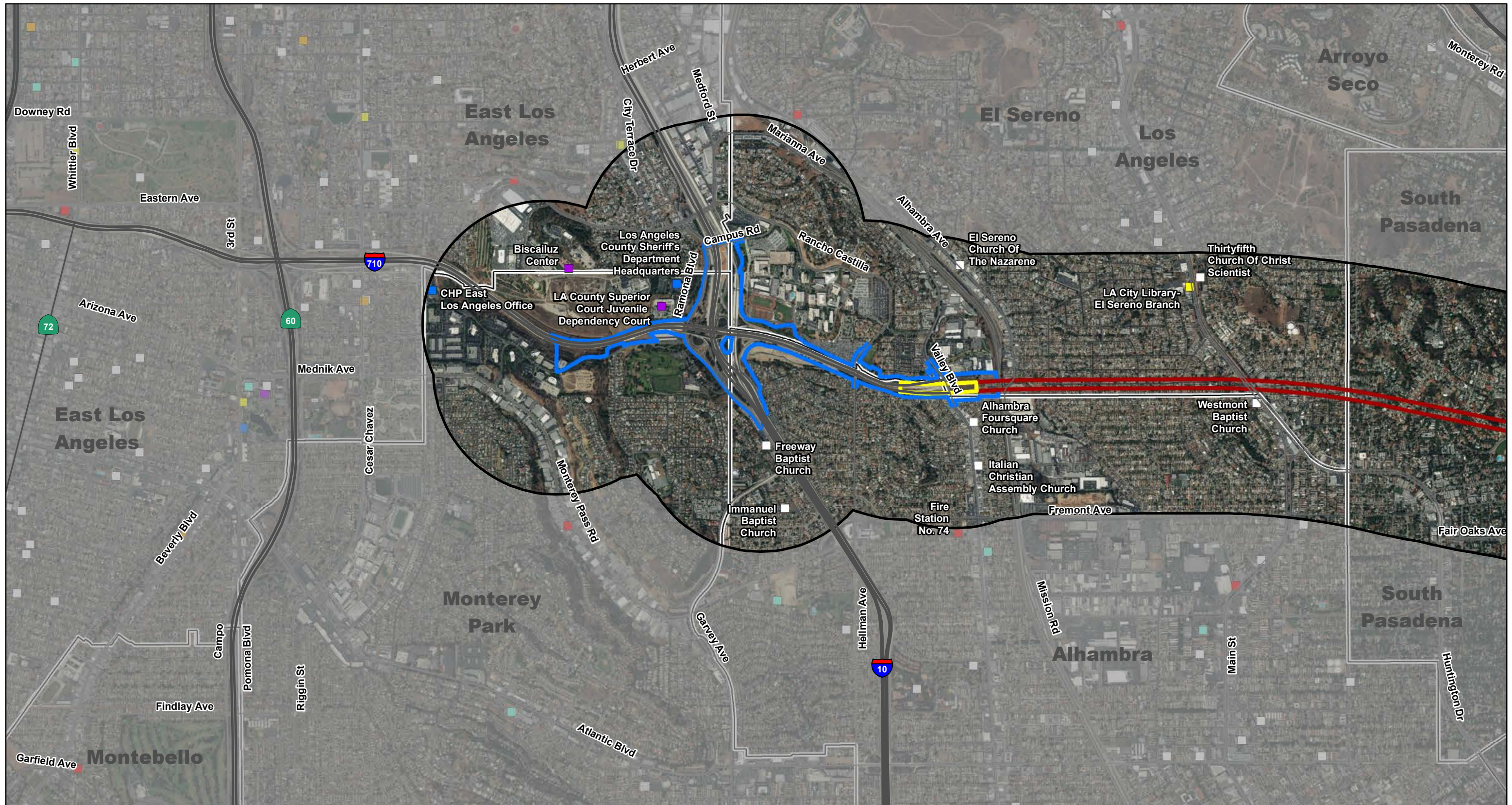


FIGURE 3.3-6
Sheet 2 of 2

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)
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LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- 0.5 Mile from the Project Improvements

- Cities, Neighborhoods, and Unincorporated Communities
- Police
- Fire Station
- Library

- Other Government Facilities
- Hospital
- Place of Worship
- Homeless Service

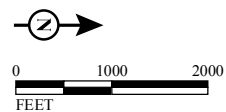
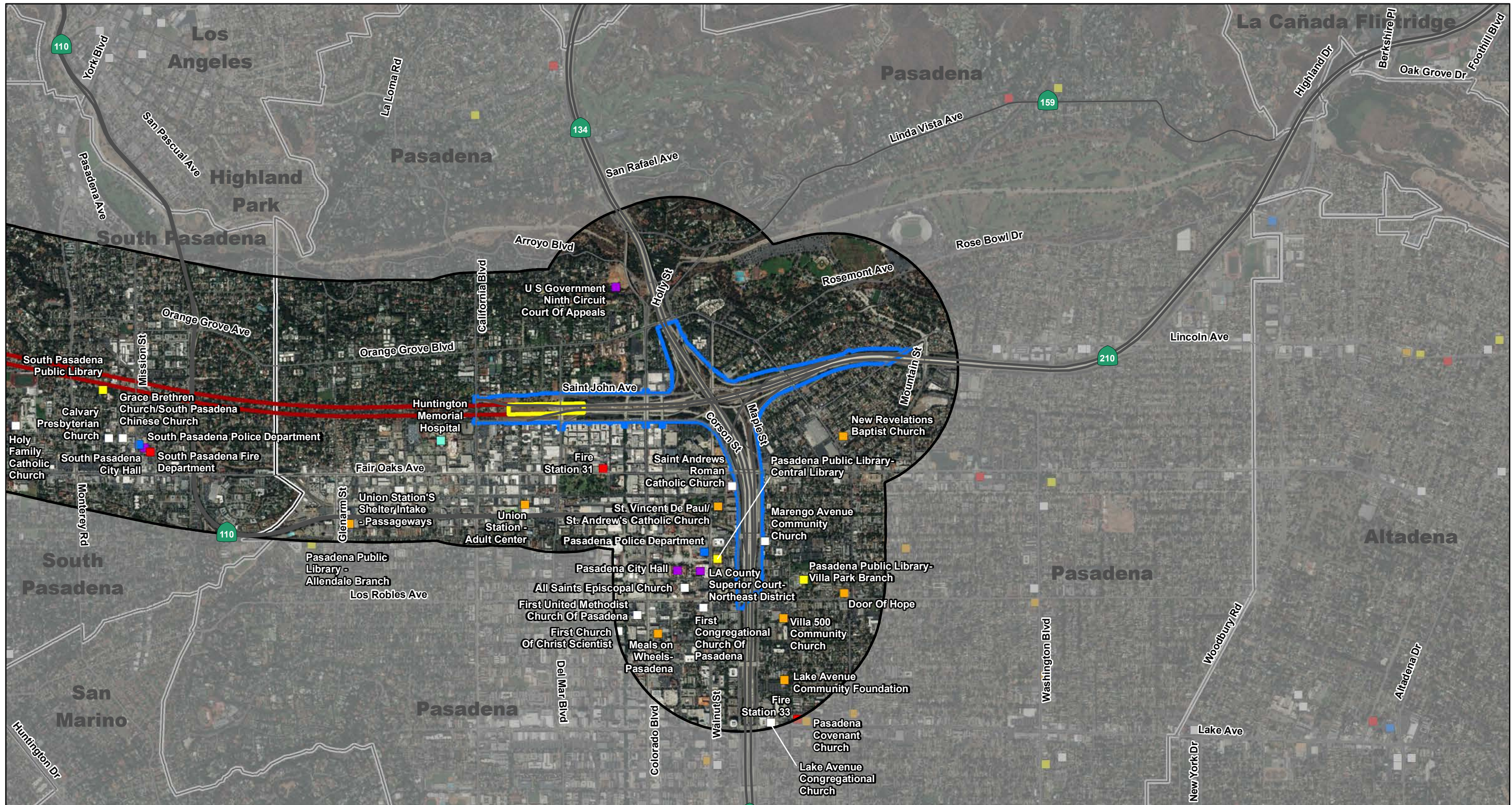


FIGURE 3.3-7
Sheet 1 of 2

SR-710 North Project
Freeway Tunnel Alternative
Community Services and Facilities

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LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- 0.5 Mile from the Project Improvements

- Cities, Neighborhoods, and Unincorporated Communities
- Police
- Fire Station
- Library

- Other Government Facilities
- Hospital
- Place of Worship
- Homeless Service

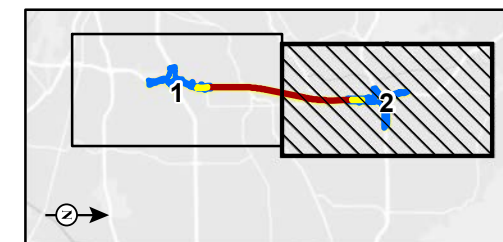
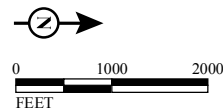
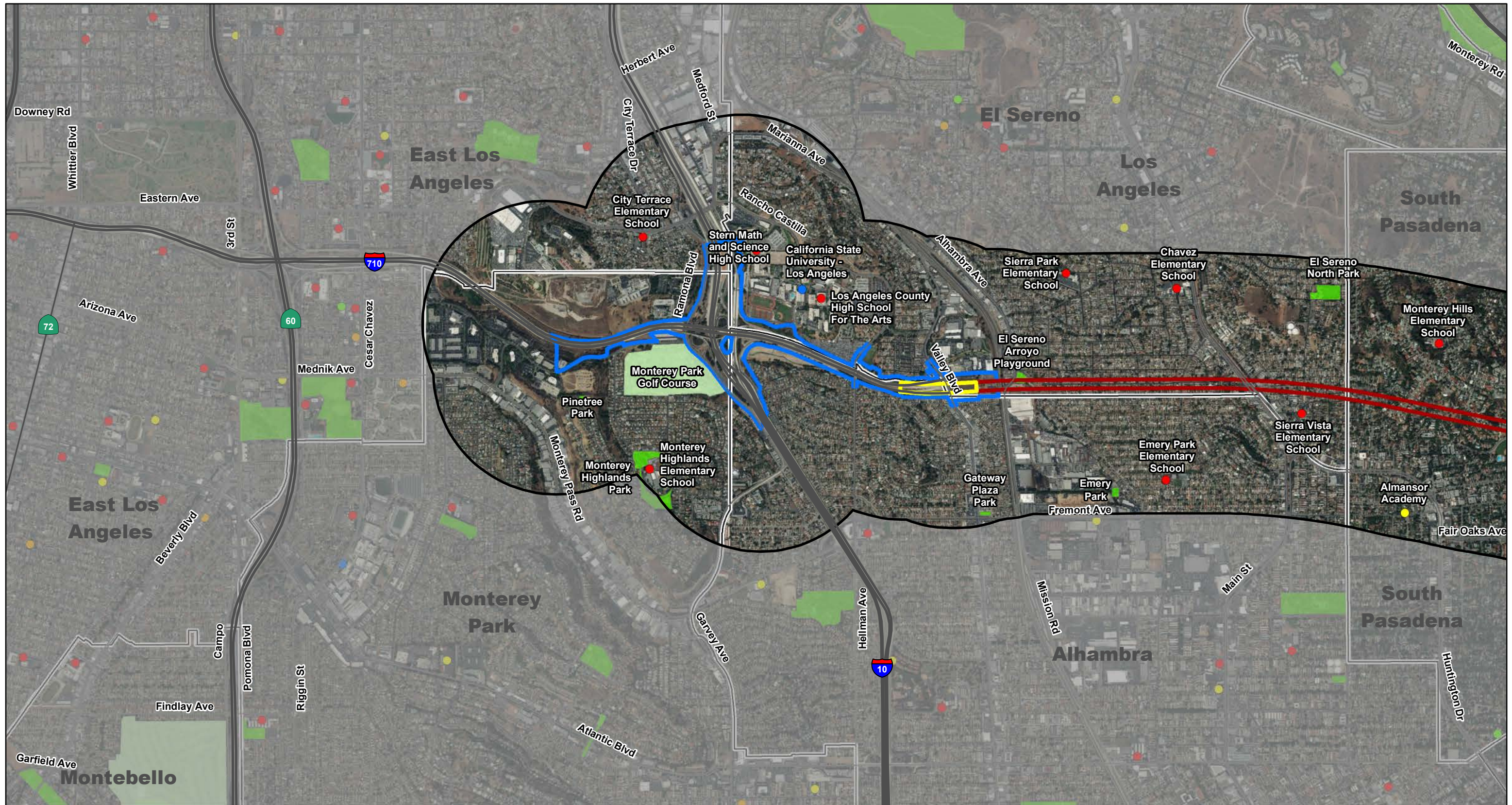


FIGURE 3.3-7
Sheet 2 of 2

SR-710 North Project
Freeway Tunnel Alternative
Community Services and Facilities

SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)
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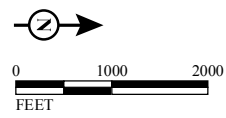
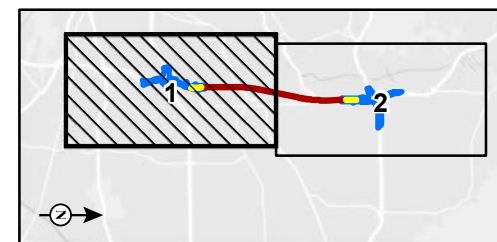


LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- 0.5 Mile from the Project Improvements

- Cities, Neighborhoods, and Unincorporated Communities
- Park
- Golf Course

- Public School
- Private School
- College or University
- Community Center
- Recreation Facility

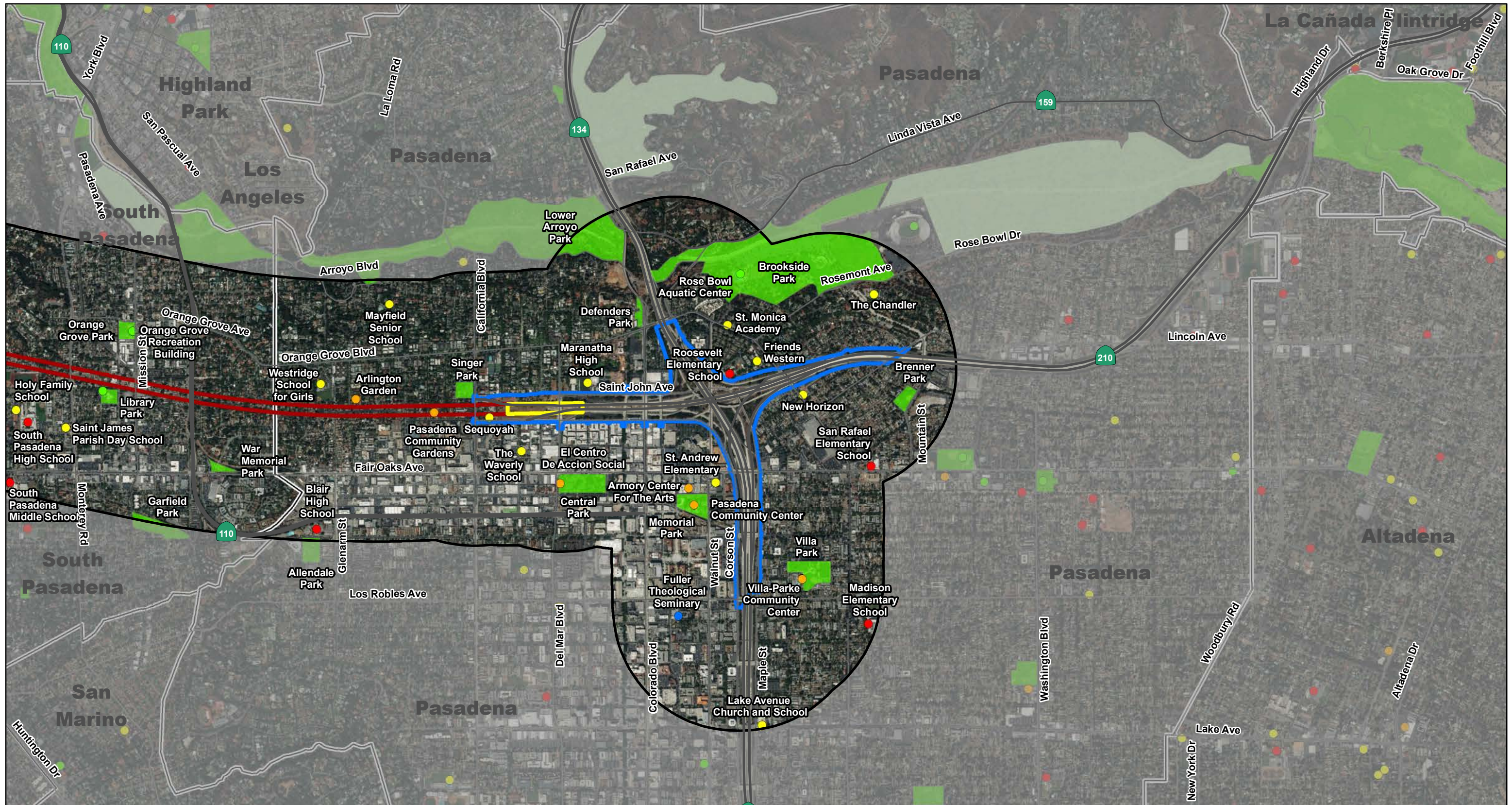


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FIGURE 3.3-8
 Sheet 1 of 2

SR-710 North Project
 Freeway Tunnel Alternative
 Schools, Parks, and Recreation Facilities

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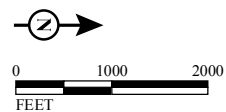


LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- 0.5 Mile from the Project Improvements

- Cities, Neighborhoods, and Unincorporated Communities
- Park
- Golf Course

- Public School
- Private School
- College or University
- Community Center
- Recreation Facility



SOURCE: Bing (c.2012); LA County (2013); Thomas Bros (2011); CH2MHill (2013); ESRI (2007)
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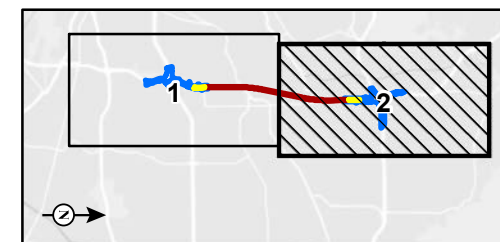


FIGURE 3.3-8
 Sheet 2 of 2

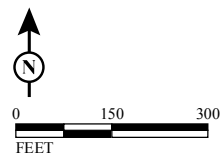
SR-710 North Project
 Freeway Tunnel Alternative
 Schools, Parks, and Recreation Facilities

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LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Temporary Construction Easement
- Permanent Easement



SOURCE: Esri (~2015); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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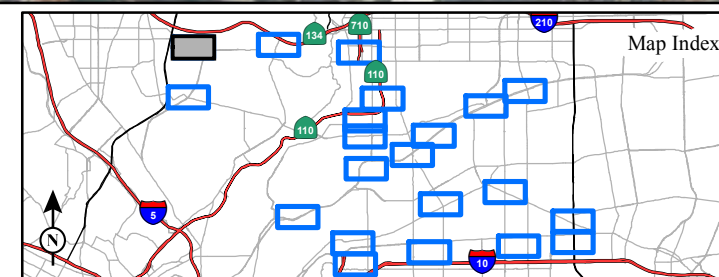
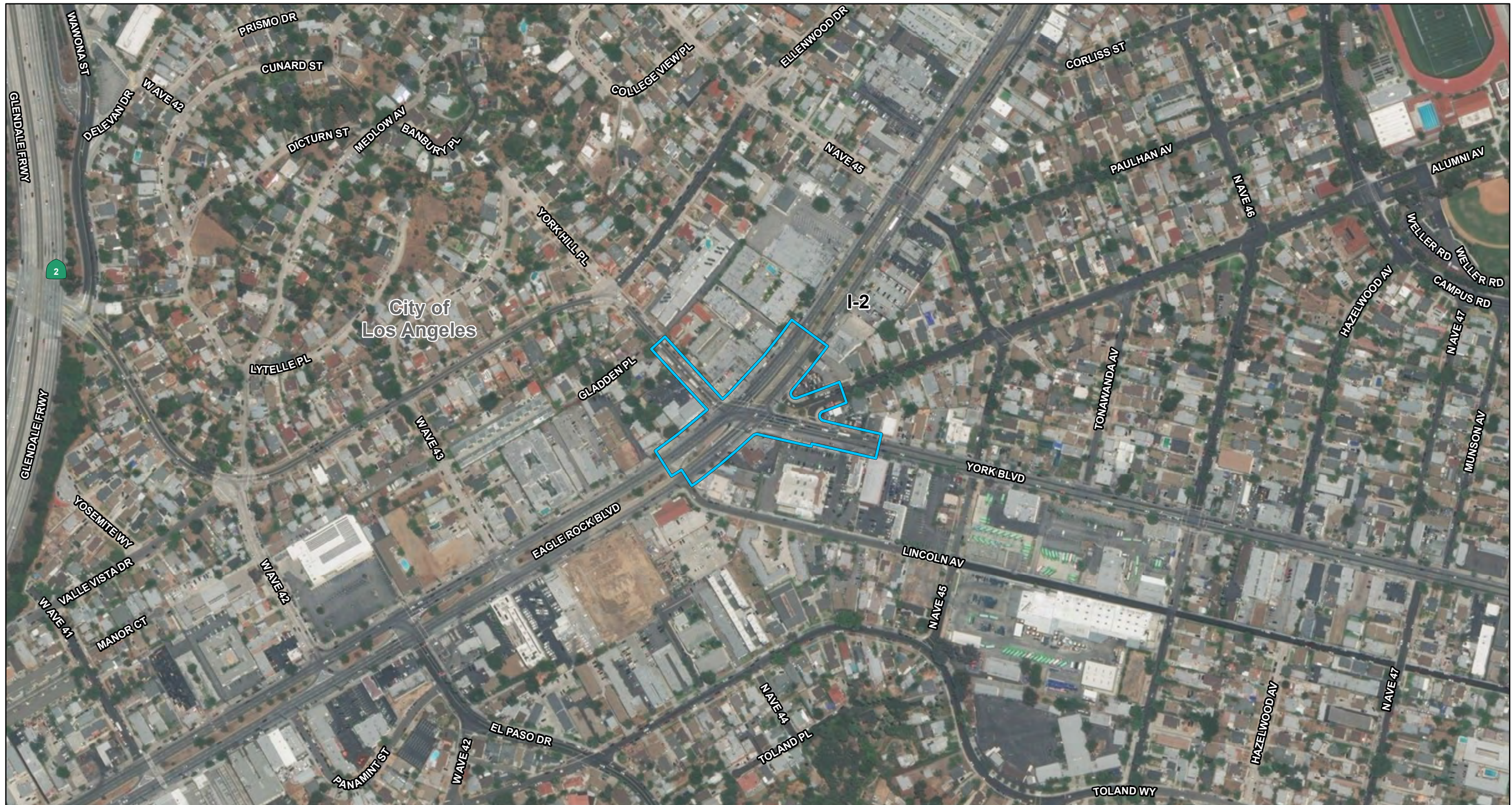


FIGURE 3.3-9
Sheet 1 of 21

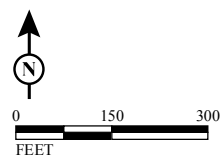
SR 710 North Project
TSM/TDM Alternative
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Temporary Construction Easement
- Permanent Easement



SOURCE: Esri (~2015); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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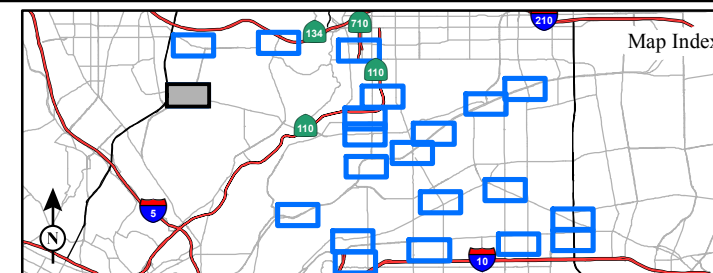
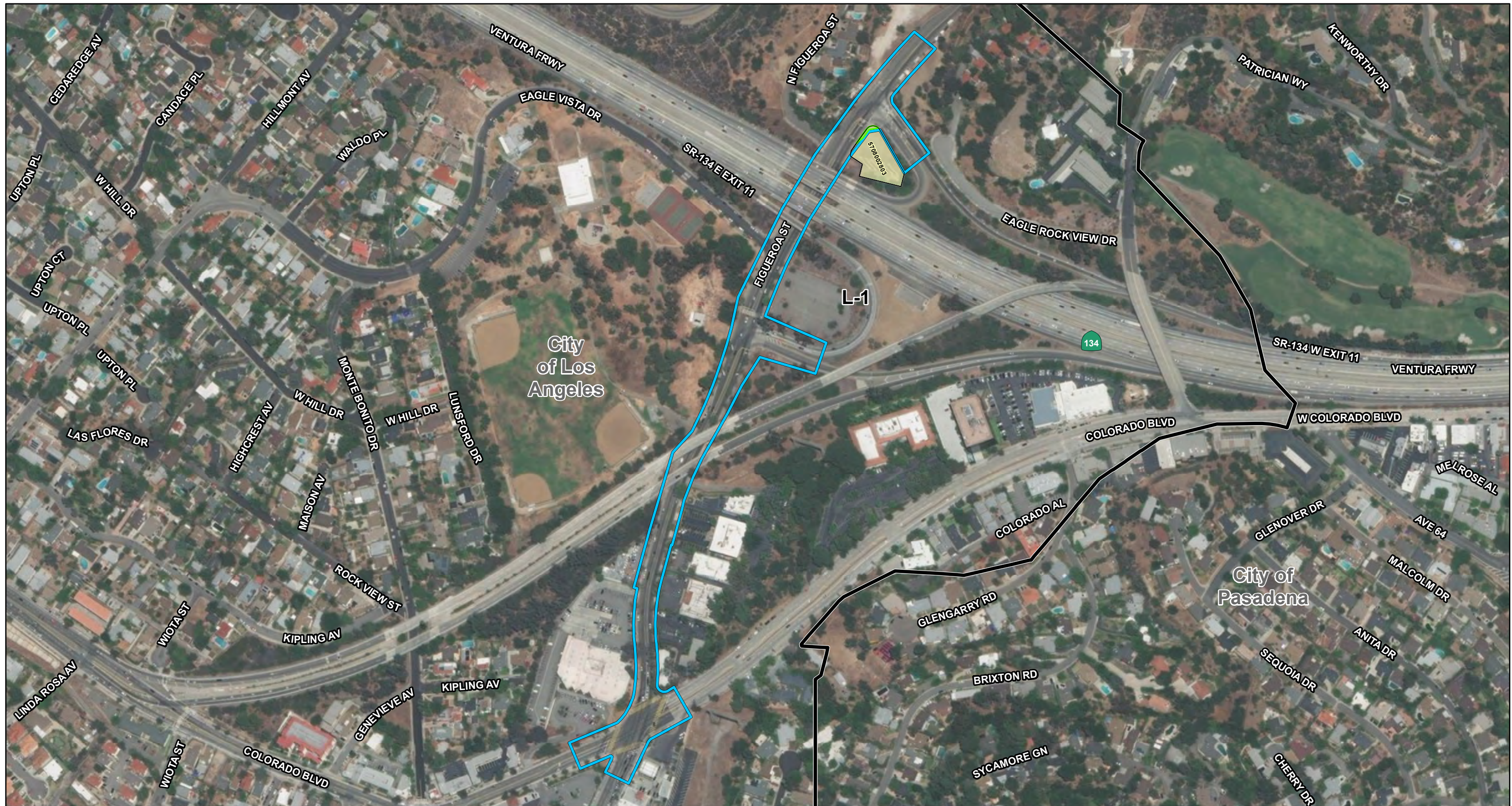









FIGURE 3.3-9
Sheet 2 of 21

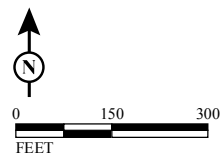
SR 710 North Project
TSM/TDM Alternative
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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LEGEND

- | | |
|--|---|
|  TSM/TDM Alternative Local Street and Intersection Improvements |  Full Acquisition |
|  City/Community/Neighborhood Boundary |  Partial Acquisition |
|  Parcels Where Acquisitions/Easements Would be Required |  Temporary Construction Easement |
| |  Permanent Easement |



SOURCE: Esri (~2015); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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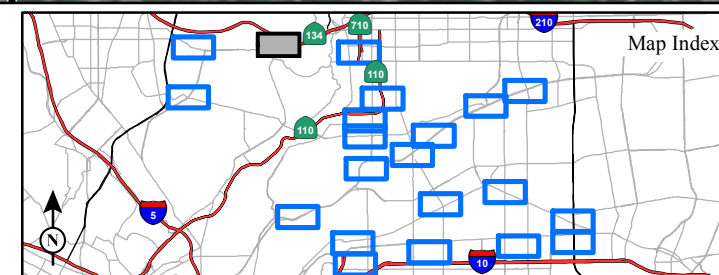
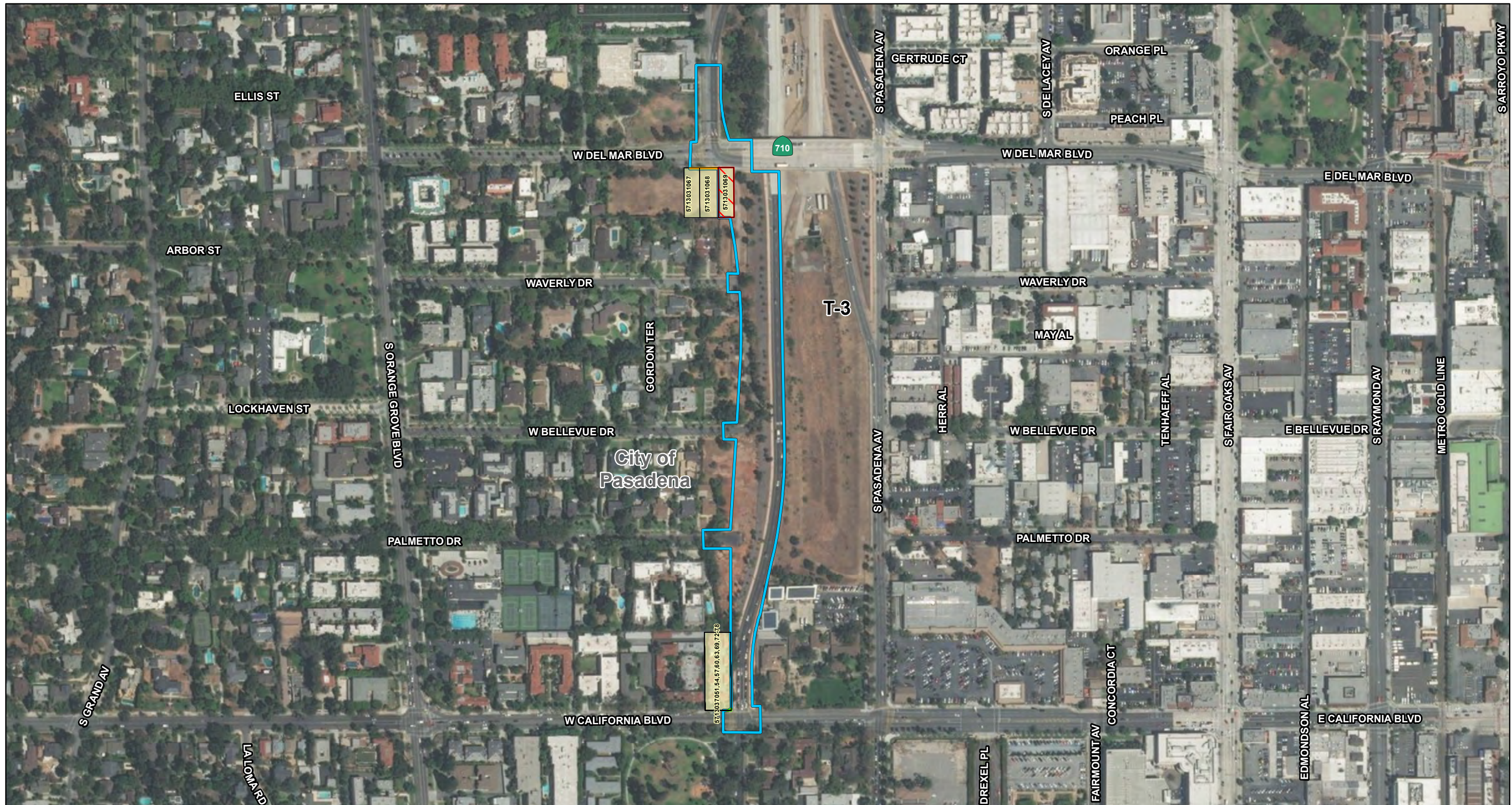


FIGURE 3.3-9
Sheet 3 of 21

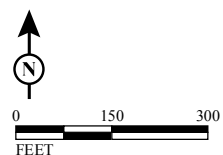
SR 710 North Project
TSM/TDM Alternative
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Temporary Construction Easement
- Permanent Easement



SOURCE: Esri (~2015); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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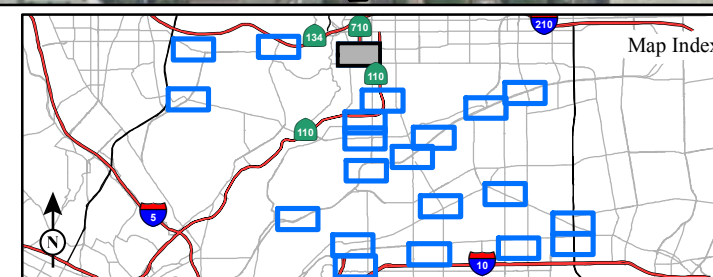
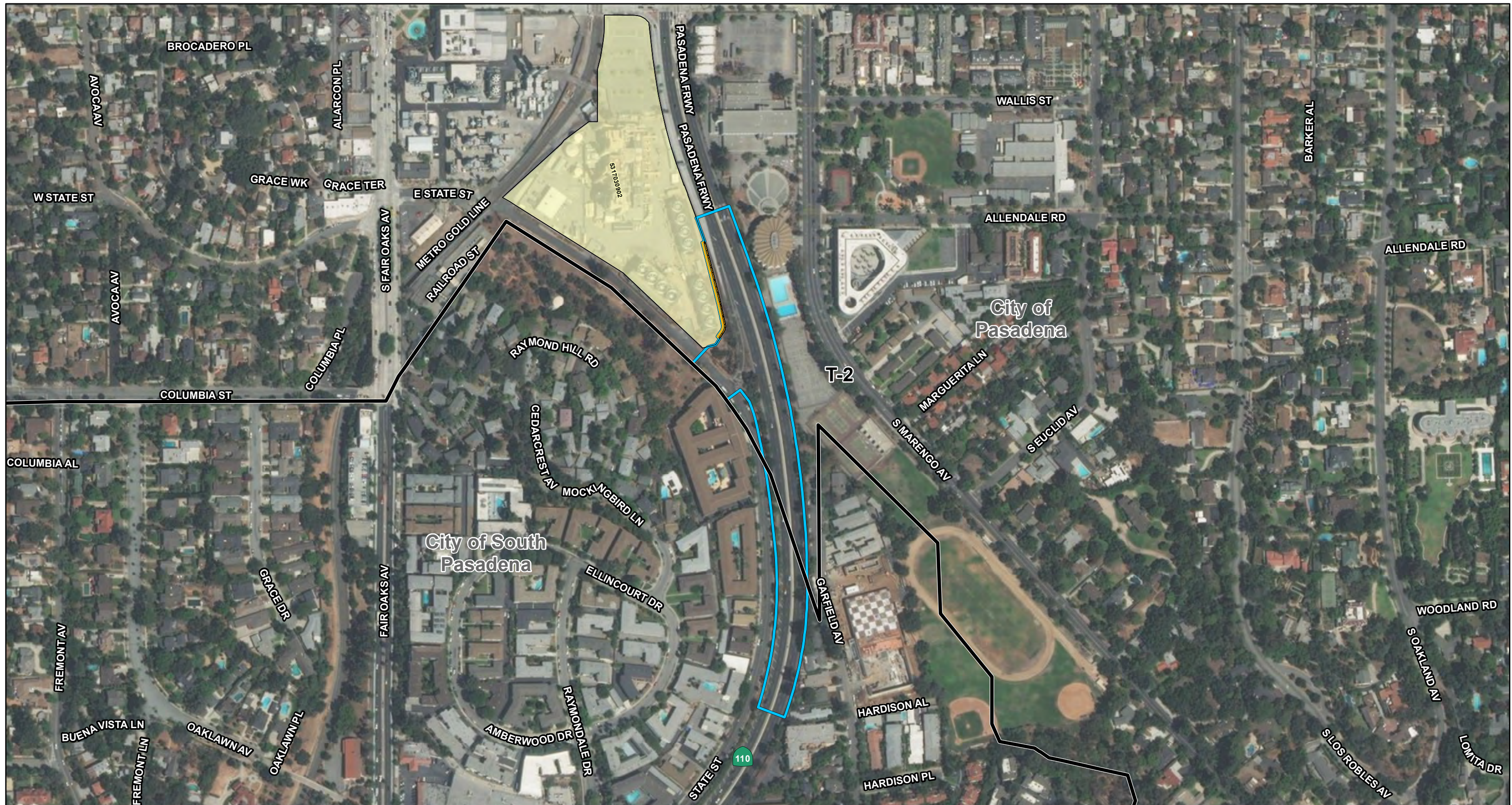


FIGURE 3.3-9
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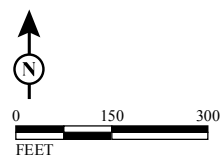
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- TSM/TDM Alternative Local Street and Intersection Improvements
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SOURCE: Esri (~2015); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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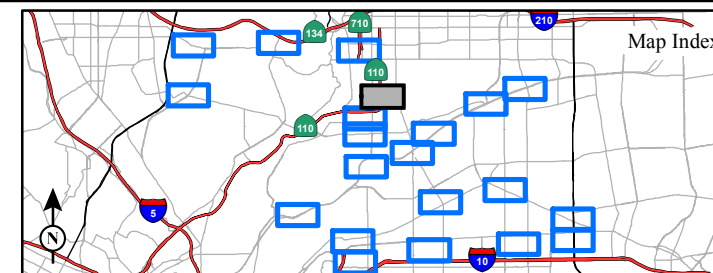
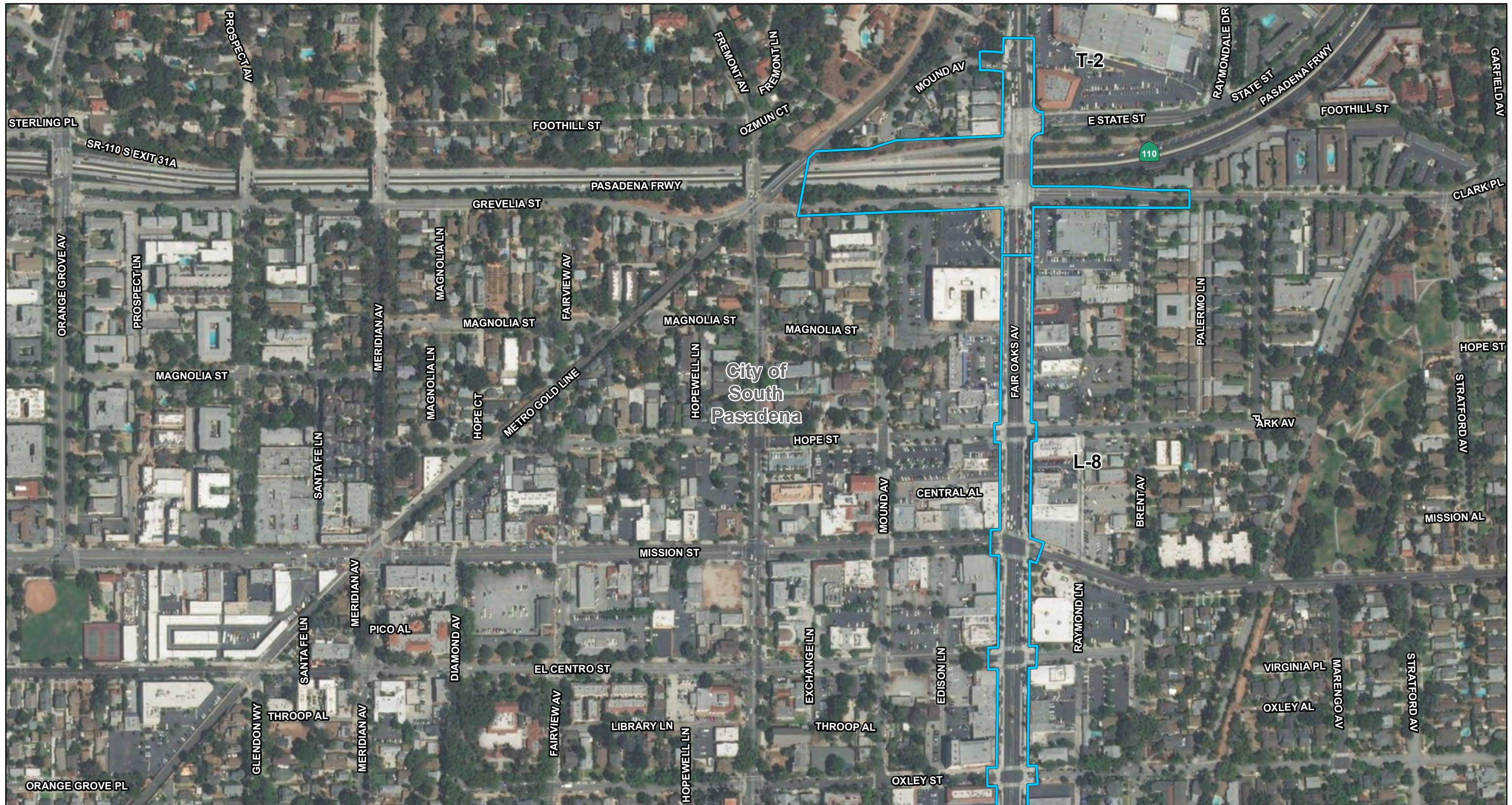


FIGURE 3.3-9
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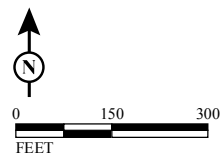
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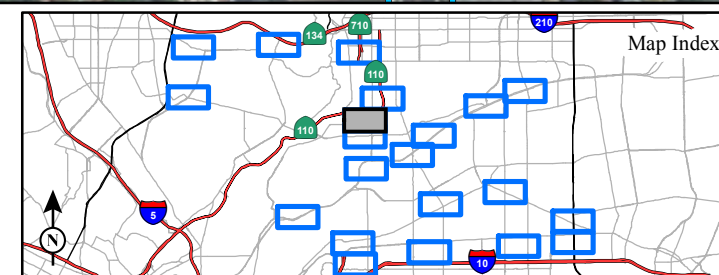
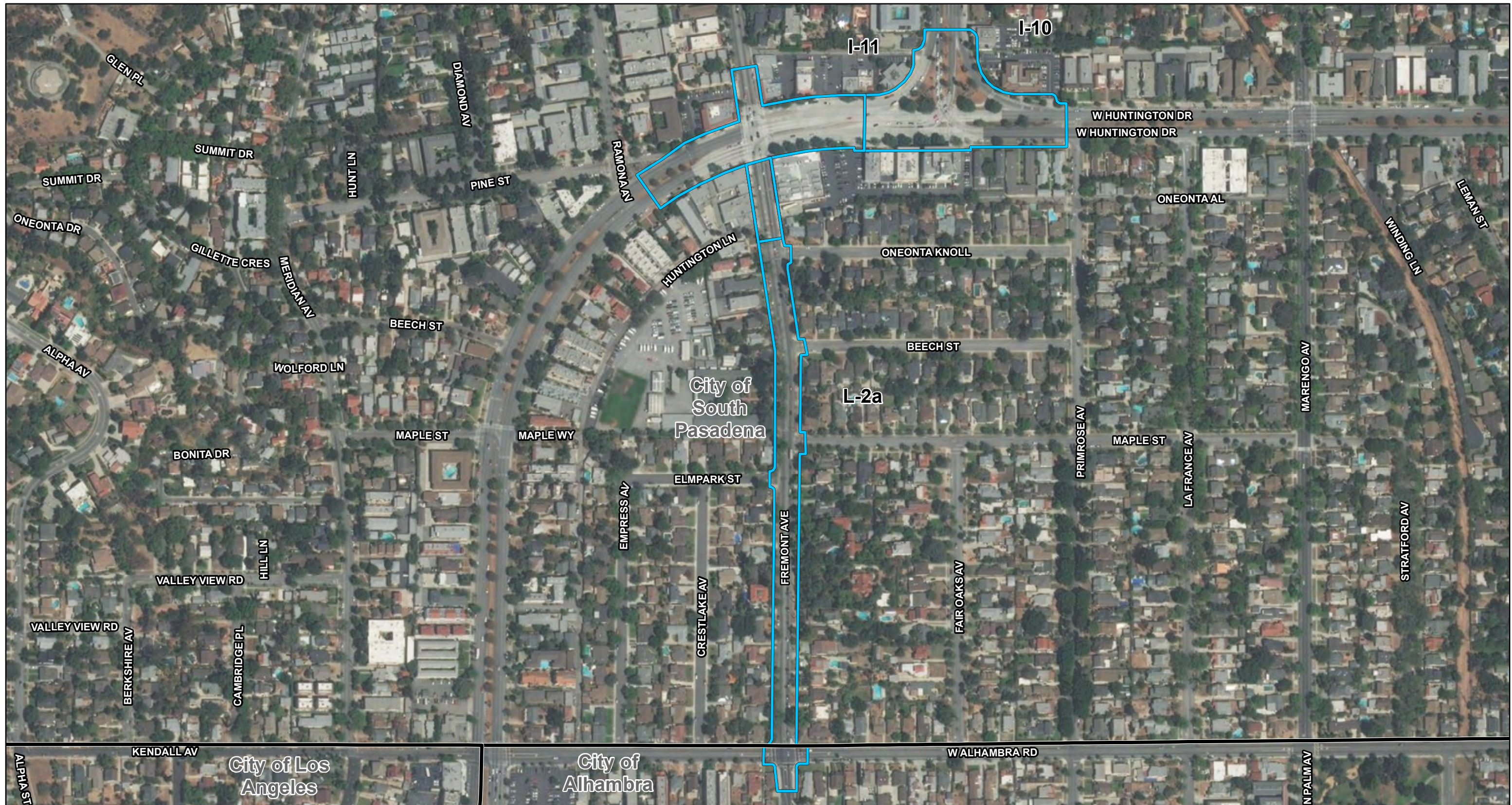


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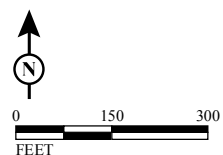
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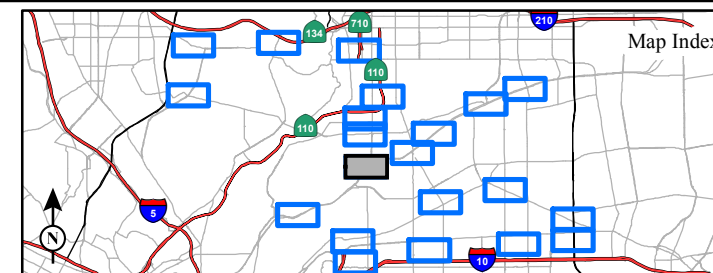
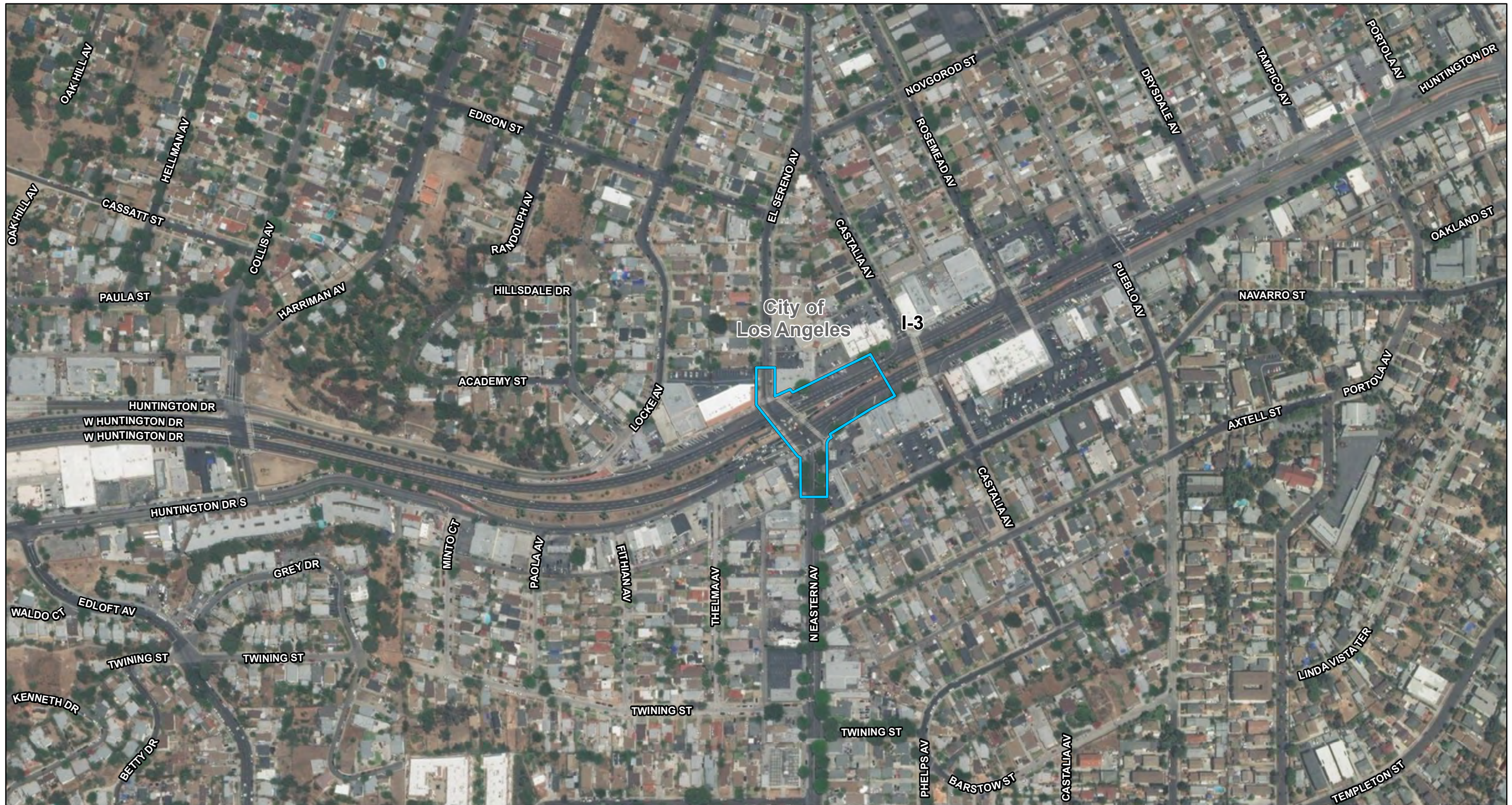


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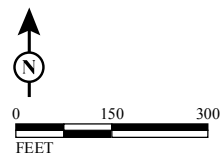
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- TSM/TDM Alternative Local Street and Intersection Improvements
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SOURCE: Esri (~2015); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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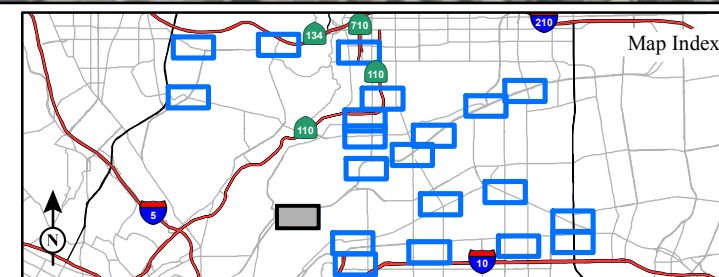
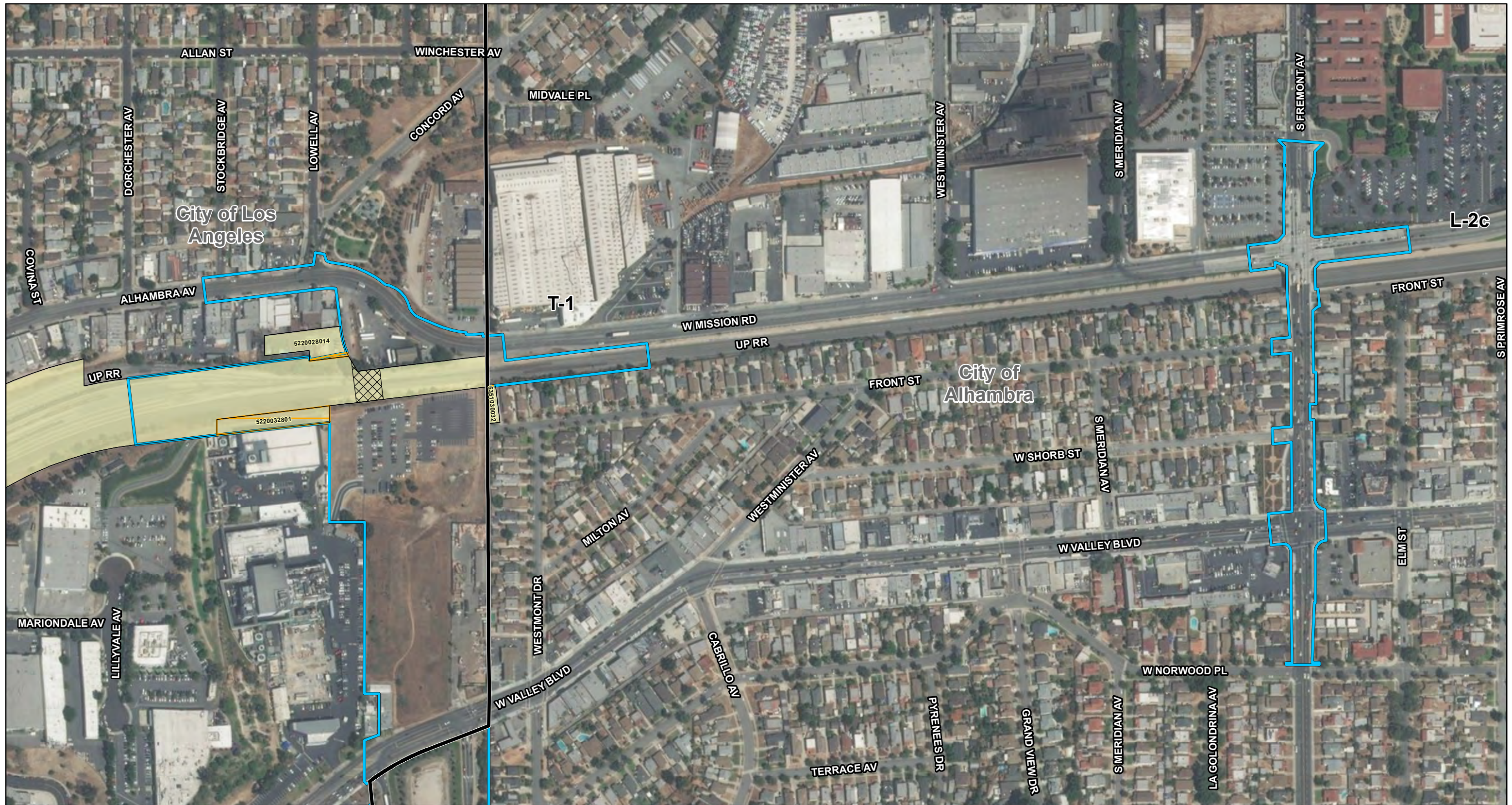


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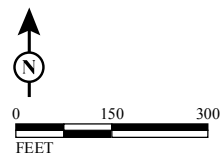
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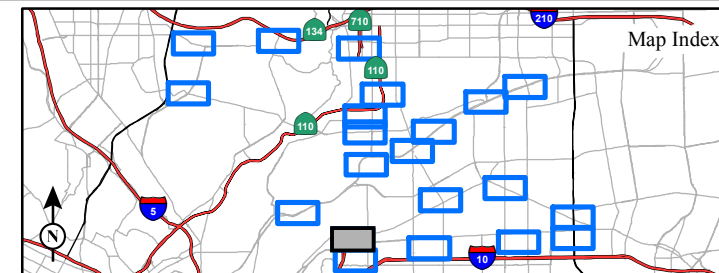
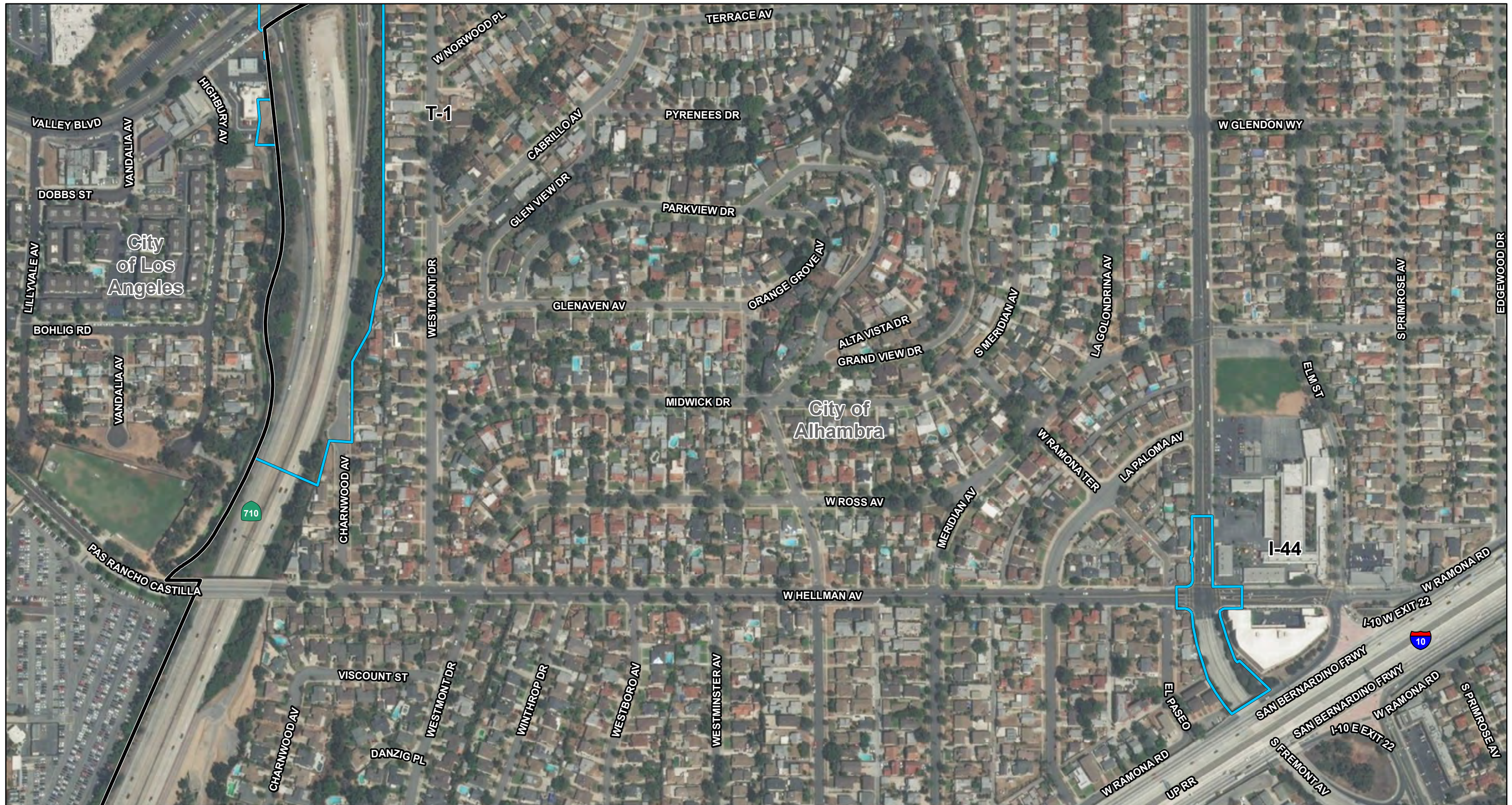


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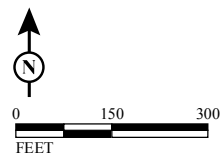
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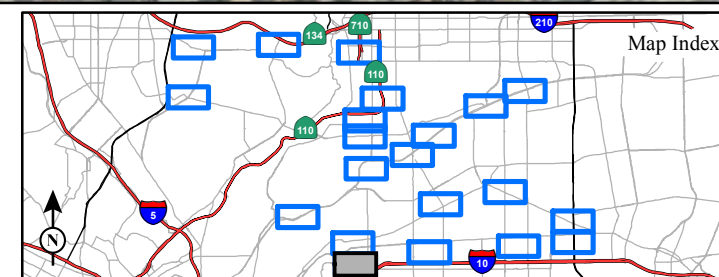


FIGURE 3.3-9
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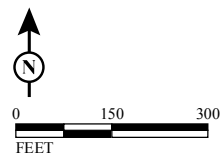
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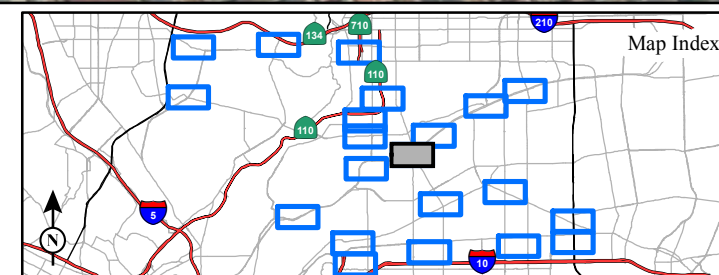
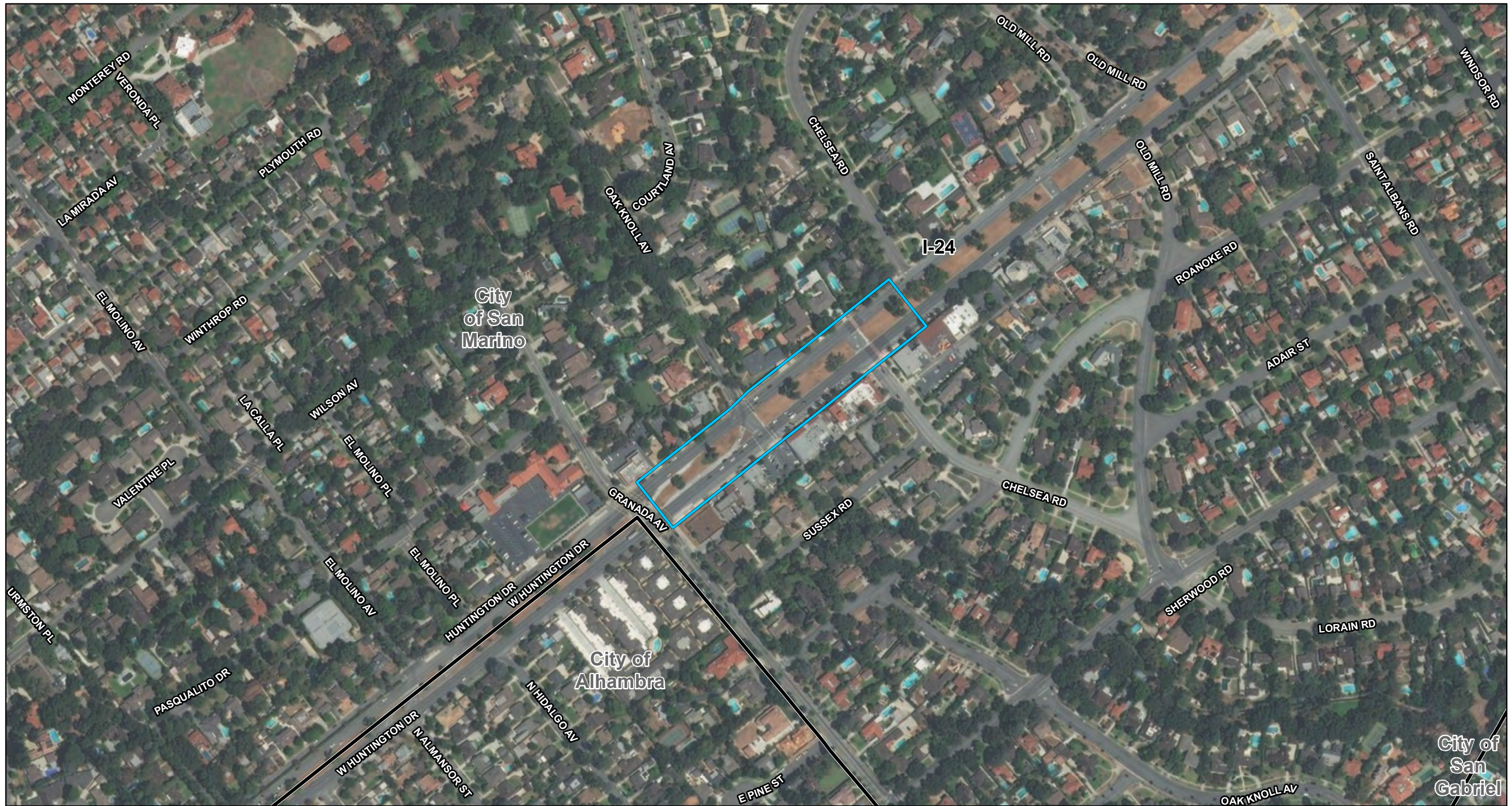









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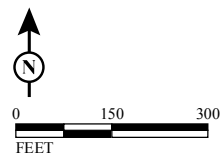
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|  Parcels Where Acquisitions/Easements Would be Required |  Temporary Construction Easement |
| |  Permanent Easement |



SOURCE: Esri (~2015); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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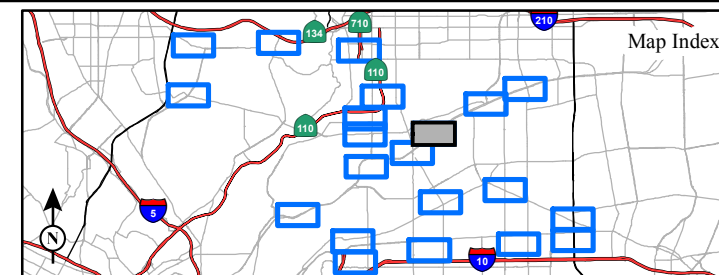
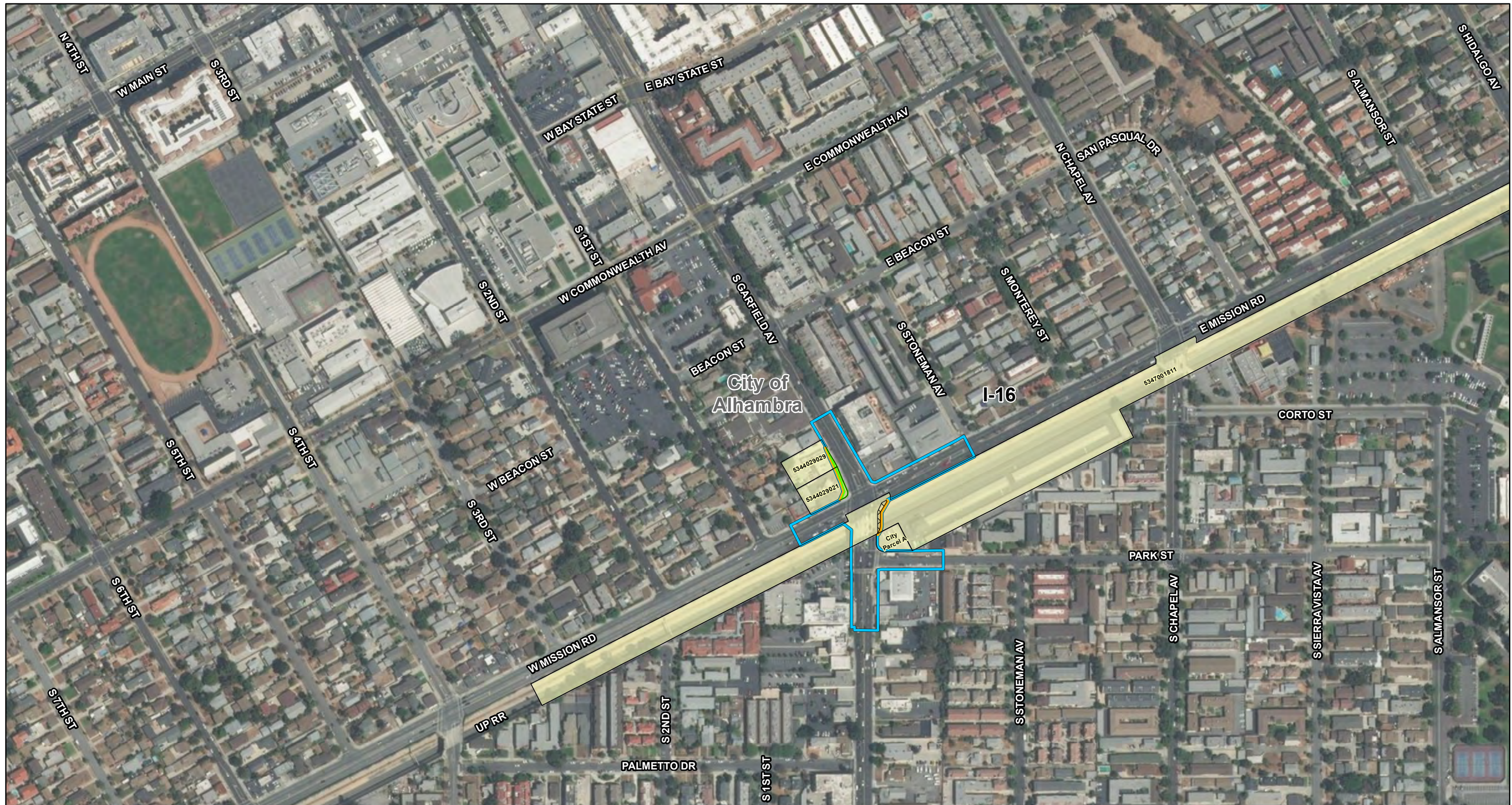


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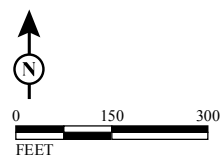
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- TSM/TDM Alternative Local Street and Intersection Improvements
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SOURCE: Esri (~2015); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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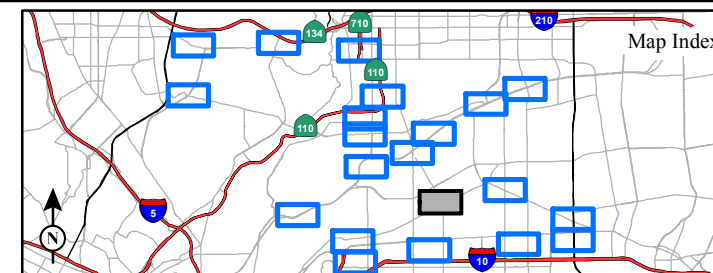
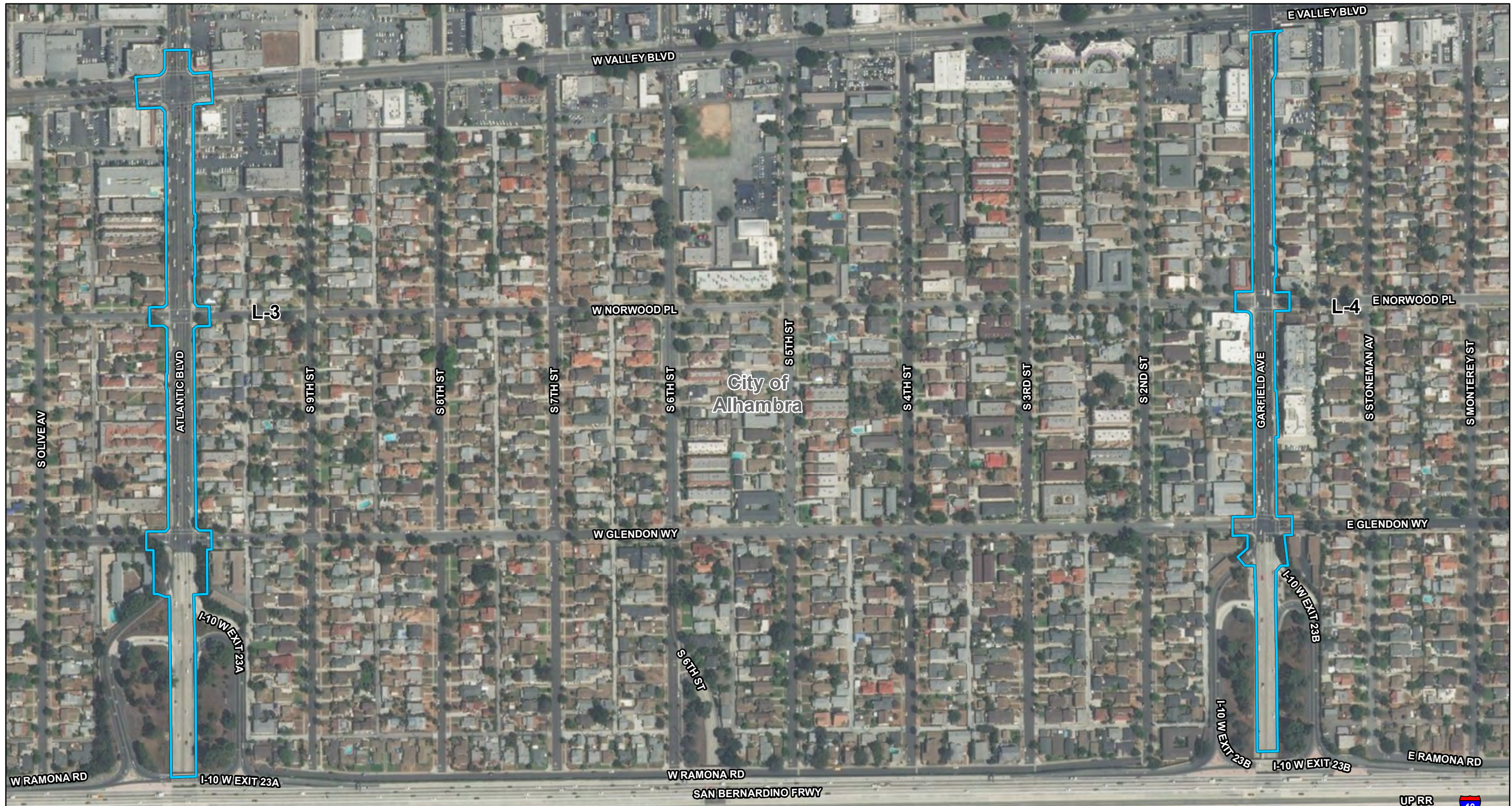


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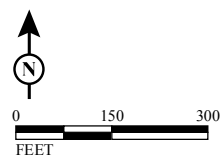
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SOURCE: Esri (~2015); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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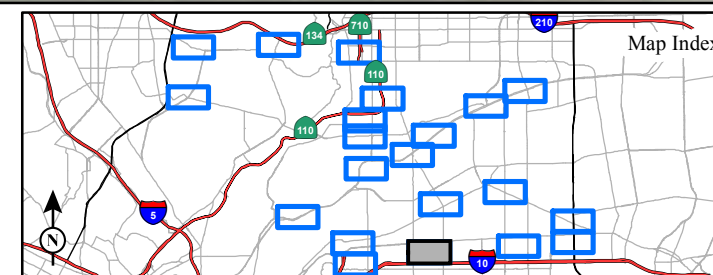


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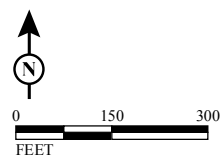
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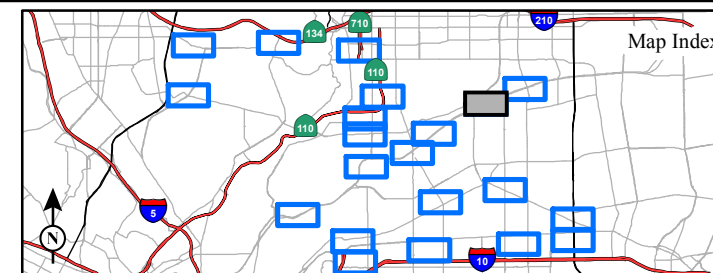
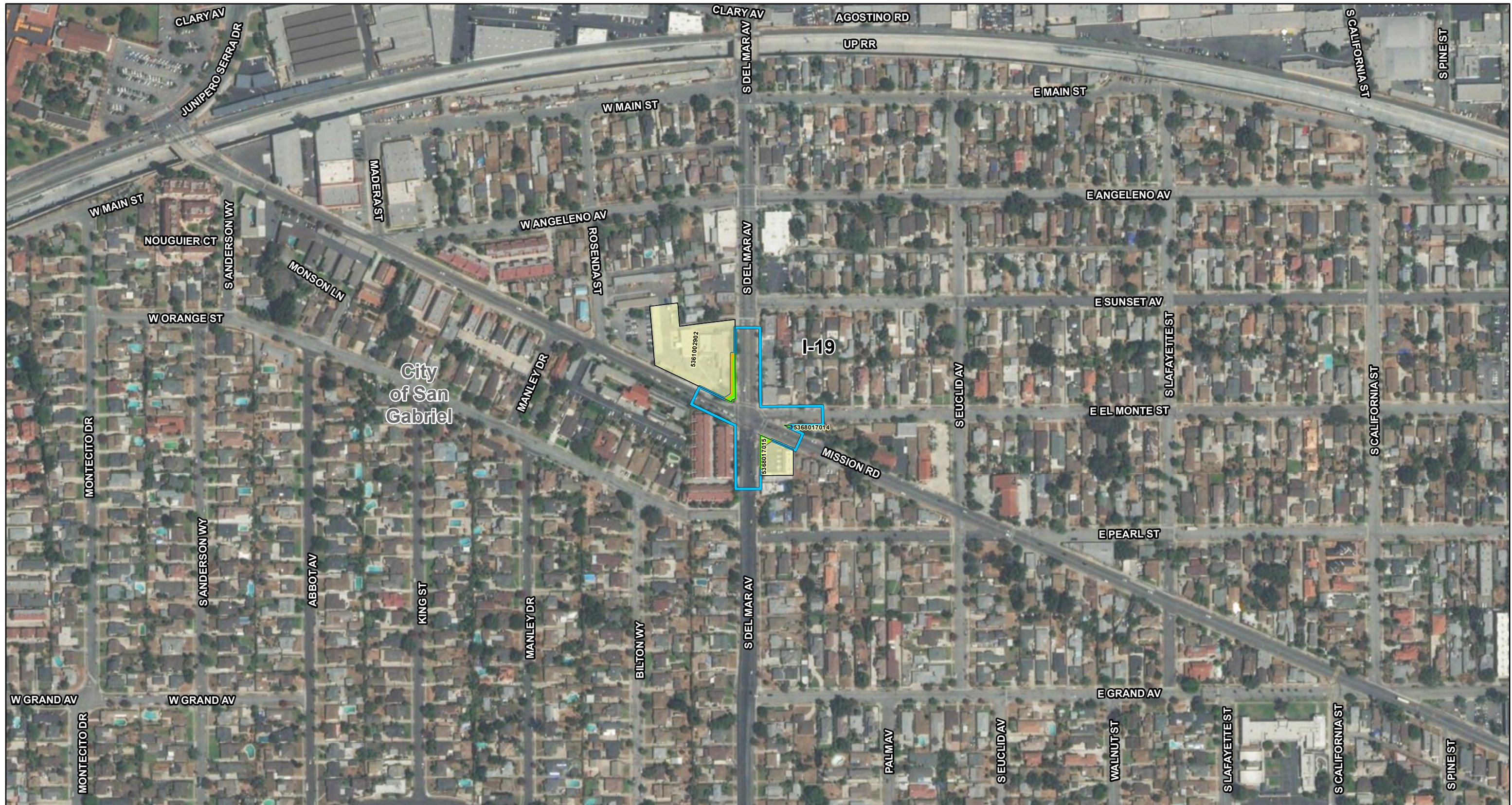


FIGURE 3.3-9
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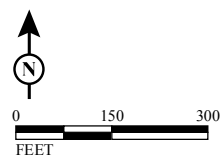
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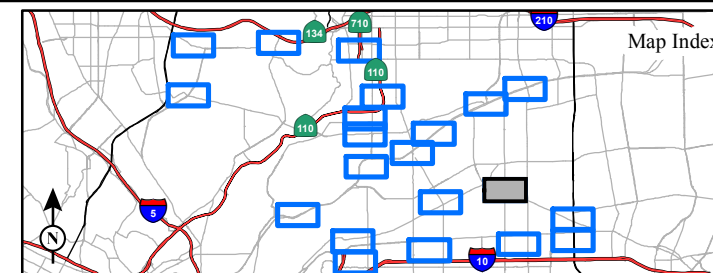
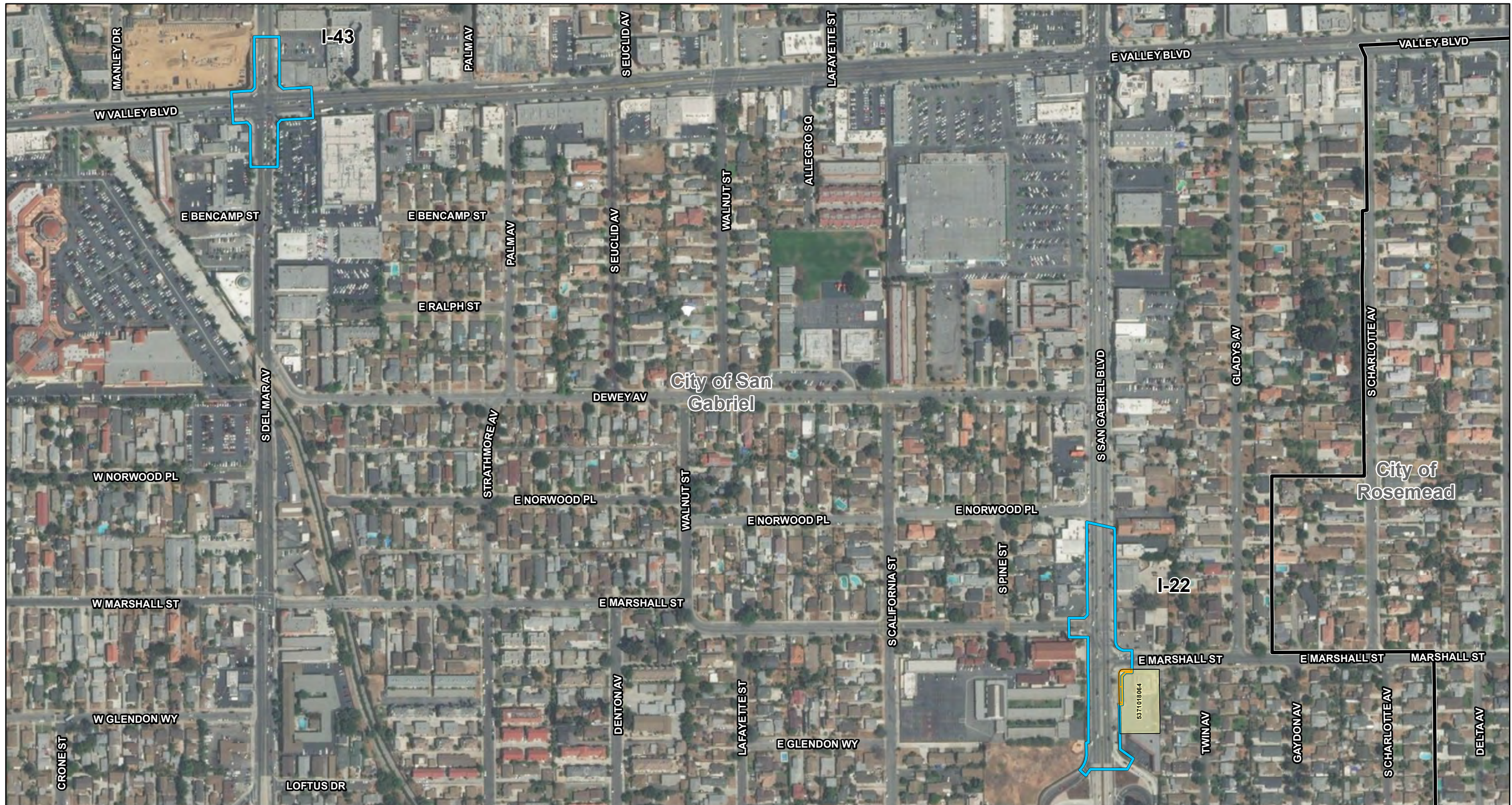


FIGURE 3.3-9
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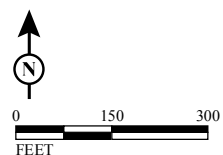
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SOURCE: Esri (~2015); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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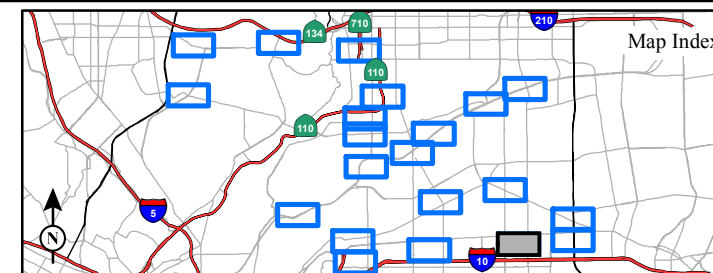


FIGURE 3.3-9
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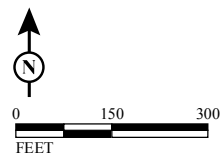
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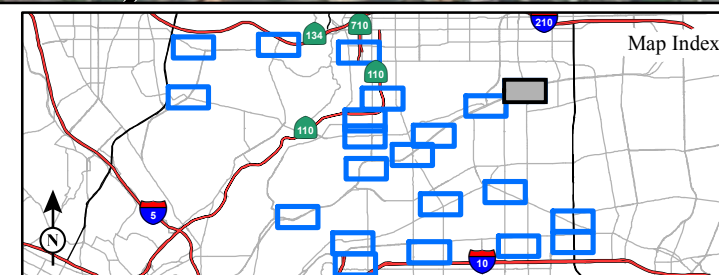


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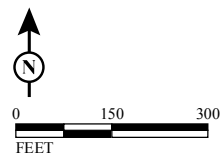
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SOURCE: Esri (~2015); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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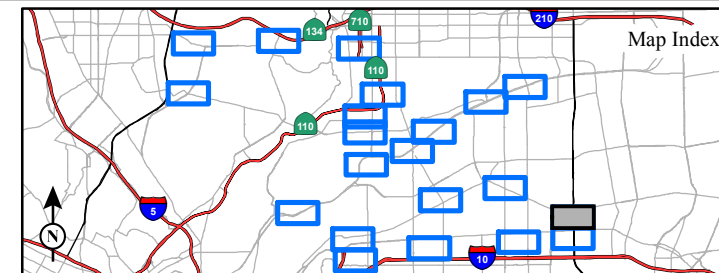
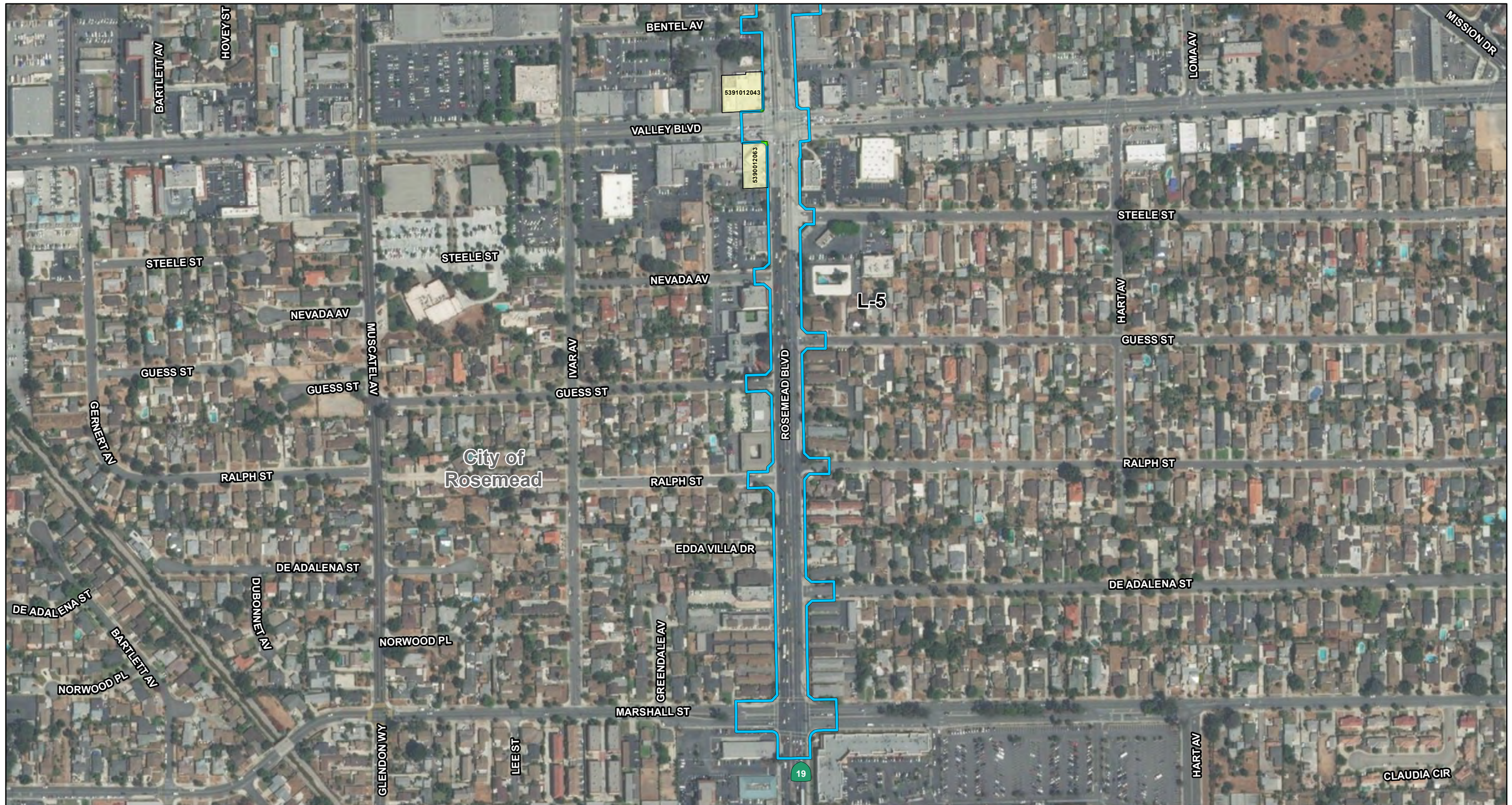


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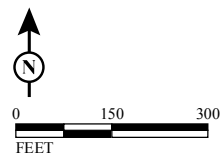
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SOURCE: Esri (~2015); JMD (8/2013); DRCD (8/2013); EPIC (12/2013)

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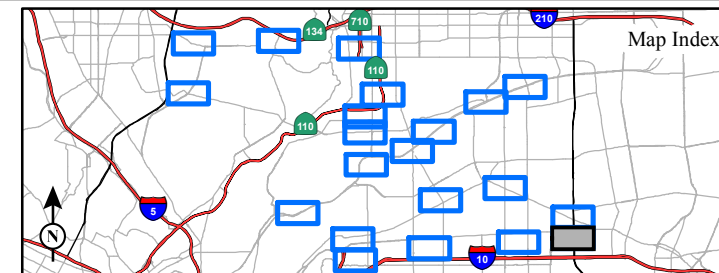
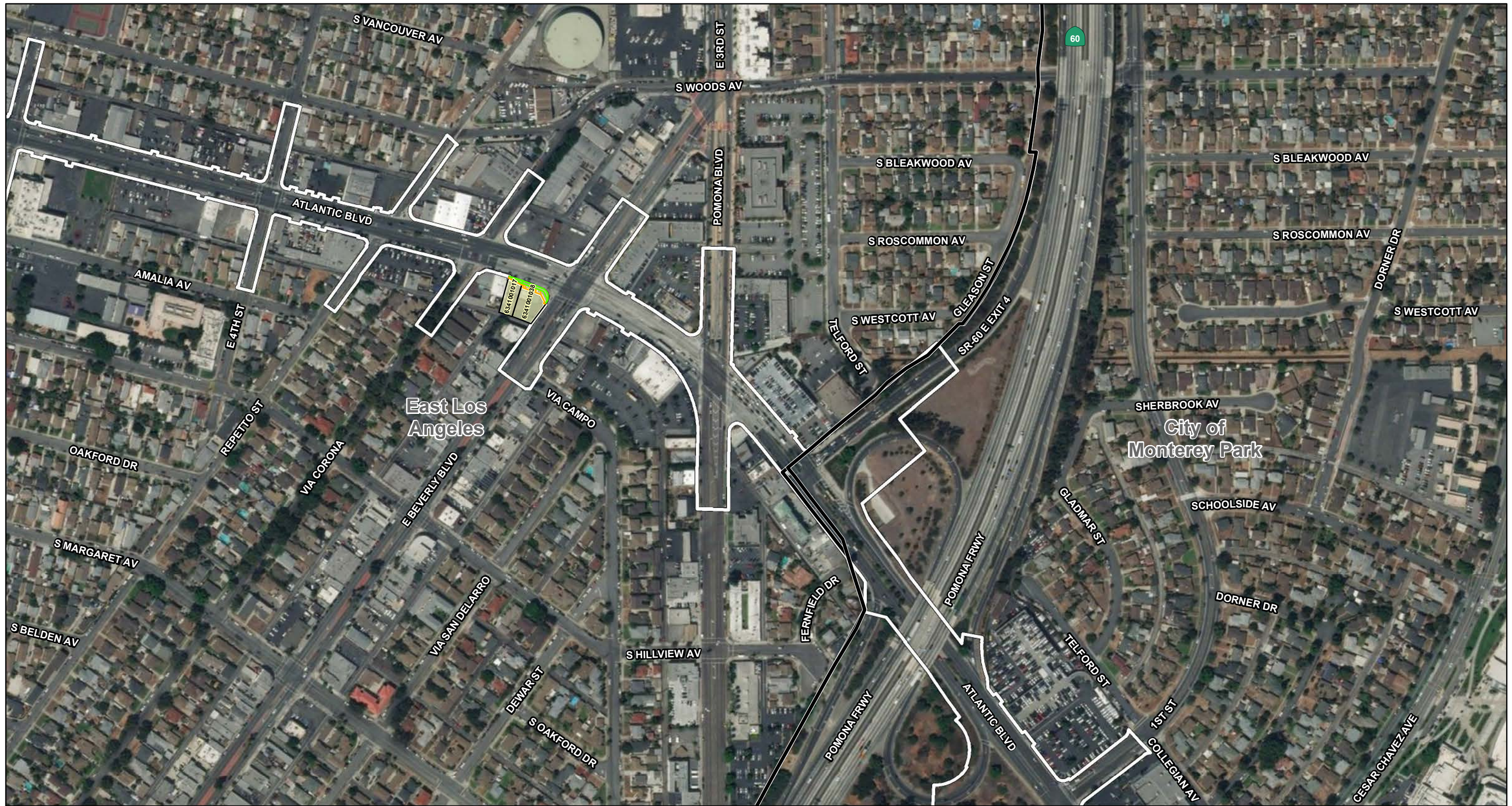


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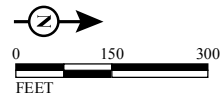
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LEGEND

- BRT Alternative Improvement Location
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Partial Acquisition
- Temporary Construction Easement



SOURCE: Bing Aerial (circa 2011); EPIC (12/2013)

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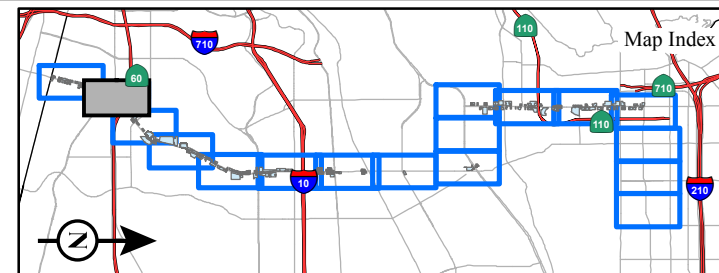
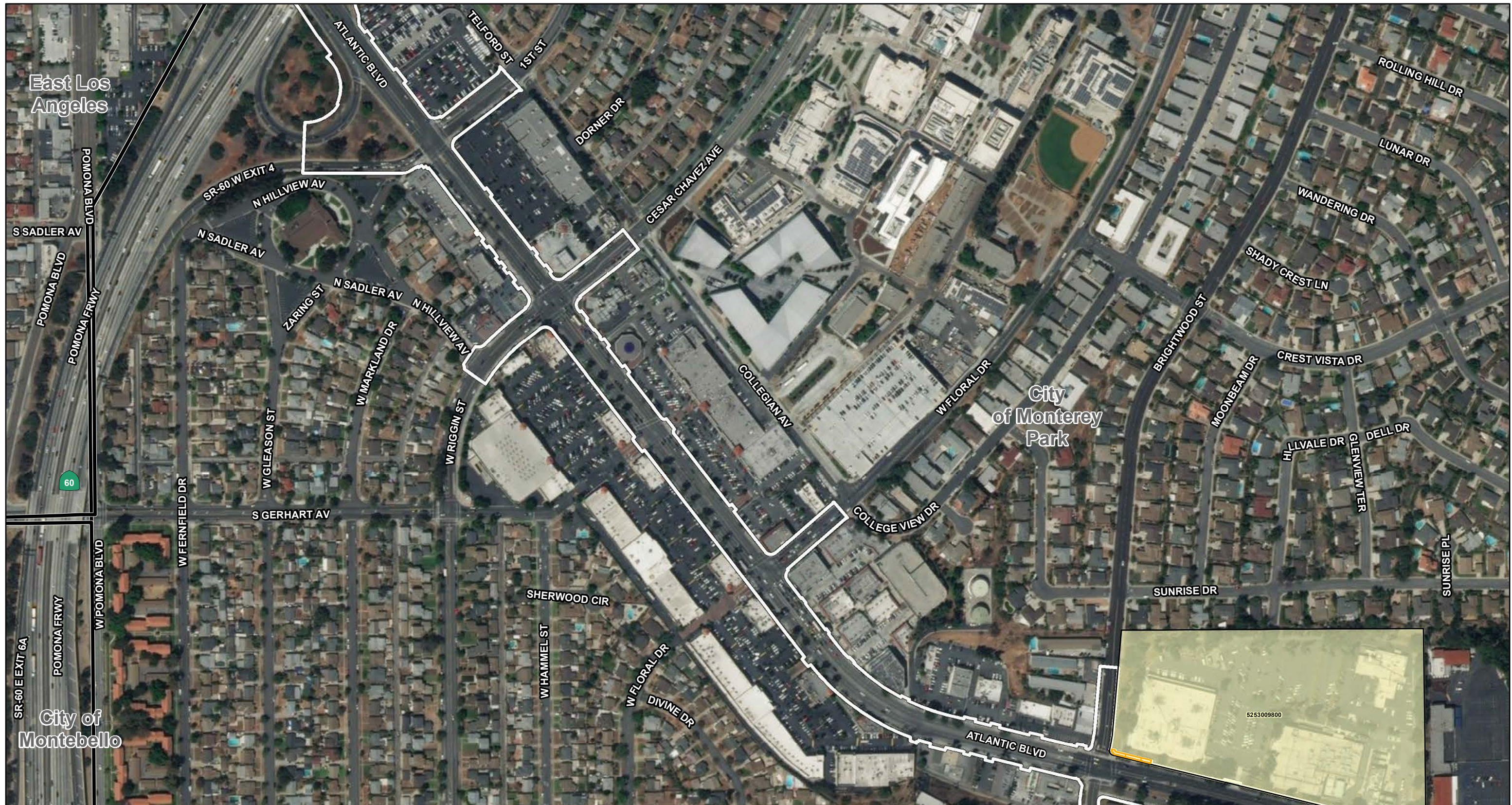


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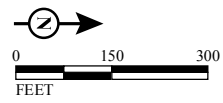
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LEGEND

- BRT Alternative Improvement Location
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Partial Acquisition
- Temporary Construction Easement



SOURCE: Bing Aerial (circa 2011); EPIC (12/2013)

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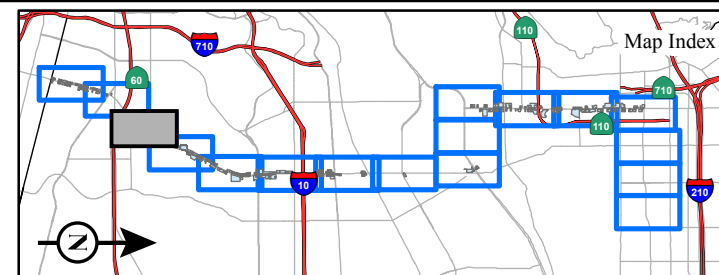


FIGURE 3.3-10
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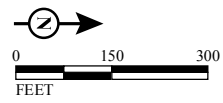
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LEGEND

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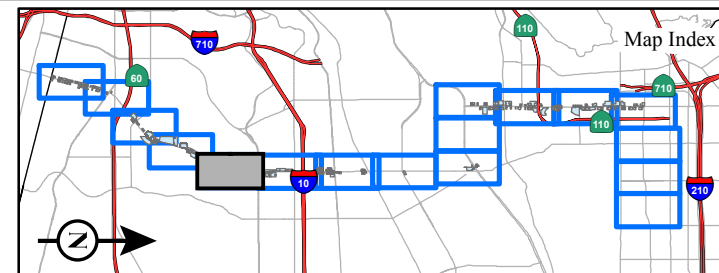


FIGURE 3.3-10
Sheet 5 of 17

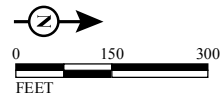
SR 710 North Project
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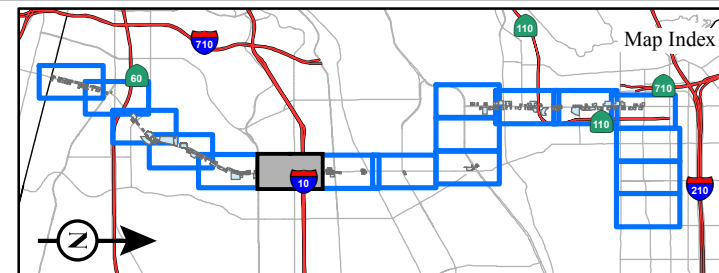
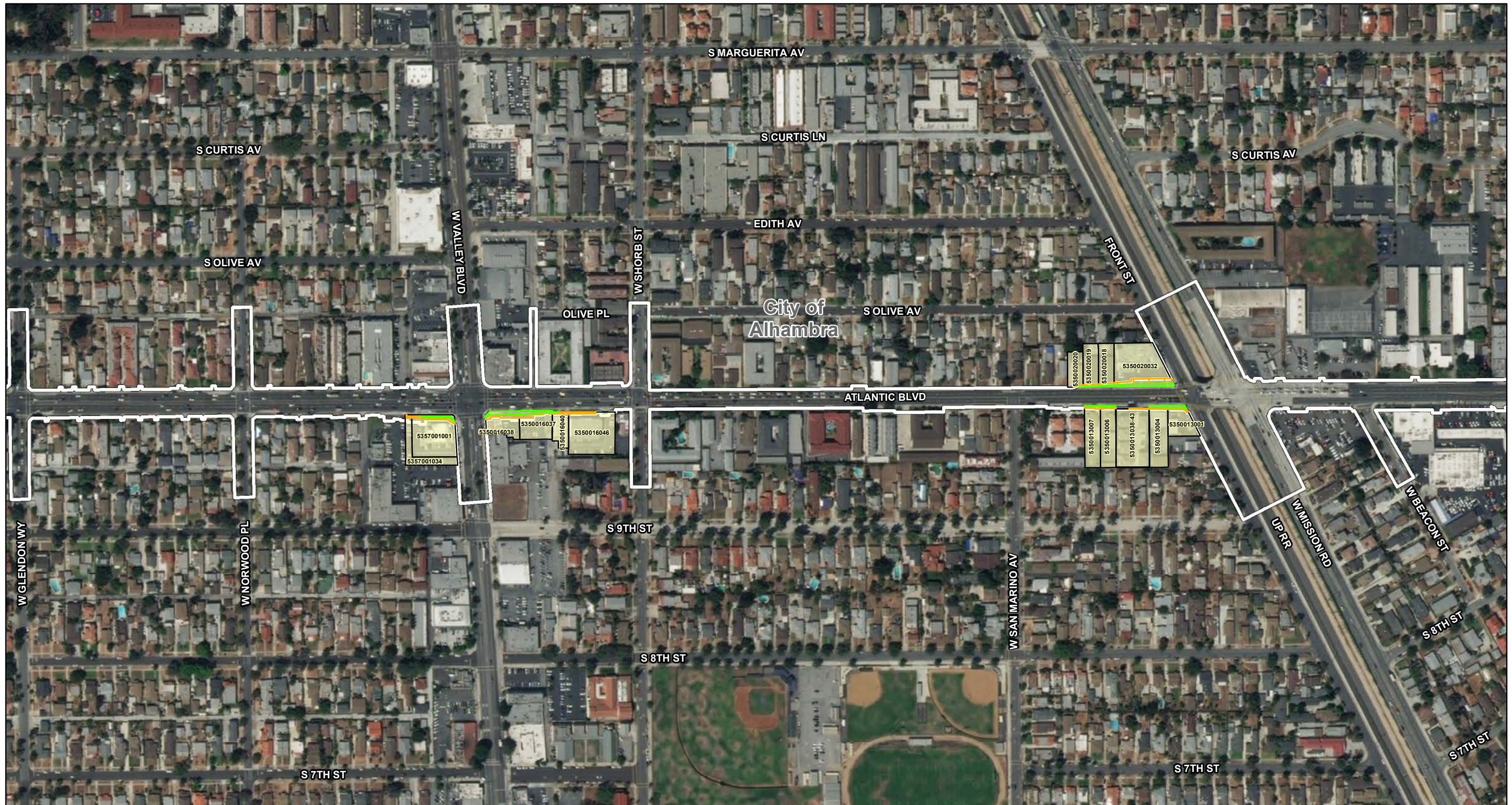







FIGURE 3.3-10
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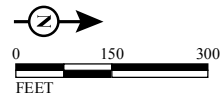
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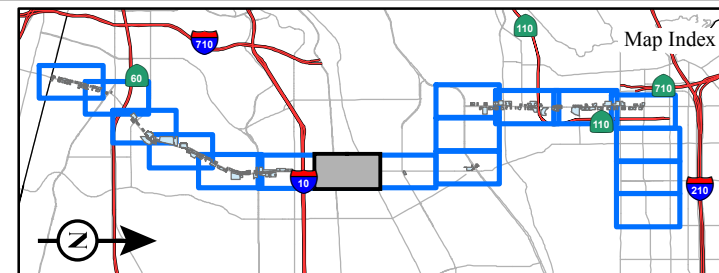
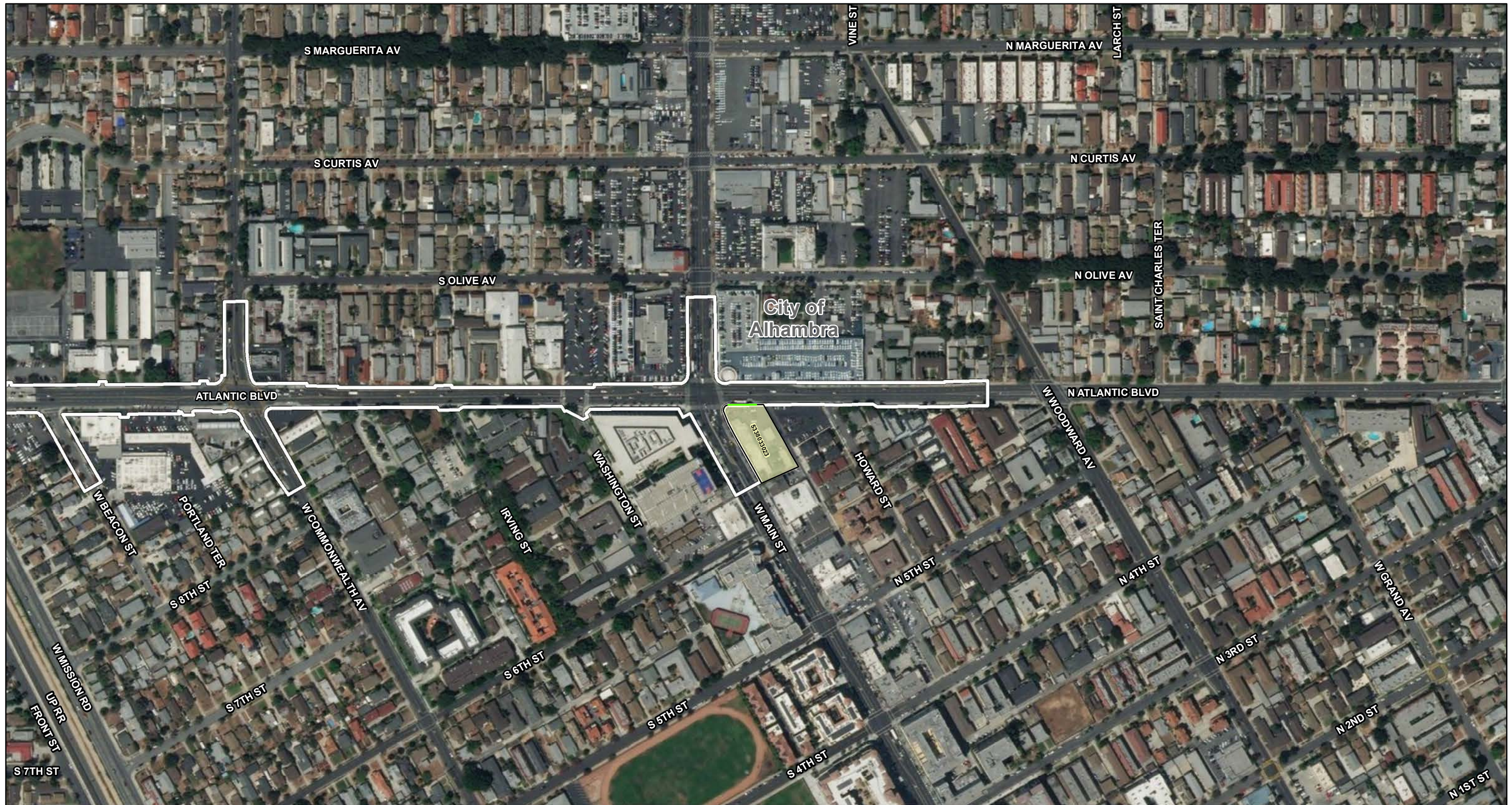







FIGURE 3.3-10
Sheet 7 of 17

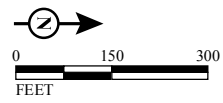
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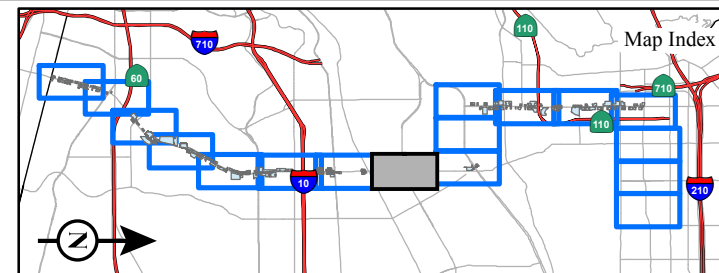
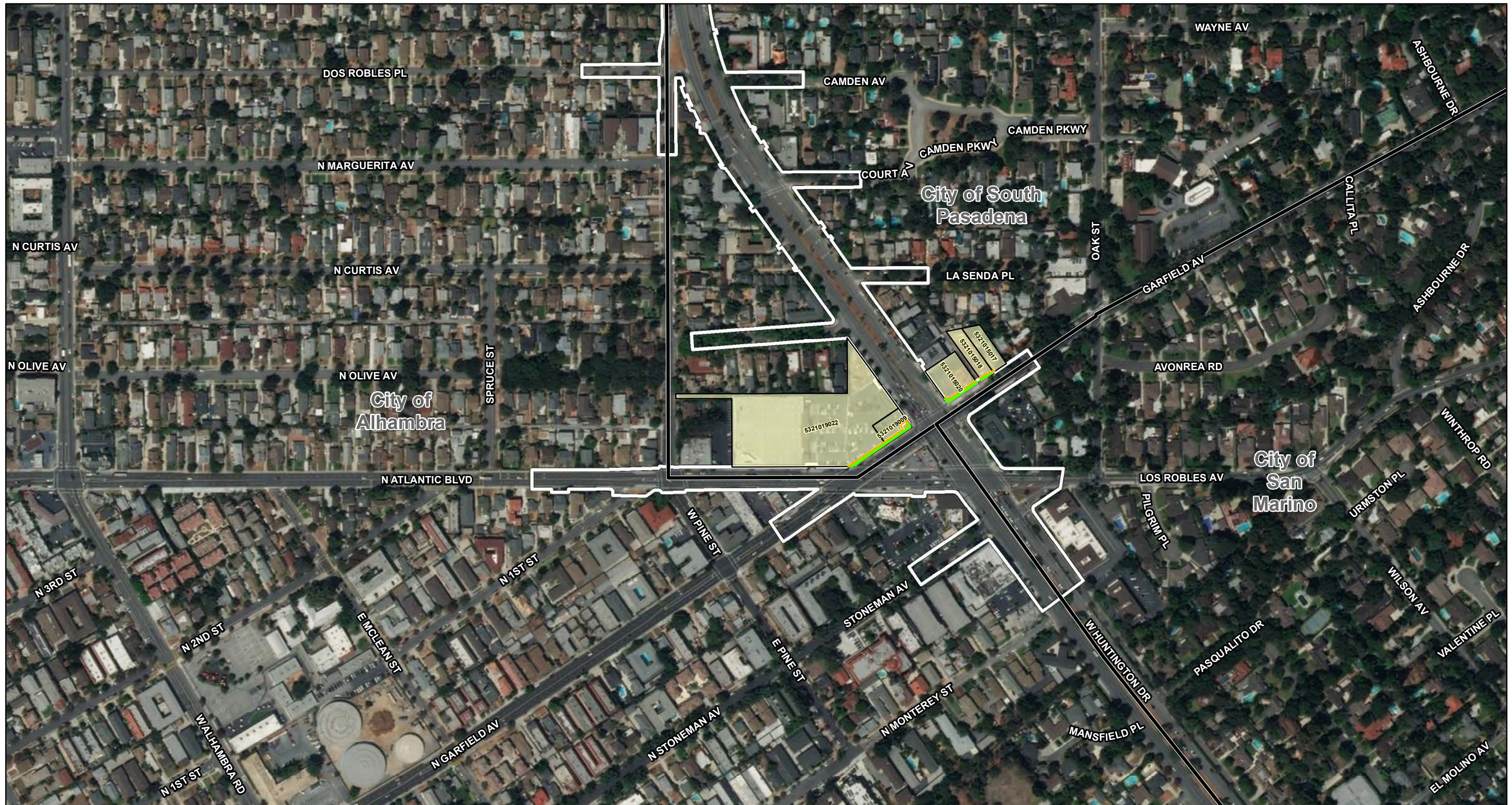


FIGURE 3.3-10
Sheet 8 of 17

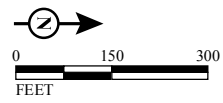
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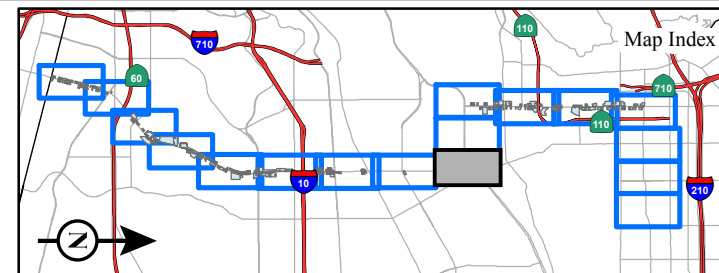
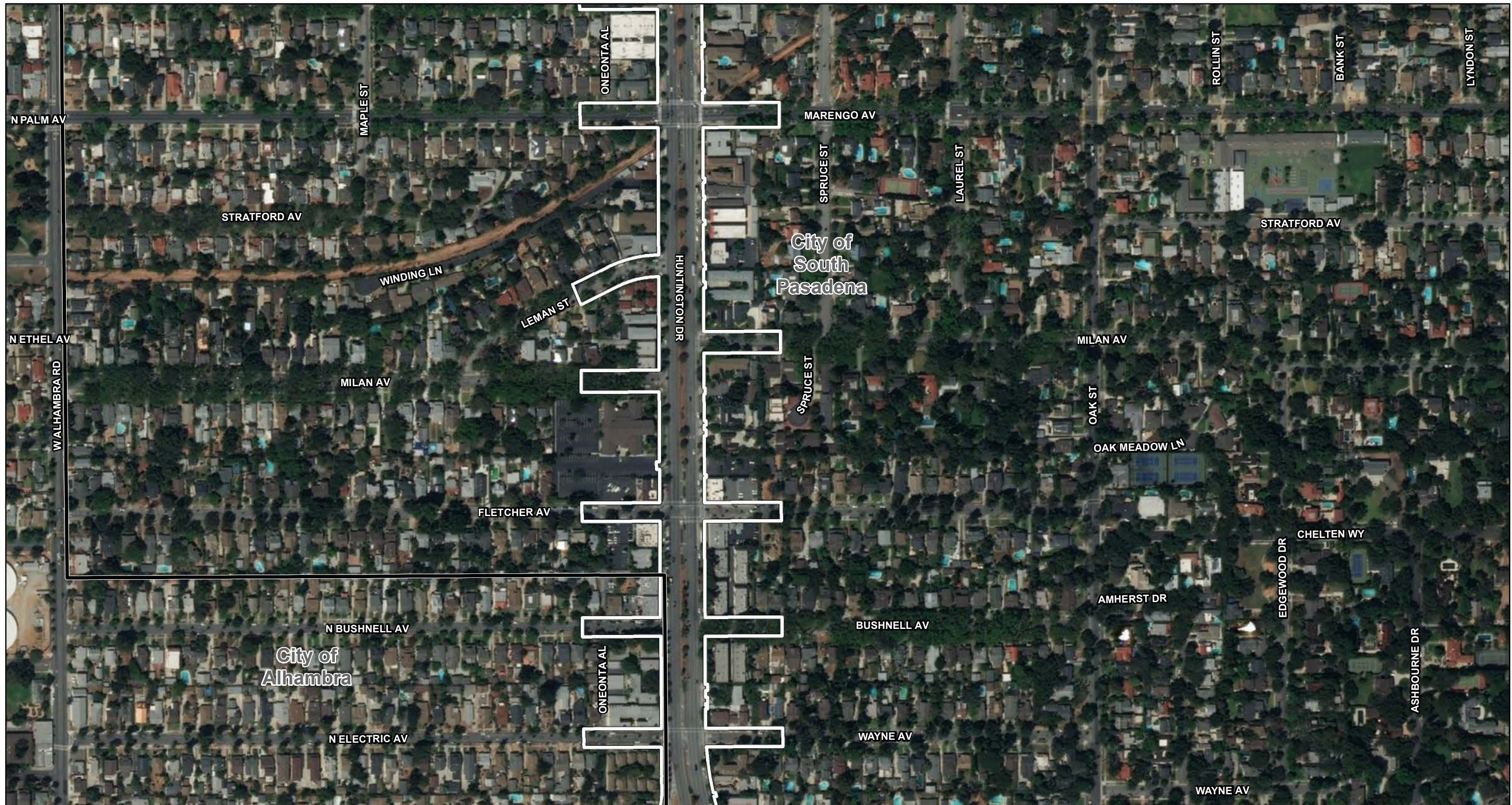







FIGURE 3.3-10
Sheet 9 of 17

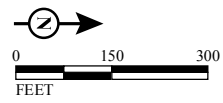
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-  City/Community/Neighborhood Boundary
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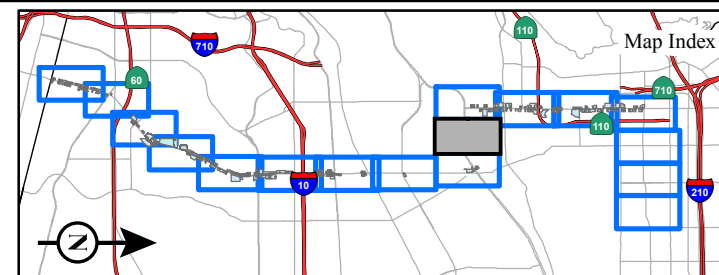
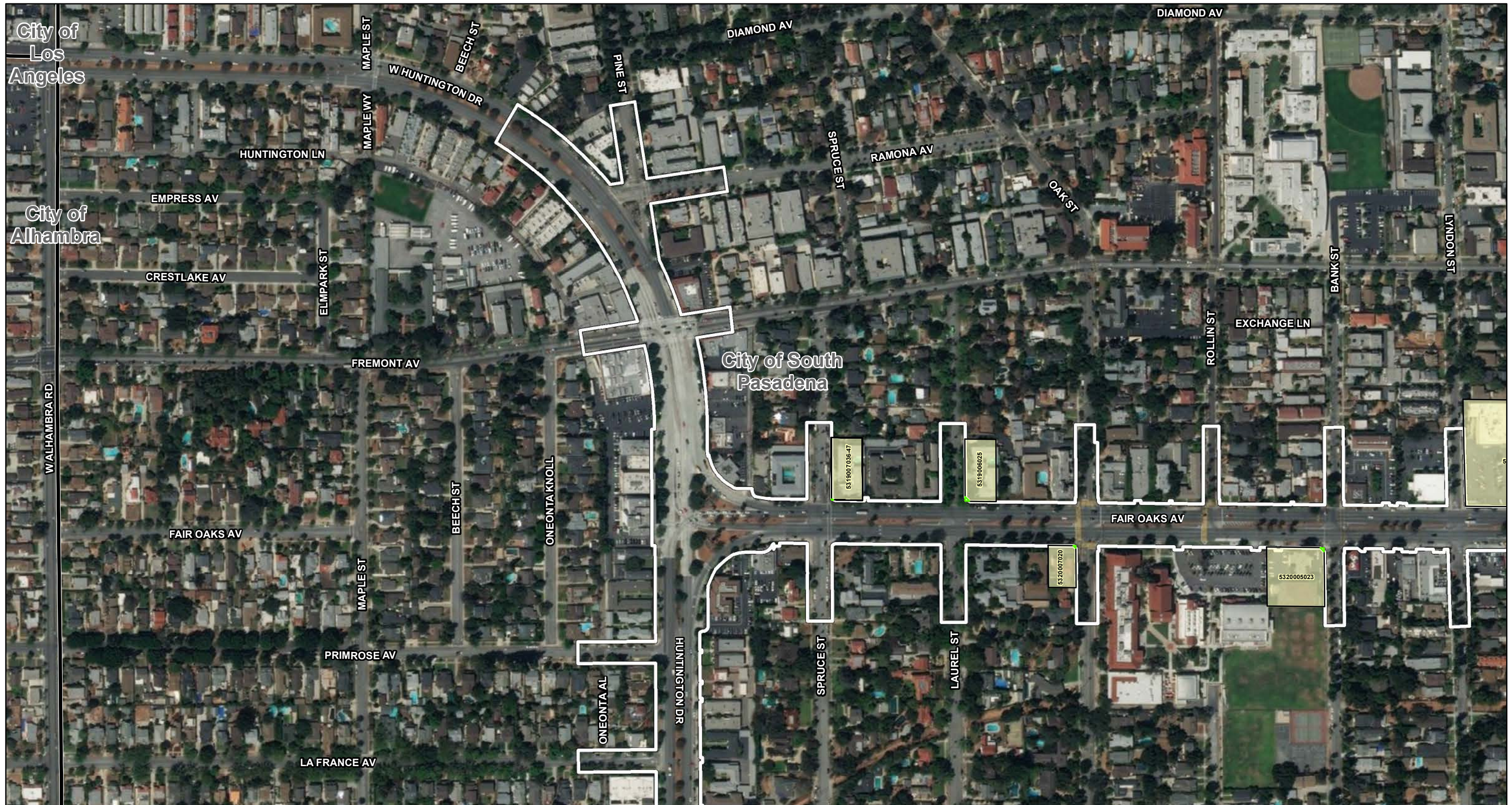


FIGURE 3.3-10
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




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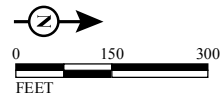
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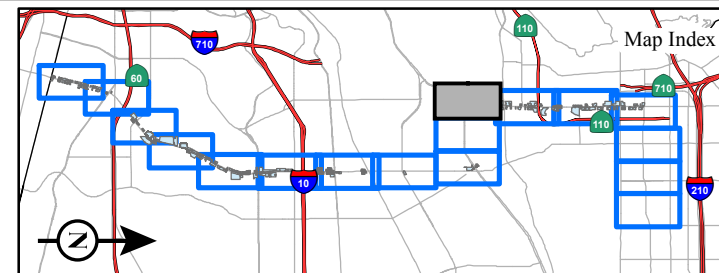
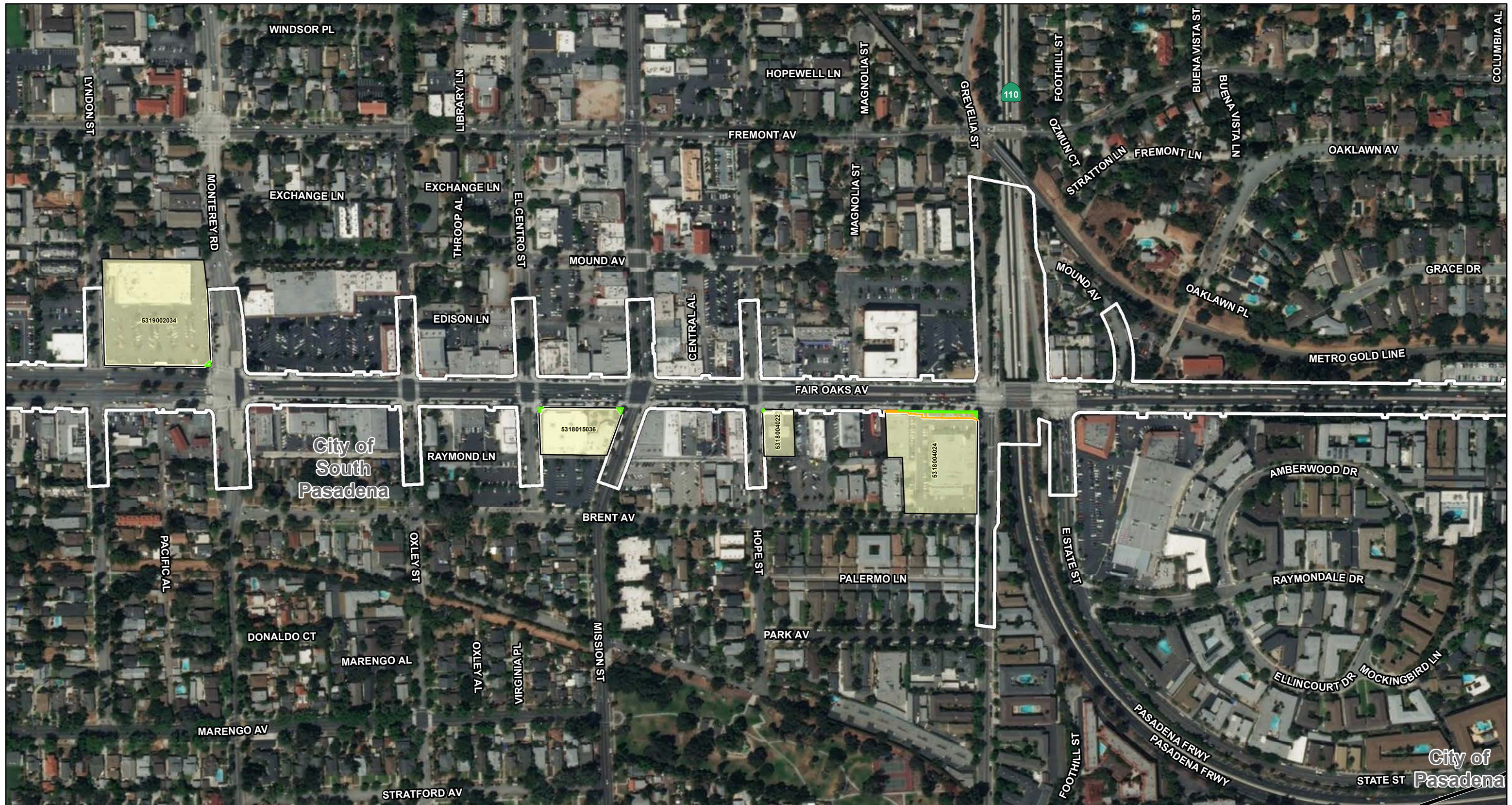







FIGURE 3.3-10
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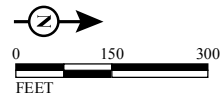
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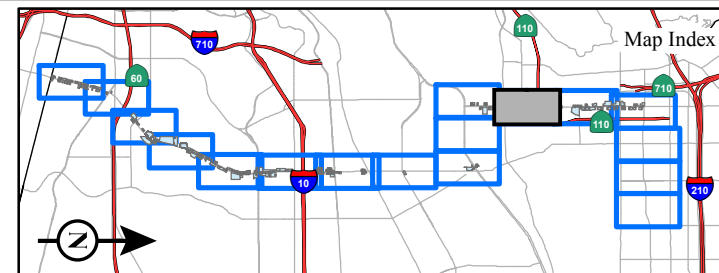
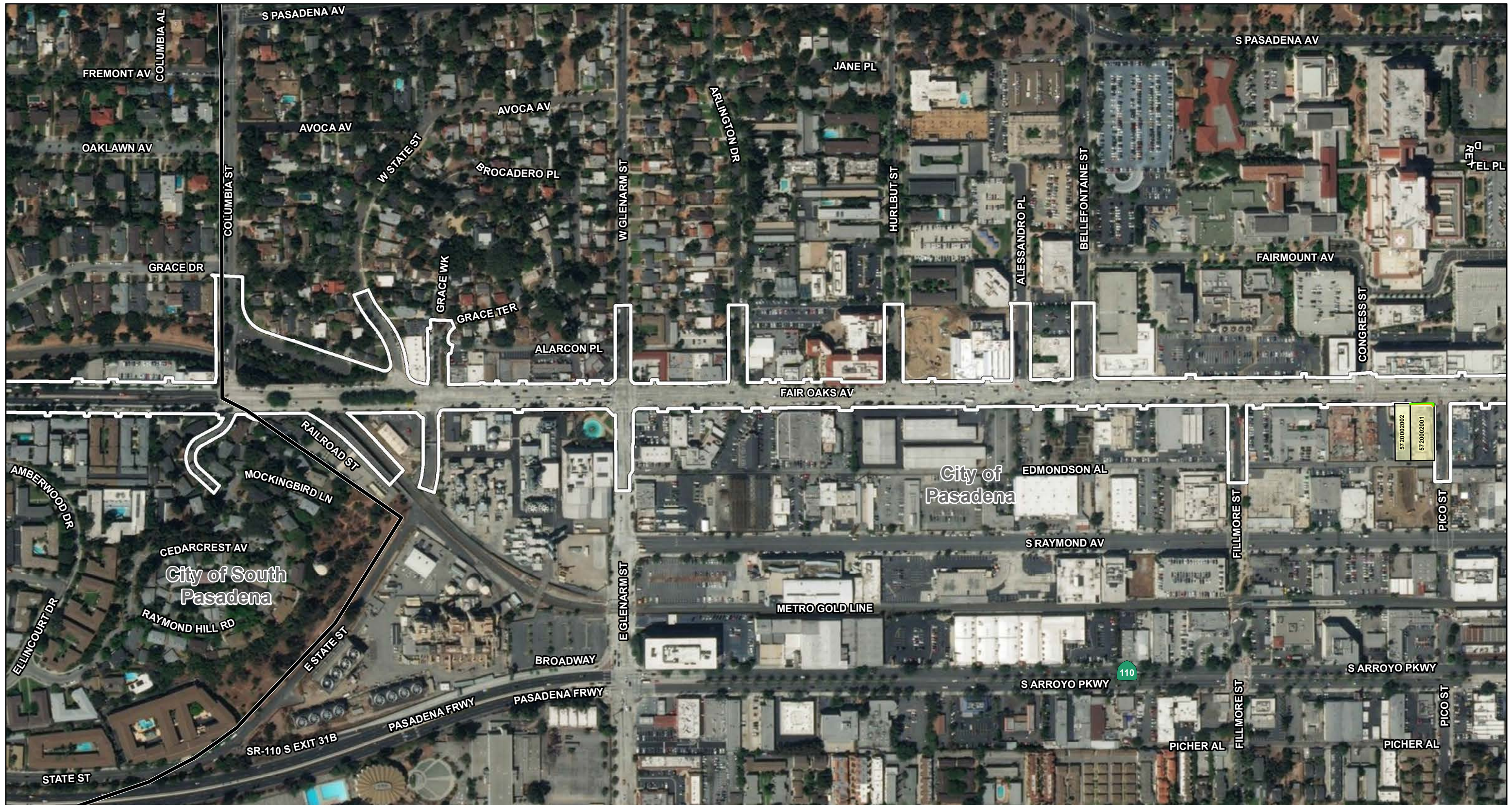







FIGURE 3.3-10
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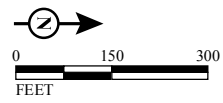
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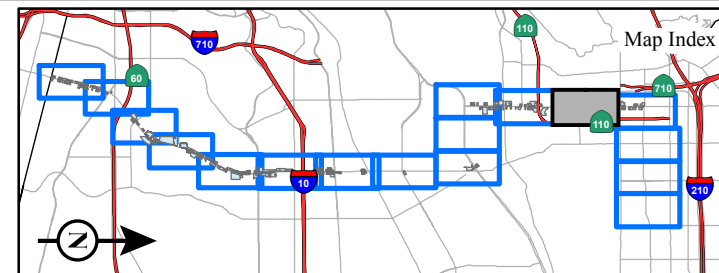
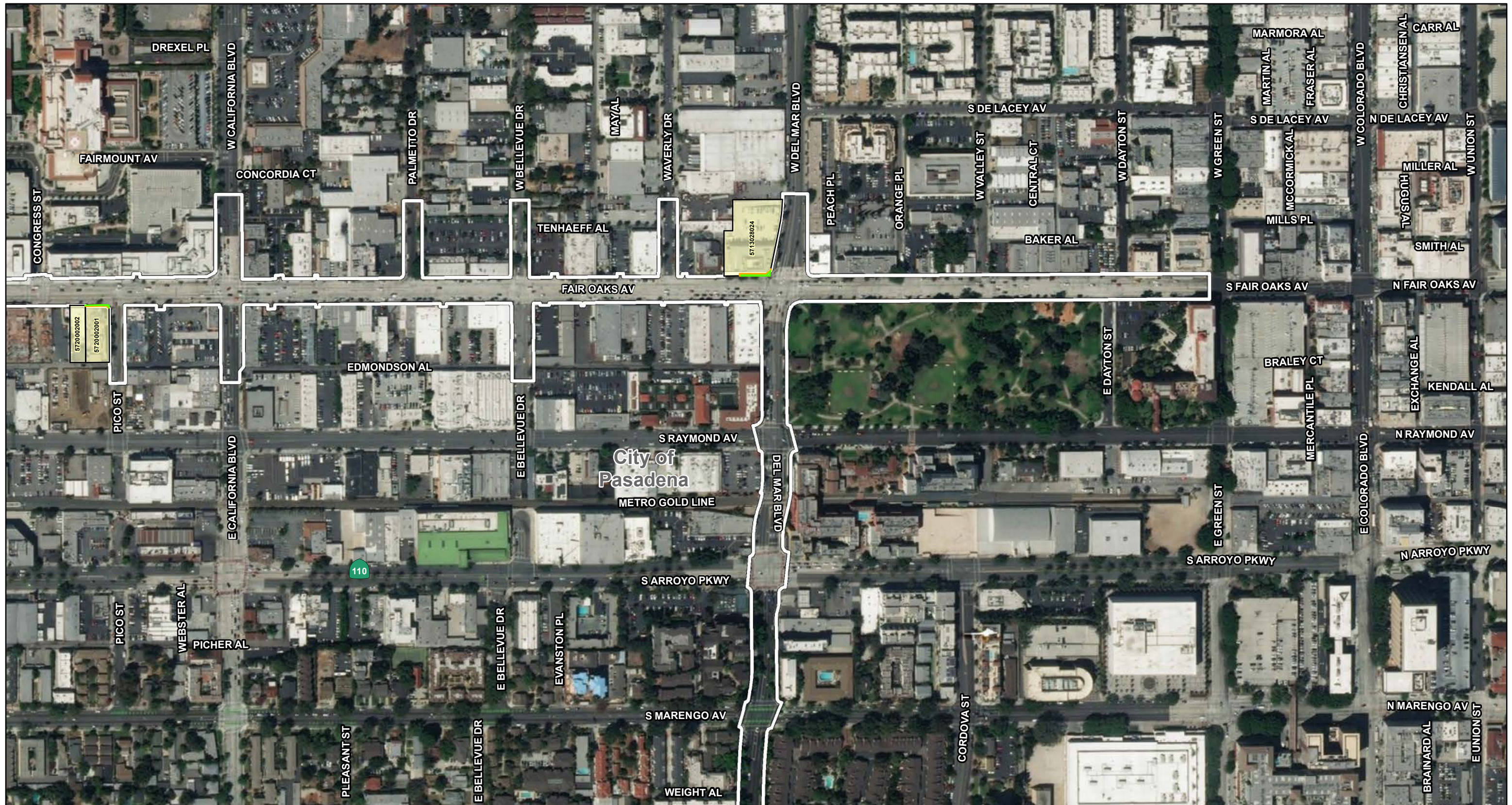


FIGURE 3.3-10
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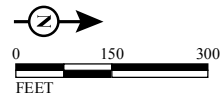
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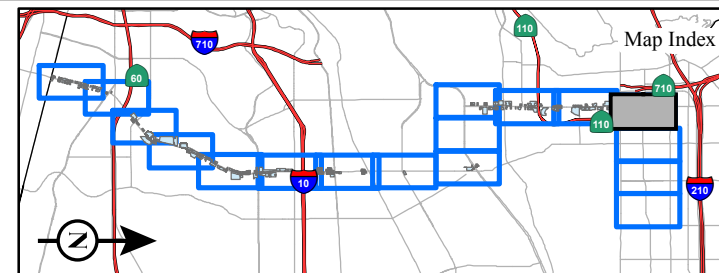
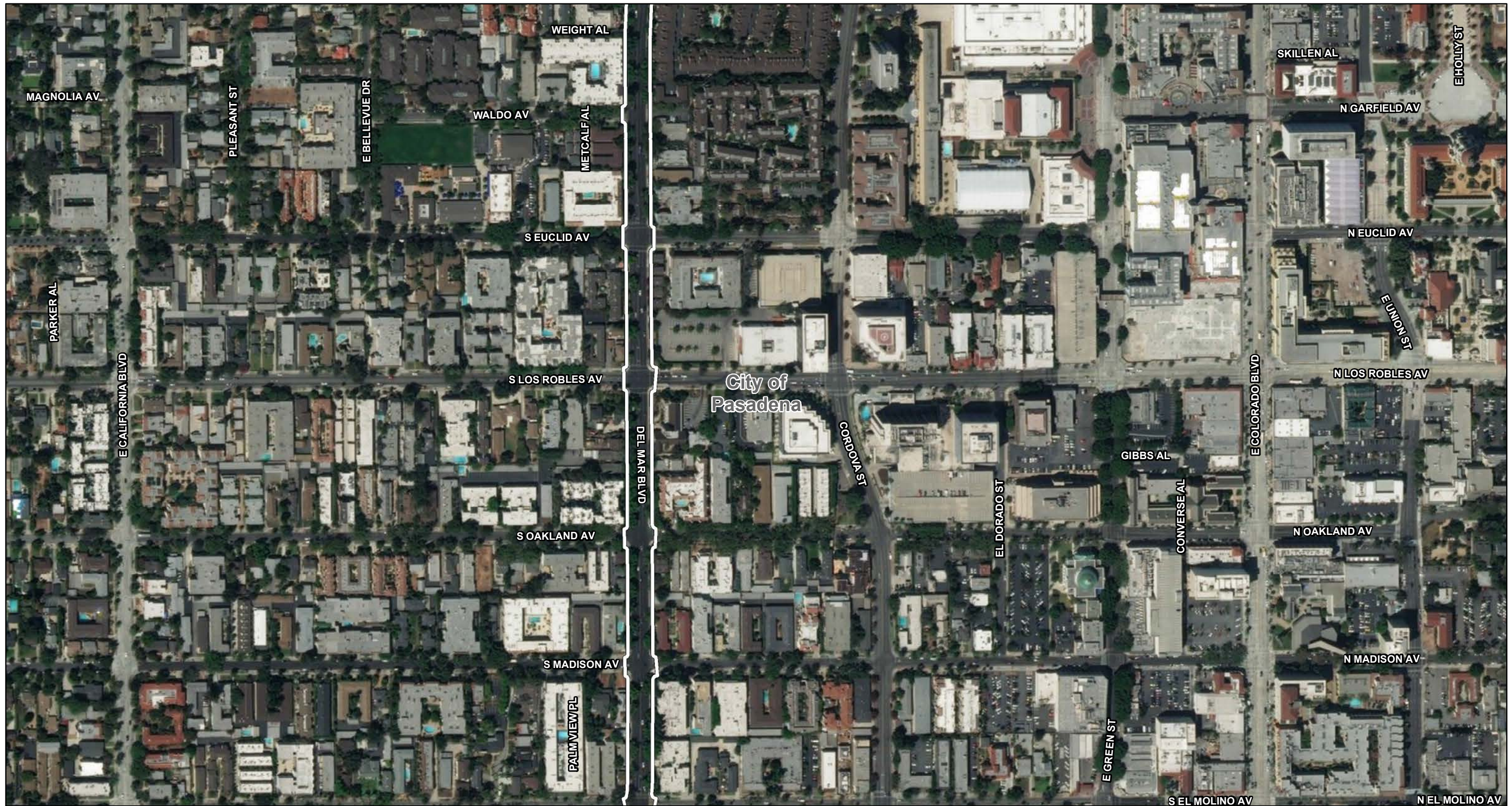







FIGURE 3.3-10
Sheet 14 of 17

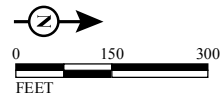
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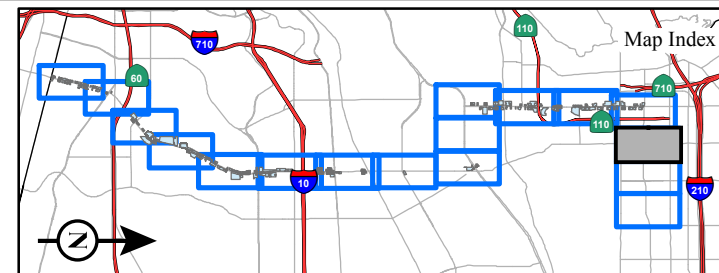
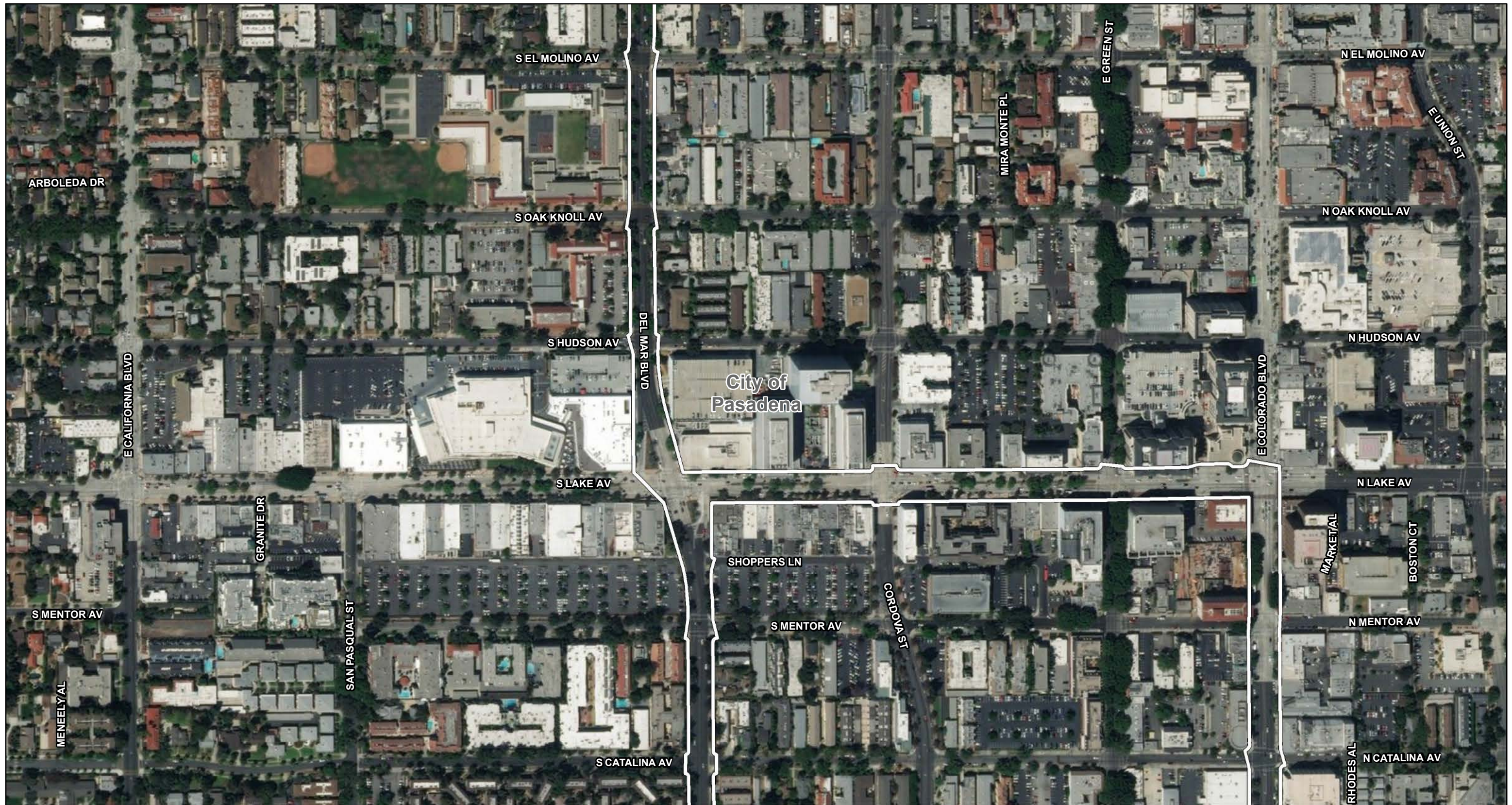







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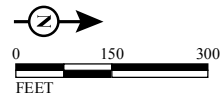
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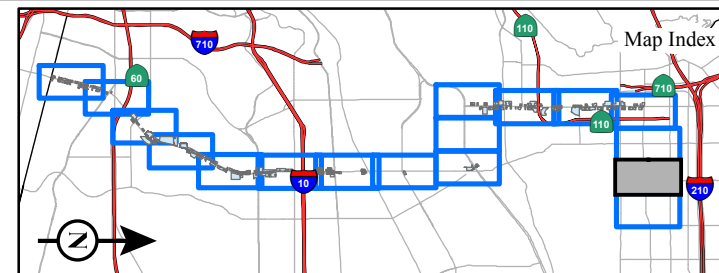
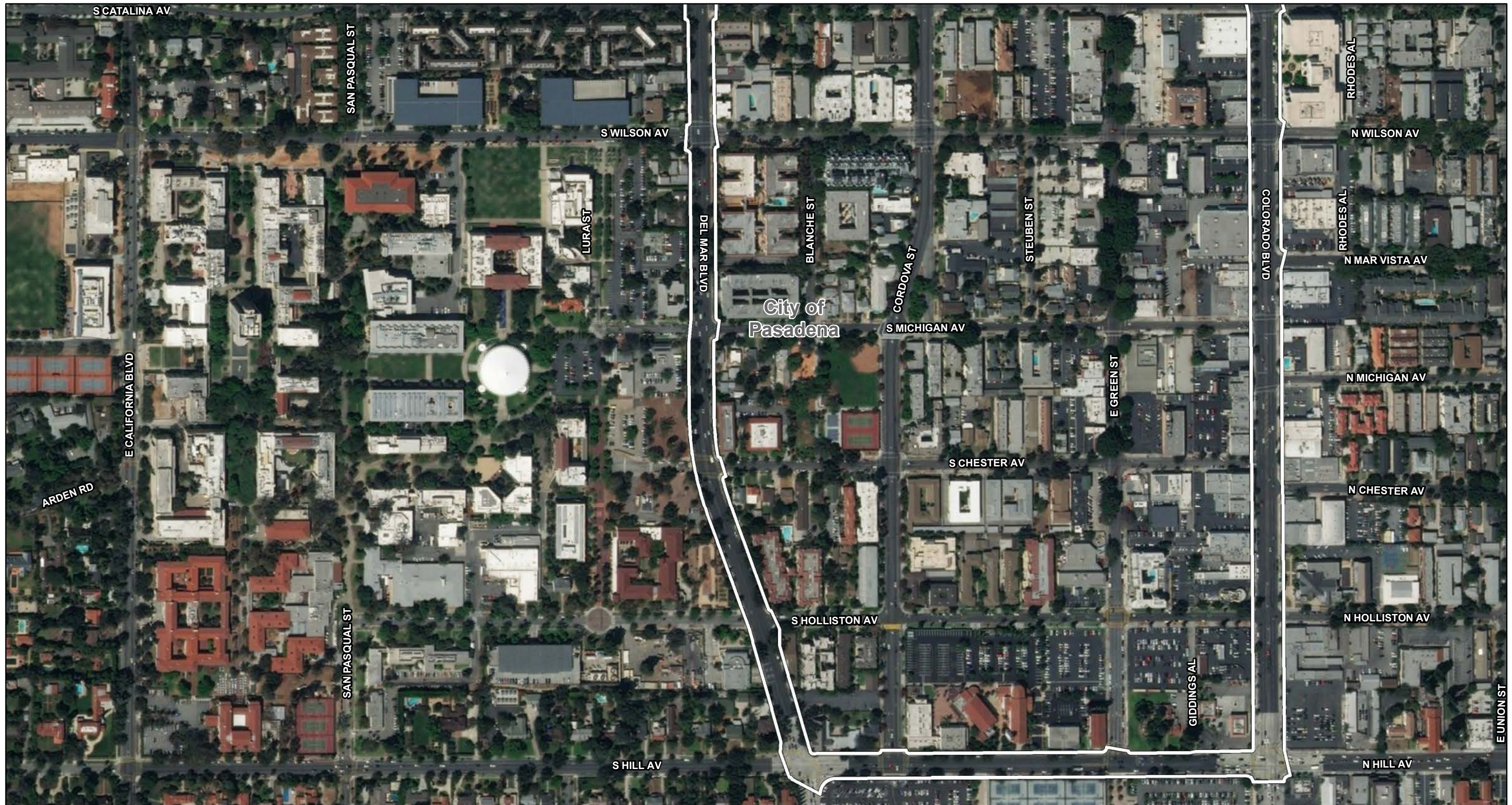







FIGURE 3.3-10
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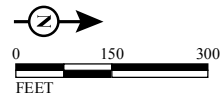
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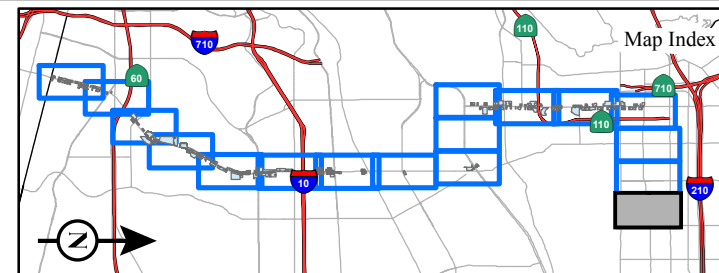
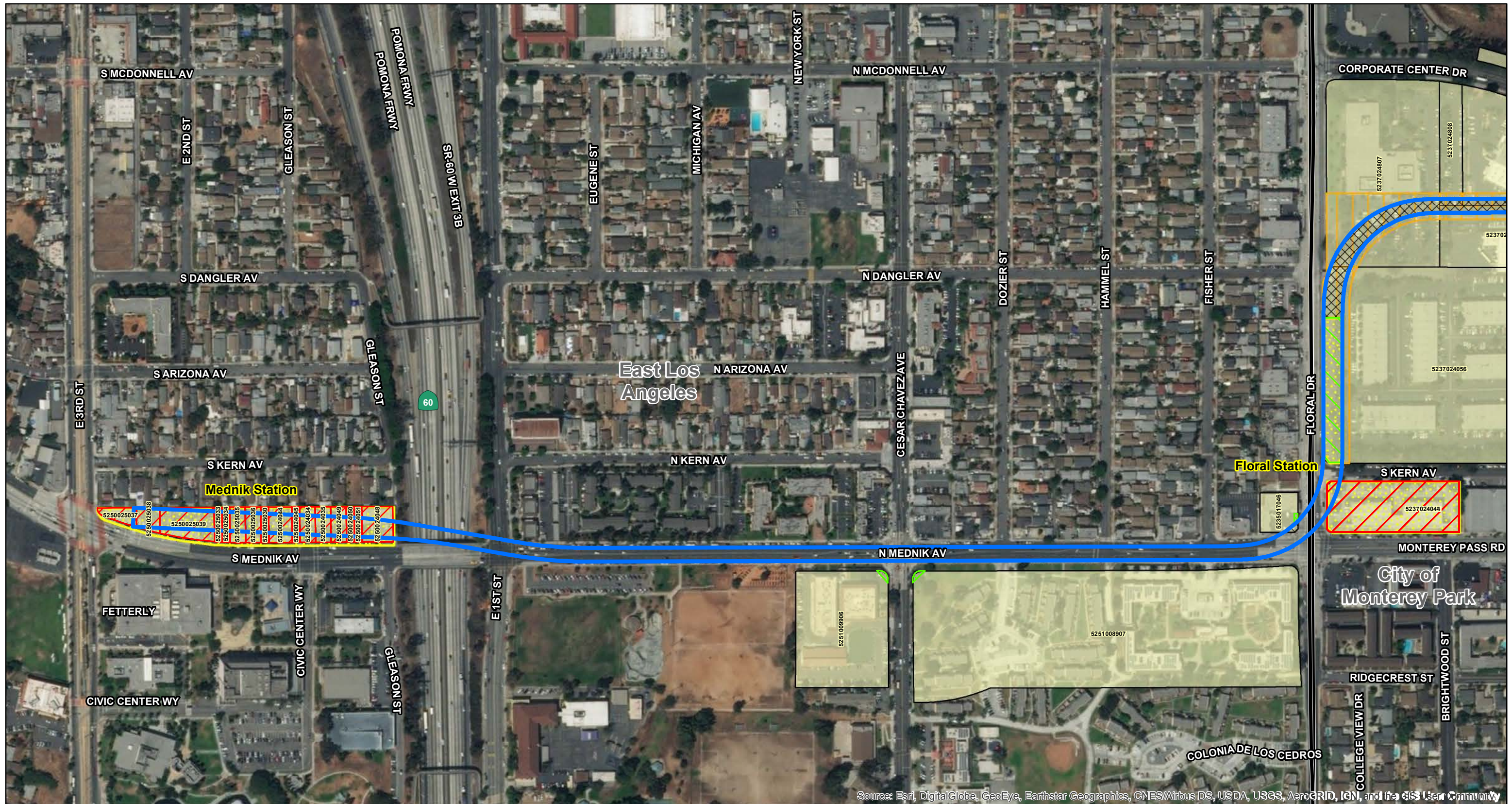


FIGURE 3.3-10
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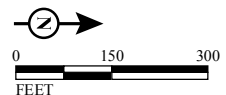
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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

LEGEND

- Aerial Segment
- Tunnel Segment
- Maintenance Yard
- Station
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Permanent Easement
- Temporary Construction Easement



SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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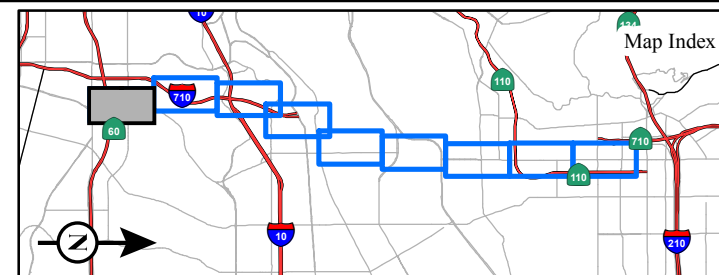


FIGURE 3.3-11
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

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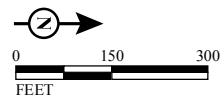
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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

LEGEND

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|  Aerial Segment |  Parcels Where Acquisitions/Easements Would be Required |
|  Tunnel Segment |  Full Acquisition |
|  Maintenance Yard |  Partial Acquisition |
|  Station |  Permanent Easement |
|  City/Community/Neighborhood Boundary |  Temporary Construction Easement |



SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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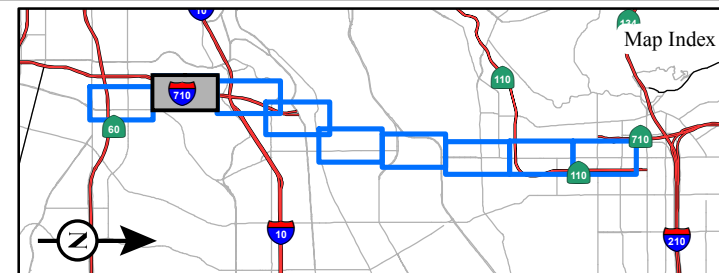
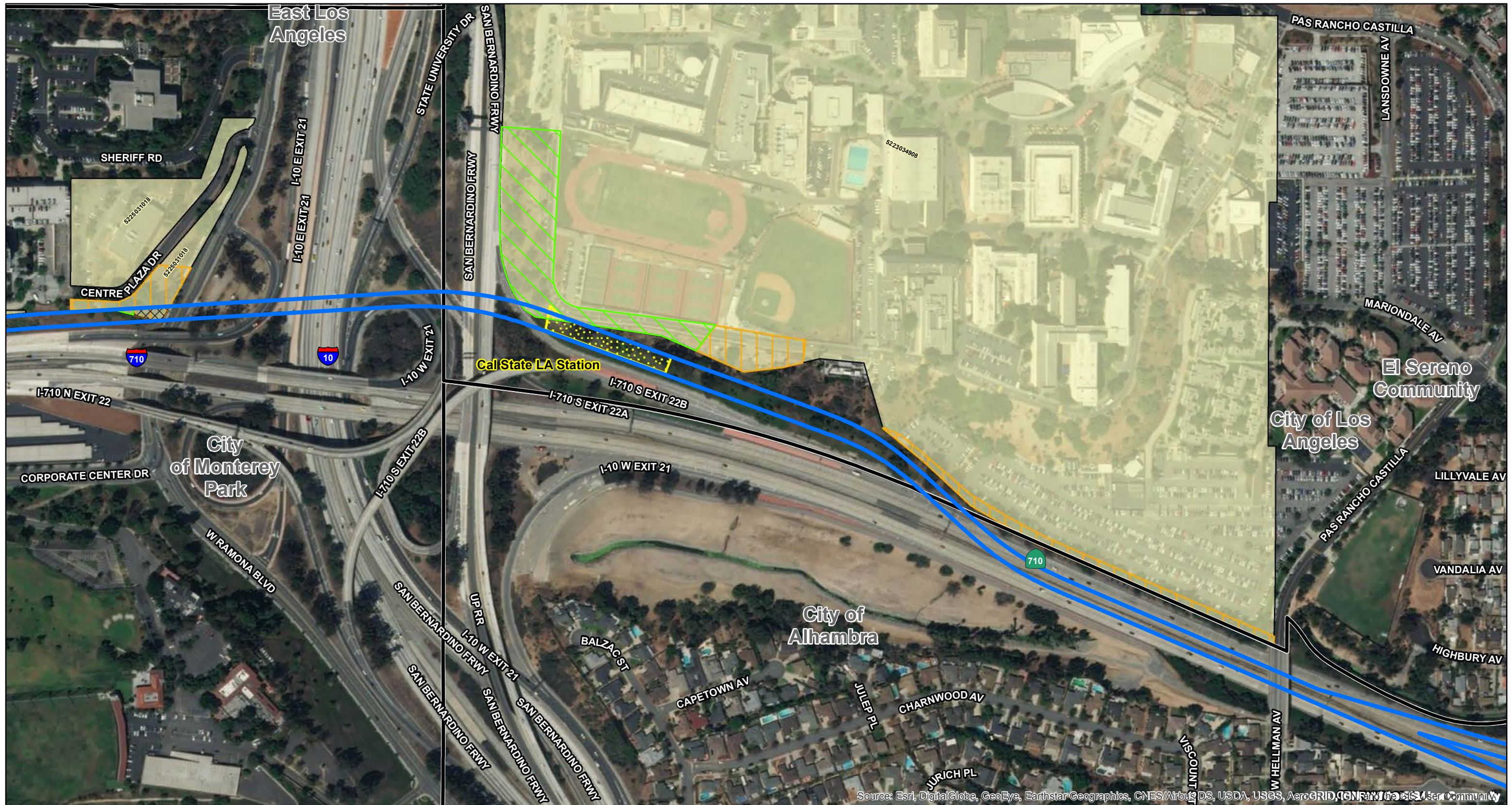


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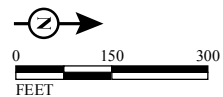
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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, SCS, Sereno Community

LEGEND

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|  Tunnel Segment |  Full Acquisition |
|  Maintenance Yard |  Partial Acquisition |
|  Station |  Permanent Easement |
|  City/Community/Neighborhood Boundary |  Temporary Construction Easement |



SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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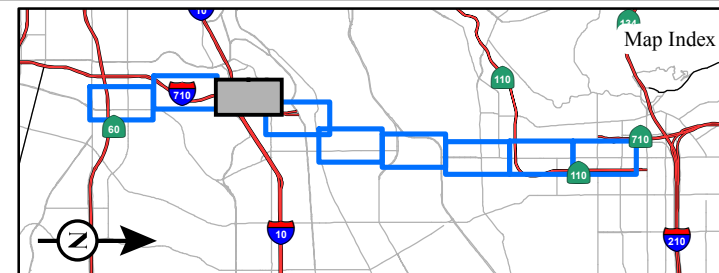
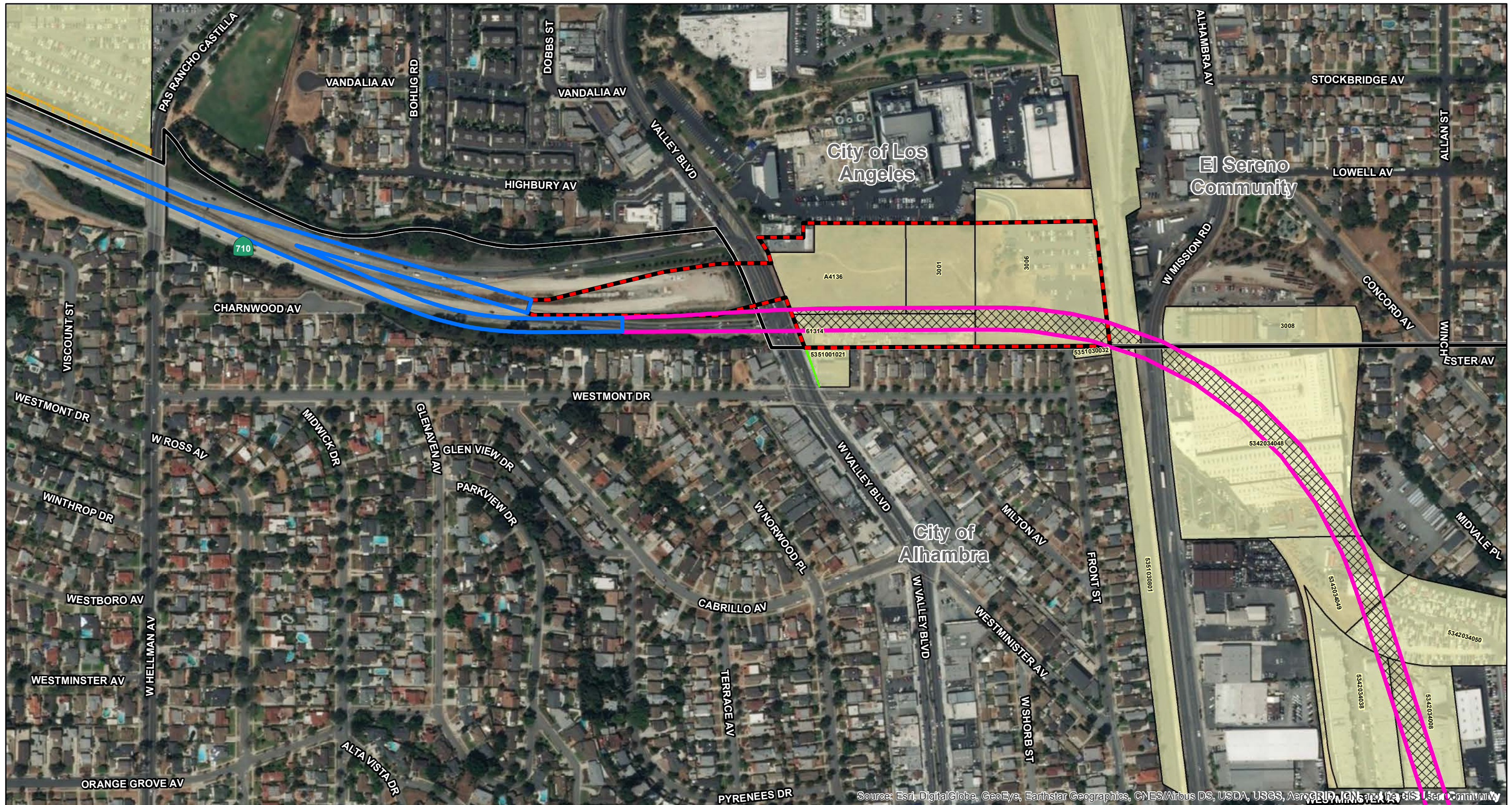


FIGURE 3.3-11
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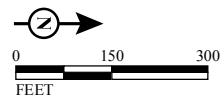
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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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|  | Aerial Segment |  | Parcels Where Acquisitions/Easements Would be Required |
|  | Tunnel Segment |  | Full Acquisition |
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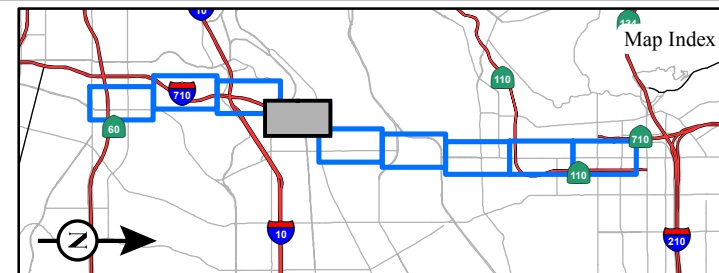
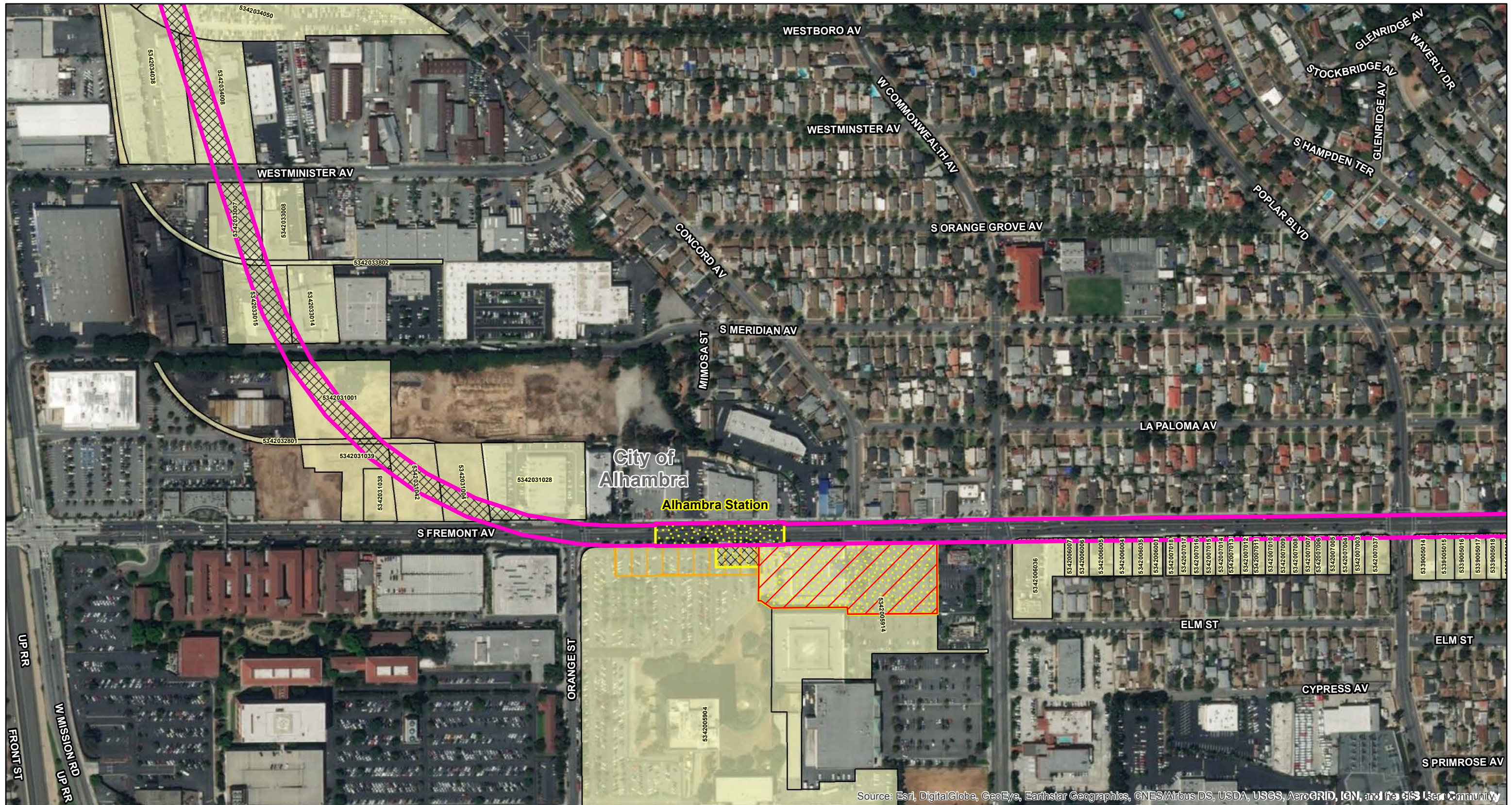


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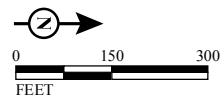
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LEGEND

- Aerial Segment
- Tunnel Segment
- Maintenance Yard
- Station
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- Full Acquisition
- Partial Acquisition
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SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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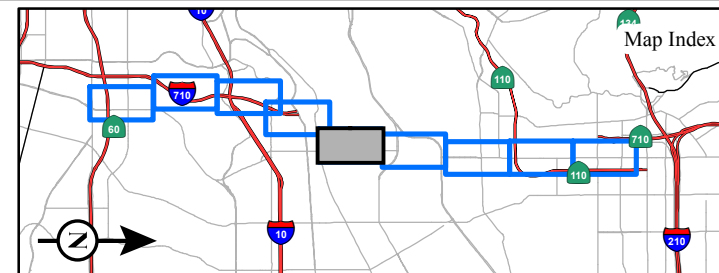
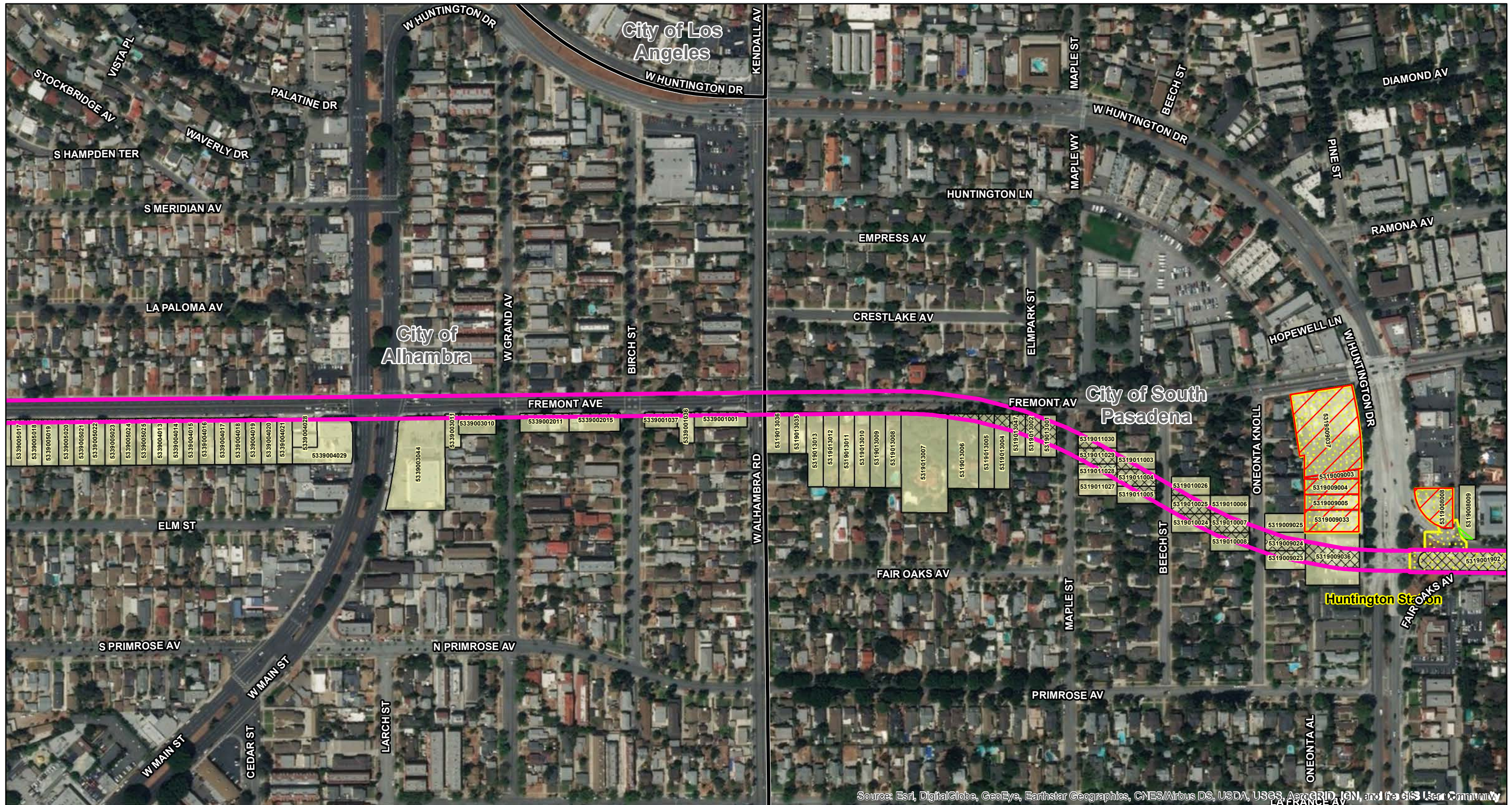


FIGURE 3.3-11
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

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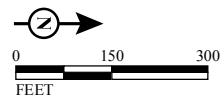
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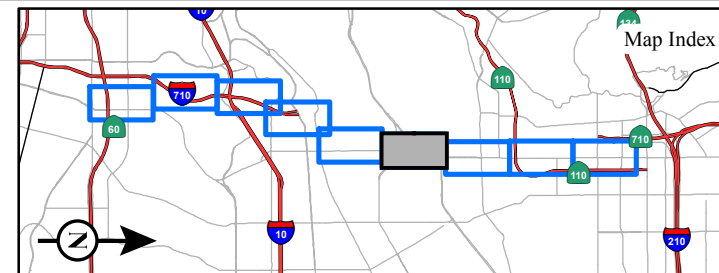
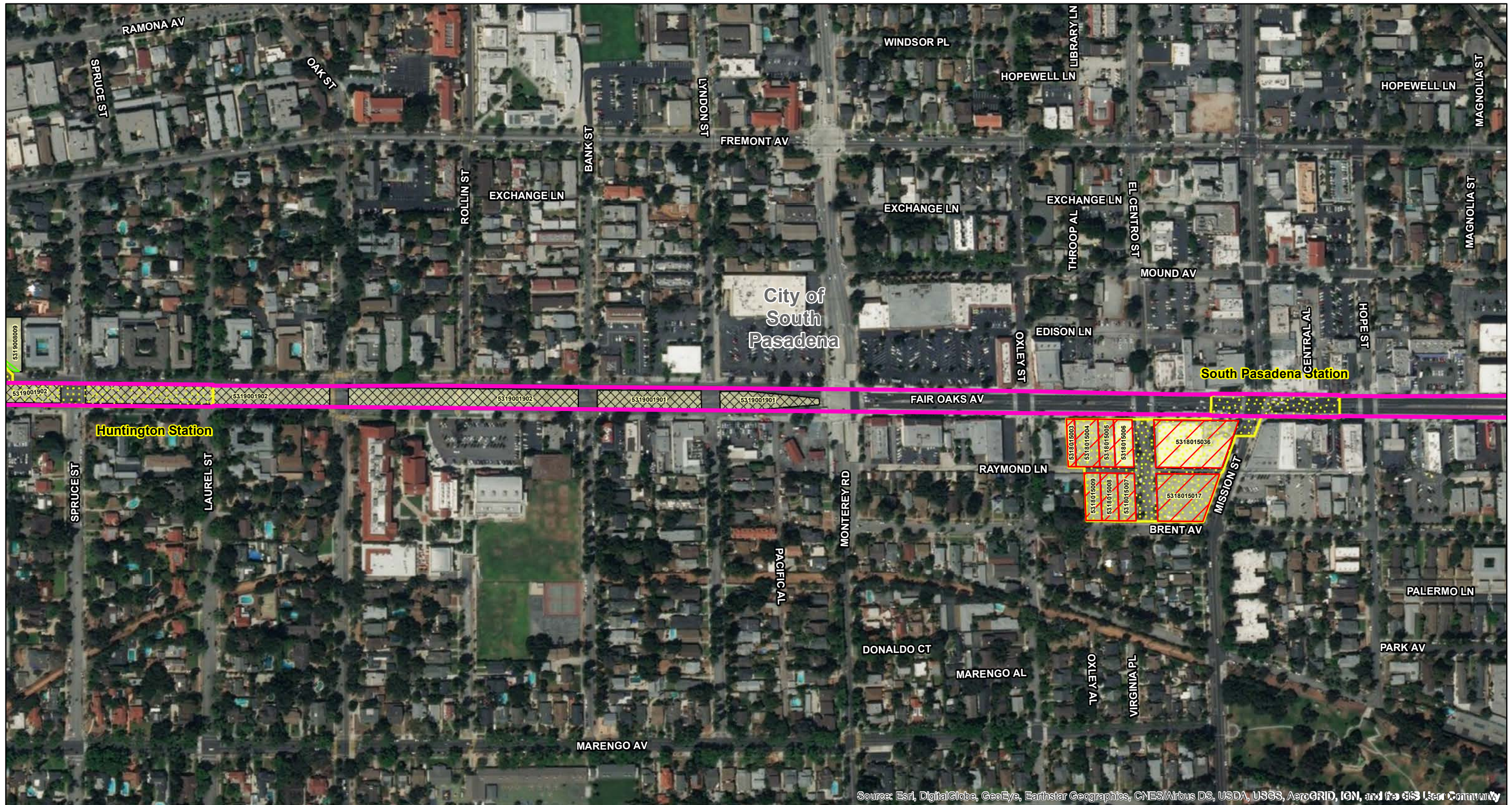


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

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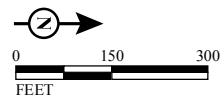
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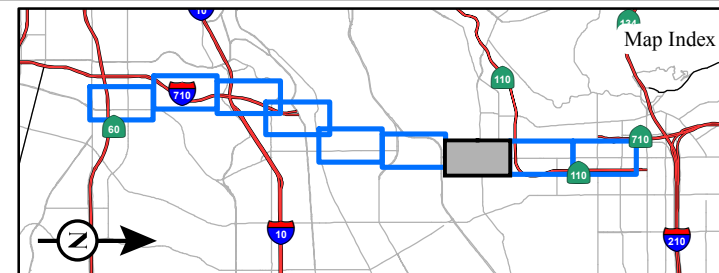
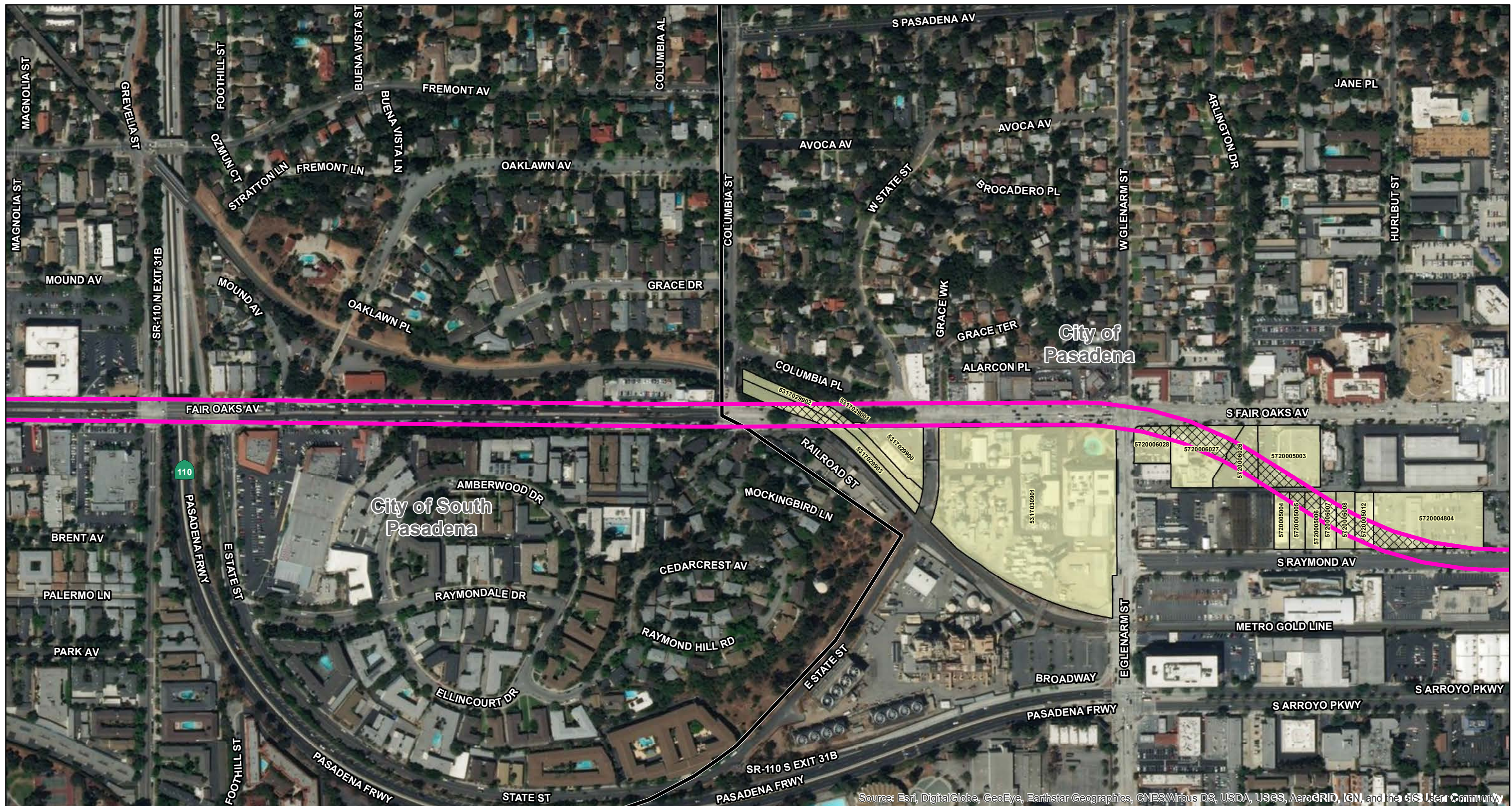


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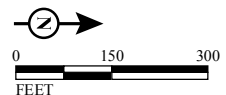
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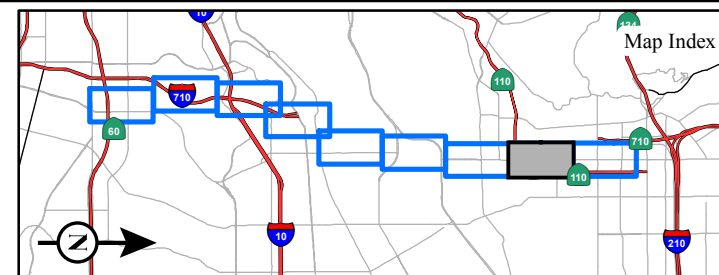
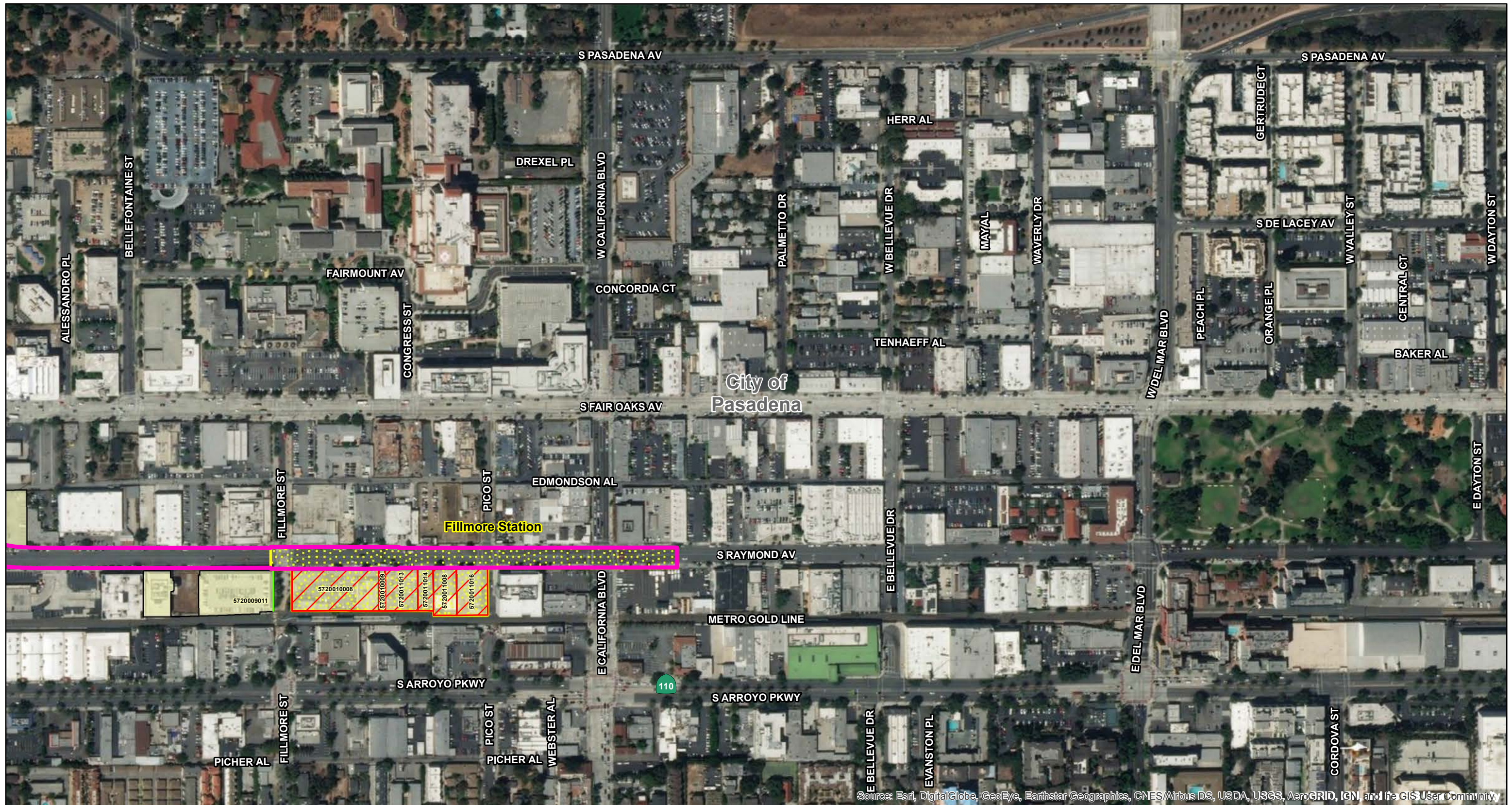


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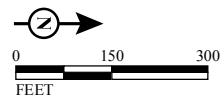
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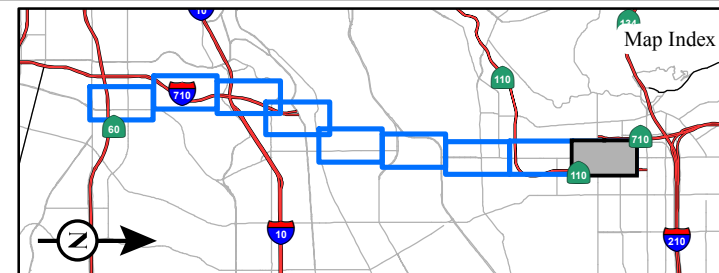


FIGURE 3.3-11
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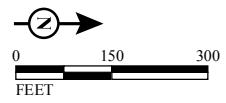
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- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
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SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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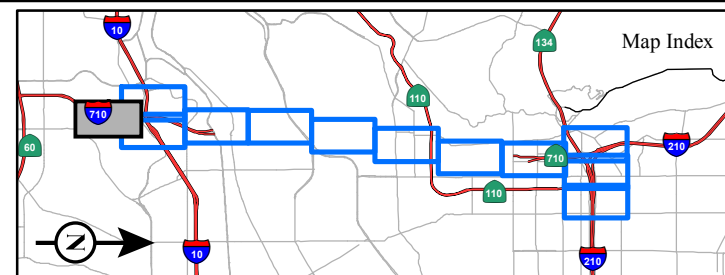
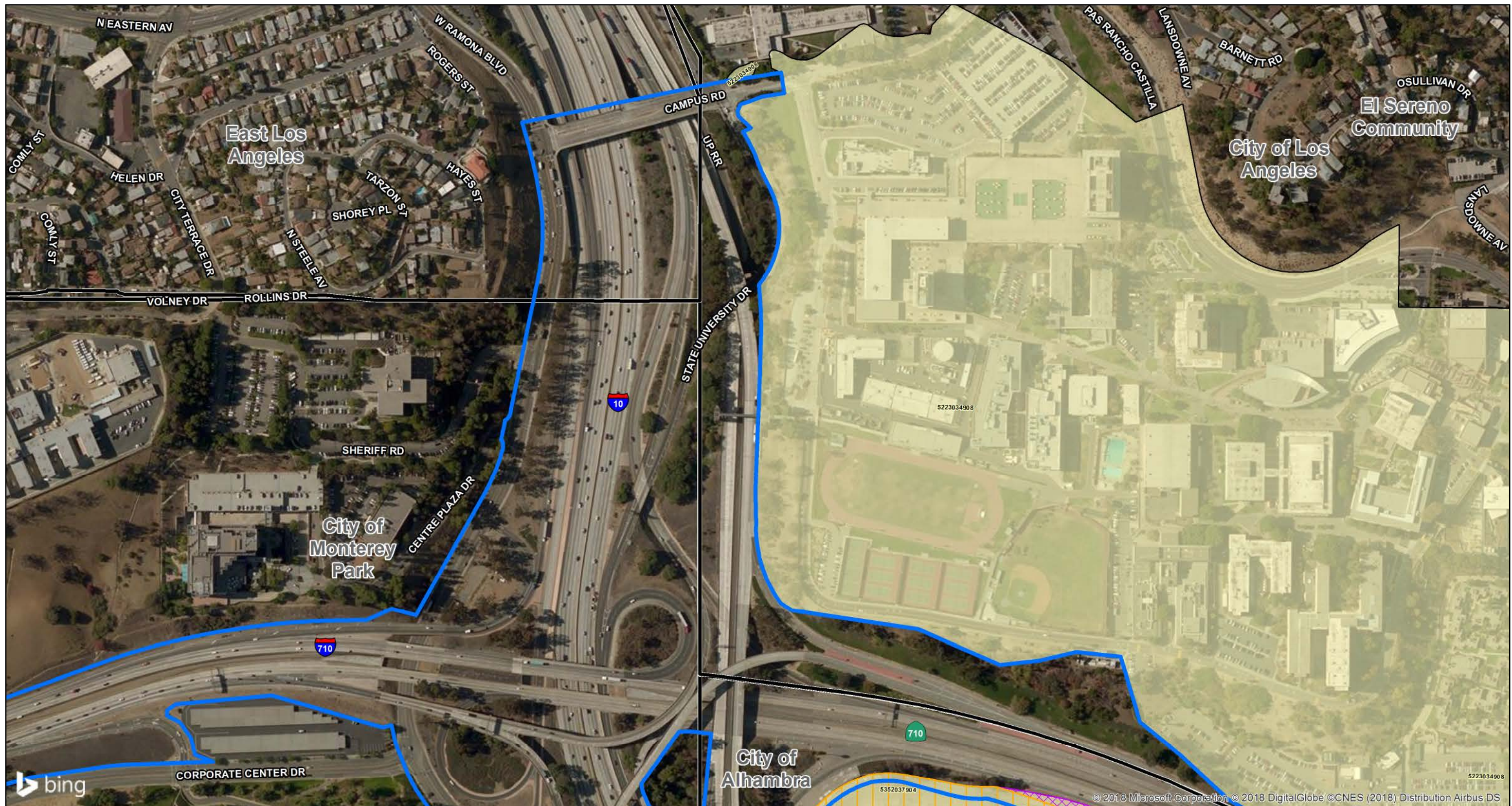


FIGURE 3.3-12
Sheet 1 of 12

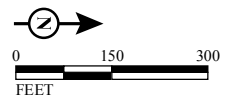
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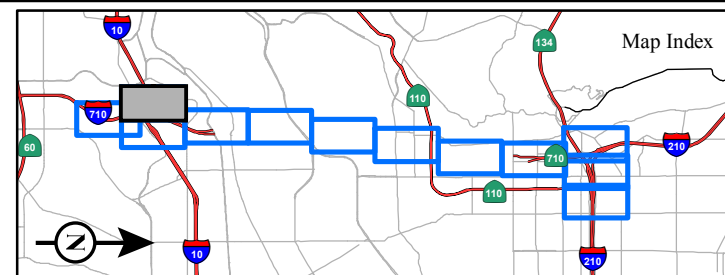


FIGURE 3.3-12
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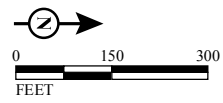
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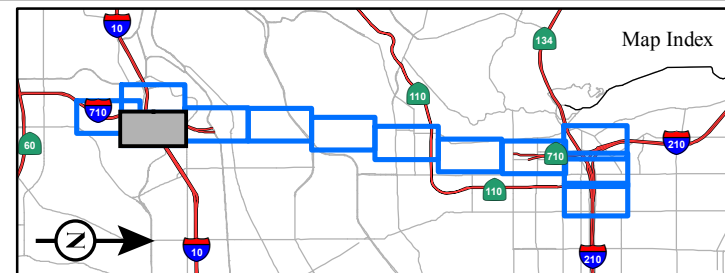


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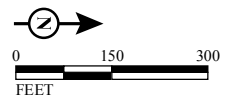
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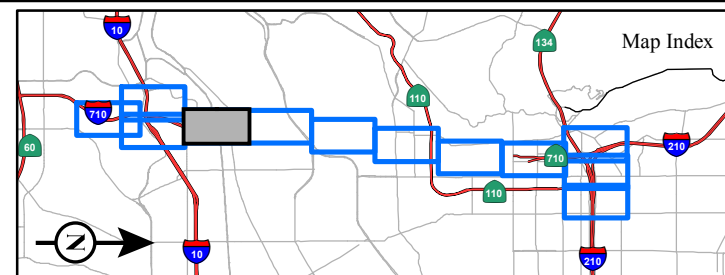
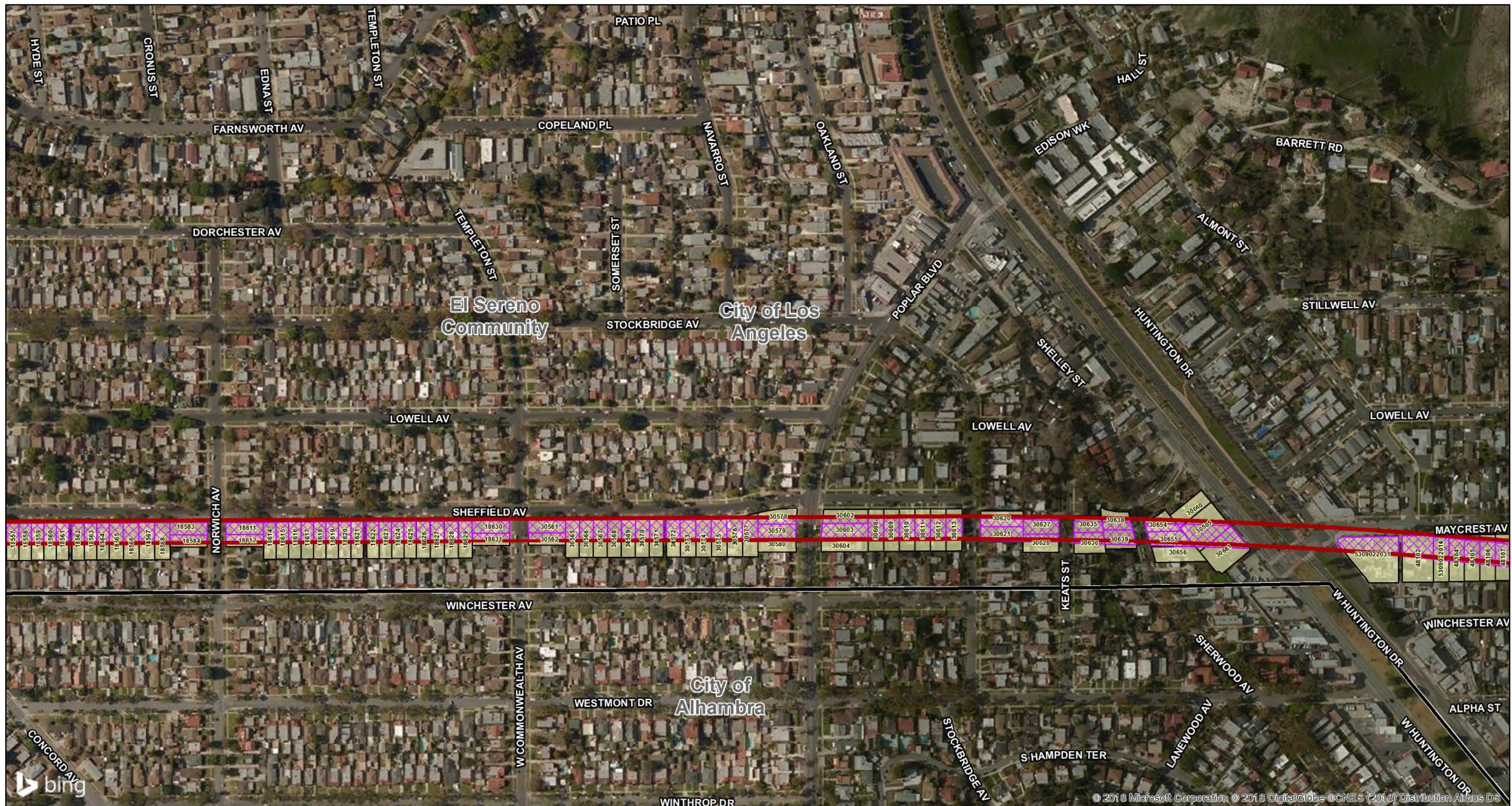


FIGURE 3.3-12
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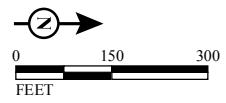
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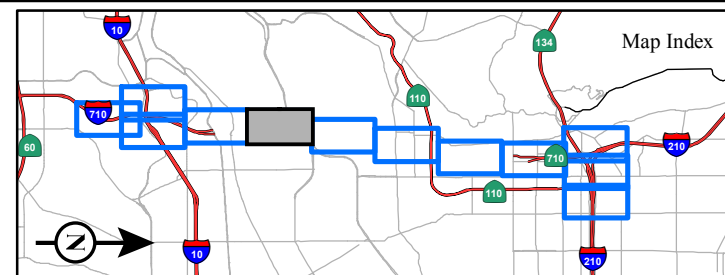
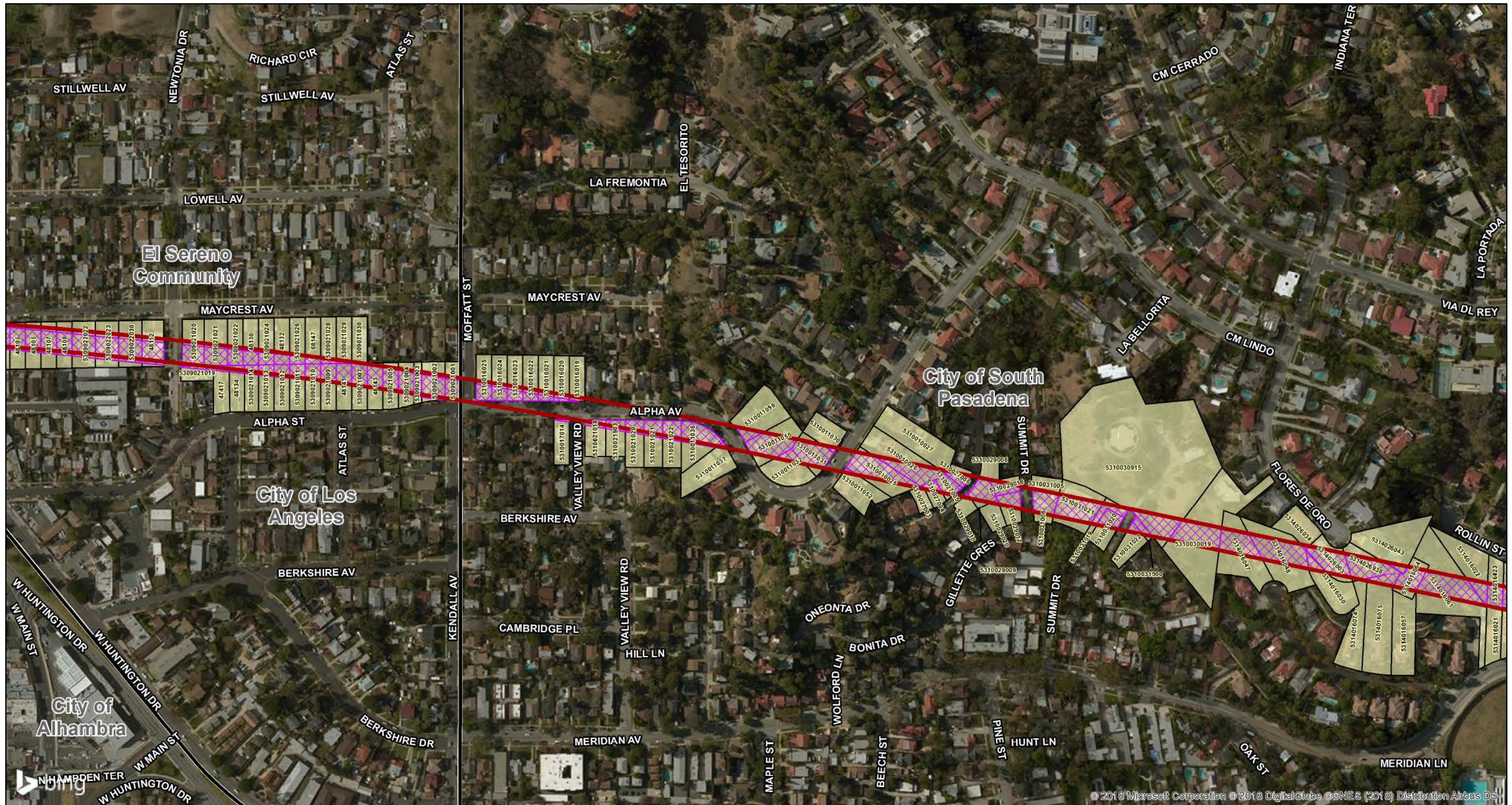


FIGURE 3.3-12
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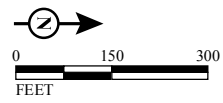
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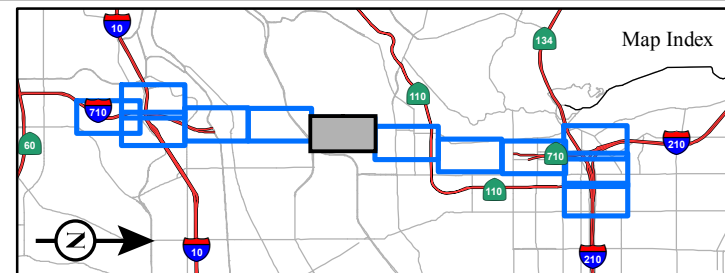
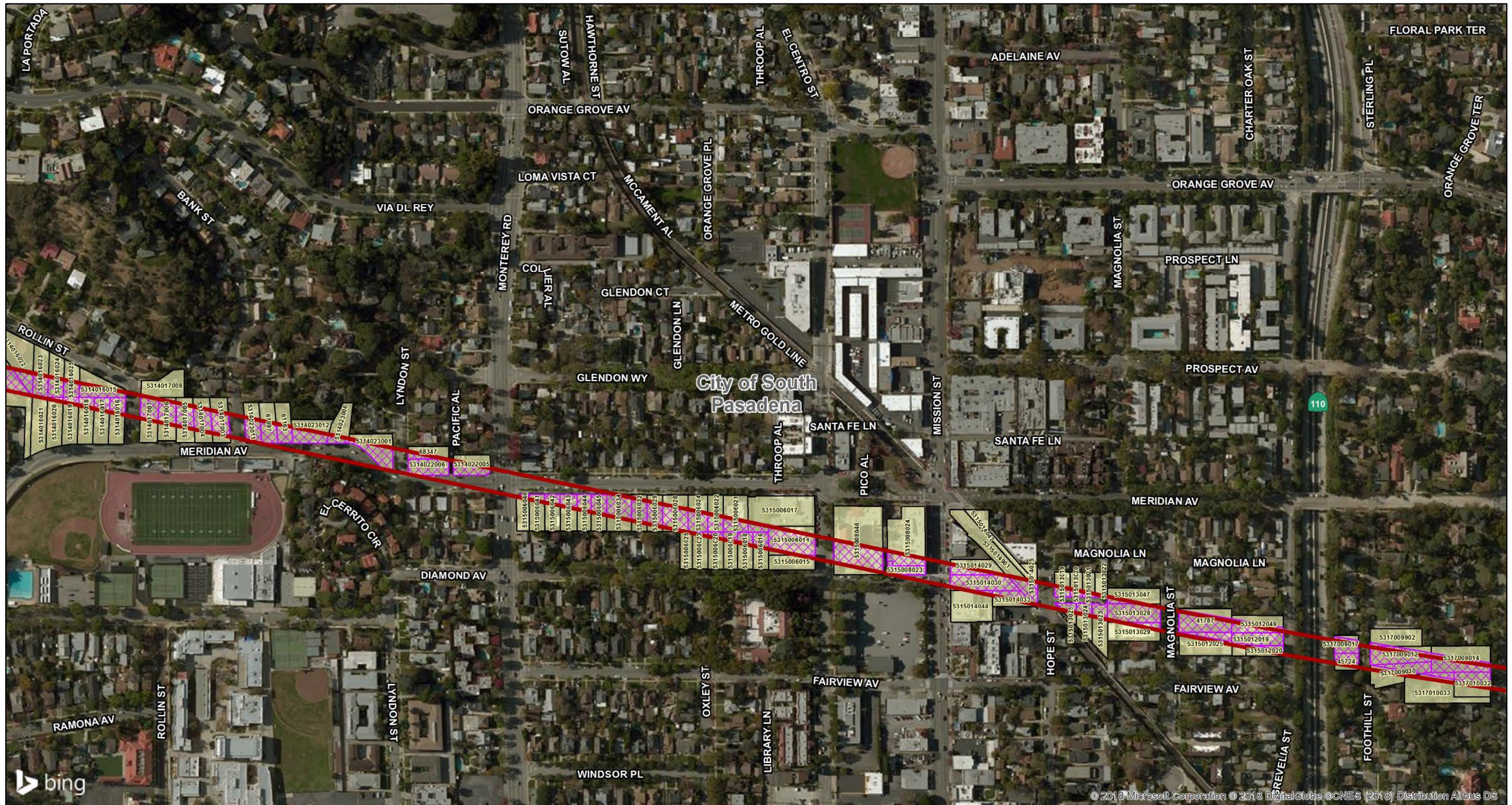











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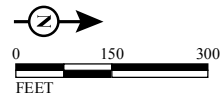
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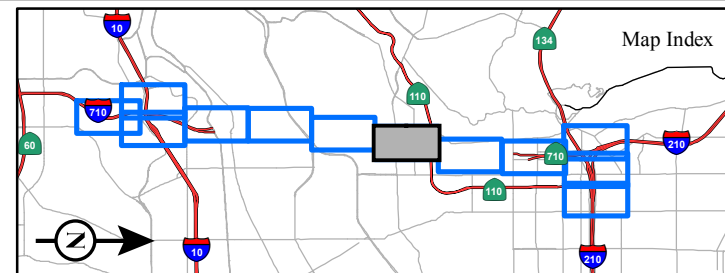
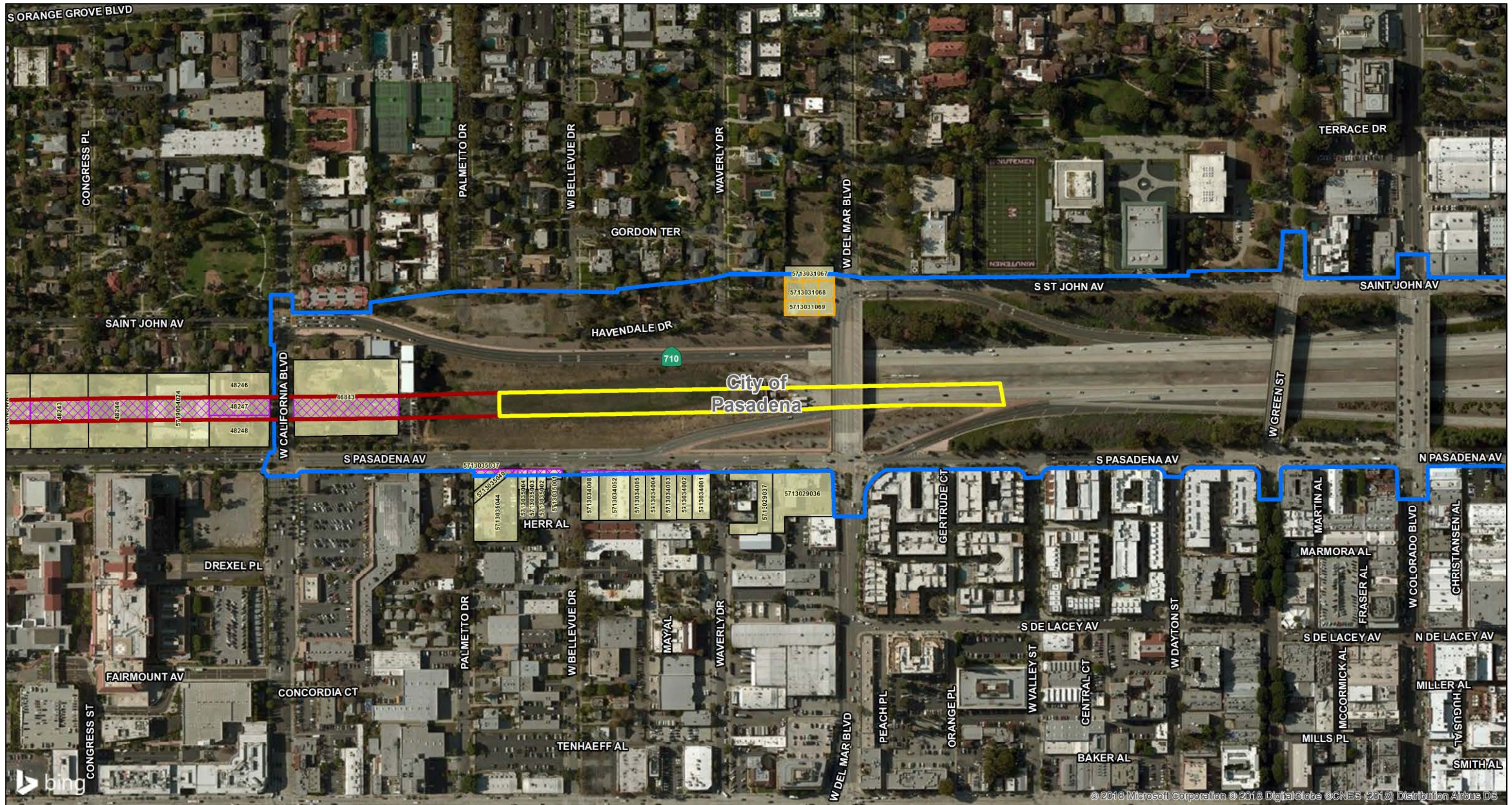


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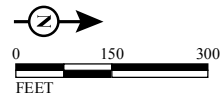
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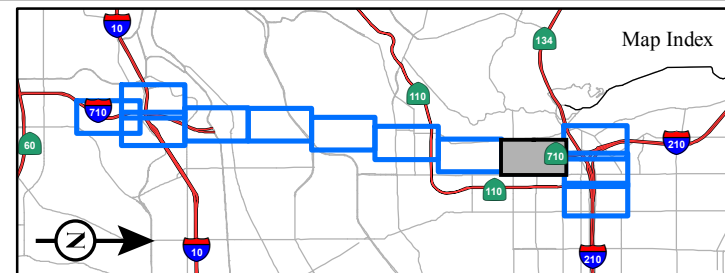
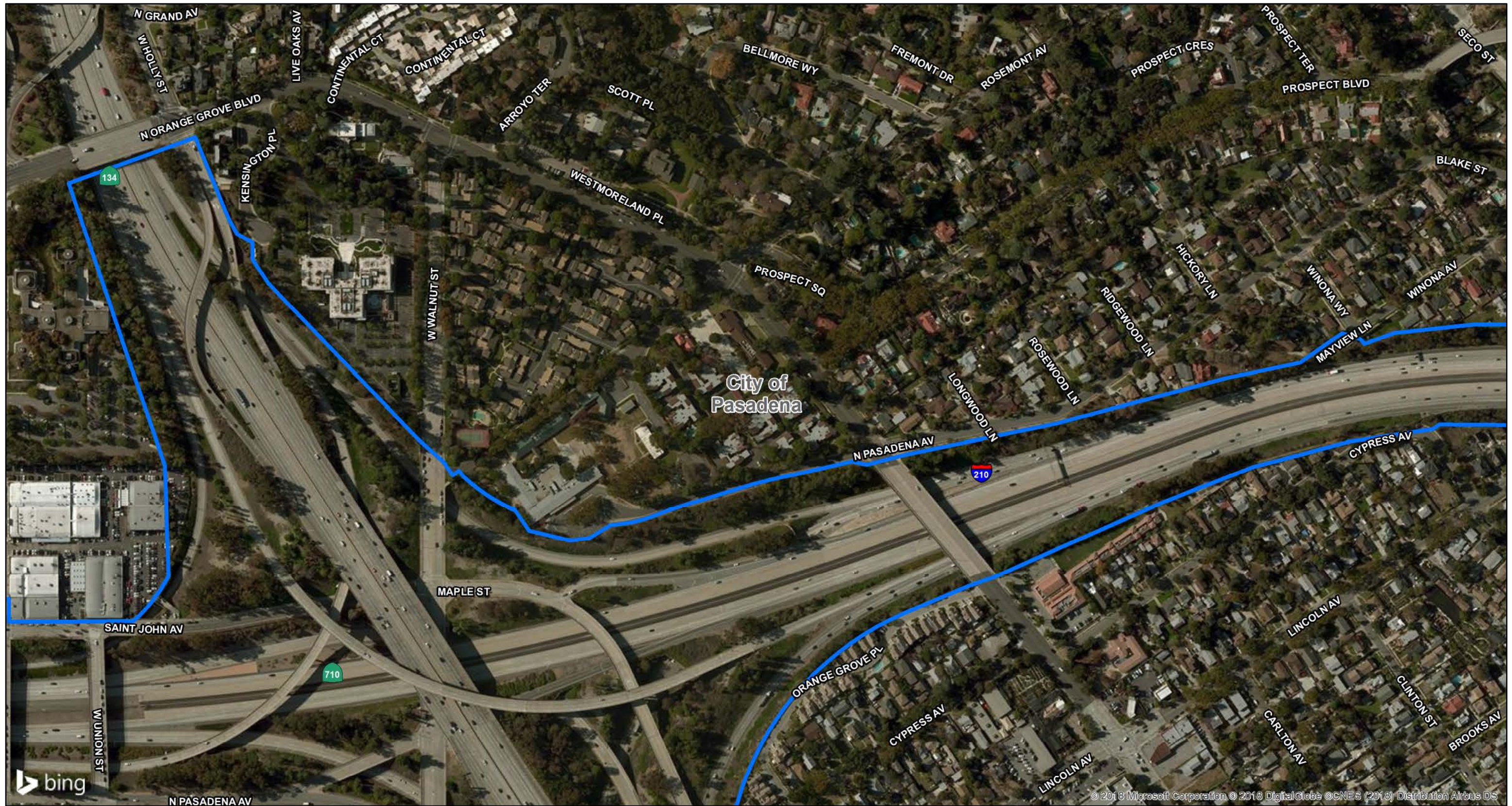


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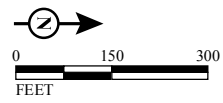
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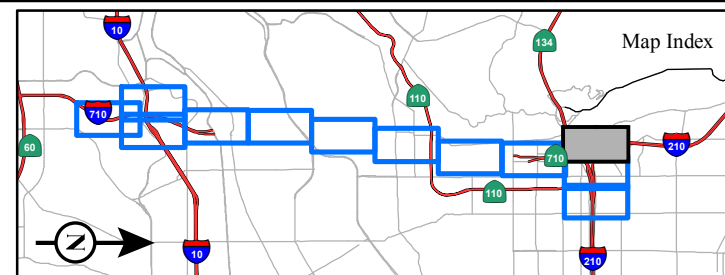
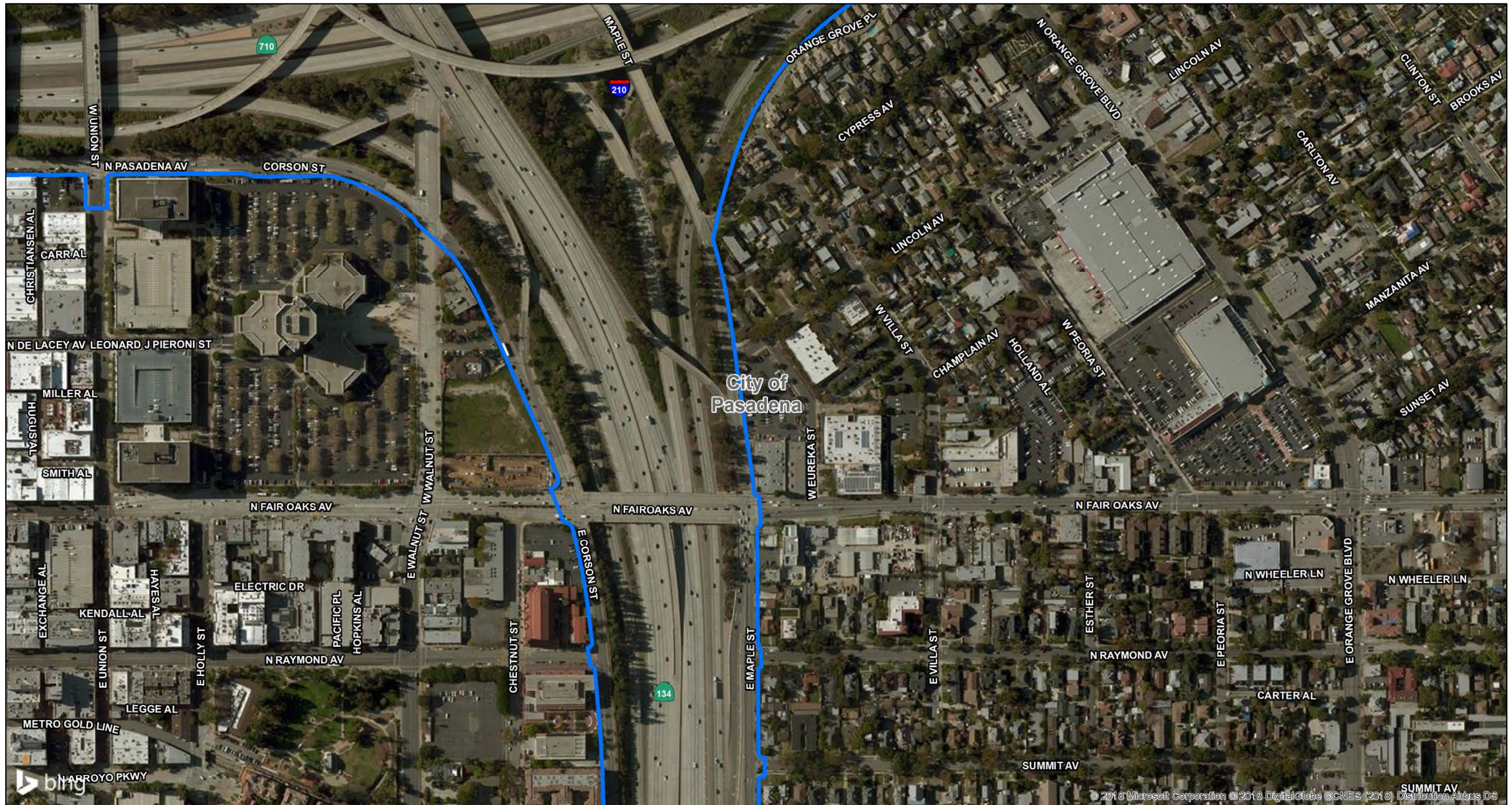


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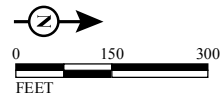
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- Temporary Construction Easement



SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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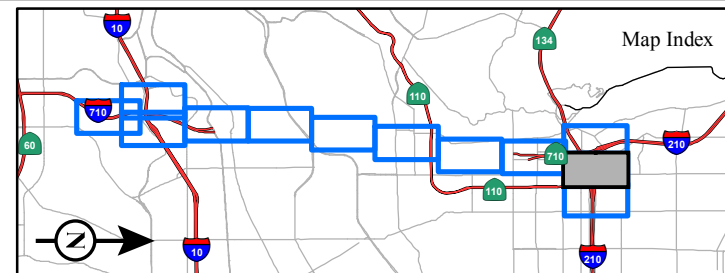


FIGURE 3.3-12
Sheet 11 of 12

SR 710 North Project
Freeway Tunnel Alternative - Single Bore Design Variation
Parcel Acquisitions
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

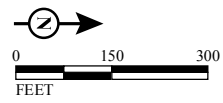
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LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Permanent Easement
- Temporary Construction Easement



SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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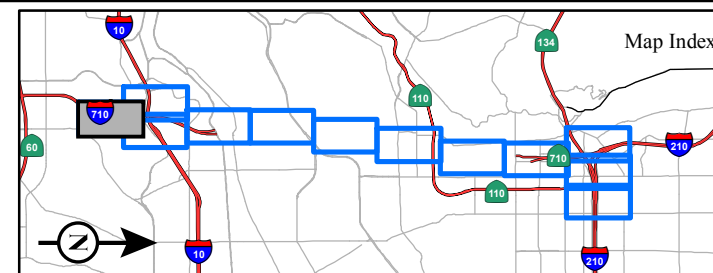
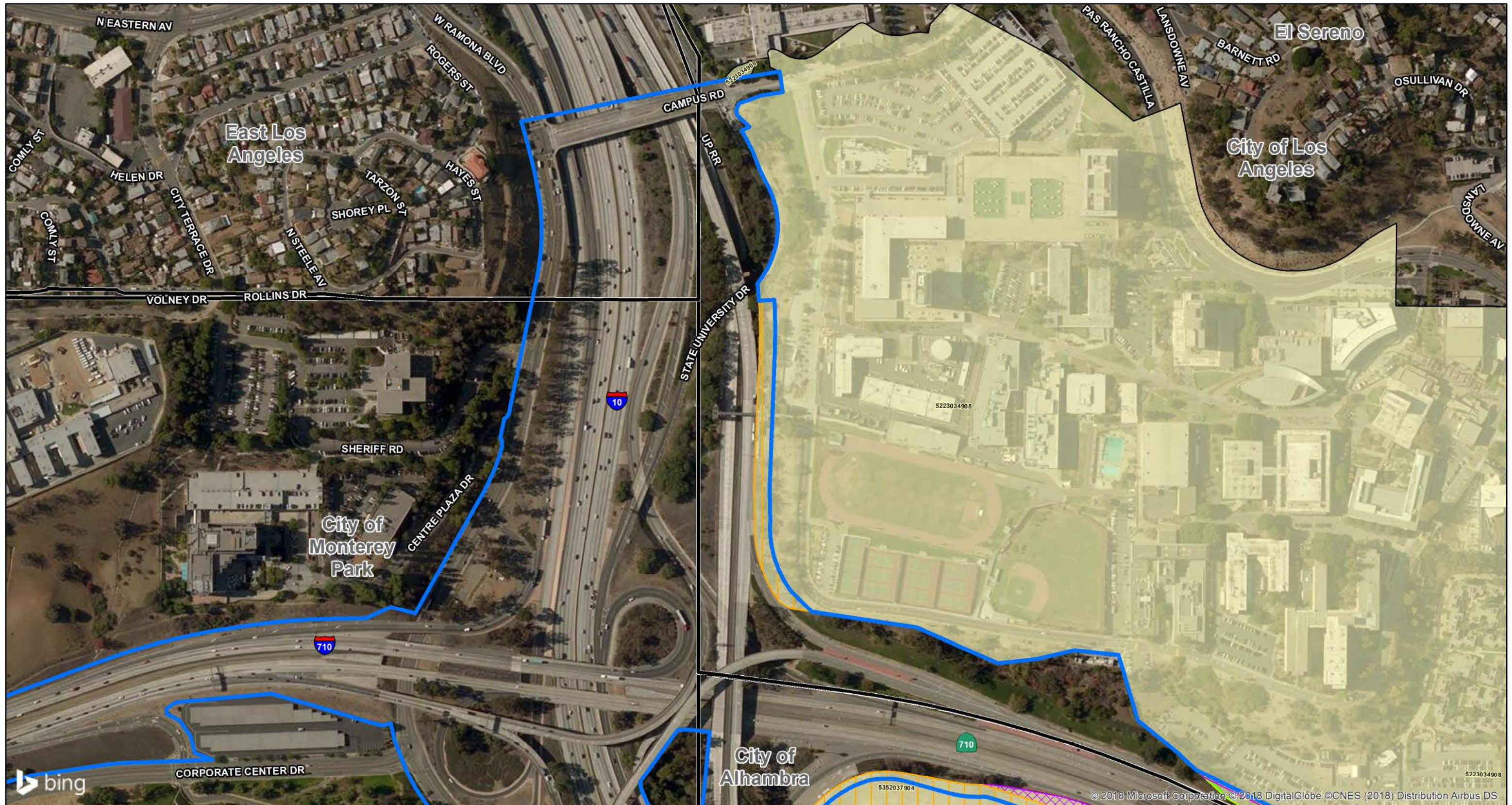











FIGURE 3.3-13
Sheet 1 of 12

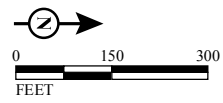
SR 710 North Project
Freeway Tunnel Alternative - Dual Bore Design Variation
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EFIS 0700000191

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LEGEND

- | | |
|--|---|
|  At Grade Segment |  Full Acquisition |
|  Cut and Cover Tunnel Segment |  Partial Acquisition |
|  Bored Tunnel Segment |  Permanent Easement |
|  City/Community/Neighborhood Boundary |  Temporary Construction Easement |
|  Parcels Where Acquisitions/Easements Would be Required | |



SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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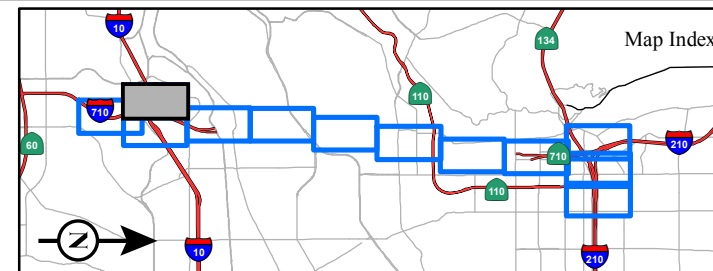


FIGURE 3.3-13
Sheet 2 of 12

SR 710 North Project
Freeway Tunnel Alternative - Dual Bore Design Variation
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EFIS 0700000191

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LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Permanent Easement
- Temporary Construction Easement

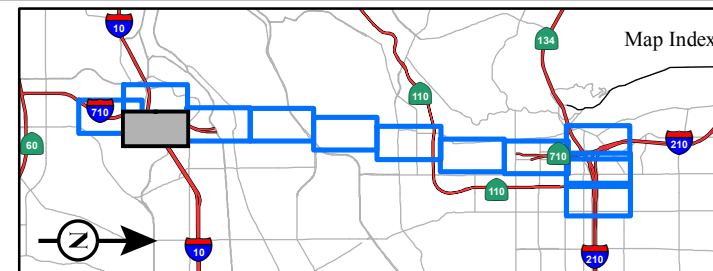
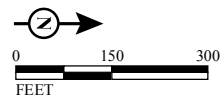


FIGURE 3.3-13
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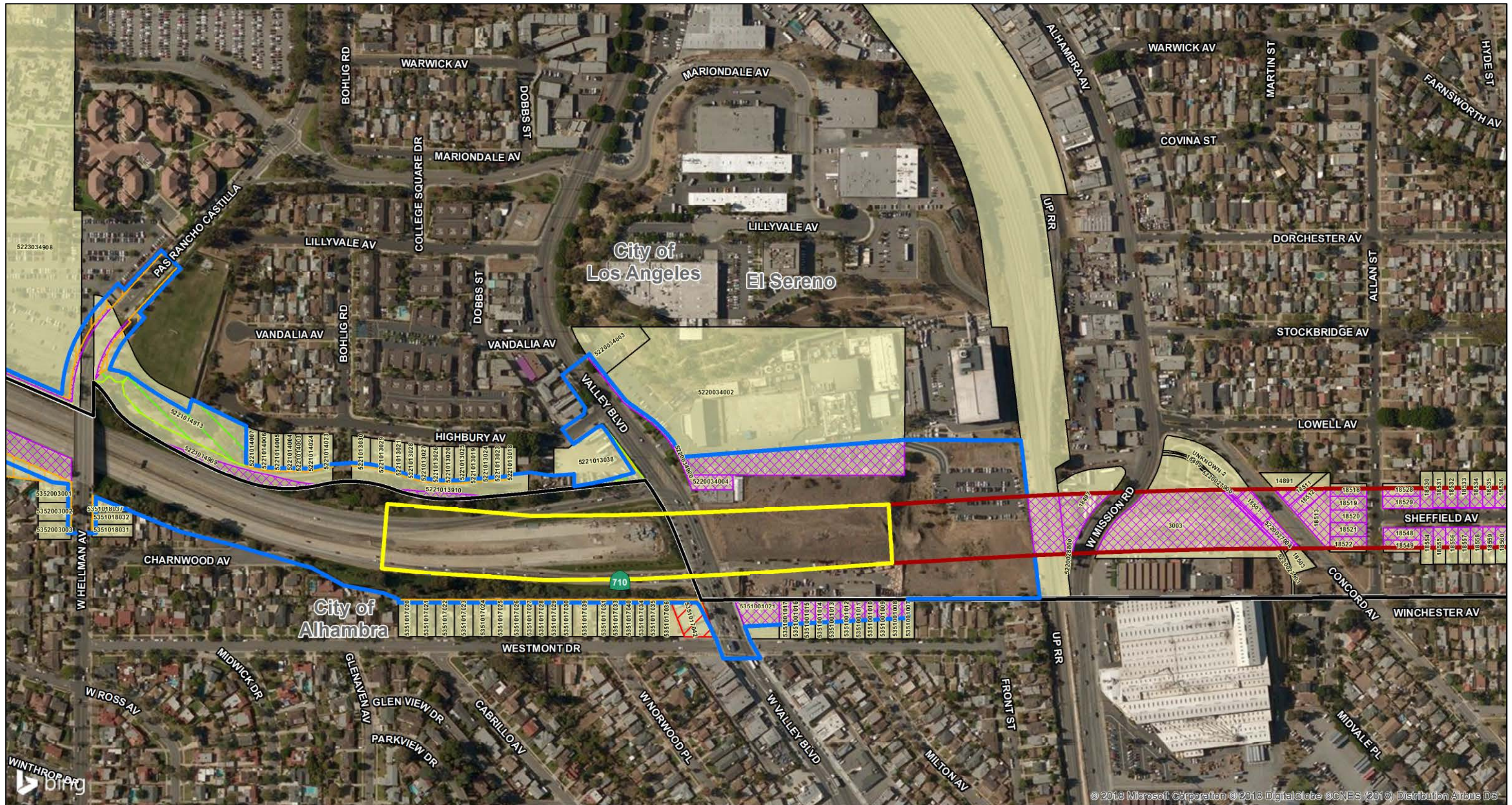
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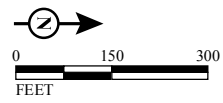
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LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Permanent Easement
- Temporary Construction Easement



SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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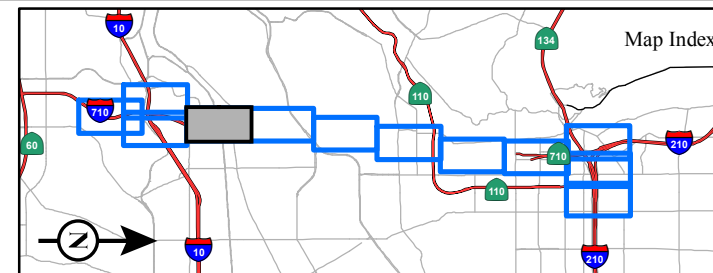
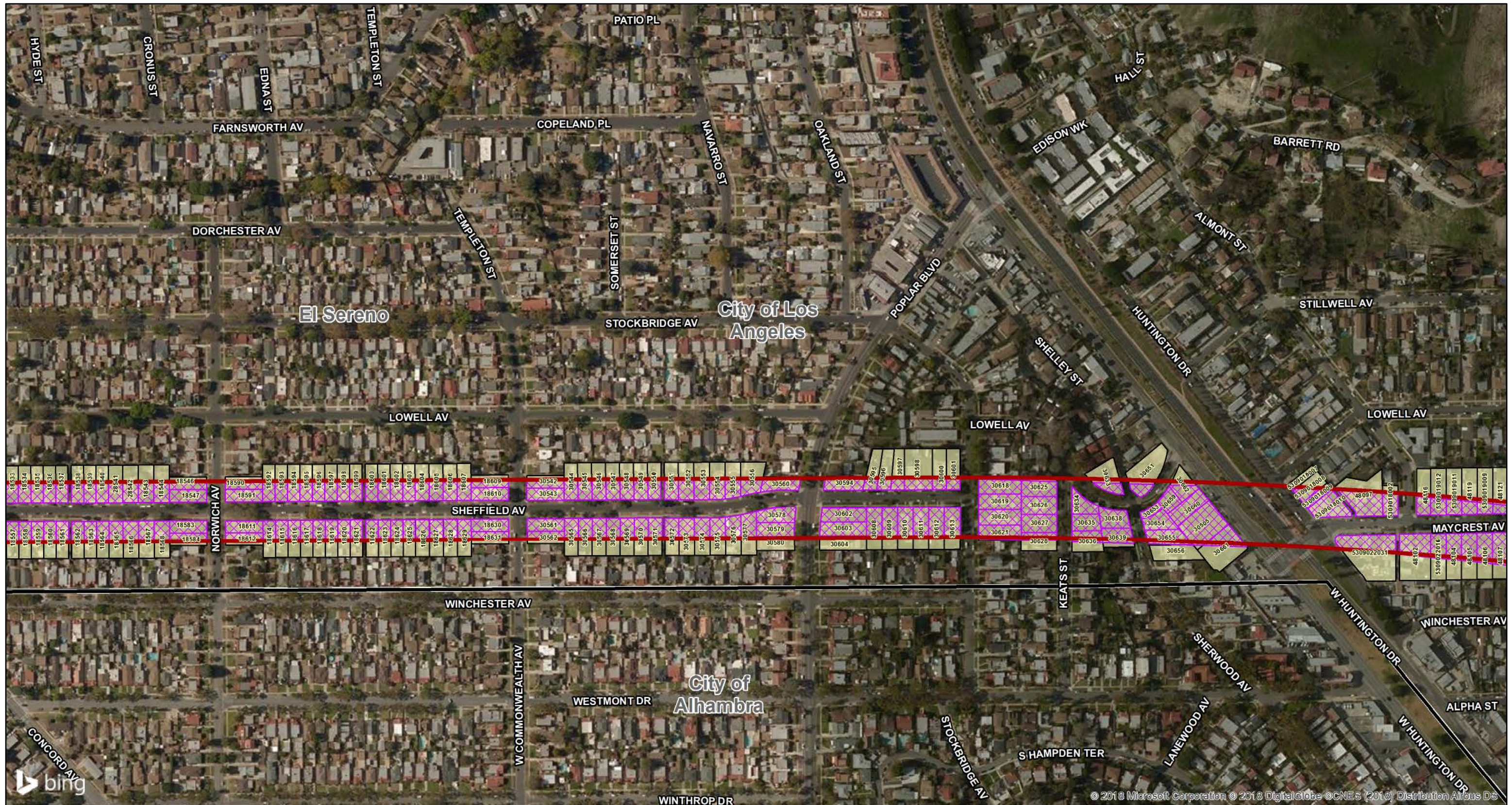


FIGURE 3.3-13
Sheet 4 of 12

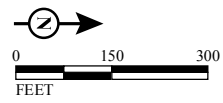
SR 710 North Project
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LEGEND

- At Grade Segment
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- Temporary Construction Easement



SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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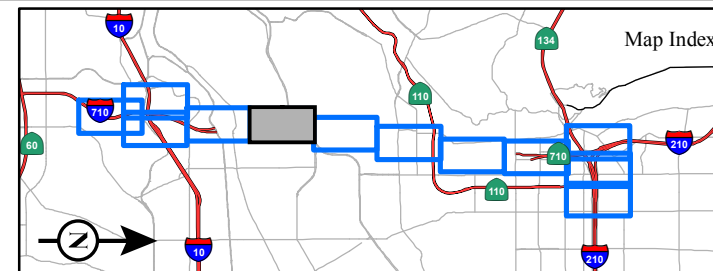
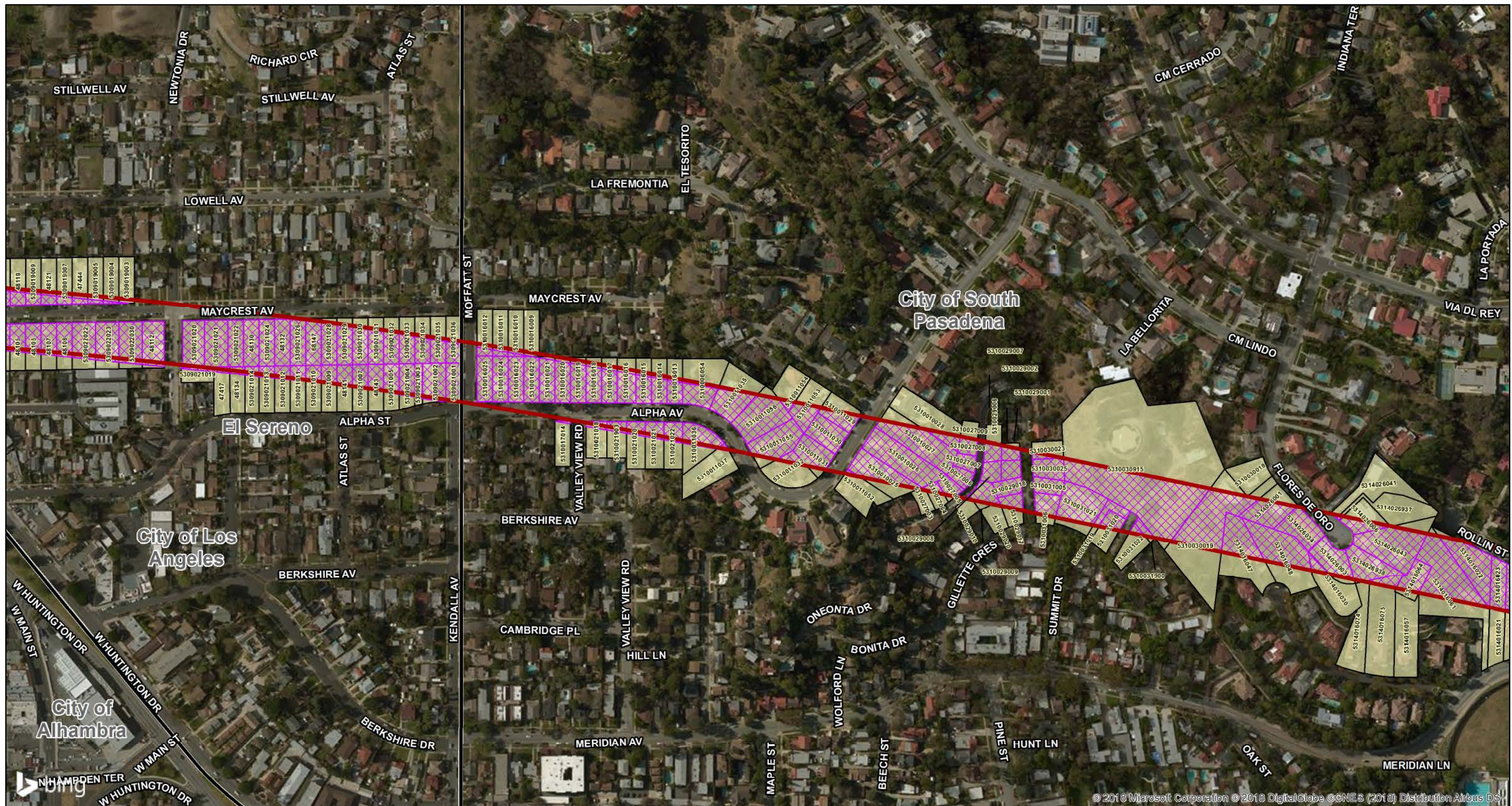


FIGURE 3.3-13
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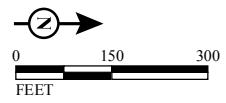
SR 710 North Project
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LEGEND

- At Grade Segment
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- City/Community/Neighborhood Boundary
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- Permanent Easement
- Temporary Construction Easement



SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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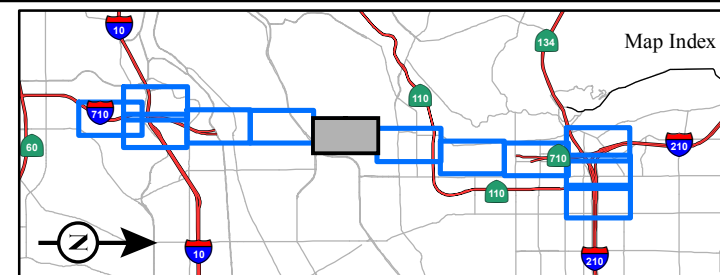
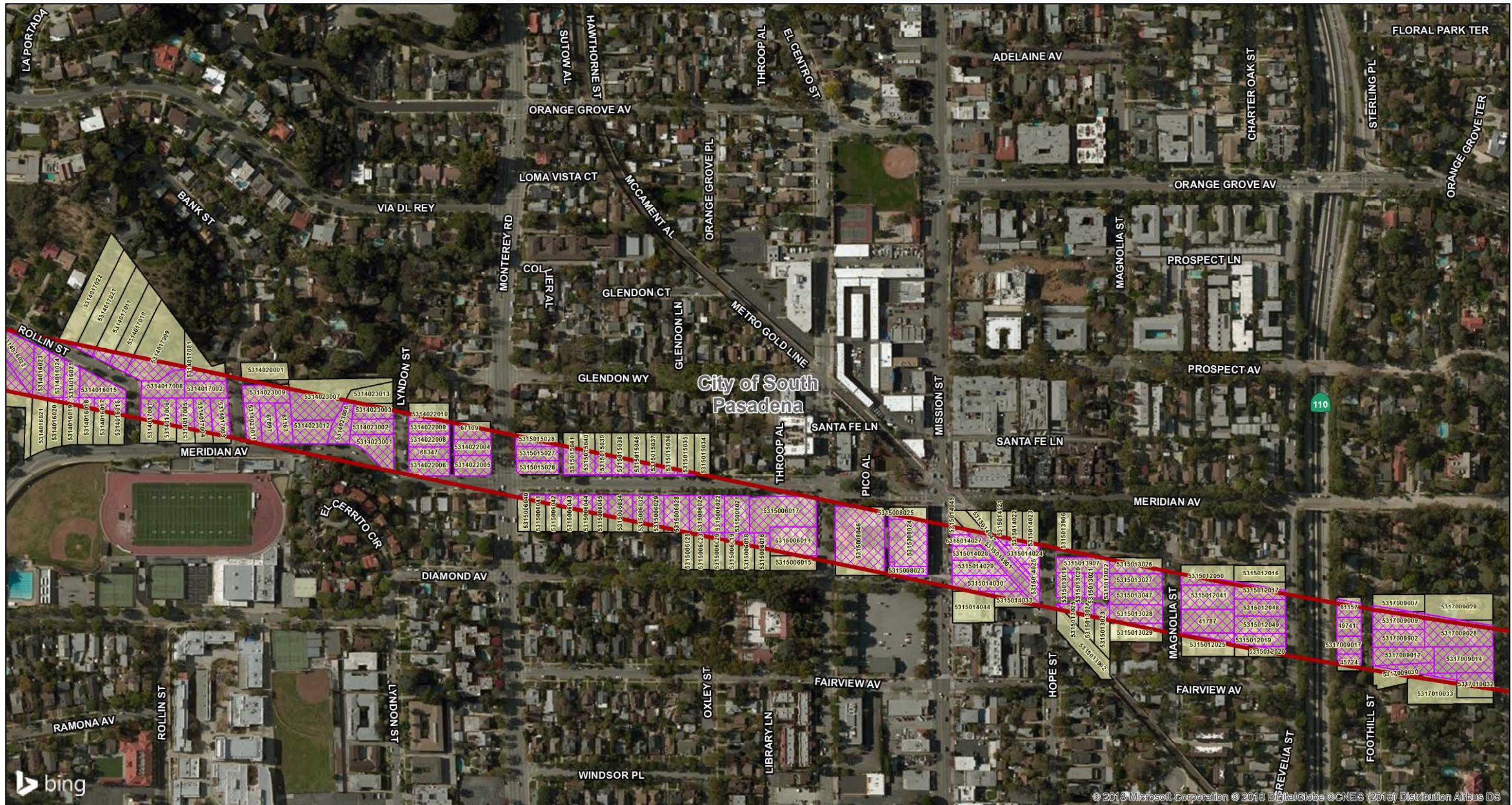


FIGURE 3.3-13
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SR 710 North Project
Freeway Tunnel Alternative - Dual Bore Design Variation
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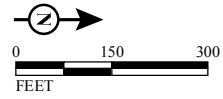
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LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
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- Temporary Construction Easement



SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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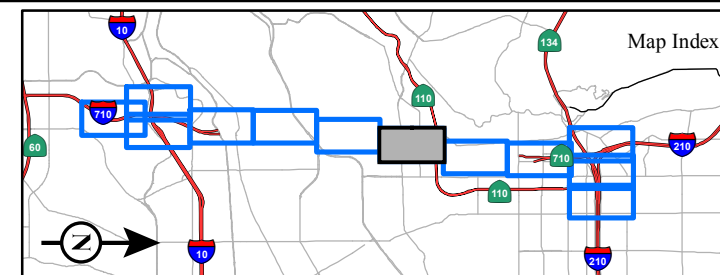
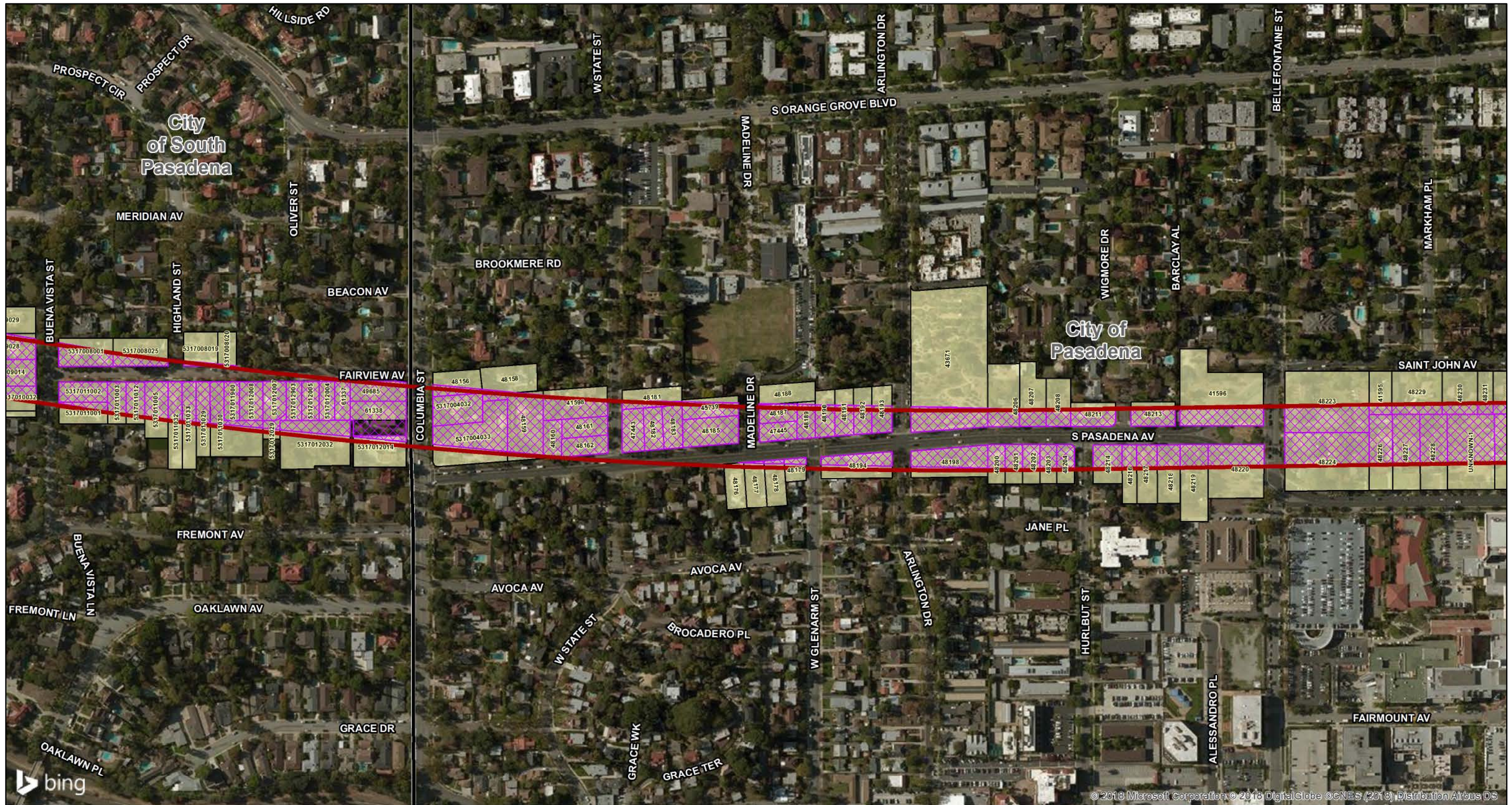


FIGURE 3.3-13
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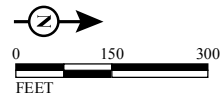
SR 710 North Project
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LEGEND

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- Temporary Construction Easement



SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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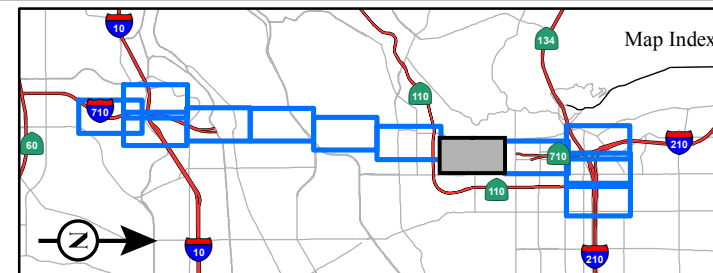


FIGURE 3.3-13
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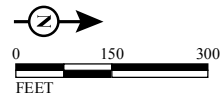
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LEGEND

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SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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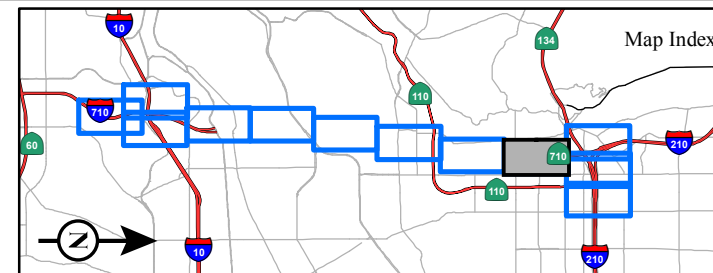
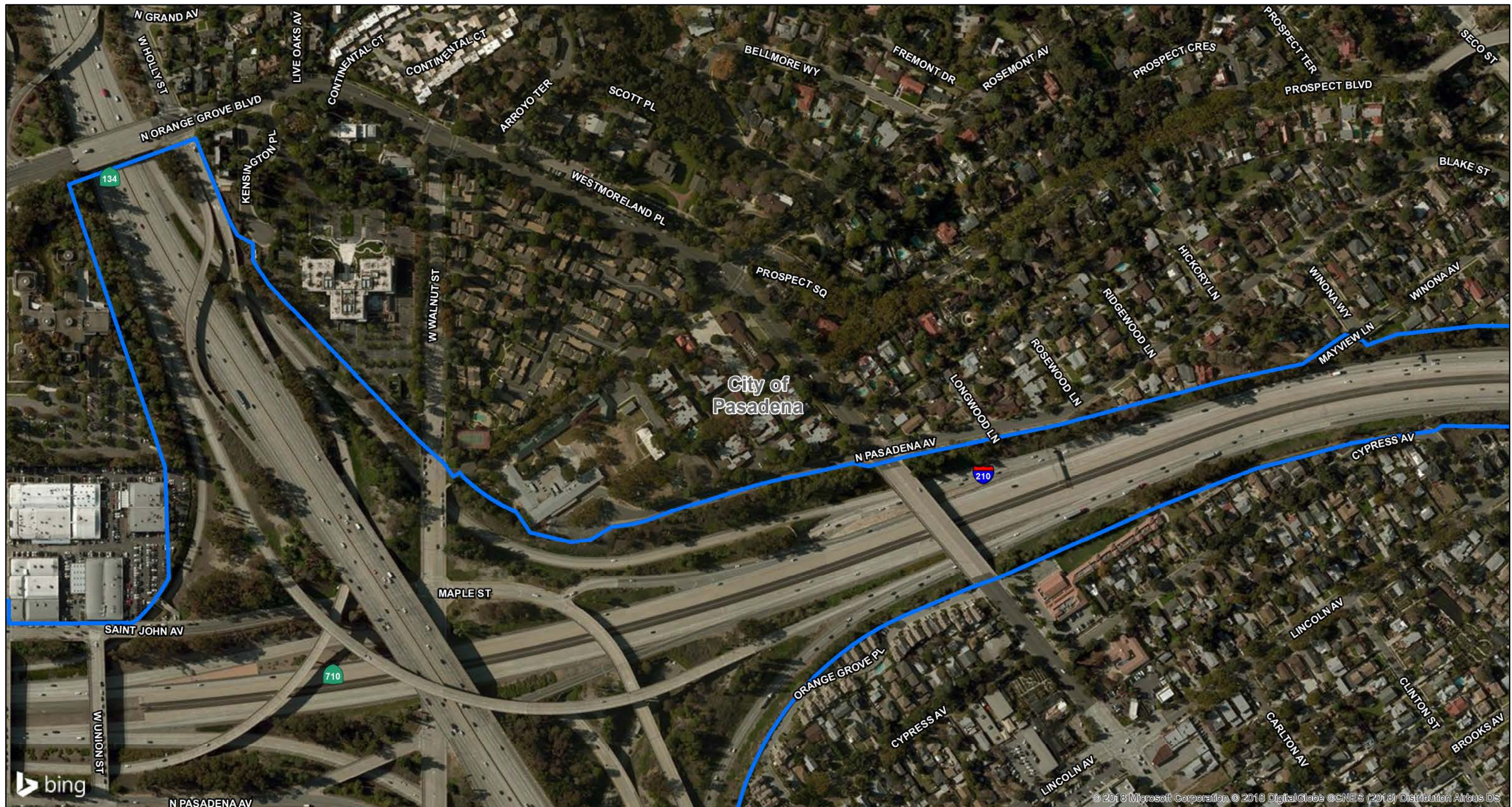


FIGURE 3.3-13
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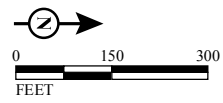
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LEGEND

- At Grade Segment
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- Temporary Construction Easement



SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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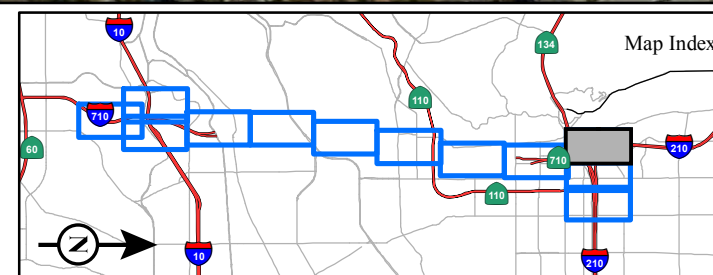
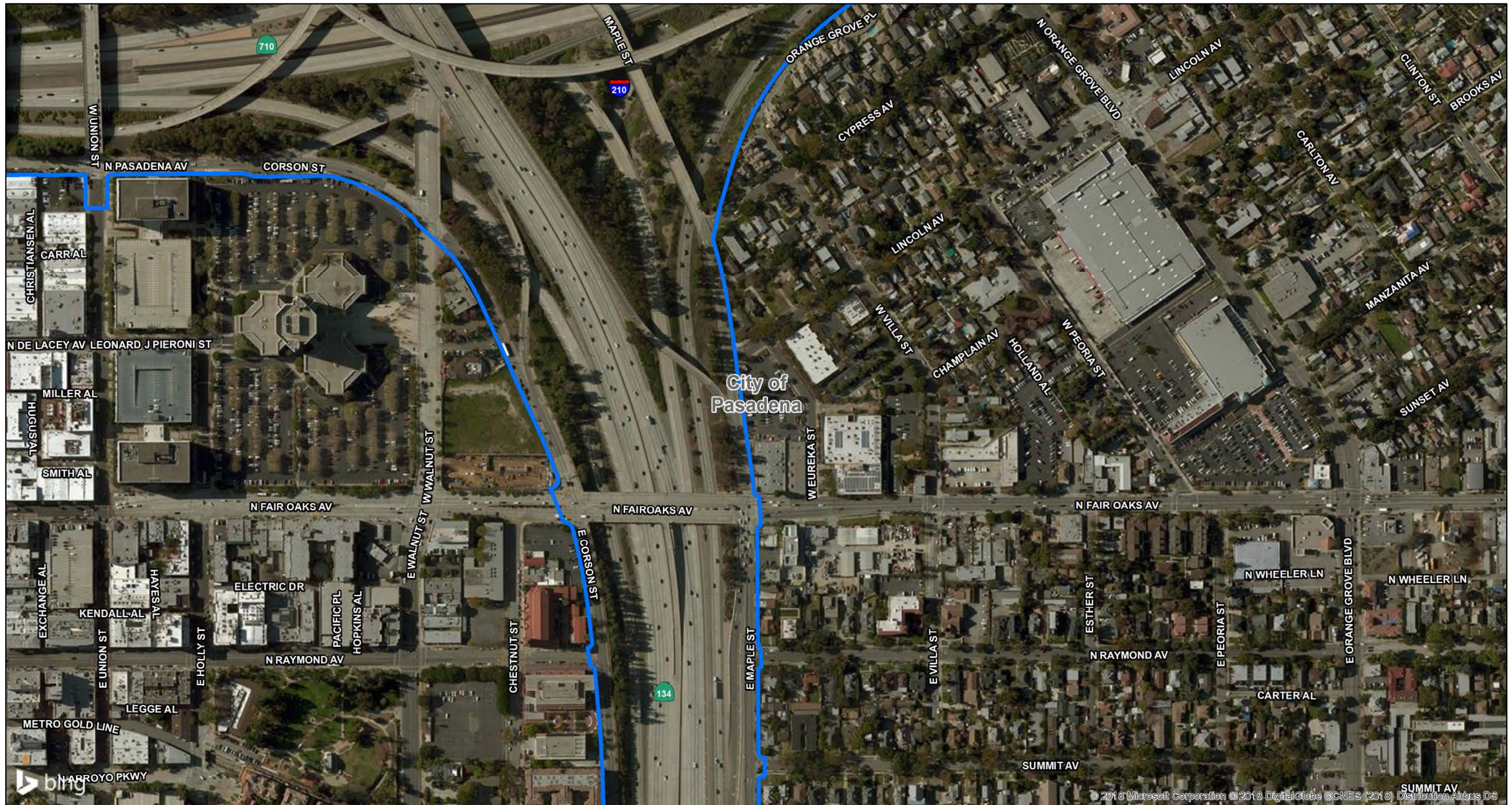


FIGURE 3.3-13
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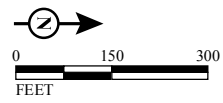
SR 710 North Project
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LEGEND

- At Grade Segment
- Cut and Cover Tunnel Segment
- Bored Tunnel Segment
- City/Community/Neighborhood Boundary
- Parcels Where Acquisitions/Easements Would be Required
- Full Acquisition
- Partial Acquisition
- Permanent Easement
- Temporary Construction Easement



SOURCE: Bing Maps (5/2010); EPIC (12/2013)

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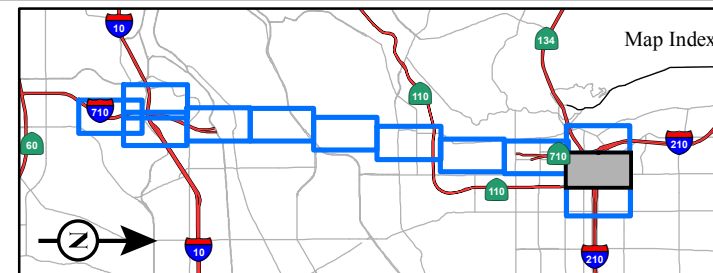
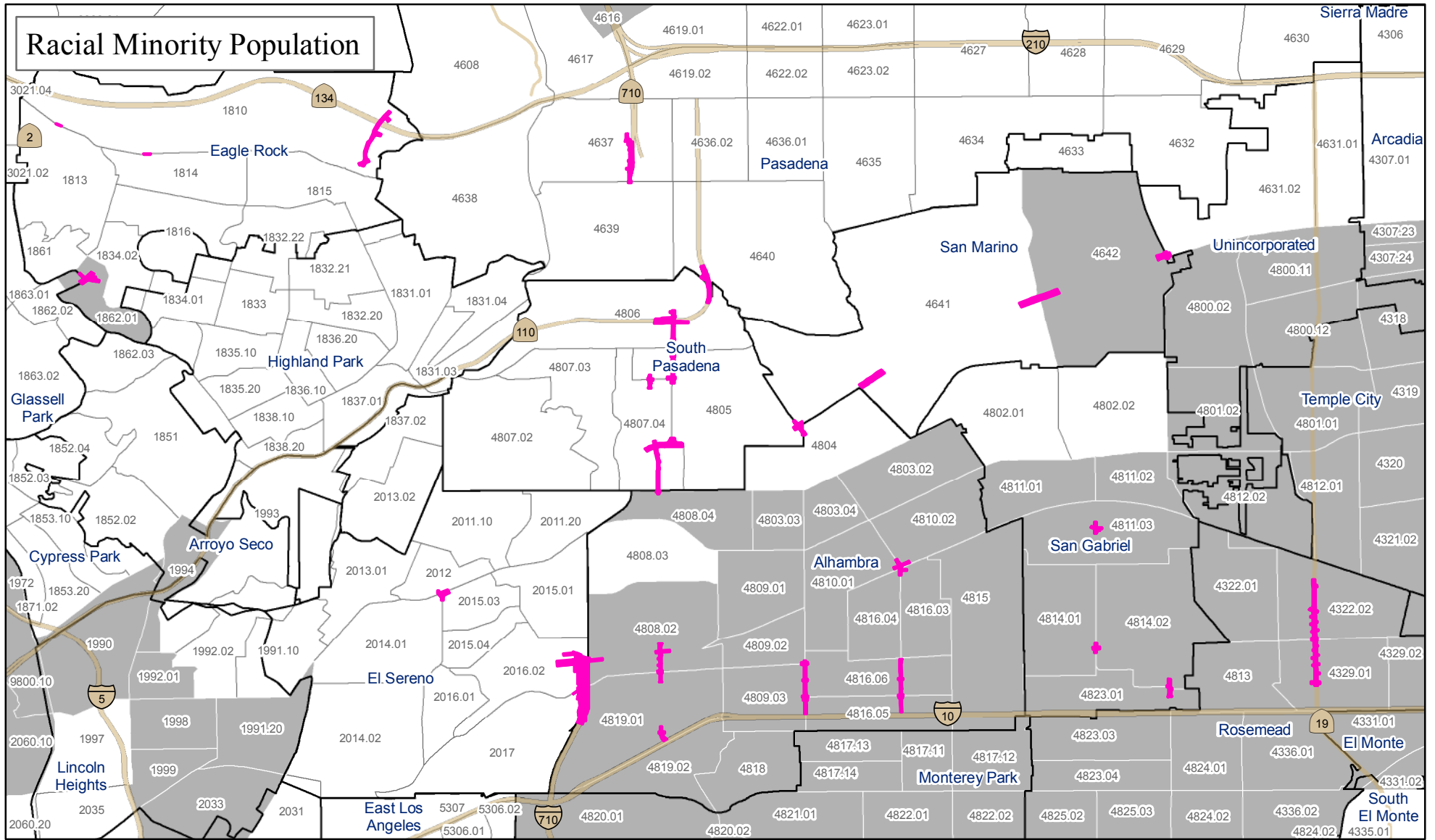


FIGURE 3.3-13
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SR 710 North Project
Freeway Tunnel Alternative - Dual Bore Design Variation
Parcel Acquisitions
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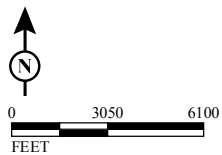
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LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- Census Tracts Where the Percentage of Racial Minorities is 10% Higher than the County Average
- Jurisdictional Boundary



SOURCE: CH2M Hill (2013); U.S. Census (2010)

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FIGURE 3.3-14

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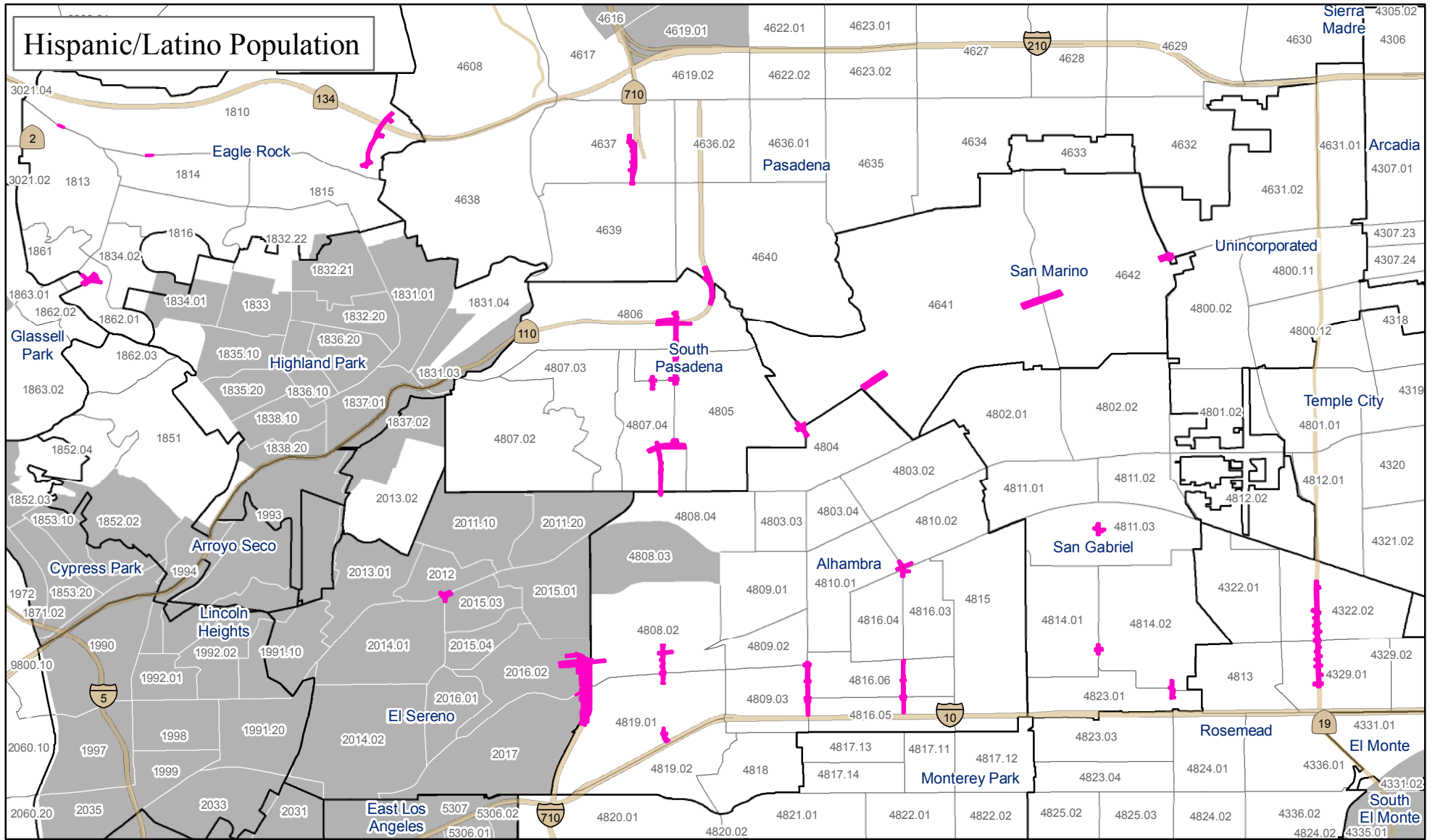
SR 710 North Project
TSM/TDM Alternative and Environmental Justice Populations

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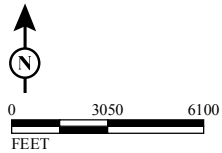
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Hispanic/Latino Population

LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- Census Tracts Where the Percentage of Hispanics/Latinos is 10% Higher than the County Average
- Jurisdictional Boundary

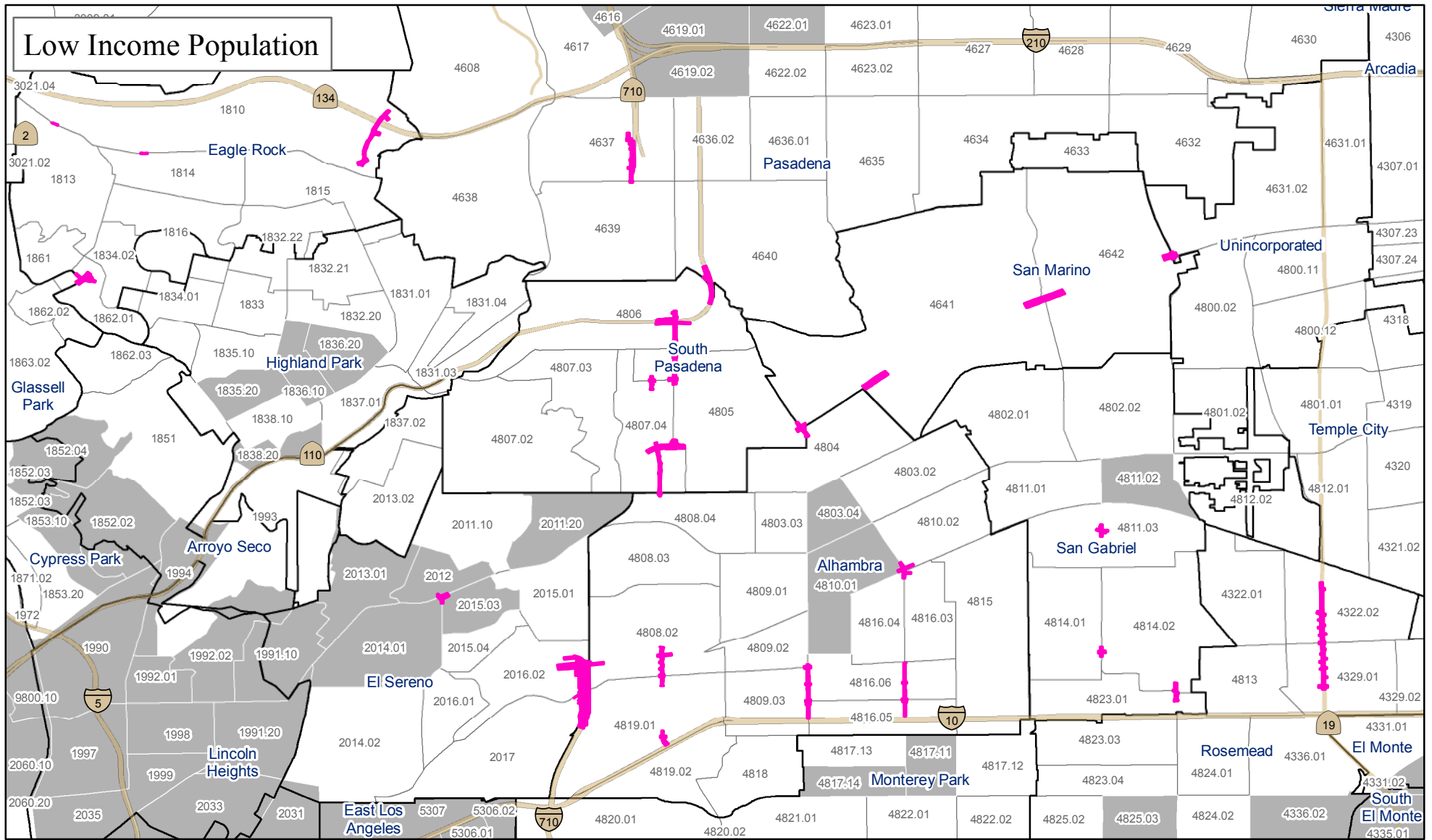


SOURCE: CH2M Hill (2013); U.S. Census (2010)
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FIGURE 3.3-14
 Sheet 2 of 4

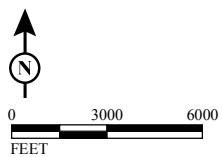
SR 710 North Project
 TSM/TDM Alternative and Environmental Justice Populations
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 EFIS 0700000191

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LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- Census Tracts Where the Percentage of Persons Living Below the Poverty Level is 5% Higher than the County Average
- Jurisdictional Boundary



SOURCE: CH2M Hill (2013); U.S. Census ACS 2007-2011, Table DP03
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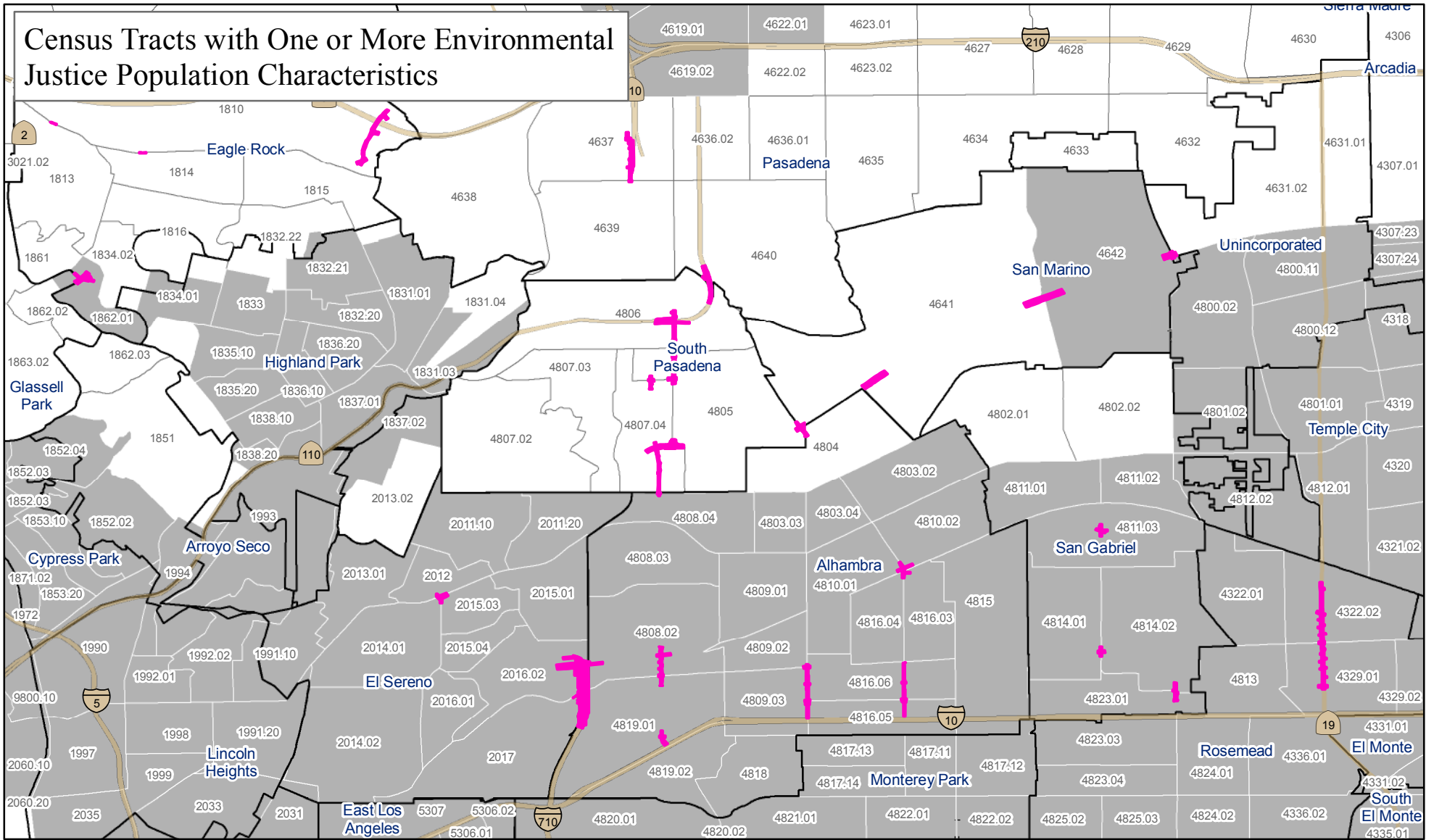
FIGURE 3.3-14
Sheet 3 of 4

SR 710 North Project
TSM/TDM Alternative and Environmental Justice Populations

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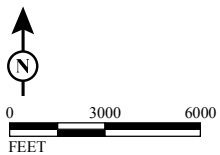
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Census Tracts with One or More Environmental Justice Population Characteristics



LEGEND

- TSM/TDM Alternative Local Street and Intersection Improvements
- Census Tracts with One or More Environmental Justice Population Percentage Substantially Greater than the County Average
- Jurisdictional Boundary



SOURCE: CH2M Hill (2013); U.S. Census (2010); U.S. Census ACS 2007-2011, Tables DP03, B01001, B25046, and B26001
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FIGURE 3.3-14
 Sheet 4 of 4

SR 710 North Project
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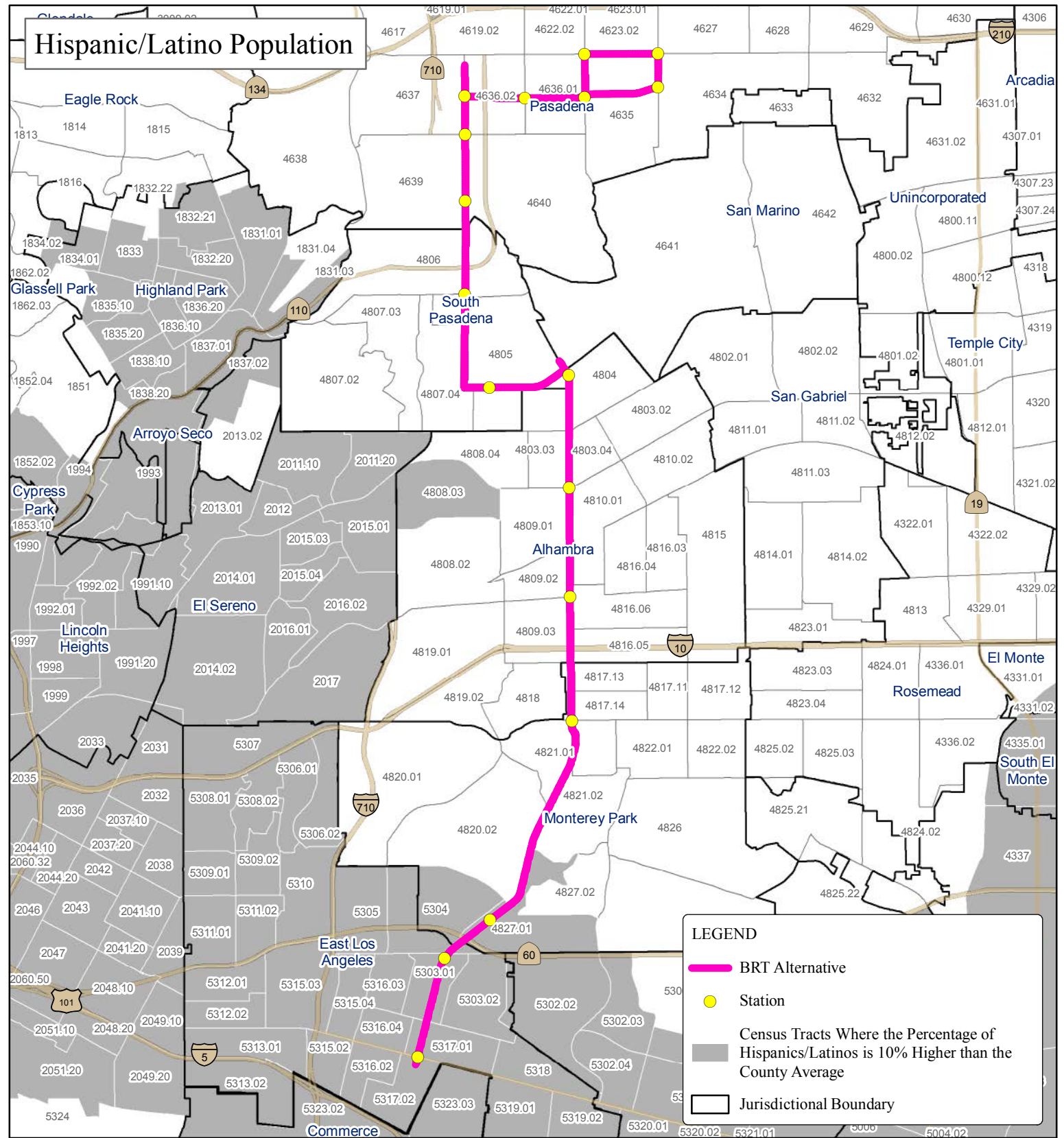
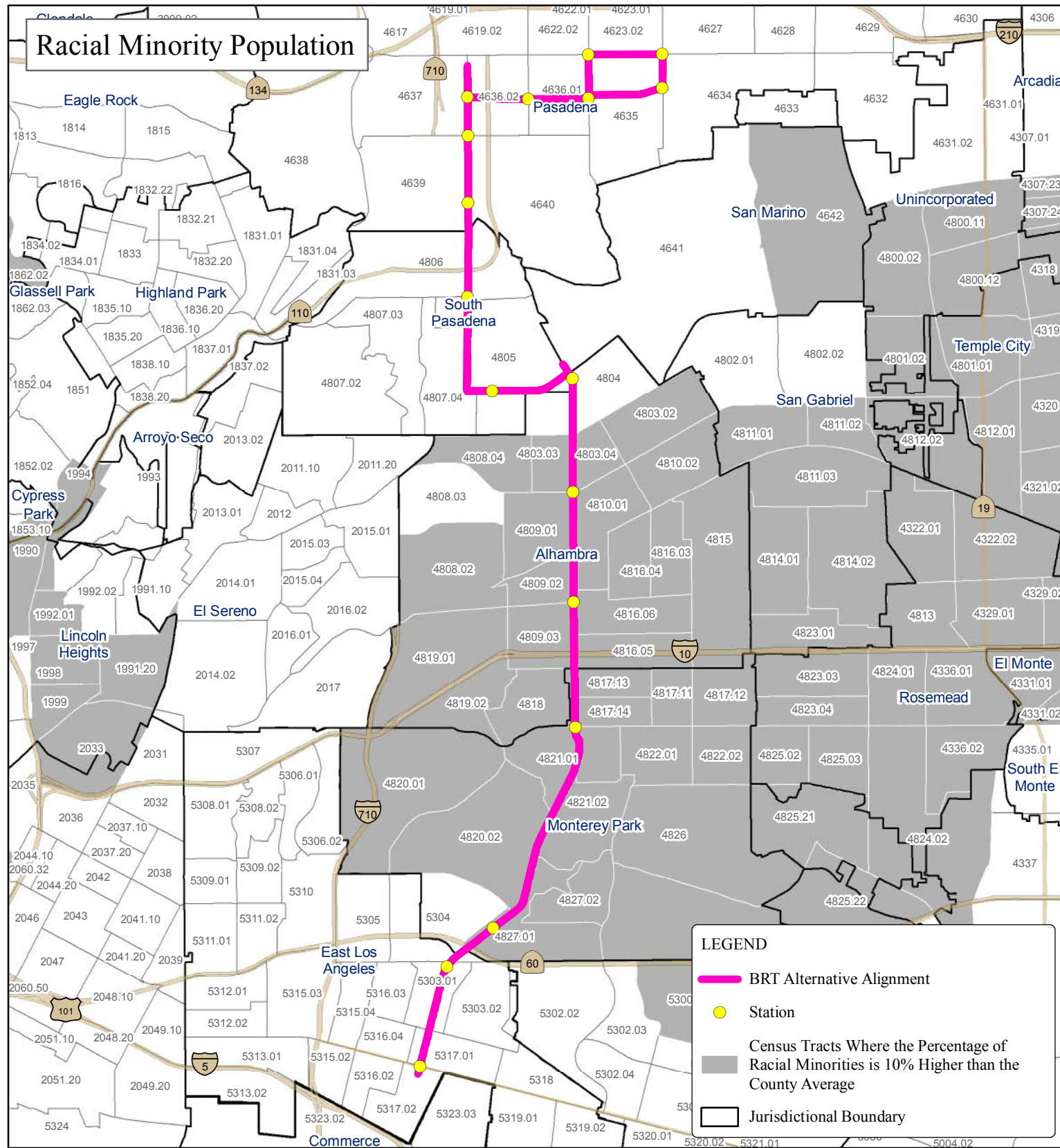
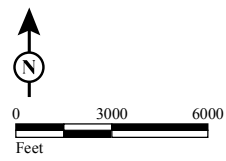


FIGURE 3.3-15
Sheet 1 of 2



SOURCE: CH2M Hill (2013); U.S. Census (2010)

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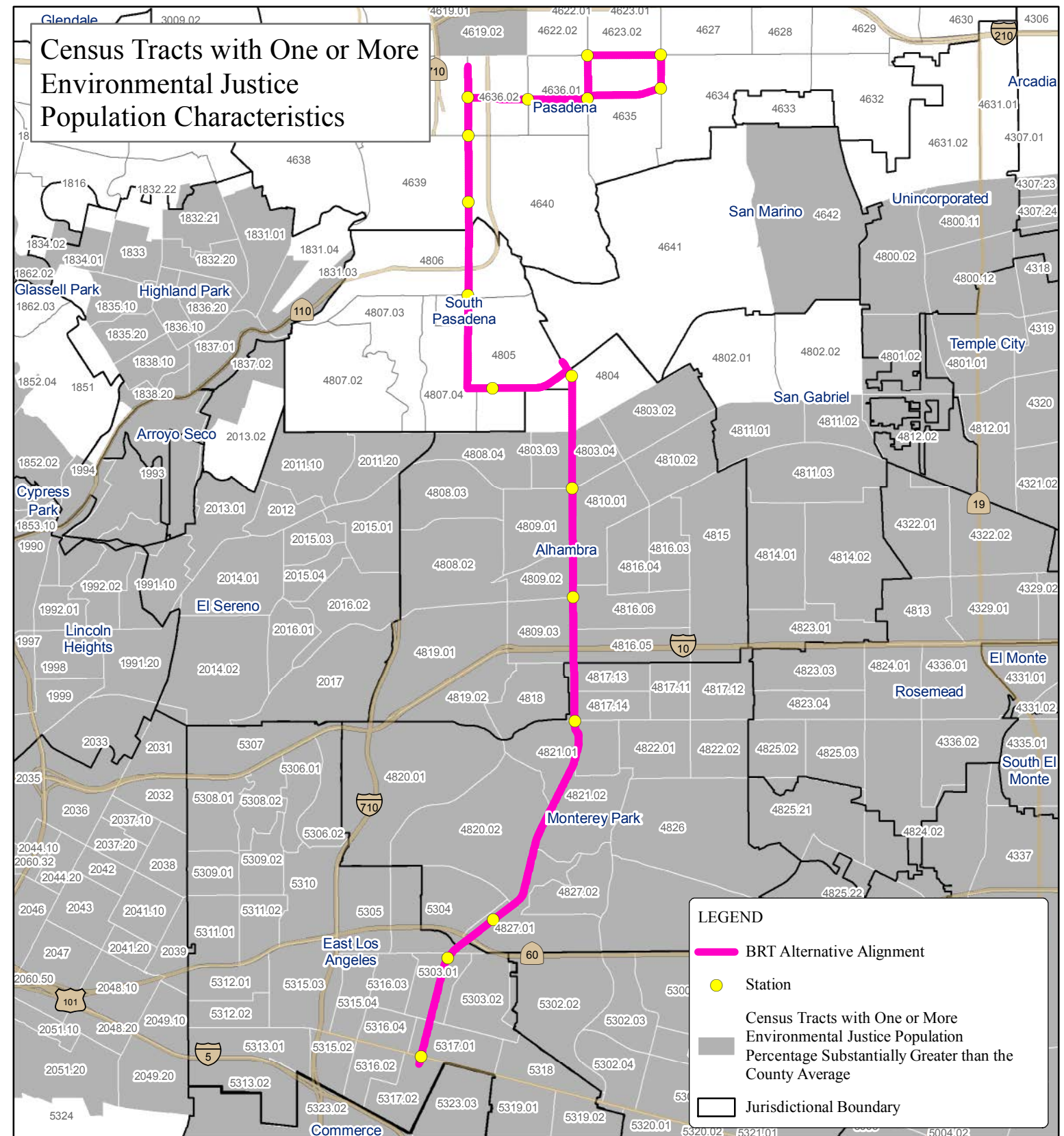
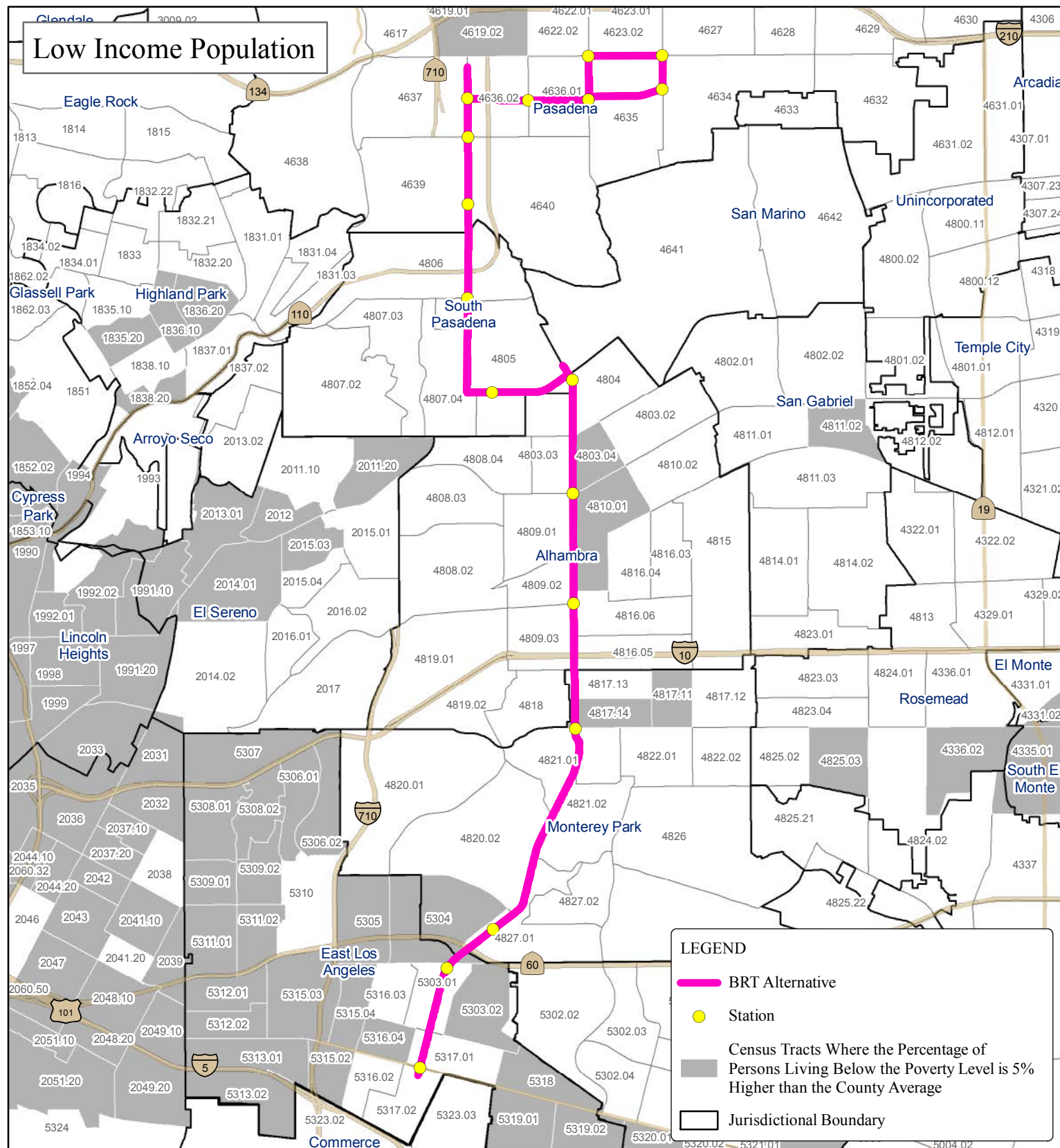
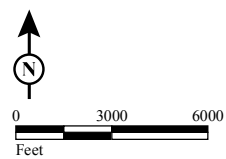


FIGURE 3.3-15
Sheet 2 of 2



SOURCE: CH2M Hill (2013); U.S. Census (2010); U.S. Census ACS 2007-2011, Tables DP03, B01001, B25046, and B26001

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SR 710 North Project
BRT Alternative and Environmental Justice Populations

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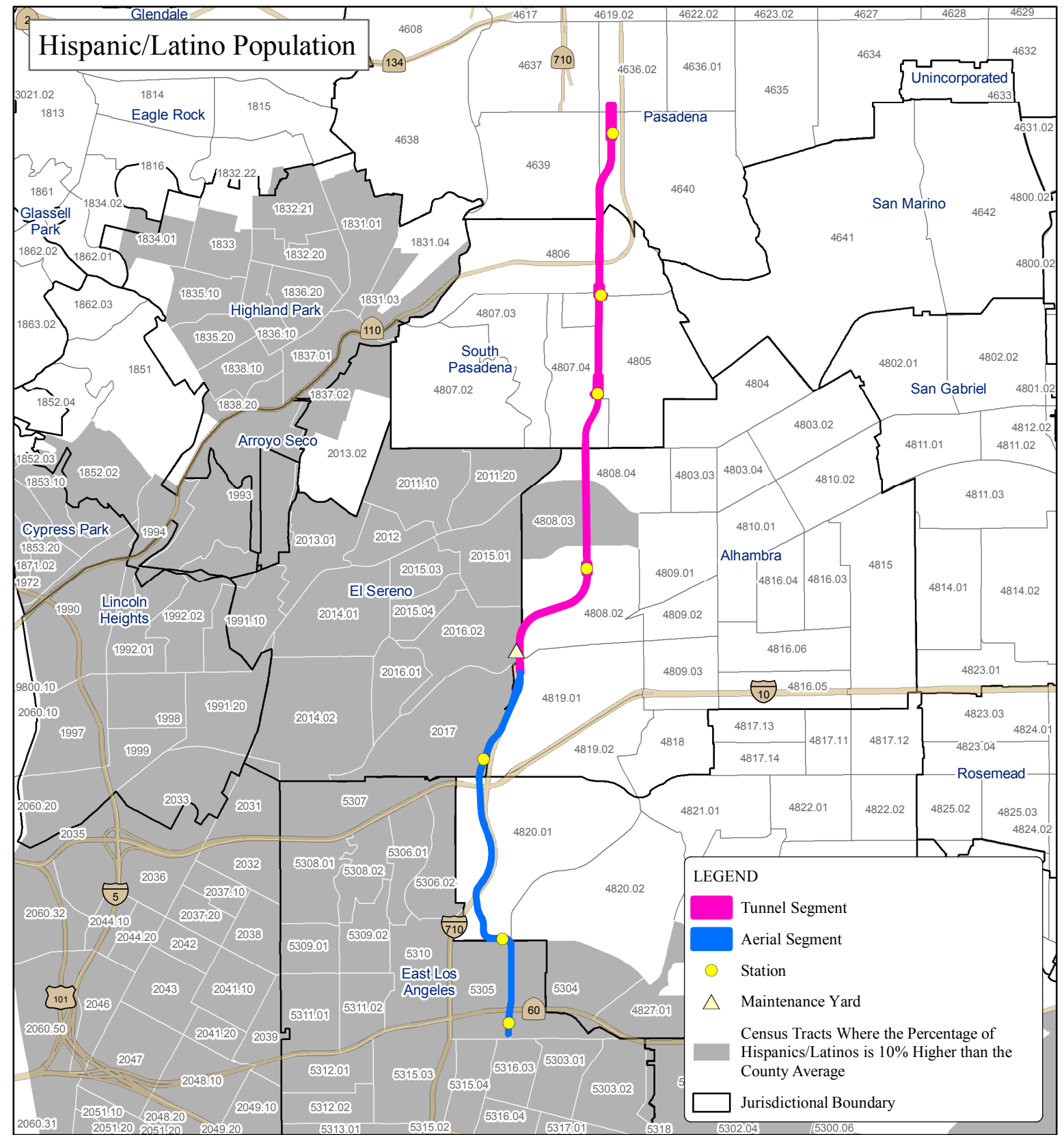
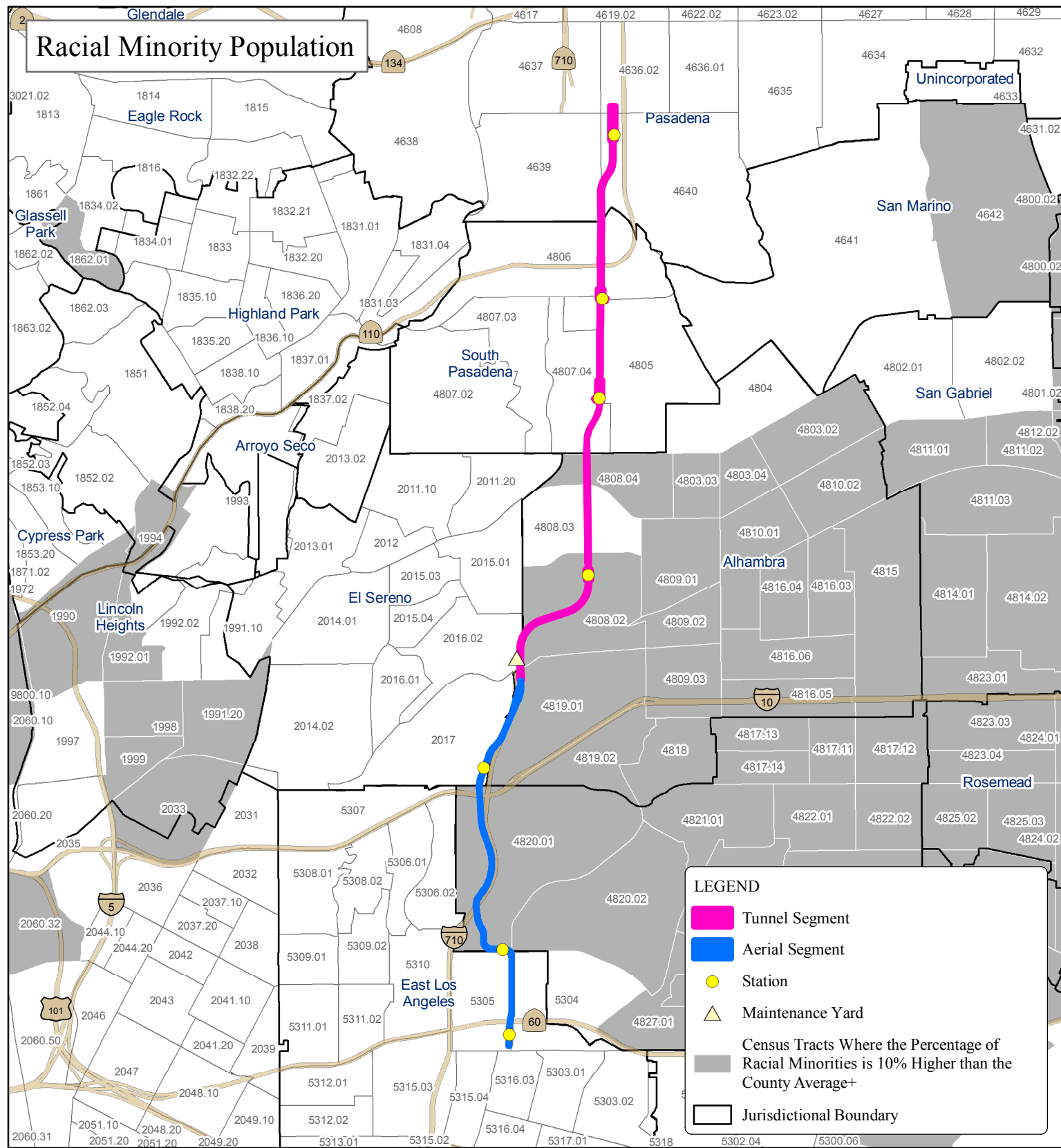
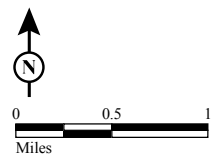


FIGURE 3.3-16
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SOURCE: CH2M Hill (2013); U.S. Census (2010)

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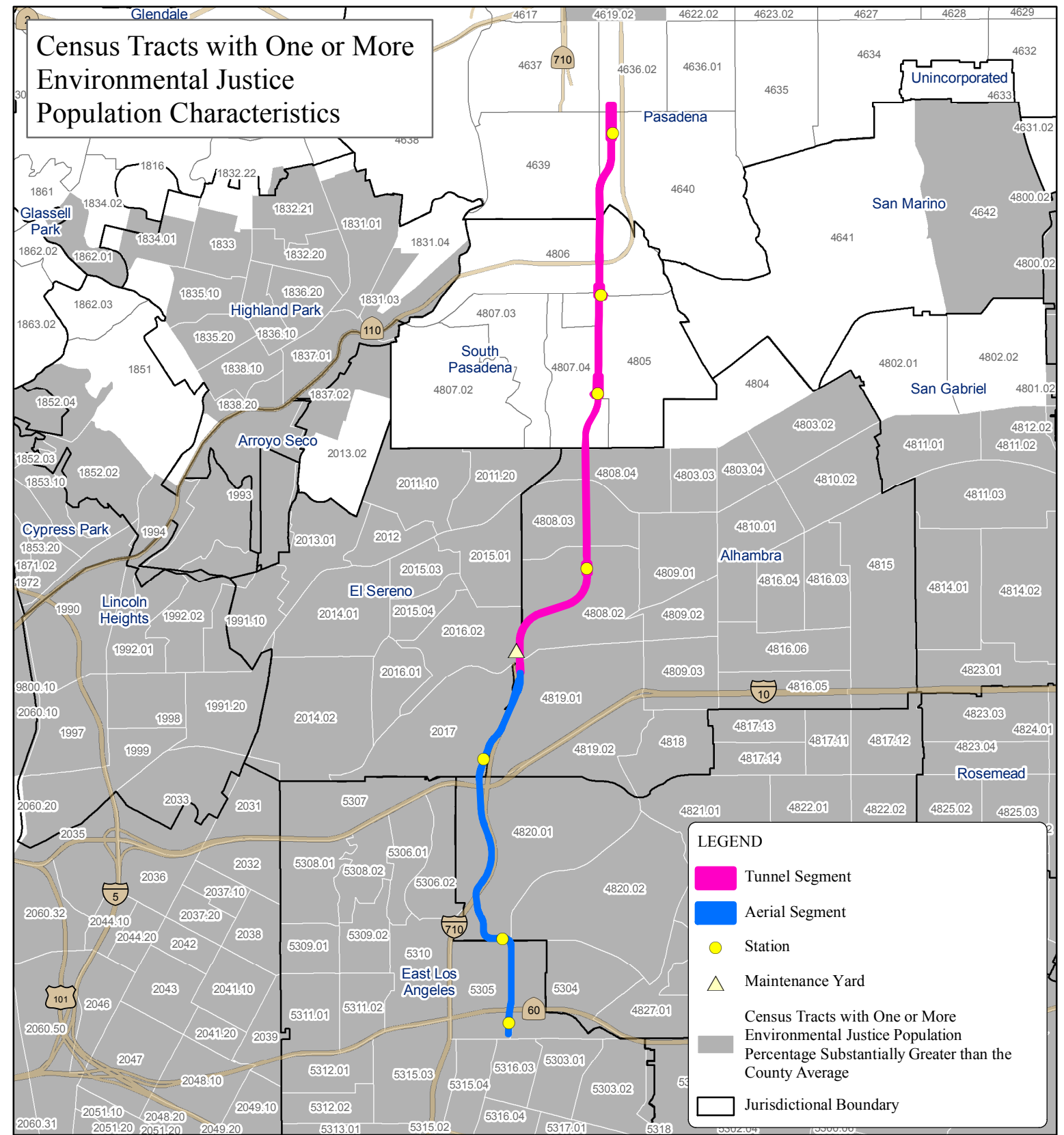
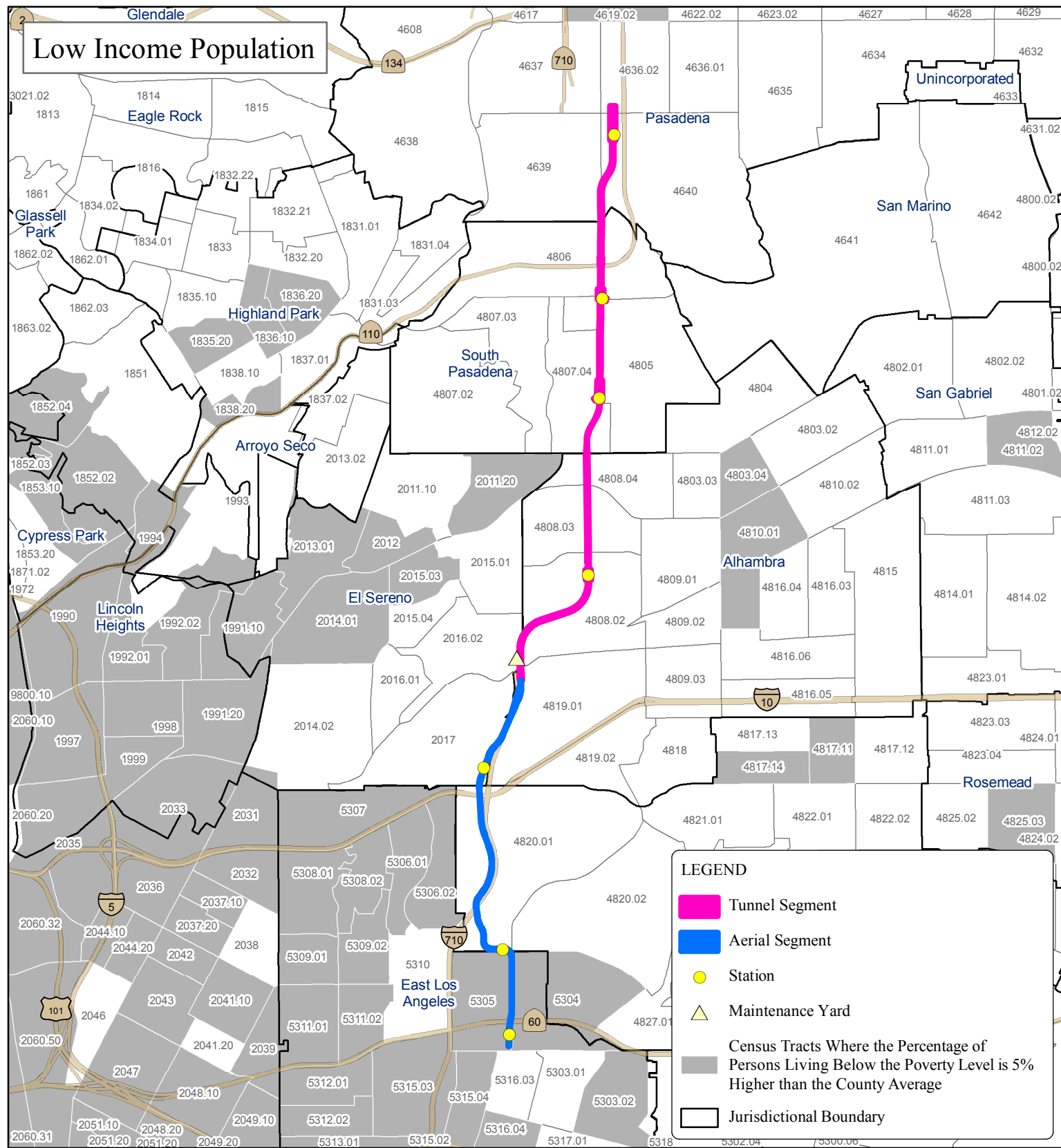
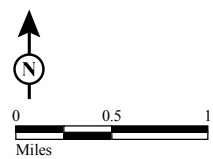


FIGURE 3.3-16
Sheet 2 of 2



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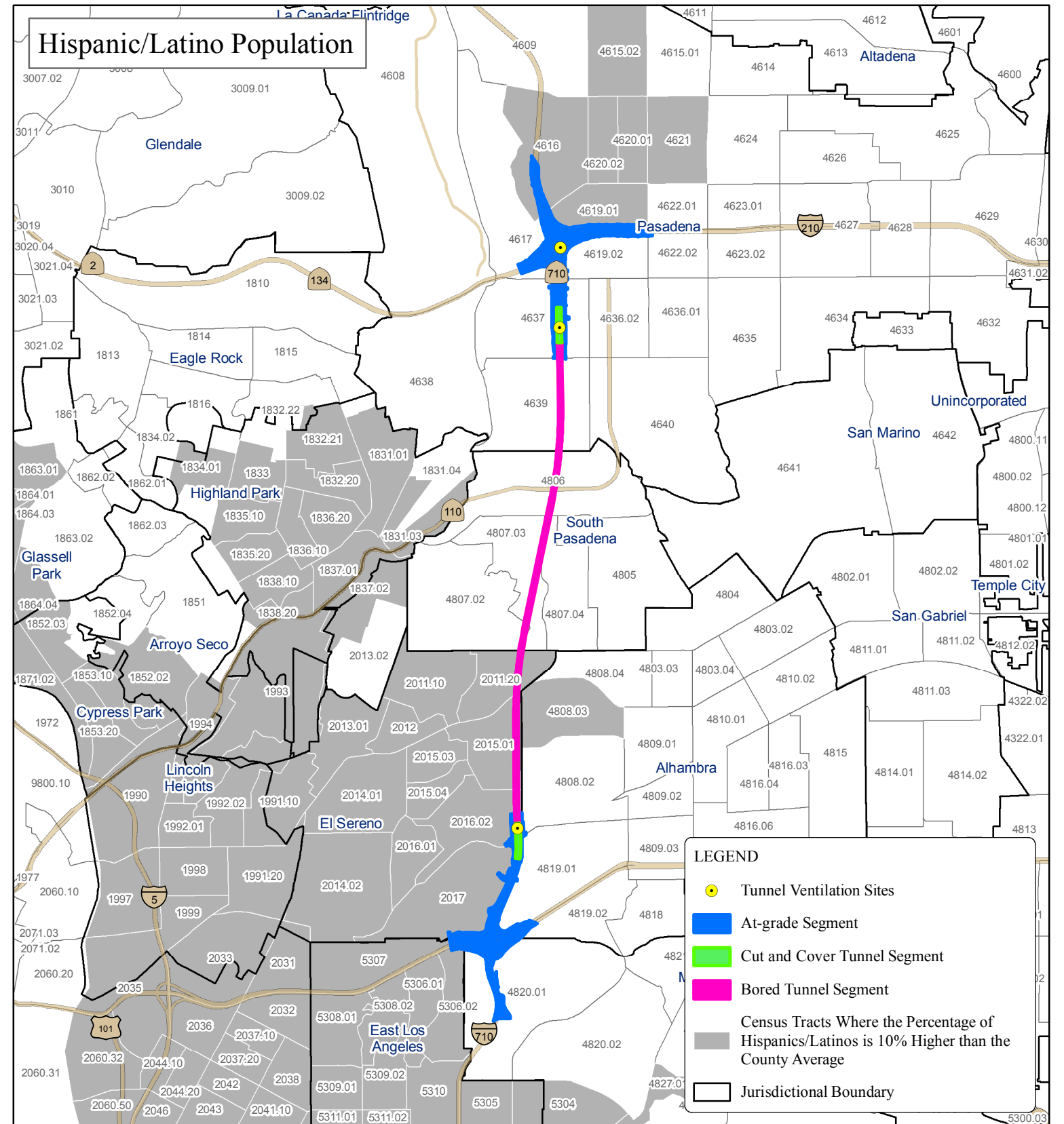
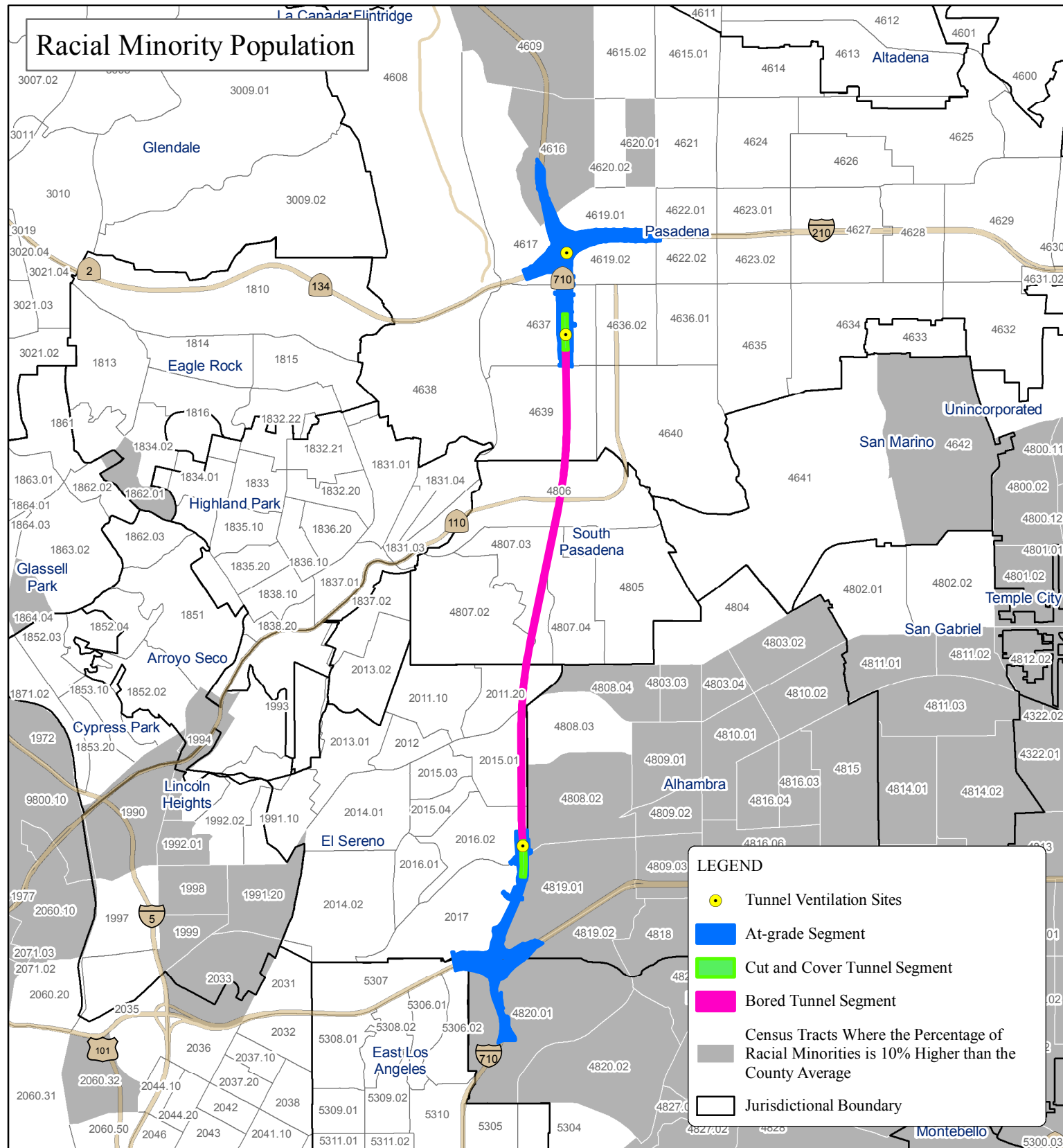
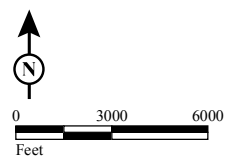


FIGURE 3.3-17
Sheet 1 of 2



SOURCE: CH2M Hill (2013); U.S. Census (2010)

I:\CHM1105\GIS\MXD\EIR_EIS\App_L\EJ_Freeway_Tunnel_Minority_and_Hispanic.mxd (1/10/2018)

SR 710 North Project
Freeway Tunnel - Dual Bore Alternative and Environmental Justice Populations

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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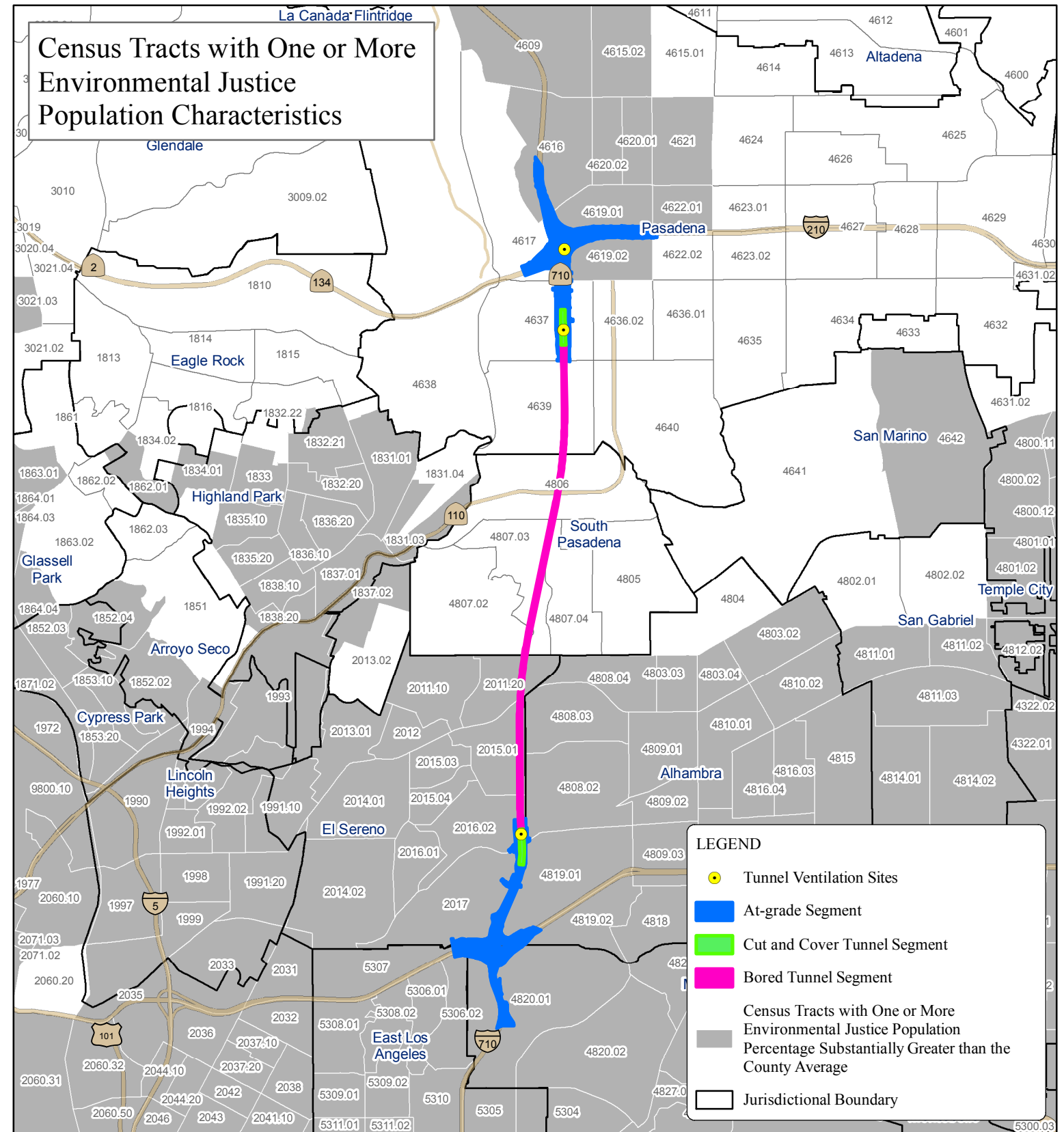
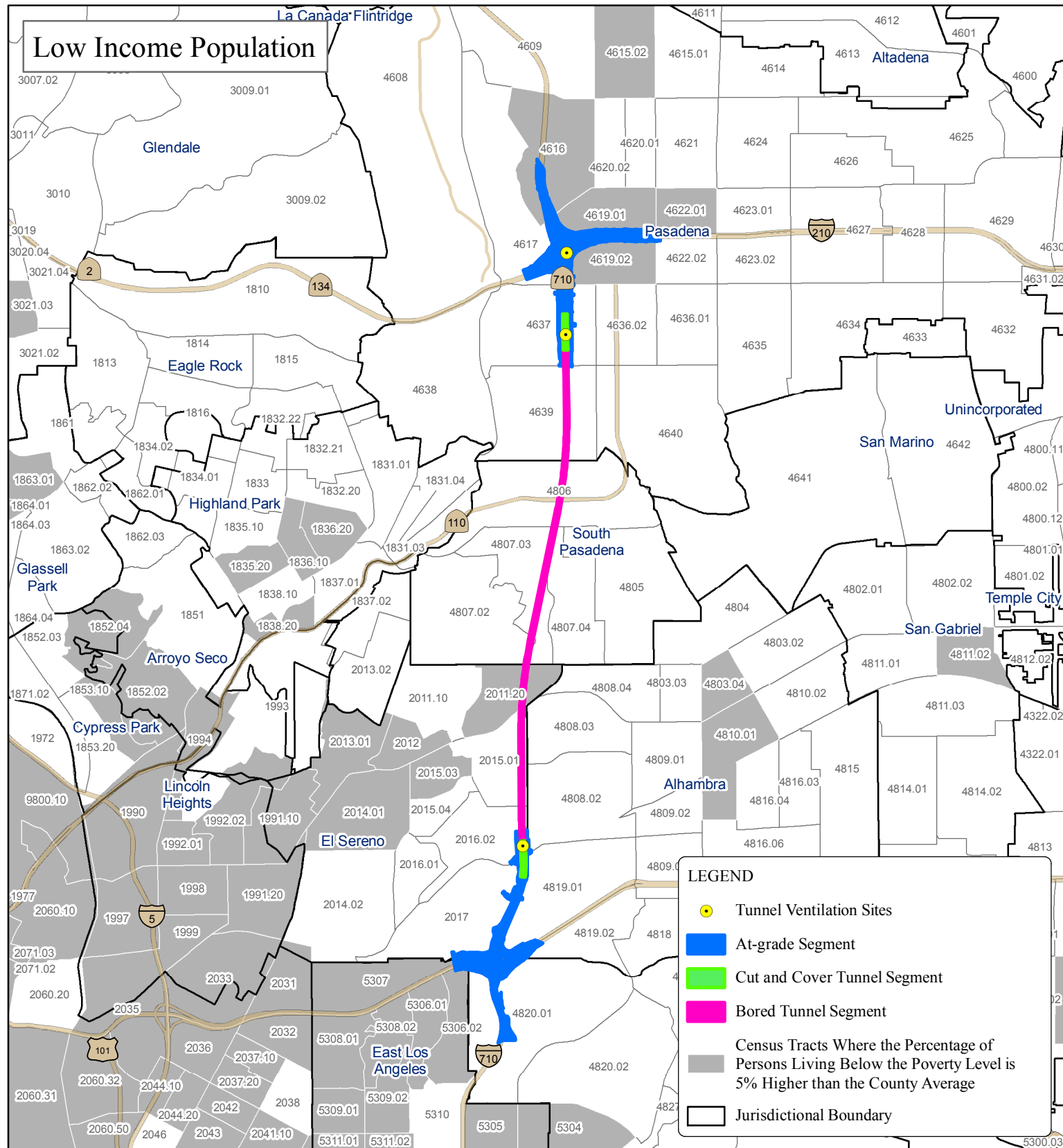
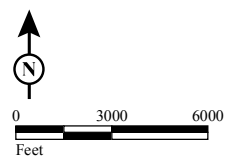


FIGURE 3.3-17
Sheet 2 of 2



SOURCE: CH2M Hill (2013); U.S. Census (2010); U.S. Census ACS 2007-2011, Tables DP03, B01001, B25046, and B26001

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SR 710 North Project
Freeway Tunnel - Dual Bore Alternative and Environmental Justice Populations

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Appendix M: Visual Impact Assessment Figures

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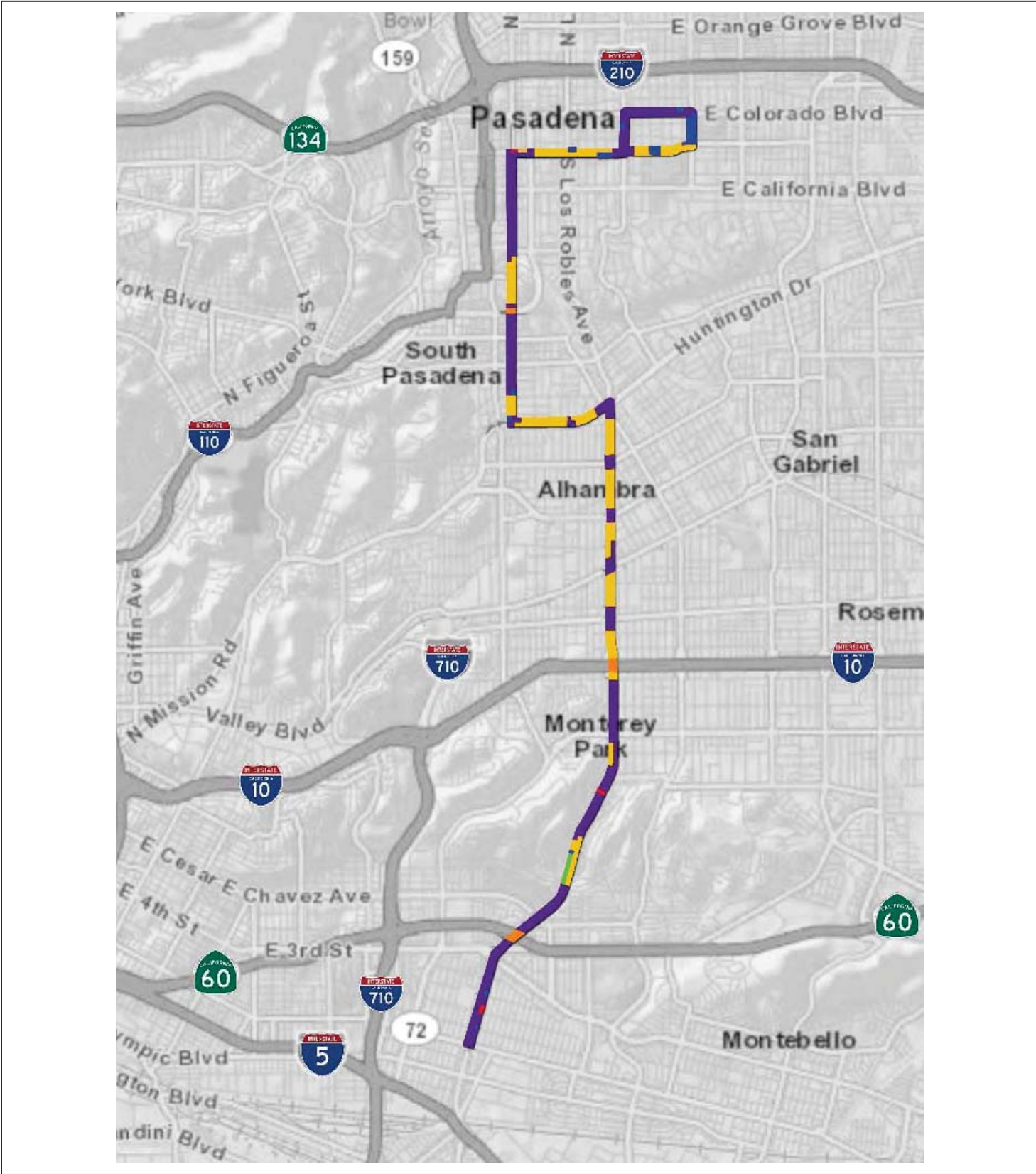


FIGURE 3.6-1

LEGEND

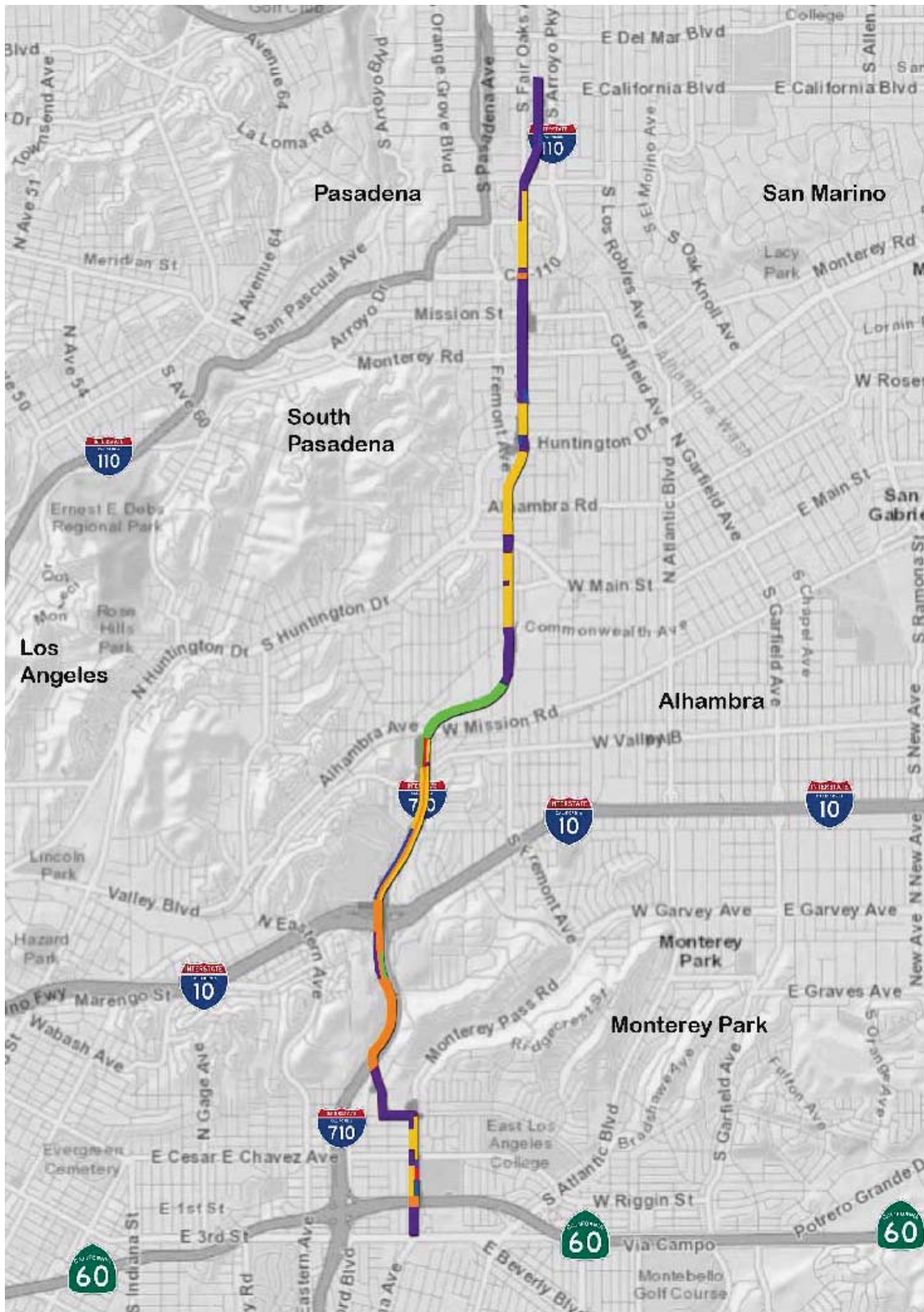
 Commercial Retail	 Industrial
 Education	 Recreation
 Freeway	 Residential



SR 710 North Project
Landscape Units - BRT

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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LEGEND

- Commercial Retail
- Education
- Freeway
- Industrial
- Recreation
- Residential



FIGURE 3.6-2

SR 710 North Project
Landscape Units - LRT

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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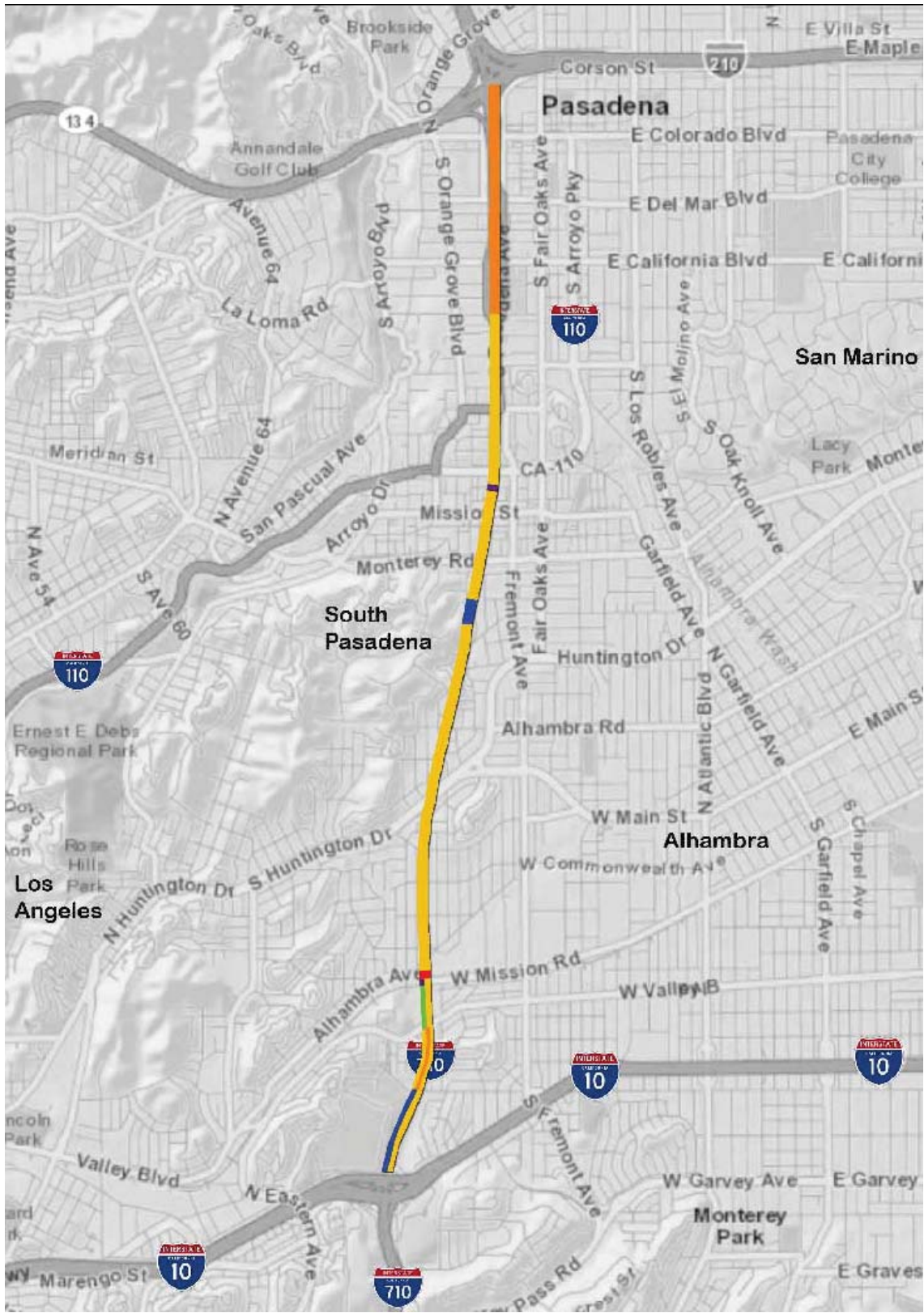


FIGURE 3.6-3

LEGEND

- Commercial Retail
- Industrial
- Education
- Recreation
- Freeway
- Residential



SR 710 North Project
Landscape Units - FWY

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition



Visual Simulation: Proposed Bus Rapid Transit Valley Station (BRT).

KEY VIEW 1-BRT

1100 W. Valley Blvd
 Intersection of Atlantic Blvd and Valley Blvd
 City of Alhambra, CA 91803







GPS Location:
 Latitude = 34° 4'39.96"N
 Longitude = 118° 8'4.70"W
 Heading = 25.35° NNE

The location of the Key View 1-BRT was taken from the southwest corner of Valley Boulevard/Atlantic Boulevard intersection in front of Conroy's Flower shop. The view looks northeast towards the proposed Bus Rapid Transit Station (BRT).



Study Area
 BRT ALTERNATIVE

LEGEND

-  Bus Rapid Transit (BRT) Alternative
-  BRT Stations
-  BRT Key View Locations
-  Freeways
-  Major Roads
-  Residential



NOT TO SCALE
 SOURCE: Tatsumi and Partners, Inc. (2013)

I:\CHM1105\G\Visual\Key View 1-BRT.cdr (1/12/2018)

FIGURE 3.6-4

SR 710 North Project
 Key View 1 - BRT Description

07-LA-710 (SR 710)
 EA 187900
 EFIS 0700000191

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Existing Condition



Visual Simulation: Proposed Bus Rapid Transit Lane (BRT)

KEY VIEW 2-BRT

245 Fair Oaks Avenue
City of South Pasadena, CA 91030

GPS Location:
Latitude = 34° 7' 22.20"N
Longitude = 118° 9' 1.39"W
Heading = 25.35° NNE

The location of Key View 2-BRT was taken from the sidewalk along Fair Oaks Avenue just outside of Peter Tolkin Architecture. The view looks northeast towards the proposed Bus Rapid Transit Lane (BRT).



LEGEND

- Bus Rapid Transit (BRT) Alternative
- BRT Stations
- BRT Key View Locations
- Freeways
- Major Roads
- Residential



NOT TO SCALE
SOURCE: Tatsumi and Partners, Inc. (2013)

I:\CHM1105\G\Visual\Key View 2-BRT.cdr (1/12/2018)

FIGURE 3.6-5

SR 710 North Project
Key View 2 - BRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition



Visual Simulation: Proposed Mednik Station

KEY VIEW 3-LRT

220 S. Mednik Avenue
City of East Los Angeles, CA 90022

GPS Location:
Latitude = 34° 2' 2.76"N
Longitude = 118° 9' 42.26"W
Heading = 268.4° W

The location of Key View 3-LRT was taken on the sidewalk along S. Mednik Avenue just outside the Edward Roybal comprehensive Health Center. The view looks west towards the proposed Mednik Station.



Study Area
LRT ALTERNATIVE

- LEGEND
- Light Rail Transit (LRT) Alternative
 - BRT Stations
 - LRT Key View Locations
 - Freeways
 - Major Roads
 - Residential



FIGURE 3.6-6

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Existing Condition



Visual Simulation: Light Rail Transit crossing the SR 60 Freeway

KEY VIEW 4-LRT

SR 60 Eastbound at Dangler Avenue
City of East Los Angeles, CA 90022

GPS Location:
Latitude = 34° 2' 11.30"N
Longitude = 118° 9' 51.57"W
Heading = 85° E

The location of Key View 4-LRT was taken from the pedestrian bridge on Dangler Avenue, west of Mednik Avenue. The view looks east towards the elevated Light Rail Transit crossing the SR 60 (Pomona Freeway).



Study Area
LRT ALTERNATIVE

LEGEND

- Light Rail Transit (LRT) Alternative
- BRT Stations
- LRT Key View Locations
- Freeways
- Major Roads
- Residential



NOT TO SCALE
SOURCE: Tatsumi and Partners, Inc. (2013)

FIGURE 3.6-7

SR 710 North Project
Key View 4 - LRT Description

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Existing Condition



Visual Simulation: Light Rail Transit running above N. Mednik Ave.

KEY VIEW 5-LRT

Belvedere Community Regional Park
4914 E. Cesar Chavez Avenue
City of East Los Angeles, CA 90022

GPS Location:
Latitude = 34° 2' 2.38"N
Longitude = 118° 9' 39.74"W
Heading = 271° W

The location of Key View 5-LRT is within Belvedere Community Regional Park and was taken from the open field in the Park. The view looks towards the proposed elevated Light Rail Transit running above N. Mednik Avenue.



LEGEND

- Light Rail Transit (LRT) Alternative
- BRT Stations
- LRT Key View Locations
- Freeways
- Major Roads
- Residential



NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

E:\CHM1105\G\Visual\Key View 5-LRT.cdr (1/12/2018)

FIGURE 3.6-8

SR 710 North Project
Key View 5 - LRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition



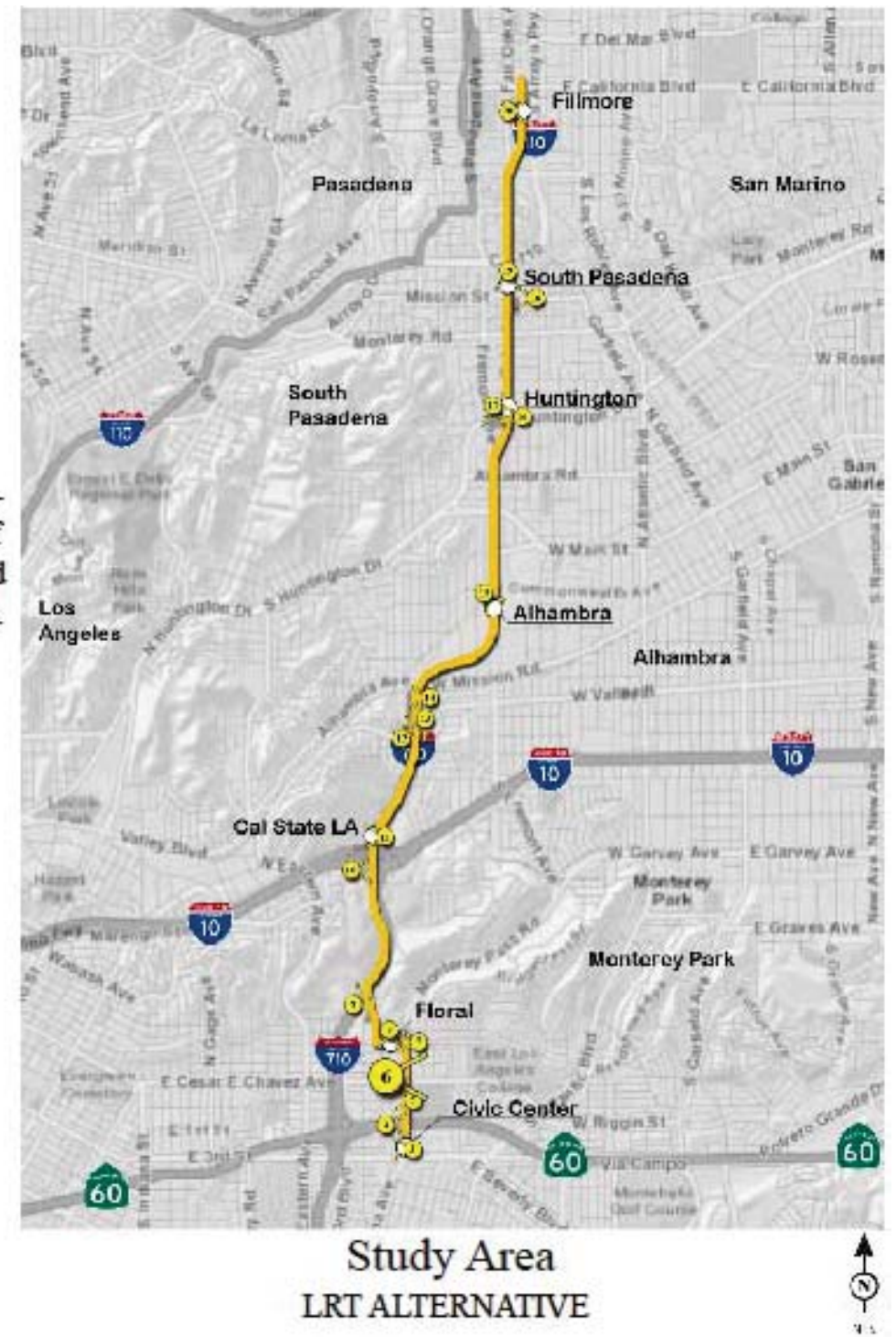
Visual Simulation: Light Rail Transit running above N. Mednik Ave.

KEY VIEW 6-LRT

4760 East Cesar E. Chavez Avenue.
City of East Los Angeles, CA 90022

GPS Location:
Latitude = 34° 2'25.88"N
Longitude = 118° 9'45.98"W
Heading = 91° E

The location of Key View 6-LRT was taken place on East Cesar E. Chavez a block west of Mednik Avenue, and outside of Denny's restaurant. The view looks east towards the proposed elevated Light Rail Transit running above N. Mednik Avenue.



Study Area
LRT ALTERNATIVE

LEGEND	
	Light Rail Transit (LRT) Alternative
	BRT Stations
	LRT Key View Locations
	Freeways
	Major Roads
	Residential



NOT TO SCALE
SOURCE: Tatsumi and Partners, Inc. (2013)

I:\CHM1105\G\Visual\Key View 6-LRT.cdr (1/12/2018)

FIGURE 3.6-9

SR 710 North Project
Key View 6 - LRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition



Visual Simulation: Light Rail Transit running above N. Mednik Avenue looking towards Floral Station.

KEY VIEW 7-LRT

2349 Floral Drive
City of Monterey Park, CA 91754

GPS Location:

Latitude = 34° 2'39.19"N
Longitude = 118° 9'40.82"W
Heading = 269° W

The location of Key View 7-LRT was taken from the street median on Floral Drive just east of Mednik Avenue. The view looks west towards the proposed elevated Light Rail Transit is running above N. Mednik Avenue and curving onto the proposed Floral Station.



Study Area
LRT ALTERNATIVE

LEGEND

- Light Rail Transit (LRT) Alternative
- BRT Stations
- LRT Key View Locations
- Freeways
- Major Roads
- Residential



NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

E:\CHM1105\G\Visual\Key View 7-LRT.cdr (1/12/2018)

FIGURE 3.6-10

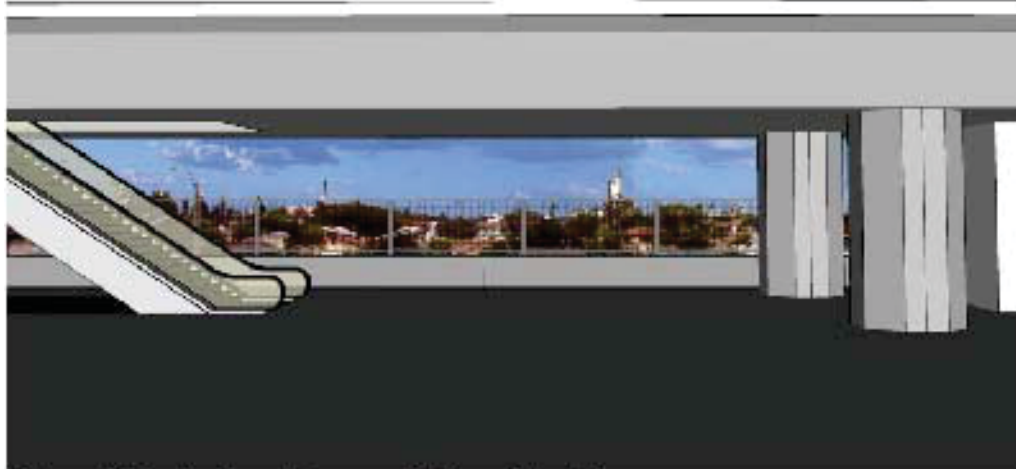
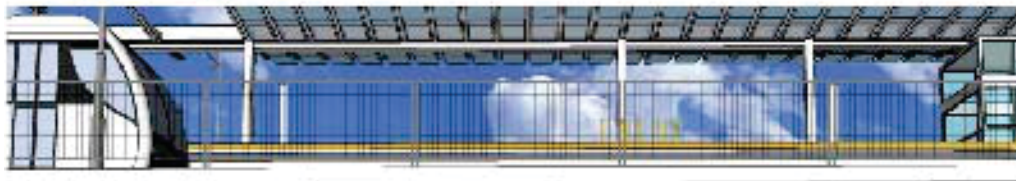
SR 710 North Project
Key View 7 - LRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition



Visual Simulation: Proposed Floral Station.

KEY VIEW 8-LRT

4721-4761 Floral Drive
City of Monterey Park, CA 91754

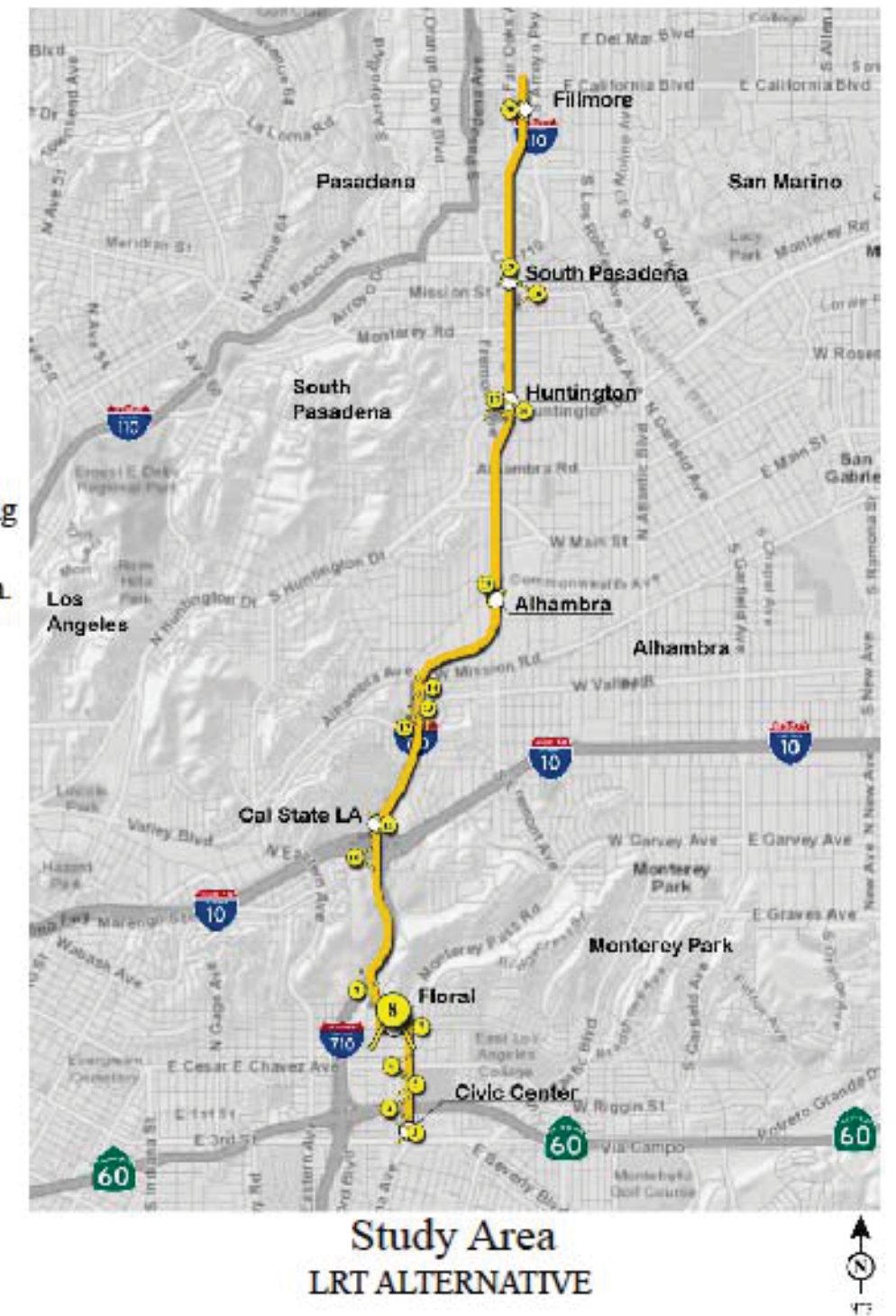
GPS Location:

Latitude = 34° 2' 40.90"N

Longitude = 118° 9' 49.02"W

Heading = 179° S

The location of Key View 8-LRT was taken from the parking lot of southern side of the Monterey Park Business Center. The view looks south towards at the proposed Floral Station.



LEGEND

- Light Rail Transit (LRT) Alternative
- BRT Stations
- LRT Key View Locations
- Freeways
- Major Roads
- Residential



FIGURE 3.6-11

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Existing Condition



Visual Simulation: Light Rail Transit crossing the I-710 Freeway.

KEY VIEW 9-LRT

I-710 Northbound, northeast of Floral Drive crossing City of East Los Angeles, CA 90022

GPS Location:

Latitude = 34° 2'52.25"N

Longitude = 118° 10'2.59"W

Heading = 34° NE

The location of Key View 9-LRT was taken on the I-710 Northbound between commercial office buildings on the east and the Los Angeles County Sheriff's Office property on the west. The view looks northeast towards the proposed elevated Light Rail Transit crossing the I-710 freeway.



FIGURE 3.6-12

LEGEND

- Light Rail Transit (LRT) Alternative
- BRT Stations
- LRT Key View Locations
- Freeways
- Major Roads
- Residential



NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

E:\CHM1105\G\Visual\Key View 9-LRT.cdr (1/12/2018)

SR 710 North Project
Key View 9 - LRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition



Visual Simulation: Light Rail Transit crossing the I-10 Freeway.

KEY VIEW 10-LRT

I-10 Eastbound at I-710 Northbound/Southbound Junction
City of Monterey Park, CA 91754

GPS Location:

Latitude = 34° 3' 39.60"N

Longitude = 118° 10' 1.84"W







Heading = 97° E

The location of Key View 10-LRT was taken from the I-10 East/SR 710 North transition ramp/W. Ramona Road off-ramp. The view looks east towards the proposed elevated Light Rail Transit that will run parallel to the SR 710 freeway.



Study Area
LRT ALTERNATIVE

LEGEND

-  Light Rail Transit (LRT) Alternative
-  BRT Stations
-  LRT Key View Locations
-  Freeways
-  Major Roads
-  Residential



NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

E:\CHM1105\G\Visual\Key View 10-LRT.cdr (1/12/2018)

FIGURE 3.6-13

SR 710 North Project
Key View 10 - LRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition



Visual Simulation: Proposed Cal State LA Station

KEY VIEW 11-LRT

I-10 Westbound to SR 710 Northbound Transition Ramp
City of Los Angeles, CA 90032

GPS Location:

Latitude = 34° 3' 48.51"N

Longitude = 118° 9' 52.06"W







Heading = 278° W

The location of Key View 11-LRT was taken at the I-10 West to SR 710 North transition ramp. The view looks west toward the proposed California State University Los Angeles (CSU-LA) station.



Study Area
LRT ALTERNATIVE

LEGEND

-  Light Rail Transit (LRT) Alternative
-  Freeways
-  BRT Stations
-  Major Roads
-  LRT Key View Locations
-  Residential



NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

E:\CHM1105\G\Visual\Key View 11-LRT.cdr (1/12/2018)

FIGURE 3.6-14

SR 710 North Project
Key View 11 - LRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition



Visual Simulation: Light Rail Transit maintenance yard at Valley Blvd.

KEY VIEW 12-LRT

5531 Valley Boulevard
City of Los Angeles, CA 90032

GPS Location:
Latitude = 34° 4' 28.66"N
Longitude = 118° 9' 42.27"W
Heading = 25° NNE

The location of Key View 12-LRT was taken on Valley Boulevard at the entrance of the on-ramp of SR 710 Southbound. The view looks northeast towards the proposed Light Rail Transit maintenance yard.



Study Area
LRT ALTERNATIVE

LEGEND	
	Light Rail Transit (LRT) Alternative
	BRT Stations
	LRT Key View Locations
	Freeways
	Major Roads
	Residential



NOT TO SCALE
SOURCE: Tatsumi and Partners, Inc. (2013)
E:\CHM1105\G\Visual\Key View 12-LRT.cdr (1/12/2018)

FIGURE 3.6-15

SR 710 North Project
Key View 12 - LRT Description
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition

KEY VIEW 13-LRT

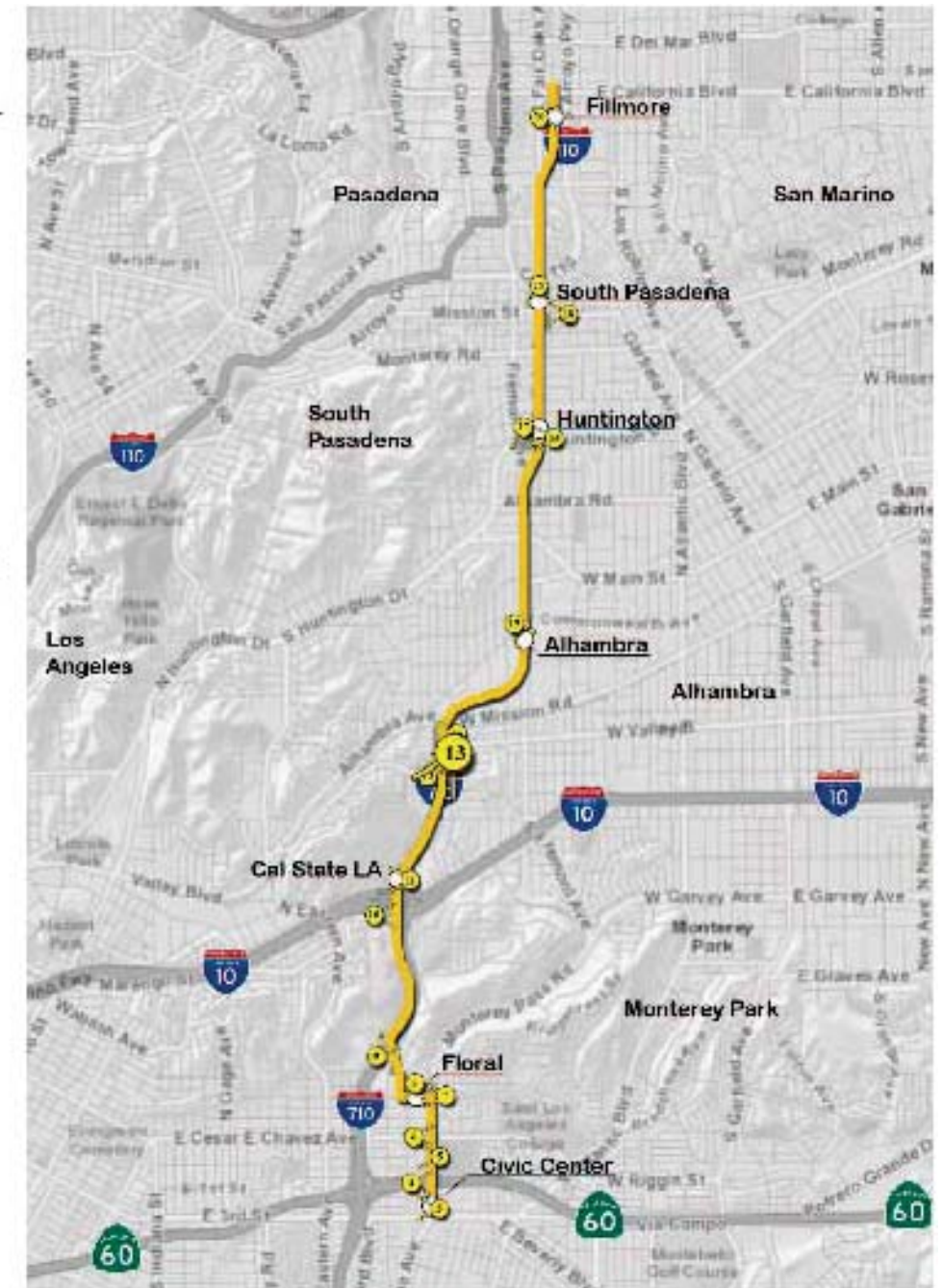
3299 W. Valley Boulevard
City of Alhambra, CA 91803

GPS Location:
Latitude = 34° 4' 31.14"N
Longitude = 118° 9' 38.83"W
Heading = 188° S

The location of Key View 13-LRT was taken on Valley Boulevard at the end of the off-ramp of SR 710 Northbound. The view looks south towards the proposed Light Rail Transit maintenance yard.



Visual Simulation: Light Rail Transit maintenance yard at Valley Blvd.



Study Area
LRT ALTERNATIVE



LEGEND







-  Light Rail Transit (LRT) Alternative
-  BRT Stations
-  LRT Key View Locations
-  Freeways
-  Major Roads
-  Residential



FIGURE 3.6-16

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Existing Condition



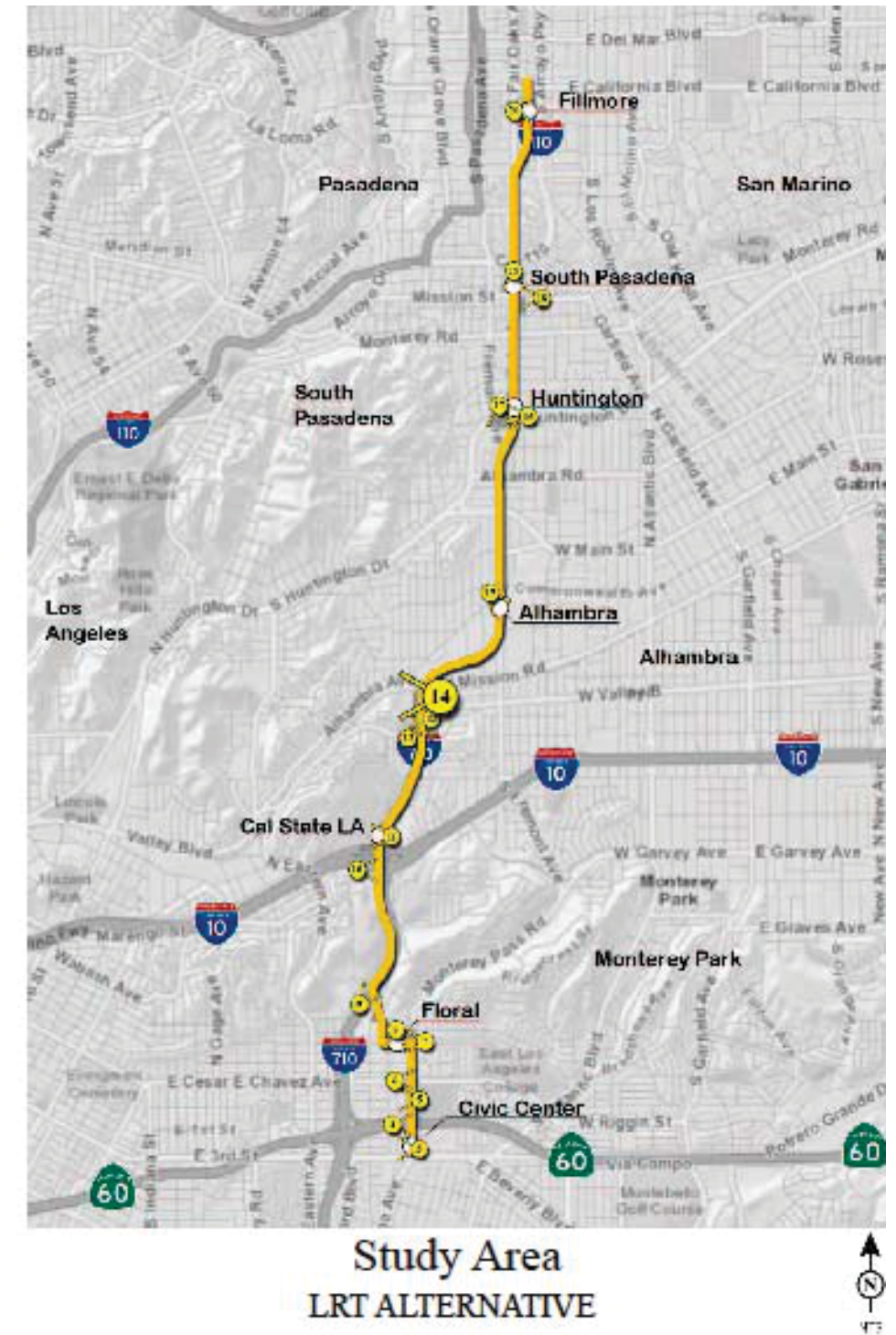
Visual Simulation: Light Rail Transit maintenance area.

KEY VIEW 14-LRT

3201 Front Street
City of Alhambra, CA 91803

GPS Location:
Latitude = 34° 4' 39" .99"N
Longitude = 118° 9' 36.17"W
Heading = 264° W

The location of Key View 14-LRT was taken from the intersection of Front Street and Westmont Drive. The view looks west towards the proposed Light Rail Transit maintenance yard.



Study Area
LRT ALTERNATIVE

LEGEND

- Light Rail Transit (LRT) Alternative
- BRT Stations
- LRT Key View Locations
- Freeways
- Major Roads
- Residential



FIGURE 3.6-17

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Existing Condition



Visual Simulation: Proposed Fremont Station

KEY VIEW 15-LRT

619 S. Fremont Avenue
City of Alhambra, CA 91803

GPS Location:
Latitude = 34° 5' 13.59"N
Longitude = 118° 9' 7.43"W
Heading = 155° SSE

The location of Key View 15-LRT was taken from the sidewalk in front of Duncan Printing Company on S. Fremont Avenue. The view looks southeast towards the proposed Fremont Station.



LEGEND

- Light Rail Transit (LRT) Alternative
- BRT Stations
- LRT Key View Locations
- Freeways
- Major Roads
- Residential



NOT TO SCALE
SOURCE: Tatsumi and Partners, Inc. (2013)

I:\CHM1105\G\Visual\Key View 15-LRT.cdr (1/12/2018)

FIGURE 3.6-18

SR 710 North Project
Key View 15 - LRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition



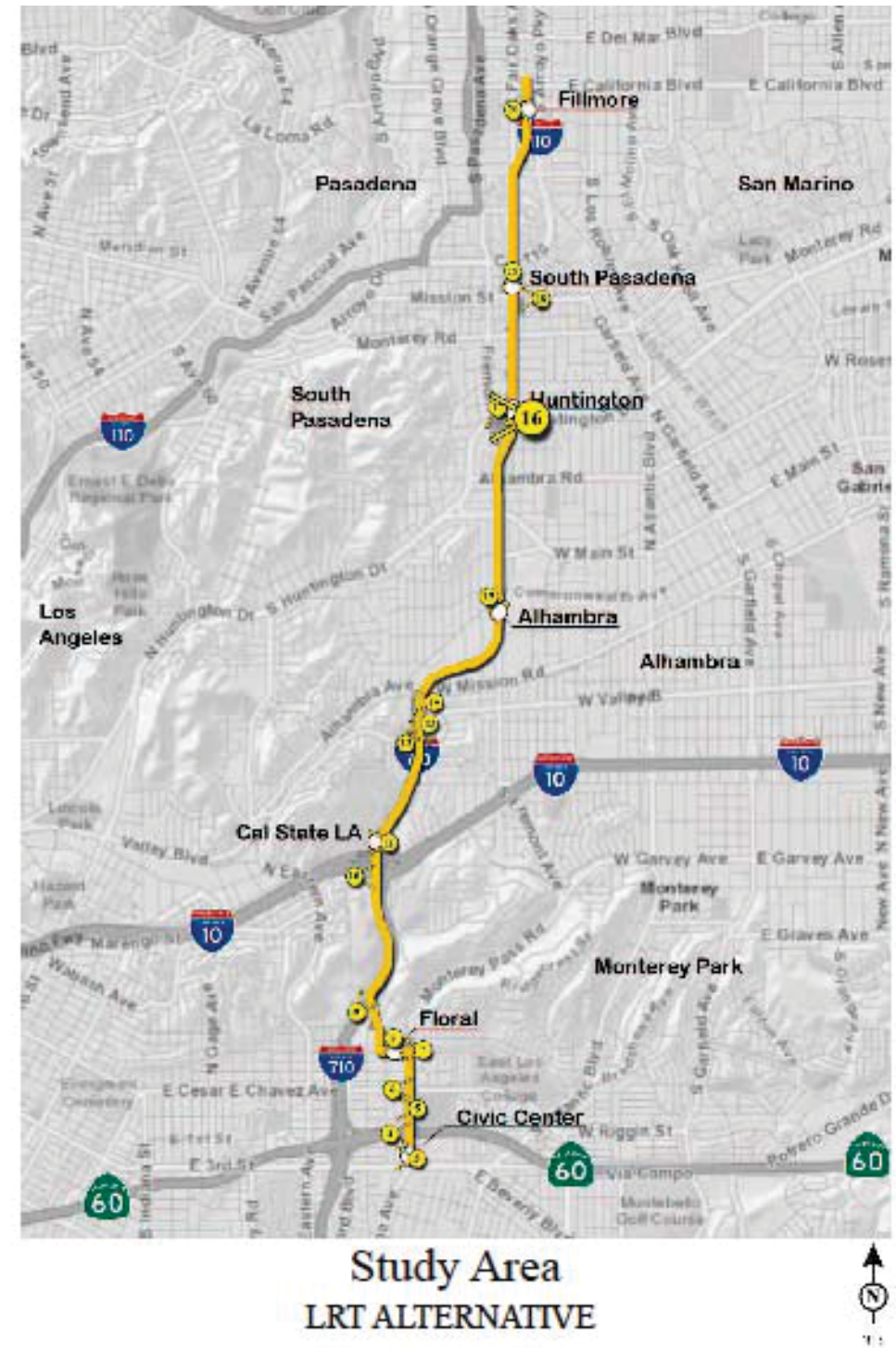
Visual Simulation: Proposed Huntington Station.

KEY VIEW 16-LRT

1600 Huntington Drive
City of South Pasadena, CA 91030

GPS Location:
Latitude = 34° 6' 15.23"N
Longitude = 118° 8' 57.20"W
Heading = 269° W

The location of the Key View 16-LRT was taken place along Huntington Drive. The view looks west towards the proposed Huntington Station.



Study Area
LRT ALTERNATIVE

LEGEND	
	Light Rail Transit (LRT) Alternative
	BRT Stations
	LRT Key View Locations
	Freeways
	Major Roads
	Residential



NOT TO SCALE
SOURCE: Tatsumi and Partners, Inc. (2013)
E:\CHM1105\G\Visual\Key View 16-LRT.cdr (1/12/2018)

FIGURE 3.6-19

SR 710 North Project
Key View 16 - LRT Description
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition



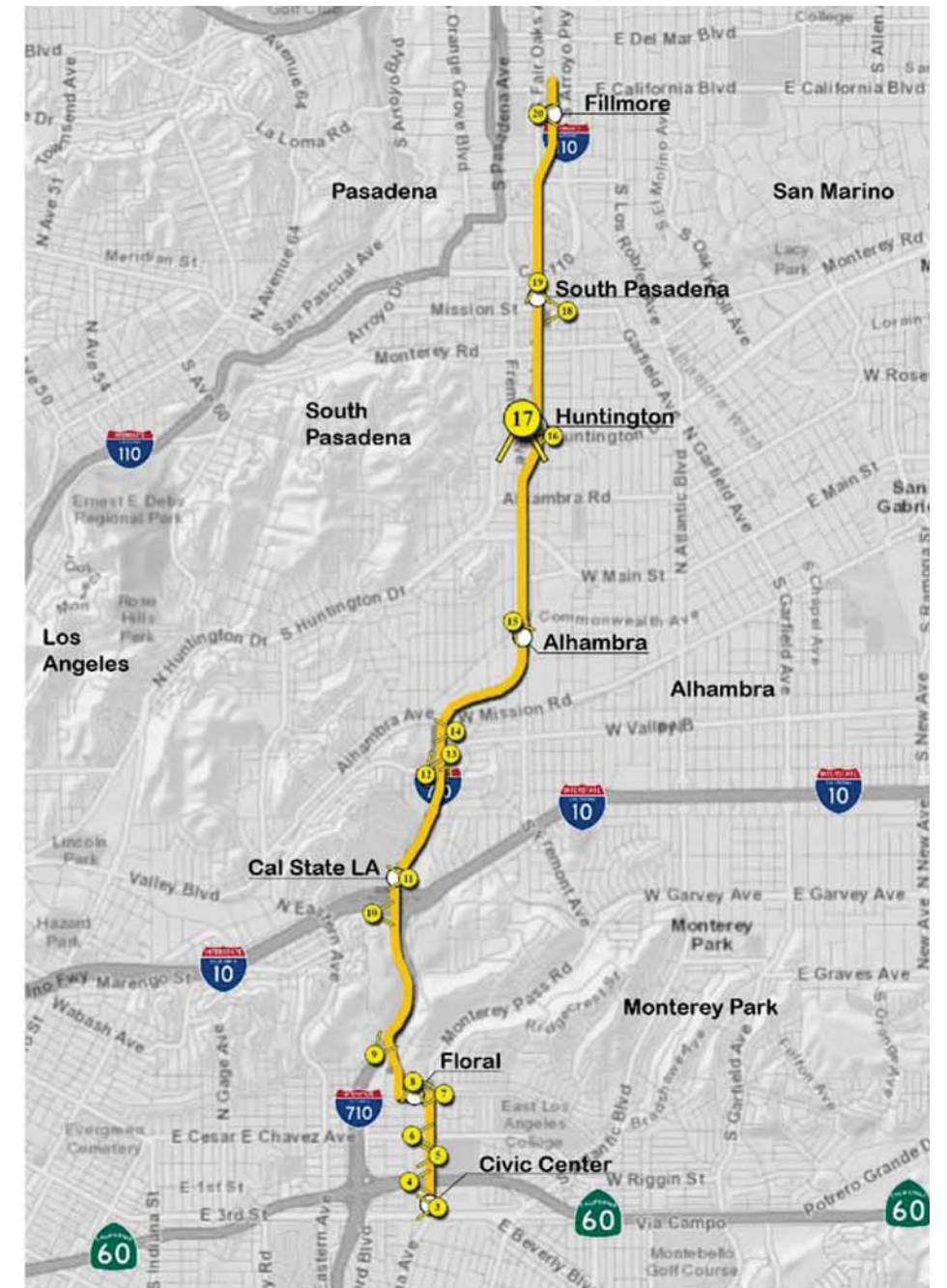
Visual Simulation: Proposed Huntington Station Parking Structure.

KEY VIEW 17-LRT

1502 Huntington Drive
City of South Pasadena, CA 91030

GPS Location:
Latitude = 34° 6' 15.82"N
Longitude = 118° 9' 5.28"W
Heading = 179° S

The location of the Key View 17-LRT was taken from the sidewalk in front of Gifted Hands Therapeutic store on Huntington Drive. The view looks south at the proposed Huntington Station parking structure.



Study Area
LRT ALTERNATIVE



LEGEND

- Light Rail Transit (LRT) Alternative
- BRT Stations
- LRT Key View Locations
- Freeways
- Major Roads
- Residential



FIGURE 3.6-20

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Existing Condition



Visual Simulation: Proposed South Pasadena Station

KEY VIEW 18-LRT

1701 Mission Street
City of South Pasadena, CA 91030

GPS Location:
Latitude = 34° 6' 55.69"N
Longitude = 118° 8' 56.24"W
Heading = 288° WNW

The location of Key View 18-LRT was taken from the intersection of Mission Street and Brent Avenue. The view looks northwest towards the proposed South Pasadena Station.



Study Area
LRT ALTERNATIVE

LEGEND

- Light Rail Transit (LRT) Alternative
- BRT Stations
- LRT Key View Locations
- Freeways
- Major Roads
- Residential



FIGURE 3.6-21

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Existing Condition



Visual Simulation: Proposed South Pasadena Station.

KEY VIEW 19-LRT

809 Fair Oaks Ave
City of South Pasadena, CA 91030

GPS Location:
Latitude = 34° 7'0.39"N
Longitude = 118° 9'1.30"W
Heading = 179° S

The location of the Key View 19-LRT was taken from the intersection of Fair Oaks Avenue and Hope Street. The view looks south towards the proposed Light Rail Transit South Pasadena Station.



Study Area
LRT ALTERNATIVE

LEGEND







-  Light Rail Transit (LRT) Alternative
-  BRT Stations
-  LRT Key View Locations
-  Freeways
-  Major Roads
-  Residential



FIGURE 3.6-22

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Existing Condition



Visual Simulation: Proposed Fillmore Station.

KEY VIEW 20-LRT

695 South Raymond Avenue
City of Pasadena, CA 91105

GPS Location:
Latitude = 34° 7' 59.89"N
Longitude = 118° 8' 55.90"W
Heading = 90° E

The location of the Key View 20-LRT was taken on the sidewalk along South Raymond Avenue. The view looks east towards the proposed Fillmore Station.



LEGEND

- Light Rail Transit (LRT) Alternative
- Freeways
- BRT Stations
- Major Roads
- LRT Key View Locations
- Residential



NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

F:\CHM1105\G\Visual\Key View 20-LRT.cdr (1/15/2018)

FIGURE 3.6-23

SR 710 North Project
Key View 20 - LRT Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition



Visual Simulation: Proposed Freeway tunnel impact area.

KEY VIEW 21-FWY

I-10 Westbound to SR 710 Northbound Ramp
City of Alhambra, CA 91803

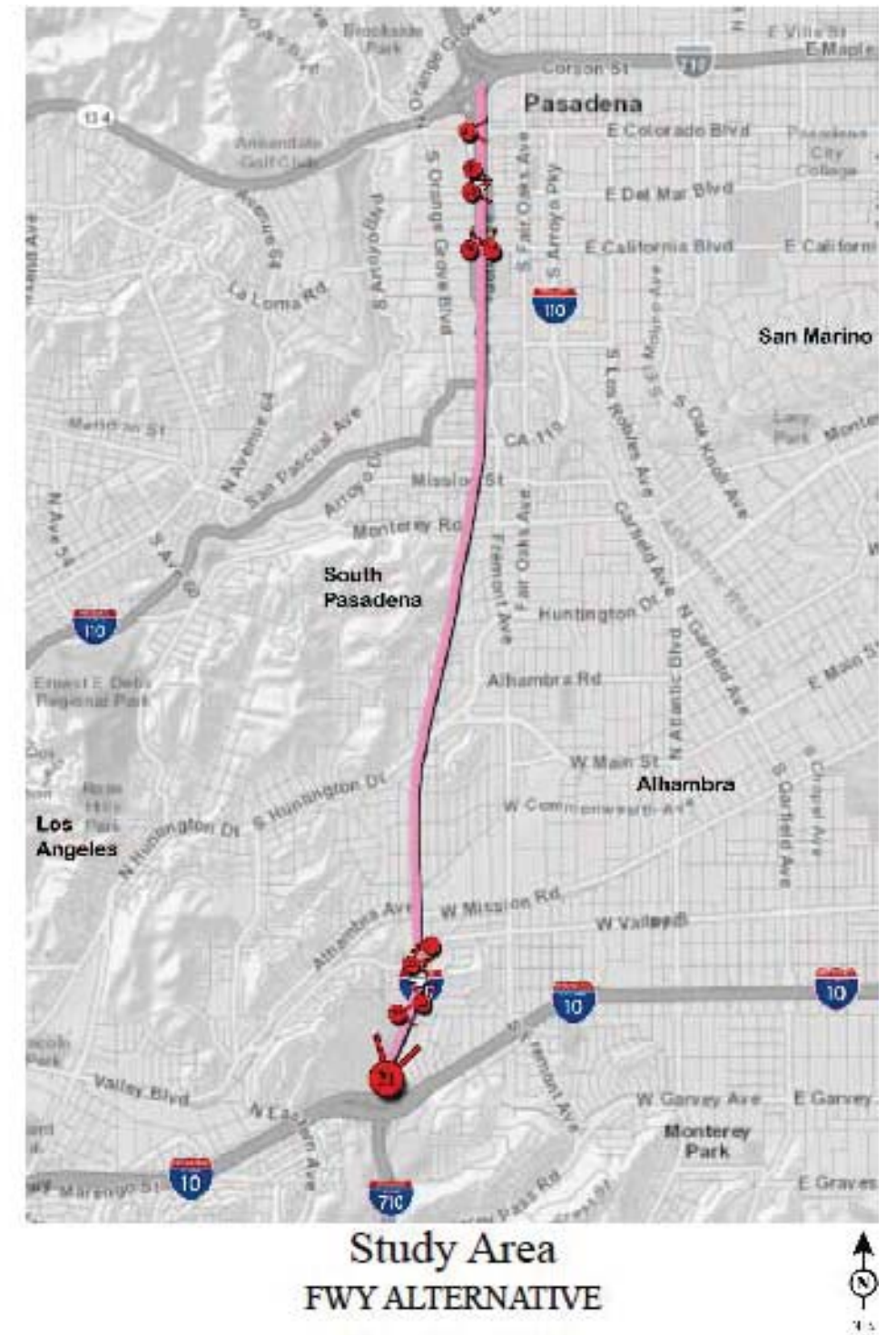
GPS Location:

Latitude = 34° 3' 55.06"N

Longitude = 118° 9' 50.67"W

Heading = 17° NNE

The location of Key View 21-FWY was taken from the SR 710 Northbound at I-10 Westbound to SR 710 ramp junction. The view looks northeast towards the proposed freeway tunnel impact area.



Study Area
FWY ALTERNATIVE

LEGEND

-  FWY Tunnel Alternative
-  FWY Tunnel Portals
-  FWY Tunnel Key View Locations
-  Freeways
-  Major Roads
-  Residential



NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

E:\CHM1105\G\Visual\Key View 21-FWY.cdr (1/15/2018)

FIGURE 3.6-24

SR 710 North Project
Key View 21 - FWY Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition



Visual Simulation: Proposed Bridge Replacement at Hellman Avenue.

KEY VIEW 22-FWY

5300 Paseo Rancho Castilla
City of Los Angeles, CA 90032

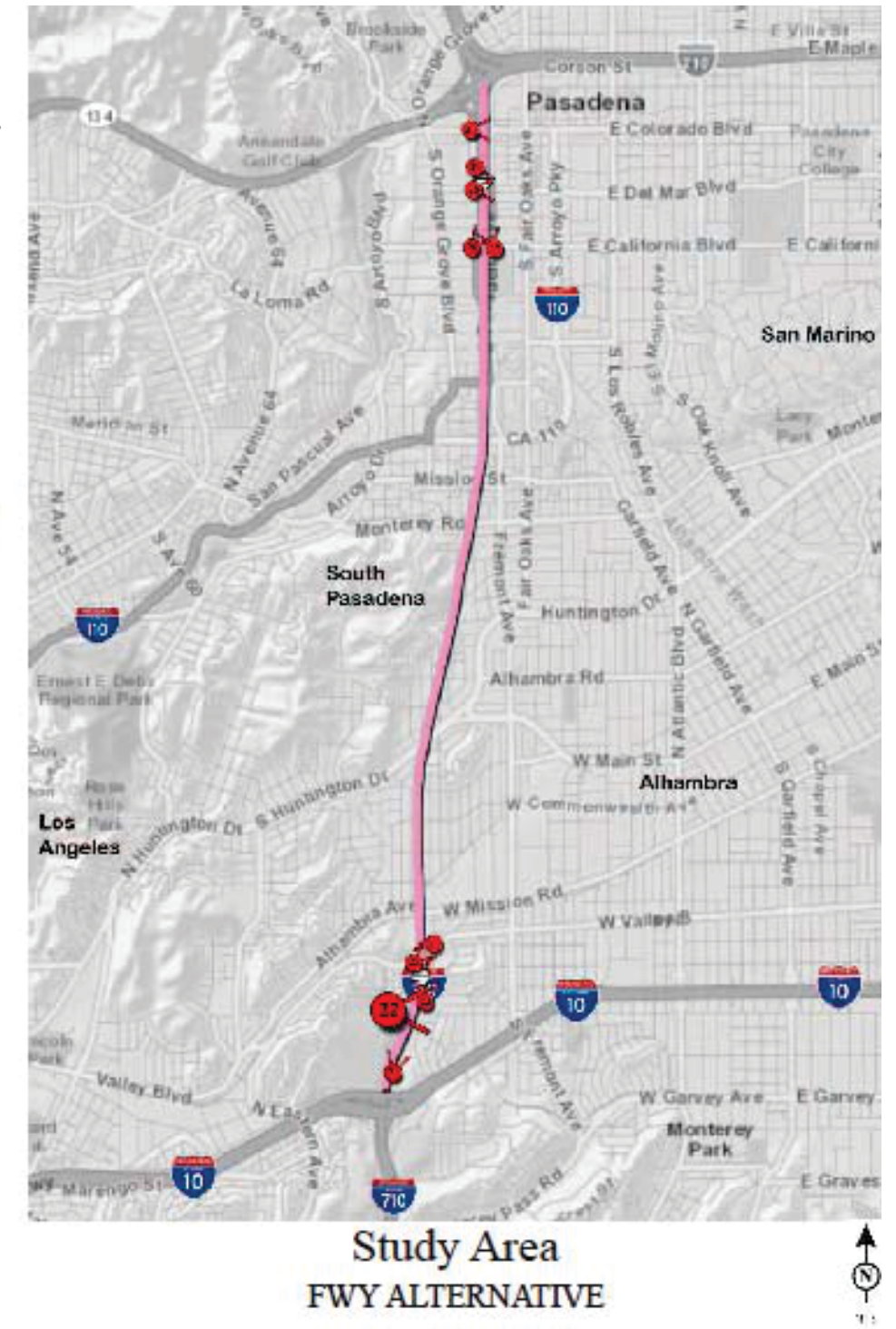
GPS Location:

Latitude = 34° 4' 10.92"N

Longitude = 118° 9' 47.67"W

Heading = 89° E

The location of Key View 22-FWY was taken on the sidewalk along Paseo Rancho Castilla, next to the California State University, Los Angeles campus parking lot. The view looks east towards the proposed Hellman Avenue bridge replacement over the SR 710.



LEGEND

-  FWY Tunnel Alternative
-  FWY Tunnel Portals
-  FWY Tunnel Key View Locations
-  Freeways
-  Major Roads
-  Residential



NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

I:\CHM1105\G\Visual\Key View 22-FWY.cdr (1/15/2018)

FIGURE 3.6-25

SR 710 North Project
Key View 22 - FWY Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition



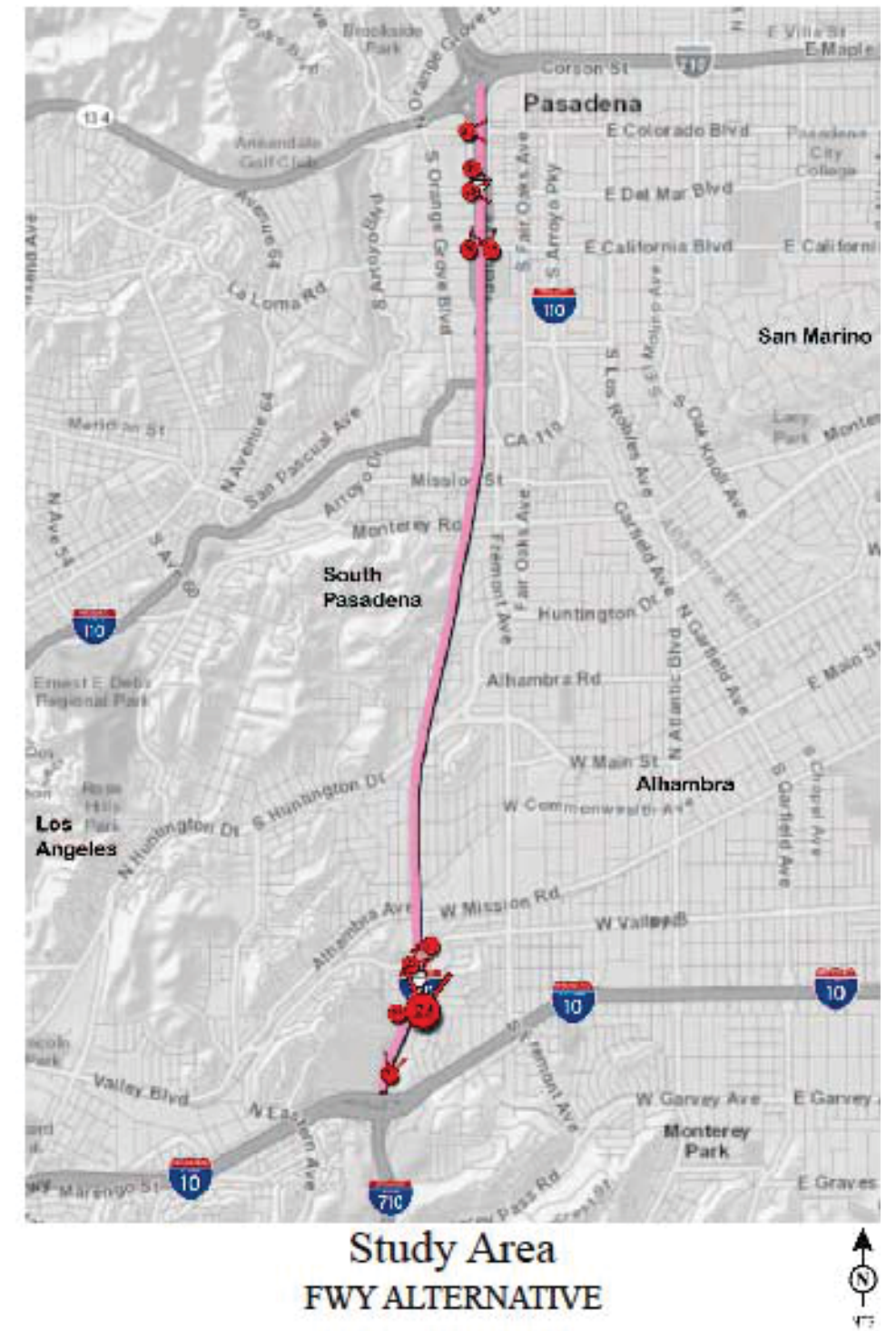
Visual Simulation: Proposed southern portal.

KEY VIEW 23-FWY

SR 710 Northbound, North of Paseo Rancho Castilla
City of Alhambra, CA 91803

GPS Location:
Latitude = 34° 4' 13.87"N
Longitude = 118° 9' 41.33"W
Heading = 18° NNE

The location of Key View 23-FWY was from the SR 710 Northbound shoulder approx. 360 feet north of Hellman Avenue bridge. The view looks northeast towards the proposed southern portal.



Study Area
FWY ALTERNATIVE

- LEGEND
- FWY Tunnel Alternative
 - FWY Tunnel Portals
 - FWY Tunnel Key View Locations
 - Freeways
 - Major Roads
 - Residential



FIGURE 3.6-26

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Existing Condition

KEY VIEW 24-FWY

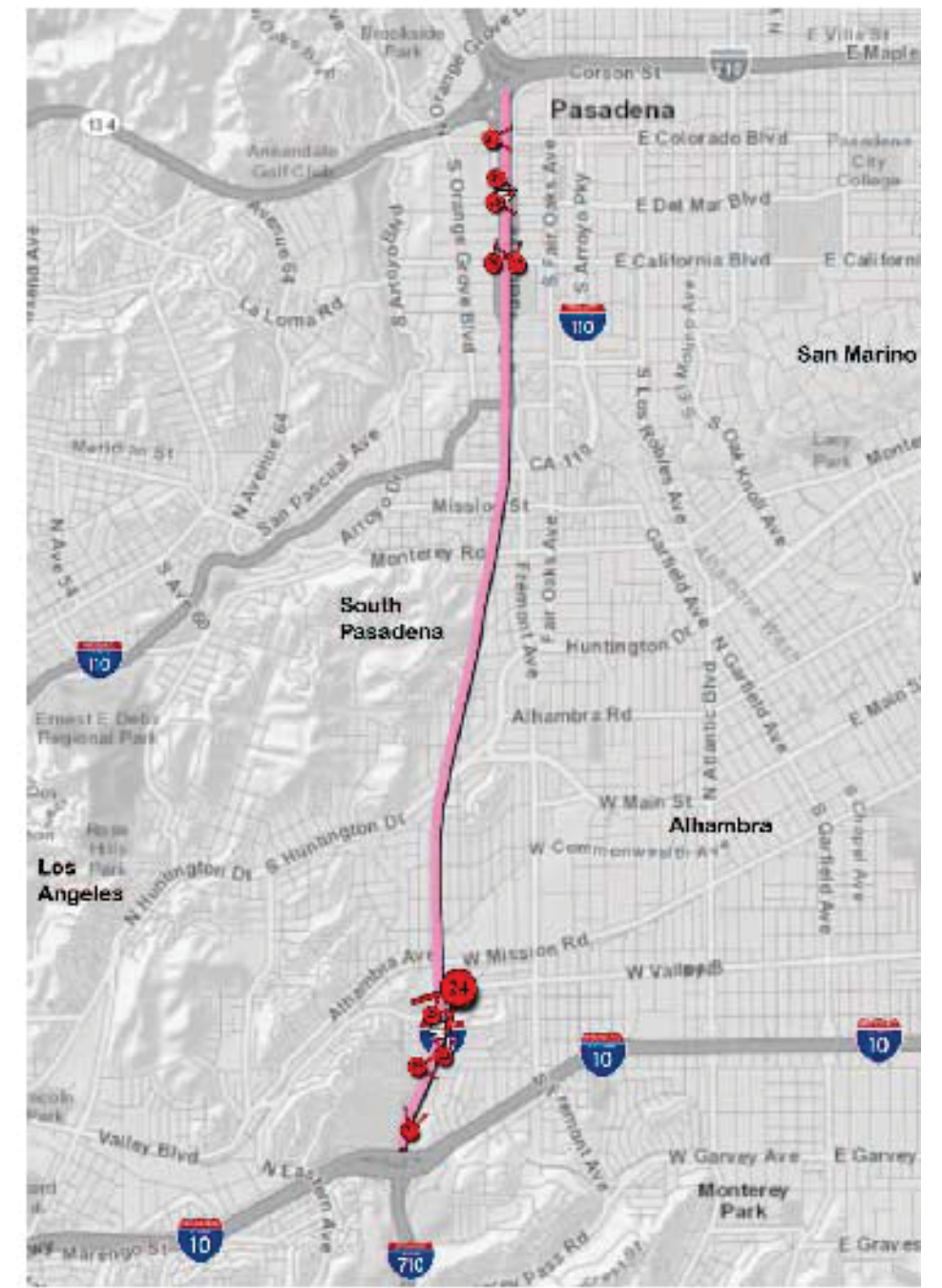
3201 W. Valley Boulevard
City of Alhambra, CA 91803

GPS Location:
Latitude = 34° 4'31.70"N
Longitude = 118° 9'37.02"W
Heading = 245° WSW

The location of Key View 24-FWY was taken on the sidewalk along Valley Boulevard slightly east of the SR 710 off-ramp. The view looks southwest towards the proposed southern portal area.





Visual Simulation: Proposed southern portal area.



Study Area
FWY ALTERNATIVE



LEGEND			
	FWY Tunnel Alternative		Freeways
	FWY Tunnel Portals		Major Roads
	FWY Tunnel Key View Locations		Residential



NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

E:\CHM1105\G\Visual\Key View 24-FWY.cdr (1/15/2018)

FIGURE 3.6-27

SR 710 North Program
Key View 24 - FWY Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition

KEY VIEW 25-FWY

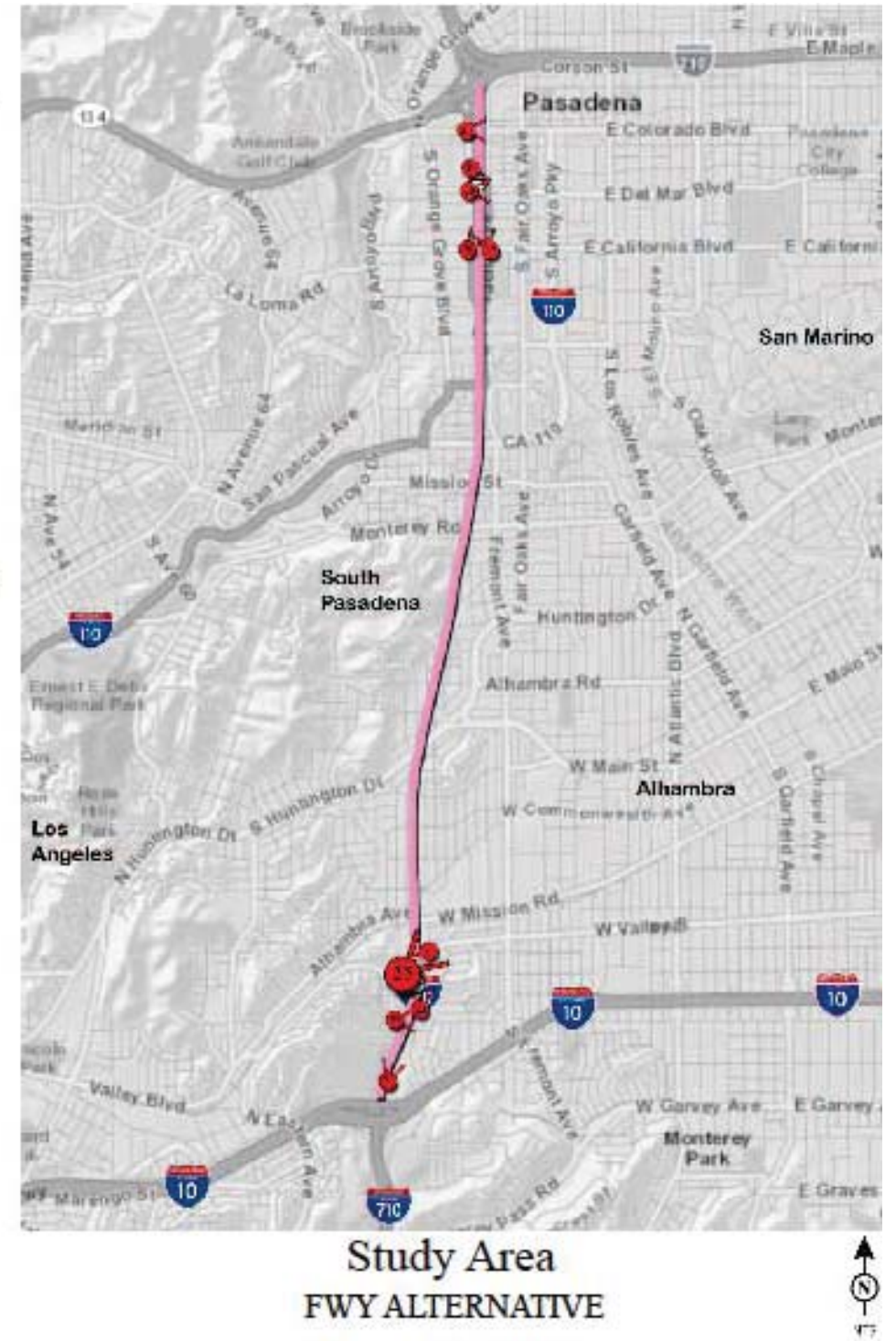
5288 West Valley Boulevard
City of Alhambra, CA 91803

GPS Location:
Latitude = 34° 4' 28.66"N
Longitude = 118° 9' 42.27"W
Heading = 25° NNE

The location of Key View 25-FWY was taken at the intersection of SR 710 on-ramp and Valley Boulevard. The view looks northeast towards the proposed Operation Maintenance Building (OMC).



Visual Simulation: Proposed Operation Maintenance Building (OMC).



Study Area
FWY ALTERNATIVE







LEGEND			
	FWY Tunnel Alternative		Freeways
	FWY Tunnel Portals		Major Roads
	FWY Tunnel Key View Locations		Residential



FIGURE 3.6-28

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Existing Condition



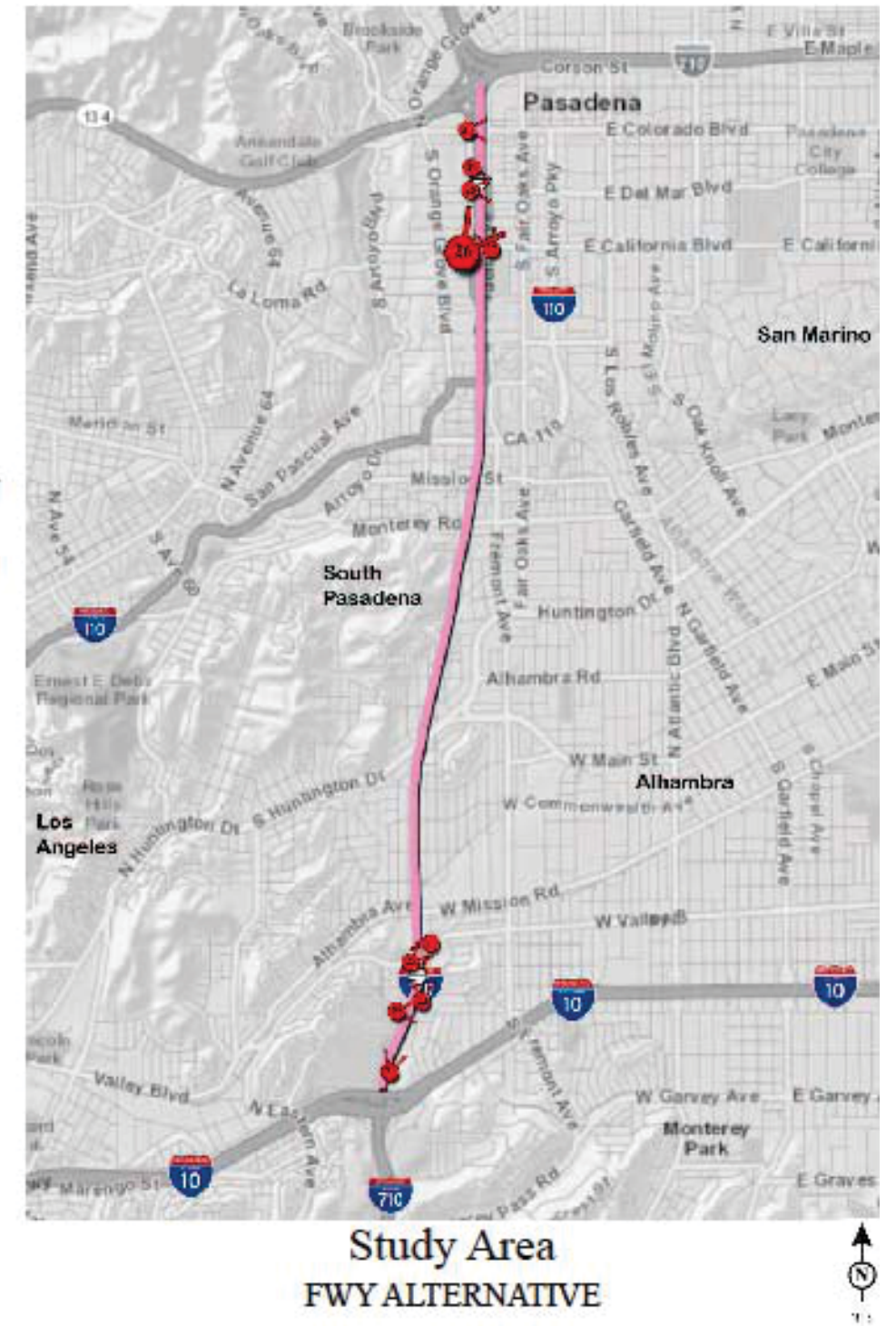
Visual Simulation: Proposed Freeway tunnel impact at W. California Boulevard and Saint John Avenue.

KEY VIEW 26-FWY

300-336 W. California Boulevard
City of Pasadena, CA 91105

GPS Location:
Latitude = 34° 8' 8.83"N
Longitude = 118° 9' 20.18"W
Heading = 9° N

The location of Key View 26-FWY was taken from the corner of Singer Park, intersection of Saint John Avenue and California Boulevard. The view looks north towards the proposed Operation Maintenance Building (OMC).



LEGEND			
	FWY Tunnel Alternative		Freeways
	FWY Tunnel Portals		Major Roads
	FWY Tunnel Key View Locations		Residential



NOT TO SCALE
SOURCE: Tatsumi and Partners, Inc. (2013)
E:\CHM1105\G\Visual\Key View 26-FWY.cdr (1/15/2018)

FIGURE 3.6-29

SR 710 North Project
Key View 26 - FWY Description
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition



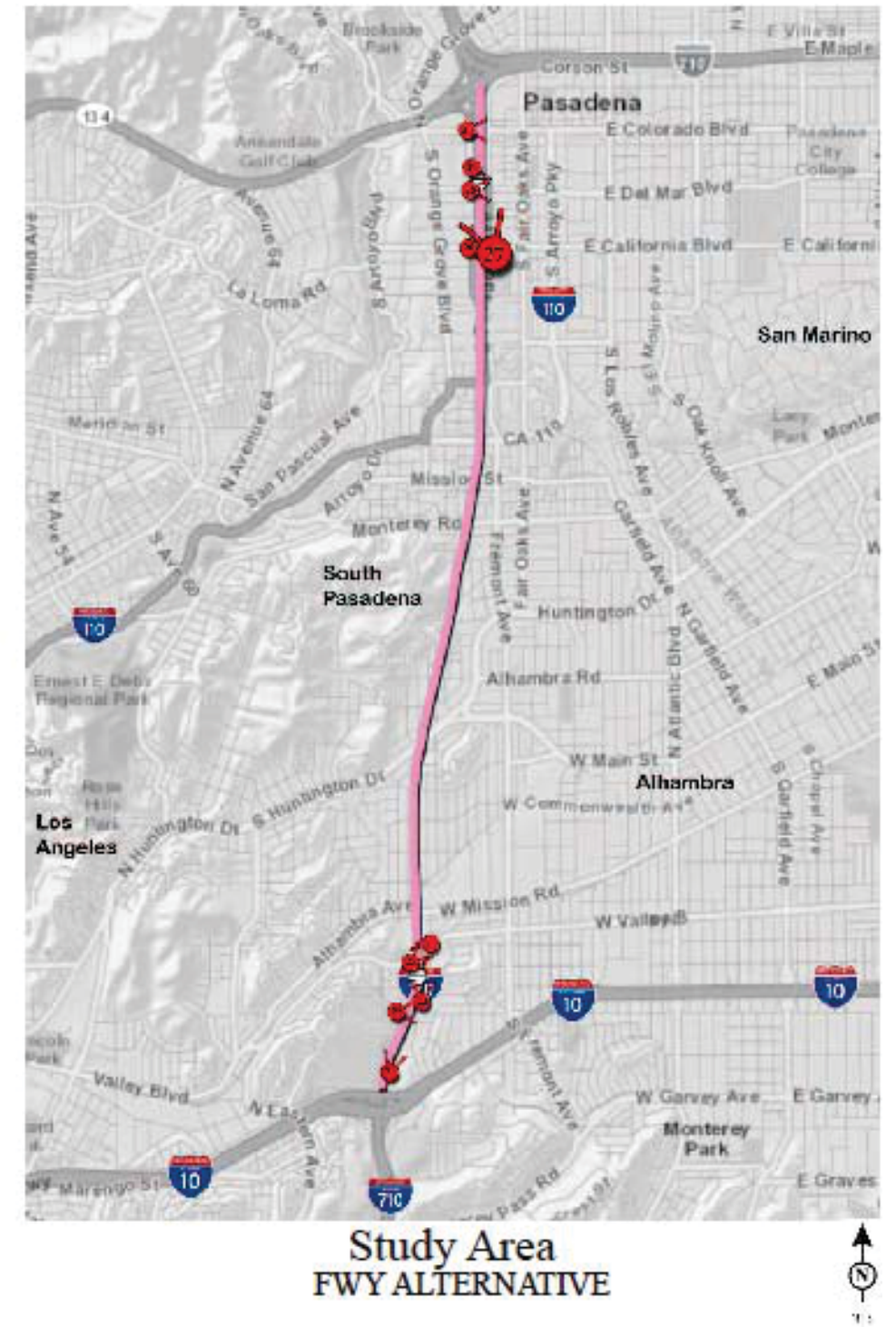
Visual Simulation: Proposed Freeway tunnel impact at W. California Boulevard and S. Pasadena Avenue.

KEY VIEW 27-FWY

Huntington Hospital
 100 W. California Boulevard
 City of Pasadena, CA 91105

GPS Location:
 Latitude = 34° 8'8.19"N
 Longitude = 118° 9'14.41"W
 Heading = 352° N

The location of Key View 27-FWY was taken from the corner of Huntington Hospital, intersection of S. Pasadena Avenue and California Boulevard. The view looks north towards the proposed Operation Maintenance Building (OMC).



Study Area
 FWY ALTERNATIVE

- LEGEND
- FWY Tunnel Alternative
 - FWY Tunnel Key View Locations
 - Freeways
 - Major Roads
 - Residential
 - FWY Tunnel Portals



FIGURE 3.6-30

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Existing Condition



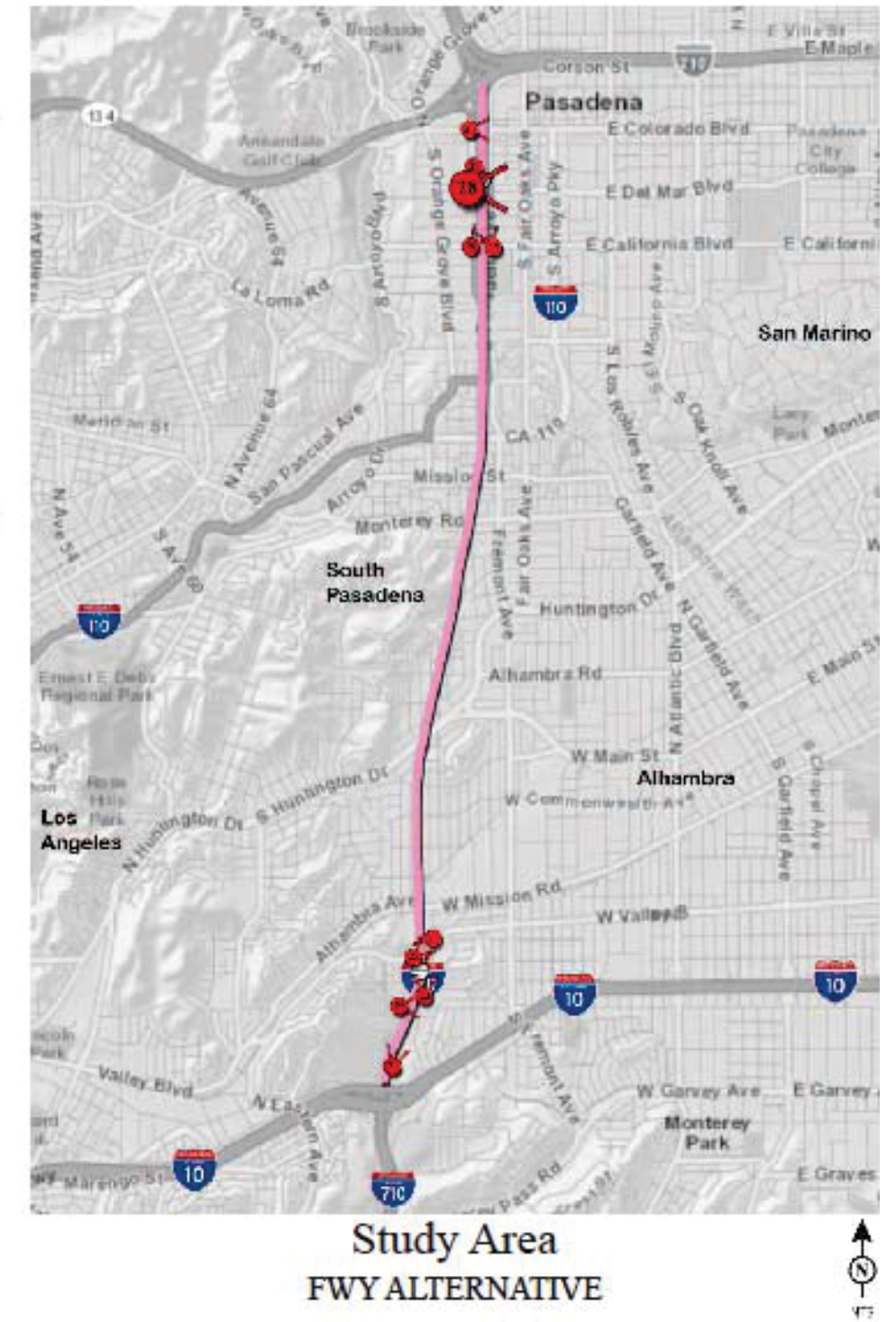
Visual Simulation: Proposed Bridge Replacement at Del Mar Blvd.

KEY VIEW 28-FWY

334-356 W. Del Mar Blvd
City of Pasadena, CA 91105

GPS Location:
Latitude = 34° 8'26.72"N
Longitude = 118° 9'21.75"W
Heading = 89° E

The location of Key View 28-FWY was taken from the street median along Del Mar Boulevard. The view looks east towards the proposed Del Mar Boulevard bridge replacement.



Study Area
FWY ALTERNATIVE







LEGEND			
	FWY Tunnel Alternative		Freeways
	FWY Tunnel Portals		Major Roads
	FWY Tunnel Key View Locations		Residential



FIGURE 3.6-31

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Existing Condition

KEY VIEW 29-FWY

SR-710 Southbound Freeway North of Der Mar Blvd Bridge
City of Pasadena, CA 91123

GPS Location:

Latitude = 34°8'31.64"N

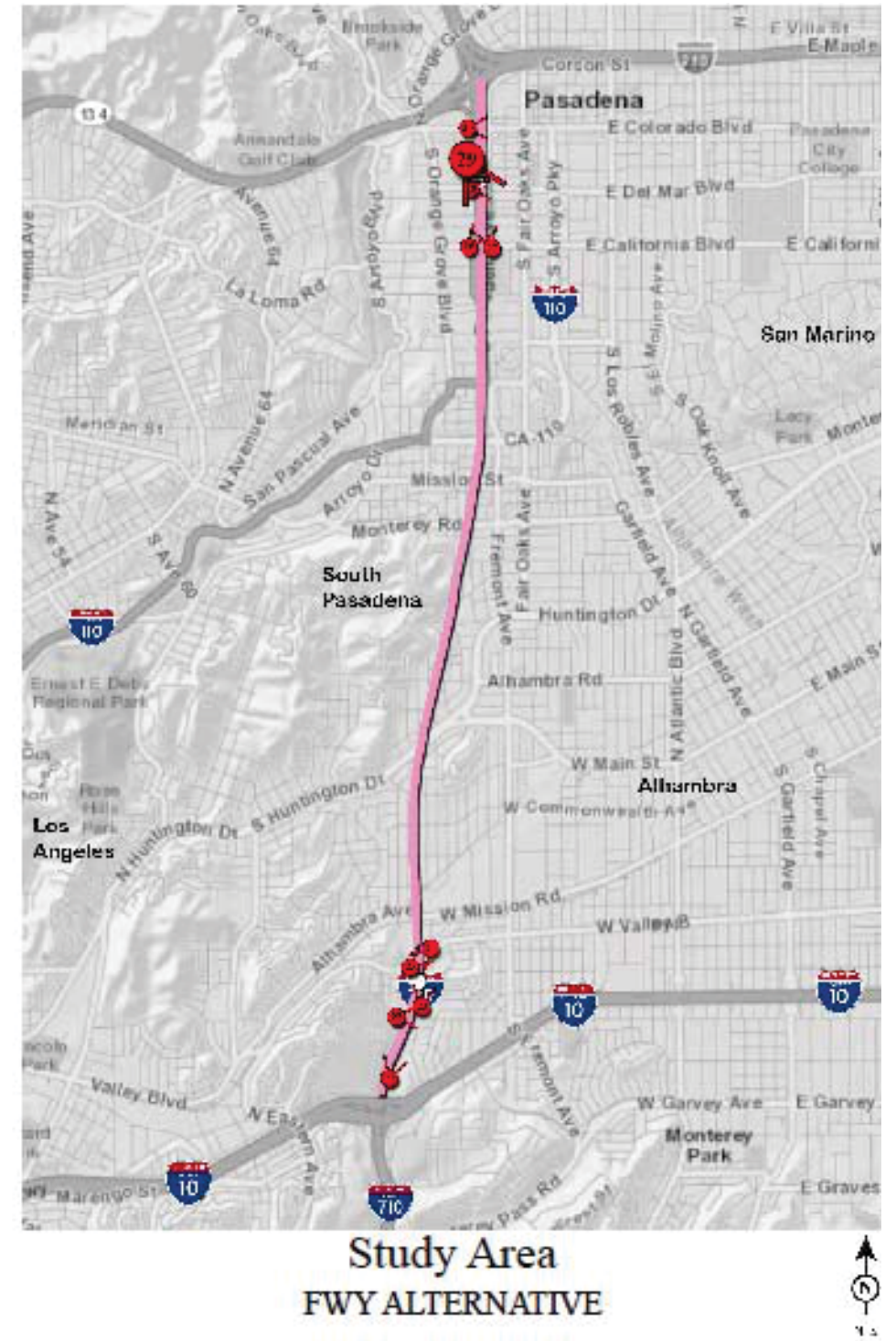
Longitude = 118° 9'19".09"W

Heading = 177° S

The location of Key View 29-FWY was taken from the SR 710 Southbound freeway approximately 450 feet north of the Del Mar Boulevard bridge. The view looks south towards the proposed northern portal.



Visual Simulation: Proposed northern portal.



Study Area
FWY ALTERNATIVE

- LEGEND
- FWY Tunnel Alternative
 - FWY Tunnel Key View Locations
 - Freeways
 - Major Roads
 - Residential
 - FWY Tunnel Portals



NOT TO SCALE
SOURCE: Tatsumi and Partners, Inc. (2013)
E:\CHM1105\G\Visual\Key View 29-FWY.cdr (1/15/2018)

FIGURE 3.6-32

SR 710 North Project
Key View 29 - FWY Description
07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Existing Condition



Visual Simulation: Proposed View at W. Colorado Blvd.

KEY VIEW 30-FWY

282-288 W. Colorado Boulevard
City of Pasadena, CA 91103

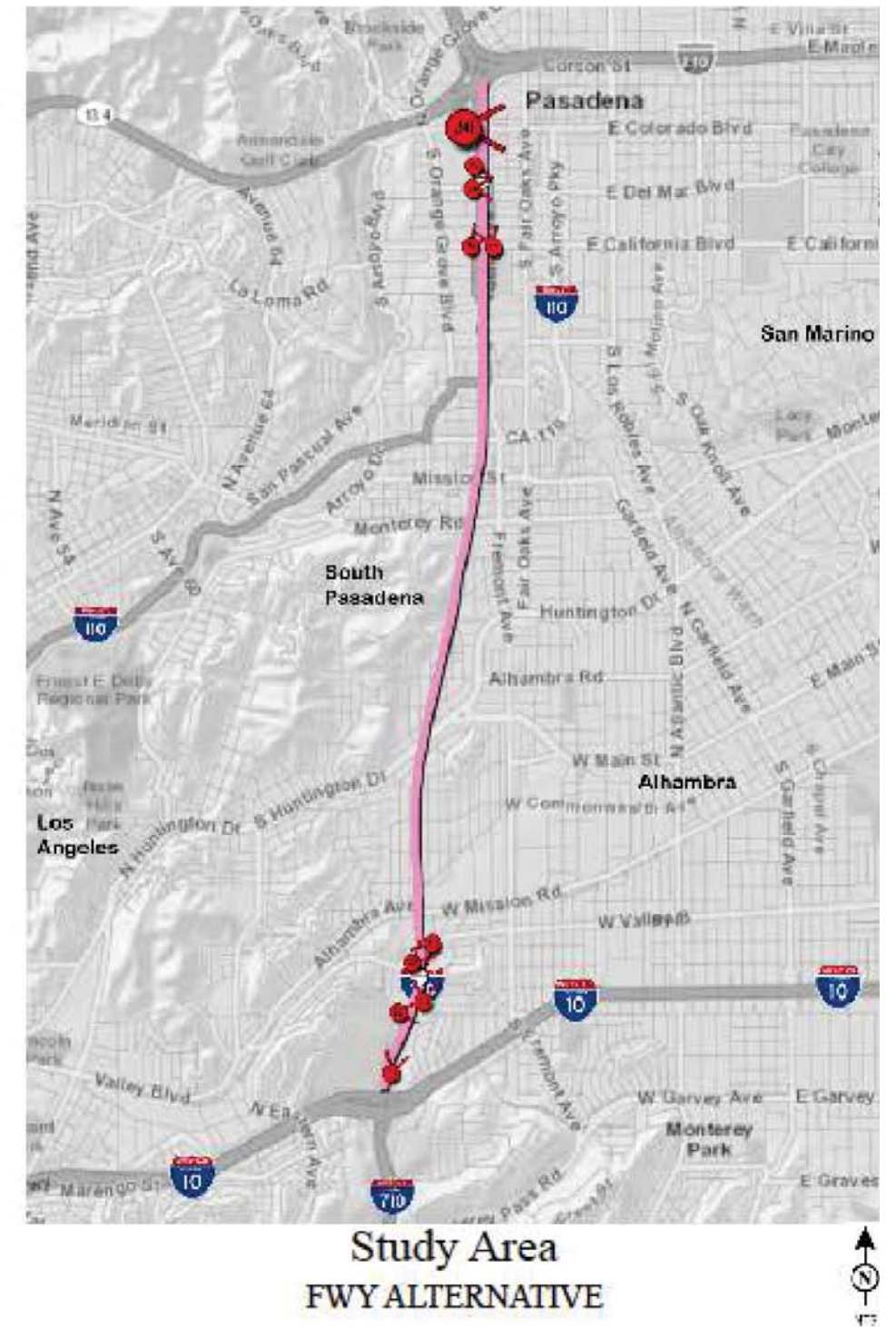
GPS Location:

Latitude = 34° 8' 44.73"N

Longitude = 118° 9' 22.54"W

Heading = 89° E

The location of Key View 30-FWY was taken from the street median along W. Colorado Boulevard. The view looks east towards the western side of Colorado Boulevard bridge overpass of the SR 710 northern terminus. Visible new features would include a series six ventilation stacks for northern portal, new paving and new striping.



Study Area
FWY ALTERNATIVE

LEGEND

-  FWY Tunnel Alternative
-  FWY Tunnel Portals
-  FWY Tunnel Key View Locations
-  Freeways
-  Major Roads
-  Residential



NOT TO SCALE

SOURCE: Tatsumi and Partners, Inc. (2013)

E:\CHM1105\G\Visual\Key View 30-FWY.cdr (1/15/2018)

FIGURE 3.6-33

SR 710 North Project
Key View 30 - FWY Description

07-LA-710 (SR 710)
EA 187900
EFIS 0700000191

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Appendix N: Noise Tables, Figures and FHWA Noise Modeling Results

This appendix contains the following tables and figures, which support the analysis in Section 3.14, Noise and Vibration:

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Figure 3.14-6: Noise Measurement and Receptor Locations and Modeled Noise Barriers – Freeway Tunnel Alternative Single-Bore Design Variation N-155

Figure 3.14-7: Noise Measurement and Receptor Locations and Modeled Noise Barriers – Freeway Tunnel Alternative Dual-Bore Design Variation N-185

Figure 3.14-8: Locations of Ground-Borne Noise Measures for the LRT Alternative N-215

This appendix also includes the FHWA noise modeling results which include the model inputs. This material is provided following the last page of Figure 3.14-8.

TABLE 3.14.2:
Noise Levels Defining Impact for Transit Projects

Existing Noise Exposure $L_{eq}(h)$ or L_{dn} (dBA) ¹	Project Noise Impact Exposure, ¹ $L_{eq}(h)$ or L_{dn} (dBA)					
	Category 1 or 2 Sites			Category 3 Sites		
	No Impact	Moderate Impact	Severe Impact	No Impact	Moderate Impact	Severe Impact
<43	<Ambient + 10	Ambient + 10–15	>Ambient + 15	<Ambient + 15	Ambient + 15–20	>Ambient + 20
43	<52	52–58	>58	<57	57–63	>63
44	<52	52–58	>58	<57	57–63	>63
45	<52	52–58	>58	<57	57–63	>63
46	<53	53–59	>59	<58	58–64	>64
47	<53	53–59	>59	<58	58–64	>64
48	<53	53–59	>59	<58	58–64	>64
49	<54	54–59	>59	<59	59–64	>64
50	<54	54–59	>59	<59	59–64	>64
51	<54	54–60	>60	<59	59–65	>65
52	<55	55–60	>60	<60	60–65	>65
53	<55	55–60	>60	<60	60–65	>65
54	<55	55–61	>61	<60	60–66	>66
55	<56	56–61	>61	<61	61–66	>66
56	<56	56–62	>62	<61	61–67	>67
57	<57	57–62	>62	<62	62–67	>67
58	<57	57–62	>62	<62	62–67	>67
59	<58	58–63	>63	<63	63–68	>68
60	<58	58–63	>63	<63	63–68	>68
61	<59	59–64	>64	<64	64–69	>69
62	<59	59–64	>64	<64	64–69	>69
63	<60	60–65	>65	<65	65–70	>70
64	<61	61–65	>65	<66	66–70	>70
65	<61	61–66	>66	<66	66–71	>71
66	<62	62–67	>67	<67	67–72	>72
67	<63	63–67	>67	<68	68–72	>72
68	<63	63–68	>68	<68	68–73	>73
69	<64	64–69	>69	<69	69–74	>74
70	<65	65–69	>69	<70	70–74	>74
71	<66	66–70	>70	<71	71–75	>75
72	<66	66–71	>71	<71	71–76	>76
73	<66	66–71	>71	<71	71–76	>76
74	<66	66–72	>72	<71	71–77	>77
75	<66	66–73	>73	<71	71–78	>78
76	<66	66–74	>74	<71	71–79	>79
77	<66	66–74	>74	<71	71–79	>79
>77	<66	66–75	>75	<71	71–80	>80

Source: *Noise Study Report* (2014).

¹ L_{dn} is used for land use where nighttime sensitivity is a factor; L_{eq} during the hour of maximum transit noise exposure is used for land use involving only daytime activities.

dBA = A-weighted decibels

L_{dn} = day-night average sound level

$L_{eq}(h)$ = 1-hour A-weighted equivalent continuous sound level

TABLE 3.14.3:
Noise Impact Criteria – Effect on Cumulative Noise Exposure

L _{dn} or L _{eq} (in dBA rounded to nearest whole decibel)			
Existing Noise Exposure	Allowable Project Noise Exposure	Allowable Combined Total Noise Exposure	Allowable Noise Exposure Increase
45	51	52	7
50	53	55	5
55	55	58	3
60	57	62	2
65	60	66	1
70	64	71	1
75	65	75	0

Source: *Noise Study Report* (2014).

dBA = A-weighted decibels

L_{eq} = equivalent continuous sound level

L_{dn} = day-night average sound level

TABLE 3.14.4:
Ground-Borne Vibration and Ground-Borne Noise Impact Criteria for Detailed Analysis

Land Use Category	Ground-Borne Vibration Impact Levels (VdB re: 1 micro-inch/second)			Ground-Borne Noise Impact Levels (dB re: 20 micro-Pascals)		
	Frequent Events ¹	Occasional Events ²	Infrequent Events ³	Frequent Events ¹	Occasional Events ²	Infrequent Events ³
Category 1: Buildings where vibration would interfere with interior operations	65 VdB ⁴	65 VdB ⁴	65 VdB ⁴	N/A ⁵	N/A ⁵	N/A ⁵
Category 2: Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB	35 dBA	38 dBA	43 dBA
Category 3: Institutional land uses with primarily daytime use.	75 VdB	78 VdB	83 VdB	40 dBA	43 dBA	48 dBA

Source: *Groundborne Noise and Vibration Impacts Report* (2014).

¹ “Frequent Events” is defined as more than 70 vibration events of the same source per day. Most rapid transit projects fall into this category

² “Occasional Events” is defined as 30 to 70 vibration events of the same source per day. Most commuter trunk lines have this many operations.

³ “Infrequent Events” is defined as fewer than 30 vibration events of the same kind per day. This category includes most commuter rail branch lines.

⁴ This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research will require detailed evaluation to define the acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the heating, ventilation, and air conditioning systems and stiffened floors.

⁵ Vibration-sensitive equipment is not sensitive to ground-borne noise.

dB = decibels

dBA = A-weighted decibels

N/A = Not Applicable

VdB = vibration velocity decibels

TABLE 3.14.5:
Criteria for Special Land Use Categories

Type of Building or Room	Ground-Borne Vibration Impact Levels (VdB re: 1 micro-inch/second)		Ground-Borne Noise Impact Levels (dB re: 20 micro-Pascals)	
	Frequent Events ¹	Occasional or Infrequent Events ²	Frequent Events ¹	Occasional or Infrequent Events ²
Concert Halls	65 VdB	65 VdB	25 dBA	25 dBA
Television Studios	65 VdB	65 VdB	25 dBA	25 dBA
Recording Studios	65 VdB	65 VdB	25 dBA	25 dBA
Auditoriums	72 VdB	80 VdB	30 dBA	38 dBA
Theaters	72 VdB	80 VdB	30 dBA	43 dBA

Source: *Groundborne Noise and Vibration Impacts Report* (2014).

Note: If the building will rarely be occupied when trains are operating, there is no need to consider impact. As an example, consider locating a commuter rail line next to a concert hall. If no commuter trains will operate after 7:00 p.m., it should be rare that the trains will interfere with the use of the hall.

¹ "Frequent Events" is defined as more than 70 vibration events of the same source per day. Most rapid transit projects fall into this category.

² "Occasional or Infrequent Events" is defined as fewer than 70 vibration events per day. This category includes most commuter rail systems.

dB = decibels

dBA = A-weighted decibels

VdB = vibration velocity decibels

TABLE 3.14.6:
Construction Vibration Damage Criteria

Building Category	Peak Particle Velocity (inches/second)	Approximate Vibration Velocity Level (RMS VdB re: 1 micro-inch/second)
I. Reinforced-concrete, steel or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry building	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

Source: *Groundborne Noise and Vibration Impacts Report* (2014).

RMS = root mean square

VdB = vibration velocity decibels

TABLE 3.14.7:
Existing Land Uses in the Vicinity of the TSM/TDM Alternative

Improvement Name and No.	Description of Existing Land Uses in the Vicinity of the Improvement
Local Street Improvement L-2a	<p>Fremont Avenue South of Alhambra Road: Land uses along this segment of Fremont Avenue include single-family and multifamily residences that are at the same grade as Fremont Avenue.</p> <p>Fremont Avenue between Alhambra Road and Maple Street: Land uses along this segment of Fremont Avenue include single-family residences that are at the same grade as Fremont Avenue.</p> <p>Fremont Avenue between Maple Street and Huntington Drive: Land uses along this segment of Fremont Avenue include single-family residences and a school that are at the same grade as Fremont Avenue.</p>
Local Street Improvement L-3	<p>Atlantic Boulevard Between I-10 and Valley Boulevard: Land uses along this segment of Atlantic Boulevard include single-family and multifamily residences and commercial uses that range from being at the same grade as Atlantic Boulevard to 15 feet higher in elevation than Atlantic Boulevard.</p>
Local Street Improvement L-4	<p>Garfield Avenue Between I-10 and Valley Boulevard: Land uses along this segment of Garfield Avenue include single-family and multifamily residences, and office and commercial uses that range from at the same grade as Garfield Avenue to 15 feet higher in elevation than Garfield Avenue.</p>
Local Street Improvement L-5	<p>Rosemead Boulevard Between Marshall Street and Valley Boulevard: Land uses along this segment of Rosemead Boulevard include single-family and multifamily residences, a restaurant, and office and commercial uses that are at the same grade as Rosemead Boulevard.</p> <p>Rosemead Boulevard Between Valley Boulevard and North of Lower Azusa Road: Land uses along this segment of Rosemead Boulevard include single-family and multifamily residences, a restaurant, a school, a church, and office and commercial uses that are at the same grade as Rosemead Boulevard.</p>
Local Street Improvement L-8	<p>Fair Oaks Avenue Between South of Monterey Road and Grevelia Street: Land uses along this segment of Fair Oaks Avenue include single-family and multifamily residences and commercial uses with frequent outdoor use areas that are at the same grade as Fair Oaks Avenue.</p>
Other Road Improvement T-1	<p>SR 710 and Connector Road Between Paseo Rancho Castilla/Hellman Avenue and Alhambra Avenue/Mission Road: Land uses in this area include single-family residences and a commercial use (gas station). Land uses in this area range from 5 feet lower in elevation than SR 710 to 45 feet higher in elevation than SR 710 and the new connector road.</p>
Other Road Improvement T-2	<p>SR 110 Between Fair Oaks Avenue and Glenarm Street: Land uses along this segment of SR 110 include single-family and multifamily residences, a public works facility, and a school that range from 10 feet lower in elevation than SR 110 to 23 feet higher in elevation than SR 110.</p>
Other Road Improvement T-3	<p>Pasadena Avenue Between Bellefontaine Street and Union Street: Land uses along this segment of Pasadena Avenue include multifamily residences, a church with frequent outdoor human use areas, a hospital, vacant land, and commercial uses with and without frequent outdoor use areas. These land uses range from 5 feet lower in elevation than SR 710 to 30 feet higher in elevation than SR 710 and are generally at the same grade as Pasadena Avenue.</p> <p>St. John Avenue Between Bellefontaine Street and Union Street: Land uses along this segment of St. John Avenue include single-family and multifamily residences, two schools, a sports field, and a park. These land uses range from 5 feet lower in elevation than SR 710 to 40 feet higher in elevation than SR 710 and are generally at the same grade as St. John Avenue.</p>

Source: *Noise Study Report* (2014).

I-10 = Interstate 10

SR 710 = State Route 710

SR 110 = State Route 110

TDM = Transportation Demand Management

TSM = Transportation System Management

TABLE 3.14.8:
Predicted Future Noise Level and Noise Barrier Analysis – TSM/TDM Alternative¹

TSM/TDM Intersection ID	Receptor No.	ETW No.	TNB No.	Land Use	No. of Units/Receptors	Location	Existing Noise Level (dBA Leq(h)) ²	Future Worst-Hour Noise Levels (dBA Leq(h))																															
								2035 Noise Level				Activity Category	Impact Type ^{3,4}	Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR) ^{2,5,6}																									
								Without Project ²	With Project ²	With Project Minus No Project Conditions	With Project Minus Existing Conditions			6 Feet			8 Feet			10 Feet			12 Feet			14 Feet			16 Feet			18 Feet			20 Feet				
														Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R		
T-1 cont'd	T1/TR-12		TNB No. 1	Residential	2	Westmond Drive	66	66	67	1	1	B(67)	A/E	--	--	--	58	9	2	57	10	2	57	10	2	56	11	2	56	11	2	56	11	2	55	12	2		
	T1/TR-13		TNB No. 1	Residential	2	Westmond Drive	65	66	67	1	2	B(67)	A/E	--	--	--	59	8	2	59	8	2	59	8	2	59	8	2	59	8	2	59	8	2	59	8	2		
	T1/TR-14			Commercial	1	Valley Boulevard	71	71	71	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	T1/TR-15			Residential	4	Westmond Drive	62	62	64	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	T1/TR-16			Residential	5	Westmond Drive	59	59	62	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	T1/TR-17			Residential	5	Westmond Drive	56	56	60	4	4	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	T1/TR-18			Residential	3	Westmond Drive	56	56	60	4	4	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	T1/TR-19			Residential	3	Front Street	62	62	64	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	T1/TR-20			Industrial	1	Mission Road	64	65	66	1	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	T1/TR-21			Residential	1	Stockbridge Avenue	58	59	60	1	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	T1/TR-22			Residential	4	Lowell Avenue	59	59	61	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T1/TR-23			Residential	2	Lowell Avenue	59	60	61	1	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T1/TR-24			Commercial/Industrial	1	Alhambra Avenue	67	68	69	1	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	T1/TR-25			Commercial/Industrial	1	Alhambra Avenue	68	68	70	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	T1/TR-26			Commercial/Industrial	1	Alhambra Avenue	63	64	68	4	5	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	T1/TR-27			Industrial	1	Valley Boulevard	53	53	60	7	7	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	T1/TR-28			Industrial	1	Valley Boulevard	55	55	59	4	4	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	T1/TR-29			Residential	1	Valley Boulevard	66	66	69	3	3	B(67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	T1/TR-30			TNB No. 2	Residential	1	Highbury Avenue	67	67	64	-3	-3	B(67)	--	62	2	--	61	3	--	60	4	--	59	5	1	59	5	1	58	6	1	57	7	1	57	7	1	
	T1/TR-31			TNB No. 2	Residential	4	Highbury Avenue	67	67	65	-2	-2	B(67)	--	64	1	--	62	3	--	60	5	4	59	6	4	59	6	4	58	7	4	57	8	4	57	8	4	
T1/TR-32			TNB No. 2	Residential	1	Highbury Avenue	64	64	64	0	0	B(67)	--	63	1	--	63	1	--	63	1	--	61	3	--	61	3	--	60	4	--	59	5	1	59	5	1		
T1/TR-33			TNB No. 2	Residential	4	Highbury Avenue	67	67	66	-1	-1	B(67)	A/E	66	0	--	66	0	--	64	2	--	62	4	--	61	5	4	60	6	4	60	6	4	59	7	4		
T1/TR-34			TNB No. 2	Residential	2	Highbury Avenue	68	68	68	0	0	B(67)	A/E	67	1	--	67	1	--	66	2	--	64	4	--	62	6	2	61	7	2	60	8	2	60	8	2		
T1/TR-35			TNB No. 2	Residential	5	Highbury Avenue	62	62	62	0	0	B(67)	--	62	0	--	62	0	--	62	0	--	61	1	--	60	2	--	59	3	--	58	4	--	58	4	--		
T1/TR-36			TNB No. 2	Residential	4	Highbury Avenue	70	70	70	0	0	B(67)	A/E	69	1	--	69	1	--	67	3	--	66	4	--	66	4	--	65	5	4	65	5	4	65	5	4		
T-2	T2/TR-1		TNB No. 1	Residential	9	Garfield Avenue	61	62	62	0	1	B(67)	--	59	3	--	59	3	--	59	3	--	58	4	--	58	4	--	58	4	--	58	4	--	58	4	--		
	T2/TR-2		TNB No. 1	Residential	4	Garfield Avenue	67	68	68	0	1	B(67)	A/E	59	9	4	58	10	4	57	11	4	56	12	4	56	12	4	54	14	4	53	15	4	52	16	4		
	T2/TR-3			Utility	1	Garfield Avenue	58	59	59	0	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	T2/TR-4			Residential	1	Garfield Avenue	61	62	62	0	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	T2/TR-5			School Tennis	1	Marengo Avenue	60	61	61	0	1	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	T2/TR-6			School Pool	1	Marengo Avenue	61	61	61	0	0	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	T2/TR-7			Utility	1	State Street	70	70	70	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	T2/TR-8		TNB No. 2	Residential	4	State Street	71	71	71	0	0	B(67)	A/E	69	2	--	69	2	--	68	3	--	68	3	--	68	3	--	68	3	--	68	3	--	68	3	--	68	3
	T2/TR-9		TNB No. 2	Residential	13	State Street ⁷	72	74	74	0	2	B(67)	A/E	71	3	--	69	5	13	68	6	13	67	7	13	66	8	13	65	9	13	65	9	13	65	9	13		
	T2/TR-10		TNB No. 2	Residential	13	State Street ⁸	72	74	74	0	2	B(67)	A/E	73	1	--	72	2	--	71	3	--	69	5	13	67	7	13	66	8	13	65	9	13	65	9	13		
	T2/TR-11		TNB No. 2	Residential	8	State Street ⁸	68	70	70	0	2	B(67)	A/E	69	1	--	68	2	--	66	4	--	63	7	8	62	8	8	61	9	8	61	9	8	61	9	8		
	T2/TR-12		TNB No. 2	Residential	1	State Street	53	54	54	0	1	B(67)	--	53	1	--	53	1	--	52	2	--	52	2	--	51	3	--	51	3	--	51	3	--	50	4	--		

TABLE 3.14.8:
 Predicted Future Noise Level and Noise Barrier Analysis – TSM/TDM Alternative¹

TSM/TDM Intersection ID	Receptor No.	ETW No.	TNB No.	Land Use	No. of Units/Receptors	Location	Existing Noise Level (dBA L _{eq} (h)) ²	Future Worst-Hour Noise Levels (dBA L _{eq} (h))																														
								2035 Noise Level				Activity Category	Impact Type ^{3,4}	Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR) ^{2,5,6}																								
								Without Project ²	With Project ²	With Project Minus No Project Conditions	With Project Minus Existing Conditions			6 Feet			8 Feet			10 Feet			12 Feet			14 Feet			16 Feet			18 Feet			20 Feet			
														L _{eq} (h)	I.L.	NBR	L _{eq} (h)	I.L.	NBR	L _{eq} (h)	I.L.	NBR	L _{eq} (h)	I.L.	NBR	L _{eq} (h)	I.L.	NBR	L _{eq} (h)	I.L.	NBR	L _{eq} (h)	I.L.	NBR	L _{eq} (h)	I.L.	NBR	
T-2 cont'd	T2/TR-13		TNB No. 2	Residential	1	State Street	47	48	48	0	1	B(67)	--	47	1	--	47	1	--	47	1	--	46	2	--	45	3	--	44	4	--	44	4	--	44	4	--	
	T2/TR-14		TNB No. 2	Residential	1	State Street	65	65	66	1	1	B(67)	A/E	65	1	--	64	2	--	64	2	--	64	2	--	64	2	--	64	2	--	64	2	--	64	2	--	
	T2/TR-15			Residential	1	State Street	47	49	49	0	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
T-3	T3/TR-1			Church BB Court	1	Pasadena Avenue	62	62	62	0	0	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
	T3/TR-2			Restaurant	1	Pasadena Avenue	60	60	61	1	1	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	T3/TR-3			Commercial	1	Pasadena Avenue	66	66	66	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	T3/TR-4			Commercial	1	Pasadena Avenue	71	71	71	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	T3/TR-5			Commercial	1	Pasadena Avenue	68	68	68	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	T3/TR-6			Commercial	1	Pasadena Avenue	64	64	65	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	T3/TR-7			School	1	Saint John Avenue	66	66	67	1	1	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	T3/TR-8			Residential	1	Waverly Drive	58	58	59	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T3/TR-9			Residential	1	Waverly Drive	58	58	61	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T3/TR-10			Residential	4	Gordon Terrace	57	57	59	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T3/TR-11			Residential	2	Havendale Drive	57	57	61	4	4	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T3/TR-12			Residential	1	Havendale Drive	57	57	61	4	4	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T3/TR-13			Residential	1	Palmetto Drive	56	56	62	6	6	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T3/TR-14			Residential	2	Palmetto Drive	55	55	58	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	T3/TR-15		ETW No. 5		Residential	1	Palmetto Drive	54	54	57	3	3	B(68)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
T3/TR-16				Residential	1	California Boulevard	70	71	71	0	1	B(69)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
T3/TR-17				School	1	Pasadena Avenue	64	64	66	2	2	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
T3/TR-18				School Playground	1	Pasadena Avenue	60	61	61	0	1	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

Source: Noise Study Report (2014).

¹ Refer to Figure 3.14-2 for locations of the TSM/TDM Alternative improvements, the receptors, and existing sound walls.

² Numbers in **bold** represent noise levels that approach or exceed the NAC.

³ A dash (-) indicates that no barrier was analyzed at this location because the modeled receptor has no outdoor frequent human use area or would not approach or exceed the NAC.

⁴ *Italics* indicate abatement not feasible due to sidewalk or driveway access.

⁵ Underlined numbers have been attenuated by at least 5 dBA (i.e., feasible wall height).

⁶ Shaded areas represent existing walls and their approximate height.

⁷ Receptor represents second-story balconies.

⁸ Receptor represents third-story balconies.

A/E = Approach or Exceed

dBA = A-weighted decibels

dBA L_{eq}(h) = equivalent continuous sound level measured in A-weighted decibels

ETW = Existing TSM/TDM Wall

I.L. = Insertion Loss

NAC = Noise Abatement Criteria

NBR = Number of Benefited Receptors

TDM = Transportation Demand Management

TNB = TSM/TDM Noise Barrier

TSM = Transportation System Management

TABLE 3.14.9:
 Predicted Future Noise Level and Noise Barrier Analysis – TSM/TDM Alternative (Alternate Barriers)¹

TSM/TDM Intersection ID	Receptor No.	ETW No. ¹	TNB No.	Land Use	No. of Units/Receptors	Location	Existing Noise Level (dBA Leq(h)) ²	Future Worst-Hour Noise Levels (dBA Leq(h))																																
								2035 Noise Level				Activity Category	Impact Type ^{3,4}	Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR) ^{2,5}																										
								Without Project ²	With Project ²	With Project Minus No Project Conditions	With Project Minus Existing Conditions			6 Feet			8 Feet			10 Feet			12 Feet			14 Feet			16 Feet			18 Feet			20 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	Leq (h)	I.L.	NBR	Leq (h)	I.L.	NBR			
T-1	T1/TR-30		TNB No. 3	Residential	1	Highbury Avenue	67	67	64	-3	-3	B(67)	--	64	0	--	64	0	--	64	0	--	64	0	--	64	0	--	63	1	--	61	3	--	<u>58</u>	<u>6</u>	1			
	T1/TR-31		TNB No. 3	Residential	4	Highbury Avenue	67	67	65	-2	-2	B(67)	--	65	0	--	65	0	--	64	1	--	62	3	--	<u>60</u>	<u>5</u>	4	<u>58</u>	<u>7</u>	4	<u>57</u>	<u>8</u>	4	<u>56</u>	<u>9</u>	4			
	T1/TR-32		TNB No. 3	Residential	1	Highbury Avenue	64	64	64	0	0	B(67)	--	64	0	--	64	0	--	63	1	--	62	2	--	62	2	--	62	2	--	62	2	--	62	2	--	62	2	--
	T1/TR-33		TNB No. 3	Residential	4	Highbury Avenue	67	67	66	-1	-1	B(67)	A/E	<u>60</u>	<u>6</u>	4	<u>59</u>	<u>7</u>	4	<u>58</u>	<u>8</u>	4	<u>58</u>	<u>8</u>	4	<u>58</u>	<u>8</u>	4	<u>57</u>	<u>9</u>	4	<u>56</u>	<u>10</u>	4	<u>55</u>	<u>11</u>	4			
	T1/TR-34		TNB No. 4	Residential	2	Highbury Avenue	68	68	68	0	0	B(67)	A/E	<u>62</u>	<u>6</u>	2	<u>60</u>	<u>8</u>	2	<u>58</u>	<u>10</u>	2	<u>57</u>	<u>11</u>	2	<u>56</u>	<u>12</u>	2	<u>55</u>	<u>13</u>	2	<u>54</u>	<u>14</u>	2	<u>53</u>	<u>15</u>	2			
	T1/TR-35		TNB No. 4	Residential	5	Highbury Avenue	62	62	62	0	0	B(67)	--	62	0	--	61	1	--	61	1	--	60	2	--	59	3	--	58	4	--	58	4	--	58	4	--	58	4	--
	T1/TR-36		TNB No. 4	Residential	4	Highbury Avenue	70	70	70	0	0	B(67)	A/E	<u>62</u>	<u>8</u>	4	<u>59</u>	<u>11</u>	4	<u>57</u>	<u>13</u>	4	<u>55</u>	<u>15</u>	4	<u>54</u>	<u>16</u>	4	<u>53</u>	<u>17</u>	4	<u>53</u>	<u>17</u>	4	<u>53</u>	<u>17</u>	4	<u>52</u>	<u>18</u>	4

Source: Noise Study Report (2014).

¹ Refer to Figure 3.14-2 for locations of the TSM/TDM Alternative improvements, the receptors, and existing sound walls.
² Numbers in **bold** represent noise levels that approach or exceed the NAC.
³ A dash (-) indicates that no barrier was analyzed at this location because the modeled receptor has no outdoor frequent human use area or would not approach or exceed the NAC.
⁴ *Italics* indicate abatement not feasible due to sidewalk or driveway access.
⁵ Underlined numbers have been attenuated by at least 5 dBA (i.e., feasible wall height).

A/E = Approach or Exceed
 dBA = A-weighted decibels
 dBA Leq(h) = equivalent continuous sound level measured in A-weighted decibels
 ETW = Existing TSM/TDM Wall
 NAC = Noise Abatement Criteria
 TDM = Transportation Demand Management
 TNB = TSM/TDM Noise Barrier
 TSM = Transportation System Management

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TABLE 3.14.10:
Existing Land Uses in the Vicinity of the BRT Alternative

Improvement Name	Description of Existing Land Uses in the Vicinity of the Improvement
Atlantic Boulevard between Olympic Boulevard and Whittier Boulevard	Land uses along this segment of Atlantic Boulevard include single-family residences and commercial uses that are at the same grade as Atlantic Boulevard.
Atlantic Boulevard between Whittier Boulevard and Beverly Boulevard	Land uses along this segment of Atlantic Boulevard include single-family and multifamily residences, a preschool, a church, a park, and commercial uses with and without outdoor eating areas that are at the same grade as Atlantic Boulevard.
Atlantic Boulevard between Beverly Boulevard and SR 60	Land uses along this segment of Atlantic Boulevard include single-family and multifamily residences and commercial uses with and without outdoor eating areas that are at the same grade as Atlantic Boulevard.
Atlantic Boulevard between SR 60 and Brightwood Street	Land uses along this segment of Atlantic Boulevard include single-family and multifamily residences, a church, and commercial uses with and without outdoor eating areas. The land uses along the northbound side of Atlantic Boulevard range from the same grade as Atlantic Boulevard to 50 feet higher in elevation than Atlantic Boulevard. Land uses along the southbound side of Atlantic Boulevard range from the same grade as Atlantic Boulevard to 30 feet higher in elevation than Atlantic Boulevard.
Atlantic Boulevard between Brightwood Street and Cadiz Street	Land uses along this segment of Atlantic Boulevard include single-family and multifamily residences, two churches, a health care center, and commercial uses that range from the same grade as Atlantic Boulevard to 45 feet higher in elevation than Atlantic Boulevard.
Atlantic Boulevard between Cadiz Street and Garvey Avenue	Land uses along this segment of Atlantic Boulevard include single-family and multifamily residences, a church, two hotels, and commercial uses with and without outdoor eating areas. The land uses along the northbound side of Atlantic Boulevard range from 25 feet lower in elevation than Atlantic Boulevard to 5 feet higher in elevation than Atlantic Boulevard. The land uses along the southbound side of Atlantic Boulevard range from the same grade as Atlantic Boulevard to 80 feet higher in elevation than Atlantic Boulevard.
Atlantic Boulevard between Garvey Avenue and I-10	Land uses along this segment of Atlantic Boulevard include single-family and multifamily residences, a hotel with an outdoor pool area, an office with an outdoor eating area, and commercial uses that range from the same grade as Atlantic Boulevard to 15 feet higher in elevation than Atlantic Boulevard.
Atlantic Boulevard between I-10 and Valley Boulevard	Land uses along this segment of Atlantic Boulevard include single-family and multifamily residences, and commercial uses that range from the same grade as Atlantic Boulevard to 15 feet higher in elevation than Atlantic Boulevard.
Atlantic Boulevard between Valley Boulevard and Main Street	Land uses along this segment of Atlantic Boulevard include single-family and multifamily residences, a school with outdoor recreational areas, a church with frequent outdoor use areas, and office and commercial uses that range from the same grade as Atlantic Boulevard to 5 feet higher in elevation than Atlantic Boulevard.
Atlantic Boulevard Between Main Street and Alhambra Road	Land uses along this segment of Atlantic Boulevard include single-family and multifamily residences, a church with frequent outdoor use areas, and commercial uses that range from the same grade as Atlantic Boulevard to 5 feet higher in elevation than Atlantic Boulevard.
Atlantic Boulevard between Alhambra Road and Huntington Drive	Land uses along this segment of Atlantic Boulevard include single-family and multifamily residences, and commercial uses with and without outdoor eating areas that range from the same grade as Atlantic Boulevard to 5 feet higher in elevation than Atlantic Boulevard.
Huntington Drive between Atlantic Boulevard and Fletcher Avenue	Land uses along this segment of Huntington Drive include single-family and multifamily residences, a preschool with outdoor frequent human use, a medical building, and commercial uses. The land uses along the westbound side of Huntington Drive range from the same grade as Huntington Drive to 5 feet higher in elevation than Huntington Drive. Land uses along the eastbound side of Huntington Drive range from 5 feet lower in elevation than Huntington Drive to the same grade as Huntington Drive.

TABLE 3.14.10:
Existing Land Uses in the Vicinity of the BRT Alternative

Improvement Name	Description of Existing Land Uses in the Vicinity of the Improvement
Huntington Drive between Fletcher Avenue and Fair Oaks Avenue	Land uses along this segment of Huntington Drive include single-family and multifamily residences, and commercial uses. The land uses along the westbound side of Huntington Drive range from the same grade as Huntington Drive to 15 feet higher in elevation than Huntington Drive. The land uses along the eastbound side of Huntington Drive range from 5 feet lower in elevation than Huntington Drive to 10 feet higher in elevation than Huntington Drive.
Fair Oaks Avenue between Huntington Drive and Monterey Road	Land uses along this segment of Fair Oaks Avenue include single-family and multifamily residences, a school, and office and commercial uses with and without outdoor eating areas. The land uses along the northbound side of Fair Oaks Avenue range from the same grade as Fair Oaks Avenue to 5 feet higher in elevation than Fair Oaks Avenue. The land uses along the southbound side of Fair Oaks Avenue range from the same grade as Fair Oaks Avenue to 15 feet higher in elevation than Fair Oaks Avenue.
Fair Oaks Avenue between Monterey Road and SR 110	Land uses along this segment of Fair Oaks Avenue include single-family and multifamily residences, and commercial uses with frequent outdoor use areas that are at the same grade as Fair Oaks Avenue.
Fair Oaks Avenue between SR 110 and Glenarm Street	Land uses along this segment of Fair Oaks Avenue include single-family and multifamily residences, a medical center, a museum, and office, commercial, and industrial uses. The land uses along the northbound side of Fair Oaks Avenue range from 5 feet lower in elevation than Fair Oaks Avenue to 30 feet higher in elevation than Fair Oaks Avenue. The land uses along the southbound side of Fair Oaks Avenue range from 5 feet lower in elevation than Fair Oaks Avenue to 15 feet higher in elevation than Fair Oaks Avenue.
Fair Oaks Avenue between Glenarm Street and California Boulevard	Land uses along this segment of Fair Oaks Avenue include single-family and multifamily residences, a nursing home, medical centers, and office and commercial uses with frequent outdoor use areas that are at the same grade as Fair Oaks Avenue.
Fair Oaks Avenue between California Boulevard and Del Mar Boulevard	Land uses along this segment of Fair Oaks Avenue include a park and commercial uses with frequent outdoor use areas. The land uses along the northbound side of Fair Oaks Avenue range from the same grade as Fair Oaks Avenue to 40 feet higher in elevation than Fair Oaks Avenue. The land uses along the southbound side of Fair Oaks Avenue range from 10 to 30 feet higher in elevation than Fair Oaks Avenue.

Source: *Noise Study Report* (2014).
 BRT = Bus Rapid Transit
 I-10 = Interstate 10
 SR 60 = State Route 60
 SR 110 = State Route 110

TABLE 3.14.12:
 Predicted Future Noise Level and Noise Barrier Analysis – BRT Alternative (Alternate Barriers)¹

Receptor No.	BNB No.	Land Use	No. of Units/Receptors	Location	Existing Noise Level (dBA Leq(h)) ²	Future Worst-Hour Noise Levels (dBA Leq(h))																													
						2035 Noise Level				Activity Category	Impact Type ^{3,4}	Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR) ^{2,5}																							
						Without Project ²	With Project ²	With Project Minus No Project Conditions	With Project Minus Existing Conditions			6 Feet			8 Feet			10 Feet			12 Feet			14 Feet			16 Feet			18 Feet			20 Feet		
												Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R
BR-443	BNB No. 3	Residential	2	Atlantic Boulevard	68	68	69	1	1	B(67)	A/E	<u>58</u> ⁴	<u>11</u>	2	56	<u>13</u>	2	55	<u>14</u>	2	55	<u>14</u>	2	54	<u>15</u>	2	54	<u>15</u>	2	53	<u>16</u>	2	53	<u>16</u>	2
BR-444	BNB No. 3	Residential	7	Atlantic Boulevard	65	65	66	1	1	B(67)	A/E	57	<u>9</u>	7	56	<u>10</u>	7	56	<u>10</u>	7	55	<u>11</u>	7	55	<u>11</u>	7	55	<u>11</u>	7	54	<u>12</u>	7	54	<u>12</u>	7
BR-445	BNB No. 3	Residential	12	Atlantic Boulevard	54	54	55	1	1	B(67)	--	54	1	--	54	1	--	54	1	--	54	1	--	54	1	--	54	1	--	54	1	--	54	1	--
BR-446	BNB No. 3	Residential	6	Atlantic Boulevard	65	65	66	1	1	B(67)	A/E	59	<u>7</u>	6	58	<u>8</u>	6	58	<u>8</u>	6	57	<u>9</u>	6	57	<u>9</u>	6	57	<u>9</u>	6	57	<u>9</u>	6	57	<u>9</u>	6
BR-447	BNB No. 3	Residential	6	Atlantic Boulevard	66	67	67	0	1	B(67)	A/E	58	<u>9</u>	6	57	<u>10</u>	6	56	<u>11</u>	6	55	<u>12</u>	6	55	<u>12</u>	6	55	<u>12</u>	6	55	<u>12</u>	6	55	<u>12</u>	6
BR-448	BNB No. 3	Residential	6	De La Fuente Street	59	59	60	1	1	B(67)	--	58	2	--	58	2	--	58	2	--	58	2	--	58	2	--	58	2	--	58	2	--	58	2	--
BR-449	BNB No. 3	Residential	3	Atlantic Boulevard	68	68	69	1	1	B(67)	A/E	59	<u>10</u>	3	56	<u>13</u>	3	55	<u>14</u>	3	55	<u>14</u>	3	54	<u>15</u>	3	54	<u>15</u>	3	54	<u>15</u>	3	54	<u>15</u>	3

Source: Noise Study Report (2014).

¹ Refer to Figure 3.14-3 for the locations of the BRT Alternative improvements and receptors.

² Numbers in **bold** represent noise levels that approach or exceed the NAC.

³ A dash (-) indicates that no barrier was analyzed at this location because the modeled receptor has no outdoor frequent human use or would not approach or exceed the NAC.

⁴ *Italics* indicate abatement not feasible due to sidewalk or driveway access.

⁵ Underlined numbers have been attenuated by at least 5 dBA (i.e., feasible wall height).

A/E = Approach or Exceed

BNB = BRT Noise Barrier

BRT = Bus Rapid Transit

dBA = A-weighted decibels

dBA Leq(h) = equivalent continuous sound level measured in A-weighted decibels

NAC = Noise Abatement Criteria

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TABLE 3.14.13:
Existing Land Uses in the Vicinity of the LRT Alternative

LRT Alignment Segment	Description of Existing Land Uses in the Vicinity of the Improvement
LRT Alignment between 3 rd Street and SR 60	Land uses along this segment of the LRT Alternative include single-family and multifamily residences, and commercial uses. Under FTA criteria, the single-family and multifamily residences are the noise sensitive uses considered for abatement.
LRT Alignment between SR 60 and Floral Drive	Land uses along this segment of the LRT Alternative include single-family and multifamily residences, a learning facility, an active park, and office and commercial uses. Under FTA criteria, the single-family and multifamily residences, and the learning facility are the noise sensitive uses considered for abatement.
LRT Alignment between Mednik Avenue and I-710	Land uses along this segment of the LRT Alternative include single-family and multifamily residences, and office and commercial uses. Under FTA criteria, the single-family residences and multifamily residences are the noise sensitive uses considered for abatement.
LRT Alignment along I-710 South of I-10	Land uses along this segment of the LRT Alternative include single-family residences, a golf course, and office and commercial uses. Under FTA criteria, the single-family residences are the noise sensitive uses considered for abatement.
LRT Alignment along I-710 Between I-10 and Hellman Avenue	Land uses in this area include single-family and multifamily residences, and a university (California State University, Los Angeles). Under FTA criteria, all these land uses are noise sensitive uses considered for abatement.
LRT Alignment along I-710 between Hellman Avenue and Valley Boulevard	Land uses along this segment of the LRT Alternative include single-family and multifamily residences. Under FTA criteria, all these residences are noise sensitive uses considered for abatement.

Source: *Noise Study Report* (2014).
 FTA = Federal Transit Administration
 I-10 = Interstate 10
 I-710 = Interstate 710
 LRT = Light Rail Transit
 SR 60 = State Route 60

TABLE 3.14.14:
 Light Rail Train Alternative Operations Noise Impact Analysis¹

Receptor Location	Associated Measurement Location	Existing Noise Measurement (Leq)	Existing Noise Level (L _{dn}) ²	Distance to Tracks (ft)	Track Height Above Ground/ Receptor (ft)	Train Operations Noise Level (L _{dn})	Noise Exposure Increase (dBA)	No Impact, Moderate, or Severe ³	Project Noise Exposure Producing No Impact (L _{dn}) ³	Proposed Barrier Height (ft)	Train Noise Level With Mitigation (dBA)	Noise Exposure Increase After Mitigation (dBA)
LR-1	LM-1	50.1	54.6	75	29	62.5	8.6	Severe	<55	6.0	53.4	2.4
LR-2	LM-1	50.1	54.6	210	29	56.2	3.9	Moderate	<55	4.0	50.8	1.5
LR-3	LM-2	61.5	63.1	90	20	66.4	5.0	Severe	<60	5.5	58.4	1.3
LR-4	LM-2	61.5	63.1	260	20	59.5	1.6	Moderate	<60	4.0	54.7	0.6
LR-5	LM-4	62.0	64.6	160	20	62.6	2.1	Moderate	<61	4.0	57.3	0.7
LR-6	LM-6	55.1	58.0	95	25.5	66.2	8.8	Severe	<57	10	55.8	2.1
LR-7 ⁴	LM-5	59.3	61.9	170	27	62.6	3.4	-	-	0.0	-	-
LR-8	LM-5	59.3	61.9	82	27	67.2	6.4	Severe	<59	7.0	57.7	1.4
LR-9	LM-7	57.1	60.0	355	27.5	58.0	2.1	Moderate	<58	4.0	53.4	0.9
LR-10	LM-8	63.0	65.6	70	28	68.2	4.5	Severe	<61	5.0	59.8	1.0
LR-11	LM-9	64.9	67.8	80	27	67.4	2.8	Moderate	<63	4.0	60.3	0.7
LR-12	LM-12	63.6	67.6	90	35	66.9	2.7	Moderate	<63	4.0	59.6	0.6
LR-13	LM-12	63.6	67.6	90	35	66.9	2.7	Moderate	<63	4.0	59.6	0.6
LR-14	LM-12	63.6	67.6	100	35	66.2	2.4	Moderate	<63	4.0	59.2	0.6
LR-15	LM-12	63.6	67.6	95	35	66.5	2.5	Moderate	<63	4.0	59.4	0.6
LR-16	LM-13	63.7	67.7	265	22	59.5	0.6	No Impact	<63	0.0	-	-
LR-17	FM-1	58.2	61.7	490	-18	53.7	0.6	No Impact	<59	0.0	-	-
LR-18	FM-4	62.8	67.0	835	50	55.3	0.3	No Impact	<63	0.0	-	-
LR-19	FM-5	59.9	64.4	710	38	54.9	0.5	No Impact	<61	0.0	-	-
LR-20	FM-6	57.4	61.9	400	68	60.8	2.5	Moderate	<59	4.0	55.4	0.9
LR-21	FM-7	61.4	65.9	275	47	61.1	1.2	Moderate	<62	4.0	55.5	0.4
LR-22	FM-8	58.1	61.8	210	22	61.0	2.6	Moderate	<59	4.0	55.9	1.0
LR-23	FM-9	66.0	69.7	155	0	62.0	0.7	No Impact	<65	0.0	-	-
LR-24	FM-10	73.3	77.0	105	0	64.8	0.3	No Impact	<66	0.0	-	-
LR-25	FM-12	59.5	63.3	400	0	55.2	0.6	No Impact	<60	0.0	-	-
LR-26	FM-19	62.3	76.7	360	0	55.9	0.0	No Impact	<66	0.0	-	-
LR-27	FM-20	68.0	71.4	190	0	60.5	0.3	No Impact	<66	0.0	-	-
LR-28	FM-22	55.5	58.9	690	0	51.2	0.7	No Impact	<58	0.0	-	-
LR-29	FM-23	55.2	58.1	530	0	53.1	1.2	No Impact	<57	0.0	-	-

Source: Noise Study Report (2014).

¹ Refer to Figure 3.14-4 for the locations of the LRT Alternative improvements and receptor locations.

² Short-term measurements associated with receptors LR-1 through LR-13 were converted to L_{dn} levels using LML1 as a reference daily level. Short-term measurements associated with receptors LR-14 through LR-17 were converted to L_{dn} levels using LML2 as a reference daily level. Short-term measurements associated with receptors LR-18 through LR-29 were converted to L_{dn} levels using FML1 as a reference daily level.

³ Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, Table 3-1.

⁴ Non-noise sensitive park. Level shown for reporting purposes only.

dBA = A-weighted decibels L_{dn} = day-night average noise level
 ft = foot/feet L_{eq} = equivalent continuous noise level

TABLE 3.14.15:
Existing Land Uses in the Vicinity of the Freeway Tunnel Alternative

Location of Improvement	Description of Existing Land Uses in the Vicinity of the Improvement
Southeast quadrant of the SR 710 and I-10 interchange	Land uses in this area include single-family and multifamily residences, a golf course, and office and commercial uses. These land uses are 10 to 150 feet higher in elevation than SR 710 and range from the same grade as I-10 to 175 feet higher in elevation than I-10.
Northeast quadrant of the SR 710 and I-10 interchange south of Paseo Rancho Castilla/Hellman Avenue	Land uses in this area include single-family and multifamily residences. These land uses range from 15 feet lower in elevation than SR 710 to 40 feet higher in elevation than SR 710, and from 25 feet lower in elevation than I-10 to 50 feet higher in elevation than I-10.
SR 710 northbound side between Paseo Rancho Castilla/Hellman Avenue and Alhambra Avenue/Mission Road	Land uses in this area include single-family residences and a commercial use (gas station). These land uses range from 5 feet lower in elevation than SR 710 to 45 feet higher in elevation than SR 710.
SR 710 southbound side between Paseo Rancho Castilla/Hellman Avenue and Alhambra Avenue/Mission Road	Land uses in this area include single-family and multifamily residences. These land uses range from 5 feet lower in elevation than SR 710 to 30 feet higher in elevation than SR 710.
Northwest quadrant of the SR 710 and I-10 interchange south of Paseo Rancho Castilla/Hellman Avenue	Land uses in this area include multifamily residences, Cal State LA classrooms and sports fields, and commercial uses. These land uses are 30 to 95 feet higher in elevation than SR 710 and 35 to 50 feet higher in elevation than I-10.
Southwest quadrant of the SR 710 and I-10 interchange	Land uses in this area include single-family residences, police training areas, and office uses. These land uses are 50 to 210 feet higher in elevation than SR 710 and 95 to 170 feet higher in elevation than I-10.
SR 710 northbound side between Bellefontaine Street and Union Street	Land uses in this area include multifamily residences, a church with frequent outdoor human use areas, a hospital, vacant land, and commercial uses with and without frequent outdoor use areas. These land uses range from 5 feet lower in elevation than SR 710 to 30 feet higher in elevation than SR 710.
Southeast quadrant of the SR 710 and SR 134/I-210 interchange north of Union Street	Land uses in this area include commercial and office uses. These land uses are at the same grade as SR 710 and range from the same grade as I-210 to 20 feet higher in elevation than I-210.
Northeast quadrant of the SR 710 and SR 134/I-210 interchange west of Fair Oaks Avenue	Land uses in this area include single-family and multifamily residences, a school with an outdoor basketball court, and commercial uses. These land uses range from 10 to 35 feet higher in elevation than I-210.
I-210 southbound side between Walnut Street and Mountain Street	Land uses in this area include single-family and multifamily residences, and a school. These land uses are 14 to 50 feet higher in elevation than I-210 and 15 to 20 feet lower in elevation than SR 134.
SR 134 westbound side west of Orange Grove Boulevard	Land uses in this area include single-family and multifamily residences and commercial uses. These land uses range from 10 feet lower in elevation than SR 134 to 35 feet higher in elevation than SR 134.
Southwest quadrant of the SR 710 and SR 134/I-210 interchange north of Union Street	Land uses in this area include commercial uses. These land uses are 40 feet higher in elevation than SR 710, and range from 40 feet lower in elevation than SR 134 to 20 feet higher in elevation than SR 134.
SR 710 southbound side between Bellefontaine Street and Union Street	Land uses in this area include single-family and multifamily residences, two schools, a sports field, auditorium, and a park. These land uses range from 5 feet lower in elevation than SR 710 to 40 feet higher in elevation than SR 710.

Source: *Noise Study Report* (2014).
 Cal State LA = California State University, Los Angeles
 I-10 = Interstate 10
 I-210 = Interstate 210
 SR 134 = State Route 134
 SR 710 = State Route 710

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TABLE 3.14.16:
 Predicted Future Noise Level and Noise Barrier Analysis – Freeway Tunnel Alternative – Single-Bore Design Variation¹

Receptor No.	EFTW No.	FTNB No.	Land Use	No. of Units/Receptors	Location	Existing Noise Level, dBA Leq(h) ²	Future Peak-Hour Noise Levels, dBA Leq(h)																																
							2035 Noise Levels				Activity Category (NAC)	Impact Type ^{3,4}	Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR) ^{2,5}																										
							Without Project ²	With Project ²	With Project Minus No Project Conditions	With Project Minus Existing Conditions			6 feet			8 feet			10 feet			12 feet			14 feet			16 feet			18 feet			20 feet					
													Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R			
FR-104		FTNB No. 13A	Residential	3	Mayview Lane	70	71	72	1	2	B(67)	A/E	70	2	--	70	2	--	70	2	--	70	2	--	70	2	--	70	2	--	70	2	--	70	2	--			
FR-105		FTNB No. 13A	Residential	2	Pasadena Avenue	72	73	74	1	2	B(67)	A/E	72	2	--	72	2	--	71	3	--	71	3	--	71	3	--	71	3	--	71	3	--	71	3	--	71	3	--
FR-106		FTNB No. 13A	Residential	1	Pasadena Avenue	64	65	69	4	5	B(67)	A/E	68	1	--	67	2	--	67	2	--	67	2	--	67	2	--	67	2	--	67	2	--	67	2	--	67	2	--
FR-107		FTNB No. 13A	Residential	1	Rosewood Lane	62	62	64	2	2	B(67)	--	63	1	--	62	2	--	62	2	--	62	2	--	62	2	--	62	2	--	62	2	--	62	2	--	62	2	--
FR-108		FTNB No. 13A	Residential	2	Pasadena Avenue	68	69	71	2	3	B(67)	A/E	68	3	--	68	3	--	67	4	--	67	4	--	67	4	--	67	4	--	67	4	--	67	4	--	67	4	--
FR-109		FTNB No. 13A	Residential	2	Rosewood Lane	63	64	65	1	2	B(67)	A/E	63	2	--	63	2	--	62	3	--	62	3	--	62	3	--	62	3	--	62	3	--	62	3	--	62	3	--
FR-110		FTNB No. 13A	Residential	1	Longwood Lane	70	71	73	2	3	B(67)	A/E	70	3	--	70	3	--	70	3	--	70	3	--	70	3	--	69	4	--	69	4	--	69	4	--	69	4	--
FR-111		FTNB No. 13A	Residential	2	Orange Grove Boulevard	66	66	67	1	1	B(67)	A/E	67	0	--	67	0	--	67	0	--	67	0	--	67	0	--	67	0	--	67	0	--	67	0	--	67	0	--
FR-112		FTNB No. 13A	Residential	2	Prospect Boulevard	66	67	68	1	2	B(67)	A/E	68	0	--	68	0	--	68	0	--	68	0	--	68	0	--	68	0	--	68	0	--	68	0	--	68	0	--
FR-113			Residential	3	Pasadena Avenue	69	69	70	1	1	B(67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
FR-114		FTNB No. 14	Residential	1	Orange Grove Boulevard	67	67	68	1	1	B(67)	--	67	1	--	67	1	--	67	1	--	67	1	--	67	1	--	67	1	--	67	1	--	67	1	--	66	2	--
FR-115		FTNB No. 14	School	1	Pasadena Avenue	66	66	67	1	1	C(67)/D(52)	A/E	64	3	--	62	5	1	61	6	1	60	7	1	60	7	1	59	8	1	59	8	1	58	9	1			
FR-116		FTNB No. 15	Residential	1	Walnut Street	69	69	69	0	0	B(67)	A/E	65	4	--	61	8	1	59	10	1	58	11	1	57	12	1	56	13	1	55	14	1	54	15	1			
FR-117		FTNB No. 15	Residential	1	Walnut Street	69	69	69	0	0	B(67)	A/E	69	0	--	69	0	--	68	1	--	65	4	--	63	6	1	62	7	1	62	7	1	61	8	1			
FR-118			Commercial	1	Saint John Avenue	63	63	63	0	0	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
FR-119			Commercial	1	Saint John Avenue	64	64	67	3	3	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
FR-120			Residential	1	Saint John Avenue	61	61	68	7	7	B(67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
FR-121			Auditorium	1	Saint John Avenue	61	61	69	8	8	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
FR-122			School	1	Saint John Avenue	54	54	56	2	2	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
FR-123			Sports Field	1	Saint John Avenue	53	53	53	0	0	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
FR-124			School	1	Saint John Avenue	66	66	58	-8	-8	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
FR-125			Residential	1	Waverly Drive	58	58	56	-2	-2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
FR-126			Residential	1	Waverly Drive	58	58	57	-1	-1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
FR-127			Residential	4	Gordon Terrace	57	57	57	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
FR-128			Residential	2	Gordon Terrace	57	57	58	1	1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
FR-129			Residential	1	Bellevue Drive	57	57	57	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
FR-130			Residential	1	Palmetto Drive	56	57	56	-1	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
FR-131			Residential	2	Palmetto Drive	55	56	55	-1	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
FR-132	EFTW No. 15		Residential	1	Palmetto Drive	53	54	53	-1	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
FR-133			Residential	1	California Boulevard	68	68	67	-1	-1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
FR-134			School	1	Pasadena Avenue	64	64	61	-3	-3	C(67)/D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
FR-135			School Playground	1	Pasadena Avenue	57	57	57	0	0	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
FR-136			Residential	1	California Boulevard	59	59	59	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
FR-137			Residential	1	California Boulevard	53	53	53	0	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		

Source: Noise Study Report (2014).

¹ Refer to Figure 3.14-5 for the locations of the Freeway Tunnel Alternative improvements (single-bore design variation), the receptors, and existing sound walls.

² Numbers in bold represent noise levels that approach or exceed the NAC.

³ A dash (-) indicates that no barrier was analyzed at this location because the modeled receptor would not approach or exceed the NAC.

⁴ Italics indicate either no outdoor frequent human use areas or abatement not feasible due to sidewalk or driveway access.

⁵ Underlined numbers have been attenuated by at least 5 dBA (i.e., feasible wall height).

A/E = Approach or Exceed

dBA = A-weighted decibels

dBA Leq(h) = equivalent continuous sound level per hour measured in A-weighted decibels

EFTW = Existing Freeway Tunnel Wall

FTNB = Freeway Tunnel Noise Barrier

NAC = Noise Abatement Criteria

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TABLE 3.14.17:
 Predicted Future Noise Level and Noise Barrier Analysis – Freeway Tunnel Alternative – Single-Bore Design Variation (Alternate Barriers)¹

Receptor No.	EFTW No.	FTNB No.	Land Use	No. of Units/Receptors	Location	Existing Noise Level, dBA Leq(h) ²	Future Peak-Hour Noise Levels, dBA Leq(h)																													
							2035 Noise Levels				Activity Category (NAC)	Impact Type ^{3,4}	Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR) ^{2,5}																							
							Without Project ²	With Project ²	With Project Minus No Project Conditions	With Project Minus Existing Conditions			6 feet			8 feet			10 feet			12 feet			14 feet			16 feet			18 feet			20 feet		
													Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R
FR-1		FTNB No. 2	Residential	1	Casuda Canyon Drive	63	63	65	2	2	B(67)	--	64	1	--	64	1	--	64	1	--	64	1	--	64	1	--	64	1	--	64	1	--	64	1	--
FR-2		FTNB No. 2	Residential	1	Corporate Center Drive	70	70	71	1	1	B(67)	A/E	66	5	1	65	6	1	65	6	1	65	6	1	65	6	1	65	6	1	65	6	1	65	6	1
FR-6		FTNB No. 3B	Residential	3	Balzac Street	69	69	69	0	0	B(67)	A/E	64	5	3	64	5	3	64	5	3	64	5	3	64	5	3	64	5	3	64	5	3	64	5	3
FR-7		FTNB No. 3B	Residential	1	Capetown Avenue	64	64	67	3	3	B(67)	A/E	63	4	--	63	4	--	63	4	--	63	4	--	63	4	--	63	4	--	63	4	--	63	4	--
FR-8		FTNB No. 3B	Residential	1	Balzac Street	68	68	71	3	3	B(67)	A/E	61	10	1	61	10	1	61	10	1	61	10	1	61	10	1	61	10	1	61	10	1	61	10	1
FR-9		FTNB No. 3B	Residential	1	Balzac Street	66	67	70	3	4	B(67)	A/E	59	11	1	58	12	1	57	13	1	56	14	1	55	15	1	55	15	1	55	15	1	55	15	1
FR-10		FTNB No. 3B	Residential	2	Balzac Street	65	65	69	4	4	B(67)	A/E	62	7	2	60	9	2	59	10	2	58	11	2	57	12	2	57	12	2	56	13	2	56	13	2
FR-11		FTNB No. 3B	Residential	2	Balzac Street	64	65	68	3	4	B(67)	A/E	63	5	2	61	7	2	61	7	2	60	8	2	60	8	2	59	9	2	59	9	2	58	10	2
FR-12		FTNB No. 3B	Residential	3	Capetown Avenue	62	62	66	4	4	B(67)	A/E	62	4	--	62	4	--	61	5	3	61	5	3	60	6	3	59	7	3	58	8	3	58	8	3
FR-13		FTNB No. 3B	Residential	3	Capetown Avenue	61	61	66	5	5	B(67)	A/E	57	9	3	56	10	3	55	11	3	54	12	3	54	12	3	53	13	3	53	13	3	53	13	3
FR-14		FTNB No. 3B	Residential	2	Julep Place	64	65	69	4	5	B(67)	A/E	68	1	--	68	1	--	67	2	--	67	2	--	66	3	--	66	3	--	65	4	--	63	6	2
FR-15		FTNB No. 3B	Residential	2	Charnwood Avenue	64	65	69	4	5	B(67)	A/E	61	8	2	60	9	2	59	10	2	59	10	2	58	11	2	56	13	2	56	13	2	55	14	2
FR-16		FTNB No. 3B	Residential	3	Charnwood Avenue	59	59	64	5	5	B(67)	--	60	4	--	58	6	3	57	7	3	56	8	3	55	9	3	54	10	3	54	10	3	54	10	3
FR-17		FTNB No. 3B	Residential	3	Charnwood Avenue	66	66	69	3	3	B(67)	A/E	64	5	3	62	7	3	60	9	3	59	10	3	58	11	3	57	12	3	57	12	3	56	13	3
FR-18	EFTW No. 4	FTNB No. 3B	Residential	3	Charnwood Avenue	62	63	68	5	6	B(67)	A/E	64	4	--	63	5	3	61	7	3	60	8	3	59	9	3	58	10	3	58	10	3	58	10	3
FR-19	EFTW No. 4	FTNB No. 3B	Residential	3	Charnwood Avenue	65	65	70	5	5	B(67)	A/E	66	4	--	62	8	3	61	9	3	59	11	3	58	12	3	57	13	3	57	13	3	57	13	3
FR-20	EFTW No. 4	FTNB No. 3B	Residential	3	Charnwood Avenue	61	62	66	4	5	B(67)	A/E	63	3	--	62	4	--	61	5	3	60	6	3	60	6	3	59	7	3	59	7	3	59	7	3
FR-21		FTNB No. 3B	Residential	2	Hellman Avenue	63	63	68	5	5	B(67)	A/E	63	5	2	63	5	2	62	6	2	62	6	2	61	7	2	61	7	2	61	7	2	61	7	2
FR-22		FTNB No. 3B	Residential	4	Charnwood Avenue	60	60	65	5	5	B(67)	--	63	2	--	63	2	--	62	3	--	62	3	--	62	3	--	62	3	--	61	4	--	61	4	--
FR-6		FTNB No. 4	Residential	3	Balzac Street	69	69	69	0	0	B(67)	A/E	69	0	--	69	0	--	69	0	--	69	0	--	69	0	--	69	0	--	69	0	--	69	0	--
FR-7		FTNB No. 4	Residential	1	Capetown Avenue	64	64	67	3	3	B(67)	A/E	65	2	--	65	2	--	65	2	--	65	2	--	65	2	--	65	2	--	65	2	--	65	2	--
FR-8		FTNB No. 4	Residential	1	Balzac Street	68	68	71	3	3	B(67)	A/E	69	2	--	69	2	--	69	2	--	69	2	--	69	2	--	69	2	--	69	2	--	69	2	--
FR-9		FTNB No. 4	Residential	1	Balzac Street	66	67	70	3	4	B(67)	A/E	68	2	--	67	3	--	67	3	--	67	3	--	66	4	--	66	4	--	66	4	--	64	6	1
FR-10		FTNB No. 4	Residential	2	Balzac Street	65	65	69	4	4	B(67)	A/E	66	3	--	65	4	--	65	4	--	65	4	--	65	4	--	65	4	--	64	5	2	64	5	2
FR-11		FTNB No. 4	Residential	2	Balzac Street	64	65	68	3	4	B(67)	A/E	65	3	--	65	3	--	64	4	--	64	4	--	64	4	--	64	4	--	64	4	--	63	5	2
FR-12		FTNB No. 4	Residential	3	Capetown Avenue	62	62	66	4	4	B(67)	A/E	63	3	--	63	3	--	62	4	--	62	4	--	62	4	--	62	4	--	61	5	3	61	5	3
FR-13		FTNB No. 4	Residential	3	Capetown Avenue	61	61	66	5	5	B(67)	A/E	63	3	--	62	4	--	61	5	3	61	5	3	60	6	3	60	6	3	59	7	3	58	8	3
FR-14		FTNB No. 4	Residential	2	Julep Place	64	65	69	4	5	B(67)	A/E	66	3	--	64	5	2	64	5	2	63	6	2	61	8	2	61	8	2	60	9	2	59	10	2
FR-15		FTNB No. 4	Residential	2	Charnwood Avenue	64	65	69	4	5	B(67)	A/E	64	5	2	63	6	2	63	6	2	62	7	2	60	9	2	60	9	2	59	10	2	58	11	2
FR-16		FTNB No. 4	Residential	3	Charnwood Avenue	59	59	64	5	5	B(67)	--	63	1	--	62	2	--	60	4	--	59	5	3	58	6	3	58	6	3	58	6	3	57	7	3
FR-17		FTNB No. 4	Residential	3	Charnwood Avenue	66	66	69	3	3	B(67)	A/E	65	4	--	64	5	3	62	7	3	61	8	3	60	9	3	60	9	3	59	10	3	59	10	3
FR-18	EFTW No. 4	FTNB No. 4	Residential	3	Charnwood Avenue	62	63	68	5	6	B(67)	A/E	63	5	3	62	6	3	61	7	3	60	8	3	58	10	3	58	10	3	58	10	3	57	11	3
FR-19	EFTW No. 4	FTNB No. 4	Residential	3	Charnwood Avenue	65	65	70	5	5	B(67)	A/E	64	6	3	64	6	3	63	7	3	62	8	3	61	9	3	61	9	3	59	11	3	58	12	3
FR-20	EFTW No. 4	FTNB No. 4	Residential	3	Charnwood Avenue	61	62	66	4	5	B(67)	A/E	63	3	--	63	3	--	63	3	--	63	3	--	62	4	--	62	4	--	62	4	--	62	4	--
FR-21		FTNB No. 4	Residential	2	Hellman Avenue	63	63	68	5	5	B(67)	A/E	63	5	2	63	5	2	63	5	2	63	5	2	63	5	2	63	5	2	63	5	2	62	6	2
FR-22		FTNB No. 4	Residential	4	Charnwood Avenue	60	60	65	5	5	B(67)	--	63	2	--	62	3	--	62	3	--	62	3	--	62	3	--	62	3	--	62	3	--	62	3	--
FR-47		FTNB No. 6 S	Residential	1	Highbury Avenue	68	68	73	5	5	B(67)	A/E	--	--	--	73	0	--	72	1	--	72	1	--	71	2	--	70	3	--	69	4	--	68	5	1
FR-48		FTNB No. 6 S	Residential	4	Highbury Avenue	68	68	73	5	5	B(67)	A/E	--	--	--	73	0	--	73	0	--	72	1	--	72	1	--	71	2	--	70	3	--	70	3	--
FR-49		FTNB No. 6 S	Residential	4	Highbury Avenue	67	68	74	6	7	B(67)	A/E	--	--	--	74	0	--	74	0	--	74	0	--	73	1	--	72	2	--	72	2	--	72	2	--
FR-50		FTNB No. 6 S	Residential	2	Highbury Avenue	68	69	74	5	6	B(67)	A/E	--	--	--	73	1	--	73	2	--	72	2	--	72	2	--	72	2	--	71	3	--	71	3	--
FR-51		FTNB No. 6 S	Residential	4	Highbury Avenue	70	71	74	3	4	B(67)	A/E	--	--	--	72	2	--	72	2	--	72	2	--	71	3	--	71	3	--	70	4	--	69	5	4
FR-99		FTNB No. 13B	Residential	1	Cypress Avenue	62	63	64	1	2	B(67)	--	--	--	--	--	--	63	1	--	63	1	--	63	1	--	63	1	--	63	1	--	63	1	--	
FR-100		FTNB No. 13B	Residential	6	Winona Avenue	63	64	64	0	1	B(67)	--	--	--	--	--	--	62	2	--	62	2	--	62	2	--	62	2	--	62	2	--	62	2	--	
FR-101		FTNB No. 13B	Residential	1	Winona Avenue	61	62	63	1	2	B(67)	--	--	--	--	--	--	61	1	--	61	1	--	61	1	--	61	1	--	61	1	--	61	1	--	
FR-102		FTNB No. 13B	Residential	3	Winona Avenue	67	67	68	1	1	B(67)	A/E	--	--	--	--	--	67	0	--	66	1	--	65	2	--	64	3	--	63	4	--	62	5	3	
FR-103		FTNB No. 13B	Residential	2	Mayview Lane	64	65	67	2	3	B(67)	A/E	--	--	--	--	--	66	1	--	65	2	--	65	2	--	64	3	--	64	3	--	64	3	--	
FR-104		FTNB No. 13B	Residential	3	Mayview Lane	70	71	72	1	2	B(67)	A/E	--	--	--	--	--	67	5	3	65	7	3	64	8	3	63	9	3	63	9	3	62	10	3	
FR-10																																				

TABLE 3.14.17:
Predicted Future Noise Level and Noise Barrier Analysis – Freeway Tunnel Alternative – Single-Bore Design Variation (Alternate Barriers)¹

Receptor No.	EFTW No.	FTNB No.	Land Use	No. of Units/Receptors	Location	Existing Noise Level, dBA Leq(h) ²	Future Peak-Hour Noise Levels, dBA Leq(h)																													
							2035 Noise Levels				Activity Category (NAC)	Impact Type ^{3,4}	Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR) ^{2,5}																							
							Without Project ²	With Project ²	With Project Minus No Project Conditions	With Project Minus Existing Conditions			6 feet			8 feet			10 feet			12 feet			14 feet			16 feet			18 feet			20 feet		
													Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R
FR-110		FTNB No. 13B	Residential	1	Longwood Lane	70	71	73	2	3	B(67)	A/E	--	--	--	--	--	70	3	--	70	3	--	69	4	--	69	4	--	69	4	--	69	4	--	
FR-111		FTNB No. 13B	Residential	2	Orange Grove Boulevard	66	66	67	1	1	B(67)	A/E	--	--	--	--	--	67	0	--	67	0	--	67	0	--	67	0	--	67	0	--	67	0	--	
FR-112		FTNB No. 13B	Residential	2	Prospect Boulevard	66	67	68	1	2	B(67)	A/E	--	--	--	--	--	68	0	--	68	0	--	68	0	--	68	0	--	68	0	--	68	0	--	

Source: *Noise Study Report* (2014).

¹ Refer to Figure 3.14-5 for the locations of the Freeway Tunnel Alternative improvements (single-bore design variation), the receptors, and existing sound walls.

² Numbers in **bold** represent noise levels that approach or exceed the NAC.

³ a dash (–) indicates that no barrier was analyzed at this location because the modeled receptor would not approach or exceed the NAC.

⁴ *Italics* indicate either no outdoor frequent human use areas or abatement not feasible due to sidewalk or driveway access.

⁵ Underlined numbers have been attenuated by at least 5 dBA (i.e., feasible wall height).

A/E = Approach or Exceed

dBA = A-weighted decibels

dBA Leq(h) = equivalent continuous sound level per hour measured in A-weighted decibels

EFTW = Existing Freeway Tunnel Wall

FTNB = Freeway Tunnel Noise Barrier

NAC = Noise Abatement Criteria

TABLE 3.14.18:
 Predicted Future Noise Level and Noise Barrier Analysis – Freeway Tunnel Alternative – Dual-Bore Design Variation¹

Receptor No.	EFTW No.	FTNB No.	Land Use	No. of Units/Receptors	Location	Existing Noise Level, dBA L _{eq} (h) ²	Future Peak-Hour Noise Levels, dBA L _{eq} (h)																													
							2035 Noise Levels				Activity Category (NAC)	Impact Type ^{3,4}	Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR) ^{2,5}																							
							Without Project ²	With Project ²	With Project Minus No Project Conditions	With Project Minus Existing Conditions			6 feet			8 feet			10 feet			12 feet			14 feet			16 feet			18 feet			20 feet		
													L _{eq} (h)	I.L.	N B R	L _{eq} (h)	I.L.	N B R	L _{eq} (h)	I.L.	N B R	L _{eq} (h)	I.L.	N B R	L _{eq} (h)	I.L.	N B R	L _{eq} (h)	I.L.	N B R	L _{eq} (h)	I.L.	N B R	L _{eq} (h)	I.L.	N B R
FR-1		FTNB No. 1	Residential	1	Casuda Canyon Drive	63	63	65	2	2	B(67)	--	63	2	--	63	2	--	63	2	--	63	2	--	63	2	--	63	2	--	63	2	--	63	2	--
FR-2		FTNB No. 1	Residential	1	Corporate Center Drive	70	70	72	2	2	B(67)	A/E	69	3	--	69	3	--	68	4	--	68	4	--	68	4	--	68	4	--	68	4	--	68	4	--
FR-3		FTNB No. 1	Golf Course	1	Ramona Boulevard	73	73	75	2	2	C(67)	A/E	74	1	--	74	1	--	74	1	--	74	1	--	74	1	--	74	1	--	74	1	--	74	1	--
FR-4			Commercial	1	Corporate Center Drive	80	80	81	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
FR-5			Restaurant	1	Ramona Boulevard	68	68	70	2	2	E(72)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
FR-6		FTNB No. 3A	Residential	3	Balzac Street	69	69	71	2	2	B(67)	A/E	65	6	3	64	7	3	63	8	3	62	9	3	62	9	3	61	10	3	60	11	3	60	11	3
FR-7		FTNB No. 3A	Residential	1	Capetown Avenue	64	64	70	6	6	B(67)	A/E	66	4	--	65	5	1	64	6	1	64	6	1	63	7	1	63	7	1	62	8	1	62	8	1
FR-8		FTNB No. 3A	Residential	1	Balzac Street	68	68	73	5	5	B(67)	A/E	63	10	1	61	12	1	60	13	1	59	14	1	59	14	1	58	15	1	58	15	1	57	16	1
FR-9		FTNB No. 3A	Residential	1	Balzac Street	66	67	72	5	6	B(67)	A/E	61	11	1	59	13	1	58	14	1	58	14	1	57	15	1	56	16	1	56	16	1	56	16	1
FR-10		FTNB No. 3A	Residential	2	Balzac Street	65	65	72	7	7	B(67)	A/E	65	7	2	63	9	2	61	11	2	60	12	2	59	13	2	59	13	2	58	14	2	58	14	2
FR-11		FTNB No. 3A	Residential	2	Balzac Street	64	65	71	6	7	B(67)	A/E	65	6	2	63	8	2	62	9	2	62	9	2	61	10	2	61	10	2	60	11	2	60	11	2
FR-12		FTNB No. 3A	Residential	3	Capetown Avenue	62	62	69	7	7	B(67)	A/E	65	4	--	65	4	--	64	5	3	64	5	3	63	6	3	62	7	3	61	8	3	60	9	3
FR-13		FTNB No. 3A	Residential	3	Capetown Avenue	61	61	70	9	9	B(67)	A/E	60	10	3	58	12	3	57	13	3	56	14	3	55	15	3	55	15	3	54	16	3	54	16	3
FR-14		FTNB No. 3A	Residential	2	Julep Place	64	65	72	7	8	B(67)	A/E	71	1	--	71	1	--	71	1	--	70	2	--	70	2	--	69	3	--	68	4	--	66	6	2
FR-15		FTNB No. 3A	Residential	2	Charnwood Avenue	64	65	72	7	8	B(67)	A/E	65	7	2	64	8	2	63	9	2	61	11	2	60	12	2	59	13	2	58	14	2	57	15	2
FR-16		FTNB No. 3A	Residential	3	Charnwood Avenue	59	59	67	8	8	B(67)	A/E	63	4	--	62	5	3	60	7	3	59	8	3	58	9	3	57	10	3	56	11	3	56	11	3
FR-17		FTNB No. 3A	Residential	3	Charnwood Avenue	66	66	72	6	6	B(67)	A/E	66	6	3	65	7	3	64	8	3	63	9	3	61	11	3	60	12	3	60	12	3	59	13	3
FR-18	EFTW No. 4		Residential	3	Charnwood Avenue	62	63	70	7	8	B(67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
FR-19	EFTW No. 4		Residential	3	Charnwood Avenue	65	65	73	8	8	B(67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
FR-20	EFTW No. 4		Residential	3	Charnwood Avenue	61	62	69	7	8	B(67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
FR-21			Residential	2	Hellman Avenue	63	63	71	8	8	B(67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
FR-22			Residential	4	Charnwood Avenue	60	60	68	8	8	B(67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
FR-23			Residential	5	Charnwood Avenue	56	56	62	6	6	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
FR-24		FTNB No. 5	Residential	1	Charnwood Avenue	64	64	72	8	8	B(67)	A/E	68	4	--	68	4	--	68	4	--	68	4	--	68	4	--	68	4	--	68	4	--	68	4	--
FR-25		FTNB No. 5	Residential	3	Charnwood Avenue	70	70	77	7	7	B(67)	A/E	72	5	3	72	5	3	72	5	3	72	5	3	72	5	3	72	5	3	72	5	3	72	5	3
FR-26		FTNB No. 5	Residential	2	Charnwood Avenue	71	71	78	7	7	B(67)	A/E	68	10	2	65	13	2	63	15	2	62	16	2	61	17	2	60	18	2	59	19	2	59	19	2
FR-27		FTNB No. 5	Residential	6	Charnwood Avenue	56	57	63	6	7	B(67)	--	62	1	--	61	2	--	61	2	--	60	3	--	59	4	--	58	5	6	57	6	6	57	6	6
FR-28		FTNB No. 5	Residential	3	Charnwood Avenue	62	63	68	5	6	B(67)	A/E	67	1	--	66	2	--	65	3	--	64	4	--	63	5	3	62	6	3	61	7	3	60	8	3
FR-29		FTNB No. 5	Residential	4	Westmont Drive	63	64	70	6	7	B(67)	A/E	69	1	--	68	2	--	67	3	--	65	5	4	63	7	4	62	8	4	61	9	4	61	9	4
FR-30		FTNB No. 5	Residential	3	Charnwood Avenue	63	64	69	5	6	B(67)	A/E	68	1	--	67	2	--	66	3	--	65	4	--	64	5	3	63	6	3	62	7	3	61	8	3
FR-31		FTNB No. 5	Residential	3	Westmont Drive	65	66	72	6	7	B(67)	A/E	70	2	--	69	3	--	68	4	--	68	4	--	65	7	3	64	8	3	63	9	3	62	10	3
FR-32		FTNB No. 5	Residential	3	Westmont Drive	61	62	68	6	7	B(67)	A/E	67	1	--	67	1	--	66	2	--	66	2	--	65	3	--	65	3	--	64	4	--	63	5	3
FR-33		FTNB No. 5	Residential	2	Westmont Drive	70	71	77	6	7	B(67)	A/E	69	8	2	68	9	2	67	10	2	66	11	2	65	12	2	64	13	2	63	14	2	62	15	2
FR-34		FTNB No. 5	Residential	3	Westmont Drive	68	68	78	10	10	B(67)	A/E	65	13	3	64	14	3	63	15	3	62	16	3	61	17	3	61	17	3	60	18	3	59	19	3
FR-35		FTNB No. 5	Residential	3	Westmont Drive	67	67	73	6	6	B(67)	A/E	66	7	3	65	8	3	64	9	3	63	10	3	62	11	3	62	11	3	61	12	3	60	13	3
FR-36		FTNB No. 5	Residential	4	Westmont Drive	63	64	68	4	5	B(67)	A/E	62	6	4	61	7	4	60	8	4	59	9	4	58	10	4	57	11	4	56	12	4	56	12	4
FR-37		FTNB No. 5	Residential	2	Westmont Drive	65	66	67	1	2	B(67)	A/E	61	6	2	60	7	2	59	8	2	58	9	2	58	9	2	57	10	2	56	11	2	56	11	2
FR-38		FTNB No. 5	Residential	2	Westmont Drive	65	65	67	2	2	B(67)	A/E	61	6	2	61	6	2	60	7	2	60	7	2	60	7	2	60	7	2	59	8	2	59	8	2
FR-39			Residential	2	Westmont Drive	65	65	64	-1	-1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-40			Commercial	1	Valley Boulevard	68	68	69	1	1	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-41			Residential	4	Westmont Drive	60	60	65	5	5	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-42			Residential	5	Westmont Drive	57	57	64	7	7	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-43			Residential	5	Westmont Drive	55	56	62	6	7	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-44			Residential	3	Westmont Drive	55	55	61	6	6	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-45			Residential	3	Front Street	60	60	63	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-46			Residential	1	Valley Boulevard	64	64	66	2	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FR-47		FTNB No. 7	Residential	1	Highbury Avenue	68	68	74	6	6	B(67)	A/E	74	0	--	74	0	--	74	0	--	74	0	--	72	2	--	68	6	1	66	8	1	65	9	1
FR-48		FTNB No. 7	Residential	4	Highbury Avenue	68	68	75	7	7	B(67)	A/E	74	1	--	73	2	--	71	4	--	68	7	4	66	9	4	65	10	4	64	11	4	63	12	4
FR-49		FTNB No. 7	Residential	4	Highbury Avenue	67	68	77	9	10	B(67)	A/E	70	7	4	67	10	4	66	11	4	65	12	4	63	14	4	61	16	4	60					

TABLE 3.14.18:
 Predicted Future Noise Level and Noise Barrier Analysis – Freeway Tunnel Alternative – Dual-Bore Design Variation¹

Receptor No.	EFTW No.	FTNB No.	Land Use	No. of Units/Receptors	Location	Existing Noise Level, dBA L _{eq} (h) ²	Future Peak-Hour Noise Levels, dBA L _{eq} (h)																													
							2035 Noise Levels				Activity Category (NAC)	Impact Type ^{3,4}	Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR) ^{2,5}																							
							Without Project ²	With Project ²	With Project Minus No Project Conditions	With Project Minus Existing Conditions			6 feet			8 feet			10 feet			12 feet			14 feet			16 feet			18 feet			20 feet		
													L _{eq} (h)	I.L.	N B R	L _{eq} (h)	I.L.	N B R	L _{eq} (h)	I.L.	N B R	L _{eq} (h)	I.L.	N B R	L _{eq} (h)	I.L.	N B R	L _{eq} (h)	I.L.	N B R	L _{eq} (h)	I.L.	N B R	L _{eq} (h)	I.L.	N B R
FR-104		FTNB No. 13A	Residential	3	Mayview Lane	70	71	73	2	3	B(67)	A/E	<u>68</u>	5	3	<u>68</u>	5	3	<u>68</u>	5	3	<u>68</u>	5	3	<u>68</u>	5	3	<u>68</u>	5	3	<u>68</u>	5	3			
FR-105		FTNB No. 13A	Residential	2	Pasadena Avenue	72	73	75	2	3	B(67)	A/E	<u>72</u>	3	--	<u>72</u>	3	--	<u>72</u>	3	--	<u>72</u>	3	--	<u>72</u>	3	--	<u>72</u>	3	--	<u>72</u>	3	--			
FR-106		FTNB No. 13A	Residential	1	Pasadena Avenue	64	65	69	4	5	B(67)	A/E	69	0	--	69	0	--	69	0	--	69	0	--	69	0	--	69	0	--	69	0	--			
FR-107		FTNB No. 13A	Residential	1	Rosewood Lane	62	62	65	3	3	B(67)	--	65	0	--	65	0	--	65	0	--	65	0	--	65	0	--	65	0	--	65	0	--			
FR-108		FTNB No. 13A	Residential	2	Pasadena Avenue	68	69	72	3	4	B(67)	A/E	<u>64</u>	8	2	<u>63</u>	9	2	<u>63</u>	9	2	<u>63</u>	9	2	<u>63</u>	9	2	<u>63</u>	9	2	<u>63</u>	9	2			
FR-109		FTNB No. 13A	Residential	2	Rosewood Lane	63	64	67	3	4	B(67)	A/E	67	0	--	67	0	--	67	0	--	67	0	--	67	0	--	67	0	--	67	0	--			
FR-110		FTNB No. 13A	Residential	1	Longwood Lane	70	71	74	3	4	B(67)	A/E	<u>66</u>	8	1	<u>66</u>	8	1	65	9	1	65	9	1	65	9	1	65	9	1	65	9	1			
FR-111		FTNB No. 13A	Residential	2	Orange Grove Boulevard	66	66	68	2	2	B(67)	A/E	68	0	--	68	0	--	68	0	--	68	0	--	68	0	--	68	0	--	68	0	--			
FR-112		FTNB No. 13A	Residential	2	Prospect Boulevard	66	67	68	1	2	B(67)	A/E	68	0	--	68	0	--	68	0	--	68	0	--	68	0	--	68	0	--	68	0	--			
FR-113			Residential	3	Pasadena Avenue	69	69	72	3	3	B(67)	A/E	69	3	--	69	3	--	68	4	--	68	4	--	68	4	--	68	4	--	68	4	--			
FR-114			Residential	1	Orange Grove Boulevard	67	67	69	2	2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
FR-115		FTNB No. 14	School	1	Pasadena Avenue	66	66	68	2	2	C(67)/D(52)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--					
FR-116		FTNB No. 15	Residential	1	Walnut Street	69	69	70	1	1	B(67)	A/E	<u>66</u>	4	--	<u>62</u>	8	1	60	10	1	59	11	1	58	12	1	58	12	1	56	14	1			
FR-117		FTNB No. 15	Residential	1	Walnut Street	69	69	70	1	1	B(67)	A/E	70	0	--	70	0	--	69	1	--	66	4	--	64	6	1	63	7	1	63	7	1			
FR-118			Commercial	1	Saint John Avenue	63	63	65	2	2	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
FR-119			Commercial	1	Saint John Avenue	64	64	71	7	7	F	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
FR-120			Residential	1	Saint John Avenue	61	61	70	9	9	B(67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
FR-121			Auditorium	1	Saint John Avenue	61	61	72	11	11	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
FR-122			School	1	Saint John Avenue	54	54	59	5	5	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
FR-123			Sports Field	1	Saint John Avenue	53	53	58	5	5	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
FR-124			School	1	Saint John Avenue	66	66	64	-2	-2	D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
FR-125			Residential	1	Waverly Drive	58	58	61	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
FR-126			Residential	1	Waverly Drive	58	58	61	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
FR-127			Residential	4	Gordon Terrace	57	57	60	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
FR-128			Residential	2	Gordon Terrace	57	57	61	4	4	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
FR-129			Residential	1	Bellevue Drive	57	57	60	3	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
FR-130			Residential	1	Palmetto Drive	56	57	59	2	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
FR-131			Residential	2	Palmetto Drive	55	56	58	2	3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
FR-132	EFTW No. 15		Residential	1	Palmetto Drive	53	54	53	-1	0	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
FR-133			Residential	1	California Boulevard	68	68	65	-3	-3	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
FR-134			School	1	Pasadena Avenue	64	64	61	-3	-3	C(67)/D(52)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
FR-135			School Playground	1	Pasadena Avenue	57	57	56	-1	-1	C(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
FR-136			Residential	1	California Boulevard	59	59	57	-2	-2	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
FR-137			Residential	1	California Boulevard	53	53	52	-1	-1	B(67)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				

Source: Noise Study Report (2014).
¹ Refer to Figure 3.14-6 for the locations of the Freeway Tunnel Alternative improvements (dual-bore design variation), the receptors, and existing sound walls.
² Numbers in bold represent noise levels that approach or exceed the NAC.
³ A dash (–) indicates that no barrier was analyzed at this location because the modeled receptor would not approach or exceed the NAC.
⁴ Italics indicate either no outdoor frequent human use areas or abatement not feasible due to sidewalk or driveway access.
⁵ Underlined numbers have been attenuated by at least 5 dBA (i.e., feasible wall height).

A/E = Approach or Exceed
 dBA = A-weighted decibels
 dBA L_{eq}(h) = equivalent continuous sound level per hour measured in A-weighted decibels
 EFTW = Existing Freeway Tunnel Wall
 FTNB = Freeway Tunnel Noise Barrier
 NAC = Noise Abatement Criteria

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TABLE 3.14.19:
Predicted Future Noise Level and Noise Barrier Analysis – Freeway Tunnel Alternative – Dual-Bore Design Variation (Alternate Barriers)¹

Receptor No.	EFTW No.	FTNB No.	Land Use	No. of Units/Receptors	Location	Existing Noise Level, dBA Leq(h) ²	Future Peak-Hour Noise Levels, dBA Leq(h)																																
							2035 Noise Levels				Activity Category (NAC)	Impact Type ^{3,4}	Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR) ^{2,5,6}																										
							Without Project ²	With Project ²	With Project Minus No Project Conditions	With Project Minus Existing Conditions			6 feet			8 feet			10 feet			12 feet			14 feet			16 feet			18 feet			20 feet					
													Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R	Leq (h)	I.L.	N B R			
FR-1		FTNB No. 2	Residential	1	Casuda Canyon Drive	63	63	65	2	2	B(67)	--	64	1	--	64	1	--	64	1	--	64	1	--	64	1	--	64	1	--	64	1	--	64	1	--			
FR-2		FTNB No. 2	Residential	1	Corporate Center Drive	70	70	72	2	2	B(67)	A/E	67	5	1	66	6	1	66	6	1	66	6	1	66	6	1	66	6	1	66	6	1	66	6	1			
FR-6		FTNB No. 3B	Residential	3	Balzac Street	69	69	71	2	2	B(67)	A/E	65	6	3	64	7	3	63	8	3	62	9	3	62	9	3	61	10	3	60	11	3	60	11	3			
FR-7		FTNB No. 3B	Residential	1	Capetown Avenue	64	64	70	6	6	B(67)	A/E	66	4	--	65	5	1	64	6	1	64	6	1	63	7	1	63	7	1	62	8	1	62	8	1			
FR-8		FTNB No. 3B	Residential	1	Balzac Street	68	68	73	5	5	B(67)	A/E	63	10	1	61	12	1	60	13	1	59	14	1	59	14	1	58	15	1	58	15	1	57	16	1			
FR-9		FTNB No. 3B	Residential	1	Balzac Street	66	67	72	5	6	B(67)	A/E	61	11	1	59	13	1	58	14	1	58	14	1	57	15	1	56	16	1	56	16	1	56	16	1			
FR-10		FTNB No. 3B	Residential	2	Balzac Street	65	65	72	7	7	B(67)	A/E	65	7	2	63	9	2	61	11	2	60	12	2	59	13	2	59	13	2	58	14	2	58	14	2			
FR-11		FTNB No. 3B	Residential	2	Balzac Street	64	65	71	6	7	B(67)	A/E	65	6	2	63	8	2	62	9	2	62	9	2	61	10	2	61	10	2	60	11	2	60	11	2			
FR-12		FTNB No. 3B	Residential	3	Capetown Avenue	62	62	69	7	7	B(67)	A/E	65	4	--	65	4	--	64	5	3	64	5	3	63	6	3	62	7	3	61	8	3	60	9	3			
FR-13		FTNB No. 3B	Residential	3	Capetown Avenue	61	61	70	9	9	B(67)	A/E	60	10	3	58	12	3	57	13	3	56	14	3	55	15	3	55	15	3	54	16	3	54	16	3			
FR-14		FTNB No. 3B	Residential	2	Julep Place	64	65	72	7	8	B(67)	A/E	71	1	--	71	1	--	71	1	--	70	2	--	70	2	--	69	3	--	68	4	--	67	5	2			
FR-15		FTNB No. 3B	Residential	2	Charnwood Avenue	64	65	72	7	8	B(67)	A/E	65	7	2	64	8	2	63	9	2	61	11	2	60	12	2	59	13	2	58	14	2	57	15	2			
FR-16		FTNB No. 3B	Residential	3	Charnwood Avenue	59	59	67	8	8	B(67)	A/E	63	4	--	62	5	3	60	7	3	59	8	3	58	9	3	57	10	3	56	11	3	56	11	3			
FR-17		FTNB No. 3B	Residential	3	Charnwood Avenue	66	66	72	6	6	B(67)	A/E	66	6	3	65	7	3	64	8	3	63	9	3	61	11	3	60	12	3	60	12	3	59	13	3			
FR-18	EFTW No. 4	FTNB No. 3B	Residential	3	Charnwood Avenue	62	63	70	7	8	B(67)	A/E	70	0	--	67	3	--	65	5	3	64	6	3	63	7	3	62	8	3	61	9	3	60	10	3			
FR-19	EFTW No. 4	FTNB No. 3B	Residential	3	Charnwood Avenue	65	65	73	8	8	B(67)	A/E	73	0	--	68	5	3	65	8	3	63	10	3	61	12	3	60	13	3	60	13	3	59	14	3			
FR-20	EFTW No. 4	FTNB No. 3B	Residential	3	Charnwood Avenue	61	62	69	7	8	B(67)	A/E	69	0	--	66	3	--	65	4	--	64	5	3	63	6	3	62	7	3	61	8	3	61	8	3			
FR-21		FTNB No. 3B	Residential	2	Hellman Avenue	63	63	71	8	8	B(67)	A/E	71	0	--	66	5	2	65	6	2	65	6	2	64	7	2	64	7	2	64	7	2	63	8	2			
FR-22		FTNB No. 3B	Residential	4	Charnwood Avenue	60	60	68	8	8	B(67)	A/E	68	0	--	66	2	--	66	2	--	65	3	--	65	3	--	65	3	--	65	3	--	64	4	--			
FR-6		FTNB No. 4	Residential	3	Balzac Street	69	69	71	2	2	B(67)	A/E	70	1	--	70	1	--	70	1	--	70	1	--	70	1	--	70	1	--	70	1	--	70	1	--			
FR-7		FTNB No. 4	Residential	1	Capetown Avenue	64	64	70	6	6	B(67)	A/E	67	3	--	67	3	--	67	3	--	67	3	--	67	3	--	67	3	--	67	3	--	67	3	--			
FR-8		FTNB No. 4	Residential	1	Balzac Street	68	68	73	5	5	B(67)	A/E	72	1	--	72	1	--	72	1	--	72	1	--	72	1	--	72	1	--	72	1	--	72	1	--			
FR-9		FTNB No. 4	Residential	1	Balzac Street	66	67	72	5	6	B(67)	A/E	70	2	--	69	3	--	69	3	--	69	3	--	68	4	--	68	4	--	66	6	1	65	7	1			
FR-10		FTNB No. 4	Residential	2	Balzac Street	65	65	72	7	7	B(67)	A/E	69	3	--	68	4	--	67	5	2	67	5	2	67	5	2	67	5	2	67	5	2	66	6	2			
FR-11		FTNB No. 4	Residential	2	Balzac Street	64	65	71	6	7	B(67)	A/E	68	3	--	67	4	--	67	4	--	67	4	--	66	5	2	66	5	2	65	6	2	65	6	2			
FR-12		FTNB No. 4	Residential	3	Capetown Avenue	62	62	69	7	7	B(67)	A/E	66	3	--	66	3	--	65	4	--	64	5	3	64	5	3	63	6	3	63	6	3	62	7	3			
FR-13		FTNB No. 4	Residential	3	Capetown Avenue	61	61	70	9	9	B(67)	A/E	66	4	--	65	5	3	64	6	3	63	7	3	63	7	3	61	9	3	61	9	3	60	10	3			
FR-14		FTNB No. 4	Residential	2	Julep Place	64	65	72	7	8	B(67)	A/E	69	3	--	67	5	2	67	5	2	66	6	2	66	6	2	64	8	2	63	9	2	62	10	2	61	11	2
FR-15		FTNB No. 4	Residential	2	Charnwood Avenue	64	65	72	7	8	B(67)	A/E	67	5	2	66	6	2	66	6	2	64	8	2	63	9	2	62	10	2	61	11	2	61	11	2			
FR-16		FTNB No. 4	Residential	3	Charnwood Avenue	59	59	67	8	8	B(67)	A/E	65	2	--	64	3	--	63	4	--	62	5	3	61	6	3	61	6	3	60	7	3	60	7	3			
FR-17		FTNB No. 4	Residential	3	Charnwood Avenue	66	66	72	6	6	B(67)	A/E	67	5	3	66	6	3	64	8	3	63	9	3	63	9	3	62	10	3	62	10	3	61	11	3			
FR-18	EFTW No. 4	FTNB No. 4	Residential	3	Charnwood Avenue	62	63	70	7	8	B(67)	A/E	68	2	--	67	3	--	67	3	--	66	4	--	66	4	--	65	5	3	65	5	3	65	5	3			
FR-19	EFTW No. 4	FTNB No. 4	Residential	3	Charnwood Avenue	65	65	73	8	8	B(67)	A/E	71	2	--	71	2	--	69	4	--	68	5	3	67	6	3	65	8	3	64	9	3	63	10	3			
FR-20	EFTW No. 4	FTNB No. 4	Residential	3	Charnwood Avenue	61	62	69	7	8	B(67)	A/E	69	0	--	69	0	--	69	0	--	68	1	--	68	1	--	68	1	--	68	1	--	67	2	--			
FR-21		FTNB No. 4	Residential	2	Hellman Avenue	63	63	71	8	8	B(67)	A/E	71	0	--	71	0	--	71	0	--	71	0	--	71	0	--	71	0	--	71	0	--	70	1	--			
FR-22		FTNB No. 4	Residential	4	Charnwood Avenue	60	60	68	8	8	B(67)	A/E	68	0	--	67	1	--	67	1	--	67	1	--	67	1	--	66	2	--	66	2	--	65	3	--			
FR-47		FTNB No. 6 D	Residential	1	Highbury Avenue	68	68	74	6	6	B(67)	A/E	73	1	--	72	2	--	70	4	--	68	6	1	67	7	1	65	9	1	64	10	1	64	10	1			
FR-48		FTNB No. 6 D	Residential	4	Highbury Avenue	68	68	75	7	7	B(67)	A/E	74	1	--	73	2	--	71	4	--	70	6	4	67	8	4	66	9	4	65	10	4	64	11	4			
FR-49		FTNB No. 6 D	Residential	4	Highbury Avenue	67	68	77	9	10	B(67)	A/E	77	0	--	76	1	--	74	3	--	73	4	--	72	5	--	71	6	4	68	9	4	66	11	4			
FR-50		FTNB No. 6 D	Residential	2	Highbury Avenue	68	69	77	8	9	B(67)	A/E	77	0	--	74	3	--	73	4	--	70	7	2	67	10	2	66	11	2	65	12	2	64	13	2			
FR-51		FTNB No																																					

TABLE 3.14.19:
Predicted Future Noise Level and Noise Barrier Analysis – Freeway Tunnel Alternative – Dual-Bore Design Variation (Alternate Barriers)¹

Receptor No.	EFTW No.	FTNB No.	Land Use	No. of Units/Receptors	Location	Existing Noise Level, dBA $L_{eq}(h)^2$	Future Peak-Hour Noise Levels, dBA $L_{eq}(h)$																													
							2035 Noise Levels				Activity Category (NAC)	Impact Type ^{3,4}	Noise Prediction With Barrier, Barrier Insertion Loss (I.L.), and Number of Benefited Receptors (NBR) ^{2,5,6}																							
							Without Project ²	With Project ²	With Project Minus No Project Conditions	With Project Minus Existing Conditions			6 feet			8 feet			10 feet			12 feet			14 feet			16 feet			18 feet			20 feet		
													$L_{eq}(h)$	I.L.	NBR	$L_{eq}(h)$	I.L.	NBR	$L_{eq}(h)$	I.L.	NBR	$L_{eq}(h)$	I.L.	NBR	$L_{eq}(h)$	I.L.	NBR	$L_{eq}(h)$	I.L.	NBR	$L_{eq}(h)$	I.L.	NBR	$L_{eq}(h)$	I.L.	NBR
FR-110		FTNB No. 13B	Residential	1	Longwood Lane	70	71	74	3	4	B(67)	A/E	--	--	--	--	--	71	3	--	71	3	--	70	4	--	70	4	--	70	4	--	70	4	--	
FR-111		FTNB No. 13B	Residential	2	Orange Grove Boulevard	66	66	68	2	2	B(67)	A/E	--	--	--	--	--	68	0	--	68	0	--	68	0	--	68	0	--	68	0	--	68	0	--	
FR-112		FTNB No. 13B	Residential	2	Prospect Boulevard	66	67	68	1	2	B(67)	A/E	--	--	--	--	--	68	0	--	68	0	--	68	0	--	68	0	--	68	0	--	68	0	--	

Source: *Noise Study Report* (2014).

¹ Refer to Figure 3.14-6 for the locations of the Freeway Tunnel Alternative improvements (dual-bore design variation), the receptors, and existing sound walls.

² Numbers in **bold** represent noise levels that approach or exceed the NAC.

³ A dash (–) indicates that no barrier was analyzed at this location because the modeled receptor would not approach or exceed the NAC.

⁴ *Italics* indicate either no outdoor frequent human use areas or abatement not feasible due to sidewalk or driveway access.

⁵ Underlined numbers have been attenuated by at least 5 dBA (i.e., feasible wall height).

A/E = Approach or Exceed

dBA = A-weighted decibels

dBA $L_{eq}(h)$ = equivalent continuous sound level per hour measured in A-weighted decibels

EFTW = Existing Freeway Tunnel Wall

FTNB = Freeway Tunnel Noise Barrier

NAC = Noise Abatement Criteria

TABLE 3.14.20:
Typical Construction Equipment Noise Levels

Type of Equipment	Range of Maximum Sound Levels (dBA L _{max} at 50 ft)	Suggested Maximum Sound Levels for Analysis (dBA L _{max} at 50 ft)
Pile drivers	81–96	93
Rock drills	83–99	96
Jackhammers	75–85	82
Pneumatic tools	78–88	85
Pumps	74–84	80
Scrapers	83–91	87
Haul trucks	83–94	88
Cranes	79–86	82
Portable generators	71–87	80
Rollers	75–82	80
Dozers	77–90	85
Tractors	77–82	80
Front-end loaders	77–90	86
Hydraulic backhoe	81–90	86
Hydraulic excavators	81–90	86
Graders	79–89	86
Air compressors	76–89	86
Trucks	81–87	86

Source: *Noise Study Report* (2014).

dBA L_{max} = maximum instantaneous sound level measured in A-weighted decibels
 ft = feet

TABLE 3.14-21:
Receptor Locations Where the Applicable Noise Abatement Criteria Would be Approached or Exceeded under the TSM/TDM Alternative

Improvement Name and No.	Receptor and Land Use Description	Noise Abatement Considered
Local Street Improvement L-3	Receptor TR-22 (L3/TR-22): This receptor location represents an existing swimming pool on the west side of Atlantic Boulevard. There are no existing walls that shield this area.	One noise barrier (TNB No. 1) was modeled along the property line to shield this residence.
	Receptor TR-34 (L3/TR-34): This receptor location represents an existing residence on Glendon Way on the west side of Atlantic Boulevard. There are no existing walls that shield this residence.	One noise barrier (TNB No. 2) was modeled along the property line to shield this residence.
Local Street Improvement L-5	Receptor TR-33 (L5/TR-33): This receptor location represents an existing residence on the west side of Rosemead Boulevard. There are no existing walls that shield this residence.	One noise barrier (TNB No. 1) was modeled along the property line to shield this residence.
Other Road Improvement T-1	Receptors TR-6 (T1/TR-6) through TR-13 (T1/TR-13): These receptor locations represent existing residences on the east side of SR 710. There are no existing walls that shield these residences.	One noise barrier (TNB No. 1) was modeled along the property line to shield these residences.
	Receptors TR-30 (T1/TR-30) through TR-36 (T1/TR-36): These receptor locations represent existing residences on the west side of SR 710. There are no existing walls that shield these residences.	Three noise barriers (TNB Nos. 2 through 4) were modeled along the edge of shoulder of SR 710 and the property lines to shield these residences. Two scenarios were analyzed: Scenario 1, which only includes modeled TNB No. 2, and Scenario 2, which includes modeled TNB Nos. 3 and 4.
Other Road Improvement T-2	Receptors TR-1 (T2/TR-1) and TR-2 (T2/TR-2): These receptor locations represent existing single-family and multifamily residences on the east side of SR 110. There are no existing walls that shield these residences.	One noise barrier (TNB No. 1) was modeled along the ROW/property line to shield these residences and multifamily residence balconies.
	Receptors TR-8 (T2/TR-8) through TR-14 (T2/TR-14): These receptor locations represent existing multifamily residences on the west side of SR 110. There are no existing walls that shield these residences.	One noise barrier (TNB No. 2) was modeled along the ROW/edge of roadway to shield the first, second, and third floor balconies of these multifamily residences.

Source: *Noise Study Report* (2014).
 ROW = right of way
 SR 110 = State Route 110
 SR 710 = State Route 710
 TDM = Transportation Demand Management
 TNB = TSM/TDM Noise Barrier
 TSM = Transportation System Management

TABLE 3.14.22:
Summary of Feasible Noise Barriers for the TSM/TDM Alternative

TSM/TDM Intersection ID No.	Noise Barrier No.	Height (ft)	Approximate Length (ft)	Receiver Locations Benefited	Number of Benefited Units ¹	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	Station No.	
								Begin	End
L-3	TNB No. 1	6	48	L3/TR-22	1	\$55,000	\$55,000	29+85	30+15
		8 ²		L3/TR-22	1	\$55,000			
		10		L3/TR-22	1	\$55,000			
		12		L3/TR-22	1	\$55,000			
		14		L3/TR-22	1	\$55,000			
		16		L3/TR-22	1	\$55,000			
		18		L3/TR-22	1	\$55,000			
		20		L3/TR-22	1	\$55,000			
	TNB No. 2	6	46	L3/TR-34	1	\$55,000	\$55,000	19+10	19+23
		8 ²		L3/TR-34	1	\$55,000			
		10		L3/TR-34	1	\$55,000			
		12		L3/TR-34	1	\$55,000			
		14		L3/TR-34	1	\$55,000			
		16		L3/TR-34	1	\$55,000			
		18		L3/TR-34	1	\$55,000			
		20		L3/TR-34	1	\$55,000			
L-5	TNB No. 1	6	202	L5/TR-33	2	\$55,000	\$110,000	30+18	30+23
		8		L5/TR-33	2	\$55,000			
		10 ²		L5/TR-33	2	\$55,000			
		12		L5/TR-33	2	\$55,000			
		14		L5/TR-33	2	\$55,000			
		16		L5/TR-33	2	\$55,000			
		18		L5/TR-33	2	\$55,000			
		20		L5/TR-33	2	\$55,000			
T-1	TNB No. 1	8	1247	T1/TR-7 to T1/TR-13	18	\$55,000	\$990,000	40+95	53+67
		10		T1/TR-7 to T1/TR-13	18	\$55,000			
		12		T1/TR-7 to T1/TR-13	18	\$55,000			
		14		T1/TR-7 to T1/TR-13	18	\$55,000			
		16 ²		T1/TR-7 to T1/TR-13	18	\$55,000			
		18		T1/TR-7 to T1/TR-13	18	\$55,000			
		20		T1/TR-7 to T1/TR-13	18	\$55,000			
	TNB No. 2	10	963	T1/TR-31	4	\$55,000	\$220,000	39+75	48+53
		12		T1/TR-30, T1/TR-31	5	\$55,000			
		14		T1/TR-30, T1/TR-31, T1/TR-33, T1/TR-34	11	\$55,000			
		16		T1/TR-30, T1/TR-31, T1/TR-33, T1/TR-34, T1/TR-36	15	\$55,000			
		18		T1/TR-30 to T1/TR-34, T1/TR-36	16	\$55,000			
		20 ³		T1/TR-30 to T1/TR-34, T1/TR-36	16	\$55,000			

TABLE 3.14.22:
Summary of Feasible Noise Barriers for the TSM/TDM Alternative

TSM/TDM Intersection ID No.	Noise Barrier No.	Height (ft)	Approximate Length (ft)	Receiver Locations Benefited	Number of Benefited Units ¹	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	Station No.		
								Begin	End	
T-1	TNB No. 3	6	673	T1/TR-33	4	\$55,000	\$220,000	43+00	49+52	
		8		T1/TR-33	4	\$55,000				
		10		T1/TR-33	4	\$55,000				
		12		T1/TR-33	4	\$55,000				
		14		T1/TR-31, T1/TR-33	8	\$55,000				
		16		T1/TR-31, T1/TR-33	8	\$55,000				
		18		T1/TR-31, T1/TR-33	8	\$55,000				
		20 ³		T1/TR-30, T1/TR-31, T1/TR-33	9	\$55,000				
	TNB No. 4	6	406	T1/TR-34	6	\$55,000	\$330,000	39+36	42+40	
		8		T1/TR-34	6	\$55,000				
		10		T1/TR-34	6	\$55,000				
		12		T1/TR-34	6	\$55,000				
		14		T1/TR-34	6	\$55,000				
		16		T1/TR-34	6	\$55,000				
		18		T1/TR-34	6	\$55,000				
		20 ²		T1/TR-34	6	\$55,000				
	T-2	TNB No. 1	6	349	T2/TR-2	4	\$55,000	\$220,000	79+28	82+63
			8		T2/TR-2	4	\$55,000			
10 ²			T2/TR-2		4	\$55,000				
12			T2/TR-2		4	\$55,000				
14			T2/TR-2		4	\$55,000				
16			T2/TR-2		4	\$55,000				
18			T2/TR-2		4	\$55,000				
20			T2/TR-2		4	\$55,000				
TNB No. 2		8	743	T2/TR-9	13	\$55,000	\$715,000	82+37	89+95	
		10		T2/TR-9	13	\$55,000				
		12		T2/TR-9 to T2/TR-11	34	\$55,000				
		14		T2/TR-9 to T2/TR-11	34	\$55,000				
		16		T2/TR-9 to T2/TR-11	34	\$55,000				
		18		T2/TR-9 to T2/TR-11	34	\$55,000				
		20 ²		T2/TR-9 to T2/TR-11	34	\$55,000				

Source: *Noise Study Report (2014)*.

¹ Number of units that are attenuated by 5 dBA or more by the modeled barrier.

² Denotes the minimum wall height required to break the line of sight between the receiver and truck exhaust stack.

³ Denotes that the maximum feasible barrier height would not break the line of sight between the receptor and the truck exhaust stack.

dBA = A-weighted decibels

TNB = Freeway Tunnel Noise Barrier

ft = feet

TSM = Transportation System Management

TDM = Transportation Demand Management

TABLE 3.14.23:

Receptor Locations Where the Applicable Noise Abatement Criteria Would be Approached or Exceeded under the BRT Alternative

Receptor and Land Use Description	Noise Abatement Considered
Receptor BR-122: This receptor location represents an existing residence on San Marino Avenue on the east side of Atlantic Boulevard. There are no existing walls that shield this residence.	One noise barrier (BNB No. 5) was modeled along the property line to shield this residence.
Receptor BR-237: This receptor location represents an existing apartment complex on Amberwood Drive on the east side of Atlantic Boulevard. There are no existing walls that shield these apartments.	One noise barrier (BNB No. 6) was modeled along the property line to shield these apartments.
Receptor BR-397: This receptor location represents an existing pool area associated with an apartment complex on Shorb Street on the west side of Atlantic Boulevard. There are no existing walls that shield this pool area.	One noise barrier (BNB No. 4) was modeled along the property line to shield this pool area.
Receptors BR-443, BR-444, BR-446, BR-447, and BR-449: These receptor locations represent existing single-family and multifamily residences on the west side of Atlantic Boulevard, between Harding Avenue and Mabel Avenue. There are no existing walls that shield these residences.	Two noise barriers (BNB Nos. 2 and 3) were modeled along the City's ROW/property line and at the top of slope to shield these residences.
Receptor BR-450: This receptor location represents an existing multifamily residence on the west side of Atlantic Boulevard, between Harding Avenue and Mabel Avenue. There are no existing walls that shield this residence.	One noise barrier (BNB No. 1) was modeled along the property line to shield this residence.

Source: *Noise Study Report* (2014).

BNB = BRT Noise Barrier

BRT = Bus Rapid Transit

ROW = right of way

TABLE 3.14.24:
Summary of Feasible Noise Barriers for the BRT Alternative

Noise Barrier No.	Height (ft)	Approximate Length (ft)	Receiver Locations Benefited	Number of Benefited Units ¹	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	Station Number	
							Begin	End
BNB No. 1	10	340	BR-450	12	\$55,000	\$660,000	168+95	172+05
	12		BR-450	12	\$55,000	\$660,000		
	14		BR-450	12	\$55,000	\$660,000		
	16		BR-450	12	\$55,000	\$660,000		
	18		BR-450	12	\$55,000	\$660,000		
	20 ²		BR-450	12	\$55,000	\$660,000		
BNB No. 2	10	826	BR-448	3	\$55,000	\$165,000	173+00 & 177+02	176+85 & 181+48
	12		BR-447, BR-449	9	\$55,000	\$495,000		
	14		BR-444, BR-447, BR-449	16	\$55,000	\$880,000		
	16		BR-443, BR-444, BR-446, BR-447, BR-449	24	\$55,000	\$1,320,000		
	18		BR-443, BR-444, BR-446, BR-447, BR-449	24	\$55,000	\$1,320,000		
	20 ³		BR-443, BR-444, BR-446, BR-447, BR-449	24	\$55,000	\$1,320,000		
BNB No. 3	6	623	BR-443, BR-444, BR-446, BR-447, BR-449	24	\$55,000	\$1,320,000	173+55 & 177+04	176+98 & 180+30
	8 ²		BR-443, BR-444, BR-446, BR-447, BR-449	24	\$55,000	\$1,320,000		
	10		BR-443, BR-444, BR-446, BR-447, BR-449	24	\$55,000	\$1,320,000		
	12		BR-443, BR-444, BR-446, BR-447, BR-449	24	\$55,000	\$1,320,000		
	14		BR-443, BR-444, BR-446, BR-447, BR-449	24	\$55,000	\$1,320,000		
	16		BR-443, BR-444, BR-446, BR-447, BR-449	24	\$55,000	\$1,320,000		
	18		BR-443, BR-444, BR-446, BR-447, BR-449	24	\$55,000	\$1,320,000		
	20		BR-443, BR-444, BR-446, BR-447, BR-449	24	\$55,000	\$1,320,000		
BNB No. 4	8 ²	67	BR-397	1	\$55,000	\$55,000	248+20	248+58
	10		BR-397	1	\$55,000	\$55,000		
	12		BR-397	1	\$55,000	\$55,000		
	14		BR-397	1	\$55,000	\$55,000		
	16		BR-397	1	\$55,000	\$55,000		
	18		BR-397	1	\$55,000	\$55,000		
	20		BR-397	1	\$55,000	\$55,000		
BNB No. 5	6	146	BR-122	1	\$55,000	\$55,000	260+16	260+95
	8		BR-122	1	\$55,000	\$55,000		
	10 ²		BR-122	1	\$55,000	\$55,000		
	12		BR-122	1	\$55,000	\$55,000		
	14		BR-122	1	\$55,000	\$55,000		
	16		BR-122	1	\$55,000	\$55,000		
	18		BR-122	1	\$55,000	\$55,000		
	20		BR-122	1	\$55,000	\$55,000		

Source: *Noise Study Report* (2014).

¹ Number of units that are attenuated by 5 dBA or more by the modeled barrier.

² Denotes the minimum wall height required to break the line of sight between the receiver and truck exhaust stack.

³ Denotes that the maximum feasible barrier height would not break the line of sight between the receptor and the truck exhaust stack.

BNB = BRT Noise Barrier dBA = A-weighted decibels
 BRT = Bus Rapid Transit ft = feet

TABLE 3.14.25:
Summary of Noise Impact Analysis for the LRT Alternative

Receptor Location	Existing Noise Level (L _{dn})	Train Operations Noise Level (L _{dn})	Noise Exposure Increase (dBA)	No Impact, Moderate, Severe ¹	Proposed Barrier Height (ft) ²	Train Noise Level With Mitigation (dBA)	No Impact, Moderate, Severe After Mitigation ¹
LR-01	54.6	63.6	9.5	Severe	6.0	54.4	No Impact
LR-02	54.6	57.2	4.5	Moderate	4.0	51.8	No Impact
LR-03	63.1	67.5	5.7	Severe	5.5	59.5	No Impact
LR-04	63.1	60.5	1.9	Moderate	4.0	55.8	No Impact
LR-05	64.6	63.7	2.6	Moderate	4.0	58.4	No Impact
LR-06	58.0	67.3	9.8	Severe	9.5	56.9	No Impact
LR-07 ³	61.9	63.7	4.0	–	0.0	–	–
LR-08	61.9	68.3	7.3	Severe	7.0	58.7	No Impact
LR-09	60.0	59.1	2.6	Moderate	4.0	54.4	No Impact
LR-10	65.6	69.3	5.2	Severe	5.0	60.8	No Impact
LR-11	67.8	68.4	3.3	Moderate	4.0	61.4	No Impact
LR-12	67.6	67.9	3.2	Moderate	4.0	60.6	No Impact
LR-13	67.6	67.9	3.2	Moderate	4.0	60.6	No Impact
LR-14	67.6	67.3	2.9	Moderate	4.0	60.2	No Impact
LR-15	67.6	67.6	3.0	Moderate	4.0	60.4	No Impact
LR-16	67.7	60.5	0.8	No Impact	0.0	–	–
LR-17	61.7	54.7	0.8	No Impact	0.0	–	–
LR-18	67.0	56.3	0.4	No Impact	0.0	–	–
LR-19	64.4	55.9	0.6	No Impact	0.0	–	–
LR-20	61.9	61.9	3.0	Moderate	4.0	56.4	No Impact
LR-21	65.9	62.1	1.5	Moderate	4.0	56.5	No Impact
LR-22	61.8	62.0	3.1	Moderate	4.0	57.0	No Impact
LR-23	69.7	63.0	0.8	No Impact	0.0	–	–
LR-24	77.0	65.8	0.3	No Impact	0.0	–	–
LR-25	63.3	56.2	0.8	No Impact	0.0	–	–
LR-26	76.7	57.0	0.0	No Impact	0.0	–	–
LR-27	71.4	61.6	0.4	No Impact	0.0	–	–
LR-28	58.9	52.3	0.9	No Impact	0.0	–	–
LR-29	58.1	54.2	1.5	No Impact	0.0	–	–

Source: *Noise Study Report* (2014).

¹ Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, Table 3-1.

² Proposed barrier height is relative to the track height level.

³ Non-noise-sensitive active park. Only passive parks are classified as being noise sensitive. Level shown for reporting purposes only.

dBA = A-weighted decibels

ft = feet

L_{dn} = day-night average sound level

LRT = Light Rail Transit

TABLE 3.14.26:

Receptor Locations Where the Applicable Noise Abatement Criteria Would be Approached or Exceeded under the Freeway Tunnel Alternative

Receptor and Land Use Description	Noise Abatement Considered
Receptor FR-2: This receptor location represents an existing residence on Corporate Center Drive on the east side of I-710. There is an existing 6 ft high wall located along the residential property line that shields this residence.	Two separate noise barrier locations were modeled to shield this residence to compare their effectiveness. One noise barrier (FTNB No. 1) was modeled along the edge of the State ROW, and an alternative noise barrier (FTNB No. 2) was modeled along the residential property line.
Receptors FR-6 through FR-22: These receptor locations represent existing residences on Balzac Street on the north side of SR 60, and Capetown Avenue, Charnwood Avenue, Julep Place, and Hellman Avenue on the west side of I-710. There are two existing 5.5 to 6 ft high walls that shield some of these residences.	Three noise barriers were modeled along the edge of shoulder and the State ROW property line to shield these residences. The first barrier (FTNB No. 03A) was calculated from 6 to 20 ft with no changes to the existing walls. The second wall (FTNB No. 03B) would replace the existing wall and with FTNB No. 3A was calculated from 6 to 20 ft. A third scenario included no changes at the existing walls at the residential property lines and modeling FTNB No. 4 along the shoulder of the connector ramp on the east side of SR 710. A small gap in that wall would be necessary to allow access to the retention basin between the freeway and the residences.
Receptors FR-24 through FR-26 and FR-28 through FR-39: These receptor locations represent existing residences on Charnwood Avenue and Westmont Drive on the east side of I-710. There are no existing walls that shield these residences.	One noise barrier (FTNB No. 5) was modeled along the State ROW/property line to shield these residences.
Receptors FR-47 through FR-49: These receptor locations represent existing residences on Highbury Avenue on the west side of I-710. There are no existing walls that shield these residences.	Two separate noise barrier locations were modeled to shield these residences to compare their effectiveness. One noise barrier (FTNB No. 7) was modeled along the residential private property line for each design variation, and the other noise barrier (FTNB No. 6) was modeled along the edge of the shoulder for each design variation (6S for single bore and 6D for dual bore).
Receptors FR-50 and FR-51: These receptor locations represent existing residences on Highbury Avenue on the west side of I-710. There are no existing walls that shield these residences.	Two separate noise barrier locations were modeled to shield these residences to compare their effectiveness. One noise barrier (FTNB No. 8) was modeled along the residential private property line for each design variation, and the other noise barrier (FTNB No. 6) was modeled along the edge of the shoulder for each design variation (6S for single bore and 6D for dual bore).
Receptor FR-72: This receptor location represents an existing restaurant patio on Colorado Boulevard on the east side of SR 710. There is no existing wall that shields the outdoor frequent human use area associated with this restaurant patio (dual bore only).	One noise barrier (FTNB No. 9) was modeled along the property line to shield this outdoor frequent human use area.
Receptors FR-75 through FR-81, FR-83 and FR-84: These receptor locations represent existing multifamily residences on Orange Grove Place and Cypress Avenue on the east side of I-210. There is an existing 6.5 foot high wall that shields these residences.	One noise barrier (FTNB No. 10) was modeled along the State ROW/property line to shield these residences.
Receptors FR-85 and FR-89 through FR-95: These receptor locations represent existing residences on Cypress Avenue and a school on Orange Grove Boulevard on the east side of I-210. There is an existing 6 ft high wall that shields these residences and school.	One noise barrier, FTNB No. 11, was modeled along the State right of way/property line to shield these residences and school.

TABLE 3.14.26:

Receptor Locations Where the Applicable Noise Abatement Criteria Would be Approached or Exceeded under the Freeway Tunnel Alternative

Receptor and Land Use Description	Noise Abatement Considered
Receptors FR-96 through FR-98: These receptor locations represent existing residences on Lincoln Avenue on the east side of I-210. There is an existing 6 ft high wall that shields these residences.	One noise barrier (FTNB No. 12) was modeled along the State ROW/property line to shield these residences.
Receptors FR-99, FR-100, FR-102 through FR-106, FR-108 through FR-113: These receptor locations represent existing residences on Winona Avenue, Pasadena Avenue, Mayview Lane, Ridgewood Lane, Rosewood Lane, Longwood Lane, Orange Grove Boulevard, and Prospect Boulevard on the west side of I-210. There is an existing 6.5 to 10 ft high wall that shields some of these residences.	Two locations were modeled for this barrier. For the first, FTNB No. 13B was calculated from 6 to 20 ft with no changes to the existing walls. For the second, FTNB No. 13A, the existing wall would be replaced and FTNB No. 13B would be added at that location.
Receptors FR-114 and FR-115: This receptor location represents an existing school on Pasadena Avenue on the west side of I-210. There are no existing walls that shield the outdoor frequent human use areas associated with the school.	One noise barrier (FTNB No. 14) was modeled along the property line to shield these outdoor frequent human use areas.
Receptors FR-116 and FR-117: These receptor locations represent an existing pool and tennis court associated with an apartment complex on Walnut Street on the northwest side of the I-210/SR 134 interchange. There are no existing walls that shield the outdoor frequent human use areas associated with the apartments.	One noise barrier (FTNB No. 15) was modeled along the property line to shield these outdoor frequent human use areas.

Source: *Noise Study Report* (2014).

ft = foot/feet

FTNB = Freeway Tunnel Noise Barrier

I-210 = Interstate 210

I-710 = Interstate 710

ROW = right of way

SR 134 = State Route 134

SR 60 = State Route 60

Table 3.14.27:
Summary of Feasible Noise Barriers for the Freeway Tunnel Alternative with the Single-Bore Design Variation

Noise Barrier No.	Height (ft)	Approximate Length (ft)	Receiver Locations Benefited	Number of Benefited Units ¹	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	Station Number	
							Begin	End
FTNB No. 1	14	537	FR-2	1	\$55,000	\$55,000	1376+15	1381+30
	16		FR-2	1	\$55,000	\$55,000		
	18		FR-2	1	\$55,000	\$55,000		
	20 ³		FR-2	1	\$55,000	\$55,000		
FTNB No. 2	6	115	FR-2	1	\$55,000	\$55,000	1378+57	1379+00
	8 ²		FR-2	1	\$55,000	\$55,000		
	10		FR-2	1	\$55,000	\$55,000		
	12		FR-2	1	\$55,000	\$55,000		
	14		FR-2	1	\$55,000	\$55,000		
	16		FR-2	1	\$55,000	\$55,000		
	18		FR-2	1	\$55,000	\$55,000		
	20		FR-2	1	\$55,000	\$55,000		
FTNB No. 3A	6	2453	FR-6, FR-8 to FR-11, FR-13, FR-15, FR-17	17	\$55,000	\$935,000	1406+90	1425+40
	8		FR-6, FR-8 to FR-11, FR-13, FR-15 to FR-17	20	\$55,000	\$1,100,000		
	10		FR-6, FR-8 to FR-13, FR-15 to FR-17	23	\$55,000	\$1,265,000		
	12 ²		FR-6 to FR-13, FR-15 to FR-17	24	\$55,000	\$1,320,000		
	14		FR-6 to FR-13, FR-15 to FR-17	24	\$55,000	\$1,320,000		
	16		FR-6 to FR-13, FR-15 to FR-17	24	\$55,000	\$1,320,000		
	18		FR-6 to FR-13, FR-15 to FR-17	24	\$55,000	\$1,320,000		
	20		FR-6 to FR-17	26	\$55,000	\$1,430,000		
FTNB No. 3B	6	3091	FR-6, FR-8 to FR-11, FR-13, FR-15, FR-17, FR-21	19	\$55,000	\$1,045,000	1425+21	1431+40
	8		FR-6, FR-8 to FR-11, FR-13, FR-15 to FR-19, FR-21	28	\$55,000	\$1,540,000		
	10		FR-6, FR-8 to FR-13, FR-15 to FR-21	34	\$55,000	\$1,870,000		
	12 ²		FR-6, FR-8 to FR-13, FR-15 to FR-21	34	\$55,000	\$1,870,000		
	14		FR-6, FR-8 to FR-13, FR-15 to FR-21	34	\$55,000	\$1,870,000		
	16		FR-6, FR-8 to FR-13, FR-15 to FR-21	34	\$55,000	\$1,870,000		
	18		FR-6, FR-8 to FR-13, FR-15 to FR-21	34	\$55,000	\$1,870,000		
	20		FR-6, FR-8 to FR-21	36	\$55,000	\$1,980,000		
FTNB No. 4	6	2621	FR-15, FR-18, FR-19, FR-21	10	\$55,000	\$550,000	1406+65 & 1414+22	1413+92 & 1431+40
	8		FR-14, FR-15, FR-17 to FR-19, FR-21	15	\$55,000	\$825,000		
	10		FR-13 to FR-15, FR-17 to FR-19, FR-21	18	\$55,000	\$990,000		
	12		FR-13 to FR-19, FR-21	21	\$55,000	\$1,155,000		
	14		FR-13 to FR-19, FR-21	21	\$55,000	\$1,155,000		
	16		FR-13 to FR-19, FR-21	21	\$55,000	\$1,155,000		
	18		FR-10, FR-12 to FR-19, FR-21	26	\$55,000	\$1,430,000		
	20 ³		FR-9 to FR-19, FR-21	29	\$55,000	\$1,595,000		

Table 3.14.27:
Summary of Feasible Noise Barriers for the Freeway Tunnel Alternative with the Single-Bore Design Variation

Noise Barrier No.	Height (ft)	Approximate Length (ft)	Receiver Locations Benefited	Number of Benefited Units ¹	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	Station Number	
							Begin	End
FTNB No. 5	6	1801	FR-25, FR-26, FR-33 to FR-37	19	\$55,000	\$1,045,000	1432+48	1449+75
	8		FR-25, FR-26, FR-33 to FR-37	19	\$55,000	\$1,045,000		
	10		FR-25, FR-26, FR-31, FR-33 to FR-37	22	\$55,000	\$1,210,000		
	12		FR-25, FR-26, FR-28 to FR-31, FR-33 to FR-37	32	\$55,000	\$1,760,000		
	14		FR-24 to FR-26, FR-28 to FR-31, FR-33 to FR-37	33	\$55,000	\$1,815,000		
	16		FR-24 to FR-31, FR-33 to FR-37	39	\$55,000	\$2,145,000		
	18		FR-24 to FR-37	42	\$55,000	\$2,310,000		
	20 ²	FR-24 to FR-37	42	\$55,000	\$2,310,000			
FTNB No. 6S	20 ³	1454	FR-47, FR-51	5	\$55,000	\$275,000	1432+85	1447+75
FTNB No. 7	6	673	FR-49	4	\$55,000	\$220,000	1440+20	1446+75
	8		FR-49	4	\$55,000	\$220,000		
	10		FR-49	4	\$55,000	\$220,000		
	12		FR-48, FR-49	8	\$55,000	\$440,000		
	14		FR-48, FR-49	8	\$55,000	\$440,000		
	16		FR-47 to FR-49	9	\$55,000	\$495,000		
	18		FR-47 to FR-49	9	\$55,000	\$495,000		
	20 ²	FR-47 to FR-49	9	\$55,000	\$495,000			
FTNB No. 8	6	406	FR-50, FR-51	6	\$55,000	\$330,000	1436+65	1439+70
	8		FR-50, FR-51	6	\$55,000	\$330,000		
	10		FR-50, FR-51	6	\$55,000	\$330,000		
	12		FR-50, FR-51	6	\$55,000	\$330,000		
	14		FR-50, FR-51	6	\$55,000	\$330,000		
	16		FR-50, FR-51	6	\$55,000	\$330,000		
	18		FR-50, FR-51	6	\$55,000	\$330,000		
	20 ²	FR-50, FR-51	6	\$55,000	\$330,000			
FTNB No. 10	8	1207	FR-75, FR-80	10	\$55,000	\$550,000	1774+35	1784+20
	10		FR-75, FR-80	10	\$55,000	\$550,000		
	12		FR-75, FR-78, FR-80	12	\$55,000	\$660,000		
	14 ²		FR-75 to FR-78, FR-80	18	\$55,000	\$990,000		
	16		FR-75 to FR-80	22	\$55,000	\$1,210,000		
	18		FR-75 to FR-80	22	\$55,000	\$1,210,000		
	20	FR-75 to FR-80	22	\$55,000	\$1,210,000			
FTNB No. 11	12 ²	1404	FR-91	2	\$55,000	\$110,000	1786+00	1800+28
	14		FR-91, FR-92	5	\$55,000	\$275,000		
	16		FR-91, FR-92	5	\$55,000	\$275,000		
	18		FR-85, FR-89 to FR-92	12	\$55,000	\$660,000		
	20		FR-85, FR-89 to FR-92	12	\$55,000	\$660,000		

Table 3.14.27:

Summary of Feasible Noise Barriers for the Freeway Tunnel Alternative with the Single-Bore Design Variation

Noise Barrier No.	Height (ft)	Approximate Length (ft)	Receiver Locations Benefited	Number of Benefited Units ¹	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	Station Number	
							Begin	End
FTNB No. 12	14	556	FR-96	3	\$55,000	\$165,000	1800+20	1805+95
	16		FR-96	3	\$55,000	\$165,000		
	18		FR-96	3	\$55,000	\$165,000		
	20 ³		FR-96, FR-97	5	\$55,000	\$275,000		
FTNB No. 13A	10 ²	2315	FR-104, FR-105	5	\$55,000	\$275,000	1783+50	1806+20
	12		FR-104, FR-105	5	\$55,000	\$275,000		
	14		FR-104, FR-105	5	\$55,000	\$275,000		
	16		FR-104, FR-105	5	\$55,000	\$275,000		
	18		FR-104, FR-105	5	\$55,000	\$275,000		
	20		FR-102, FR-104, FR-105, FR-107	10	\$55,000	\$550,000		
FTNB No. 14	8	263	FR-115	1	\$55,000	\$55,000	1774+15	1776+22
	10		FR-115	1	\$55,000	\$55,000		
	12		FR-115	1	\$55,000	\$55,000		
	14		FR-115	1	\$55,000	\$55,000		
	16 ²		FR-115	1	\$55,000	\$55,000		
	18		FR-115	1	\$55,000	\$55,000		
	20		FR-115	1	\$55,000	\$55,000		
FTNB No. 15	8	262	FR-116	1	\$55,000	\$55,000	1768+60	1769+90
	10		FR-116	1	\$55,000	\$55,000		
	12 ²		FR-116	1	\$55,000	\$55,000		
	14		FR-116, FR-117	2	\$55,000	\$110,000		
	16		FR-116, FR-117	2	\$55,000	\$110,000		
	18		FR-116, FR-117	2	\$55,000	\$110,000		
	20		FR-116, FR-117	2	\$55,000	\$110,000		

Source: *Noise Study Report (2014)*.

¹ Number of units that are attenuated by 5 dBA or more by the modeled barrier.

² Denotes the minimum wall height required to break the line of sight between the receiver and truck exhaust stack.

³ Denotes that the maximum feasible barrier height would not break the line of sight between the receptor and the truck exhaust stack.

dBA = A-weighted decibels

ft = feet

FTNB = Freeway Tunnel Noise Barrier

TABLE 3.14.28:
Summary of Feasible Noise Barriers for the Freeway Tunnel Alternative with the Dual-Bore Design Variation

Noise Barrier No.	Height (ft)	Approximate Length (ft)	Receiver Locations Benefited	Number of Benefited Units ¹	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	Station Number	
							Begin	End
FTNB No. 2	6	115	FR-2	1	\$55,000	\$55,000	1378+57	1379+00
	8 ²		FR-2	1	\$55,000	\$55,000		
	10		FR-2	1	\$55,000	\$55,000		
	12		FR-2	1	\$55,000	\$55,000		
	14		FR-2	1	\$55,000	\$55,000		
	16		FR-2	1	\$55,000	\$55,000		
	18		FR-2	1	\$55,000	\$55,000		
	20	FR-2	1	\$55,000	\$55,000			
FTNB No. 3A	6	2453	FR-6, FR-8 to FR-11, FR-13, FR-15, FR-17	17	\$55,000	\$935,000	1407+00	1425+50
	8		FR-6 to FR-11, FR-13, FR-15 to FR-17	21	\$55,000	\$1,155,000		
	10		FR-6 to FR-13, FR-15 to FR-17	24	\$55,000	\$1,320,000		
	12 ²		FR-6 to FR-13, FR-15 to FR-17	24	\$55,000	\$1,320,000		
	14		FR-6 to FR-13, FR-15 to FR-17	24	\$55,000	\$1,320,000		
	16		FR-6 to FR-13, FR-15 to FR-17	24	\$55,000	\$1,320,000		
	18		FR-6 to FR-13, FR-15 to FR-17	24	\$55,000	\$1,320,000		
	20	FR-6 to FR-17	26	\$55,000	\$1,430,000			
FTNB No. 3B	6	3091	FR-6, FR-8 to FR-11, FR-13, FR-15, FR-17	17	\$55,000	\$935,000	1425+21	1431+40
	8		FR-6 to FR-11, FR-13, FR-15 to FR-17, FR-19, FR-21	26	\$55,000	\$1,430,000		
	10		FR-6 to FR-13, FR-15 to FR-19, FR-21	32	\$55,000	\$1,760,000		
	12 ²		FR-6 to FR-13, FR-15 to FR-21	35	\$55,000	\$1,925,000		
	14		FR-6 to FR-13, FR-15 to FR-21	35	\$55,000	\$1,925,000		
	16		FR-6 to FR-13, FR-15 to FR-21	35	\$55,000	\$1,925,000		
	18		FR-6 to FR-13, FR-15 to FR-21	35	\$55,000	\$1,925,000		
	20	FR-6 to FR-21	37	\$55,000	\$2,035,000			
FTNB No. 4	6	2621	FR-15, FR-17	5	\$55,000	\$275,000	1406+78 & 1414+25	1414+05 & 1431+40
	8		FR-13 to FR-15, FR-17	10	\$55,000	\$550,000		
	10		FR-10, FR-13 to FR-15, FR-17	12	\$55,000	\$660,000		
	12		FR-10, FR-12 to FR-17, FR-19	21	\$55,000	\$1,155,000		
	14		FR-10 to FR-17, FR-19	23	\$55,000	\$1,265,000		
	16		FR-10 to FR-19	26	\$55,000	\$1,430,000		
	18		FR-9 to FR-19	27	\$55,000	\$1,485,000		
	20 ³	FR-9 to FR-19	27	\$55,000	\$1,485,000			
FTNB No. 5	6	1801	FR-25, FR-26, FR-33 to FR-38	21	\$55,000	\$1,155,000	1432+48	1449+75
	8		FR-25, FR-26, FR-33 to FR-38	21	\$55,000	\$1,155,000		
	10		FR-25, FR-26, FR-33 to FR-38	21	\$55,000	\$1,155,000		
	12		FR-25, FR-26, FR-29, FR-33 to FR-38	25	\$55,000	\$1,375,000		
	14		FR-25, FR-26, FR-28 to FR-31, FR-33 to FR-38	34	\$55,000	\$1,870,000		

TABLE 3.14.28:
Summary of Feasible Noise Barriers for the Freeway Tunnel Alternative with the Dual-Bore Design Variation

Noise Barrier No.	Height (ft)	Approximate Length (ft)	Receiver Locations Benefited	Number of Benefited Units ¹	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	Station Number	
							Begin	End
	16		FR-25 to FR-31, FR-33 to FR-38	40	\$55,000	\$2,200,000		
	18		FR-25 to FR-31, FR-33 to FR-38	40	\$55,000	\$2,200,000		
	20 ²		FR-25 to FR-38	43	\$55,000	\$2,365,000		
FTNB No. 6D	6	1404	FR-51	4	\$55,000	\$220,000	1432+85	1447+60
	8		FR-51	4	\$55,001	\$220,004		
	10		FR-51	4	\$55,002	\$220,008		
	12		FR-47, FR-48, FR-50, FR-51	11	\$55,003	\$605,033		
	14		FR-47-FR-51	15	\$55,004	\$825,060		
	16		FR-47-FR-51	15	\$55,005	\$825,075		
	18		FR-47-FR-51	15	\$55,006	\$825,090		
	20 ³		FR-47-FR-51	15	\$55,007	\$825,105		
	FTNB No. 7		6	673	FR-49	4		
8		FR-49	4		\$55,000	\$220,000		
10		FR-49	4		\$55,000	\$220,000		
12		FR-48, FR-49	8		\$55,000	\$440,000		
14		FR-48, FR-49	8		\$55,000	\$440,000		
16		FR-47 to FR-49	9		\$55,000	\$495,000		
18		FR-47 to FR-49	9		\$55,000	\$495,000		
20 ²		FR-47 to FR-49	9		\$55,000	\$495,000		
FTNB No. 8	6	406	FR-50, FR-51	6	\$55,000	\$330,000	1436+80	1439+85
	8		FR-50, FR-51	6	\$55,000	\$330,000		
	10		FR-50, FR-51	6	\$55,000	\$330,000		
	12		FR-50, FR-51	6	\$55,000	\$330,000		
	14		FR-50, FR-51	6	\$55,000	\$330,000		
	16		FR-50, FR-51	6	\$55,000	\$330,000		
	18		FR-50, FR-51	6	\$55,000	\$330,000		
	20 ²		FR-50, FR-51	6	\$55,000	\$330,000		
FTNB No. 9	6	84	FR-72	1	\$55,000	\$55,000	1751+75	1752+25
	8 ²		FR-72	1	\$55,000	\$55,000		
	10		FR-72	1	\$55,000	\$55,000		
	12		FR-72	1	\$55,000	\$55,000		
	14		FR-72	1	\$55,000	\$55,000		
	16		FR-72	1	\$55,000	\$55,000		
	18		FR-72	1	\$55,000	\$55,000		
	20		FR-72	1	\$55,000	\$55,000		

TABLE 3.14.28:
Summary of Feasible Noise Barriers for the Freeway Tunnel Alternative with the Dual-Bore Design Variation

Noise Barrier No.	Height (ft)	Approximate Length (ft)	Receiver Locations Benefited	Number of Benefited Units ¹	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	Station Number	
							Begin	End
FTNB No. 10	8	1207	FR-75, FR-80	10	\$55,000	\$550,000	1774+35	1784+20
	10		FR-75, FR-80	10	\$55,000	\$550,000		
	12		FR-75, FR-80	10	\$55,000	\$550,000		
	14 ²		FR-75 to FR-78, FR-80	18	\$55,000	\$990,000		
	16		FR-75 to FR-80	22	\$55,000	\$1,210,000		
	18		FR-75 to FR-80	22	\$55,000	\$1,210,000		
FTNB No. 11	10 ²	1404	FR-91	2	\$55,000	\$110,000	1786+00	1800+28
	12		FR-91	2	\$55,000	\$110,000		
	14		FR-91, FR-92	5	\$55,000	\$275,000		
	16		FR-85, FR-91, FR-92	6	\$55,000	\$330,000		
	18		FR-85, FR-90 to FR-92	9	\$55,000	\$495,000		
	20		FR-85, FR-89 to FR-92	12	\$55,000	\$660,000		
FTNB No. 12	14	556	FR-96	3	\$54,997	\$164,991	1800+20	1805+95
	16		FR-96	3	\$54,998	\$164,994		
	18		FR-96	3	\$54,999	\$164,997		
	20 ³		FR-96	3	\$55,000	\$165,000		
FTNB No. 13A	10 ²	2315	FR-104, FR-105	5	\$55,000	\$275,000	1783+50	1806+20
	12		FR-104, FR-105	5	\$55,000	\$275,000		
	14		FR-104, FR-105, FR-108	7	\$55,000	\$385,000		
	16		FR-104, FR-105, FR-108	7	\$55,000	\$385,000		
	18		FR-104, FR-105, FR-108	7	\$55,000	\$385,000		
	20		FR-104, FR-105, FR-108, FR-109	9	\$55,000	\$495,000		
FTNB No. 13B	18 ²	709	FR-108	2	\$55,000	\$110,000	1790+65	1806+20
	20		FR-108	2	\$55,000	\$110,000		
FTNB No. 14	8	263	FR-115	1	\$55,000	\$55,000	1774+15	1776+22
	10		FR-115	1	\$55,000	\$55,000		
	12		FR-115	1	\$55,000	\$55,000		
	14		FR-115	1	\$55,000	\$55,000		
	16 ²		FR-115	1	\$55,000	\$55,000		
	18		FR-115	1	\$55,000	\$55,000		
FTNB No. 15	8	262	FR-116	1	\$55,000	\$55,000	1768+60	1769+90
	10		FR-116	1	\$55,000	\$55,000		
	12 ²		FR-116	1	\$55,000	\$55,000		
	14		FR-116, FR-117	2	\$55,000	\$110,000		

TABLE 3.14.28:
Summary of Feasible Noise Barriers for the Freeway Tunnel Alternative with the Dual-Bore Design Variation

Noise Barrier No.	Height (ft)	Approximate Length (ft)	Receiver Locations Benefited	Number of Benefited Units ¹	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	Station Number	
							Begin	End
	16		FR-116, FR-117	2	\$55,000	\$110,000		
	18		FR-116, FR-117	2	\$55,000	\$110,000		
	20		FR-116, FR-117	2	\$55,000	\$110,000		

Source: *Noise Study Report (2014)*.

¹ Number of units that are attenuated by 5 dBA or more by the modeled barrier.

² Denotes the minimum wall height required to break the line of sight between the receiver and truck exhaust stack.

³ Denotes that the maximum feasible barrier height would not break the line of sight between the receptor and the truck exhaust stack.

dBA = A-weighted decibels

ft = feet

FTNB = Freeway Tunnel Noise Barrier

TABLE 3.14.29:
Predicted Future Interior Noise Levels for the TSM/TDM, BRT, and Freeway Tunnel Alternatives

Measurement Location	Modeled Receptor Location	Exterior to Interior Reduction (dB) ¹	Exterior (dBA L _{eq}) ²	Interior (dBA L _{eq})
SM-1	BR-7	34	68	34
SM-2	BR-13	21	62	41
SM-3	BR-380	25	68	43
SM-4	BR-161	24	63	39
SM-5	BR-218	21	69	48
SM-6	FR-180	25	59	34
SM-7	FR-170	25	63	38
SM-8	FR-152	20	68	48
SM-9	FR-118	24	69	45
SM-10	FR-133	30	69	39
SM-11	L2a/TR-14	27	64	37
SM-12	L5/TR-19	37	67	30
SM-13	T2/TR-6	19	61	42

Source: *Noise Study Report* (2014).

¹ The exterior to interior reduction was calculated based on simultaneous exterior and interior noise level measurements shown in Table 6.32 in the *Noise Study Report*.

² The exterior noise level was chosen for the worst-case condition at each receptor modeled.

dB = decibels

dBA L_{eq} = equivalent continuous sound level measured in A-weighted decibels

TABLE 3.14.30:
Summary of Abatement Information for the TSM/TDM Alternative

Inter-section ID No.	Noise Barrier No.	Height (ft)	Approx. Length (ft)	Noise Attenuation Range (dBA)	Number of Benefited Units ¹	Noise Barrier Location	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	With ROW Costs		With ROW Donated				
									Estimated Sound Barrier Construction Cost ^{2,3}	Reasonable? ³	Estimated Sound Barrier Construction Cost ^{2,3}	Reasonable? ³			
L-3	TNB No. 1	6	48	5	1	City ROW/Private Property Line	\$55,000	\$55,000	-	No	-	No			
		8 ⁴		6	1	City ROW/Private Property Line	\$55,000	\$55,000	-	No	-	No			
		10		6	1	City ROW/Private Property Line	\$55,000	\$55,000	-	No	-	No			
		12		6	1	City ROW/Private Property Line	\$55,000	\$55,000	-	No	-	No			
		14		6	1	City ROW/Private Property Line	\$55,000	\$55,000	-	No	-	No			
		16		7	1	City ROW/Private Property Line	\$55,000	\$55,000	\$33,720	Yes	\$27,120	Yes			
		18		7	1	City ROW/Private Property Line	\$55,000	\$55,000	\$36,960	Yes	\$30,360	Yes			
		20		7	1	City ROW/Private Property Line	\$55,000	\$55,000	\$40,200	Yes	\$33,600	Yes			
	TNB No. 2	6	46	7	1	Private Property Line	\$55,000	\$55,000	\$49,053	Yes	\$10,178	Yes			
		8 ⁴		10	1	Private Property Line	\$55,000	\$55,000	\$52,158	Yes	\$13,283	Yes			
		10		13	1	Private Property Line	\$55,000	\$55,000	\$55,263	No	\$16,388	Yes			
		12		14	1	Private Property Line	\$55,000	\$55,000	\$58,368	No	\$19,493	Yes			
		14		15	1	Private Property Line	\$55,000	\$55,000	\$61,473	No	\$22,598	Yes			
		16		16	1	Private Property Line	\$55,000	\$55,000	\$64,578	No	\$25,703	Yes			
		18		17	1	Private Property Line	\$55,000	\$55,000	\$67,683	No	\$28,808	Yes			
		20		18	1	Private Property Line	\$55,000	\$55,000	\$70,788	No	\$31,913	Yes			
	L-5	TNB No. 1	6	202	7	2	Private Property Line	\$55,000	\$110,000	\$111,936	No	\$52,811	Yes		
			8		9	2	Private Property Line	\$55,000	\$110,000	\$125,571	No	\$66,446	Yes		
			10 ⁴		9	2	Private Property Line	\$55,000	\$110,000	\$139,206	No	\$80,081	Yes		
			12		10	2	Private Property Line	\$55,000	\$110,000	\$152,841	No	\$93,716	Yes		
14			10		2	Private Property Line	\$55,000	\$110,000	\$166,476	No	\$107,351	Yes			
16			10		2	Private Property Line	\$55,000	\$110,000	\$180,111	No	\$120,986	No			
18			10		2	Private Property Line	\$55,000	\$110,000	\$193,746	No	\$134,621	No			
20			10		2	Private Property Line	\$55,000	\$110,000	\$207,381	No	\$148,256	No			
T-1			TNB No. 1		8	1247	7-10	18	Caltrans ROW	\$55,000	\$990,000	\$981,972	Yes	\$921,009	Yes
					10		8-12	18	Caltrans ROW	\$55,000	\$990,000	\$1,184,171	No	\$1,123,209	No
	12	8-13		18	Caltrans ROW		\$55,000	\$990,000	\$1,183,959	No	\$1,122,997	No			
	14	8-13		18	Caltrans ROW		\$55,000	\$990,000	\$1,175,061	No	\$1,114,098	No			
	16 ⁴	8-14		18	Caltrans ROW		\$55,000	\$990,000	\$1,436,514	No	\$1,375,552	No			
	18	8-15		18	Caltrans ROW		\$55,000	\$990,000	\$1,696,909	No	\$1,635,946	No			
	20	8-15		18	Caltrans ROW		\$55,000	\$990,000	\$1,825,093	No	\$1,764,131	No			
	TNB No. 2	10	963	5	4	Caltrans ROW	\$55,000	\$220,000	-	No	-	No			
		12		5-6	5	Caltrans ROW	\$55,000	\$275,000	-	No	-	No			
		14		5-6	11	Caltrans ROW	\$55,000	\$605,000	-	No	-	Yes			
16		5-7		15	Caltrans ROW	\$55,000	\$825,000	\$541,387	Yes	\$541,387	Yes				
18		5-8		16	Caltrans ROW	\$55,000	\$880,000	\$603,380	Yes	\$603,380	Yes				
TNB No. 3	20 ⁵	673	5-8	16	Caltrans ROW	\$55,000	\$880,000	\$665,373	Yes	\$665,373	Yes				
	6		6	4	Private Property Line	\$55,000	\$220,000	-	No	-	No				
	8		7	4	Private Property Line	\$55,000	\$220,000	\$859,633	No	\$409,611	No				
		10		8	4	Private Property Line	\$55,000	\$220,000	\$905,060	No	\$455,039	No			

TABLE 3.14.30:
 Summary of Abatement Information for the TSM/TDM Alternative

Inter-section ID No.	Noise Barrier No.	Height (ft)	Approx. Length (ft)	Noise Attenuation Range (dBA)	Number of Benefited Units ¹	Noise Barrier Location	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	With ROW Costs		With ROW Donated			
									Estimated Sound Barrier Construction Cost ^{2,3}	Reasonable? ³	Estimated Sound Barrier Construction Cost ^{2,3}	Reasonable? ³		
		12	406	8	4	Private Property Line	\$55,000	\$220,000	\$950,488	No	\$500,466	No		
		14		5-8	8	Private Property Line	\$55,000	\$440,000	\$995,915	No	\$545,894	No		
		16		7-9	8	Private Property Line	\$55,000	\$440,000	\$1,041,343	No	\$591,321	No		
		18		8-10	8	Private Property Line	\$55,000	\$440,000	\$1,086,770	No	\$636,749	No		
		20 ⁵		6-11	9	Private Property Line	\$55,000	\$495,000	\$1,132,198	No	\$682,176	No		
		TNB No. 4		6	6-8	6	Private Property Line	\$55,000	\$330,000	\$588,214	No	\$353,580	No	
		8		8-11	6	Private Property Line	\$55,000	\$330,000	\$615,619	No	\$380,985	No		
		10		10-13	6	Private Property Line	\$55,000	\$330,000	\$643,024	No	\$408,390	No		
		12		11-15	6	Private Property Line	\$55,000	\$330,000	\$670,429	No	\$435,795	No		
		14		12-16	6	Private Property Line	\$55,000	\$330,000	\$697,834	No	\$463,200	No		
	16	13-17	6	Private Property Line	\$55,000	\$330,000	\$725,239	No	\$490,605	No				
	18	14-17	6	Private Property Line	\$55,000	\$330,000	\$752,644	No	\$518,010	No				
	20 ⁴	15-18	6	Private Property Line	\$55,000	\$330,000	\$780,049	No	\$545,415	No				
	T-2	TNB No. 1	6	349	9	4	Caltrans ROW/Private Property Line	\$55,000	\$220,000	\$104,264	Yes	\$88,995	Yes	
			8		10	4	Caltrans ROW/Private Property Line	\$55,000	\$220,000	\$127,821	Yes	\$112,553	Yes	
			10 ⁴		11	4	Caltrans ROW/Private Property Line	\$55,000	\$220,000	\$151,379	Yes	\$136,110	Yes	
			12		12	4	Caltrans ROW/Private Property Line	\$55,000	\$220,000	\$174,936	Yes	\$159,668	Yes	
			14		12	4	Caltrans ROW/Private Property Line	\$55,000	\$220,000	\$198,494	Yes	\$183,225	Yes	
16			14		4	Caltrans ROW/Private Property Line	\$55,000	\$220,000	\$222,051	No	\$206,783	Yes		
18			15		4	Caltrans ROW/Private Property Line	\$55,000	\$220,000	\$245,609	No	\$230,340	No		
20			16		4	Caltrans ROW/Private Property Line	\$55,000	\$220,000	\$269,166	No	\$253,898	No		
TNB No. 2			8		743	5	13	Caltrans ROW	\$55,000	\$715,000	-	No	-	Yes
10			6			13	Caltrans ROW	\$55,000	\$715,000	-	No	-	Yes	
12		5-7	34	Caltrans ROW		\$55,000	\$1,870,000	\$347,353	Yes	\$314,846	Yes			
14		7-8	34	Caltrans ROW		\$55,000	\$1,870,000	\$397,505	Yes	\$364,999	Yes			
16		8-9	34	Caltrans ROW		\$55,000	\$1,870,000	\$447,658	Yes	\$415,151	Yes			
18		9	34	Caltrans ROW		\$55,000	\$1,870,000	\$497,810	Yes	\$465,304	Yes			
20 ⁴		9	34	Caltrans ROW		\$55,000	\$1,870,000	\$547,963	Yes	\$515,456	Yes			

Source: LSA Associates, Inc. (2014).

¹ Number of units that are attenuated by 5 dBA or more by the modeled barrier.

² Sound barrier construction cost information provided by CH2M HILL.

³ Shaded area represents barrier heights that have been determined to be not reasonable because the barrier would not reduce noise levels by 7 dBA or more.

⁴ Denotes the minimum wall height required to break the line of sight between the receiver and truck exhaust stack.

⁵ Denotes that the maximum feasible barrier height would not break the line of sight between the receptor and the truck exhaust stack.

Caltrans = California Department of Transportation TDM = Transportation Demand Management

dBA = A-weighted decibels TNB = TSM/TDM Noise Barrier

ft = feet TSM = Transportation System Management

ROW = right of way

TABLE 3.14.31
Summary of Abatement Information for the BRT Alternative

Noise Barrier No.	Height (ft)	Approx. Length (ft)	Noise Attenuation Range (dBA)	Number of Benefited Units ¹	Noise Barrier Location	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	With ROW Costs		With ROW Donated	
								Estimated Sound Barrier Construction Cost ^{2,3}	Reasonable? ³	Estimated Sound Barrier Construction Cost ^{2,3}	Reasonable? ³
BNB No. 1	10	340	9	12	Private Property Line	\$55,000	\$660,000	\$567,613	Yes	\$546,363	Yes
	12		11	12	Private Property Line	\$55,000	\$660,000	\$590,308	Yes	\$569,058	Yes
	14		12	12	Private Property Line	\$55,000	\$660,000	\$613,003	Yes	\$591,753	Yes
	16		13	12	Private Property Line	\$55,000	\$660,000	\$635,698	Yes	\$614,448	Yes
	18		14	12	Private Property Line	\$55,000	\$660,000	\$660,688	No	\$639,438	Yes
	20 ⁴		14	12	Private Property Line	\$55,000	\$660,000	\$683,638	No	\$662,388	No
BNB No. 2	10	826	5	3	Private Property Line	\$55,000	\$165,000	-	No	-	No
	12		6-7	9	Private Property Line	\$55,000	\$495,000	\$1,290,757	No	\$1,238,382	No
	14		5-9	16	Private Property Line	\$55,000	\$880,000	\$1,346,693	No	\$1,294,318	No
	16		5-9	24	Private Property Line	\$55,000	\$1,320,000	\$1,402,630	No	\$1,350,255	No
	18		6-11	24	Private Property Line	\$55,000	\$1,320,000	\$1,464,223	No	\$1,411,848	No
	20 ⁵		6-12	24	Private Property Line	\$55,000	\$1,320,000	\$1,520,788	No	\$1,468,413	No
BNB No. 3	6	623	7-11	24	Private Property Line	\$55,000	\$1,320,000	\$476,237	Yes	\$359,612	Yes
	8 ⁴		8-13	24	Private Property Line	\$55,000	\$1,320,000	\$519,699	Yes	\$403,074	Yes
	10		8-14	24	Private Property Line	\$55,000	\$1,320,000	\$563,161	Yes	\$446,536	Yes
	12		9-14	24	Private Property Line	\$55,000	\$1,320,000	\$606,624	Yes	\$489,999	Yes
	14		9-15	24	Private Property Line	\$55,000	\$1,320,000	\$650,086	Yes	\$533,461	Yes
	16		9-15	24	Private Property Line	\$55,000	\$1,320,000	\$693,548	Yes	\$576,923	Yes
	18		9-16	24	Private Property Line	\$55,000	\$1,320,000	\$741,209	Yes	\$624,584	Yes
	20		9-16	24	Private Property Line	\$55,000	\$1,320,000	\$785,138	Yes	\$668,513	Yes
	BNB No. 4		8 ⁴	67	5	1	Private Property Line	\$55,000	\$55,000	-	No
10		5	1		Private Property Line	\$55,000	\$55,000	-	No	-	No
12		6	1		Private Property Line	\$55,000	\$55,000	-	No	-	No
14		6	1		Private Property Line	\$55,000	\$55,000	-	No	-	No
16		6	1		Private Property Line	\$55,000	\$55,000	-	No	-	No
18		6	1		Private Property Line	\$55,000	\$55,000	-	No	-	No
20		6	1		Private Property Line	\$55,000	\$55,000	-	No	-	No
BNB No. 5	6	146	7	1	Private Property Line	\$55,000	\$55,000	\$39,413	Yes	\$33,788	Yes
	8		10	1	Private Property Line	\$55,000	\$55,000	\$49,425	Yes	\$43,800	Yes
	10 ⁴		12	1	Private Property Line	\$55,000	\$55,000	\$59,438	No	\$53,813	Yes
	12		14	1	Private Property Line	\$55,000	\$55,000	\$69,450	No	\$63,825	No
	14		15	1	Private Property Line	\$55,000	\$55,000	\$79,463	No	\$73,838	No
	16		17	1	Private Property Line	\$55,000	\$55,000	\$89,475	No	\$83,850	No
	18		18	1	Private Property Line	\$55,000	\$55,000	\$100,500	No	\$94,875	No
	20		19	1	Private Property Line	\$55,000	\$55,000	\$110,625	No	\$105,000	No

Source: LSA Associates, Inc. (2014).

¹ Number of units that are attenuated by 5 dBA or more by the modeled barrier.

² Sound barrier construction cost information provided by CH2M HILL.

³ Shaded area represents barrier heights that have been determined to be not reasonable because the barrier would not reduce noise levels by 7 dBA or more.

⁴ Denotes the minimum wall height required to break the line of sight between the receiver and truck exhaust stack.

BNB = BRT Noise Barrier BRT = Bus Rapid Transit dBA = A-weighted decibels ft = feet

TABLE 3.14.32:
Summary of Abatement Information for the Freeway Tunnel Alternative Single-Bore Design Variation

Noise Barrier No.	Height (ft)	Approx. Length (ft)	Noise Attenuation Range (dBA)	Number of Benefited Units ¹	Noise Barrier Location	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	With ROW Costs		With ROW Donated	
								Estimated Sound Barrier Construction Cost ^{2,3}	Reasonable? ³	Estimated Sound Barrier Construction Cost ^{2,3}	Reasonable? ³
FTNB No. 1	14	537	5	1	Caltrans ROW	\$55,000	\$55,000	-	No	-	No
	16		5	1	Caltrans ROW	\$55,000	\$55,000	-	No	-	No
	18		5	1	Caltrans ROW	\$55,000	\$55,000	-	No	-	No
	20 ⁵		5	1	Caltrans ROW	\$55,000	\$55,000	-	No	-	No
FTNB No. 2	6	115	5	1	Private Property Line	\$55,000	\$55,000	-	No	-	No
	8 ⁴		6	1	Private Property Line	\$55,000	\$55,000	-	No	-	No
	10		6	1	Private Property Line	\$55,000	\$55,000	-	No	-	No
	12		6	1	Private Property Line	\$55,000	\$55,000	-	No	-	No
	14		6	1	Private Property Line	\$55,000	\$55,000	-	No	-	No
	16		6	1	Private Property Line	\$55,000	\$55,000	-	No	-	No
	18		6	1	Private Property Line	\$55,000	\$55,000	-	No	-	No
	20		6	1	Private Property Line	\$55,000	\$55,000	-	No	-	No
FTNB No. 3A	6	2453	5-11	17	Caltrans ROW/Private Property Line	\$55,000	\$935,000	\$4,117,108	No	\$1,487,844	No
	8		6-12	20	Caltrans ROW/Private Property Line	\$55,000	\$1,100,000	\$4,274,036	No	\$1,644,773	No
	10		5-13	23	Caltrans ROW/Private Property Line	\$55,000	\$1,265,000	\$4,434,284	No	\$1,805,021	No
	12 ⁴		5-14	24	Caltrans ROW/Private Property Line	\$55,000	\$1,320,000	\$4,607,528	No	\$1,978,264	No
	14		5-15	24	Caltrans ROW/Private Property Line	\$55,000	\$1,320,000	\$4,780,771	No	\$2,151,508	No
	16		6-15	24	Caltrans ROW/Private Property Line	\$55,000	\$1,320,000	\$4,954,014	No	\$2,324,751	No
	18		6-15	24	Caltrans ROW/Private Property Line	\$55,000	\$1,320,000	\$5,127,257	No	\$2,497,994	No
	20		6-16	26	Caltrans ROW/Private Property Line	\$55,000	\$1,430,000	\$5,300,500	No	\$2,671,237	No
FTNB No. 3A +3B	6	3091	5-11	19	Caltrans ROW/Private Property Line	\$55,000	\$1,045,000	\$4,468,534	No	\$1,839,271	No
	8		5-12	28	Caltrans ROW/Private Property Line	\$55,000	\$1,540,000	\$4,670,521	No	\$2,041,258	No
	10		5-13	34	Caltrans ROW/Private Property Line	\$55,000	\$1,870,000	\$4,875,828	No	\$2,246,565	No
	12 ⁴		5-14	34	Caltrans ROW/Private Property Line	\$55,000	\$1,870,000	\$5,094,130	No	\$2,464,867	No
	14		5-15	34	Caltrans ROW/Private Property Line	\$55,000	\$1,870,000	\$5,312,432	No	\$2,683,169	No
	16		5-15	34	Caltrans ROW/Private Property Line	\$55,000	\$1,870,000	\$5,530,734	No	\$2,901,471	No
	18		5-15	34	Caltrans ROW/Private Property Line	\$55,000	\$1,870,000	\$5,749,036	No	\$3,119,773	No
	20		5-16	36	Caltrans ROW/Private Property Line	\$55,000	\$1,980,000	\$5,967,338	No	\$3,338,074	No
FTNB No. 4	6	2621	5-6	10	Edge of Shoulder	\$55,000	\$550,000	-	No	-	No
	8		5-6	15	Edge of Shoulder	\$55,000	\$825,000	-	No	-	No
	10		5-7	18	Edge of Shoulder	\$55,000	\$990,000	\$1,009,649	No	\$1,009,649	No
	12		5-8	21	Edge of Shoulder	\$55,000	\$1,155,000	\$1,186,566	No	\$1,186,566	No
	14		5-10	21	Edge of Shoulder	\$55,000	\$1,155,000	\$1,363,484	No	\$1,363,484	No
	16		5-10	21	Edge of Shoulder	\$55,000	\$1,155,000	\$1,540,401	No	\$1,540,401	No
	18		5-11	26	Edge of Shoulder	\$55,000	\$1,430,000	\$1,717,319	No	\$1,717,319	No
	20 ⁵		5-12	29	Edge of Shoulder	\$55,000	\$1,595,000	\$1,894,236	No	\$1,894,236	No

TABLE 3.14.32:
Summary of Abatement Information for the Freeway Tunnel Alternative Single-Bore Design Variation

Noise Barrier No.	Height (ft)	Approx. Length (ft)	Noise Attenuation Range (dBA)	Number of Benefited Units ¹	Noise Barrier Location	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	With ROW Costs		With ROW Donated	
								Estimated Sound Barrier Construction Cost ^{2,3}	Reasonable? ³	Estimated Sound Barrier Construction Cost ^{2,3}	Reasonable? ³
FTNB No. 5	6	1801	5-12	19	Caltrans ROW/Private Property Line	\$55,000	\$1,045,000	\$607,438	Yes	\$596,363	Yes
	8		6-13	19	Caltrans ROW/Private Property Line	\$55,000	\$1,045,000	\$729,005	Yes	\$717,930	Yes
	10		5-15	22	Caltrans ROW/Private Property Line	\$55,000	\$1,210,000	\$850,573	Yes	\$839,498	Yes
	12		5-16	32	Caltrans ROW/Private Property Line	\$55,000	\$1,760,000	\$972,140	Yes	\$961,065	Yes
	14		5-17	33	Caltrans ROW/Private Property Line	\$55,000	\$1,815,000	\$1,093,708	Yes	\$1,082,633	Yes
	16		5-18	39	Caltrans ROW/Private Property Line	\$55,000	\$2,145,000	\$1,215,275	Yes	\$1,204,200	Yes
	18		5-19	42	Caltrans ROW/Private Property Line	\$55,000	\$2,310,000	\$1,336,843	Yes	\$1,325,768	Yes
	20 ⁴		5-19	42	Caltrans ROW/Private Property Line	\$55,000	\$2,310,000	\$1,458,410	Yes	\$1,447,335	Yes
FTNB No. 6S	20 ⁵	1454	5	5	Edge of Shoulder	\$55,000	\$275,000	-	No	-	No
FTNB No. 7	6	673	6	4	Caltrans ROW/Private Property Line	\$55,000	\$220,000	-	No	-	No
	8		8	4	Caltrans ROW/Private Property Line	\$55,000	\$220,000	\$757,983	No	\$327,649	No
	10		9	4	Caltrans ROW/Private Property Line	\$55,000	\$220,000	\$803,410	No	\$373,076	No
	12		6-10	8	Caltrans ROW/Private Property Line	\$55,000	\$440,000	\$848,838	No	\$418,504	Yes
	14		8-11	8	Caltrans ROW/Private Property Line	\$55,000	\$440,000	\$894,265	No	\$463,931	No
	16		5-12	9	Caltrans ROW/Private Property Line	\$55,000	\$495,000	\$939,693	No	\$509,359	No
	18		8-12	9	Caltrans ROW/Private Property Line	\$55,000	\$495,000	\$985,120	No	\$554,786	No
	20 ⁴		10-13	9	Caltrans ROW/Private Property Line	\$55,000	\$495,000	\$1,030,548	No	\$600,214	No
FTNB No. 8	6	406	7-8	6	Caltrans ROW/Private Property Line	\$55,000	\$330,000	\$430,864	No	\$200,393	Yes
	8		9-11	6	Caltrans ROW/Private Property Line	\$55,000	\$330,000	\$458,269	No	\$227,798	Yes
	10		10-13	6	Caltrans ROW/Private Property Line	\$55,000	\$330,000	\$485,674	No	\$255,203	Yes
	12		12-14	6	Caltrans ROW/Private Property Line	\$55,000	\$330,000	\$513,079	No	\$282,608	Yes
	14		13-15	6	Caltrans ROW/Private Property Line	\$55,000	\$330,000	\$540,484	No	\$310,013	Yes
	16		14-16	6	Caltrans ROW/Private Property Line	\$55,000	\$330,000	\$567,889	No	\$337,418	No
	18		15-17	6	Caltrans ROW/Private Property Line	\$55,000	\$330,000	\$595,294	No	\$364,823	No
	20 ⁴		16-17	6	Caltrans ROW/Private Property Line	\$55,000	\$330,000	\$622,699	No	\$392,228	No
FTNB No. 10	8	1207	5	10	Caltrans ROW/Private Property Line	\$55,000	\$550,000	-	No	-	No
	10		7-9	10	Caltrans ROW/Private Property Line	\$55,000	\$550,000	\$437,797	Yes	\$437,797	Yes
	12		5-11	12	Caltrans ROW/Private Property Line	\$55,000	\$660,000	\$523,041	Yes	\$523,041	Yes
	14 ⁴		5-12	18	Caltrans ROW/Private Property Line	\$55,000	\$990,000	\$608,286	Yes	\$608,286	Yes
	16		5-13	22	Caltrans ROW/Private Property Line	\$55,000	\$1,210,000	\$693,530	Yes	\$693,530	Yes
	18		6-14	22	Caltrans ROW/Private Property Line	\$55,000	\$1,210,000	\$778,774	Yes	\$778,774	Yes
	20		6-15	22	Caltrans ROW/Private Property Line	\$55,000	\$1,210,000	\$864,019	Yes	\$864,019	Yes
FTNB No. 11	12 ⁴	1404	5	2	Caltrans ROW/Private Property Line	\$55,000	\$110,000	-	No	-	No
	14		5-6	5	Caltrans ROW/Private Property Line	\$55,000	\$275,000	-	No	-	No
	16		6-7	5	Caltrans ROW/Private Property Line	\$55,000	\$275,000	\$1,154,716	No	\$1,044,248	No
	18		5-8	12	Caltrans ROW/Private Property Line	\$55,000	\$660,000	\$1,253,874	No	\$1,143,405	No
	20		5-9	12	Caltrans ROW/Private Property Line	\$55,000	\$660,000	\$1,353,031	No	\$1,242,563	No

TABLE 3.14.32:
Summary of Abatement Information for the Freeway Tunnel Alternative Single-Bore Design Variation

Noise Barrier No.	Height (ft)	Approx. Length (ft)	Noise Attenuation Range (dBA)	Number of Benefited Units ¹	Noise Barrier Location	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	With ROW Costs		With ROW Donated	
								Estimated Sound Barrier Construction Cost ^{2,3}	Reasonable? ³	Estimated Sound Barrier Construction Cost ^{2,3}	Reasonable? ³
FTNB No. 12	14	556	5	3	Edge of Shoulder	\$55,000	\$165,000	-	No	-	No
	16		5	3	Edge of Shoulder	\$55,000	\$165,000	-	No	-	No
	18		5	3	Edge of Shoulder	\$55,000	\$165,000	-	No	-	No
	20 ⁵		5-6	5	Edge of Shoulder	\$55,000	\$275,000	-	No	-	No
FTNB No. 13A+B	10 ⁴	2315	5-7	5	Caltrans ROW/Private Property Line	\$55,000	\$275,000	\$1,239,683	No	\$1,239,683	No
	12		7-8	5	Caltrans ROW/Private Property Line	\$55,000	\$275,000	\$1,403,180	No	\$1,403,180	No
	14		8-9	5	Caltrans ROW/Private Property Line	\$55,000	\$275,000	\$1,566,677	No	\$1,566,677	No
	16		9-10	5	Caltrans ROW/Private Property Line	\$55,000	\$275,000	\$1,730,174	No	\$1,730,174	No
	18		9-11	5	Caltrans ROW/Private Property Line	\$55,000	\$275,000	\$1,893,671	No	\$1,893,671	No
	20		5-11	10	Caltrans ROW/Private Property Line	\$55,000	\$550,000	\$2,057,168	No	\$2,057,168	No
FTNB No. 14	8 ⁴	263	5	1	Private Property Line	\$55,000	\$55,000	-	No	-	No
	10		6	1	Private Property Line	\$55,000	\$55,000	-	No	-	No
	12		7	1	Private Property Line	\$55,000	\$55,000	\$142,135	No	\$111,446	No
	14		7	1	Private Property Line	\$55,000	\$55,000	\$159,888	No	\$129,199	No
	16		8	1	Private Property Line	\$55,000	\$55,000	\$177,640	No	\$146,951	No
	18		8	1	Private Property Line	\$55,000	\$55,000	\$195,393	No	\$164,704	No
FTNB No. 15	20	262	9	1	Private Property Line	\$55,000	\$55,000	\$213,145	No	\$182,456	No
	8		8	1	Private Property Line	\$55,000	\$55,000	\$117,687	No	\$75,653	No
	10		10	1	Private Property Line	\$55,000	\$55,000	\$135,372	No	\$93,338	No
	12 ⁴		11	1	Private Property Line	\$55,000	\$55,000	\$153,057	No	\$111,023	No
	14		6-12	2	Private Property Line	\$55,000	\$110,000	\$170,742	No	\$128,708	No
	16		7-13	2	Private Property Line	\$55,000	\$110,000	\$188,427	No	\$146,393	No
	18		7-14	2	Private Property Line	\$55,000	\$110,000	\$206,112	No	\$164,078	No
20	8-15	2	Private Property Line	\$55,000	\$110,000	\$223,797	No	\$181,763	No		

Source: LSA Associates, Inc. (2014).

¹ Number of units that are attenuated by 5 dBA or more by the modeled barrier.

² Sound barrier construction cost information provided by CH2M HILL.

³ Shaded area represents barrier heights that have been determined to be not reasonable because the barrier would not reduce noise levels by 7 dBA or more.

⁴ Denotes the minimum wall height required to break the line of sight between the receiver and truck exhaust stack.

Caltrans = California Department of Transportation

dBA = A-weighted decibels

ft = feet

FTNB = Freeway Tunnel Noise Barrier

ROW = right of way

TABLE 3.14.33:
Summary of Abatement Information for the Freeway Tunnel Alternative Dual-Bore Design Variation

Noise Barrier No.	Height (ft)	Approx. Length (ft)	Noise Attenuation Range (dBA)	Number of Benefited Units ¹	Noise Barrier Location	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	With ROW Costs		With ROW Donated	
								Estimated Sound Barrier Construction Cost ^{2,3}	Reasonable? ³	Estimated Sound Barrier Construction Cost ^{2,3}	Reasonable? ³
FTNB No. 2	6	115	5	1	Private Property Line	\$55,000	\$55,000	-	No	-	No
	8 ⁴		6	1	Private Property Line	\$55,000	\$55,000	-	No	-	No
	10		6	1	Private Property Line	\$55,000	\$55,000	-	No	-	No
	12		6	1	Private Property Line	\$55,000	\$55,000	-	No	-	No
	14		6	1	Private Property Line	\$55,000	\$55,000	-	No	-	No
	16		6	1	Private Property Line	\$55,000	\$55,000	-	No	-	No
	18		6	1	Private Property Line	\$55,000	\$55,000	-	No	-	No
	20	6	1	Private Property Line	\$55,000	\$55,000	-	No	-	No	
FTNB No. 3A	6	2453	6-11	17	Caltrans ROW/Private Property Line	\$55,000	\$935,000	\$4,098,717	No	\$1,469,454	No
	8		5-13	21	Caltrans ROW/Private Property Line	\$55,000	\$1,155,000	\$4,248,702	No	\$1,619,439	No
	10		5-14	24	Caltrans ROW/Private Property Line	\$55,000	\$1,320,000	\$4,401,859	No	\$1,772,596	No
	12 ⁴		5-14	24	Caltrans ROW/Private Property Line	\$55,000	\$1,320,000	\$4,567,437	No	\$1,938,174	No
	14		6-15	24	Caltrans ROW/Private Property Line	\$55,000	\$1,320,000	\$4,733,014	No	\$2,103,751	No
	16		7-16	24	Caltrans ROW/Private Property Line	\$55,000	\$1,320,000	\$4,898,592	No	\$2,269,329	No
	18		8-16	24	Caltrans ROW/Private Property Line	\$55,000	\$1,320,000	\$5,064,169	No	\$2,434,906	No
	20	6-16	26	Caltrans ROW/Private Property Line	\$55,000	\$1,430,000	\$5,229,747	No	\$2,600,484	No	
FTNB No. 3A + 3B	6	3091	6-11	17	Caltrans ROW/Private Property Line	\$55,000	\$935,000	\$4,543,657	No	\$2,777,134	No
	8		5-13	26	Caltrans ROW/Private Property Line	\$55,000	\$1,430,000	\$4,752,299	No	\$2,970,184	No
	10		5-14	32	Caltrans ROW/Private Property Line	\$55,000	\$1,760,000	\$4,960,942	No	\$3,166,406	No
	12 ⁴		5-14	35	Caltrans ROW/Private Property Line	\$55,000	\$1,925,000	\$5,169,584	No	\$3,375,049	No
	14		5-15	35	Caltrans ROW/Private Property Line	\$55,000	\$1,925,000	\$5,378,227	No	\$3,583,691	No
	16		5-16	35	Caltrans ROW/Private Property Line	\$55,000	\$1,925,000	\$5,586,869	No	\$3,792,334	No
	18		5-16	35	Caltrans ROW/Private Property Line	\$55,000	\$1,925,000	\$5,795,512	No	\$4,000,976	No
	20	5-16	37	Caltrans ROW/Private Property Line	\$55,000	\$2,035,000	\$6,004,154	No	\$4,209,619	No	
FTNB No. 4	6	2621	5	5	Edge of Shoulder	\$55,000	\$275,000	-	No	-	No
	8		5-6	10	Edge of Shoulder	\$55,000	\$550,000	-	No	-	No
	10		5-8	12	Edge of Shoulder	\$55,000	\$660,000	\$1,009,649	No	\$1,009,649	No
	12		5-9	21	Edge of Shoulder	\$55,000	\$1,155,000	\$1,186,566	No	\$1,186,566	No
	14		5-9	23	Edge of Shoulder	\$55,000	\$1,265,000	\$1,363,484	No	\$1,363,484	No
	16		5-10	26	Edge of Shoulder	\$55,000	\$1,430,000	\$1,540,401	No	\$1,540,401	No
	18		5-11	27	Edge of Shoulder	\$55,000	\$1,485,000	\$1,717,319	No	\$1,717,319	No
	20 ⁵	5-11	27	Edge of Shoulder	\$55,000	\$1,485,000	\$1,894,236	No	\$1,894,236	No	
FTNB No. 5	6	1801	5-13	21	Caltrans ROW/Private Property Line	\$55,000	\$1,155,000	\$607,438	Yes	\$596,363	Yes
	8		5-14	21	Caltrans ROW/Private Property Line	\$55,000	\$1,155,000	\$729,005	Yes	\$717,930	Yes
	10		5-15	21	Caltrans ROW/Private Property Line	\$55,000	\$1,155,000	\$850,573	Yes	\$839,498	Yes
	12		5-16	25	Caltrans ROW/Private Property Line	\$55,000	\$1,375,000	\$972,140	Yes	\$961,065	Yes
	14		5-17	34	Caltrans ROW/Private Property Line	\$55,000	\$1,870,000	\$1,093,708	Yes	\$1,082,633	Yes
	16		5-18	40	Caltrans ROW/Private Property Line	\$55,000	\$2,200,000	\$1,215,275	Yes	\$1,204,200	Yes
	18		5-19	40	Caltrans ROW/Private Property Line	\$55,000	\$2,200,000	\$1,336,843	Yes	\$1,325,768	Yes
	20 ⁴	5-19	43	Caltrans ROW/Private Property Line	\$55,000	\$2,365,000	\$1,458,410	Yes	\$1,447,335	Yes	

TABLE 3.14.33:
Summary of Abatement Information for the Freeway Tunnel Alternative Dual-Bore Design Variation

Noise Barrier No.	Height (ft)	Approx. Length (ft)	Noise Attenuation Range (dBA)	Number of Benefited Units ¹	Noise Barrier Location	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	With ROW Costs		With ROW Donated	
								Estimated Sound Barrier Construction Cost ^{2,3}	Reasonable? ³	Estimated Sound Barrier Construction Cost ^{2,3}	Reasonable? ³
FTNB No. 6D	6	1404	6	4	Edge of Shoulder	\$55,000	\$220,000	-	No	-	No
	8		8	4	Edge of Shoulder	\$55,000	\$220,000	\$427,781	No	\$427,781	No
	10		10	4	Edge of Shoulder	\$55,000	\$220,000	\$518,164	No	\$518,164	No
	12		6-11	11	Edge of Shoulder	\$55,000	\$605,000	\$608,546	No	\$608,546	No
	14		5-12	15	Edge of Shoulder	\$55,000	\$825,000	\$698,929	Yes	\$698,929	Yes
	16		6-12	15	Edge of Shoulder	\$55,000	\$825,000	\$789,311	Yes	\$789,311	Yes
	18		9-13	15	Edge of Shoulder	\$55,000	\$825,000	\$879,694	No	\$879,694	No
	20 ⁵		10-13	15	Edge of Shoulder	\$55,000	\$825,000	\$970,076	No	\$970,076	No
FTNB No. 7	6	673	7	4	Caltrans ROW/Private Property Line	\$55,000	\$220,000	\$712,555	No	\$282,221	No
	8		10	4	Caltrans ROW/Private Property Line	\$55,000	\$220,000	\$757,983	No	\$327,649	No
	10		11	4	Caltrans ROW/Private Property Line	\$55,000	\$220,000	\$803,410	No	\$373,076	No
	12		7-12	8	Caltrans ROW/Private Property Line	\$55,000	\$440,000	\$848,838	No	\$418,504	Yes
	14		9-14	8	Caltrans ROW/Private Property Line	\$55,000	\$440,000	\$894,265	No	\$463,931	No
	16		6-16	9	Caltrans ROW/Private Property Line	\$55,000	\$495,000	\$939,693	No	\$509,359	No
	18		8-17	9	Caltrans ROW/Private Property Line	\$55,000	\$495,000	\$985,120	No	\$554,786	No
	20 ⁴		9-19	9	Caltrans ROW/Private Property Line	\$55,000	\$495,000	\$1,030,548	No	\$600,214	No
FTNB No. 8	6	406	7-8	6	Caltrans ROW/Private Property Line	\$55,000	\$330,000	\$430,864	No	\$200,393	Yes
	8		8-11	6	Caltrans ROW/Private Property Line	\$55,000	\$330,000	\$458,269	No	\$227,798	Yes
	10		10-13	6	Caltrans ROW/Private Property Line	\$55,000	\$330,000	\$485,674	No	\$255,203	Yes
	12		11-15	6	Caltrans ROW/Private Property Line	\$55,000	\$330,000	\$513,079	No	\$282,608	Yes
	14		12-16	6	Caltrans ROW/Private Property Line	\$55,000	\$330,000	\$540,484	No	\$310,013	Yes
	16		13-16	6	Caltrans ROW/Private Property Line	\$55,000	\$330,000	\$567,889	No	\$337,418	No
	18		14-17	6	Caltrans ROW/Private Property Line	\$55,000	\$330,000	\$595,294	No	\$364,823	No
	20 ⁴		14-17	6	Caltrans ROW/Private Property Line	\$55,000	\$330,000	\$622,699	No	\$392,228	No
FTNB No. 9	6	84	7	1	Private Property Line	\$55,000	\$55,000	\$26,985	Yes	\$19,110	Yes
	8 ⁴		8	1	Private Property Line	\$55,000	\$55,000	\$32,655	Yes	\$24,780	Yes
	10		10	1	Private Property Line	\$55,000	\$55,000	\$38,325	Yes	\$30,450	Yes
	12		11	1	Private Property Line	\$55,000	\$55,000	\$43,995	Yes	\$36,120	Yes
	14		12	1	Private Property Line	\$55,000	\$55,000	\$49,665	Yes	\$41,790	Yes
	16		13	1	Private Property Line	\$55,000	\$55,000	\$55,335	No	\$47,460	Yes
	18		14	1	Private Property Line	\$55,000	\$55,000	\$61,005	No	\$53,130	Yes
	20		14	1	Private Property Line	\$55,000	\$55,000	\$66,675	No	\$58,800	No
FTNB No. 10	8	1207	5-6	10	Caltrans ROW/Private Property Line	\$55,000	\$550,000	-	No	-	No
	10		8-9	10	Caltrans ROW/Private Property Line	\$55,000	\$550,000	\$437,797	Yes	\$437,797	Yes
	12		9-11	10	Caltrans ROW/Private Property Line	\$55,000	\$550,000	\$523,041	Yes	\$523,041	Yes
	14 ⁴		5-12	18	Caltrans ROW/Private Property Line	\$55,000	\$990,000	\$608,286	Yes	\$608,286	Yes
	16		5-13	22	Caltrans ROW/Private Property Line	\$55,000	\$1,210,000	\$693,530	Yes	\$693,530	Yes
	18		5-14	22	Caltrans ROW/Private Property Line	\$55,000	\$1,210,000	\$778,774	Yes	\$778,774	Yes
	20		6-15	23	Caltrans ROW/Private Property Line	\$55,000	\$1,265,000	\$864,019	Yes	\$864,019	Yes

TABLE 3.14.33:
Summary of Abatement Information for the Freeway Tunnel Alternative Dual-Bore Design Variation

Noise Barrier No.	Height (ft)	Approx. Length (ft)	Noise Attenuation Range (dBA)	Number of Benefited Units ¹	Noise Barrier Location	Reasonable Allowance Per Benefited Unit	Total Reasonable Allowance	With ROW Costs		With ROW Donated	
								Estimated Sound Barrier Construction Cost ^{2,3}	Reasonable? ³	Estimated Sound Barrier Construction Cost ^{2,3}	Reasonable? ³
FTNB No. 11	10	1404	5	2	Caltrans ROW/Private Property Line	\$55,000	\$110,000	-	No	-	No
	12 ⁴		6	2	Caltrans ROW/Private Property Line	\$55,000	\$110,000	-	No	-	No
	14		5-7	5	Caltrans ROW/Private Property Line	\$55,000	\$275,000	\$1,055,559	No	\$945,090	No
	16		5-8	6	Caltrans ROW/Private Property Line	\$55,000	\$330,000	\$1,154,716	No	\$1,044,248	No
	18		5-8	9	Caltrans ROW/Private Property Line	\$55,000	\$495,000	\$1,253,874	No	\$1,143,405	No
	20		5-9	12	Caltrans ROW/Private Property Line	\$55,000	\$660,000	\$1,353,031	No	\$1,242,563	No
FTNB No. 12	14	556	5	3	Edge of Shoulder	\$55,000	\$165,000	-	No	-	No
	16		6	3	Edge of Shoulder	\$55,000	\$165,000	-	No	-	No
	18		6	3	Edge of Shoulder	\$55,000	\$165,000	-	No	-	No
	20 ⁴		6	3	Edge of Shoulder	\$55,000	\$165,000	-	No	-	No
FTNB No. 13A+B	10 ⁴	2315	5-7	5	Caltrans ROW/Private Property Line	\$55,000	\$275,000	\$1,239,683	No	\$1,239,683	No
	12		7-8	5	Caltrans ROW/Private Property Line	\$55,000	\$275,000	\$1,403,180	No	\$1,403,180	No
	14		5-9	7	Caltrans ROW/Private Property Line	\$55,000	\$385,000	\$1,566,677	No	\$1,566,677	No
	16		5-10	7	Caltrans ROW/Private Property Line	\$55,000	\$385,000	\$1,730,174	No	\$1,730,174	No
	18		5-11	7	Caltrans ROW/Private Property Line	\$55,000	\$385,000	\$1,893,671	No	\$1,893,671	No
	20		5-11	9	Caltrans ROW/Private Property Line	\$55,000	\$495,000	\$2,057,168	No	\$2,057,168	No
FTNB No. 13B	18 ⁴	709	5	2	Caltrans ROW/Private Property Line	\$55,000	\$110,000	-	No	-	No
	20		5	2	Caltrans ROW/Private Property Line	\$55,000	\$110,000	-	No	-	No
FTNB No. 14	8 ⁴	263	5	1	Private Property Line	\$55,000	\$55,000	-	No	-	No
	10		6	1	Private Property Line	\$55,000	\$55,000	-	No	-	No
	12		6	1	Private Property Line	\$55,000	\$55,000	-	No	-	No
	14		7	1	Private Property Line	\$55,000	\$55,000	\$159,888	No	\$129,199	No
	16 ⁴		8	1	Private Property Line	\$55,000	\$55,000	\$177,640	No	\$146,951	No
	18		8	1	Private Property Line	\$55,000	\$55,000	\$195,393	No	\$164,704	No
	20		8	1	Private Property Line	\$55,000	\$55,000	\$213,145	No	\$182,456	No
	20		8	1	Private Property Line	\$55,000	\$55,000	\$117,687	No	\$75,653	No
FTNB No. 15	8	262	8	1	Private Property Line	\$55,000	\$55,000	\$117,687	No	\$75,653	No
	10		10	1	Private Property Line	\$55,000	\$55,000	\$135,372	No	\$93,338	No
	12 ⁴		11	1	Private Property Line	\$55,000	\$55,000	\$153,057	No	\$111,023	No
	14		6-12	2	Private Property Line	\$55,000	\$110,000	\$170,742	No	\$128,708	No
	16		7-12	2	Private Property Line	\$55,000	\$110,000	\$188,427	No	\$146,393	No
	18		7-14	2	Private Property Line	\$55,000	\$110,000	\$206,112	No	\$164,078	No
	20		8-15	2	Private Property Line	\$55,000	\$110,000	\$223,797	No	\$181,763	No

Source: LSA Associates, Inc. (2014).

¹ Number of units that are attenuated by 5 dBA or more by the modeled barrier.

² Sound barrier construction cost information provided by CH2M HILL.

³ Shaded area represents barrier heights that have been determined to be not reasonable because the barrier would not reduce noise levels by 7 dBA or more.

⁴ Denotes the minimum wall height required to break the line of sight between the receiver and truck exhaust stack.

Caltrans = California Department of Transportation FTNB = Freeway Tunnel Noise Barrier

dBA = A-weighted decibels ROW = right of way

ft = feet

TABLE 3.14.34:
Summary of Reasonable Barriers by Alternative

Alternative		Reasonable Noise Barriers
TSM/TDM Alternative	Improvement - L3	TNB No. 1 at 16, 18, and 20 ft high
		TNB No. 2 at 6, 8, 10, 12, 14, 16, 18 , and 20 ft high
	Improvement - L5	TNB No. 1 at 6, 8, 10, 12 and 14 ft high
	Improvement - T1	TNB No. 1 at 8 ft high
		TNB No. 2 at 16, 18, and 20 ft high
Improvement - T2 ¹		
BRT Alternative		BNB No. 1 at 10, 12, 14, 16, and 18 ft high
		BNB No. 3 at 6, 8, 10, 12, 14, 16, 18, and 20 ft high
		BNB No. 5 at 6, 8, 10 ft high
Freeway Tunnel Alternative – Single-Bore Design Variation		FTNB No. 5 at 6, 8, 10, 12, 14, 16, 18, and 20 ft high
		FTNB No. 7 at 12 ft high
		FTNB No. 8 at 6, 8, 10, 12 , and 14 ft high
		FTNB No. 10 at 10, 12, 14, 16, 18, and 20 ft high
Freeway Tunnel Alternative – Dual-Bore Design Variation ²		FTNB No. 5 at 6, 8, 10, 12, 14, 16, 18, and 20 ft high
		FTNB No. 6D at 14 and 16 ft high
		FTNB No. 7 at 12 ft high
		FTNB No. 8 at 6, 8, 10, 12 , and 14 ft high
		FTNB No. 10 at 10, 14, 16, 18, and 20 ft high

Source: *Noise Study Report and Errata (2014)*.

¹ The barriers proposed in Improvement - T2 were removed from consideration due to adverse effects on the Arroyo Seco Parkway Historic District.

² One barrier proposed for the dual-bore design variation was removed from consideration due to adverse effects on the Old Pasadena Historic District.

Note: **Bold** wall heights are reasonable only with right of way denoted.

BNB = BRT Noise Barrier

BRT = Bus Rapid Transit

ft = feet

FTNB = Freeway Tunnel Noise Barrier

TDM = Transportation Demand Management

TNB = TSM/TDM Noise Barrier

TSM = Transportation System Management

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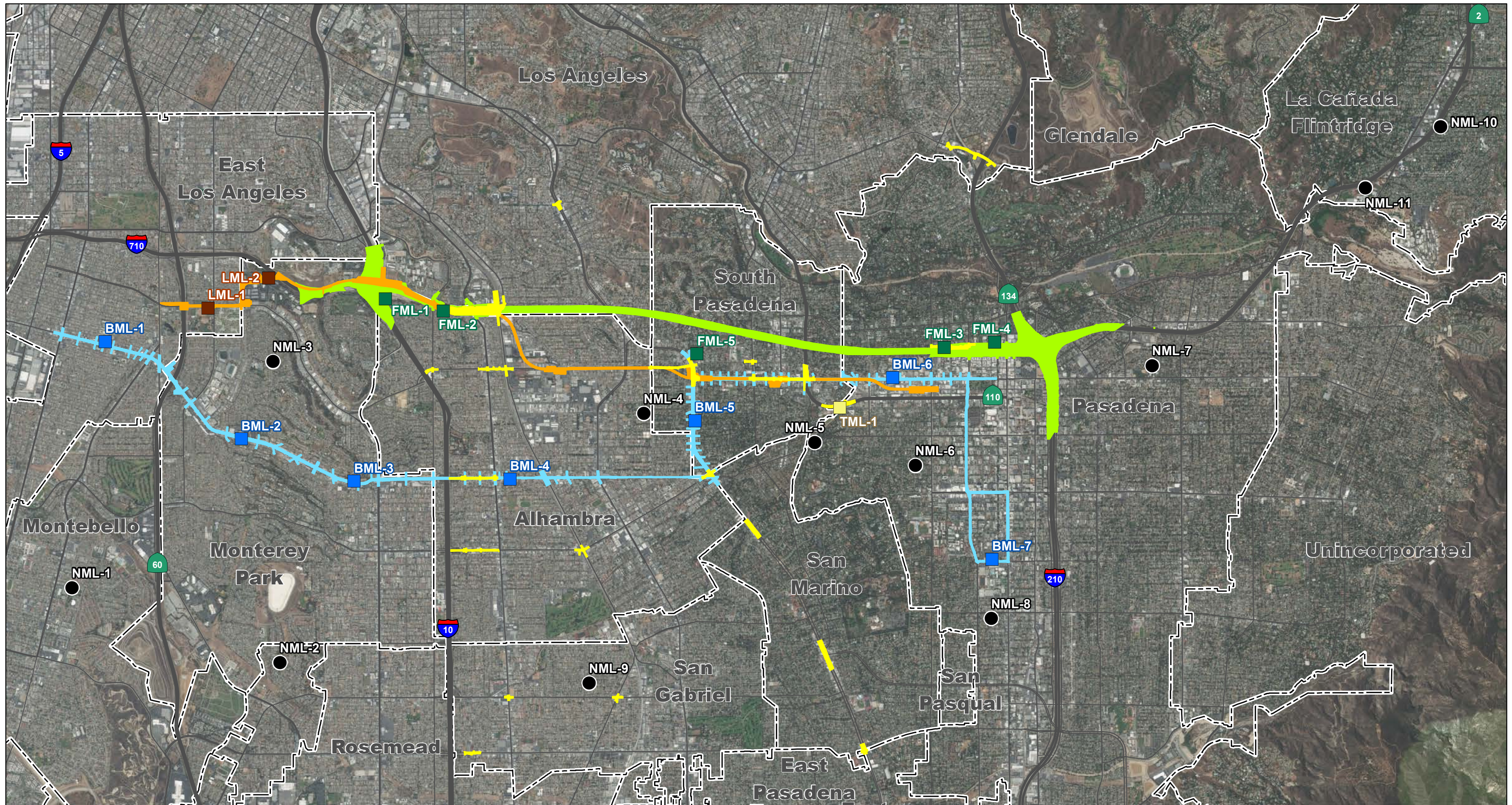
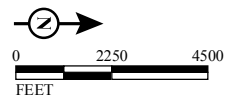


FIGURE 3.14-2

LEGEND

- Neighborhood Noise Measurement Locations (NML)
- Long-term, 24-hour, Measurement Locations (BML)
- Long-term, 24-hour, Measurement Locations (LRL)
- Long-term, 24-hour, Measurement Locations (FML)
- Long-term, 24-hour, Measurement Locations (TML)
- TSM/TDM Alternative Alignment
- BRT Alternative Alignment
- LRT Alternative Alignment
- Freeway Tunnel Alternative Alignment

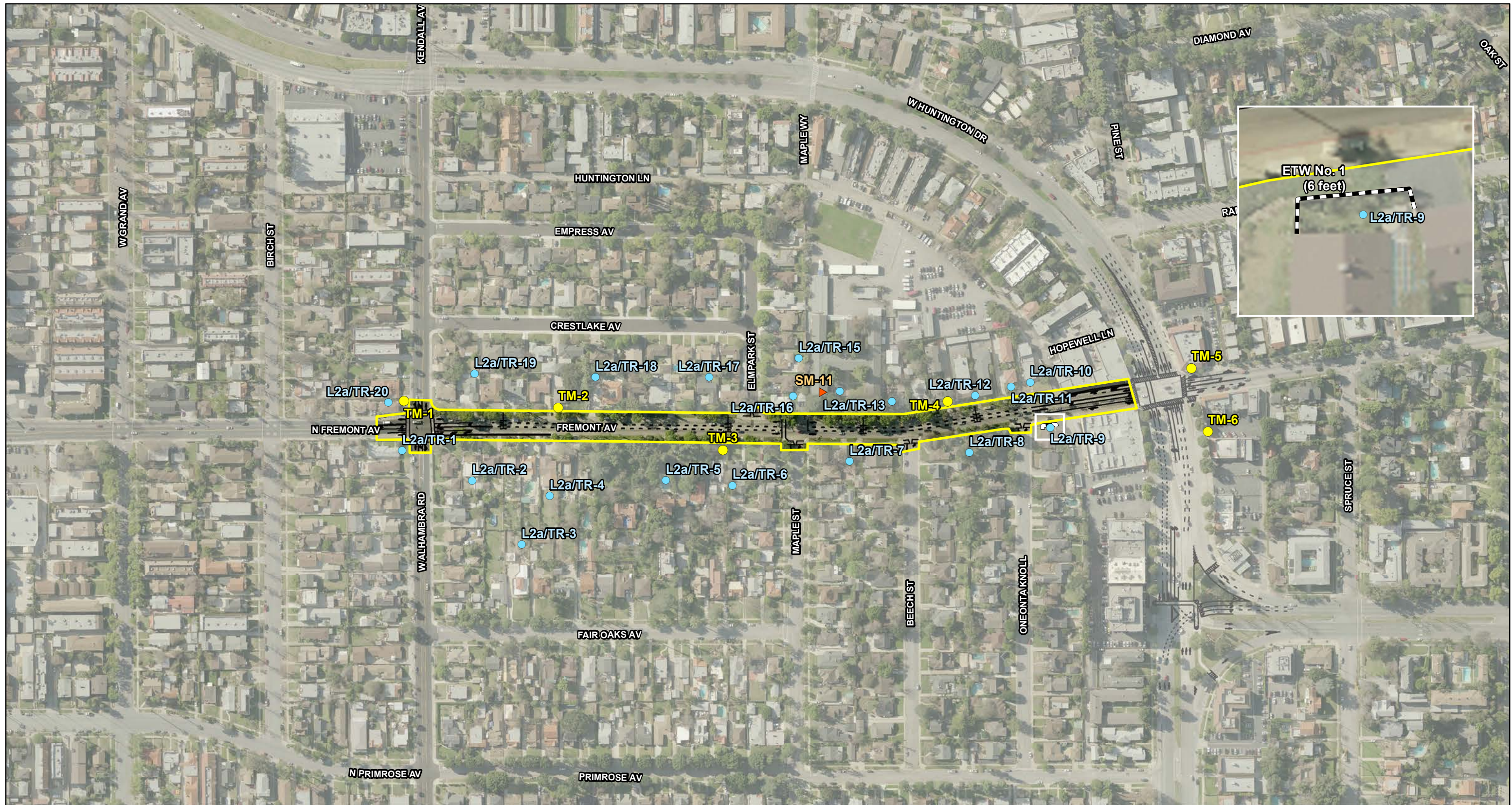


SOURCE: ESRI (2013); Thomas Brothers (2011); Noise Study Report (2014)

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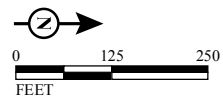
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- TSM/TDM Alternative
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- Long-term, 24-hour, Measurement Locations (TML)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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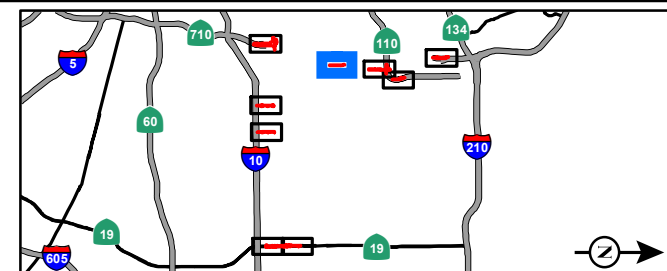
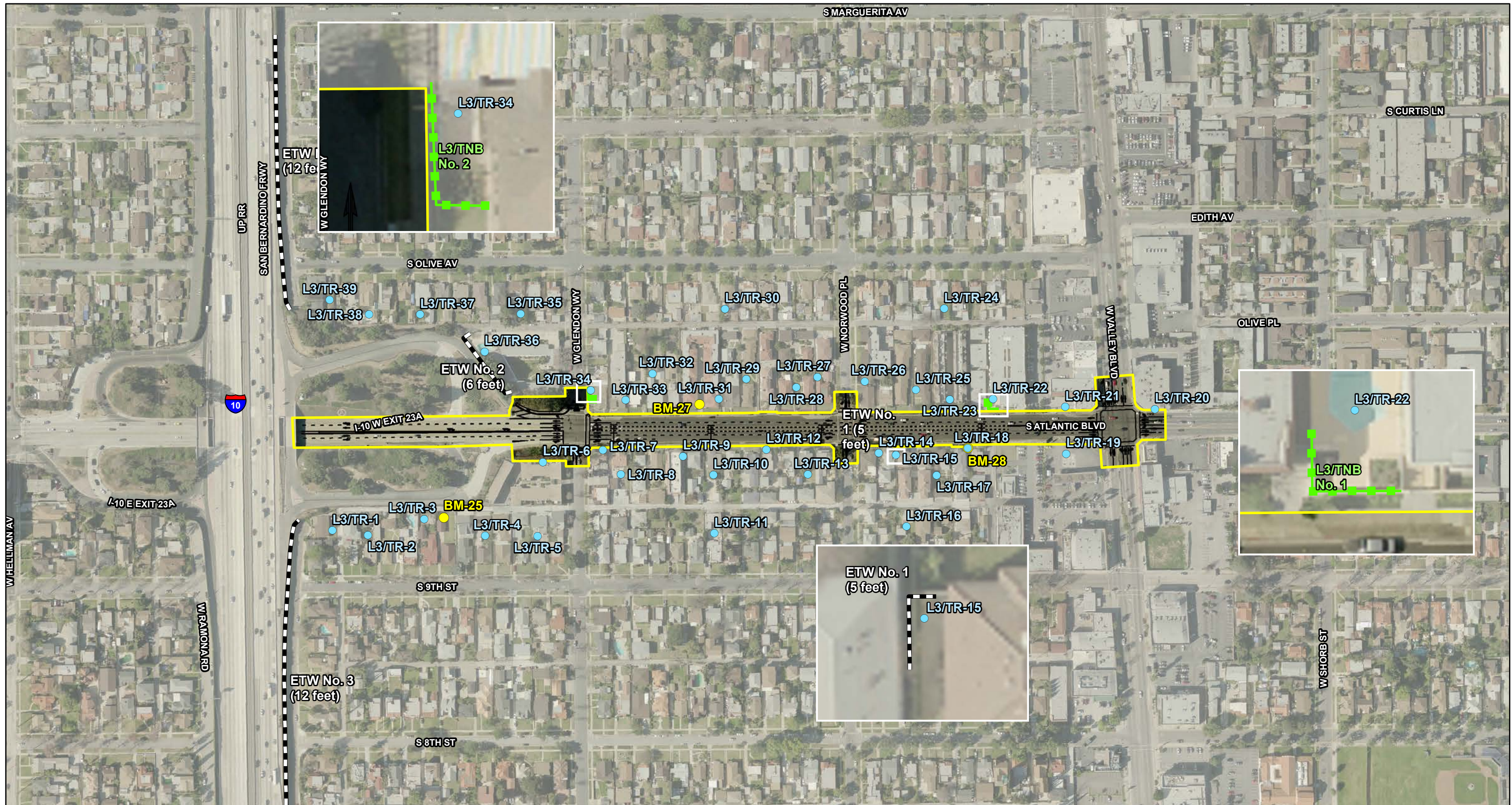


FIGURE 3.14-3
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Noise Measurement and Receptor Locations
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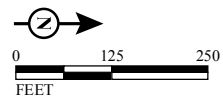
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SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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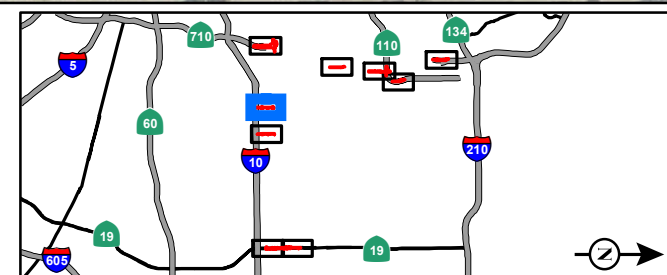


FIGURE 3.14-3

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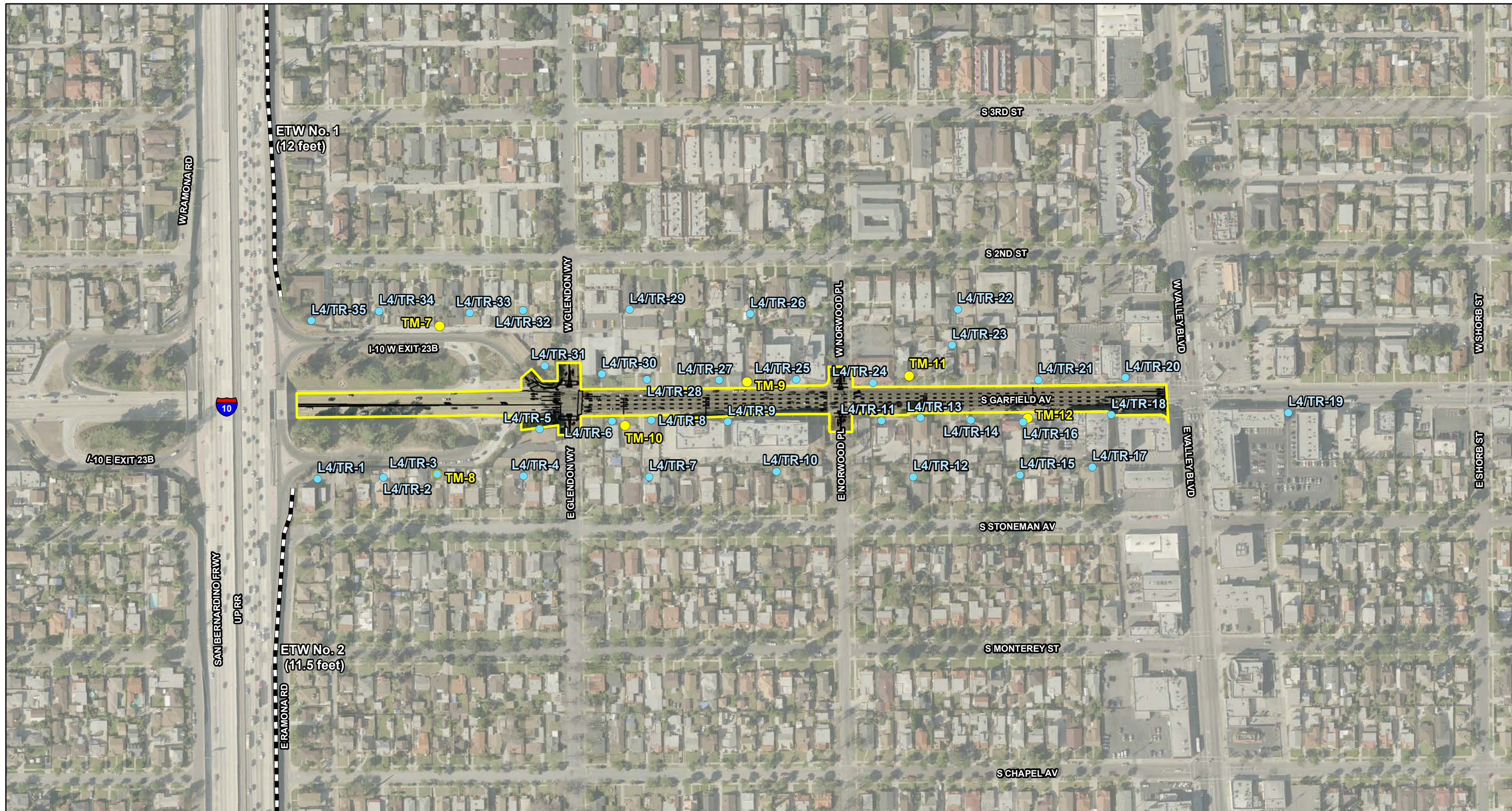
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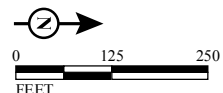
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SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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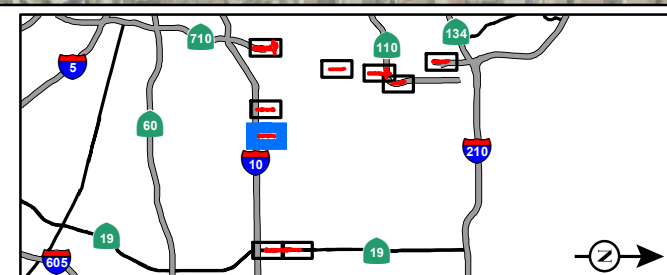
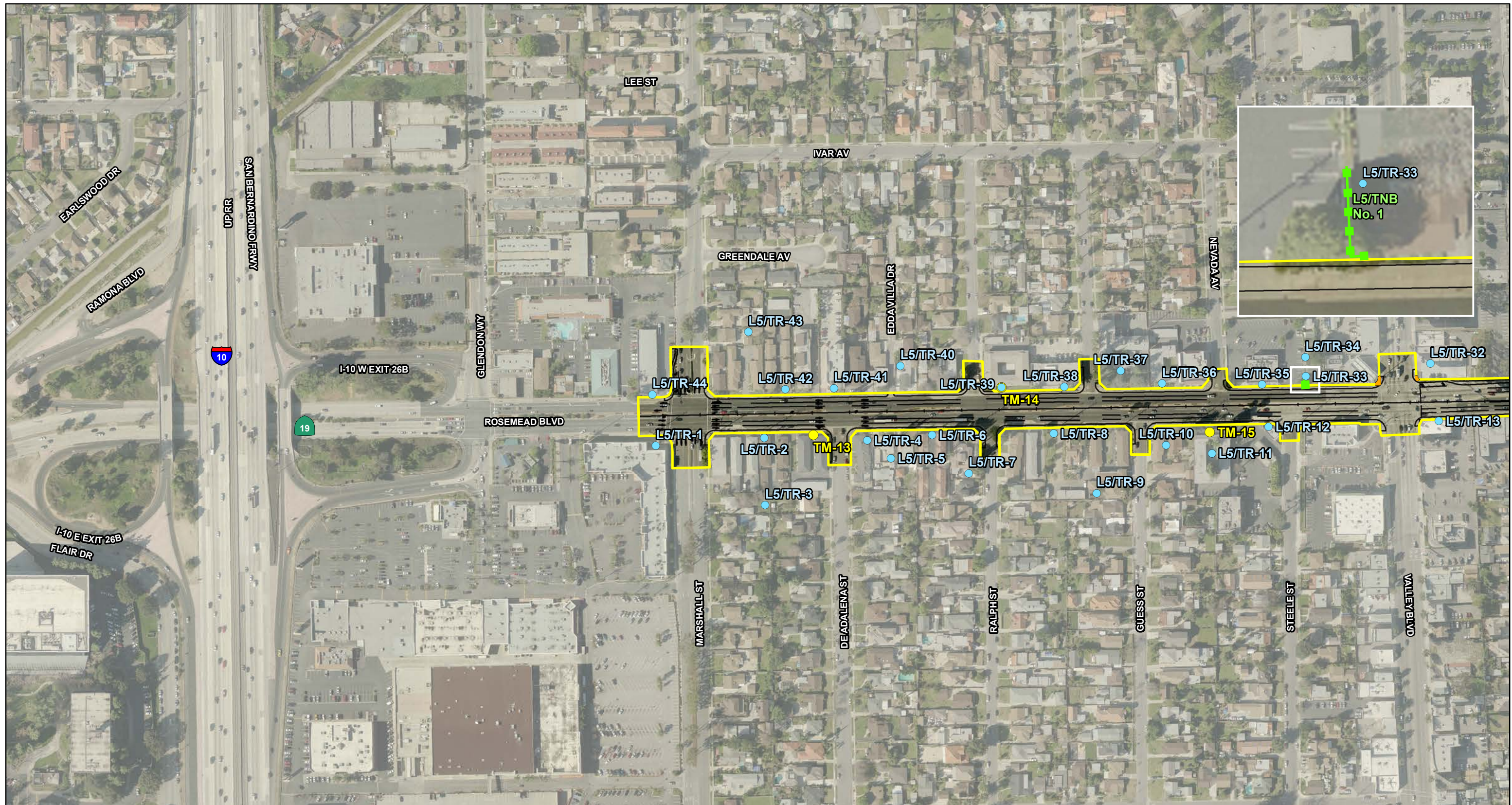


FIGURE 3.14-3
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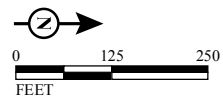
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SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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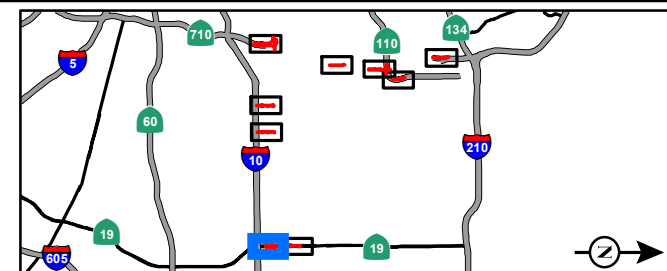


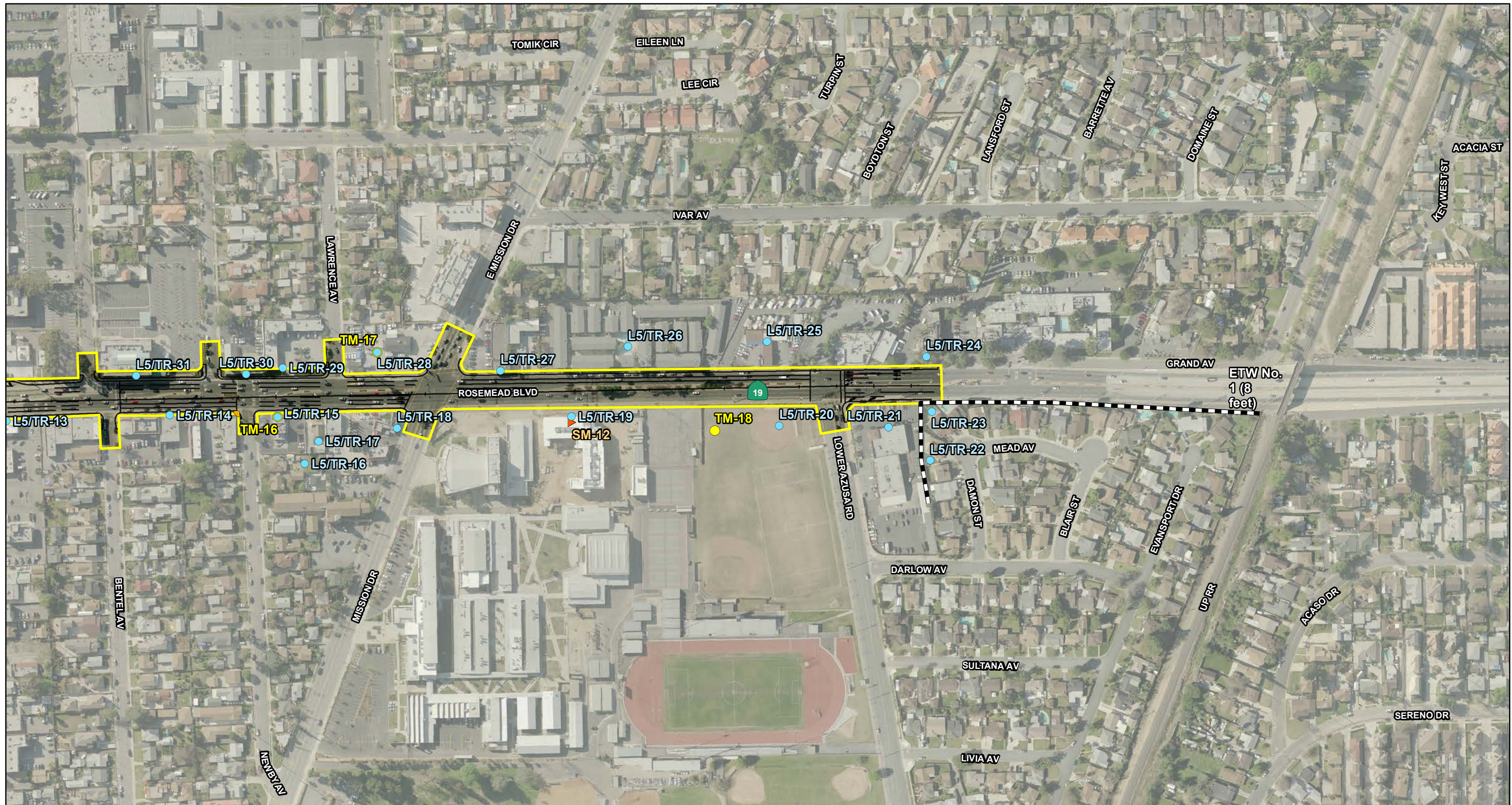
FIGURE 3.14-3

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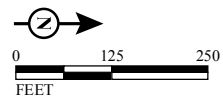
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SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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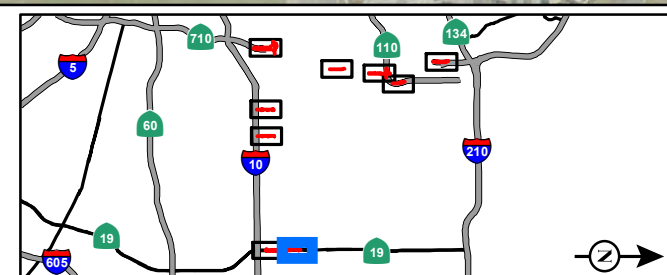


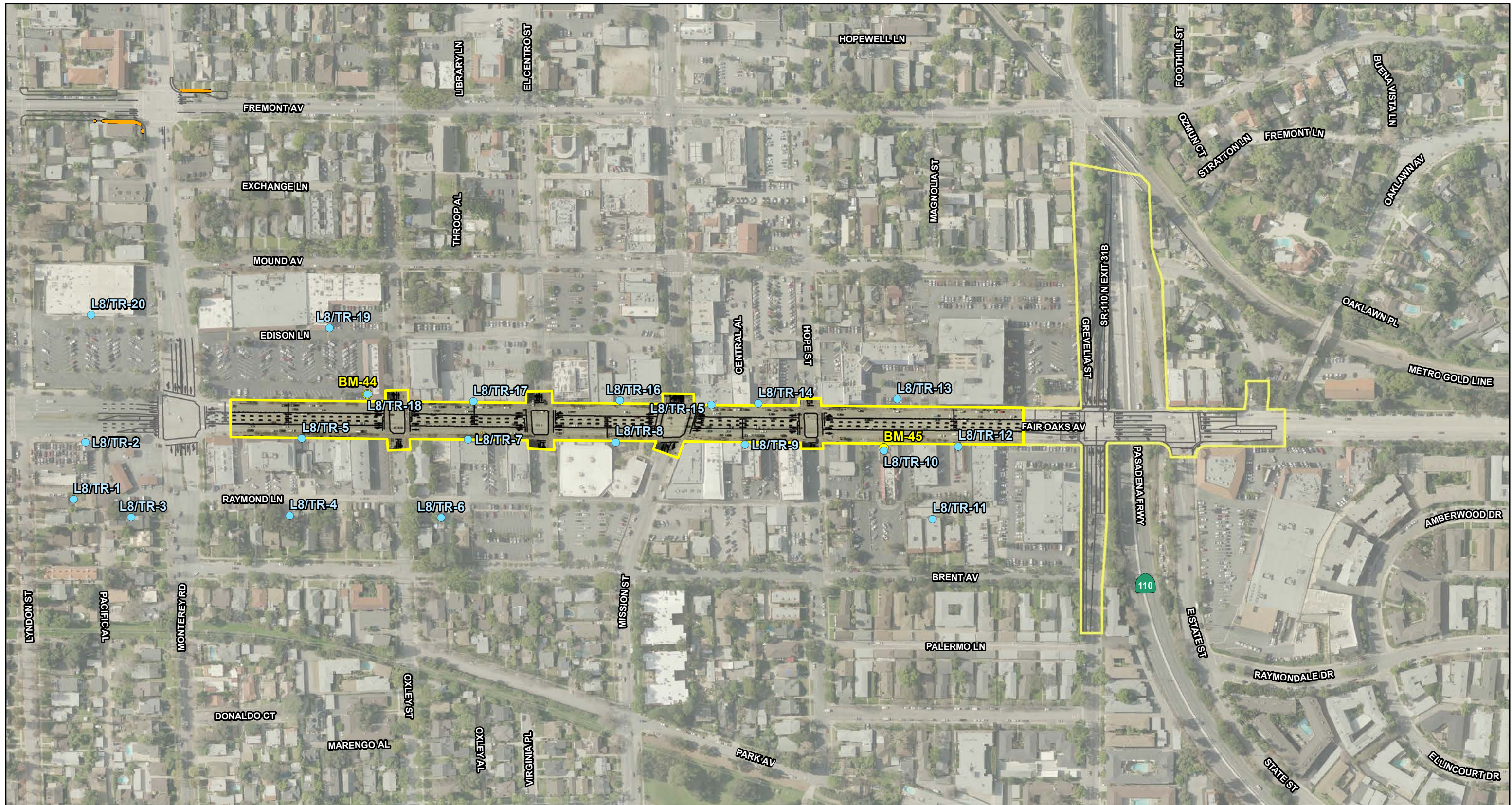
FIGURE 3.14-3

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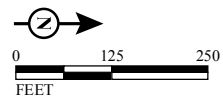
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SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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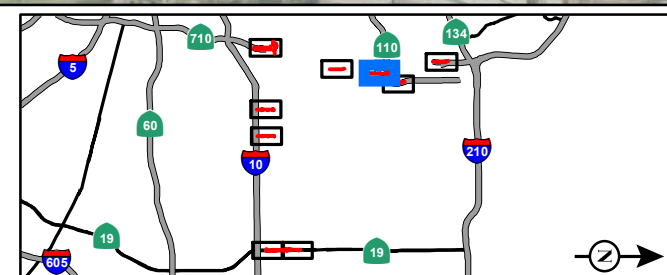


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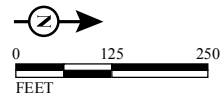
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SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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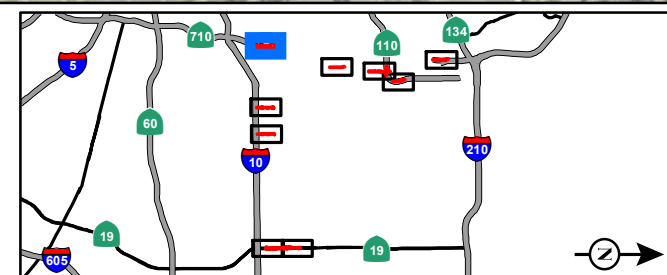


FIGURE 3.14-3

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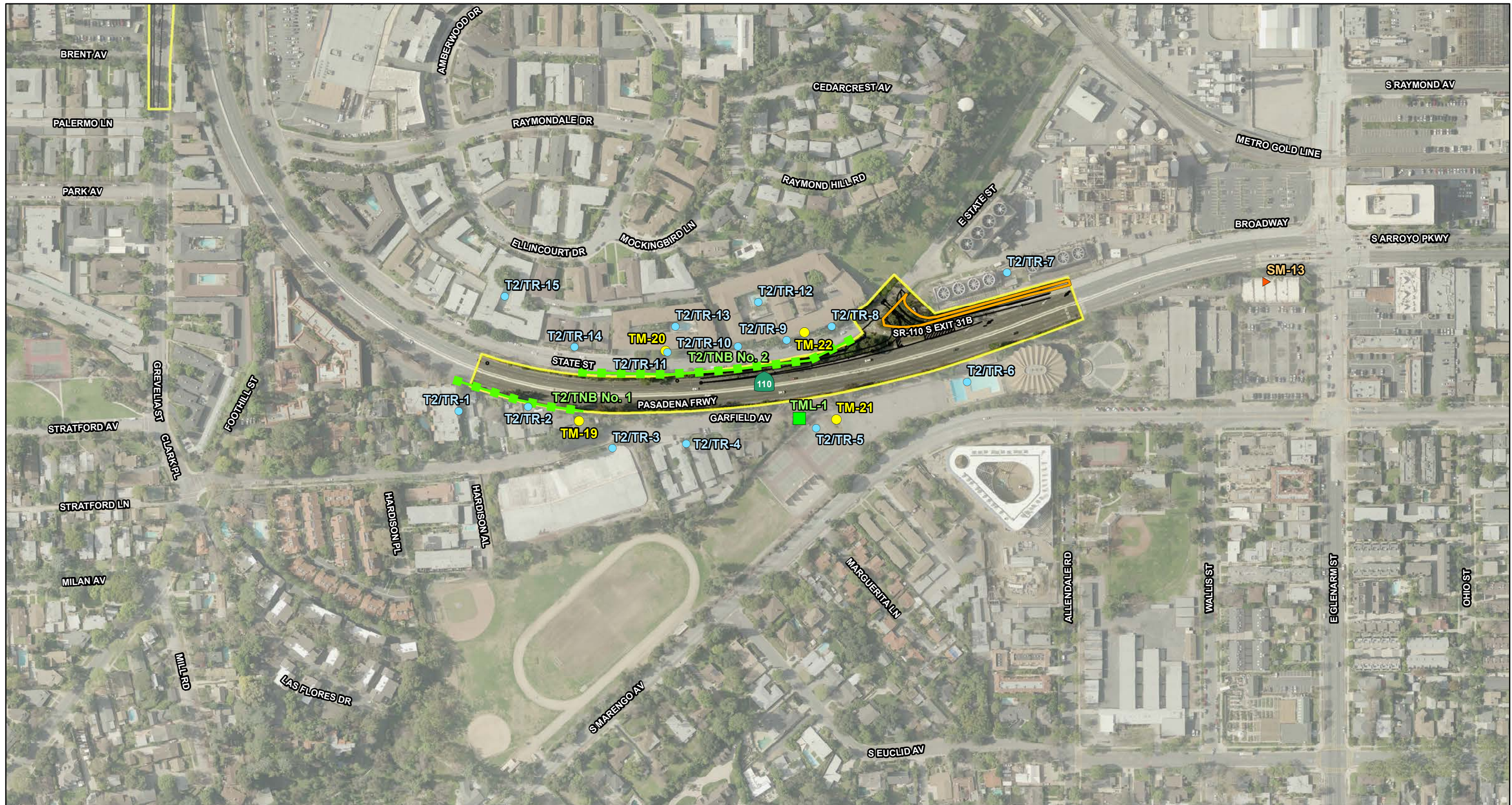
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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - TSM/TDM Alternative

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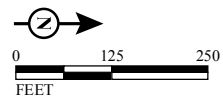
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LEGEND

- TSM/TDM Alternative
- TSM/TDM Roadway Geometrics
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- Long-term, 24-hour, Measurement Locations (TML)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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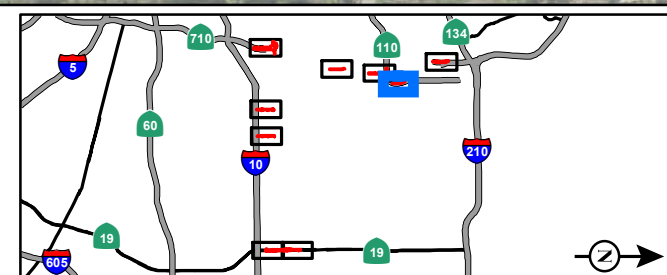


FIGURE 3.14-3
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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - TSM/TDM Alternative

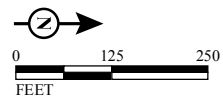
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LEGEND

- TSM/TDM Alternative
- TSM/TDM Roadway Geometrics
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- Long-term, 24-hour, Measurement Locations (TML)
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SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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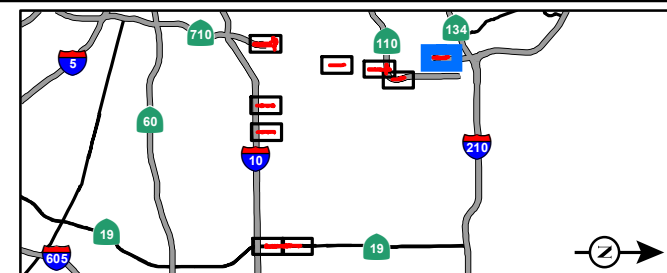
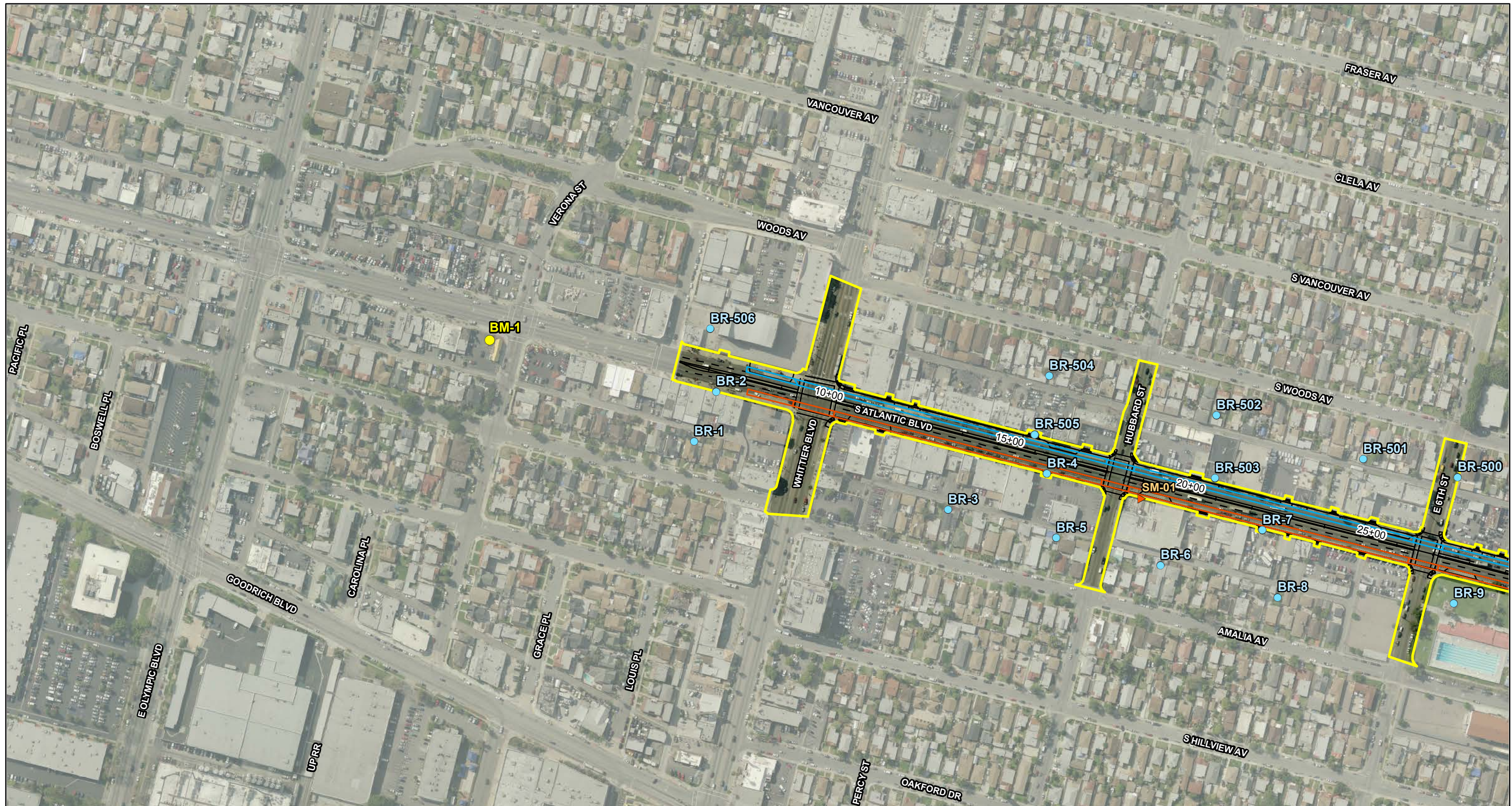


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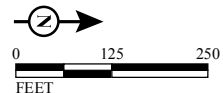
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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - TSM/TDM Alternative

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LEGEND

- | | | |
|--------------------------|----------------------------|---|
| — BRT Roadway Geometrics | ▭ BRT Alternative | ● Modeled Receptor Locations |
| — Dedicated Bus Lane | --- Existing Walls | ● Short-term Measurement Locations |
| — Shared Lane | --- Modeled Noise Barriers | ■ Long-term, 24-hour, Measurement Locations (BML) |
| — Proposed Right-of-Way | | ▲ School Measurement Locations |



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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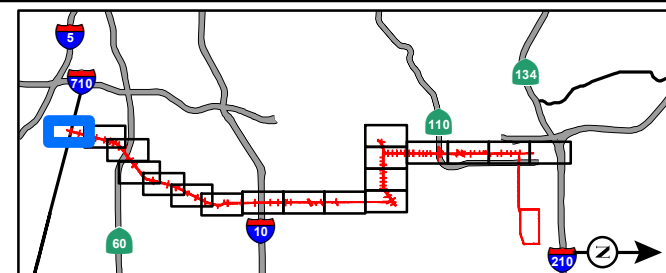
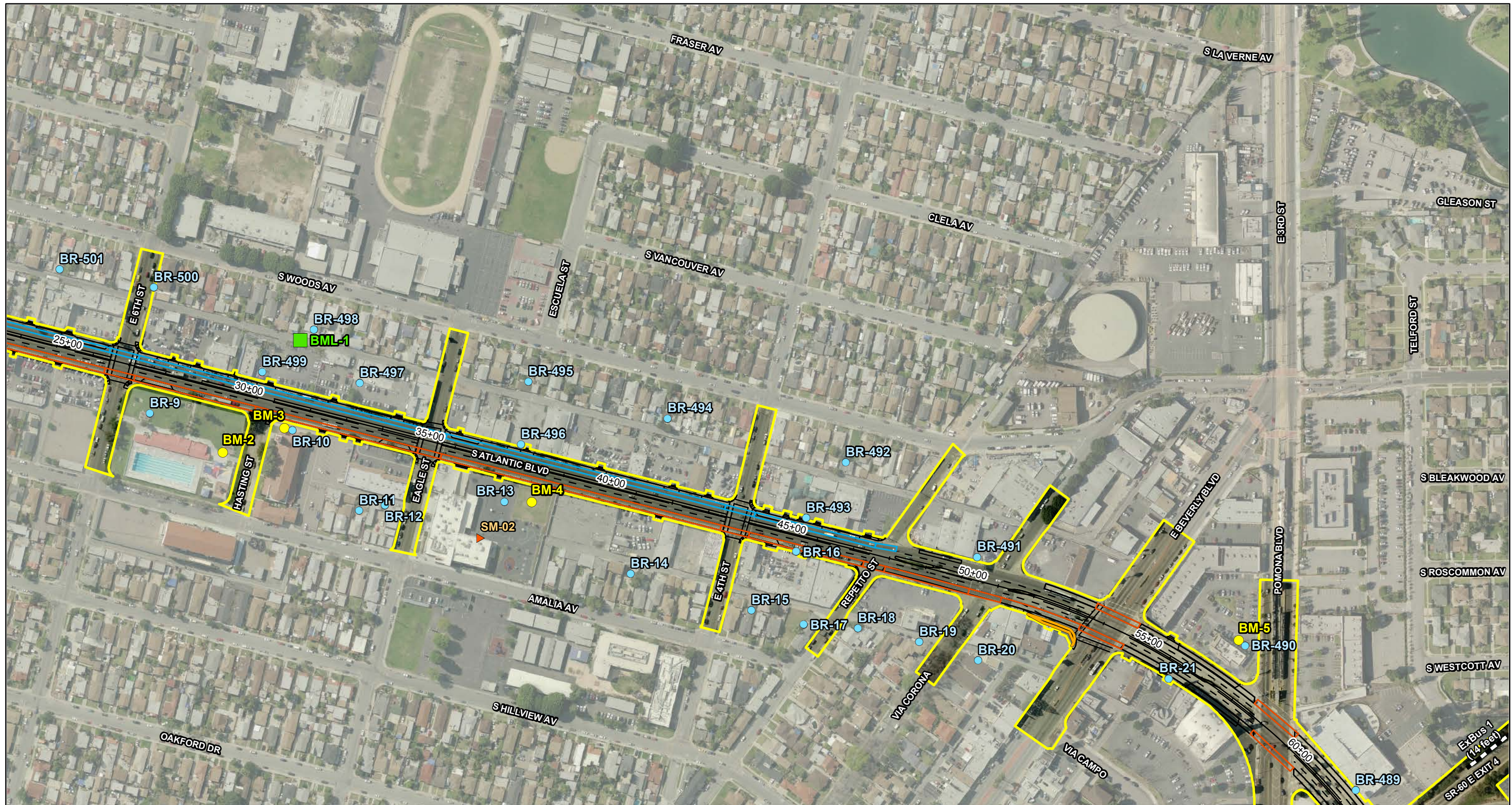


FIGURE 3.14-4
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LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- ▭ BRT Alternative
- ▬ Existing Walls
- ▬ Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (BML)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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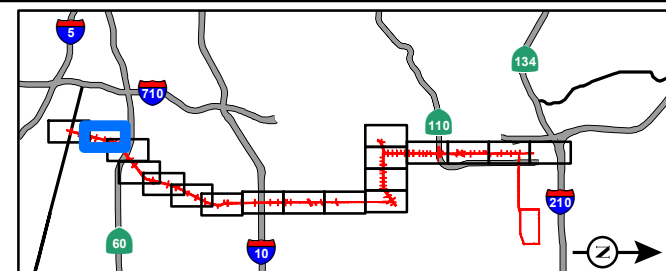
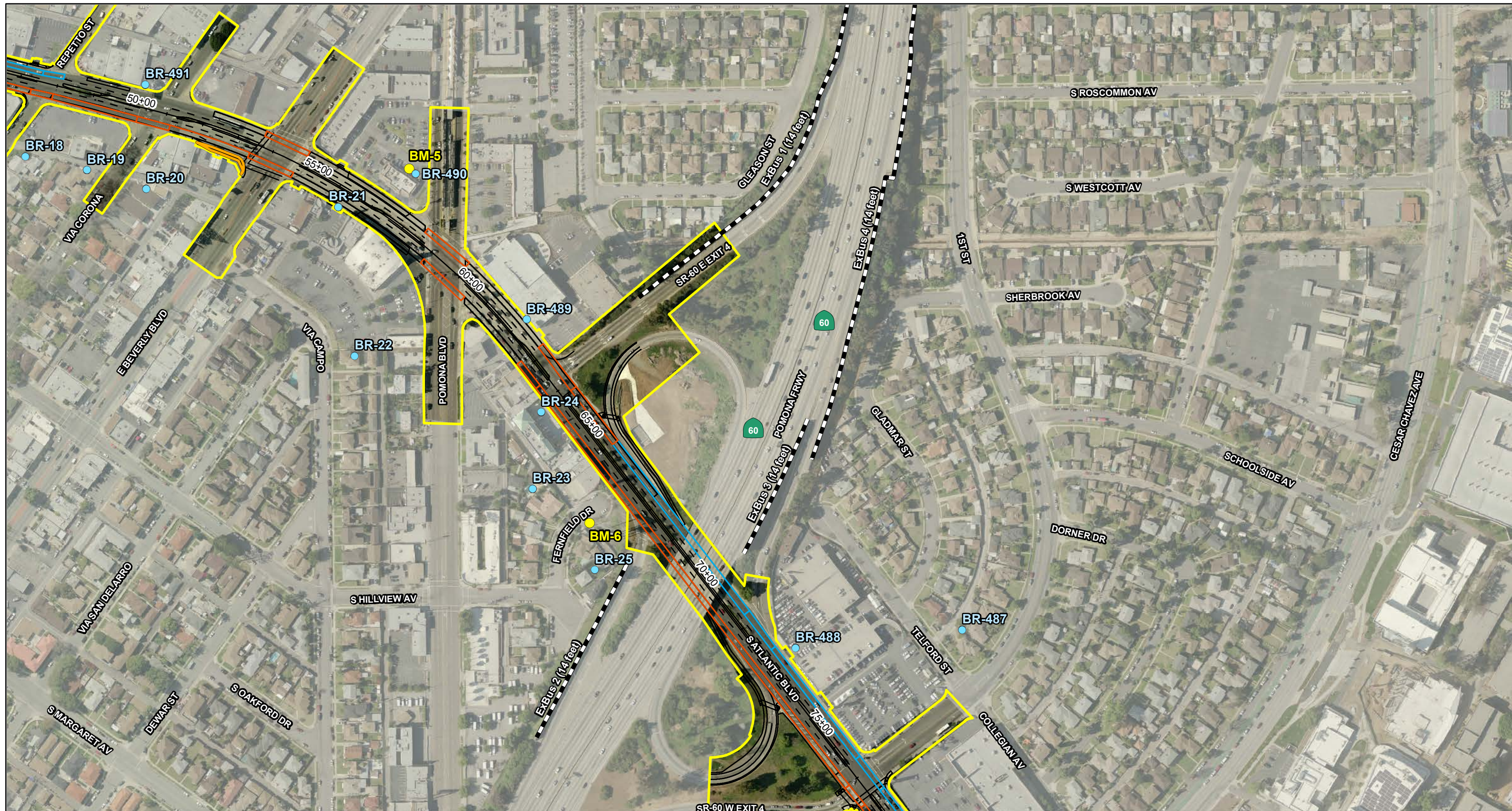


FIGURE 3.14-4
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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - BRT Alternative

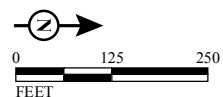
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LEGEND

- BRT Roadway Geometries
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- ▭ BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (BML)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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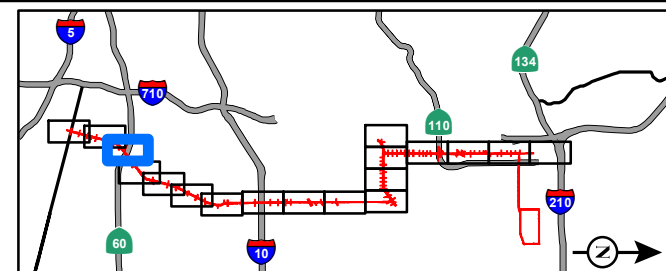
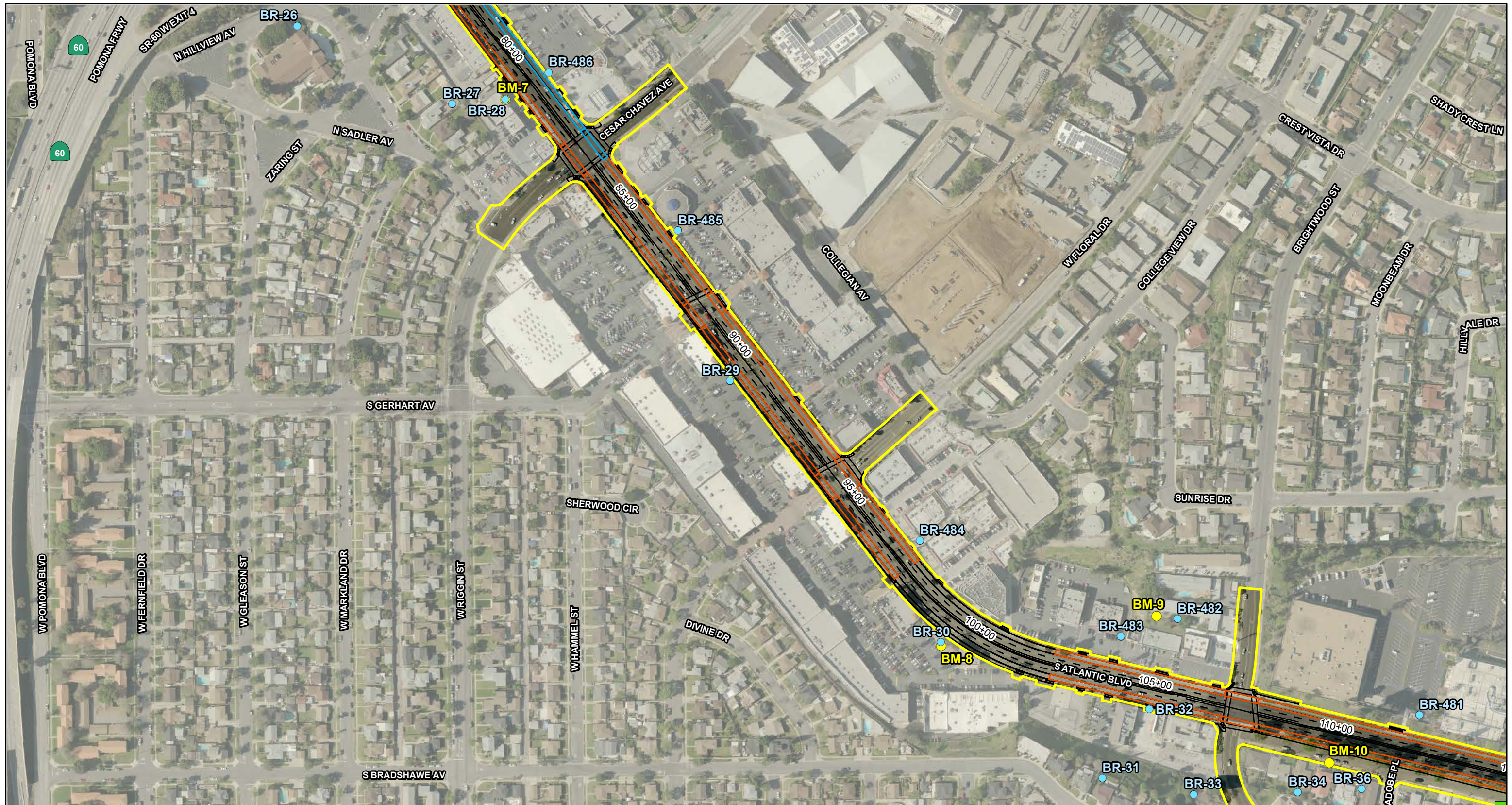


FIGURE 3.14-4
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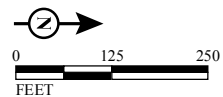
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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - BRT Alternative
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LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- ▭ BRT Alternative
- ▭ Existing Walls
- ▭ Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (BML)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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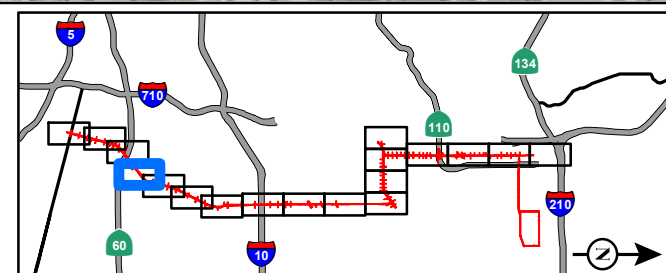


FIGURE 3.14-4

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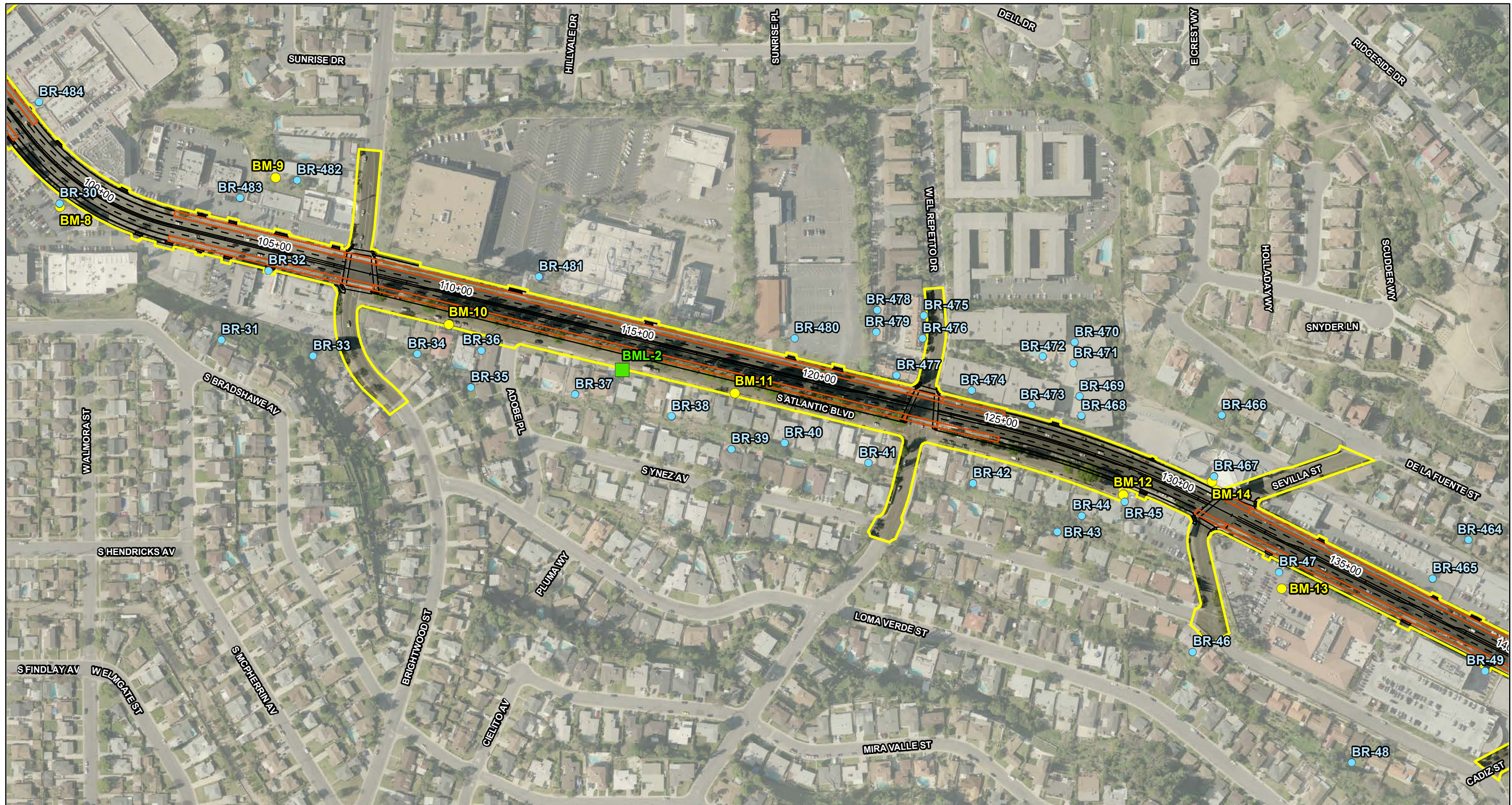
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Noise Measurement and Receptor Locations
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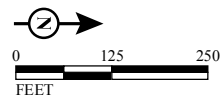
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- LEGEND**
- BRT Roadway Geometrics
 - Dedicated Bus Lane
 - Shared Lane
 - Proposed Right-of-Way
 - ▭ BRT Alternative
 - ▬ Existing Walls
 - ▬ Modeled Noise Barriers
 - Modeled Receptor Locations
 - Short-term Measurement Locations
 - Long-term, 24-hour, Measurement Locations (BML)
 - ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)
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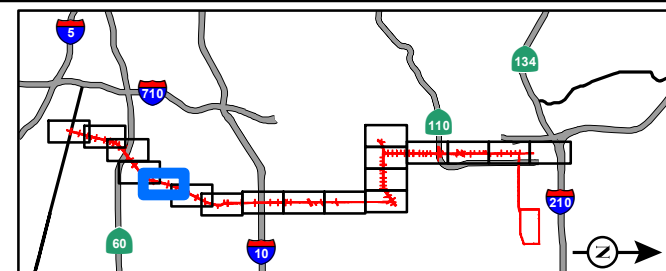


FIGURE 3.14-4
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SR 710 North Project
 Noise Measurement and Receptor Locations
 and Modeled Noise Barriers - BRT Alternative

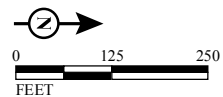
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LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- ▭ BRT Alternative
- ▬ Existing Walls
- ▬ Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (BML)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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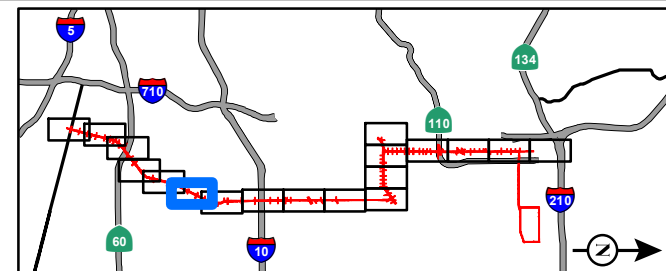


FIGURE 3.14-4

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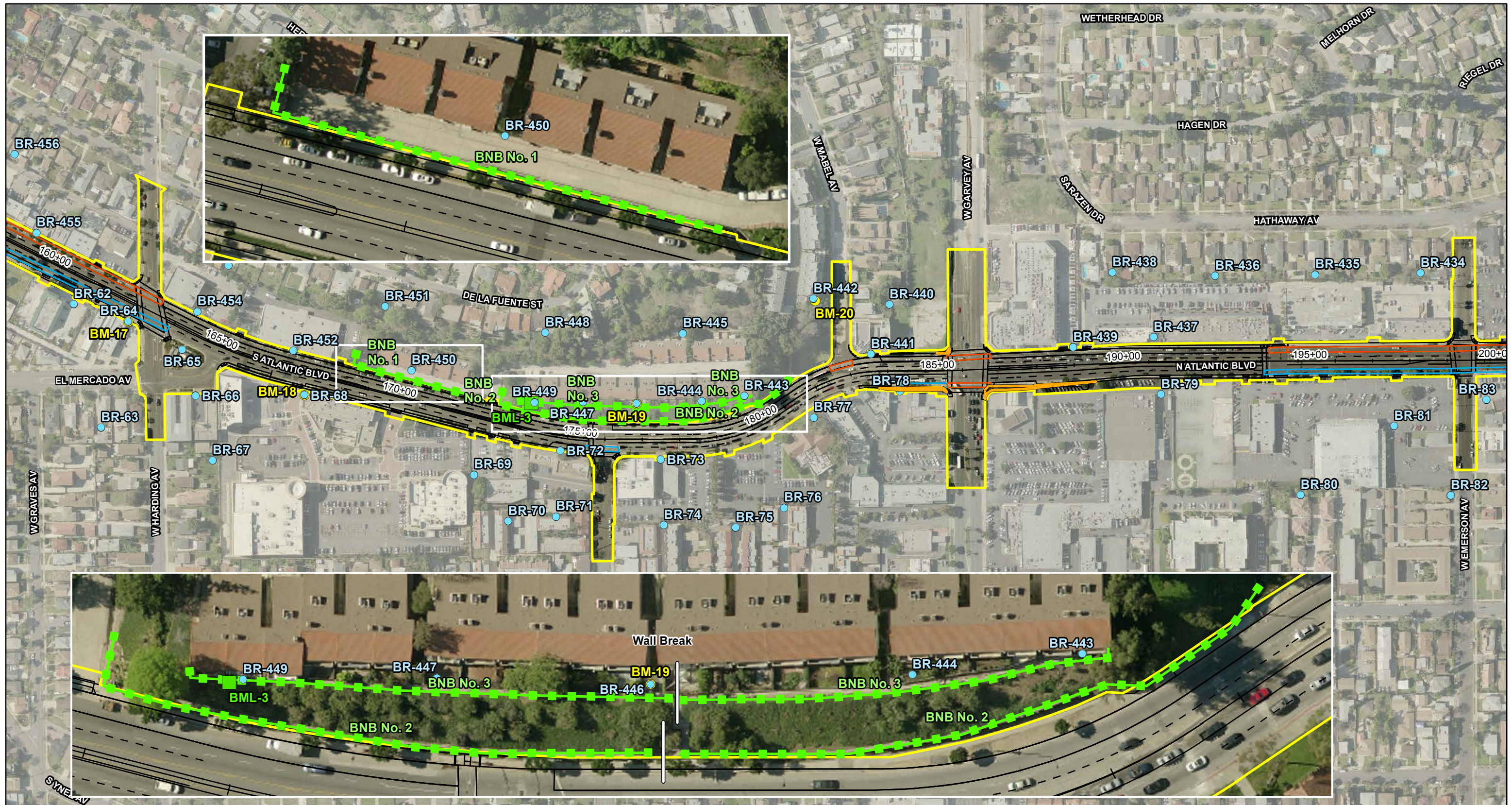
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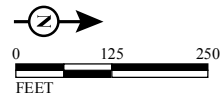
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LEGEND

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| — BRT Roadway Geometrics | ▭ BRT Alternative | ● Modeled Receptor Locations |
| — Dedicated Bus Lane | ▭ Existing Walls | ● Short-term Measurement Locations |
| — Shared Lane | ▭ Modeled Noise Barriers | ■ Long-term, 24-hour, Measurement Locations (BML) |
| — Proposed Right-of-Way | | ▲ School Measurement Locations |



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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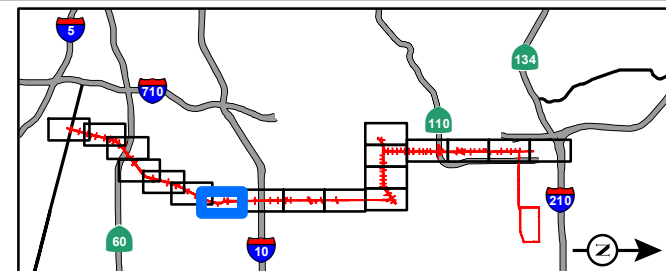


FIGURE 3.14-4

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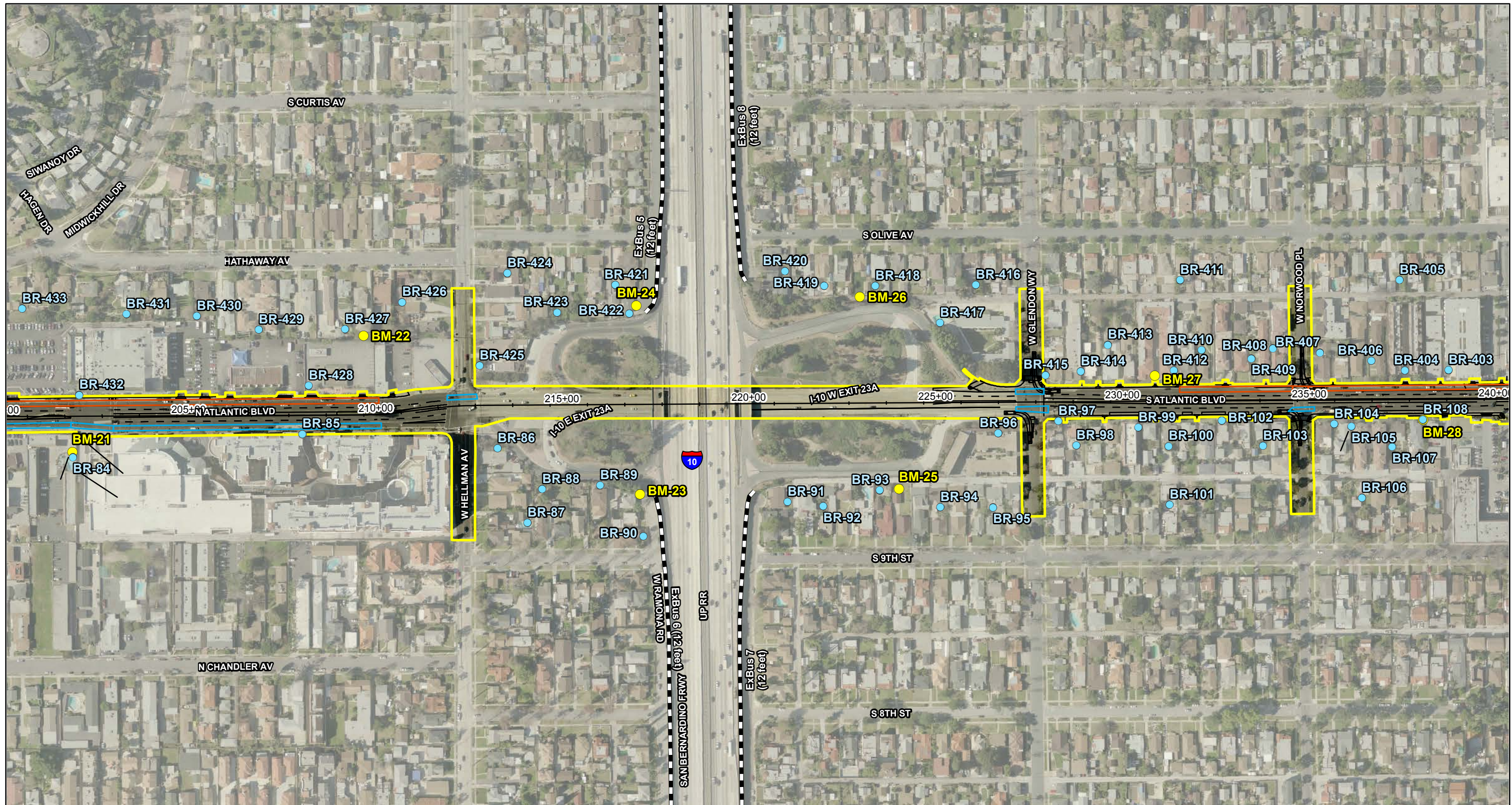
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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - BRT Alternative

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LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- ▭ BRT Alternative
- Existing Walls
- ▭ Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- ▭ Long-term, 24-hour, Measurement Locations (BML)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)
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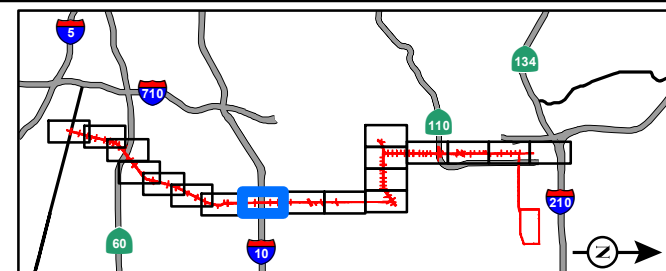
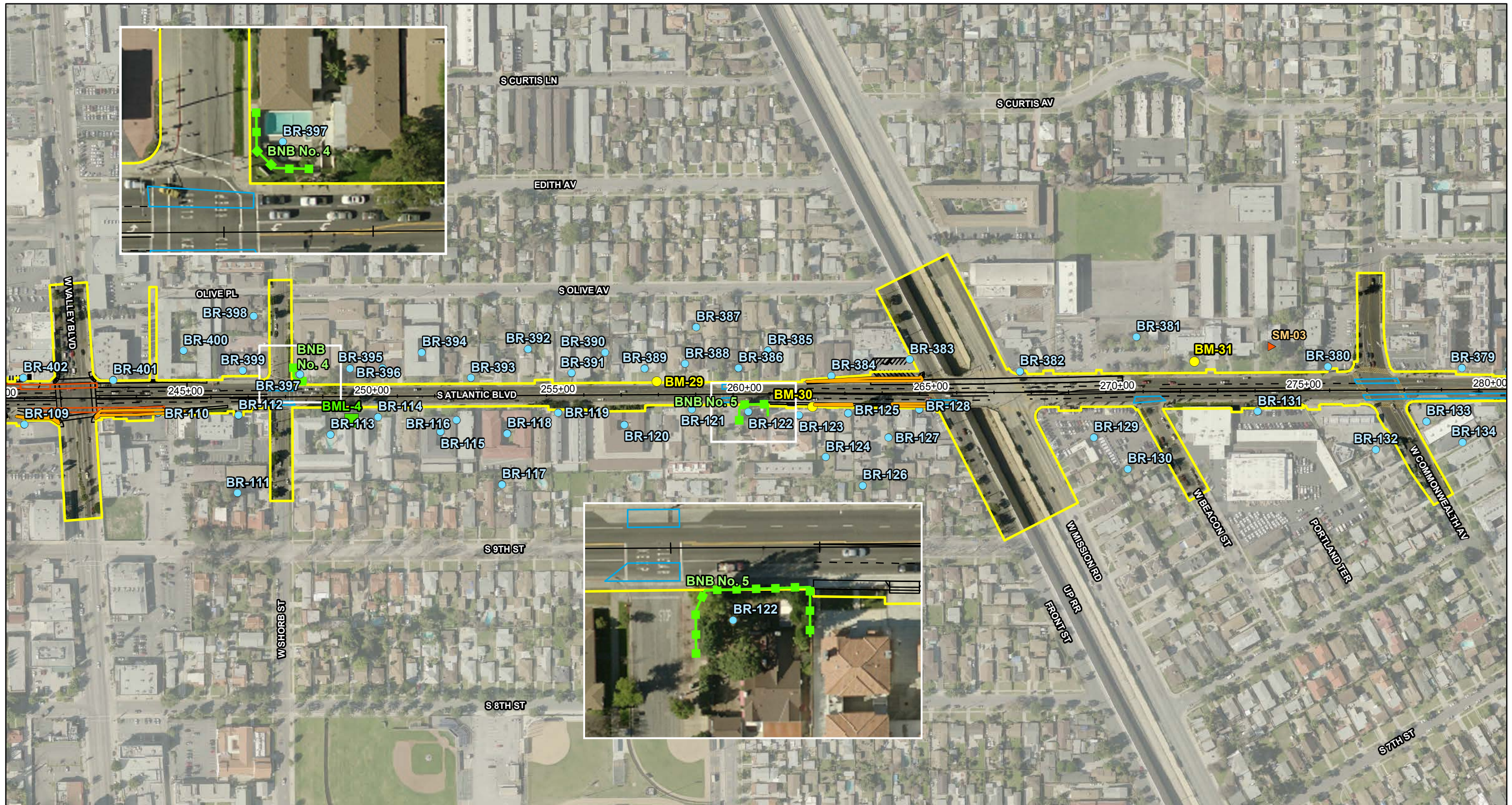


FIGURE 3.14-4
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SR 710 North Project
 Noise Measurement and Receptor Locations
 and Modeled Noise Barriers - BRT Alternative

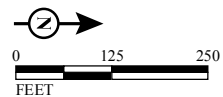
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| — BRT Roadway Geometrics | ▭ BRT Alternative | ● Modeled Receptor Locations |
| — Dedicated Bus Lane | ▭ Existing Walls | ● Short-term Measurement Locations |
| — Shared Lane | ▭ Modeled Noise Barriers | ■ Long-term, 24-hour, Measurement Locations (BML) |
| — Proposed Right-of-Way | | ▲ School Measurement Locations |



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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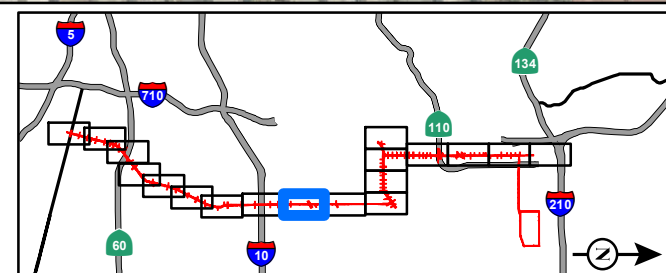


FIGURE 3.14-4

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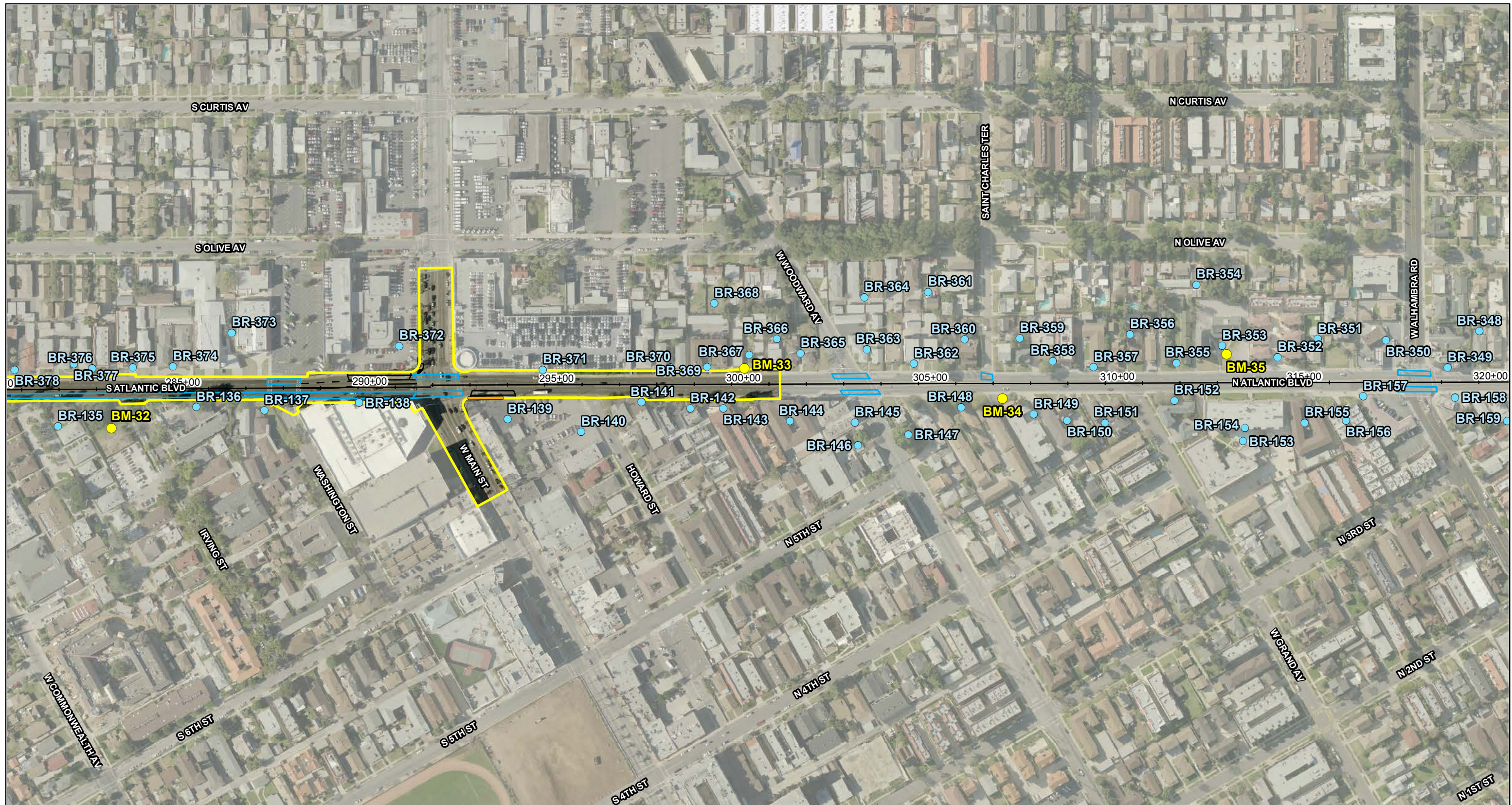
SR 710 North Project
Noise Measurement and Receptor Locations
and Modeled Noise Barriers - BRT Alternative

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LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- ▭ BRT Alternative
- ▬ Existing Walls
- ▬ Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (BML)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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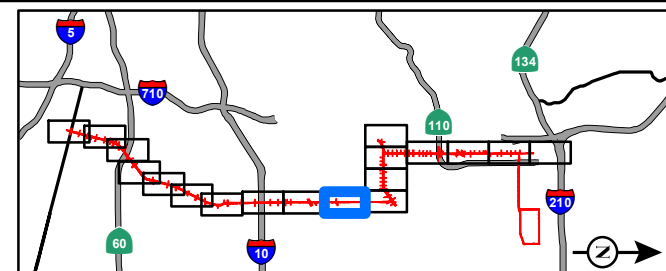


FIGURE 3.14-4
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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - BRT Alternative

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LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- ▭ BRT Alternative
- ▬ Existing Walls
- ▬ Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (BML)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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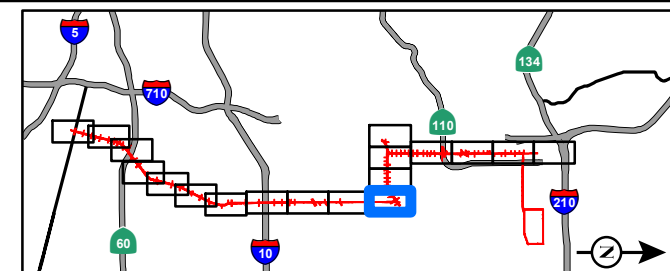


FIGURE 3.14-4
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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - BRT Alternative

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LEGEND

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|--------------------------|--------------------------|---|
| — BRT Roadway Geometrics | ▭ BRT Alternative | ● Modeled Receptor Locations |
| — Dedicated Bus Lane | ▭ Existing Walls | ● Short-term Measurement Locations |
| — Shared Lane | ▭ Modeled Noise Barriers | ■ Long-term, 24-hour, Measurement Locations (BML) |
| — Proposed Right-of-Way | | ▲ School Measurement Locations |

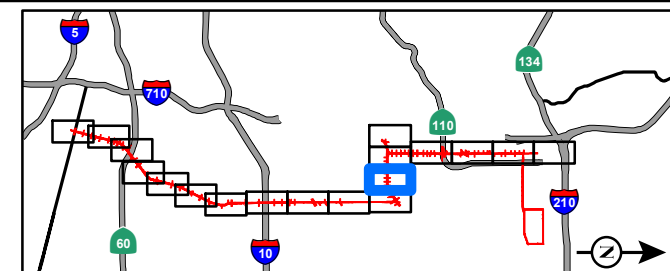
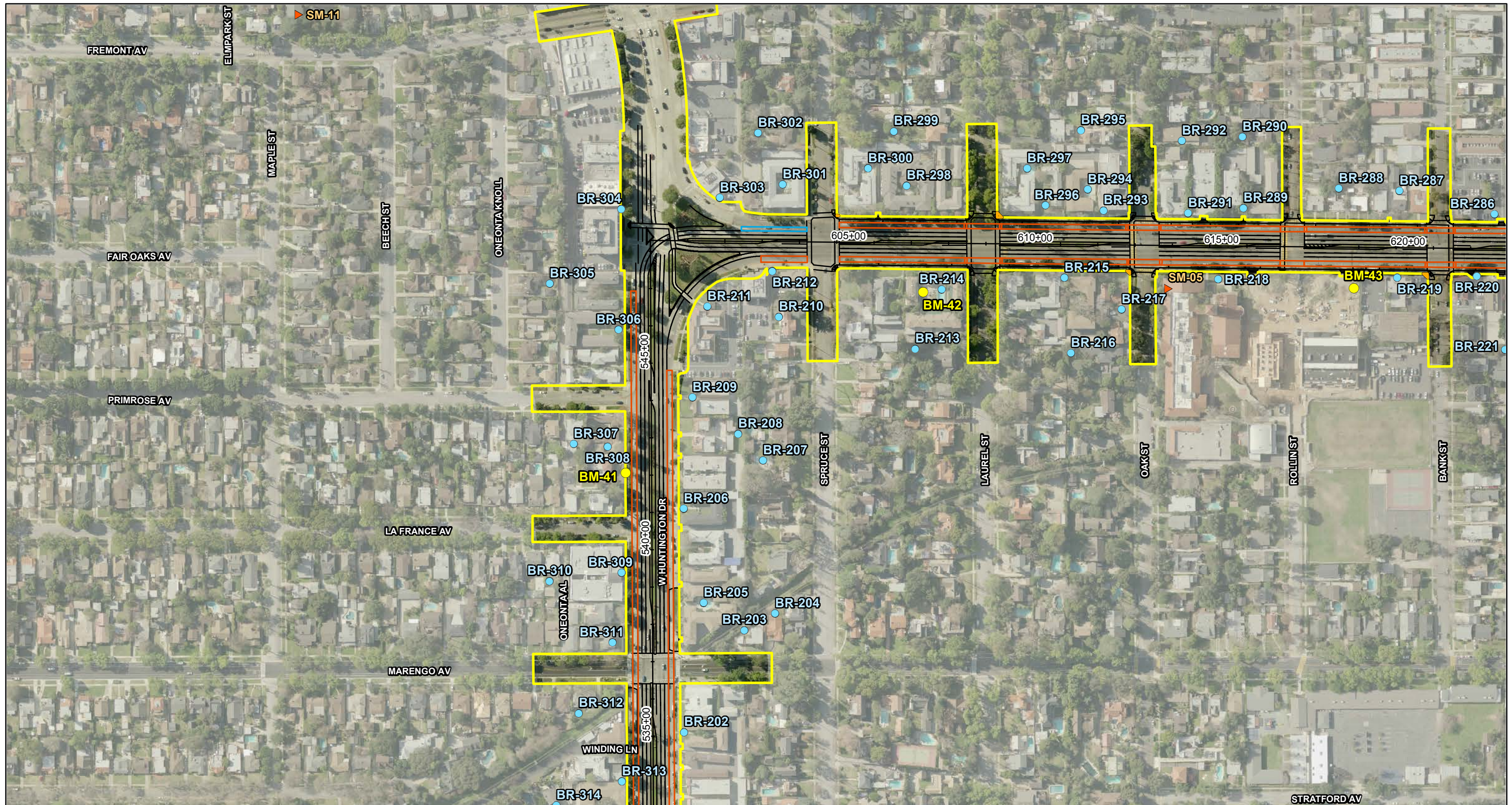


FIGURE 3.14-4
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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - BRT Alternative

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| — BRT Roadway Geometrics | ▭ BRT Alternative | ● Modeled Receptor Locations |
| — Dedicated Bus Lane | ▬ Existing Walls | ● Short-term Measurement Locations |
| — Shared Lane | ▬ Modeled Noise Barriers | ■ Long-term, 24-hour, Measurement Locations (BML) |
| — Proposed Right-of-Way | | ▲ School Measurement Locations |

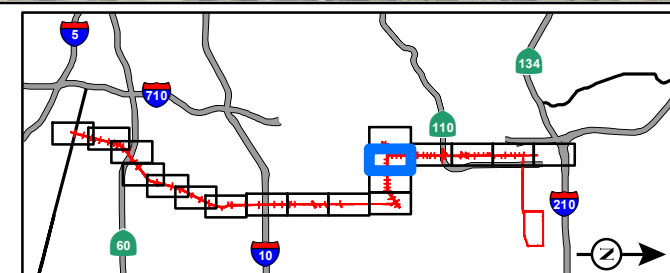


FIGURE 3.14-4

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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - BRT Alternative

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LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- ▭ BRT Alternative
- ▭ Existing Walls
- ▭ Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (BML)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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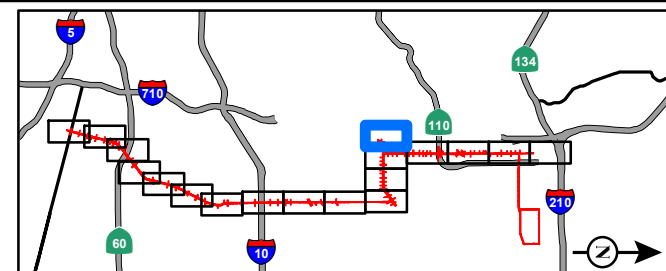
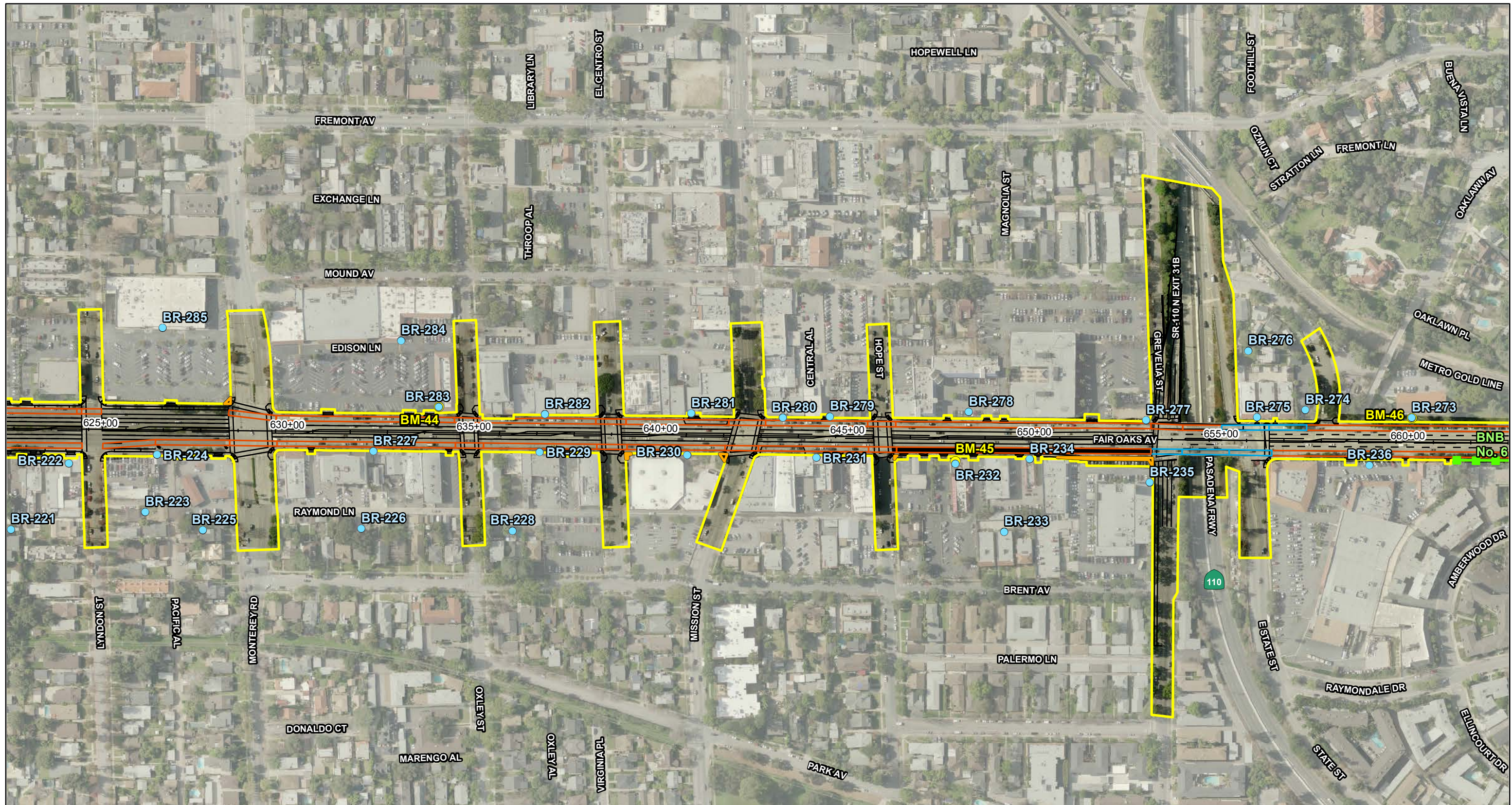


FIGURE 3.14-4
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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - BRT Alternative

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LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- ▭ BRT Alternative
- ▬ Existing Walls
- ▬ Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (BML)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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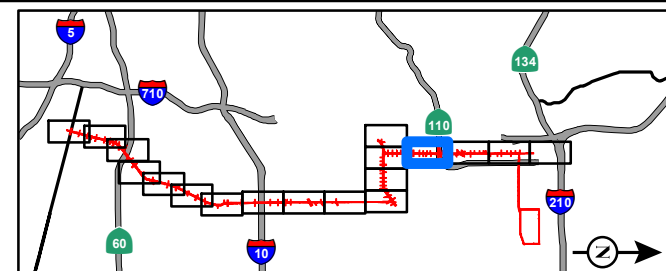


FIGURE 3.14-4

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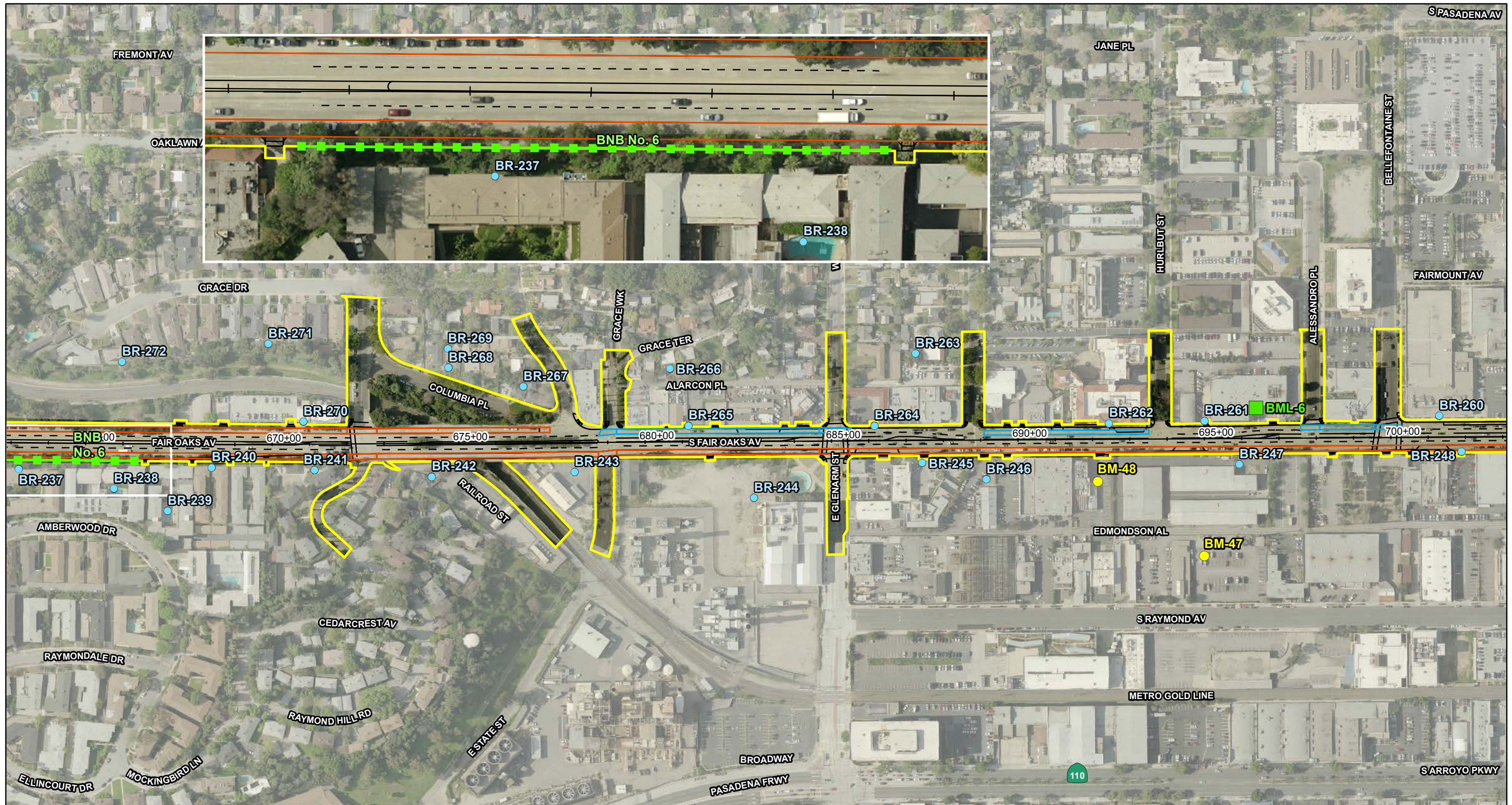
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and Modeled Noise Barriers - BRT Alternative

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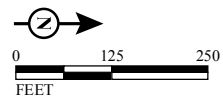
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LEGEND

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|--------------------------|--------------------------|---|
| — BRT Roadway Geometrics | ▭ BRT Alternative | ● Modeled Receptor Locations |
| — Dedicated Bus Lane | ▭ Existing Walls | ● Short-term Measurement Locations |
| — Shared Lane | ▭ Modeled Noise Barriers | ■ Long-term, 24-hour, Measurement Locations (BML) |
| — Proposed Right-of-Way | | ▲ School Measurement Locations |



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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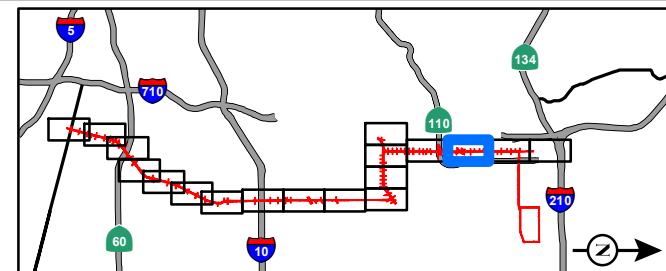


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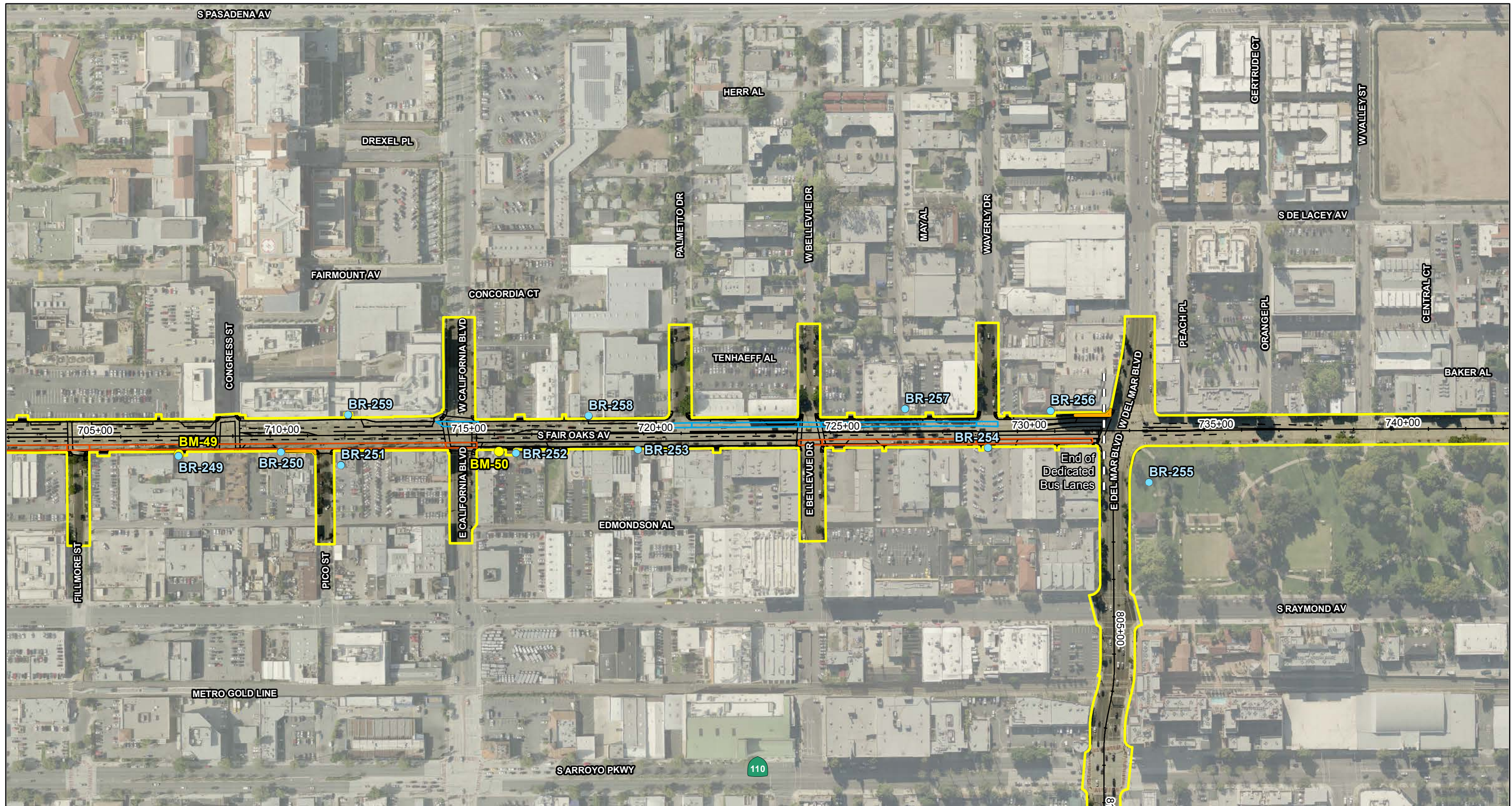
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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - BRT Alternative

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LEGEND

- BRT Roadway Geometrics
- Dedicated Bus Lane
- Shared Lane
- Proposed Right-of-Way
- ▭ BRT Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (BML)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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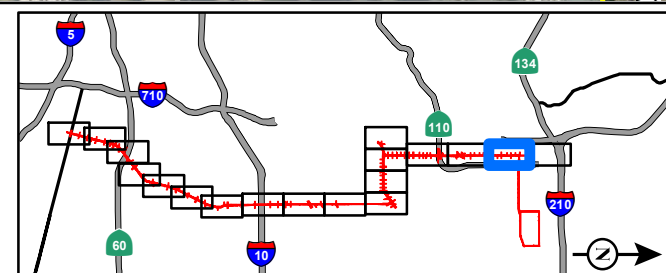


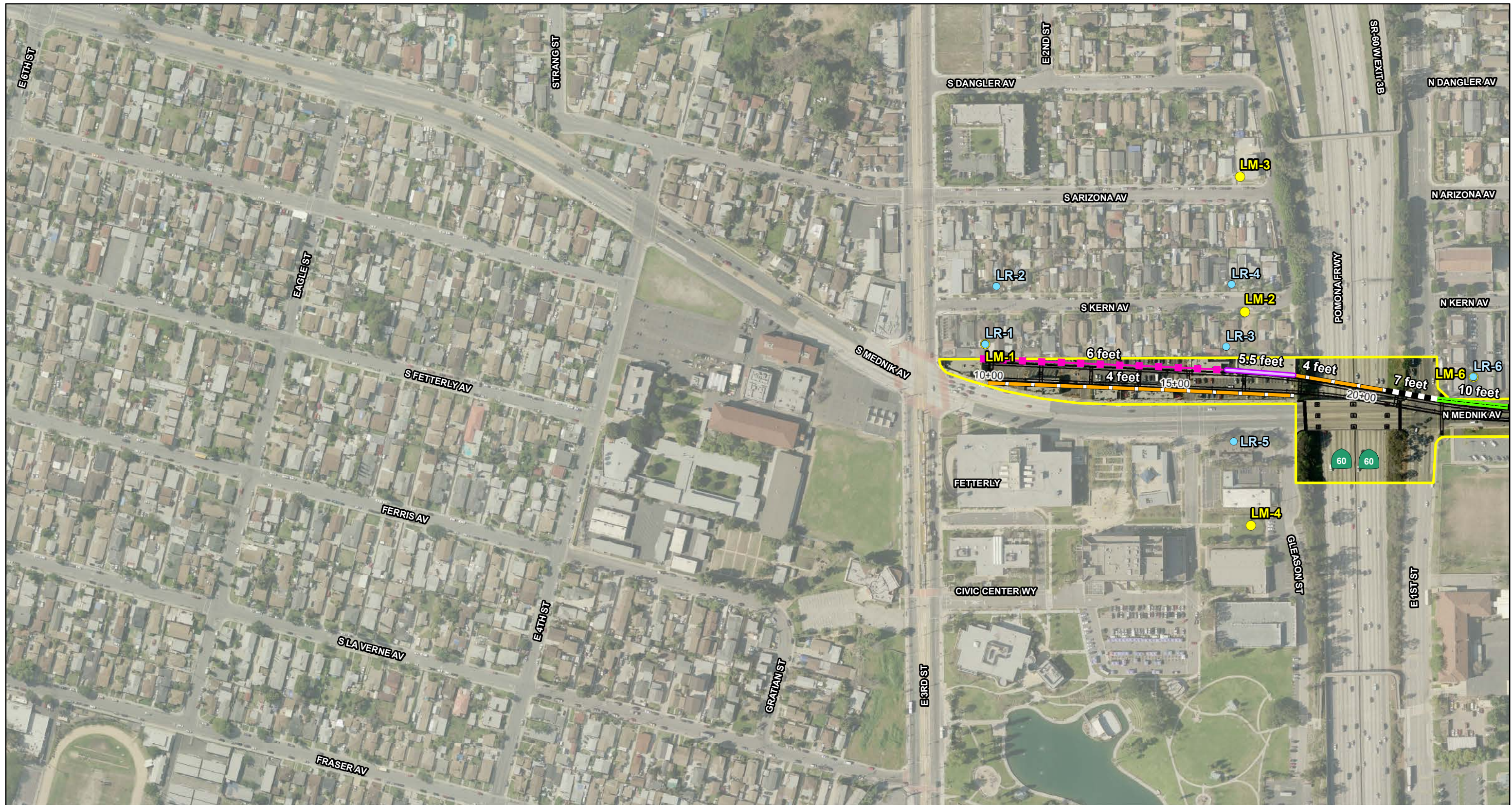
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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - BRT Alternative

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LEGEND

- LRT Geometrics
- ▭ LRT Alternative
- ▬ Modeled Noise Barriers: 4 feet
- Modeled Noise Barriers: 5 feet
- ▬ Modeled Noise Barriers: 5.5 feet
- ▬ Modeled Noise Barriers: 6 feet
- ▬ Modeled Noise Barriers: 7 feet
- ▬ Modeled Noise Barriers: 10 feet
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (LRT)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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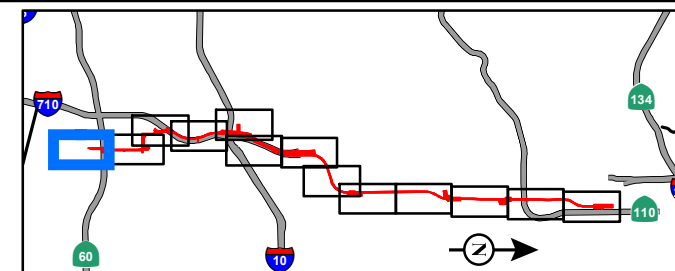
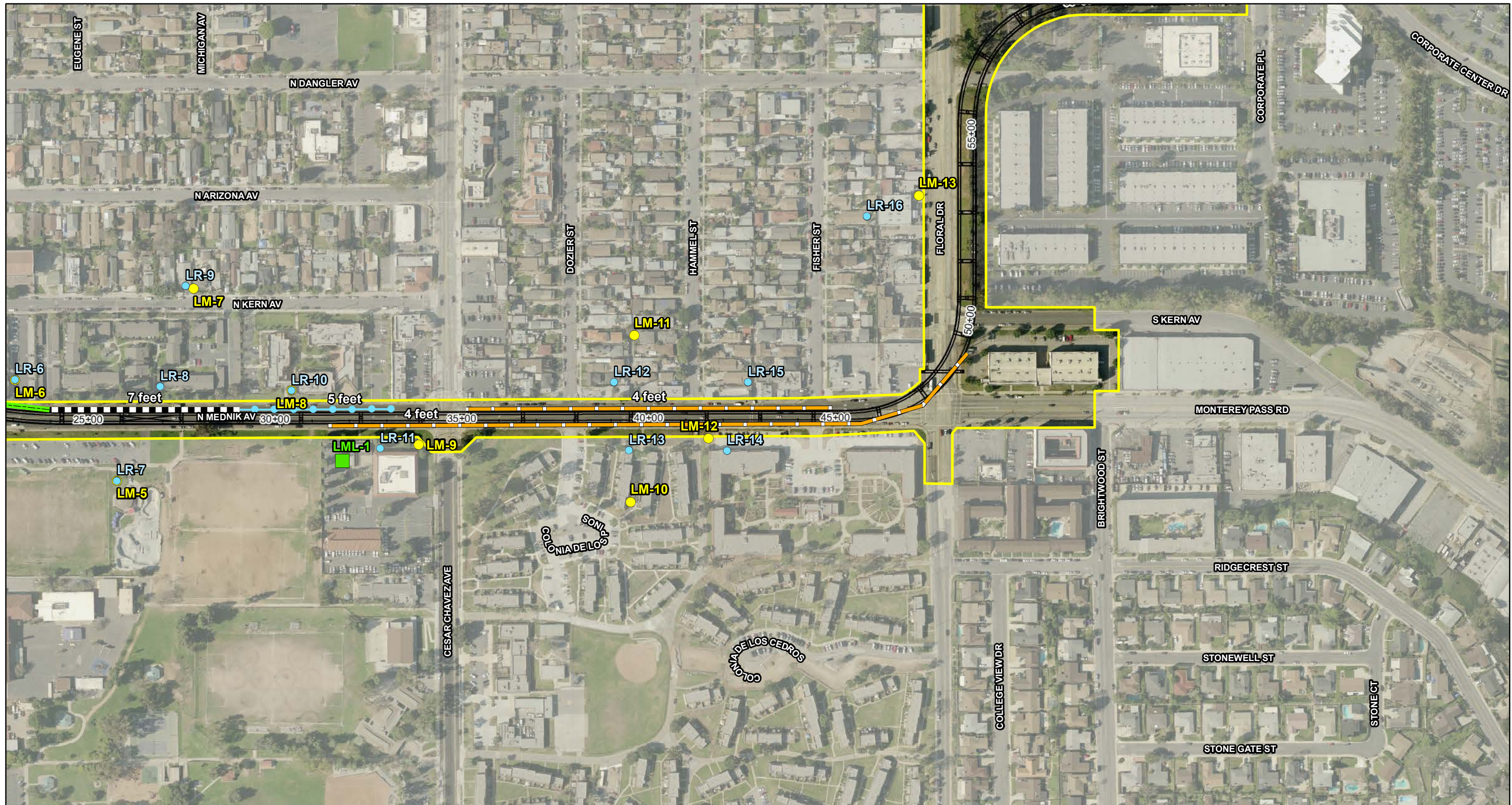


FIGURE 3.14-5
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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - LRT Alternative
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LEGEND

- LRT Geometrics
- ▭ LRT Alternative
- ▬ Modeled Noise Barriers: 4 feet
- Modeled Noise Barriers: 5 feet
- ▬ Modeled Noise Barriers: 5.5 feet
- ▬ Modeled Noise Barriers: 6 feet
- ▬ Modeled Noise Barriers: 7 feet
- ▬ Modeled Noise Barriers: 10 feet
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (LRT)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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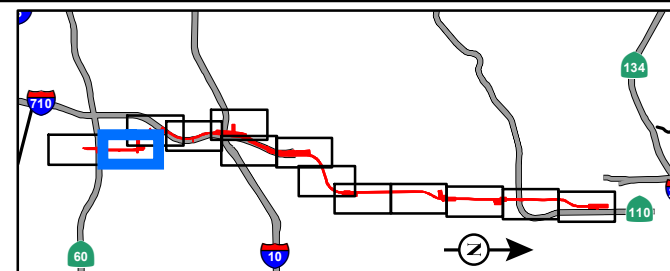


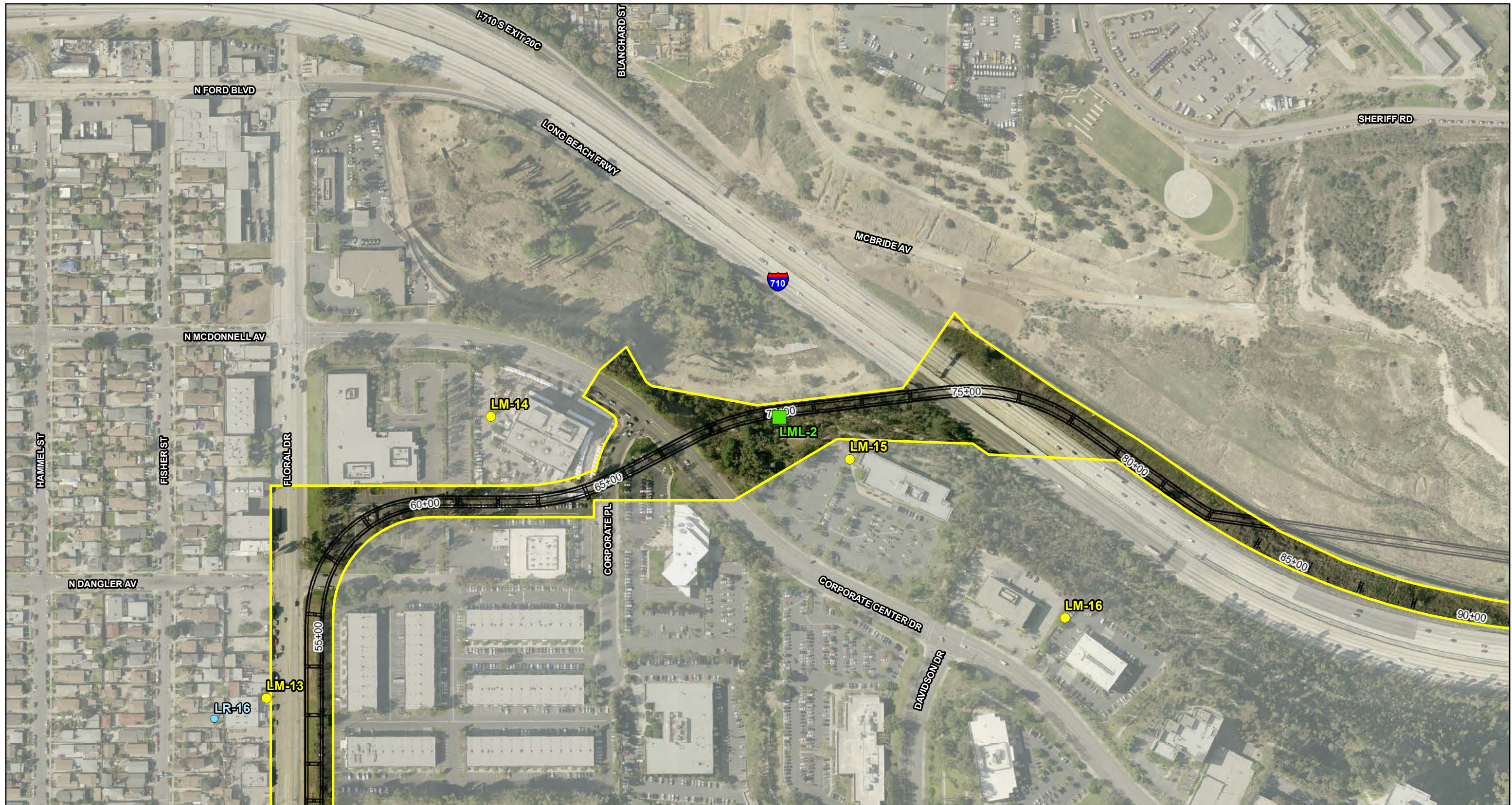
FIGURE 3.14-5

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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - LRT Alternative

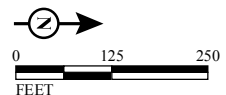
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LEGEND

- LRT Geometrics
- Modeled Noise Barriers: 5.5 feet
- Modeled Noise Barriers: 6 feet
- Modeled Noise Barriers: 4 feet
- Modeled Noise Barriers: 7 feet
- Modeled Noise Barriers: 5 feet
- Modeled Noise Barriers: 10 feet
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (LRT)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)
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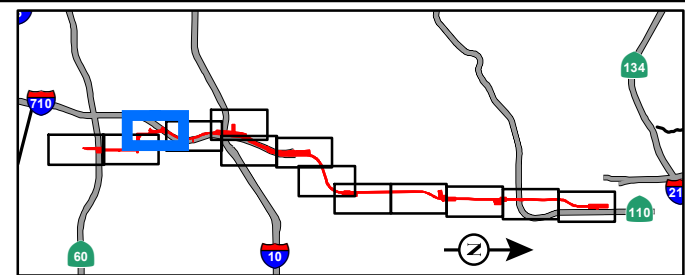


FIGURE 3.14-5
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SR 710 North Project
 Noise Measurement and Receptor Locations
 and Modeled Noise Barriers - LRT Alternative
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LEGEND

- | | | |
|----------------------------------|------------------------------------|---|
| — LRT Geometrics | — Modeled Noise Barriers: 5.5 feet | ● Modeled Receptor Locations |
| ▭ LRT Alternative | — Modeled Noise Barriers: 6 feet | ● Short-term Measurement Locations |
| ▭ Modeled Noise Barriers: 4 feet | ▭ Modeled Noise Barriers: 7 feet | ■ Long-term, 24-hour, Measurement Locations (LRT) |
| ● Modeled Noise Barriers: 5 feet | ▭ Modeled Noise Barriers: 10 feet | ▲ School Measurement Locations |



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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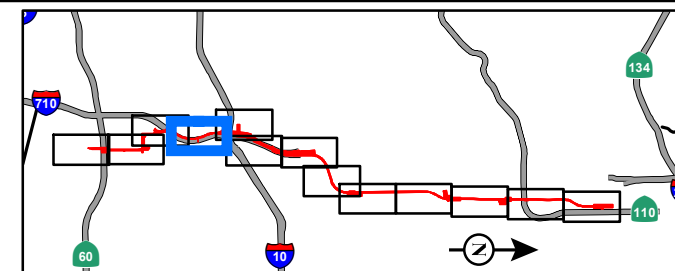
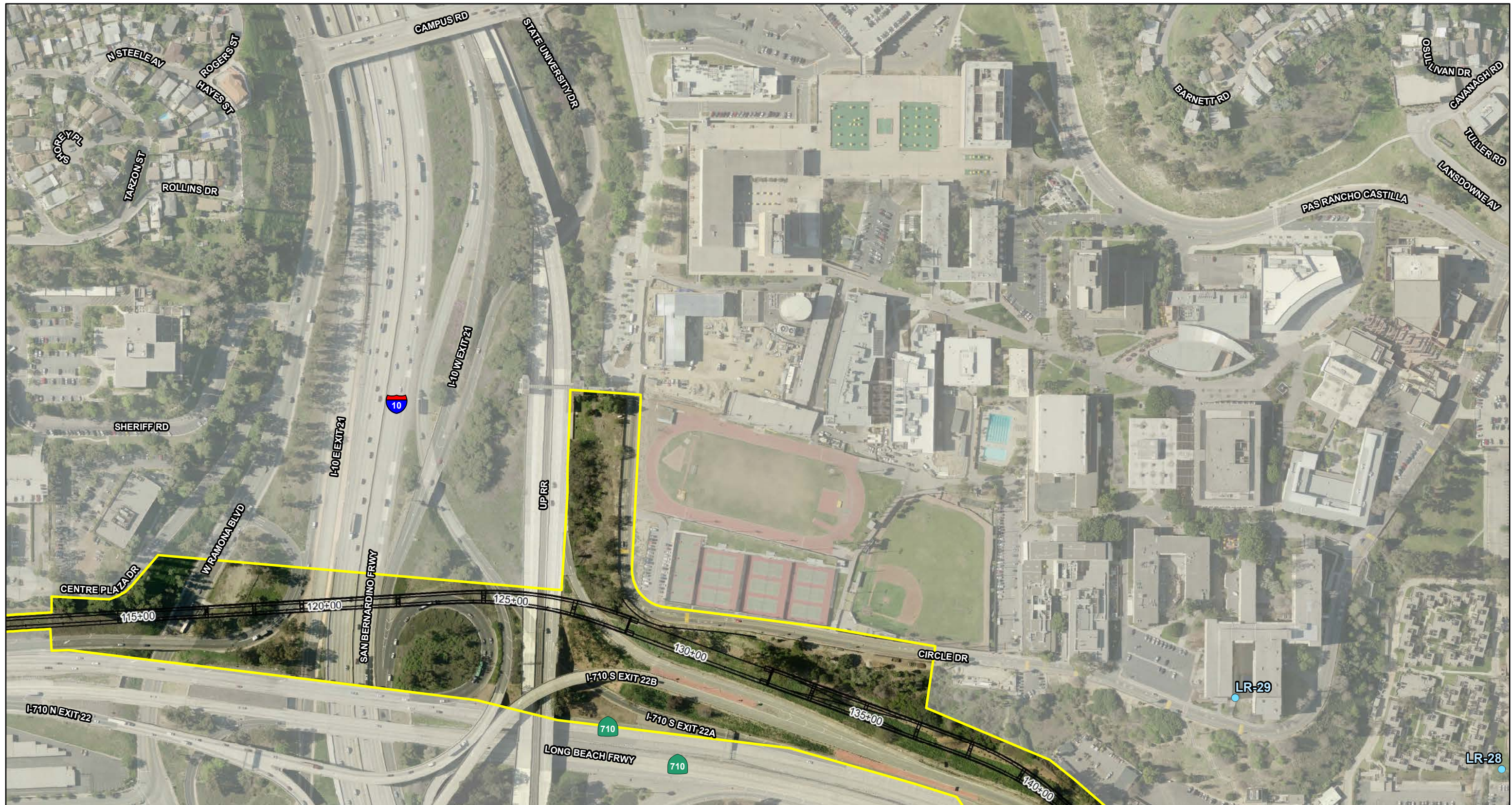


FIGURE 3.14-5
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SR 710 North Project
Noise Measurement and Receptor Locations
and Modeled Noise Barriers - LRT Alternative

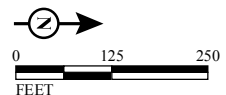
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LEGEND

- LRT Geometrics
- ▭ LRT Alternative
- ▬ Modeled Noise Barriers: 4 feet
- Modeled Noise Barriers: 5 feet
- ▬ Modeled Noise Barriers: 5.5 feet
- ▬ Modeled Noise Barriers: 6 feet
- ▬ Modeled Noise Barriers: 7 feet
- ▬ Modeled Noise Barriers: 10 feet
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (LRT)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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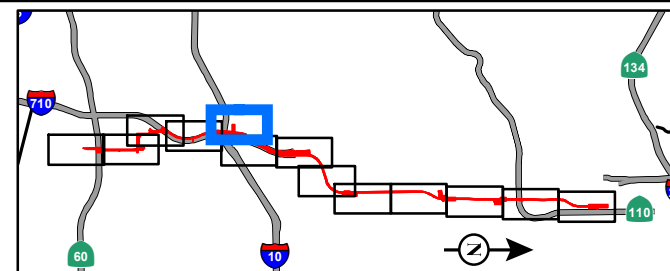


FIGURE 3.14-5
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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - LRT Alternative
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LEGEND

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|----------------------------------|------------------------------------|---|
| — LRT Geometrics | — Modeled Noise Barriers: 5.5 feet | ● Modeled Receptor Locations |
| — LRT Alternative | — Modeled Noise Barriers: 6 feet | ● Short-term Measurement Locations |
| — Modeled Noise Barriers: 4 feet | — Modeled Noise Barriers: 7 feet | ■ Long-term, 24-hour, Measurement Locations (LRT) |
| ● Modeled Noise Barriers: 5 feet | — Modeled Noise Barriers: 10 feet | ▲ School Measurement Locations |



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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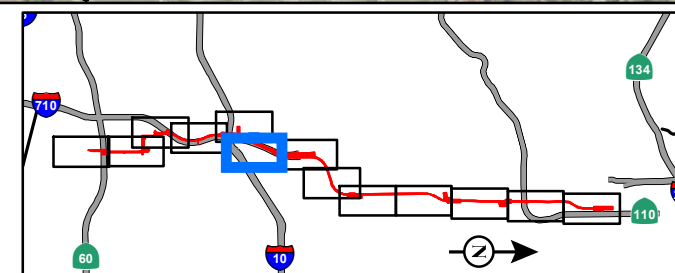


FIGURE 3.14-5
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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - LRT Alternative
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|----------------------------------|------------------------------------|---|
| — LRT Geometrics | — Modeled Noise Barriers: 5.5 feet | ● Modeled Receptor Locations |
| ▭ LRT Alternative | ▭ Modeled Noise Barriers: 6 feet | ● Short-term Measurement Locations |
| ▭ Modeled Noise Barriers: 4 feet | ▭ Modeled Noise Barriers: 7 feet | ■ Long-term, 24-hour, Measurement Locations (LRT) |
| ● Modeled Noise Barriers: 5 feet | ▭ Modeled Noise Barriers: 10 feet | ▲ School Measurement Locations |



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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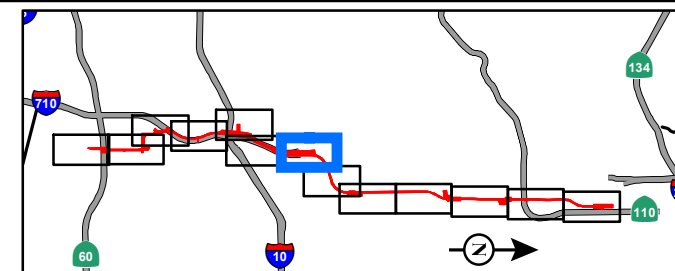
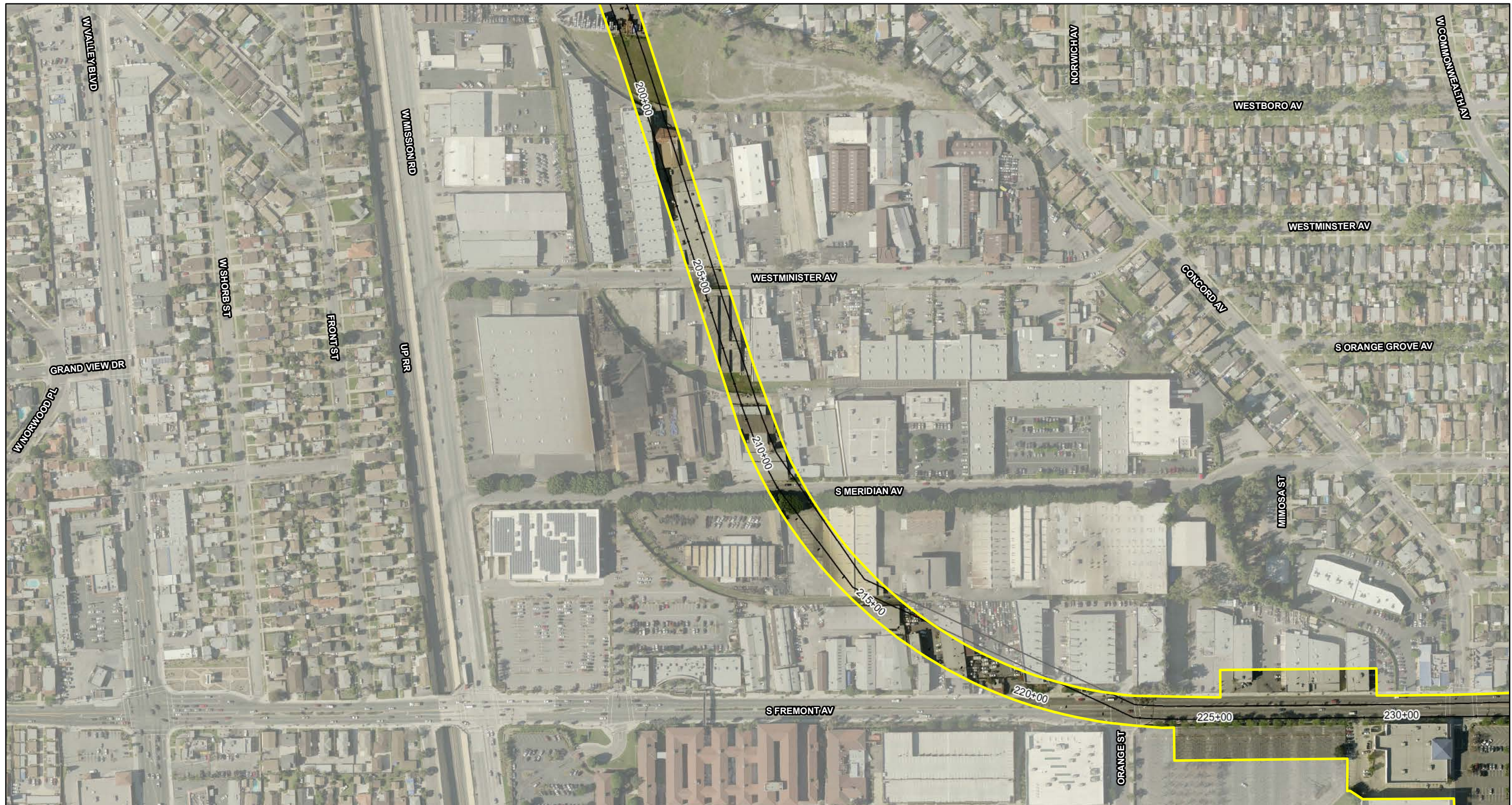


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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - LRT Alternative
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LEGEND

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|----------------------------------|------------------------------------|---|
| — LRT Geometrics | — Modeled Noise Barriers: 5.5 feet | ● Modeled Receptor Locations |
| ▭ LRT Alternative | — Modeled Noise Barriers: 6 feet | ● Short-term Measurement Locations |
| ▭ Modeled Noise Barriers: 4 feet | ▭ Modeled Noise Barriers: 7 feet | ■ Long-term, 24-hour, Measurement Locations (LRT) |
| ● Modeled Noise Barriers: 5 feet | — Modeled Noise Barriers: 10 feet | ▲ School Measurement Locations |



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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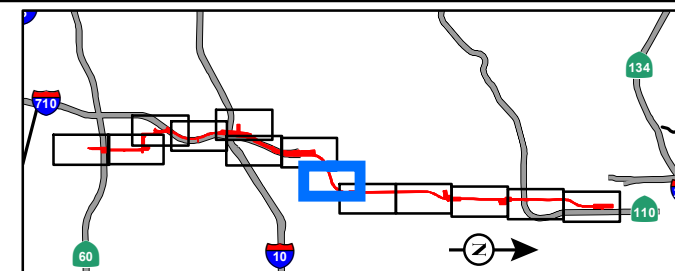
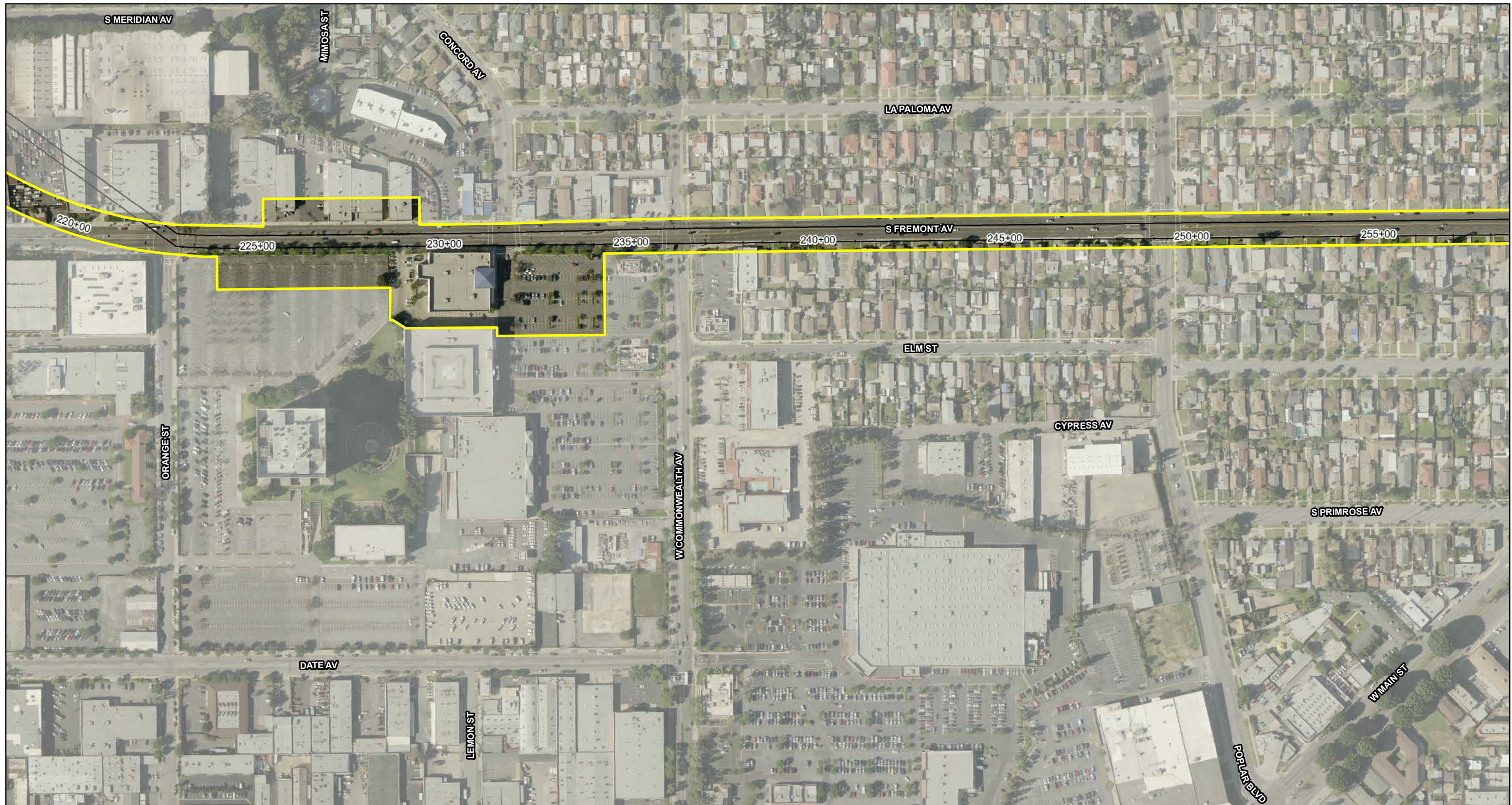


FIGURE 3.14-5
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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - LRT Alternative
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LEGEND

- LRT Geometrics
- ▭ LRT Alternative
- ▭ Modeled Noise Barriers: 4 feet
- Modeled Noise Barriers: 5 feet
- ▭ Modeled Noise Barriers: 5.5 feet
- ▭ Modeled Noise Barriers: 6 feet
- ▭ Modeled Noise Barriers: 7 feet
- ▭ Modeled Noise Barriers: 10 feet
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (LRT)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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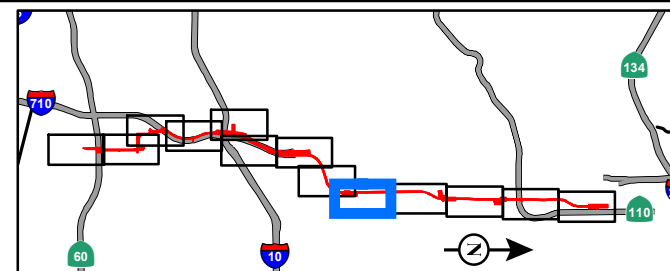
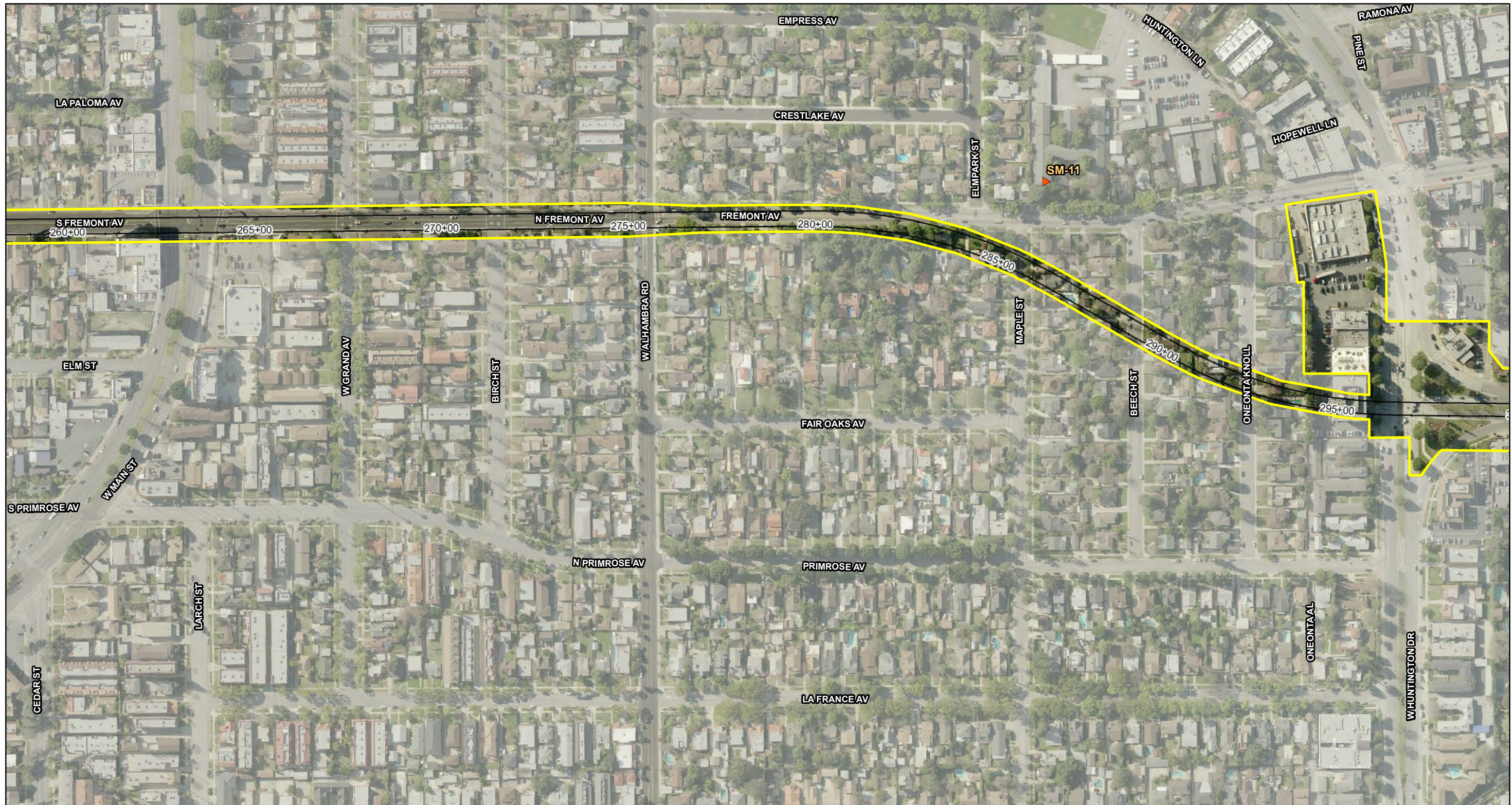


FIGURE 3.14-5
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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - LRT Alternative
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LEGEND

- LRT Geometrics
- ▭ LRT Alternative
- ▭ Modeled Noise Barriers: 4 feet
- Modeled Noise Barriers: 5 feet
- ▭ Modeled Noise Barriers: 5.5 feet
- ▭ Modeled Noise Barriers: 6 feet
- ▭ Modeled Noise Barriers: 7 feet
- ▭ Modeled Noise Barriers: 10 feet
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (LRT)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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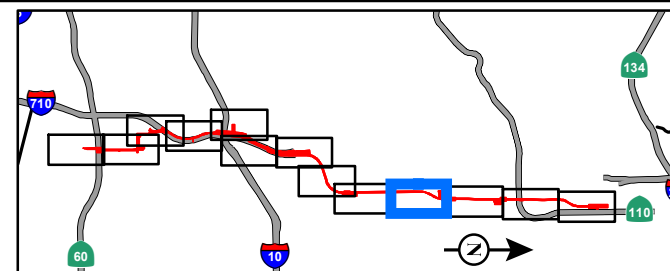
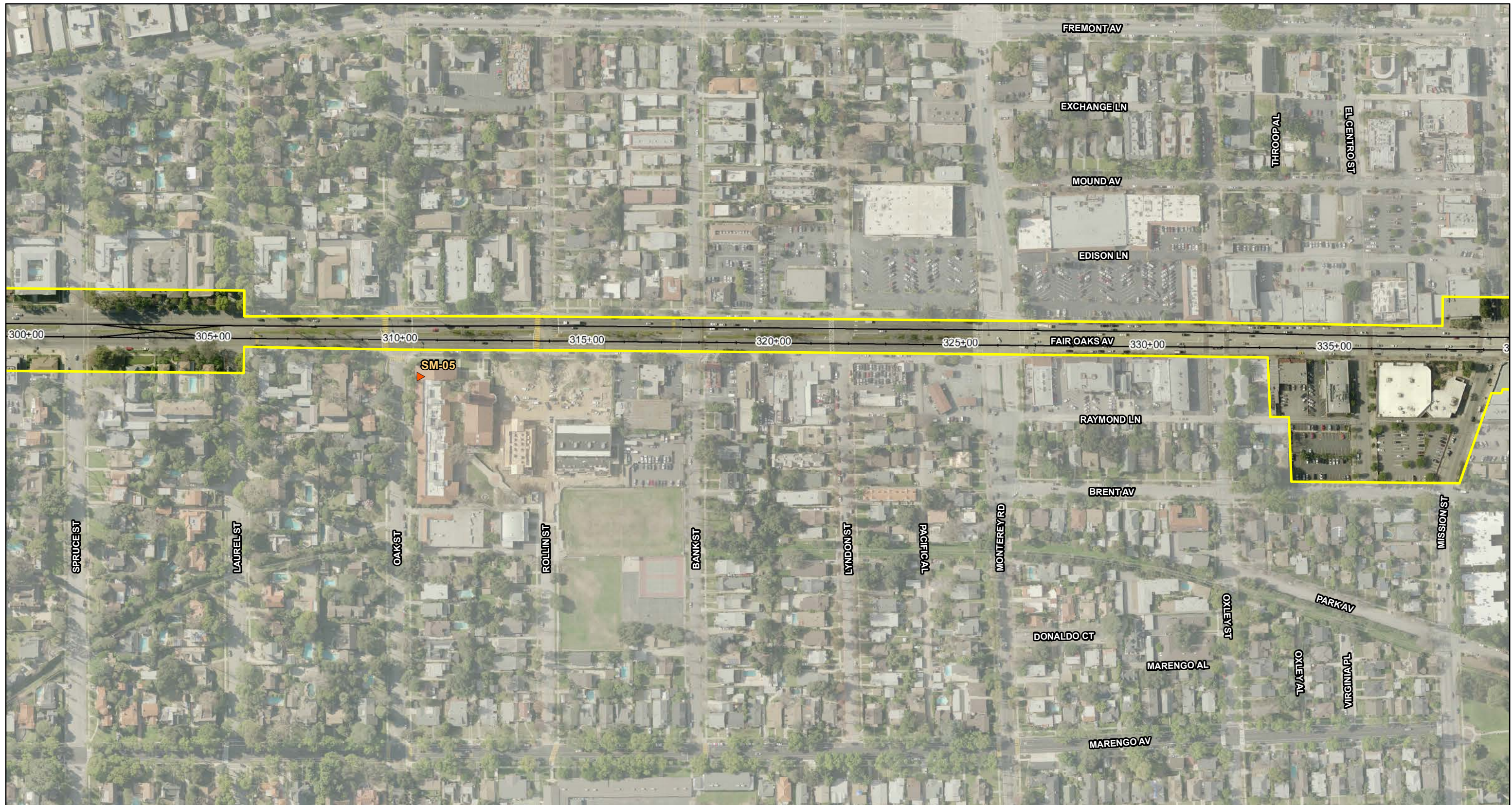


FIGURE 3.14-5

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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - LRT Alternative

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LEGEND

- LRT Geometrics
- ▭ LRT Alternative
- ▭ Modeled Noise Barriers: 4 feet
- Modeled Noise Barriers: 5 feet
- ▭ Modeled Noise Barriers: 5.5 feet
- ▭ Modeled Noise Barriers: 6 feet
- ▭ Modeled Noise Barriers: 7 feet
- ▭ Modeled Noise Barriers: 10 feet
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (LRT)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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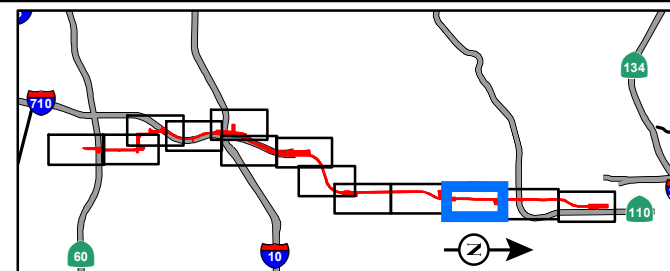


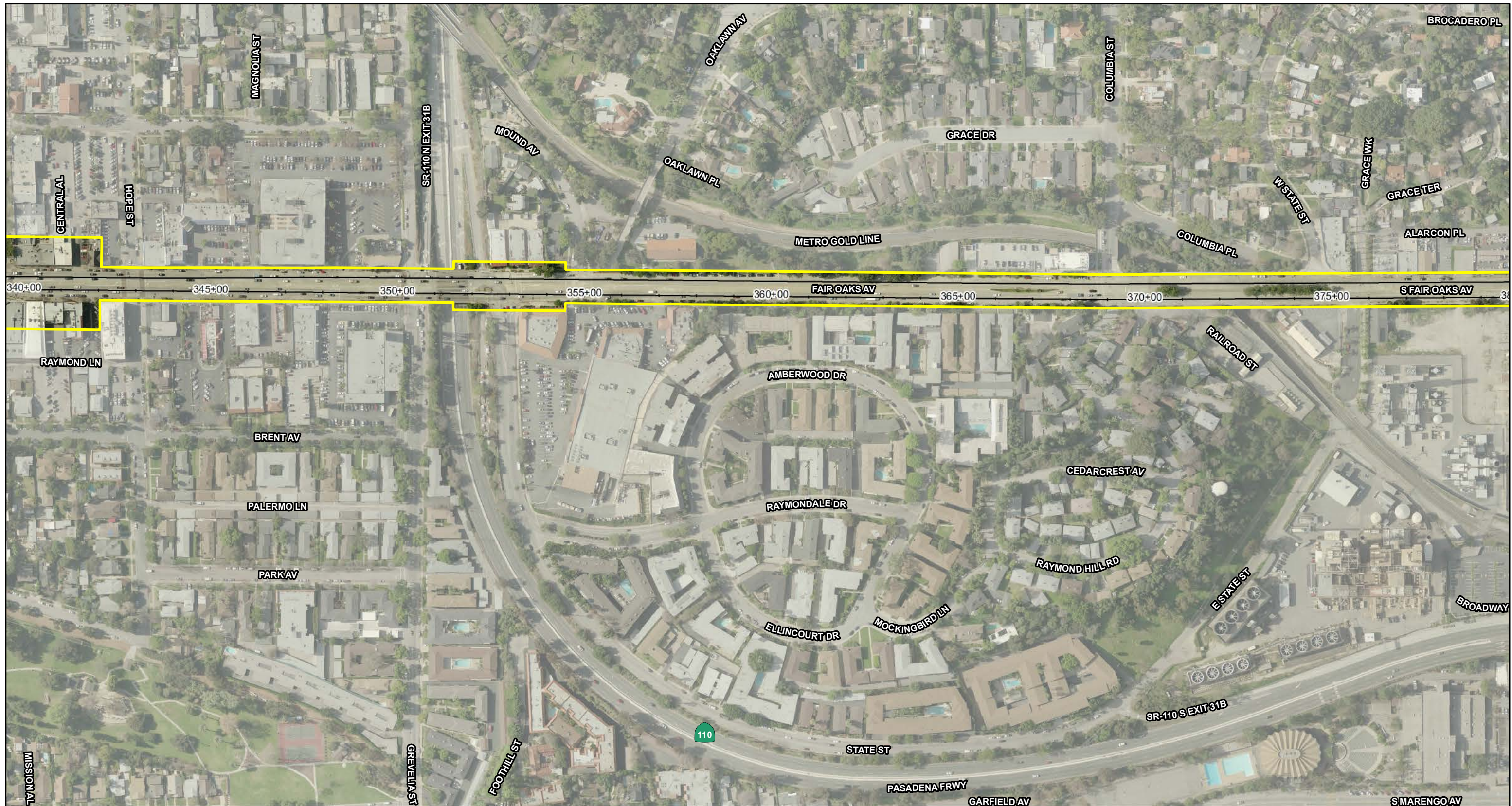
FIGURE 3.14-5

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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - LRT Alternative

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LEGEND

- LRT Geometrics
- ▭ LRT Alternative
- ▬ Modeled Noise Barriers: 4 feet
- Modeled Noise Barriers: 5 feet
- ▬ Modeled Noise Barriers: 5.5 feet
- ▬ Modeled Noise Barriers: 6 feet
- ▬ Modeled Noise Barriers: 7 feet
- ▬ Modeled Noise Barriers: 10 feet
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (LRT)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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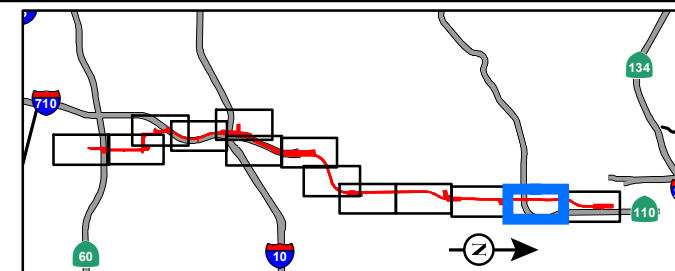


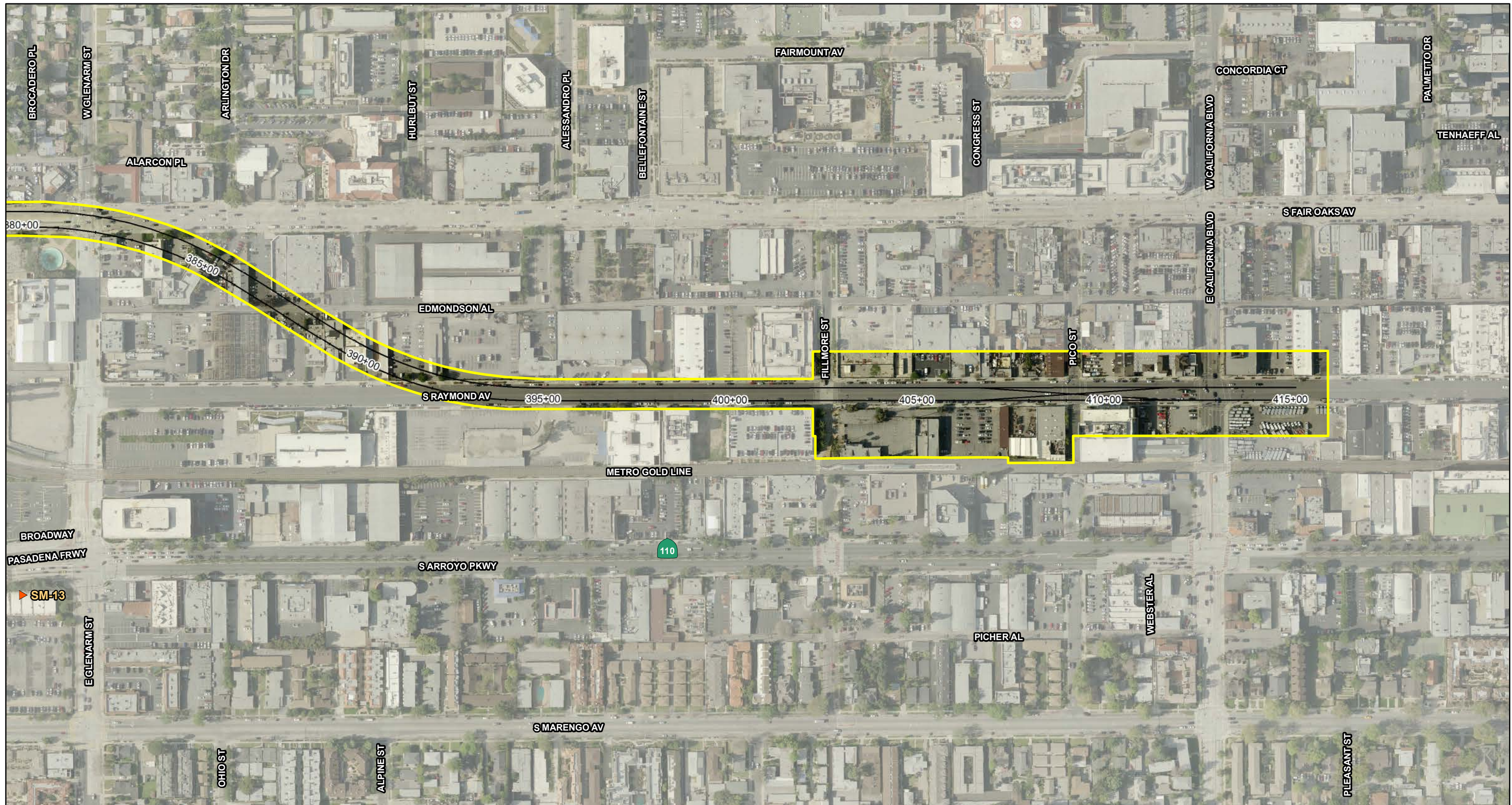
FIGURE 3.14-5

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Noise Measurement and Receptor Locations
and Modeled Noise Barriers - LRT Alternative

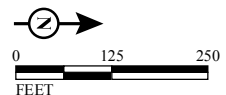
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LEGEND

- LRT Geometrics
- ▭ LRT Alternative
- ▭ Modeled Noise Barriers: 4 feet
- Modeled Noise Barriers: 5 feet
- ▭ Modeled Noise Barriers: 5.5 feet
- ▭ Modeled Noise Barriers: 6 feet
- ▭ Modeled Noise Barriers: 7 feet
- ▭ Modeled Noise Barriers: 10 feet
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (LRT)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)
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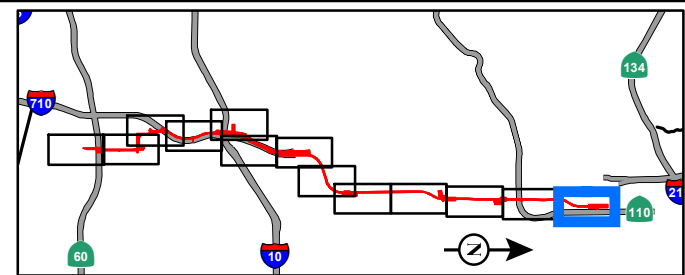


FIGURE 3.14-5
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 Noise Measurement and Receptor Locations
 and Modeled Noise Barriers - LRT Alternative
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LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- ▨ Tunnel Segment
- ▭ Single Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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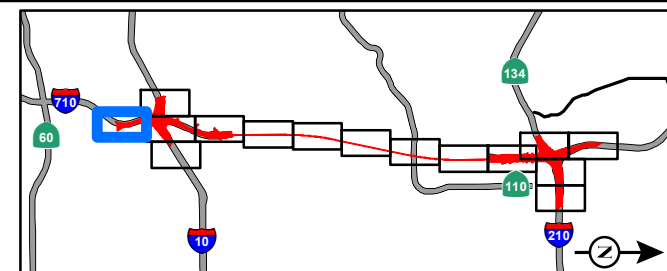


FIGURE 3.14-6

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SR 710 North Project
Noise Measurement and Receptor Locations
and Modeled Noise Barriers -
Freeway Tunnel Alternative Single Bore Design

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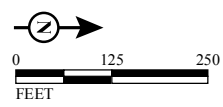
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LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- ▨ Tunnel Segment
- ▭ Single Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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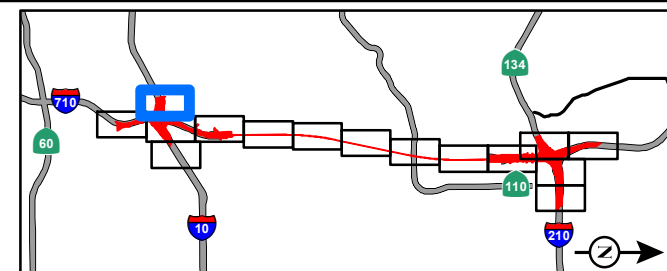


FIGURE 3.14-6
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SR 710 North Project
Noise Measurement and Receptor Locations
and Modeled Noise Barriers -
Freeway Tunnel Alternative Single Bore Design

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LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- ▨ Tunnel Segment
- ▭ Single Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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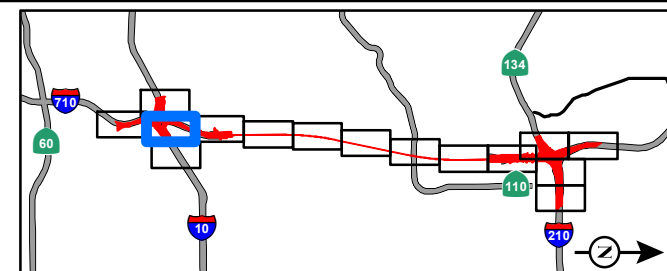


FIGURE 3.14-6

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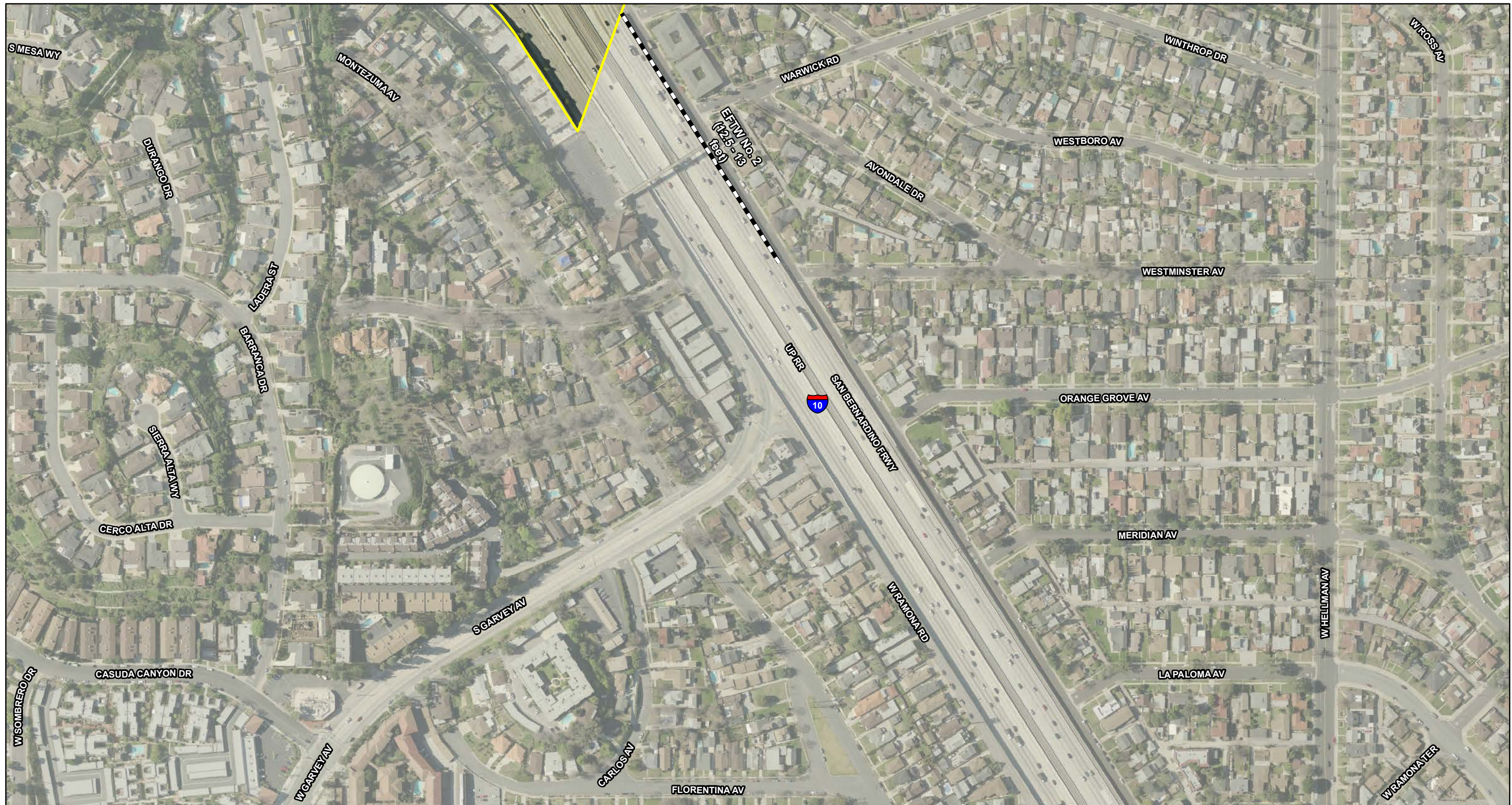
Noise Measurement and Receptor Locations
and Modeled Noise Barriers -
Freeway Tunnel Alternative Single Bore Design

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LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- ▨ Tunnel Segment
- ▭ Single Bore Freeway Tunnel Alternative
- Existing Walls
- ▬ Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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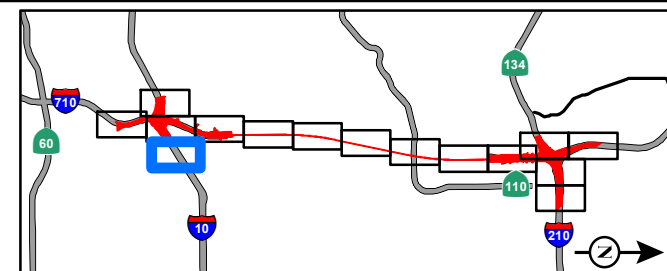


FIGURE 3.14-6

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Noise Measurement and Receptor Locations
and Modeled Noise Barriers -
Freeway Tunnel Alternative Single Bore Design

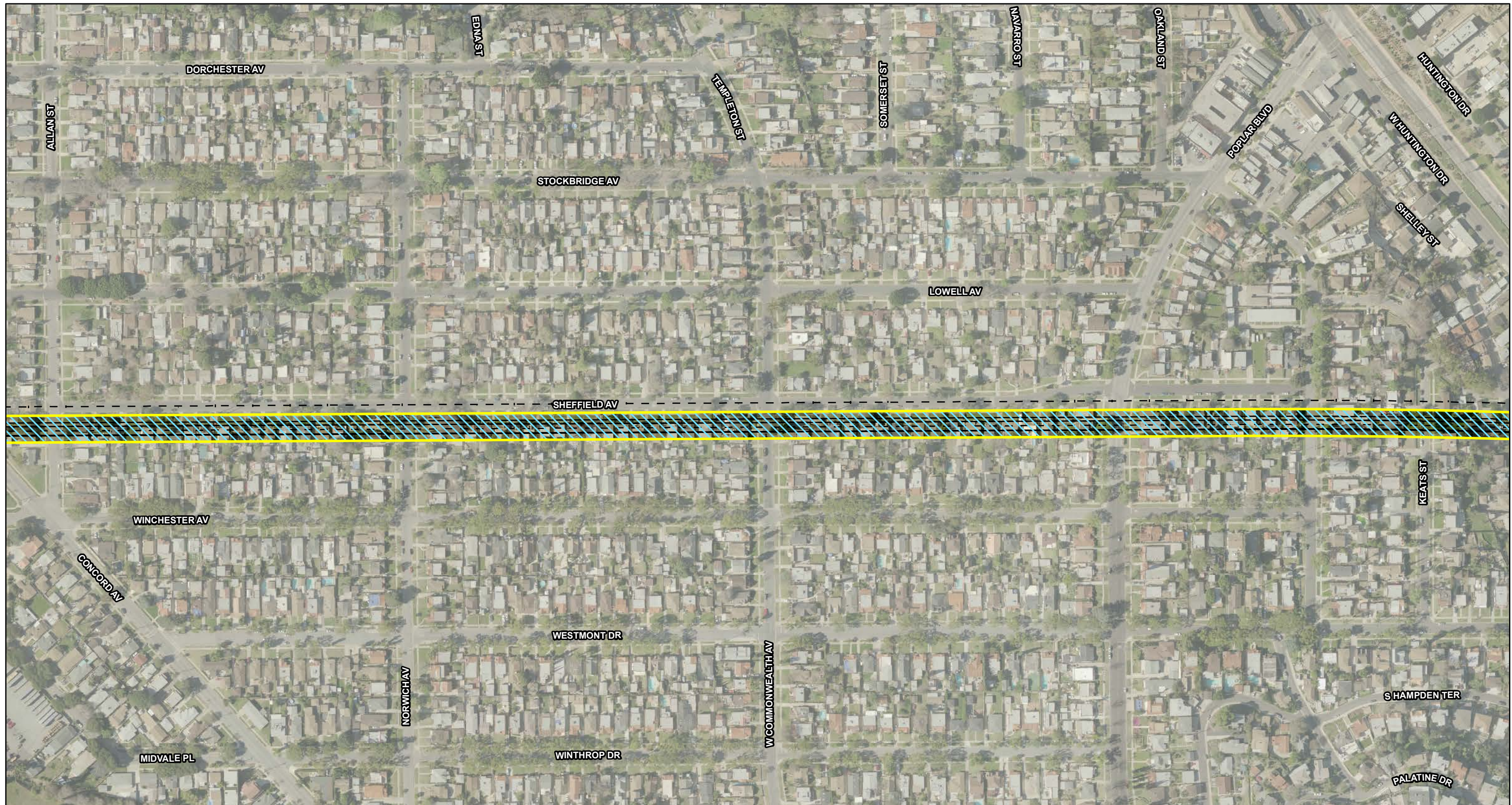
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LEGEND

- Freeway Tunnel Single Bore Geometries
- Proposed Right-of-Way
- ▨ Tunnel Segment
- ▭ Single Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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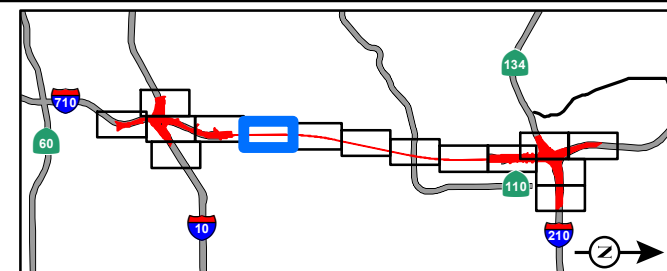


FIGURE 3.14-6

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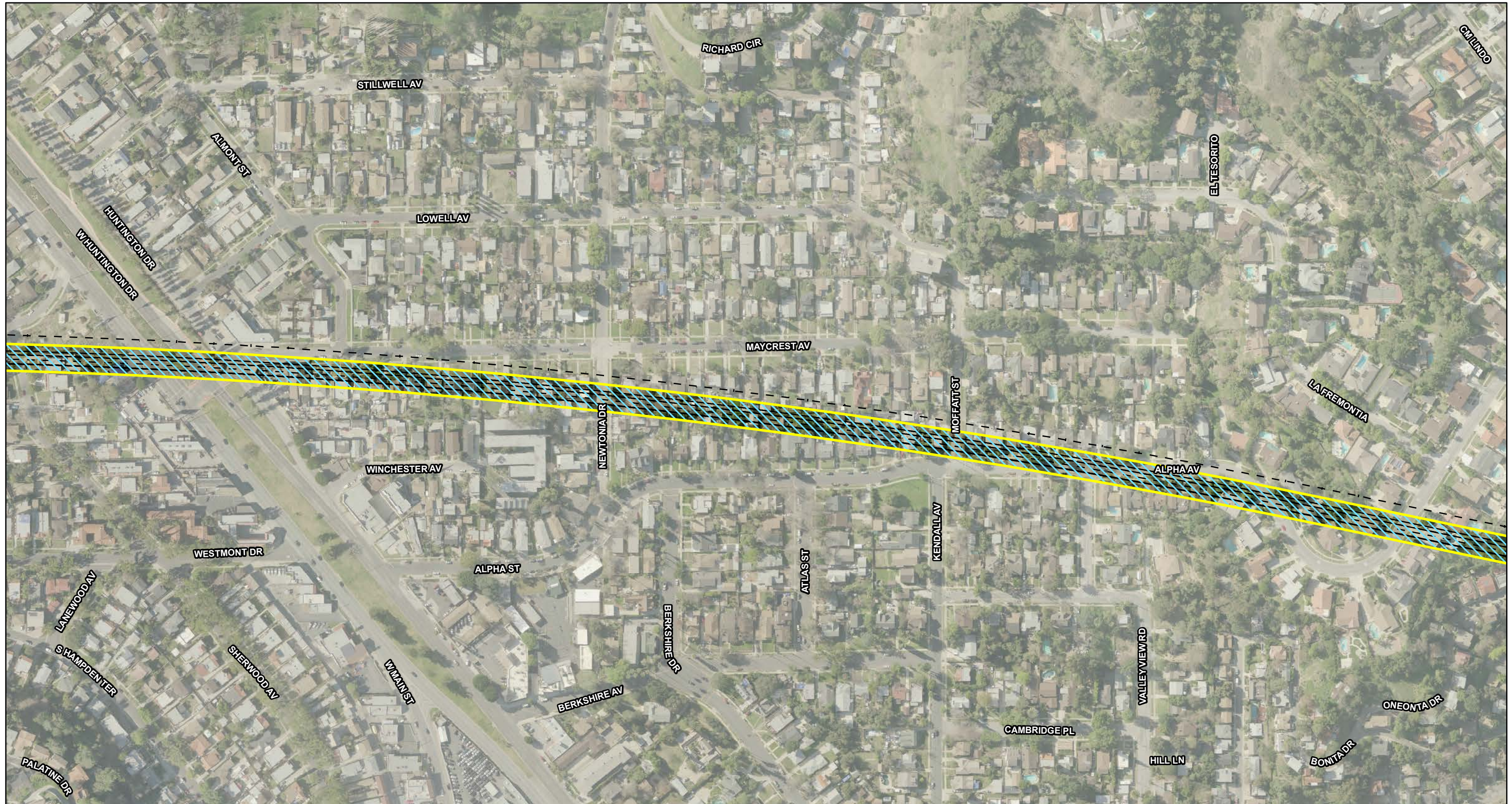
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Noise Measurement and Receptor Locations
and Modeled Noise Barriers -
Freeway Tunnel Alternative Single Bore Design

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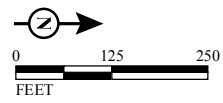
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LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- ▨ Tunnel Segment
- ▭ Single Bore Freeway Tunnel Alternative
- Existing Walls
- ▬ Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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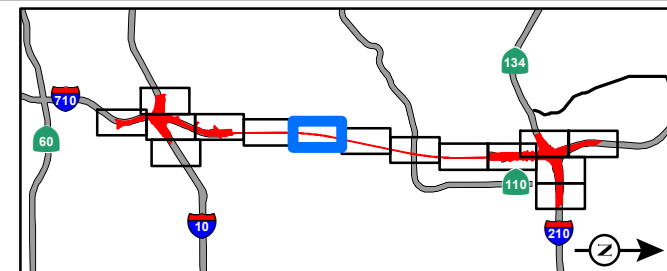


FIGURE 3.14-6

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SR 710 North Project

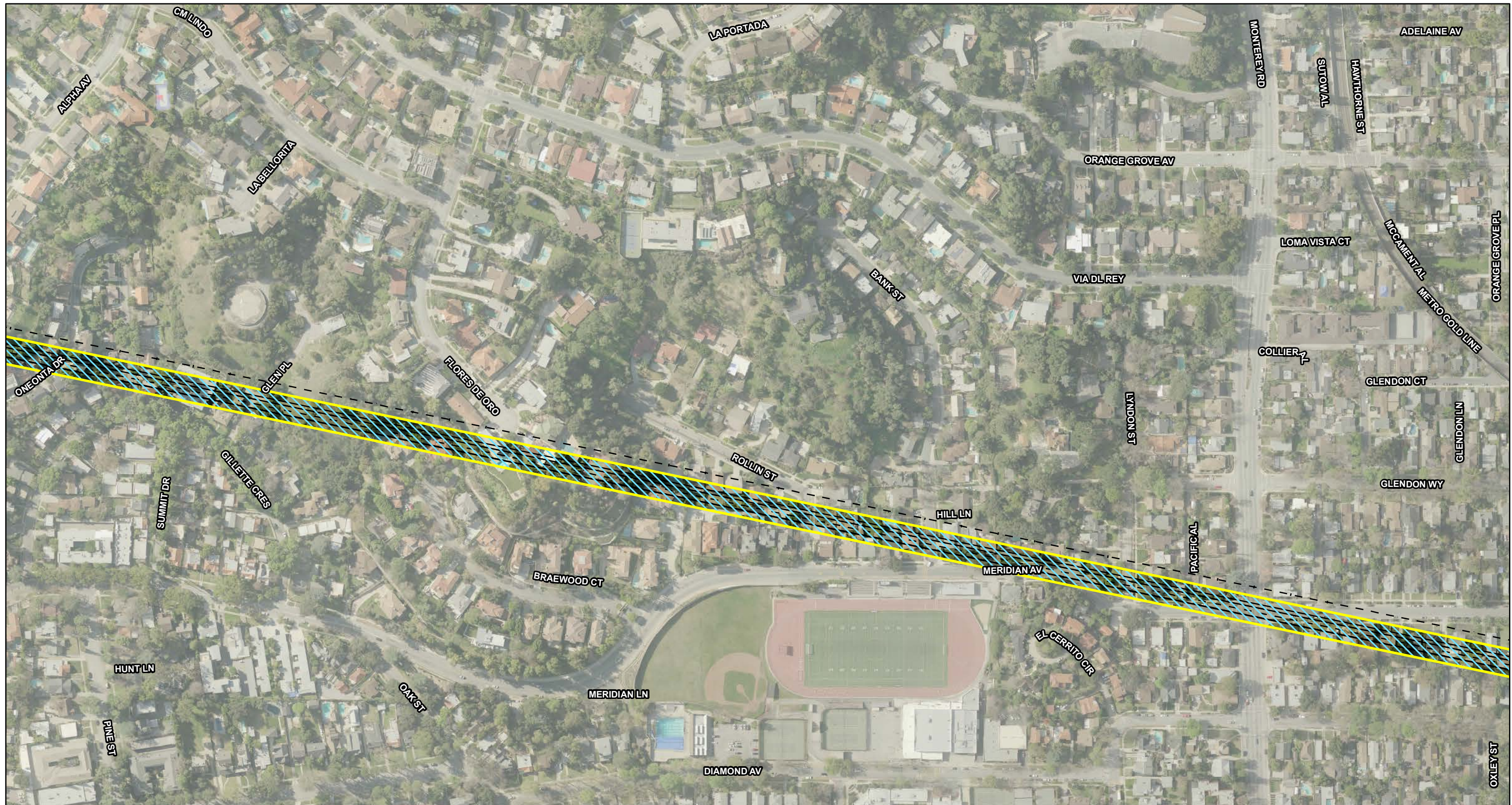
Noise Measurement and Receptor Locations
and Modeled Noise Barriers -
Freeway Tunnel Alternative Single Bore Design

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LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- ▨ Tunnel Segment
- ▭ Single Bore Freeway Tunnel Alternative
- Existing Walls
- ▬ Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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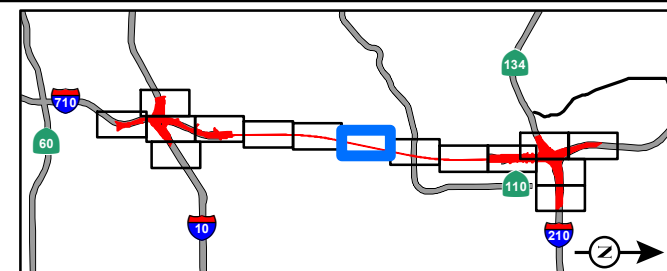


FIGURE 3.14-6

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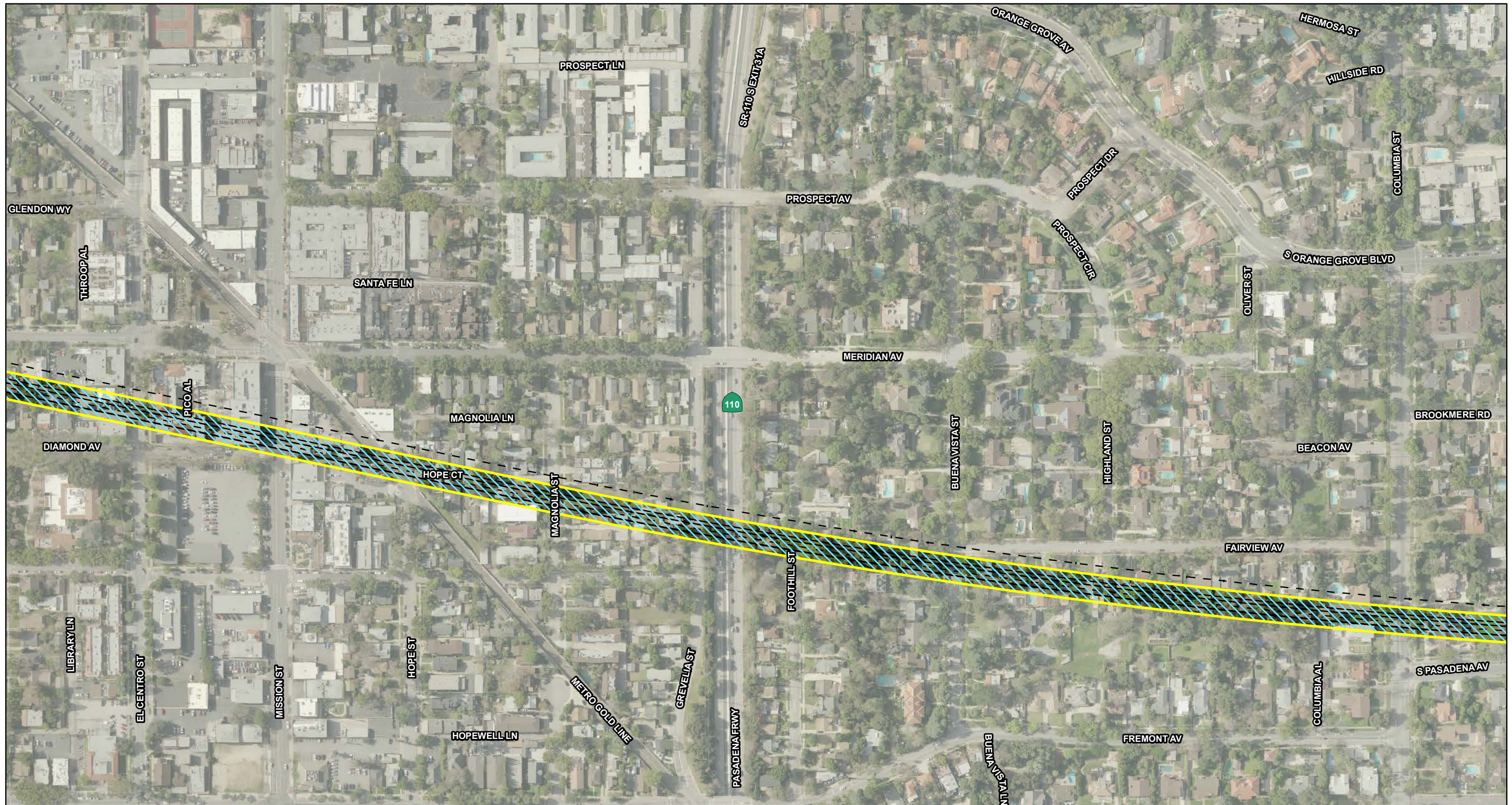
Noise Measurement and Receptor Locations
and Modeled Noise Barriers -
Freeway Tunnel Alternative Single Bore Design

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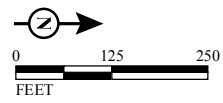
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LEGEND

- Freeway Tunnel Single Bore Geometrics
- Proposed Right-of-Way
- ▨ Tunnel Segment
- ▭ Single Bore Freeway Tunnel Alternative
- Existing Walls
- Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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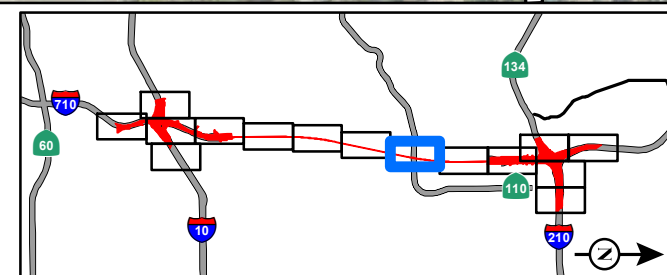


FIGURE 3.14-6

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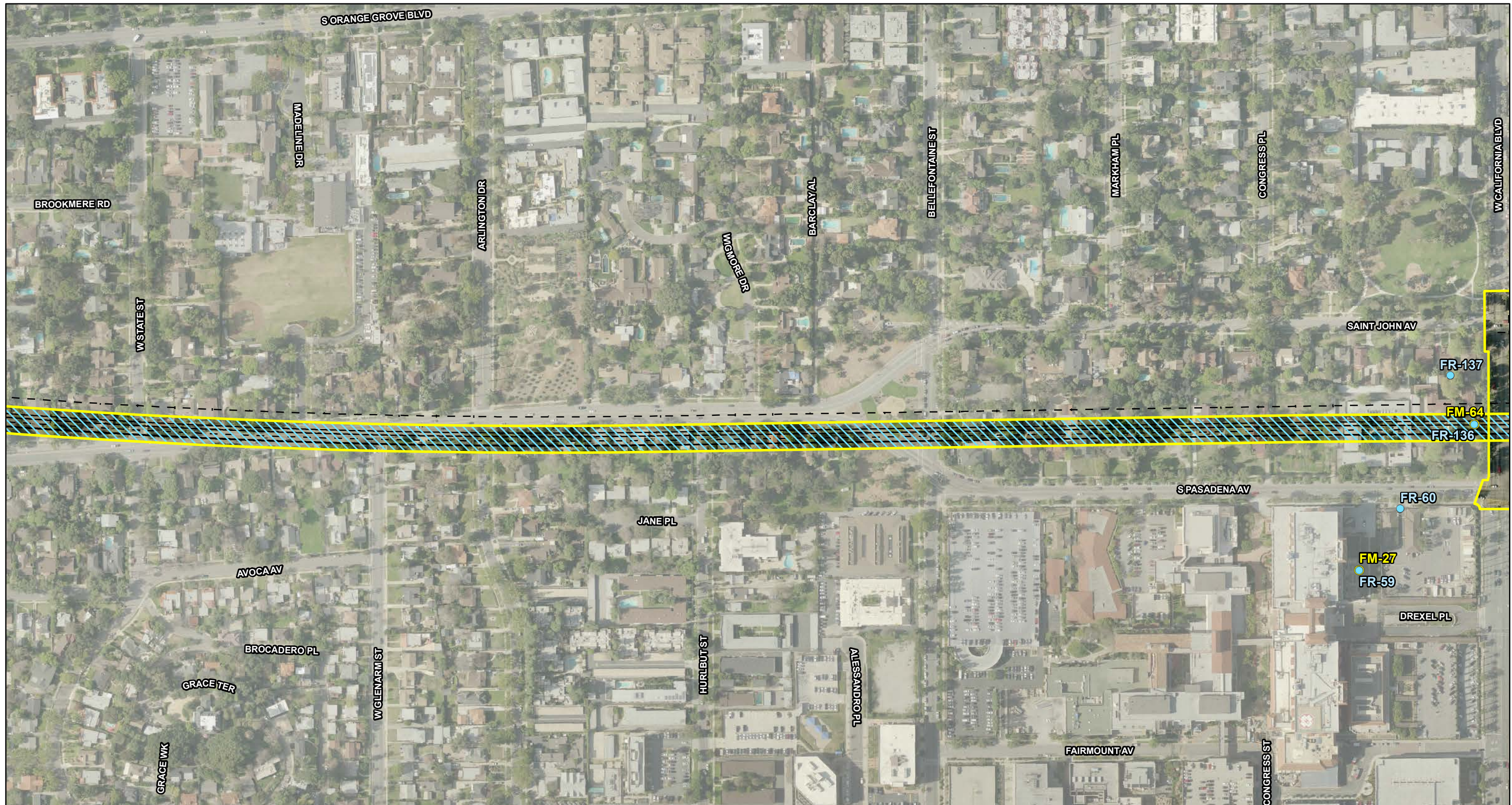
SR 710 North Project
Noise Measurement and Receptor Locations
and Modeled Noise Barriers -
Freeway Tunnel Alternative Single Bore Design

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LEGEND

- Freeway Tunnel Single Bore Geometries
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SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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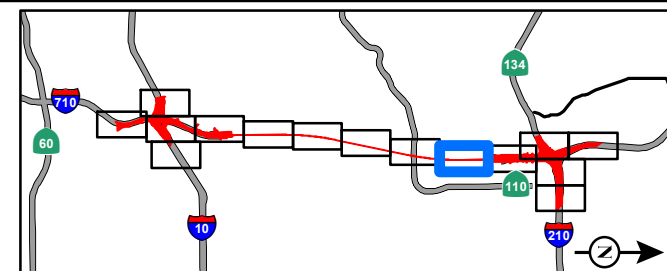


FIGURE 3.14-6

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Noise Measurement and Receptor Locations
and Modeled Noise Barriers -
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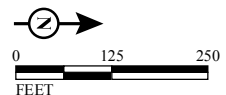
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LEGEND

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SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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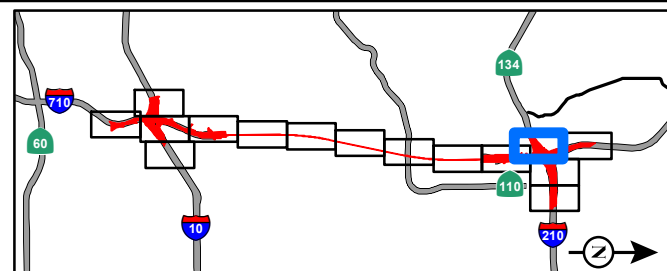


FIGURE 3.14-6

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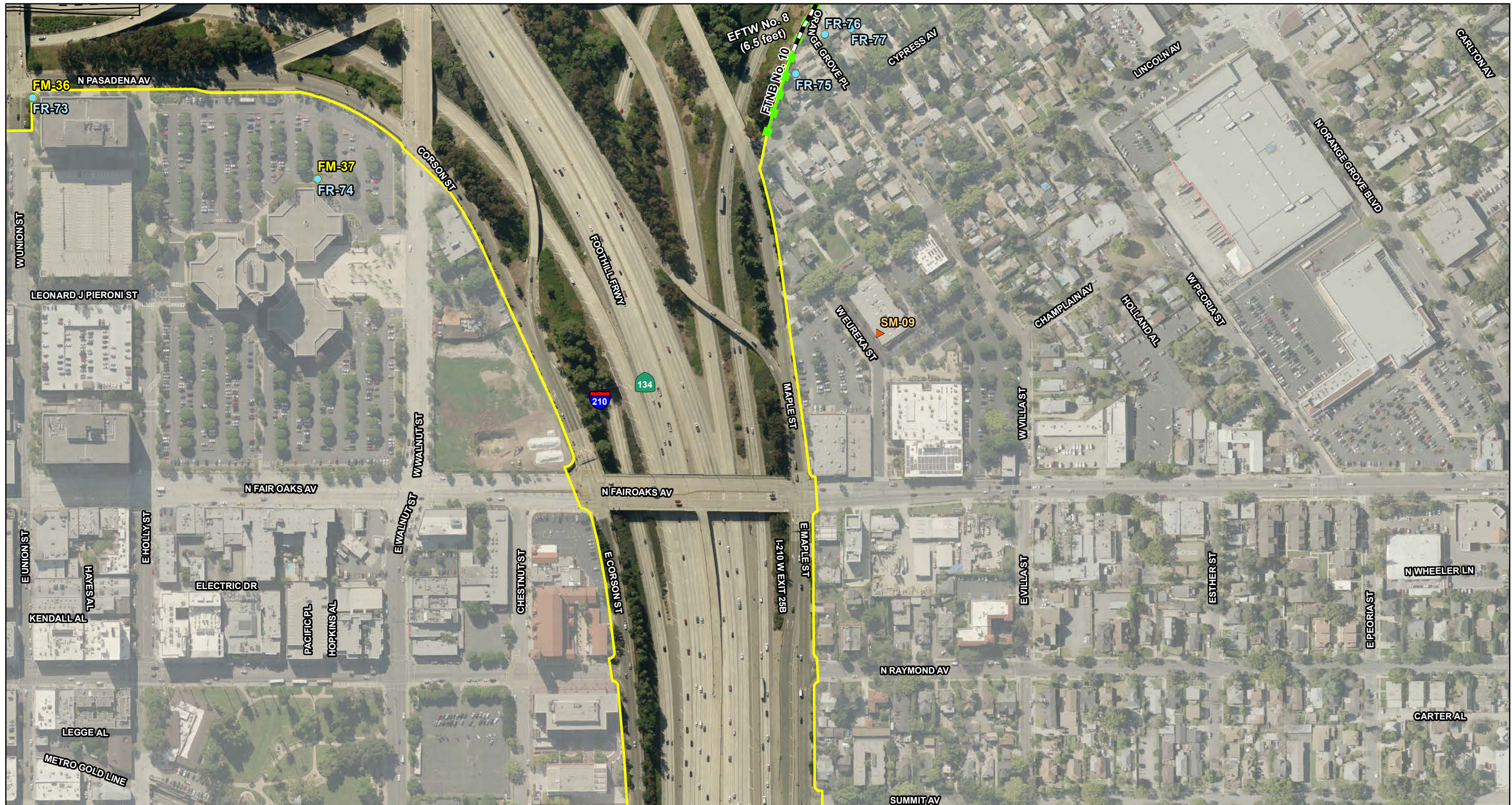
Noise Measurement and Receptor Locations
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Freeway Tunnel Alternative Single Bore Design

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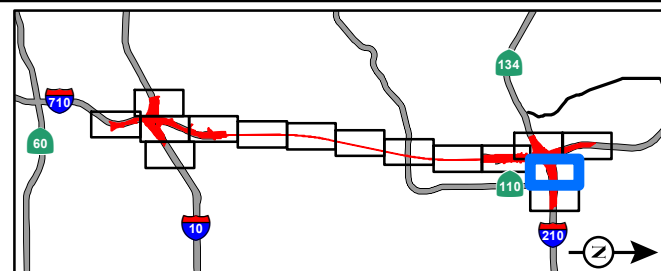


FIGURE 3.14-6

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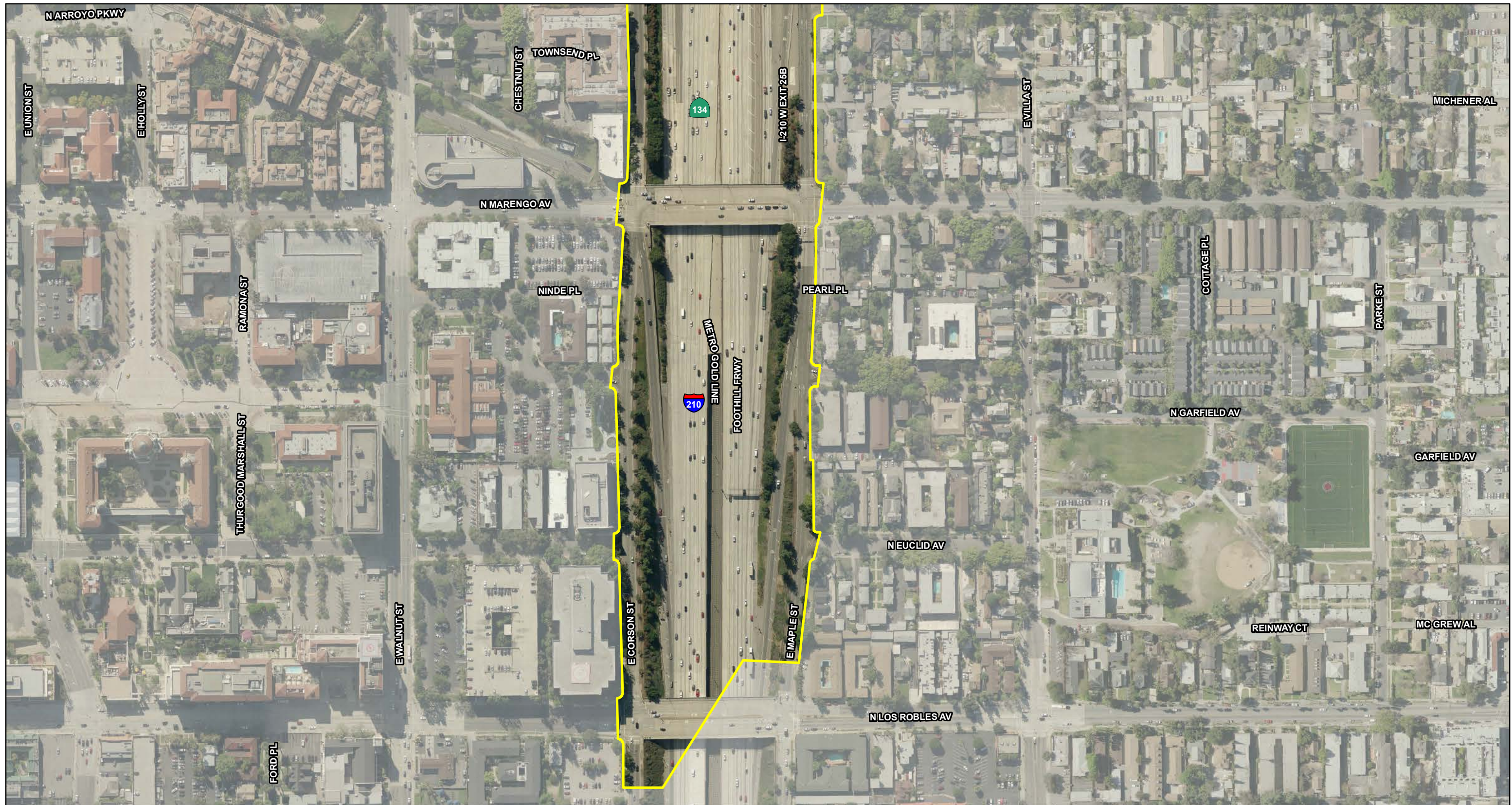
Noise Measurement and Receptor Locations
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SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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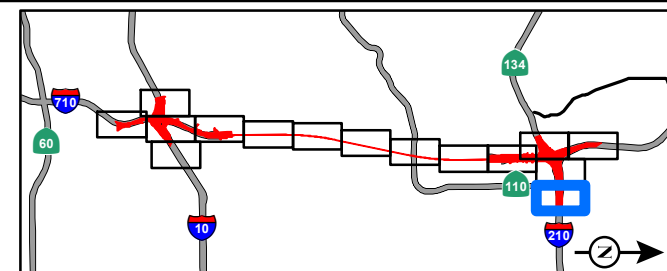


FIGURE 3.14-6

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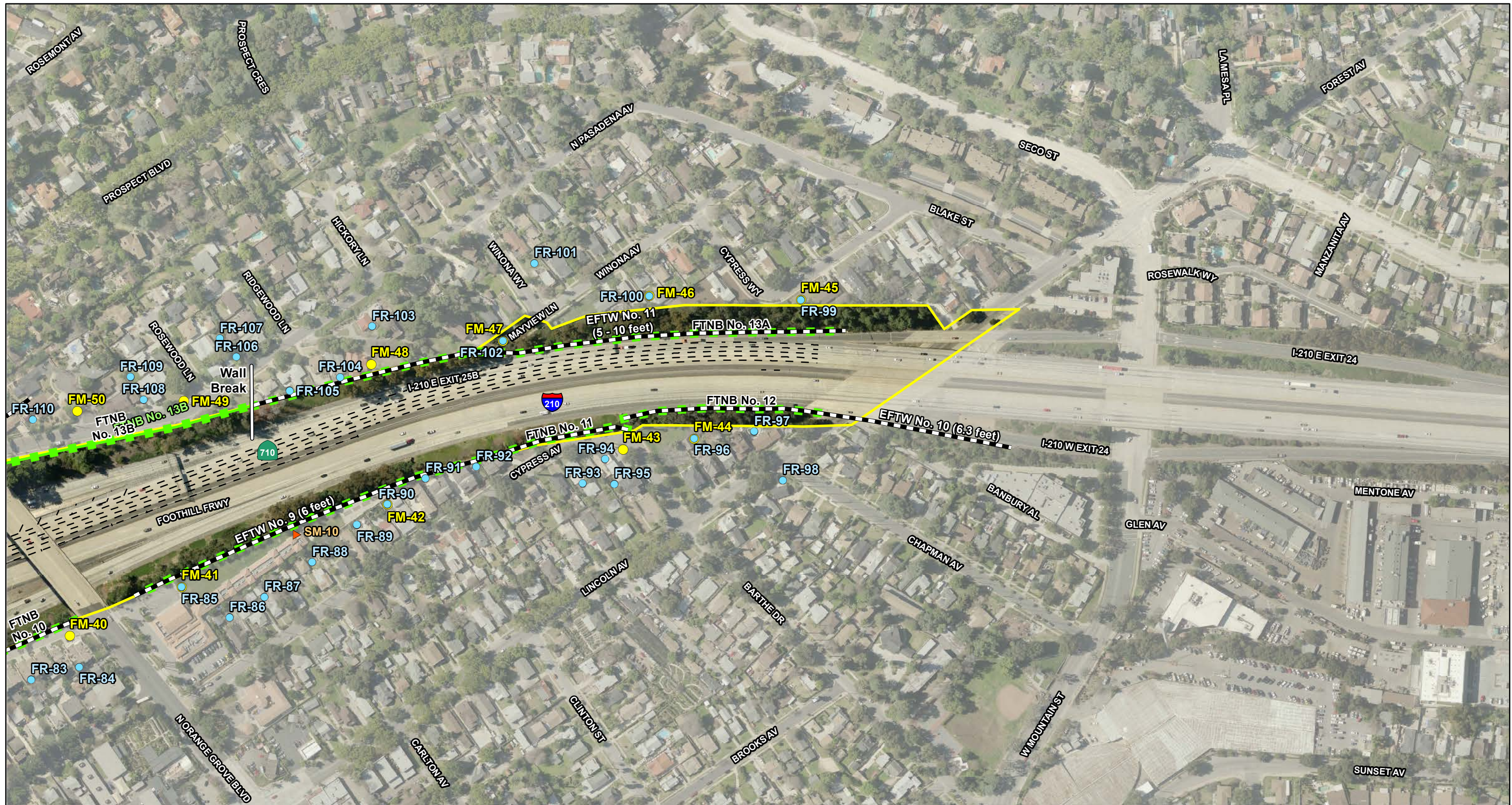
Noise Measurement and Receptor Locations
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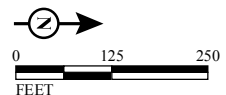
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LEGEND

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SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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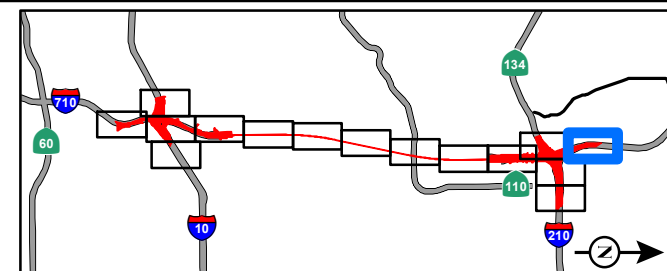


FIGURE 3.14-6

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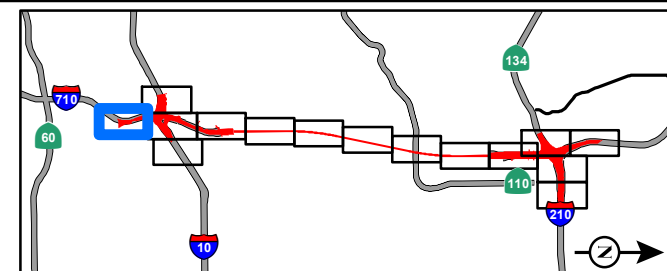


FIGURE 3.14-7

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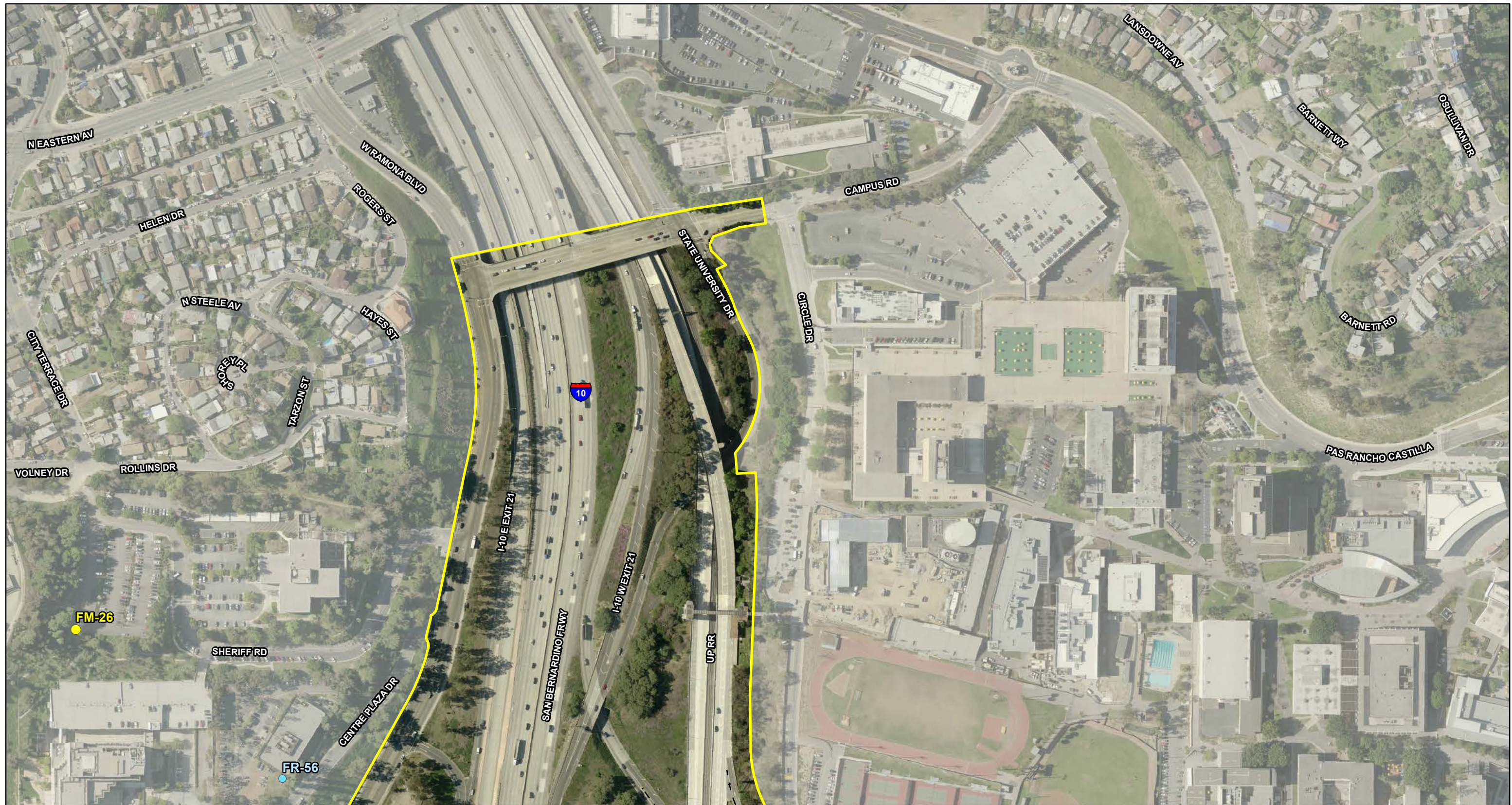
Noise Measurement and Receptor Locations
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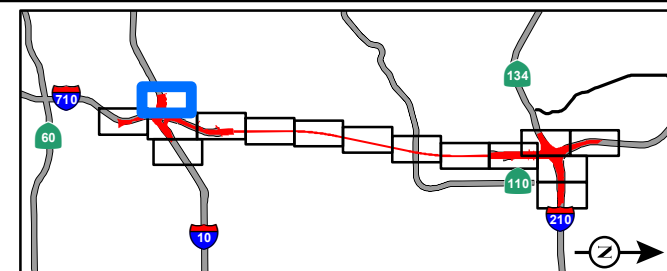


FIGURE 3.14-7

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SR 710 North Project

Noise Measurement and Receptor Locations
and Modeled Noise Barriers -
Freeway Tunnel Alternative Dual Bore Design

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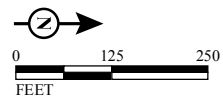
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LEGEND

- Freeway Tunnel Dual Bore Geometries
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SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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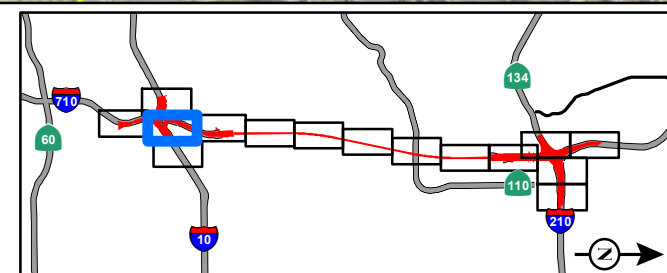
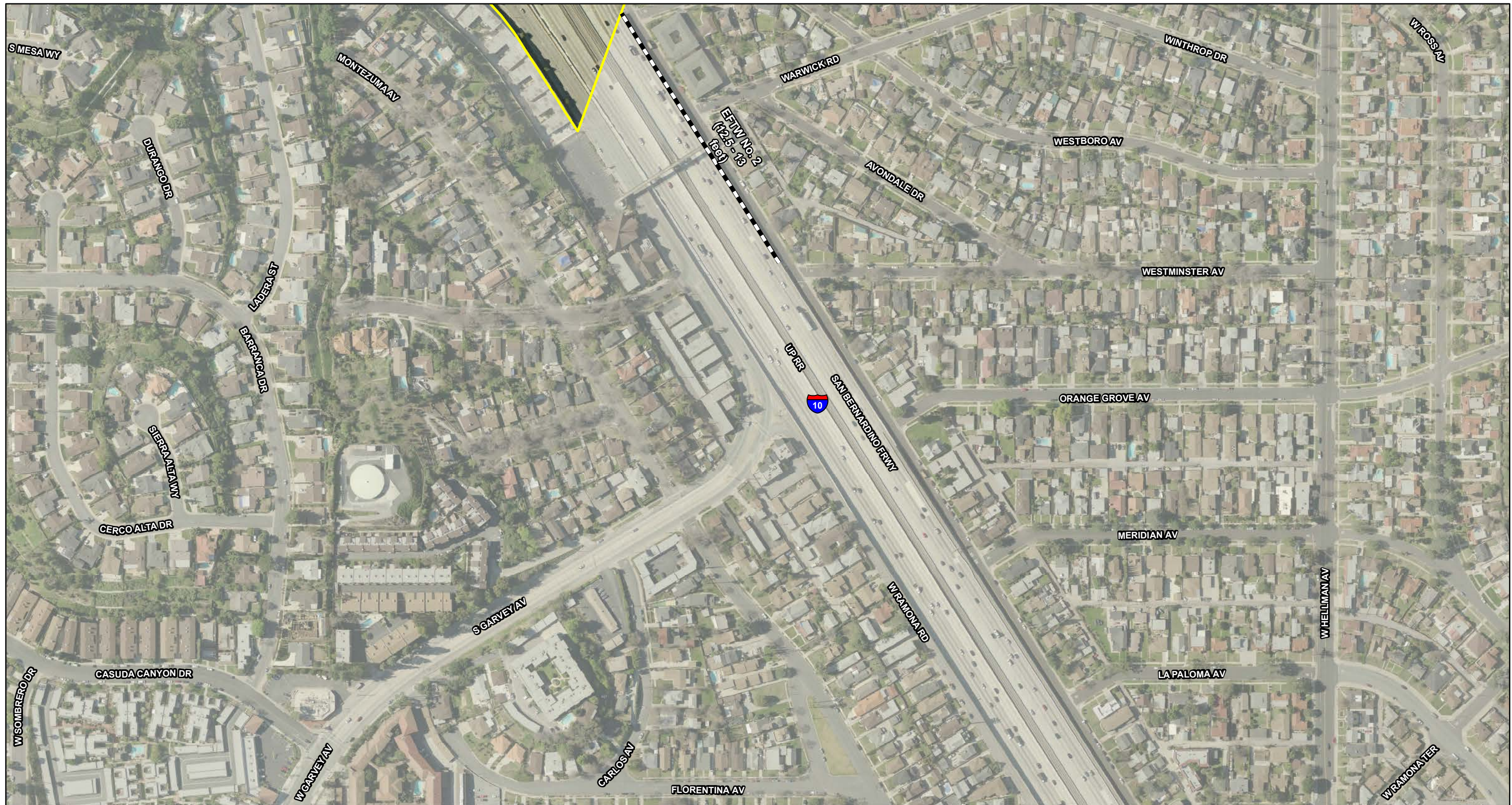


FIGURE 3.14-7
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 and Modeled Noise Barriers -
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SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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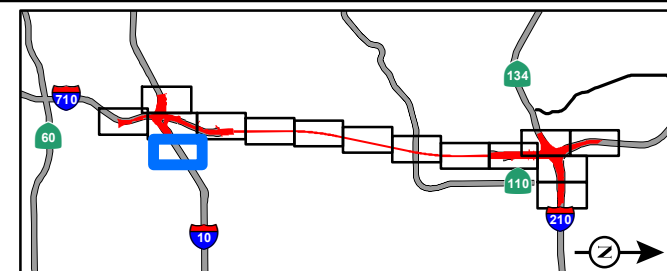


FIGURE 3.14-7
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 and Modeled Noise Barriers -
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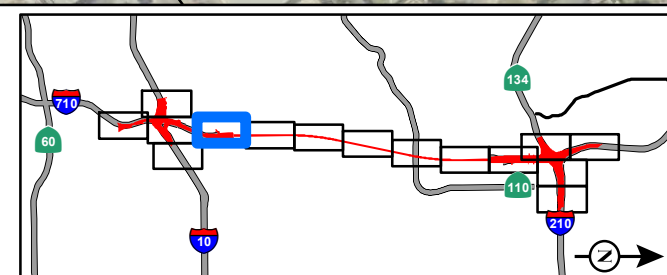


FIGURE 3.14-7

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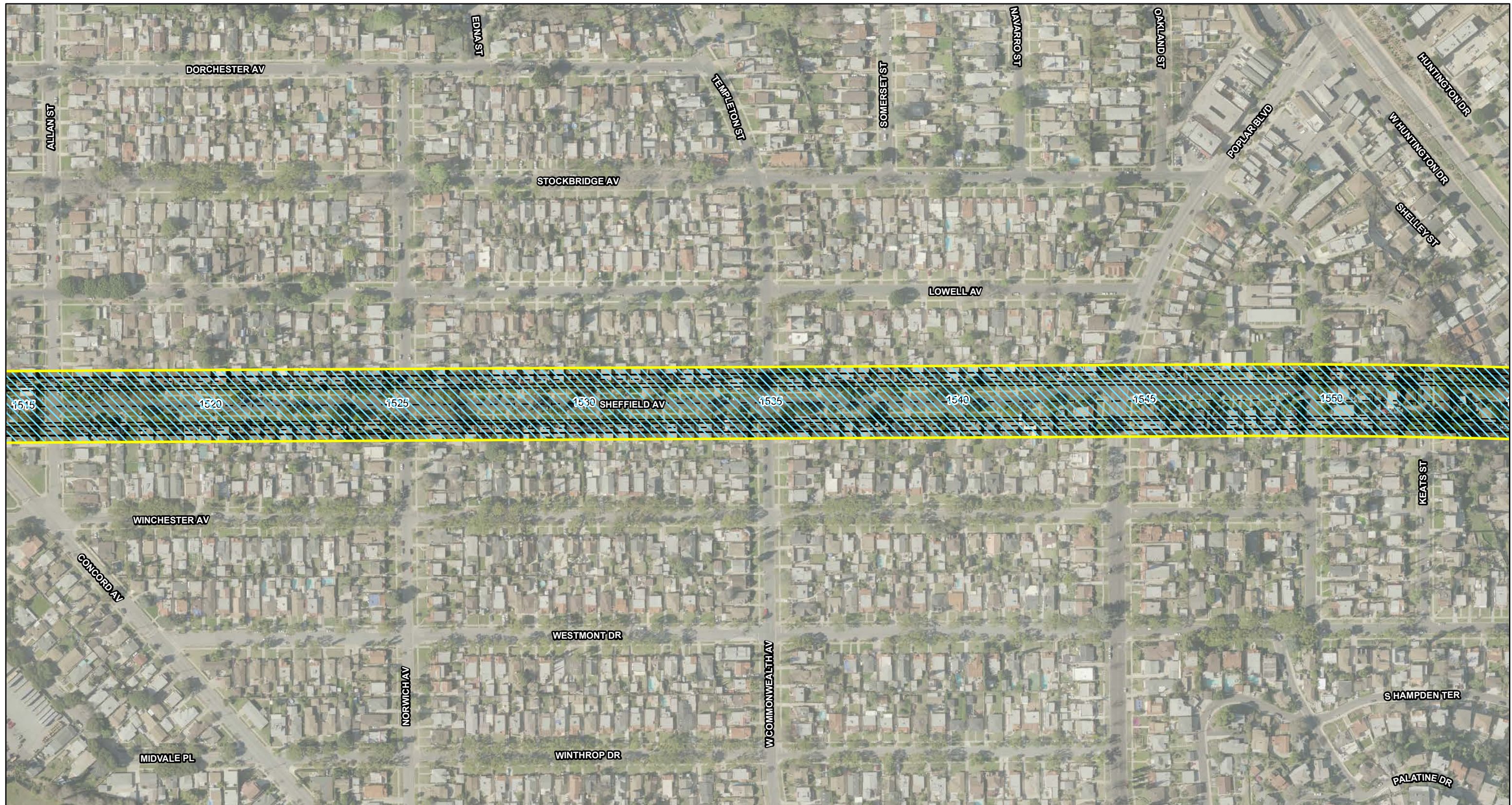
Noise Measurement and Receptor Locations
and Modeled Noise Barriers -
Freeway Tunnel Alternative Dual Bore Design

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LEGEND

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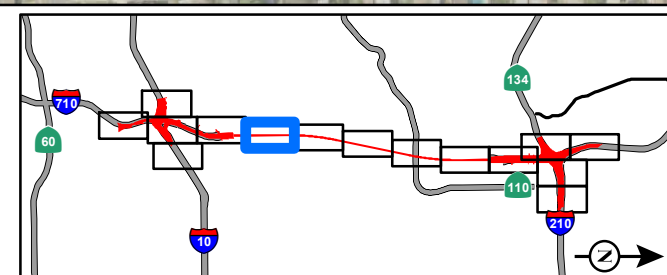


FIGURE 3.14-7

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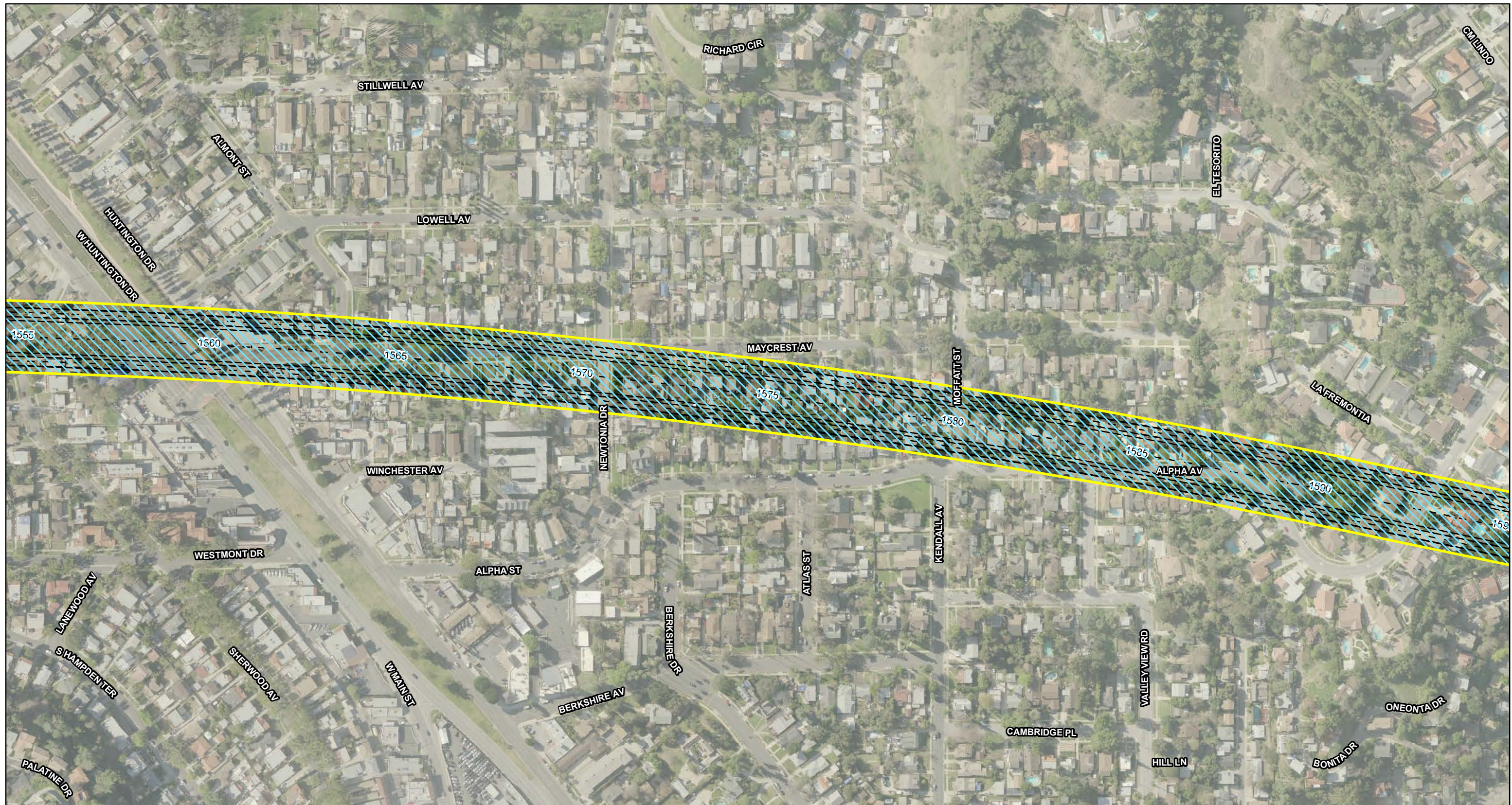
Noise Measurement and Receptor Locations
and Modeled Noise Barriers -
Freeway Tunnel Alternative Dual Bore Design

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LEGEND

- Freeway Tunnel Dual Bore Geometrics
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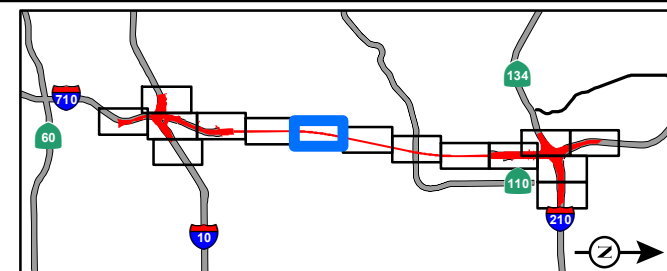


FIGURE 3.14-7

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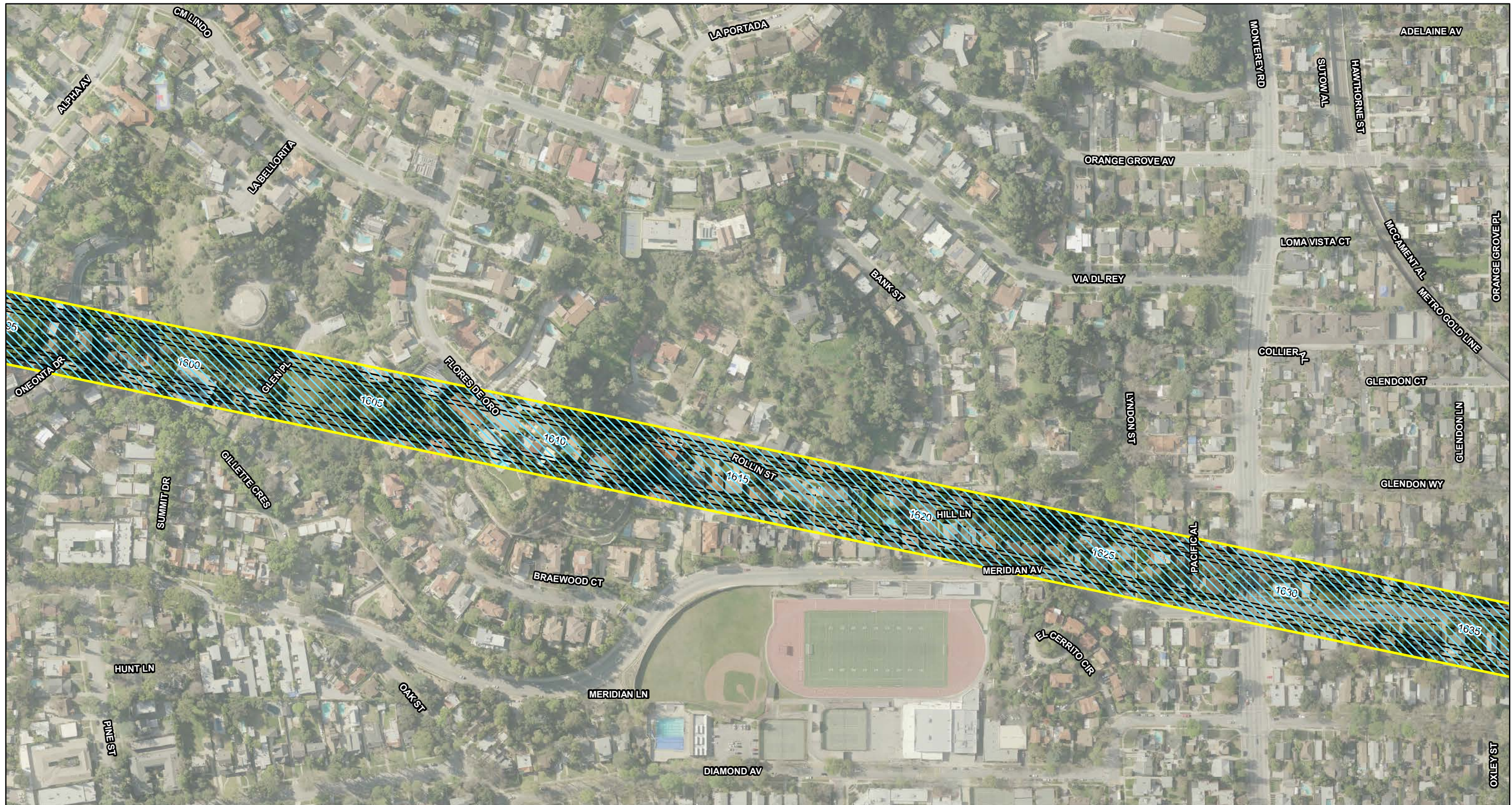
Noise Measurement and Receptor Locations
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LEGEND

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SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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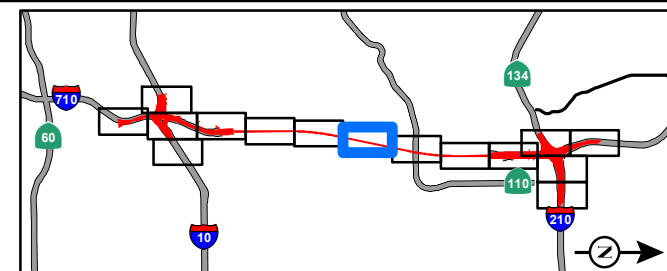


FIGURE 3.14-7

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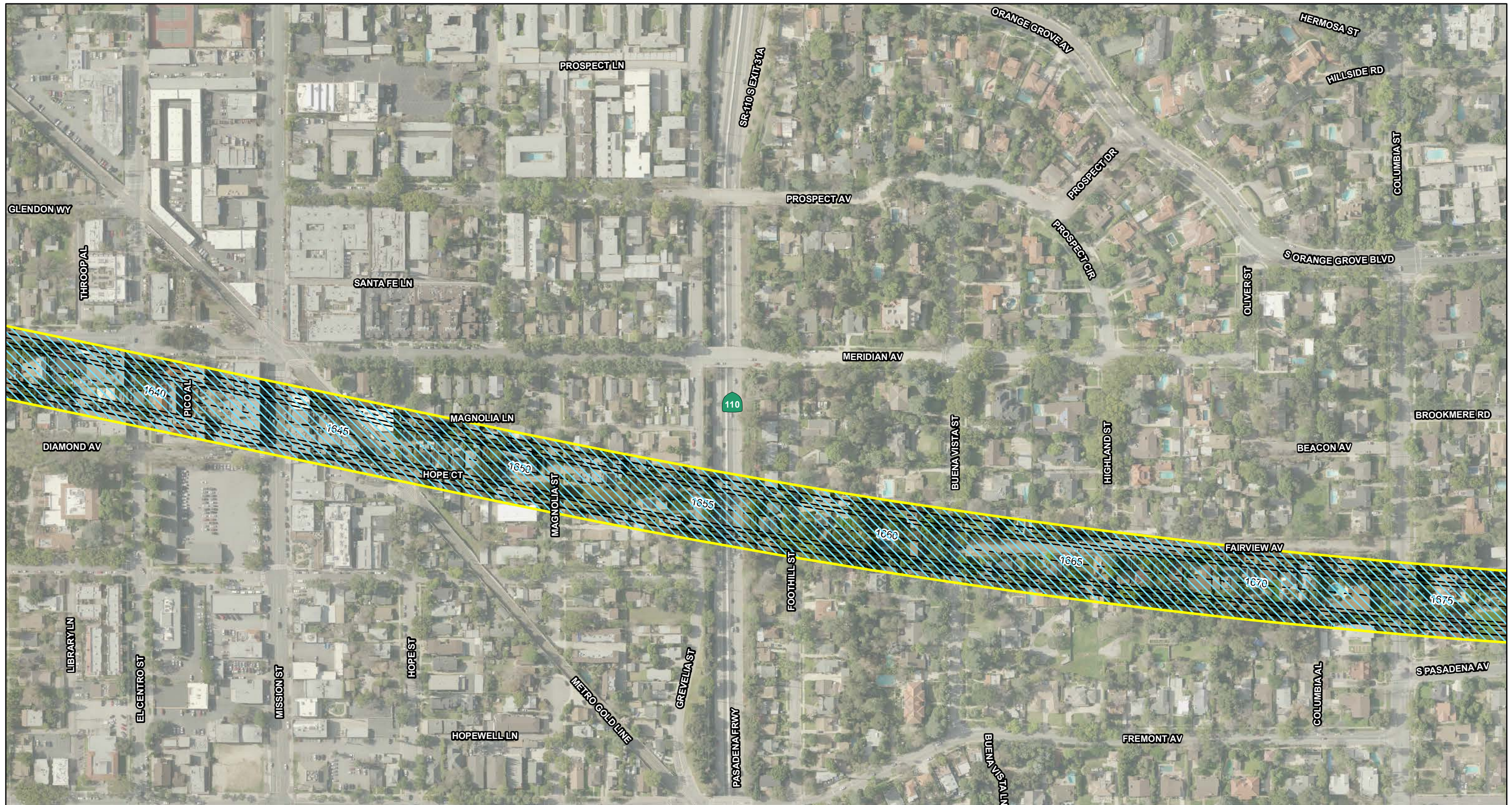
Noise Measurement and Receptor Locations
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Freeway Tunnel Alternative Dual Bore Design

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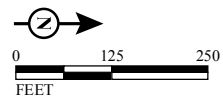
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LEGEND

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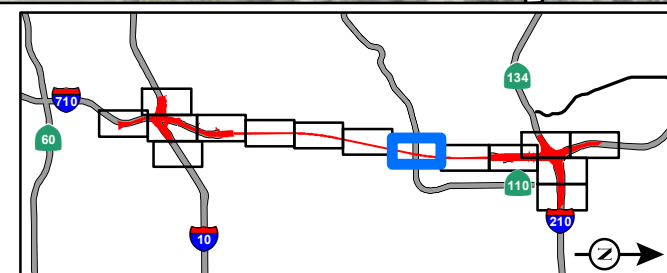


FIGURE 3.14-7

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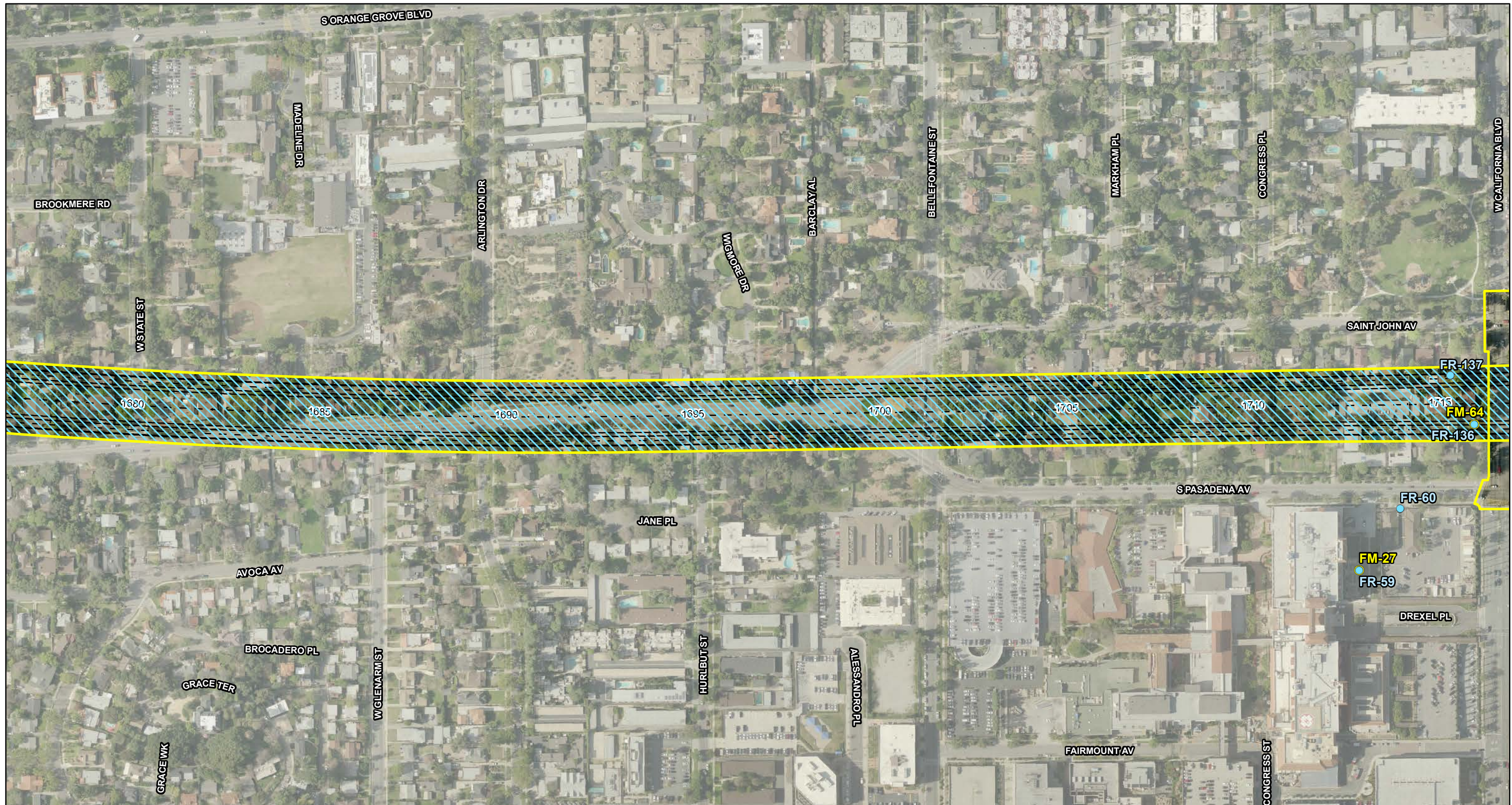
Noise Measurement and Receptor Locations
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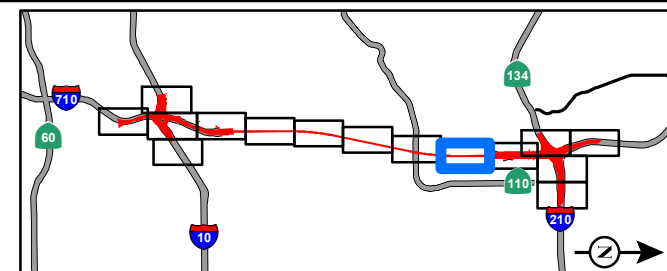


FIGURE 3.14-7

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Noise Measurement and Receptor Locations
and Modeled Noise Barriers -
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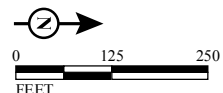
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LEGEND

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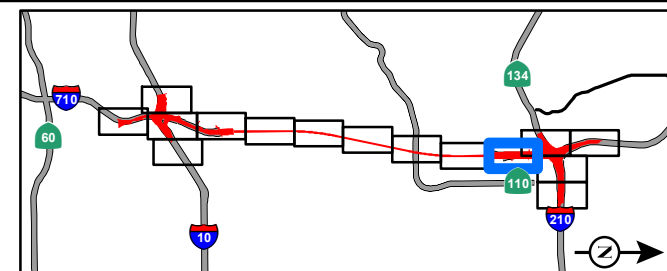


FIGURE 3.14-7

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SR 710 North Project

Noise Measurement and Receptor Locations
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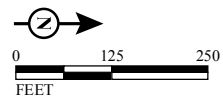
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LEGEND

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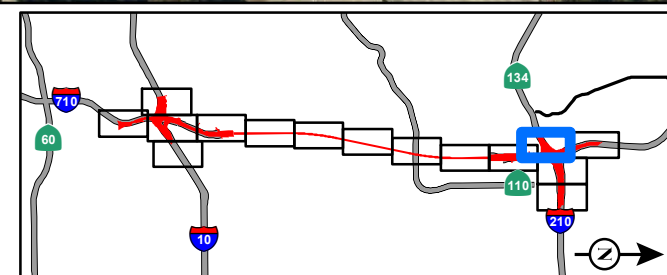


FIGURE 3.14-7

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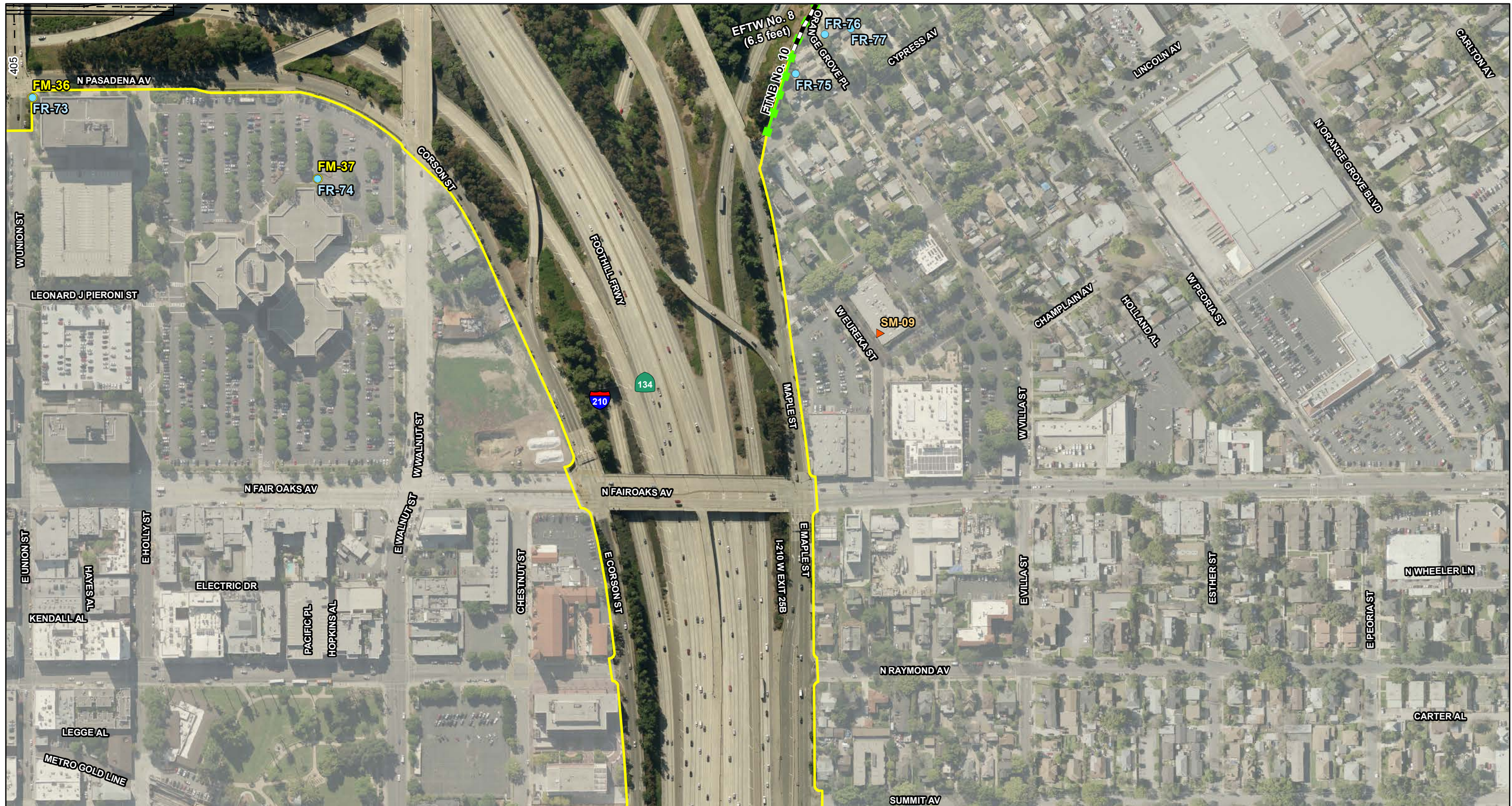
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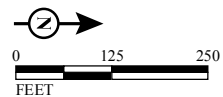
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LEGEND

- Freeway Tunnel Dual Bore Geometrics
- Proposed Right-of-Way
- ▨ Tunnel Segment
- ▭ Dual Bore Freeway Tunnel Alternative
- Existing Walls
- ▬ Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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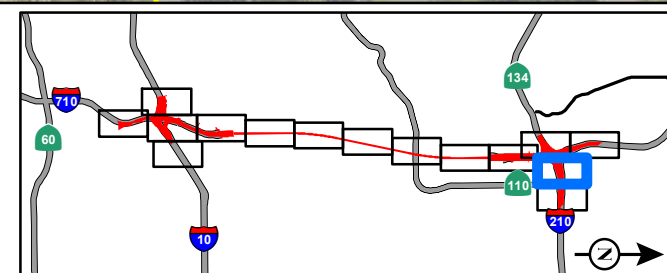
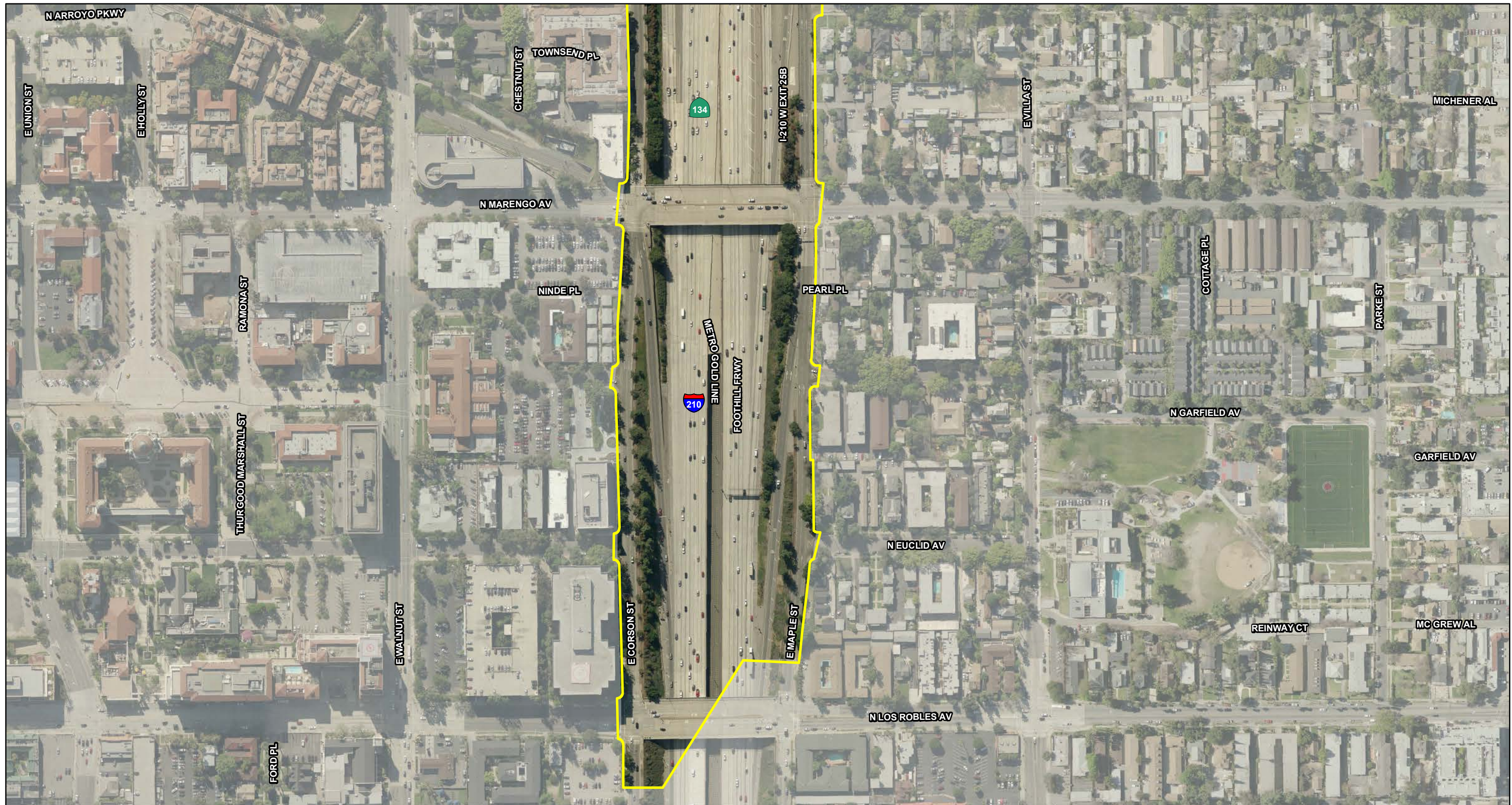


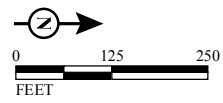
FIGURE 3.14-7
 Sheet 13 of 15
 SR 710 North Project
 Noise Measurement and Receptor Locations
 and Modeled Noise Barriers -
 Freeway Tunnel Alternative Dual Bore Design
 07-LA-710 (SR 710)
 EA 187900
 EFIS 070000191

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LEGEND

- Freeway Tunnel Dual Bore Geometrics
- Proposed Right-of-Way
- ▨ Tunnel Segment
- ▭ Dual Bore Freeway Tunnel Alternative
- Existing Walls
- ▬ Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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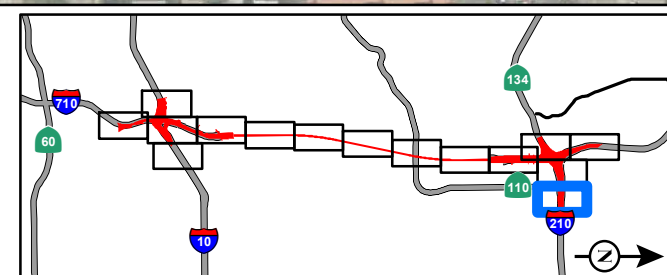


FIGURE 3.14-7

Sheet 14 of 15

SR 710 North Project

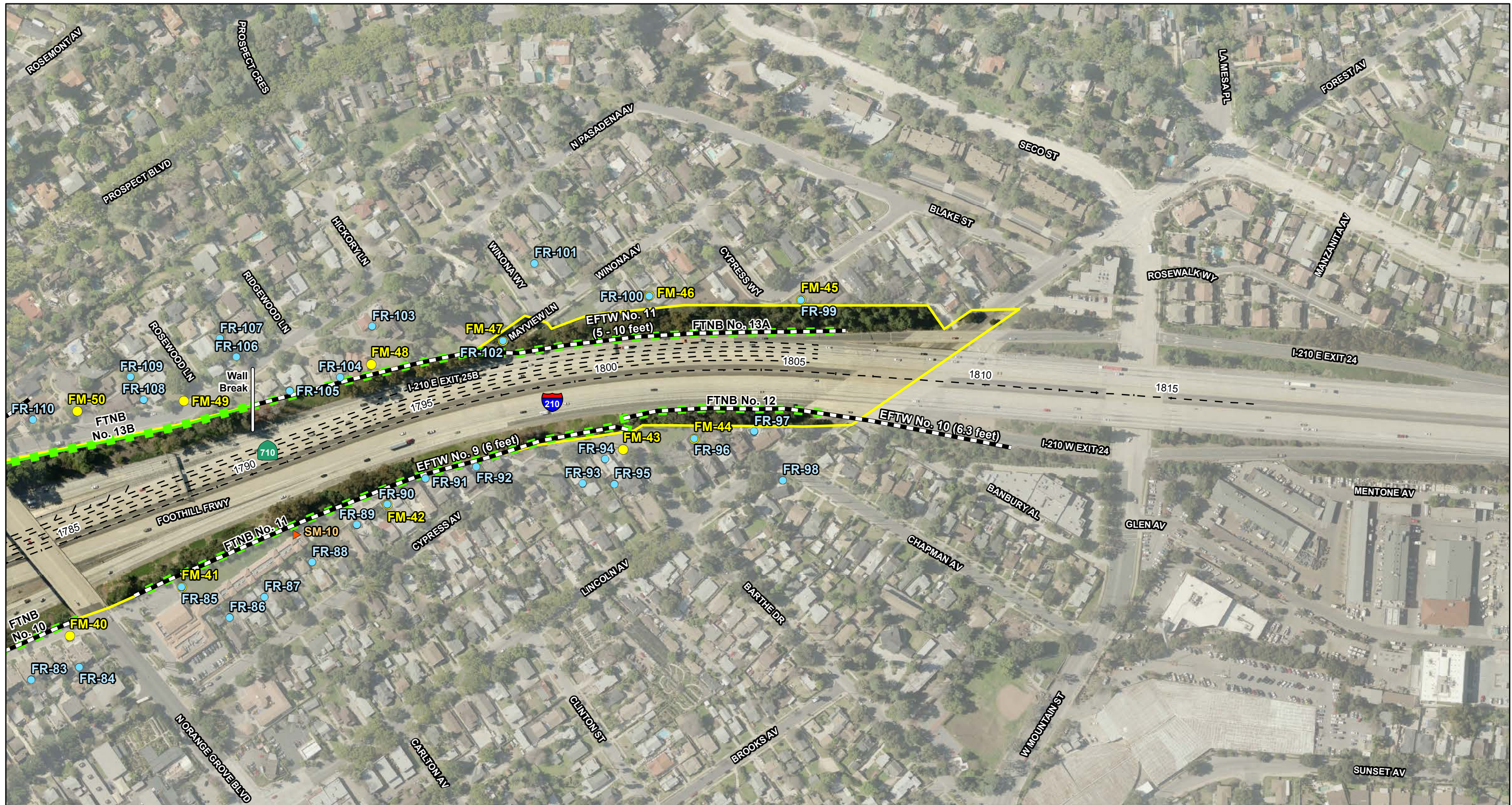
Noise Measurement and Receptor Locations
and Modeled Noise Barriers -
Freeway Tunnel Alternative Dual Bore Design

07-LA-710 (SR 710)

EA 187900

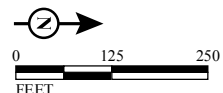
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LEGEND

- Freeway Tunnel Dual Bore Geometrics
- Proposed Right-of-Way
- ▨ Tunnel Segment
- ▭ Dual Bore Freeway Tunnel Alternative
- Existing Walls
- ▬ Modeled Noise Barriers
- Modeled Receptor Locations
- Short-term Measurement Locations
- Long-term, 24-hour, Measurement Locations (FML)
- ▲ School Measurement Locations



SOURCE: Thomas Brothers (2011); LARIAC (12/2010); Noise Study Report (2014)

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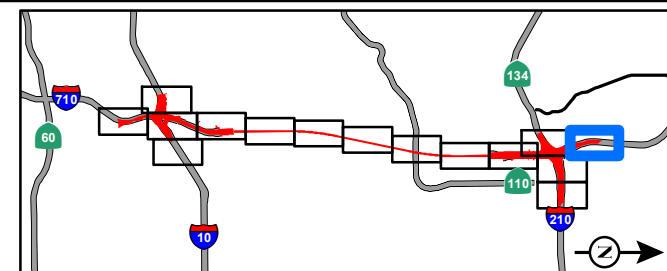


FIGURE 3.14-7

Sheet 15 of 15

SR 710 North Project

Noise Measurement and Receptor Locations
and Modeled Noise Barriers -
Freeway Tunnel Alternative Dual Bore Design

07-LA-710 (SR 710)

EA 187900

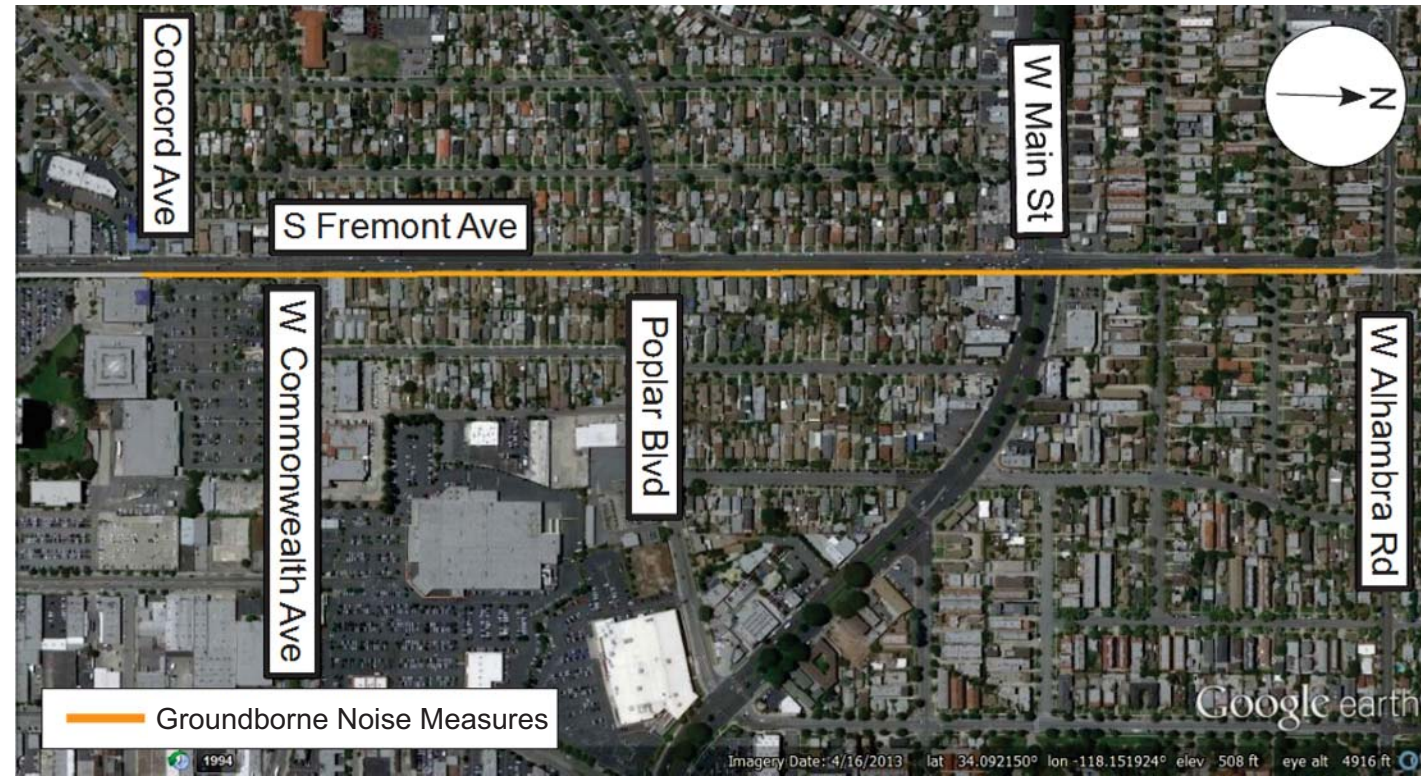
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Segment 1



Segment 2



Segment 3

Segment 4

FIGURE 3.14-8

SR 710 North Project
 Locations of Groundborne Noise
 Measures for the LRT Alternative
 07-LA-710 (SR 710)
 EA 187900
 EFIS 0700000191

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Existing (2013)

	Roadway Segment	ADT	Center-line to 70 CNEL (feet)	Center-line to 65 CNEL (feet)	Center-line to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane
Existing (2013)-01	SR 2 between I-210 and SR 134 Interchange North Termini	120,200	402	859	1,848	79.8
Existing (2013)-02	SR 2 between SR 134 Interchange North Termini and SR 134 Interchange South Termini	85,800	331	706	1,517	78.5
Existing (2013)-03	SR 2 between SR 134 Interchange South Termini and I-5 Interchange North Termini	145,400	457	979	2,105	80.6
Existing (2013)-04	SR 2 between I-5 Interchange North Termini and I-5 Interchange South Termini	48,500	215	452	967	75.5
Existing (2013)-05	SR 110 between Glenarm Street and S Avenue 52	81,600	218	466	1,002	76.8
Existing (2013)-06	SR 110 between S Avenue 52 and I-5 Interchange North Termini	117,000	276	592	1,274	78.4
Existing (2013)-07	SR 110 between and I-5 Interchange North Termini and I-5 Interchange South Termini	91,200	235	502	1,079	77.3
Existing (2013)-08	SR 134 between SR 134 start at 210/710 Interchange and SR 134/I-210/SR 710 Interchange West Termini	155,400	477	1,020	2,193	80.5
Existing (2013)-09	SR 134 between SR 134/I-210/SR 710 Interchange West Termini and N. Figueroa Street	191,000	537	1,151	2,475	81.3
Existing (2013)-10	SR 134 between N. Figueroa Street and 2 Interchange east Termini	189,700	535	1,145	2,464	81.3
Existing (2013)-11	SR 134 between SR 2 Interchange east Termini and SR 2 Interchange west Termini	139,600	448	958	2,059	80.1
Existing (2013)-12	I-5 between SR 2 Interchange North Termini and SR 2 Interchange South Termini	202,100	597	1,282	2,759	82.4
Existing (2013)-13	I-5 between SR 2 Interchange South Termini and SR 110 Interchange North Termini	247,000	699	1,503	3,235	83.4
Existing (2013)-14	I-5 between SR 110 Interchange North Termini and SR 110 Interchange South Termini	194,700	633	1,359	2,925	82.8
Existing (2013)-15	I-5 between SR 110 Interchange South Termini and I-10 Interchange North Termini	211,300	642	1,378	2,967	82.9
Existing (2013)-16	I-5 between I-10 Interchange North Termini and I-10 Interchange South Termini	157,600	503	1,078	2,320	81.3
Existing (2013)-17	I-5 between I-10 Interchange South Termini and East Cesar Chavez Avenue Ramps	233,800	638	1,370	2,949	82.8
Existing (2013)-18	I-10 between I-5 Interchange west Termini and I-5 Interchange east Termini	59,500	227	477	1,023	75.9
Existing (2013)-19	I-10 between I-5 Interchange east Termini and SR710 Interchange west Termini	206,400	564	1,206	2,593	81.2
Existing (2013)-20	I-10 between SR710 Interchange east Termini and Rosemead Boulevard	220,900	546	1,167	2,508	80.9
Existing (2013)-21	I-10 between Rosemead Boulevard and I-605 Interchange west Termini	196,000	515	1,102	2,370	80.8
Existing (2013)-22	I-210 between I-605 Interchange East Termini and I-605 Interchange West Termini	148,100	510	1,092	2,350	81.1
Existing (2013)-23	I-210 between I-605 Interchange West Termini and Rosemead Boulevard	204,300	641	1,376	2,961	82.6
Existing (2013)-24	I-210 between Rosemead Boulevard and San Gabriel Boulevard	236,400	686	1,468	3,159	82.2
Existing (2013)-25	I-210 between San Gabriel Boulevard and I-710 Interchange East Termini	257,300	713	1,526	3,283	82.4
Existing (2013)-26	I-210 between I-710 Interchange North Termini and Lincoln Avenue	131,900	455	972	2,091	80.3
Existing (2013)-27	I-210 between Lincoln Avenue and SR 2	116,500	423	905	1,946	79.9
Existing (2013)-28	I-210 between SR 2 and La Crescenta Avenue	121,700	447	952	2,046	79.7
Existing (2013)-29	I-605 between I-210 Interchange South Termini and Los Angeles Street	145,400	490	1,048	2,256	80.8
Existing (2013)-30	I-605 between Los Angeles Street and I-10 Interchange North Termini	174,400	542	1,162	2,500	81.5

Modeled using the "Soft" setting.

Modeled using custom traffic percentages

Future 2035 No Build

	Roadway Segment	ADT	Center-line to 70 CNEL (feet)	Center-line to 65 CNEL (feet)	Center-line to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane
Future 2035 No Build-01	SR 2 between I-210 and SR 134 Interchange North Termini	121,900	439	939	2,021	80.4
Future 2035 No Build-02	SR 2 between SR 134 Interchange North Termini and SR 134 Interchange South Termini	88,300	366	783	1,682	79.2
Future 2035 No Build-03	SR 2 between SR 134 Interchange South Termini and I-5 Interchange North Termini	146,300	489	1,049	2,256	81.1
Future 2035 No Build-04	SR 2 between I-5 Interchange North Termini and I-5 Interchange South Termini	48,500	225	473	1,013	75.8
Future 2035 No Build-05	SR 110 between Glenarm Street and S Avenue 52	83,300	221	472	1,016	76.9
Future 2035 No Build-06	SR 110 between S Avenue 52 and I-5 Interchange North Termini	118,000	278	595	1,281	78.4
Future 2035 No Build-07	SR 110 between and I-5 Interchange North Termini and I-5 Interchange South Termini	93,400	238	510	1,096	77.4
Future 2035 No Build-08	SR 134 between SR 134 start at 210/710 Interchange and SR 134/I-210/SR 710 Interchange West Termini	171,900	562	1,204	2,590	81.6
Future 2035 No Build-09	SR 134 between SR 134/I-210/SR 710 Interchange West Termini and N. Figueroa Street	196,100	602	1,291	2,779	82.0
Future 2035 No Build-10	SR 134 between N. Figueroa Street and 2 Interchange east Termini	200,000	610	1,308	2,816	82.1
Future 2035 No Build-11	SR 134 between SR 2 Interchange east Termini and SR 2 Interchange west Termini	151,200	520	1,113	2,395	81.1
Future 2035 No Build-12	I-5 between SR 2 Interchange North Termini and SR 2 Interchange South Termini	209,700	691	1,484	3,195	83.3
Future 2035 No Build-13	I-5 between SR 2 Interchange South Termini and SR 110 Interchange North Termini	252,300	802	1,725	3,713	84.3
Future 2035 No Build-14	I-5 between SR 110 Interchange North Termini and SR 110 Interchange South Termini	198,800	730	1,570	3,380	83.7
Future 2035 No Build-15	I-5 between I-10 Interchange South Termini and I-10 Interchange North Termini	216,800	732	1,572	3,386	83.7
Future 2035 No Build-16	I-5 between I-10 Interchange North Termini and I-10 Interchange South Termini	162,700	579	1,242	2,673	82.2
Future 2035 No Build-17	I-5 between I-10 Interchange South Termini and East Cesar Chavez Avenue Ramps	242,100	738	1,587	3,417	83.8
Future 2035 No Build-18	I-10 between I-5 Interchange west Termini and I-5 Interchange east Termini	64,500	250	528	1,132	76.6
Future 2035 No Build-19	I-10 between I-5 Interchange east Termini and SR710 Interchange west Termini	220,300	638	1,367	2,941	82.1
Future 2035 No Build-20	I-10 between SR710 Interchange east Termini and Rosemead Boulevard	229,500	598	1,279	2,751	81.5
Future 2035 No Build-21	I-10 between Rosemead Boulevard and I-605 Interchange west Termini	210,300	578	1,238	2,663	81.5
Future 2035 No Build-22	I-210 between I-605 Interchange East Termini and I-605 Interchange West Termini	155,300	615	1,320	2,840	82.3
Future 2035 No Build-23	I-210 between I-605 Interchange West Termini and Rosemead Boulevard	208,900	764	1,642	3,534	83.8
Future 2035 No Build-24	I-210 between Rosemead Boulevard and San Gabriel Boulevard	242,100	810	1,737	3,739	83.3
Future 2035 No Build-25	I-210 between San Gabriel Boulevard and I-710 Interchange East Termini	264,000	836	1,794	3,860	83.5
Future 2035 No Build-26	I-210 between I-710 Interchange North Termini and Lincoln Avenue	135,000	552	1,183	2,546	81.6
Future 2035 No Build-27	I-210 between Lincoln Avenue and SR 2	119,600	516	1,106	2,381	81.2
Future 2035 No Build-28	I-210 between SR 2 and La Crescenta Avenue	123,000	543	1,161	2,496	81.0
Future 2035 No Build-29	I-605 between I-210 Interchange South Termini and Los Angeles Street	146,900	635	1,364	2,935	82.5
Future 2035 No Build-30	I-605 between Los Angeles Street and I-10 Interchange North Termini	176,800	691	1,485	3,197	83.1

Modeled using the "Soft" setting.
Modeled using custom traffic percentages

2035 BRT

	Roadway Segment	ADT	Center-line to 70 CNEL (feet)	Center-line to 65 CNEL (feet)	Center-line to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane
2035 BRT-01	SR 2 between I-210 and SR 134 Interchange North Termini	120,400	438	938	2,019	80.3
2035 BRT-02	SR 2 between SR 134 Interchange North Termini and SR 134 Interchange South Termini	86,700	362	773	1,662	79.1
2035 BRT-03	SR 2 between SR 134 Interchange South Termini and I-5 Interchange North Termini	144,700	486	1,041	2,240	81.0
2035 BRT-04	SR 2 between I-5 Interchange North Termini and I-5 Interchange South Termini	48,200	219	461	988	75.7
2035 BRT-05	SR 110 between Glenarm Street and S Avenue 52	82,600	220	470	1,010	76.9
2035 BRT-06	SR 110 between S Avenue 52 and I-5 Interchange North Termini	116,600	276	591	1,271	78.4
2035 BRT-07	SR 110 between and I-5 Interchange North Termini and I-5 Interchange South Termini	92,800	237	508	1,092	77.4
2035 BRT-08	SR 134 between SR 134 start at 210/710 Interchange and SR 134/I-210/SR 710 Interchange West Termini	171,500	561	1,202	2,586	81.6
2035 BRT-09	SR 134 between SR 134/I-210/SR 710 Interchange West Termini and N. Figueroa Street	195,500	601	1,289	2,773	82.0
2035 BRT-10	SR 134 between N. Figueroa Street and 2 Interchange east Termini	199,600	609	1,307	2,812	82.1
2035 BRT-11	SR 134 between SR 2 Interchange east Termini and SR 2 Interchange west Termini	150,800	519	1,111	2,390	81.1
2035 BRT-12	I-5 between SR 2 Interchange North Termini and SR 2 Interchange South Termini	210,800	693	1,489	3,206	83.4
2035 BRT-13	I-5 between SR 2 Interchange South Termini and SR 110 Interchange North Termini	252,000	797	1,713	3,688	84.3
2035 BRT-14	I-5 between SR 110 Interchange North Termini and SR 110 Interchange South Termini	197,800	724	1,556	3,351	83.6
2035 BRT-15	I-5 between I-5 Interchange South Termini and I-10 Interchange North Termini	216,100	730	1,569	3,378	83.7
2035 BRT-16	I-5 between I-10 Interchange North Termini and I-10 Interchange South Termini	162,900	584	1,254	2,700	82.2
2035 BRT-17	I-5 between I-10 Interchange South Termini and East Cesar Chavez Avenue Ramps	242,300	739	1,588	3,419	83.8
2035 BRT-18	I-10 between I-5 Interchange west Termini and I-5 Interchange east Termini	67,400	257	543	1,166	76.8
2035 BRT-19	I-10 between I-5 Interchange east Termini and SR710 Interchange west Termini	221,100	630	1,350	2,904	82.0
2035 BRT-20	I-10 between SR710 Interchange east Termini and Rosemead Boulevard	228,600	596	1,276	2,744	81.5
2035 BRT-21	I-10 between Rosemead Boulevard and I-605 Interchange west Termini	211,200	580	1,241	2,671	81.6
2035 BRT-22	I-210 between I-605 Interchange East Termini and I-605 Interchange West Termini	155,600	616	1,321	2,844	82.3
2035 BRT-23	I-210 between I-605 Interchange West Termini and Rosemead Boulevard	208,000	762	1,637	3,524	83.7
2035 BRT-24	I-210 between Rosemead Boulevard and San Gabriel Boulevard	241,400	809	1,734	3,732	83.2
2035 BRT-25	I-210 between San Gabriel Boulevard and I-710 Interchange East Termini	262,400	833	1,786	3,845	83.4
2035 BRT-26	I-210 between I-710 Interchange North Termini and Lincoln Avenue	136,500	556	1,192	2,564	81.7
2035 BRT-27	I-210 between Lincoln Avenue and SR 2	120,300	518	1,111	2,390	81.2
2035 BRT-28	I-210 between SR 2 and La Crescenta Avenue	122,800	541	1,157	2,488	81.0
2035 BRT-29	I-605 between I-210 Interchange South Termini and Los Angeles Street	146,400	637	1,367	2,943	82.6
2035 BRT-30	I-605 between Los Angeles Street and I-10 Interchange North Termini	176,300	690	1,482	3,191	83.1

Modeled using the "Soft" setting.

Modeled using custom traffic percentages

2035 LRT

	Roadway Segment	ADT	Center-line to 70 CNEL (feet)	Center-line to 65 CNEL (feet)	Center-line to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane
2035 LRT-01	SR 2 between I-210 and SR 134 Interchange North Termini	121,300	431	923	1,985	80.2
2035 LRT-02	SR 2 between SR 134 Interchange North Termini and SR 134 Interchange South Termini	87,300	356	761	1,635	79.0
2035 LRT-03	SR 2 between SR 134 Interchange South Termini and I-5 Interchange North Termini	145,800	481	1,031	2,218	81.0
2035 LRT-04	SR 2 between I-5 Interchange North Termini and I-5 Interchange South Termini	48,100	219	461	987	75.7
2035 LRT-05	SR 110 between Glenarm Street and S Avenue 52	83,600	222	474	1,018	76.9
2035 LRT-06	SR 110 between S Avenue 52 and I-5 Interchange North Termini	118,300	278	596	1,283	78.5
2035 LRT-07	SR 110 between and I-5 Interchange North Termini and I-5 Interchange South Termini	93,900	239	512	1,100	77.5
2035 LRT-08	SR 134 between SR 134 start at 210/710 Interchange and SR 134/I-210/SR 710 Interchange West Termini	172,600	559	1,199	2,579	81.6
2035 LRT-09	SR 134 between SR 134/I-210/SR 710 Interchange West Termini and N. Figueroa Street	197,200	600	1,287	2,769	82.0
2035 LRT-10	SR 134 between N. Figueroa Street and 2 Interchange east Termini	200,700	607	1,302	2,802	82.1
2035 LRT-11	SR 134 between SR 2 Interchange east Termini and SR 2 Interchange west Termini	151,700	521	1,116	2,400	81.1
2035 LRT-12	I-5 between SR 2 Interchange North Termini and SR 2 Interchange South Termini	208,600	703	1,510	3,252	83.5
2035 LRT-13	I-5 between SR 2 Interchange South Termini and SR 110 Interchange North Termini	251,800	801	1,722	3,709	84.3
2035 LRT-14	I-5 between SR 110 Interchange North Termini and SR 110 Interchange South Termini	197,800	728	1,565	3,369	83.7
2035 LRT-15	I-5 between SR 110 Interchange South Termini and I-10 Interchange North Termini	216,400	735	1,580	3,401	83.7
2035 LRT-16	I-5 between I-10 Interchange North Termini and I-10 Interchange South Termini	162,800	591	1,269	2,732	82.3
2035 LRT-17	I-5 between I-10 Interchange South Termini and East Cesar Chavez Avenue Ramps	242,300	744	1,598	3,441	83.8
2035 LRT-18	I-10 between I-5 Interchange west Termini and I-5 Interchange east Termini	66,800	255	540	1,159	76.7
2035 LRT-19	I-10 between I-5 Interchange east Termini and SR710 Interchange west Termini	220,200	628	1,346	2,896	82.0
2035 LRT-20	I-10 between SR710 Interchange east Termini and Rosemead Boulevard	231,300	606	1,297	2,789	81.6
2035 LRT-21	I-10 between Rosemead Boulevard and I-605 Interchange west Termini	215,400	594	1,273	2,738	81.7
2035 LRT-22	I-210 between I-605 Interchange East Termini and I-605 Interchange West Termini	155,800	616	1,322	2,846	82.3
2035 LRT-23	I-210 between I-605 Interchange West Termini and Rosemead Boulevard	208,800	762	1,637	3,525	83.7
2035 LRT-24	I-210 between Rosemead Boulevard and San Gabriel Boulevard	241,700	805	1,726	3,714	83.2
2035 LRT-25	I-210 between San Gabriel Boulevard and I-710 Interchange East Termini	263,800	831	1,782	3,835	83.4
2035 LRT-26	I-210 between I-710 Interchange North Termini and Lincoln Avenue	135,700	551	1,180	2,540	81.6
2035 LRT-27	I-210 between Lincoln Avenue and SR 2	120,200	518	1,110	2,389	81.2
2035 LRT-28	I-210 between SR 2 and La Crescenta Avenue	123,200	539	1,153	2,480	81.0
2035 LRT-29	I-605 between I-210 Interchange South Termini and Los Angeles Street	147,000	636	1,364	2,937	82.6
2035 LRT-30	I-605 between Los Angeles Street and I-10 Interchange North Termini	176,800	688	1,477	3,180	83.1

Modeled using the "Soft" setting.

Modeled using custom traffic percentages

2035 TSM/TDM

	Roadway Segment	ADT	Center-line to 70 CNEL (feet)	Center-line to 65 CNEL (feet)	Center-line to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane
2035 TSM/TDM-01	SR 2 between I-210 and SR 134 Interchange North Termini	120,300	435	931	2,003	80.3
2035 TSM/TDM-02	SR 2 between SR 134 Interchange North Termini and SR 134 Interchange South Termini	86,600	359	767	1,649	79.0
2035 TSM/TDM-03	SR 2 between SR 134 Interchange South Termini and I-5 Interchange North Termini	144,900	486	1,042	2,242	81.0
2035 TSM/TDM-04	SR 2 between I-5 Interchange North Termini and I-5 Interchange South Termini	48,400	223	468	1,003	75.8
2035 TSM/TDM-05	SR 110 between Glenarm Street and S Avenue 52	82,700	220	470	1,011	76.9
2035 TSM/TDM-06	SR 110 between S Avenue 52 and I-5 Interchange North Termini	116,500	276	590	1,270	78.4
2035 TSM/TDM-07	SR 110 between and I-5 Interchange North Termini and I-5 Interchange South Termini	93,300	238	509	1,095	77.4
2035 TSM/TDM-08	SR 134 between SR 134 start at 210/710 Interchange and SR 134/I-210/SR 710 Interchange West Termini	171,000	560	1,200	2,581	81.6
2035 TSM/TDM-09	SR 134 between SR 134/I-210/SR 710 Interchange West Termini and N. Figueroa Street	195,500	601	1,289	2,773	82.0
2035 TSM/TDM-10	SR 134 between N. Figueroa Street and 2 Interchange east Termini	199,400	609	1,306	2,810	82.1
2035 TSM/TDM-11	SR 134 between SR 2 Interchange east Termini and SR 2 Interchange west Termini	150,600	519	1,110	2,388	81.1
2035 TSM/TDM-12	I-5 between SR 2 Interchange North Termini and SR 2 Interchange South Termini	210,200	696	1,495	3,220	83.4
2035 TSM/TDM-13	I-5 between SR 2 Interchange South Termini and SR 110 Interchange North Termini	251,900	801	1,723	3,710	84.3
2035 TSM/TDM-14	I-5 between SR 110 Interchange North Termini and SR 110 Interchange South Termini	197,600	728	1,564	3,367	83.7
2035 TSM/TDM-15	I-5 between SR 110 Interchange South Termini and I-10 Interchange North Termini	215,800	729	1,568	3,375	83.7
2035 TSM/TDM-16	I-5 between I-10 Interchange North Termini and I-10 Interchange South Termini	161,200	593	1,272	2,738	82.3
2035 TSM/TDM-17	I-5 between I-10 Interchange South Termini and East Cesar Chavez Avenue Ramps	241,400	749	1,609	3,465	83.9
2035 TSM/TDM-18	I-10 between I-5 Interchange west Termini and I-5 Interchange east Termini	67,400	254	538	1,155	76.7
2035 TSM/TDM-19	I-10 between I-5 Interchange east Termini and SR710 Interchange west Termini	222,000	627	1,343	2,890	81.9
2035 TSM/TDM-20	I-10 between SR710 Interchange east Termini and Rosemead Boulevard	228,600	596	1,276	2,744	81.5
2035 TSM/TDM-21	I-10 between Rosemead Boulevard and I-605 Interchange west Termini	211,200	580	1,241	2,671	81.6
2035 TSM/TDM-22	I-210 between I-605 Interchange East Termini and I-605 Interchange West Termini	155,500	615	1,321	2,842	82.3
2035 TSM/TDM-23	I-210 between I-605 Interchange West Termini and Rosemead Boulevard	208,000	762	1,637	3,524	83.7
2035 TSM/TDM-24	I-210 between Rosemead Boulevard and San Gabriel Boulevard	240,800	807	1,731	3,726	83.2
2035 TSM/TDM-25	I-210 between San Gabriel Boulevard and I-710 Interchange East Termini	263,000	834	1,789	3,850	83.4
2035 TSM/TDM-26	I-210 between I-710 Interchange North Termini and Lincoln Avenue	136,700	556	1,193	2,567	81.7
2035 TSM/TDM-27	I-210 between Lincoln Avenue and SR 2	120,400	519	1,111	2,391	81.2
2035 TSM/TDM-28	I-210 between SR 2 and La Crescenta Avenue	122,900	538	1,151	2,476	80.9
2035 TSM/TDM-29	I-605 between I-210 Interchange South Termini and Los Angeles Street	145,900	636	1,364	2,937	82.5
2035 TSM/TDM-30	I-605 between Los Angeles Street and I-10 Interchange North Termini	175,900	689	1,480	3,186	83.1

Modeled using the "Soft" setting.

Modeled using custom traffic percentages

2035 Single Bore V1

	Roadway Segment	ADT	Center-line to 70 CNEL (feet)	Center-line to 65 CNEL (feet)	Center-line to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane
2035 Single Bore V1-01	SR 2 between I-210 and SR 134 Interchange North Termini	105,100	373	796	1,711	79.3
2035 Single Bore V1-02	SR 2 between SR 134 Interchange North Termini and SR 134 Interchange South Termini	71,700	295	628	1,348	77.7
2035 Single Bore V1-03	SR 2 between SR 134 Interchange South Termini and I-5 Interchange North Termini	134,200	432	924	1,989	80.2
2035 Single Bore V1-04	SR 2 between I-5 Interchange North Termini and I-5 Interchange South Termini	46,400	207	433	928	75.3
2035 Single Bore V1-05	SR 110 between Glenarm Street and S Avenue 52	81,300	218	465	999	76.8
2035 Single Bore V1-06	SR 110 between S Avenue 52 and I-5 Interchange North Termini	115,000	273	585	1,259	78.3
2035 Single Bore V1-07	SR 110 between and I-5 Interchange North Termini and I-5 Interchange South Termini	93,000	238	508	1,093	77.4
2035 Single Bore V1-08	SR 134 between SR 134 start at 210/710 Interchange and SR 134/I-210/SR 710 Interchange West Termini	176,300	565	1,212	2,607	81.6
2035 Single Bore V1-09	SR 134 between SR 134/I-210/SR 710 Interchange West Termini and N. Figueroa Street	196,700	618	1,326	2,853	82.2
2035 Single Bore V1-10	SR 134 between N. Figueroa Street and 2 Interchange east Termini	201,700	628	1,348	2,901	82.3
2035 Single Bore V1-11	SR 134 between SR 2 Interchange east Termini and SR 2 Interchange west Termini	153,800	545	1,168	2,513	81.4
2035 Single Bore V1-12	I-5 between SR 2 Interchange North Termini and SR 2 Interchange South Termini	212,200	668	1,435	3,089	83.1
2035 Single Bore V1-13	I-5 between SR 2 Interchange South Termini and SR 110 Interchange North Termini	249,100	748	1,607	3,460	83.9
2035 Single Bore V1-14	I-5 between SR 110 Interchange North Termini and SR 110 Interchange South Termini	195,000	678	1,457	3,136	83.2
2035 Single Bore V1-15	I-5 between SR 110 Interchange South Termini and I-10 Interchange North Termini	210,400	679	1,459	3,141	83.2
2035 Single Bore V1-16	I-5 between I-10 Interchange North Termini and I-10 Interchange South Termini	159,100	575	1,235	2,658	82.1
2035 Single Bore V1-17	I-5 between I-10 Interchange South Termini and East Cesar Chavez Avenue Ramps	240,200	737	1,583	3,409	83.8
2035 Single Bore V1-18	I-10 between I-5 Interchange west Termini and I-5 Interchange east Termini	67,600	255	539	1,157	76.7
2035 Single Bore V1-19	I-10 between I-5 Interchange east Termini and SR710 Interchange west Termini	218,300	587	1,257	2,704	81.5
2035 Single Bore V1-20	I-10 between SR710 Interchange east Termini and Rosemead Boulevard	229,300	597	1,278	2,749	81.5
2035 Single Bore V1-21	I-10 between Rosemead Boulevard and I-605 Interchange west Termini	211,600	582	1,247	2,684	81.6
2035 Single Bore V1-22	I-210 between I-605 Interchange East Termini and I-605 Interchange West Termini	154,600	613	1,316	2,832	82.3
2035 Single Bore V1-23	I-210 between I-605 Interchange West Termini and Rosemead Boulevard	205,800	747	1,604	3,453	83.6
2035 Single Bore V1-24	I-210 between Rosemead Boulevard and San Gabriel Boulevard	238,400	793	1,700	3,659	83.1
2035 Single Bore V1-25	I-210 between San Gabriel Boulevard and I-710 Interchange East Termini	262,200	821	1,760	3,787	83.3
2035 Single Bore V1-26	I-210 between I-710 Interchange North Termini and Lincoln Avenue	160,800	658	1,413	3,041	82.8
2035 Single Bore V1-27	I-210 between Lincoln Avenue and SR 2	135,800	599	1,285	2,765	82.2
2035 Single Bore V1-28	I-210 between SR 2 and La Crescenta Avenue	131,000	597	1,279	2,751	81.6
2035 Single Bore V1-29	I-605 between I-210 Interchange South Termini and Los Angeles Street	144,300	614	1,318	2,836	82.3
2035 Single Bore V1-30	I-605 between Los Angeles Street and I-10 Interchange North Termini	174,300	669	1,436	3,092	82.9

Modeled using the "Soft" setting.

Modeled using custom traffic percentages

2035 Single Bore V6

	Roadway Segment	ADT	Center-line to 70 CNEL (feet)	Center-line to 65 CNEL (feet)	Center-line to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane
2035 Single Bore V6-01	SR 2 between I-210 and SR 134 Interchange North Termini	104,700	372	794	1,707	79.3
2035 Single Bore V6-02	SR 2 between SR 134 Interchange North Termini and SR 134 Interchange South Termini	71,400	297	631	1,354	77.7
2035 Single Bore V6-03	SR 2 between SR 134 Interchange South Termini and I-5 Interchange North Termini	133,800	431	923	1,985	80.2
2035 Single Bore V6-04	SR 2 between I-5 Interchange North Termini and I-5 Interchange South Termini	46,900	208	436	934	75.3
2035 Single Bore V6-05	SR 110 between Glenarm Street and S Avenue 52	81,500	218	466	1,001	76.8
2035 Single Bore V6-06	SR 110 between S Avenue 52 and I-5 Interchange North Termini	114,900	273	585	1,258	78.3
2035 Single Bore V6-07	SR 110 between and I-5 Interchange North Termini and I-5 Interchange South Termini	92,900	237	508	1,092	77.4
2035 Single Bore V6-08	SR 134 between SR 134 start at 210/710 Interchange and SR 134/I-210/SR 710 Interchange West Termini	174,500	558	1,195	2,571	81.5
2035 Single Bore V6-09	SR 134 between SR 134/I-210/SR 710 Interchange West Termini and N. Figueroa Street	195,500	616	1,320	2,842	82.2
2035 Single Bore V6-10	SR 134 between N. Figueroa Street and 2 Interchange east Termini	201,100	627	1,346	2,896	82.3
2035 Single Bore V6-11	SR 134 between SR 2 Interchange east Termini and SR 2 Interchange west Termini	153,100	544	1,164	2,505	81.4
2035 Single Bore V6-12	I-5 between SR 2 Interchange North Termini and SR 2 Interchange South Termini	213,400	670	1,440	3,100	83.1
2035 Single Bore V6-13	I-5 between SR 2 Interchange South Termini and SR 110 Interchange North Termini	249,300	748	1,608	3,462	83.9
2035 Single Bore V6-14	I-5 between SR 110 Interchange North Termini and SR 110 Interchange South Termini	195,600	679	1,460	3,142	83.2
2035 Single Bore V6-15	I-5 between SR 110 Interchange South Termini and I-10 Interchange North Termini	210,500	675	1,450	3,122	83.2
2035 Single Bore V6-16	I-5 between I-10 Interchange North Termini and I-10 Interchange South Termini	159,600	573	1,230	2,646	82.1
2035 Single Bore V6-17	I-5 between I-10 Interchange South Termini and East Cesar Chavez Avenue Ramps	240,100	732	1,573	3,386	83.7
2035 Single Bore V6-18	I-10 between I-5 Interchange west Termini and I-5 Interchange east Termini	68,100	254	537	1,152	76.7
2035 Single Bore V6-19	I-10 between I-5 Interchange east Termini and SR710 Interchange west Termini	217,600	591	1,265	2,721	81.6
2035 Single Bore V6-20	I-10 between SR710 Interchange east Termini and Rosemead Boulevard	229,500	598	1,279	2,751	81.5
2035 Single Bore V6-21	I-10 between Rosemead Boulevard and I-605 Interchange west Termini	211,700	583	1,248	2,684	81.6
2035 Single Bore V6-22	I-210 between I-605 Interchange East Termini and I-605 Interchange West Termini	155,000	614	1,318	2,836	82.3
2035 Single Bore V6-23	I-210 between I-605 Interchange West Termini and Rosemead Boulevard	205,600	746	1,603	3,451	83.6
2035 Single Bore V6-24	I-210 between Rosemead Boulevard and San Gabriel Boulevard	238,500	793	1,701	3,660	83.1
2035 Single Bore V6-25	I-210 between San Gabriel Boulevard and I-710 Interchange East Termini	262,600	821	1,762	3,791	83.3
2035 Single Bore V6-26	I-210 between I-710 Interchange North Termini and Lincoln Avenue	162,100	662	1,420	3,057	82.8
2035 Single Bore V6-27	I-210 between Lincoln Avenue and SR 2	136,300	600	1,288	2,772	82.2
2035 Single Bore V6-28	I-210 between SR 2 and La Crescenta Avenue	131,500	599	1,282	2,758	81.6
2035 Single Bore V6-29	I-605 between I-210 Interchange South Termini and Los Angeles Street	144,500	618	1,326	2,853	82.4
2035 Single Bore V6-30	I-605 between Los Angeles Street and I-10 Interchange North Termini	174,500	673	1,445	3,111	82.9

Modeled using the "Soft" setting.

Modeled using custom traffic percentages

2035 Single Bore V7

	Roadway Segment	ADT	Center-line to 70 CNEL (feet)	Center-line to 65 CNEL (feet)	Center-line to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane
2035 Single Bore V7-01	SR 2 between I-210 and SR 134 Interchange North Termini	105,700	414	885	1,904	80.0
2035 Single Bore V7-02	SR 2 between SR 134 Interchange North Termini and SR 134 Interchange South Termini	71,800	331	705	1,516	78.5
2035 Single Bore V7-03	SR 2 between SR 134 Interchange South Termini and I-5 Interchange North Termini	133,400	468	1,004	2,160	80.8
2035 Single Bore V7-04	SR 2 between I-5 Interchange North Termini and I-5 Interchange South Termini	46,100	210	441	943	75.4
2035 Single Bore V7-05	SR 110 between Glenarm Street and S Avenue 52	80,900	217	463	996	76.8
2035 Single Bore V7-06	SR 110 between S Avenue 52 and I-5 Interchange North Termini	114,500	272	584	1,256	78.3
2035 Single Bore V7-07	SR 110 between and I-5 Interchange North Termini and I-5 Interchange South Termini	93,100	238	509	1,094	77.4
2035 Single Bore V7-08	SR 134 between SR 134 start at 210/710 Interchange and SR 134/I-210/SR 710 Interchange West Termini	175,700	564	1,209	2,601	81.6
2035 Single Bore V7-09	SR 134 between SR 134/I-210/SR 710 Interchange West Termini and N. Figueroa Street	196,000	602	1,291	2,778	82.0
2035 Single Bore V7-10	SR 134 between N. Figueroa Street and 2 Interchange east Termini	201,800	609	1,307	2,812	82.1
2035 Single Bore V7-11	SR 134 between SR 2 Interchange east Termini and SR 2 Interchange west Termini	153,500	525	1,124	2,419	81.1
2035 Single Bore V7-12	I-5 between SR 2 Interchange North Termini and SR 2 Interchange South Termini	210,600	709	1,524	3,281	83.5
2035 Single Bore V7-13	I-5 between SR 2 Interchange South Termini and SR 110 Interchange North Termini	246,400	813	1,747	3,762	84.4
2035 Single Bore V7-14	I-5 between SR 110 Interchange North Termini and SR 110 Interchange South Termini	191,200	736	1,582	3,406	83.8
2035 Single Bore V7-15	I-5 between SR 110 Interchange South Termini and I-10 Interchange North Termini	207,800	740	1,591	3,424	83.8
2035 Single Bore V7-16	I-5 between I-10 Interchange North Termini and I-10 Interchange South Termini	157,000	618	1,327	2,857	82.6
2035 Single Bore V7-17	I-5 between I-10 Interchange South Termini and East Cesar Chavez Avenue Ramps	238,600	782	1,680	3,618	84.1
2035 Single Bore V7-18	I-10 between I-5 Interchange west Termini and I-5 Interchange east Termini	66,600	252	532	1,141	76.6
2035 Single Bore V7-19	I-10 between I-5 Interchange east Termini and SR710 Interchange west Termini	217,700	612	1,311	2,821	81.8
2035 Single Bore V7-20	I-10 between SR710 Interchange east Termini and Rosemead Boulevard	229,100	597	1,278	2,748	81.5
2035 Single Bore V7-21	I-10 between Rosemead Boulevard and I-605 Interchange west Termini	211,400	582	1,247	2,682	81.6
2035 Single Bore V7-22	I-210 between I-605 Interchange East Termini and I-605 Interchange West Termini	154,000	615	1,319	2,840	82.3
2035 Single Bore V7-23	I-210 between I-605 Interchange West Termini and Rosemead Boulevard	205,900	755	1,622	3,492	83.7
2035 Single Bore V7-24	I-210 between Rosemead Boulevard and San Gabriel Boulevard	238,000	801	1,718	3,697	83.2
2035 Single Bore V7-25	I-210 between San Gabriel Boulevard and I-710 Interchange East Termini	262,200	828	1,775	3,820	83.4
2035 Single Bore V7-26	I-210 between I-710 Interchange North Termini and Lincoln Avenue	163,300	592	1,271	2,735	82.1
2035 Single Bore V7-27	I-210 between Lincoln Avenue and SR 2	138,500	539	1,156	2,487	81.5
2035 Single Bore V7-28	I-210 between SR 2 and La Crescenta Avenue	133,000	549	1,175	2,526	81.1
2035 Single Bore V7-29	I-605 between I-210 Interchange South Termini and Los Angeles Street	145,000	633	1,359	2,924	82.5
2035 Single Bore V7-30	I-605 between Los Angeles Street and I-10 Interchange North Termini	175,100	687	1,476	3,176	83.1

Modeled using the "Soft" setting.

Modeled using custom traffic percentages

2035 Dual Bore V2

	Roadway Segment	ADT	Center-line to 70 CNEL (feet)	Center-line to 65 CNEL (feet)	Center-line to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane
2035 Dual Bore V2-01	SR 2 between I-210 and SR 134 Interchange North Termini	99,300	351	748	1,608	78.9
2035 Dual Bore V2-02	SR 2 between SR 134 Interchange North Termini and SR 134 Interchange South Termini	63,700	270	573	1,230	77.1
2035 Dual Bore V2-03	SR 2 between SR 134 Interchange South Termini and I-5 Interchange North Termini	124,500	408	872	1,876	79.9
2035 Dual Bore V2-04	SR 2 between I-5 Interchange North Termini and I-5 Interchange South Termini	44,300	197	411	880	74.9
2035 Dual Bore V2-05	SR 110 between Glenarm Street and S Avenue 52	76,600	209	447	961	76.6
2035 Dual Bore V2-06	SR 110 between S Avenue 52 and I-5 Interchange North Termini	110,100	265	569	1,223	78.1
2035 Dual Bore V2-07	SR 110 between and I-5 Interchange North Termini and I-5 Interchange South Termini	91,900	236	504	1,084	77.4
2035 Dual Bore V2-08	SR 134 between SR 134 start at 210/710 Interchange and SR 134/I-210/SR 710 Interchange West Termini	169,300	547	1,171	2,520	81.4
2035 Dual Bore V2-09	SR 134 between SR 134/I-210/SR 710 Interchange West Termini and N. Figueroa Street	200,400	620	1,329	2,860	82.2
2035 Dual Bore V2-10	SR 134 between N. Figueroa Street and 2 Interchange east Termini	203,600	626	1,343	2,890	82.3
2035 Dual Bore V2-11	SR 134 between SR 2 Interchange east Termini and SR 2 Interchange west Termini	156,000	543	1,163	2,503	81.4
2035 Dual Bore V2-12	I-5 between SR 2 Interchange North Termini and SR 2 Interchange South Termini	213,100	678	1,458	3,138	83.2
2035 Dual Bore V2-13	I-5 between SR 2 Interchange South Termini and SR 110 Interchange North Termini	245,400	752	1,617	3,480	83.9
2035 Dual Bore V2-14	I-5 between SR 110 Interchange North Termini and SR 110 Interchange South Termini	190,400	681	1,463	3,150	83.2
2035 Dual Bore V2-15	I-5 between ISR 110 Interchange South Termini and I-10 Interchange North Termini	202,700	673	1,446	3,112	83.2
2035 Dual Bore V2-16	I-5 between I-10 Interchange North Termini and I-10 Interchange South Termini	157,100	591	1,269	2,732	82.3
2035 Dual Bore V2-17	I-5 between I-10 Interchange South Termini and East Cesar Chavez Avenue Ramps	240,700	759	1,631	3,512	84.0
2035 Dual Bore V2-18	I-10 between I-5 Interchange west Termini and I-5 Interchange east Termini	69,200	259	548	1,175	76.8
2035 Dual Bore V2-19	I-10 between I-5 Interchange east Termini and SR710 Interchange west Termini	216,200	574	1,228	2,642	81.4
2035 Dual Bore V2-20	I-10 between SR710 Interchange east Termini and Rosemead Boulevard	230,400	602	1,287	2,769	81.5
2035 Dual Bore V2-21	I-10 between Rosemead Boulevard and I-605 Interchange west Termini	212,900	585	1,253	2,695	81.6
2035 Dual Bore V2-22	I-210 between I-605 Interchange East Termini and I-605 Interchange West Termini	154,900	614	1,317	2,835	82.3
2035 Dual Bore V2-23	I-210 between I-605 Interchange West Termini and Rosemead Boulevard	202,800	739	1,589	3,420	83.5
2035 Dual Bore V2-24	I-210 between Rosemead Boulevard and San Gabriel Boulevard	235,400	782	1,676	3,607	83.0
2035 Dual Bore V2-25	I-210 between San Gabriel Boulevard and I-710 Interchange East Termini	259,900	811	1,739	3,742	83.3
2035 Dual Bore V2-26	I-210 between I-710 Interchange North Termini and Lincoln Avenue	175,100	671	1,442	3,103	82.9
2035 Dual Bore V2-27	I-210 between Lincoln Avenue and SR 2	146,900	612	1,313	2,827	82.3
2035 Dual Bore V2-28	I-210 between SR 2 and La Crescenta Avenue	140,200	608	1,302	2,802	81.7
2035 Dual Bore V2-29	I-605 between I-210 Interchange South Termini and Los Angeles Street	141,700	613	1,315	2,831	82.3
2035 Dual Bore V2-30	I-605 between Los Angeles Street and I-10 Interchange North Termini	171,900	670	1,439	3,097	82.9

Modeled using the "Soft" setting.

Modeled using custom traffic percentages

2035 Dual Bore V4

	Roadway Segment	ADT	Center-line to 70 CNEL (feet)	Center-line to 65 CNEL (feet)	Center-line to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane
2035 Dual Bore V4-01	SR 2 between I-210 and SR 134 Interchange North Termini	97,200	313	667	1,432	78.1
2035 Dual Bore V4-02	SR 2 between SR 134 Interchange North Termini and SR 134 Interchange South Termini	61,400	238	502	1,075	76.2
2035 Dual Bore V4-03	SR 2 between SR 134 Interchange South Termini and I-5 Interchange North Termini	122,800	369	789	1,697	79.2
2035 Dual Bore V4-04	SR 2 between I-5 Interchange North Termini and I-5 Interchange South Termini	43,900	192	400	855	74.7
2035 Dual Bore V4-05	SR 110 between Glenarm Street and S Avenue 52	75,600	208	443	952	76.5
2035 Dual Bore V4-06	SR 110 between S Avenue 52 and I-5 Interchange North Termini	108,900	264	564	1,214	78.1
2035 Dual Bore V4-07	SR 110 between and I-5 Interchange North Termini and I-5 Interchange South Termini	91,000	234	501	1,077	77.3
2035 Dual Bore V4-08	SR 134 between SR 134 start at 210/710 Interchange and SR 134/I-210/SR 710 Interchange West Termini	167,900	542	1,161	2,498	81.3
2035 Dual Bore V4-09	SR 134 between SR 134/I-210/SR 710 Interchange West Termini and N. Figueroa Street	201,400	613	1,314	2,829	82.2
2035 Dual Bore V4-10	SR 134 between N. Figueroa Street and 2 Interchange east Termini	204,600	619	1,328	2,859	82.2
2035 Dual Bore V4-11	SR 134 between SR 2 Interchange east Termini and SR 2 Interchange west Termini	157,000	542	1,161	2,497	81.3
2035 Dual Bore V4-12	I-5 between SR 2 Interchange North Termini and SR 2 Interchange South Termini	213,500	660	1,417	3,050	83.0
2035 Dual Bore V4-13	I-5 between SR 2 Interchange South Termini and SR 110 Interchange North Termini	244,900	710	1,527	3,287	83.5
2035 Dual Bore V4-14	I-5 between SR 110 Interchange North Termini and SR 110 Interchange South Termini	190,300	639	1,374	2,957	82.8
2035 Dual Bore V4-15	I-5 between ISR 110 Interchange South Termini and I-10 Interchange North Termini	201,800	635	1,365	2,938	82.8
2035 Dual Bore V4-16	I-5 between I-10 Interchange North Termini and I-10 Interchange South Termini	157,000	554	1,190	2,560	81.9
2035 Dual Bore V4-17	I-5 between I-10 Interchange South Termini and East Cesar Chavez Avenue Ramps	240,400	725	1,559	3,356	83.7
2035 Dual Bore V4-18	I-10 between I-5 Interchange west Termini and I-5 Interchange east Termini	70,200	261	553	1,187	76.9
2035 Dual Bore V4-19	I-10 between I-5 Interchange east Termini and SR710 Interchange west Termini	215,900	573	1,227	2,639	81.4
2035 Dual Bore V4-20	I-10 between SR710 Interchange east Termini and Rosemead Boulevard	230,700	602	1,288	2,771	81.5
2035 Dual Bore V4-21	I-10 between Rosemead Boulevard and I-605 Interchange west Termini	213,100	580	1,243	2,674	81.6
2035 Dual Bore V4-22	I-210 between I-605 Interchange East Termini and I-605 Interchange West Termini	154,000	612	1,312	2,824	82.3
2035 Dual Bore V4-23	I-210 between I-605 Interchange West Termini and Rosemead Boulevard	201,600	731	1,570	3,379	83.5
2035 Dual Bore V4-24	I-210 between Rosemead Boulevard and San Gabriel Boulevard	234,200	777	1,666	3,585	83.0
2035 Dual Bore V4-25	I-210 between San Gabriel Boulevard and I-710 Interchange East Termini	258,700	808	1,734	3,730	83.2
2035 Dual Bore V4-26	I-210 between I-710 Interchange North Termini and Lincoln Avenue	171,700	716	1,539	3,312	83.3
2035 Dual Bore V4-27	I-210 between Lincoln Avenue and SR 2	145,800	663	1,423	3,062	82.8
2035 Dual Bore V4-28	I-210 between SR 2 and La Crescenta Avenue	140,100	648	1,388	2,987	82.2
2035 Dual Bore V4-29	I-605 between I-210 Interchange South Termini and Los Angeles Street	140,700	603	1,293	2,782	82.2
2035 Dual Bore V4-30	I-605 between Los Angeles Street and I-10 Interchange North Termini	171,100	659	1,415	3,047	82.8

Modeled using the "Soft" setting.

Modeled using custom traffic percentages

2035 Dual Bore V5

	Roadway Segment	ADT	Center-line to 70 CNEL (feet)	Center-line to 65 CNEL (feet)	Center-line to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane
2035 Dual Bore V5-01	SR 2 between I-210 and SR 134 Interchange North Termini	100,500	387	826	1,777	79.5
2035 Dual Bore V5-02	SR 2 between SR 134 Interchange North Termini and SR 134 Interchange South Termini	63,600	298	634	1,362	77.8
2035 Dual Bore V5-03	SR 2 between SR 134 Interchange South Termini and I-5 Interchange North Termini	122,800	441	943	2,029	80.4
2035 Dual Bore V5-04	SR 2 between I-5 Interchange North Termini and I-5 Interchange South Termini	44,300	203	426	911	75.2
2035 Dual Bore V5-05	SR 110 between Glenarm Street and S Avenue 52	75,400	207	442	951	76.5
2035 Dual Bore V5-06	SR 110 between S Avenue 52 and I-5 Interchange North Termini	108,900	264	564	1,214	78.1
2035 Dual Bore V5-07	SR 110 between and I-5 Interchange North Termini and I-5 Interchange South Termini	91,300	235	502	1,080	77.3
2035 Dual Bore V5-08	SR 134 between SR 134 start at 210/710 Interchange and SR 134/I-210/SR 710 Interchange West Termini	167,300	550	1,179	2,536	81.4
2035 Dual Bore V5-09	SR 134 between SR 134/I-210/SR 710 Interchange West Termini and N. Figueroa Street	204,000	607	1,302	2,803	82.1
2035 Dual Bore V5-10	SR 134 between N. Figueroa Street and 2 Interchange east Termini	206,900	613	1,315	2,829	82.2
2035 Dual Bore V5-11	SR 134 between SR 2 Interchange east Termini and SR 2 Interchange west Termini	158,400	527	1,129	2,428	81.2
2035 Dual Bore V5-12	I-5 between SR 2 Interchange North Termini and SR 2 Interchange South Termini	209,600	740	1,591	3,425	83.8
2035 Dual Bore V5-13	I-5 between SR 2 Interchange South Termini and SR 110 Interchange North Termini	241,100	828	1,780	3,832	84.5
2035 Dual Bore V5-14	I-5 between SR 110 Interchange North Termini and SR 110 Interchange South Termini	186,200	749	1,609	3,465	83.9
2035 Dual Bore V5-15	I-5 between ISR 110 Interchange South Termini and I-10 Interchange North Termini	197,400	738	1,587	3,417	83.8
2035 Dual Bore V5-16	I-5 between I-10 Interchange North Termini and I-10 Interchange South Termini	153,400	651	1,398	3,009	82.9
2035 Dual Bore V5-17	I-5 between I-10 Interchange South Termini and East Cesar Chavez Avenue Ramps	236,500	817	1,757	3,784	84.4
2035 Dual Bore V5-18	I-10 between I-5 Interchange west Termini and I-5 Interchange east Termini	69,400	256	542	1,162	76.7
2035 Dual Bore V5-19	I-10 between I-5 Interchange east Termini and SR710 Interchange west Termini	214,100	585	1,251	2,692	81.5
2035 Dual Bore V5-20	I-10 between SR710 Interchange east Termini and Rosemead Boulevard	231,200	596	1,274	2,741	81.5
2035 Dual Bore V5-21	I-10 between Rosemead Boulevard and I-605 Interchange west Termini	213,300	581	1,244	2,676	81.6
2035 Dual Bore V5-22	I-210 between I-605 Interchange East Termini and I-605 Interchange West Termini	153,900	615	1,319	2,839	82.3
2035 Dual Bore V5-23	I-210 between I-605 Interchange West Termini and Rosemead Boulevard	201,800	745	1,601	3,446	83.6
2035 Dual Bore V5-24	I-210 between Rosemead Boulevard and San Gabriel Boulevard	234,100	792	1,699	3,656	83.1
2035 Dual Bore V5-25	I-210 between San Gabriel Boulevard and I-710 Interchange East Termini	258,800	820	1,760	3,787	83.3
2035 Dual Bore V5-26	I-210 between I-710 Interchange North Termini and Lincoln Avenue	161,100	562	1,206	2,594	81.7
2035 Dual Bore V5-27	I-210 between Lincoln Avenue and SR 2	142,900	534	1,145	2,464	81.4
2035 Dual Bore V5-28	I-210 between SR 2 and La Crescenta Avenue	143,400	556	1,190	2,559	81.2
2035 Dual Bore V5-29	I-605 between I-210 Interchange South Termini and Los Angeles Street	141,100	625	1,341	2,886	82.4
2035 Dual Bore V5-30	I-605 between Los Angeles Street and I-10 Interchange North Termini	171,400	681	1,462	3,148	83.0

Modeled using the "Soft" setting.

Modeled using custom traffic percentages

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Appendix O: Memorandum of Agreement

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**MEMORANDUM OF AGREEMENT
AMONG THE CALIFORNIA DEPARTMENT OF TRANSPORTATION,
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER, AND THE ADVISORY
COUNCIL ON HISTORIC PRESERVATION
REGARDING THE STATE ROUTE 710 (SR-710) NORTH PROJECT,
CITIES OF ALHAMBRA, LOS ANGELES, MONTEREY PARK, PASADENA, ROSEMEAD,
SAN GABRIEL, SAN MARINO, and SOUTH PASADENA, and the UNICORPORATED
COMMUNITY of EAST LOS ANGELES, LOS ANGELES COUNTY, CALIFORNIA**

WHEREAS, the Federal Highway Administration (FHWA) has assigned, and the California Department of Transportation (Caltrans, including all subordinate divisions defined below) has assumed FHWA responsibility for environmental review, consultation, and pursuant to 23 USC 327, which became effective on October 1, 2012 and applies to this Undertaking; and

WHEREAS, pursuant to the January 2014 *First Amended Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California* (Section 106 PA), Caltrans is deemed to be a federal agency for all highway-aid projects it has assumed, and in that capacity Caltrans has assigned the role of “agency official” to the Caltrans Division of Environmental Analysis (DEA) Chief for the purpose of compliance with 36 CFR 800 and is responsible for oversight of District environmental responsibilities. To provide for effective compliance, day-to-day responsibilities and coordination of the Section 106 process are further delegated to the DEA Cultural Studies Office (CSO) Chief; and

WHEREAS, Caltrans and the Los Angeles County Metropolitan Transportation Authority (METRO) propose to improve mobility and relieve congestion in the area bounded by State Route 2 and Interstates 5, 10, 210 and 605 in east/northeast Los Angeles and the western San Gabriel Valley, and have selected the Transportation System Management (TSM)/Transportation Demand Management (TDM) Alternative as described in Attachment A; and

WHEREAS, Caltrans has consulted with the California State Historic Preservation Officer (SHPO) pursuant to Stipulations X.C, and XI of the Section 106 PA, and, where the Section 106 PA so directs, in accordance with 36 CFR Part 800, the regulation that implements Section 106 of the National Historic Preservation Act of 1966 (54 USC 306108), as amended (NHPA), regarding the Undertaking's effects on historic properties; and

WHEREAS, in accordance with 36 CFR 800.6(a)(1), Caltrans has notified the Advisory Council on Historic Preservation (ACHP) of its adverse effect determination with specified documentation, and the ACHP has chosen to participate in the consultation pursuant to 36 CFR 800.6(a)(1)(iii); X.C. 3.b of the Section 106 PA; and

WHEREAS, the Undertaking's Area of Potential of Effects (APE) includes maximum existing or proposed right-of-way for the TSM/TDM alternative and all areas that could potentially be directly or indirectly affected by the proposed Undertaking; and

WHEREAS, Caltrans has determined that the State Route 710 (SR-710) North Project, TSM/TDM Alternative (Undertaking) will have adverse effects on the Arroyo Seco Parkway Historic District, a property listed in the National Register of Historic Places (National Register) under Criteria A and C; and

WHEREAS, Caltrans in consultation with SHPO and the Consulting Parties, has determined that the Undertaking's adverse effects cannot be avoided and that implementation of the treatments set forth in Stipulations II and III of this MOA will satisfactorily take into account the Undertaking's adverse effects

on the historic property; and

WHEREAS, Caltrans District 7 and METRO have a responsibility to fulfill terms of this MOA and are participating as invited signatories; and

WHEREAS, Caltrans has consulted with the Los Angeles Conservancy, National Trust for Historic Preservation, No on 710 Action Committee, Pasadena Heritage, City of Pasadena, City of South Pasadena, Sequoyah School, and West Pasadena Residents' Association regarding the Undertaking and its adverse effects on the subject historic properties and have invited them to sign this MOA as concurring parties; and

WHEREAS, Caltrans has initiated consultation with the Los Angeles City/County Native American Indian Commission; the Gabrielino Tongva Nation; Ti'At Society/Inter-Tribal Council of Pimu; the Gabrielino-Tongva Tribe, Linda Candelaria, Bernie Acuna and Conrad Acuna; the Gabrielino/Tongva San Gabriel Band of Mission Indians; the Gabrielino Band of Mission Indians; Tongva Ancestral Territorial Tribal Nation; Gabrielino Tongva Indians of California Tribal Council, regarding the Undertaking and none of the groups requested to be a consulting party; will continue to consult with them and will afford them, should they so desire, the further opportunity to more directly and actively participate in the implementation of the Undertaking itself and this MOA; and

WHEREAS, Caltrans and Metro began extensive public outreach for the undertaking in early 2011 with eight public scoping meetings. Opportunities to involve the public in the engineering and environmental studies continued through Spring 2018 with Conversation Series Meetings, Stakeholder Meetings, Open Houses, Common Liaison Council Meetings, social media outlets, five public hearings as result of the circulation of the Draft EIR/EIS and FOE, and an additional public hearing following circulation of the Focused Recirculated DEIR/Supplemental EIS. The Section 106 outreach process overlapped with and was part of the outreach efforts under CEQA and NEPA beginning in 2013;

NOW, THEREFORE, Caltrans, SHPO, and ACHP agree that, upon Caltrans' decision to proceed with the Undertaking, Caltrans shall ensure that the Undertaking is implemented in accordance with the following stipulations in order to take into account the effects of the Undertaking on historic properties, and further agrees that these stipulations shall govern the Undertaking and all of its parts until this MOA expires or is terminated.

STIPULATIONS

Caltrans shall ensure that the following stipulations are carried out:

I. AREA OF POTENTIAL EFFECTS

- A. The Undertaking's Area of Potential Effects (APE) is depicted in Attachment B of this MOA. The APE includes the maximum existing or proposed right-of-way for the preferred alternative, easements (temporary and permanent), all improved properties subject to temporary or permanent changes in access (ingress and egress), and areas where visual or audible changes could occur outside the required right-of-way.
- B. If modifications to the Undertaking subsequent to the execution of this MOA necessitate the revision of the APE (i.e. Temporary Construction Easements, reduction of project scope or activities), District 7 will consult with Caltrans Headquarters Cultural Studies Office and the SHPO to facilitate mutual agreement on the subject revisions. If Caltrans, District 7, and the SHPO cannot reach such agreement, then the parties to this MOA shall resolve the dispute in accordance with Stipulation IV.B below. If Caltrans, District 7, and the SHPO reach mutual agreement on the proposed revisions, then District 7 will submit a final map of the revisions,

consistent with the requirements of Stipulation VIII.A and Attachment 3 of the Section 106 PA no later than 30 days following such agreement. Any additional required identification and evaluation efforts necessitated due to changes to the APE will be undertaken consistent with the requirements of Stipulation VIII.B and VIII.C of the Section 106 PA. Amendment of the APE through consultation among the MOA parties will not require an amendment to this MOA. The revised APE and supporting documentation shall be incorporated into Attachment B to this MOA.

II. TREATMENT OF HISTORIC PROPERTIES

Caltrans shall:

- A. Minimize the effects on the character-defining features of the Arroyo Seco Parkway Historic District (ASPHD) by preparing a plan that conforms to the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (SOIS) in consultation with Caltrans CSO and SHPO, as required.. The project Architectural Historian shall review the final design plans, review mockups as needed, and conduct a field visit to ensure that the following work is performed in accordance with the SOIS. At a minimum, the SOIS Plan will ensure:
 - New elements, like retaining walls, off-ramps, on-ramps, curbing, and lighting, will be designed to be compatible with the Historic District, in terms of color, materials, profiles, dimensions, etc.;
 - Any work taking place on character-defining features will minimize potential damage to the Historic District; and
 - All revegetation of buffers and planting strips will be designed to be compatible with the Historic District.
- B. Install a highway sign near the northern entrance to the Parkway at Glenarm Street that welcomes drivers to the Arroyo Seco Parkway Historic District. The sign will be compatible with similar signage found at the southern entrance to the Parkway.
- C. Create and post electronic content for a smartphone traveler application (The Clio or equal) that describes and interprets the Historic District. The content will include historical narrative information, as well as historical photographs, and other documentation. This application will be available free to the public through smartphone application stores prior to the termination of this agreement. The availability of the application will be advertised on or in Metro facilities such as bus benches, local bus lines, Gold Line Stations and rail cars within the project area.
- D. Caltrans shall submit design development plans for the Fair Oaks and State Street Interchanges for review and comment at 60% and 90% completion.
 1. All parties to the MOA will be invited to review the design development plans to determine whether the plans conform to concepts described in Item A of this stipulation. All parties to the MOA will provide comments on the submittals to Caltrans within 30 calendar days of receipt. If MOA parties do not comment within the time provided, Caltrans may assume that MOA parties concur and that the package meets the cited objectives.
 2. Caltrans will incorporate MOA parties' comments into the project plans to the fullest extent. If Caltrans revises project plans in response to MOA parties' comments, then no further review is required for that consultation package.

3. Should Caltrans object to incorporation of MOA parties' comments into consultation packages at any stage of the project, Caltrans will provide MOA parties with written explanation of that objection. Objections to the plans shall be resolved in accordance with Stipulation IV.B of this MOA.

III. DISCOVERIES, UNANTICIPATED EFFECTS AND TREATMENT OF HUMAN REMAINS

- A. Post-Review Discovery and Monitoring Plan (PRDMP). The PRDMP for the proposed project (Confidential Volume III of the Finding Of Adverse Effect) specifies procedures to be followed prior to and during construction activities to ensure compliance with the Caltrans Section 106 PA. The policies and procedures in the PRDMP will apply during ground-disturbing activities in areas deemed sensitive for subsurface archaeological deposits, particularly in the vicinity of the Horatio Rust Site and Otsungna Village Site. Archaeological Monitoring Areas are further specified in the PRDMP.
 - The Resident Engineer will require the Construction Contractor to implement the policies and procedures of the PRDMP detailed in Volume III of the Finding of Adverse Effect. The implementation of those requirements will be overseen by a Qualified Archaeological Monitor or a consultant who meets the Professionally Qualified Staff (PQS) requirements for a Qualified Archaeological Monitor.
- B. As legally mandated, human remains and related items discovered during the implementation of the terms of this Agreement and the Undertaking will be treated in accordance with the requirements of Health and Safety Code Section 7050.5(b). If pursuant to Health and Safety Code Section 7050.5(c) the coroner determines that the human remains are or may be those of a Native American, then the discovery shall be treated in accordance with the provisions of Public Resources Code Section 5097.98 (a)(d). Caltrans, as the landowner, shall ensure, to the extent possible, that the views of the Most Likely Descendent(s), as determined by the California Native American Heritage Commission, are taken into consideration when decisions are made about the disposition of Native American human remains and associated objects.
- C. If Caltrans determines, during implementation of the terms of this MOA or after construction of the Undertaking has commenced, that the Undertaking will affect a previously unidentified property that may be eligible for listing in the National Register, or affect a known historic property in an unanticipated manner, Caltrans will address the discovery or unanticipated effect in accordance with 36 CFR Section 800.13(b)(3) and the PRDMP. Caltrans at its discretion may hereunder assume any discovered property to be eligible for the National Register in accordance with 36 CFR Section 800.13(c) and the PRDMP.

IV. ADMINISTRATIVE PROVISIONS

A. STANDARDS

1. **Definitions.** The definitions provided at 36 CFR Section 800.16 are applicable throughout this MOA.
2. **Parties** to this agreement are defined as follows:
 - a. **Signatory parties** have the sole authority to execute, amend, or terminate the MOA.

- b. **Invited signatories** have the authority to amend or terminate the MOA.
 - c. **Concurring parties** signing the MOA do so to acknowledge their agreement or concurrence with the MOA, but have no legal authority under the MOA to terminate or amend the MOA. Concurring with the terms of the MOA does not constitute their agreement with the Undertaking.
 - d. The above use of the term "All Parties" refers to those defined in Stipulations IV.A.2.a-c regardless as to whether or not they sign the MOA.
3. **Professional Qualifications.** Caltrans shall ensure that the actions and products required by Stipulation II of this MOA shall be carried out by or under the direct supervision of persons meeting the *Secretary of the Interior's Professional Qualification Standards for Archeology and Historic Preservation* (36 CFR Part 61) in the relevant field of study.

B. RESOLVING OBJECTIONS

1. Should any party to this MOA object at any time in writing to the manner in which the terms of this MOA are implemented, to any action carried out or proposed with respect to implementation of the MOA (other than the Undertaking itself), or to any documentation prepared in accordance with and subject to the terms of this MOA, Caltrans shall immediately notify the other MOA parties of the objection, request their comments on the objection within 15 days following receipt of Caltrans' notification, and proceed to consult with the objecting party for no more than 30 days to resolve the objection. Caltrans will honor the request of the other parties to participate in the consultation and will take any comments provided by those parties into account.
2. If the objection is resolved during the 30-day consultation period, Caltrans may proceed with the disputed action in accordance with the terms of such resolution.
3. If at the end of the 30-day consultation period, Caltrans determines that the objection cannot be resolved through such consultation, then Caltrans shall forward all documentation relevant to the objection to the ACHP, including Caltrans' proposed response to the objection, with the expectation that the ACHP will, within thirty (30) days after receipt of such documentation:
 - a. Advise Caltrans that the ACHP concurs in Caltrans' proposed response to objection, whereupon Caltrans will respond to the objection accordingly. The objection shall thereby be resolved; or
 - b. Provide Caltrans with recommendations, which Caltrans will take into account in reaching a final decision regarding its response to the objection. The objection shall thereby be resolved; or
 - c. Notify Caltrans that the objection will be referred for comment pursuant to 36 CFR §800.7(c) and proceed to refer the objection and comment. Caltrans shall take the resulting comments into account in accordance with 36 CFR § 800.7(c) (4) and Section 110(1) of the NHPA. The objection shall thereby be resolved.
4. Should the ACHP not exercise one of the above options within 30 days after receipt of all pertinent documentation, Caltrans may proceed to implement its proposed response. The objection shall thereby be resolved.
5. Caltrans shall take into account any of the ACHP's recommendations or comments provided in accordance with this stipulation with reference only to the subject of the objection.

Caltrans's responsibility to carry out all actions under this MOA that are not the subjects of the objection shall remain unchanged.

6. At any time during implementation of the measures stipulated in this MOA, should a member of the public raise an objection in writing pertaining to such implementation to any signatory party to this MOA, that signatory party shall immediately notify Caltrans. Caltrans shall immediately notify the other signatory parties in writing of the objection. Any signatory party may choose to comment in writing on the objection to Caltrans. Caltrans shall establish a reasonable time frame for this comment period. Caltrans shall consider the objection, and in reaching its decision, Caltrans will take all comments from the other signatory parties into account. Within 15 days following closure of the comment period, Caltrans will render a decision regarding the objection and respond to the objecting party. Caltrans will promptly notify the other signatory parties of its decision in writing, including a copy of the response to the objecting party. Caltrans' decision regarding resolution of the objection will be final. Following issuance of its final decision, Caltrans may authorize the action subject to dispute hereunder to proceed in accordance with the terms of that decision.
7. Caltrans shall provide all parties to this MOA, and any parties that have objected pursuant to section B.3 and B.4 of this stipulation, with a copy of its final written decision regarding any objection addressed pursuant to this stipulation.
8. Caltrans may authorize any action subject to objection under this stipulation to proceed after the objection has been resolved in accordance with the terms of this stipulation.

C. AMENDMENTS

Any signatory party to this MOA may propose that this MOA be amended, whereupon all parties shall consult for no more than 30 days to consider such amendment. The amendment will be effective on the date a copy is signed by all of the original signatories. If the signatories cannot agree to appropriate terms to amend the MOA, any signatory may terminate the agreement in accordance with Stipulation III.D, below.

D. TERMINATION

1. If this MOA is not amended as provided for in Section C of this stipulation, or if any signatory proposes termination of this MOA for other reasons, the signatory party proposing termination shall, in writing, notify the other MOA parties, explain the reasons for proposing termination, and consult with the other parties for at least 30 days to seek alternatives to termination. Such consultation shall not be required if Caltrans proposes termination because the Undertaking no longer meets the definition set forth in 36 CFR Section 800.16 (y).
2. Should such consultation result in an agreement on an alternative to termination, the signatory parties shall proceed in accordance with the terms of that agreement.
3. Should such consultation fail, the signatory party proposing termination may terminate this MOA by promptly notifying the other MOA parties in writing. Termination hereunder shall render this MOA without further force or effect.
4. If this Agreement is terminated hereunder, and if Caltrans determines that the Undertaking will nonetheless proceed, then Caltrans shall comply with the requirements of the Section 106 PA, or request the comments of the ACHP pursuant to 36 CFR Part 800.

5. Once the MOA is terminated, and prior to work continuing on the undertaking, Caltrans must either:
 - a. Execute an MOA pursuant to 36 CFR § 800.6 or
 - b. Request, take into account, and respond to the comments of the ACHP under 36 CFR § 800.7. Caltrans shall notify the signatories as to the course of action it will pursue.

E. DURATION OF THE MOA

The duration of this MOA shall be no more than five (5) years following the date of execution by the SHPO and Caltrans, or upon completion of the Undertaking (whichever comes first). If the terms are not satisfactorily fulfilled at that time, Caltrans shall consult with the signatories and concurring parties to extend it or reconsider its terms. Reconsideration may include continuation of the MOA as originally executed, amendment of the MOA, or termination. In the event of termination, Caltrans will comply with Stipulations III through XI of the Section 106 PA if it determines that the Undertaking will proceed notwithstanding termination of this MOA.

F. REPORTING REQUIREMENTS AND RELATED REVIEWS

Caltrans shall provide the parties to this agreement an annual update. Such updates shall include any scheduling changes proposed, any problems encountered, failures to adopt proposed mitigation measures, and any disputes and objections received in Caltrans' efforts to carry out the terms of this MOA. The update will be due no later than December 31 of each year, beginning December 31, 2019 and continuing annually thereafter throughout the duration of this MOA. At the request of any party to this MOA, or if deemed necessary at least on an annual basis, Caltrans shall ensure that one or more meetings are held to facilitate review and comments, and to resolve questions and comments.

G. EFFECTIVE DATE

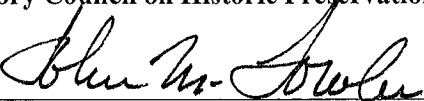
This MOA will take effect on the date that it has been executed by Caltrans, SHPO, and ACHP.

EXECUTION of this MOA by Caltrans, the SHPO, and the ACHP, and implementation of its terms, is evidence that Caltrans has taken into account the effects of this Undertaking on historic properties and afforded the ACHP an opportunity to comment.

**MEMORANDUM OF AGREEMENT
AMONG THE CALIFORNIA DEPARTMENT OF TRANSPORTATION,
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER, AND THE ADVISORY
COUNCIL ON HISTORIC PRESERVATION
REGARDING THE STATE ROUTE 710 (SR-710) NORTH PROJECT,
CITIES OF ALHAMBRA, LOS ANGELES, MONTEREY PARK, PASADENA, ROSEMEAD,
SAN GABRIEL, SAN MARINO, and SOUTH PASADENA, and the UNICORPORATED
COMMUNITY of EAST LOS ANGELES, LOS ANGELES COUNTY, CALIFORNIA**

SIGNATORY PARTIES:

Advisory Council on Historic Preservation

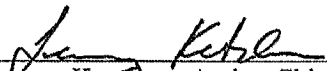
By 
John M. Fowler
Executive Director

10/18/18
Date

**MEMORANDUM OF AGREEMENT
AMONG THE CALIFORNIA DEPARTMENT OF TRANSPORTATION,
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER, AND THE ADVISORY
COUNCIL ON HISTORIC PRESERVATION
REGARDING THE STATE ROUTE 710 (SR-710) NORTH PROJECT,
CITIES OF ALHAMBRA, LOS ANGELES, MONTEREY PARK, PASADENA, ROSEMEAD,
SAN GABRIEL, SAN MARINO, and SOUTH PASADENA, and the UNINCORPORATED
COMMUNITY of EAST LOS ANGELES, LOS ANGELES COUNTY, CALIFORNIA**

SIGNATORY PARTIES:

California Department of Transportation

By 
Jeremy Ketchum, Acting Chief
Caltrans Division of Environmental Analysis

10/9/18
Date

California State Historic Preservation Officer

By 
Julianne Polanco
State Historic Preservation Officer

10/9/18
Date

**MEMORANDUM OF AGREEMENT
AMONG THE CALIFORNIA DEPARTMENT OF TRANSPORTATION,
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER, AND THE ADVISORY
COUNCIL ON HISTORIC PRESERVATION
REGARDING THE STATE ROUTE 710 (SR-710) NORTH PROJECT,
CITIES OF ALHAMBRA, LOS ANGELES, MONTEREY PARK, PASADENA, ROSEMEAD,
SAN GABRIEL, SAN MARINO, and SOUTH PASADENA, and the UNINCORPORATED
COMMUNITY of EAST LOS ANGELES, LOS ANGELES COUNTY, CALIFORNIA**


INVITED SIGNATORY:

California Department of Transportation

By  _____
John Bulinski, District Director
District 7, Los Angeles

_____ 10/10/18
Date

Los Angeles County Metropolitan Transportation Authority

By  _____
Abdollah Ansari, Senior Executive Officer
Highway Program

_____ 10/10/18
Date

**MEMORANDUM OF AGREEMENT
AMONG THE CALIFORNIA DEPARTMENT OF TRANSPORTATION,
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER, AND THE ADVISORY
COUNCIL ON HISTORIC PRESERVATION
REGARDING THE STATE ROUTE 710 (SR-710) NORTH PROJECT,
CITIES OF ALHAMBRA, LOS ANGELES, MONTEREY PARK, PASADENA, ROSEMEAD,
SAN GABRIEL, SAN MARINO, and SOUTH PASADENA, and the UNINCORPORATED
COMMUNITY of EAST LOS ANGELES, LOS ANGELES COUNTY, CALIFORNIA**

CONCURRING PARTIES:

Los Angeles Conservancy

Did not respond
By _____ Date _____
Adrian Scott Fine, Director of Advocacy

National Trust for Historic Preservation

Did not respond
By _____ Date _____
Paul W. Edmondson, Chief Legal Officer

No on 710 Action Committee

By Claire W. Bogaard Date 13 October 2018
Claire W. Bogaard, Chair

Pasadena Heritage

By Susan Mossman Date 10-19-2018
Susan Mossman, Executive Director

City of Pasadena

Did not respond
By _____ Date _____
Steve Mermell, City Manager

Attachment A: Project Description

2.2.2 Transportation System Management (TSM)/Transportation Demand Management (TDM) Alternative

The TSM/TDM Alternative consists of strategies and improvements to increase efficiency and capacity for all modes of transportation within the system with lower capital cost investments and/or lower potential impacts. The TSM/TDM Alternative is designed to maximize the efficiency of the existing transportation system by improving capacity and reducing the effects of bottlenecks and chokepoints. TSM strategies increase the efficiency of existing facilities (i.e., TSM strategies are actions that increase the number of vehicle trips or lane capacity of a facility without increasing the number of through lanes).

Transportation System Management (TSM)

TSM strategies include Intelligent Transportation Systems (ITS), local street and intersection improvements, and Active Traffic Management (ATM). These concepts are explained below.

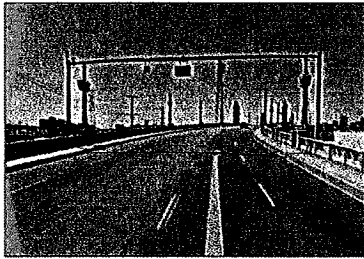

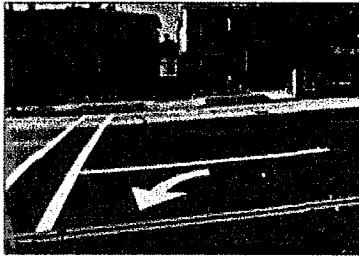
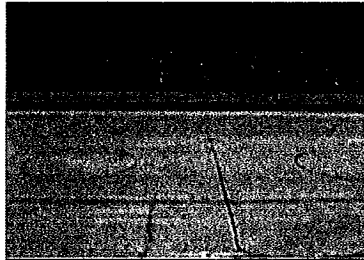



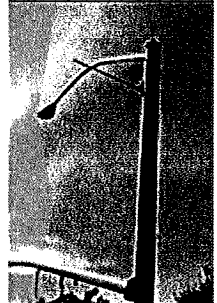
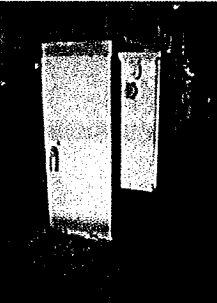
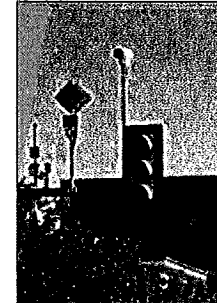

- **Intelligent Transportation Systems (ITS) Improvements:** ITS improvements include traffic signal upgrades, synchronization and transit prioritization, installation of arterial changeable message signs (CMS), and arterial video and speed data collection systems. The TSM/TDM Alternative includes signal optimization on corridors with signal coordination hardware already installed by Metro's Traffic Signal Synchronization Program (TSSP). These corridors include Del Mar Avenue, Rosemead Boulevard, Temple City Boulevard, Santa Anita Avenue, Fair Oaks Avenue, Fremont Avenue, and Peck Road. The only remaining major north-south corridor in the San Gabriel Valley in which TSSP has not been implemented is Garfield Avenue; therefore, TSSP on this corridor is included in the TSM/TDM Alternative. The following provides further explanation of the proposed ITS elements.
 - Traffic signal upgrades include turn arrows, vehicle and/or bicycle detection, pedestrian countdown timers, incorporation into the regional management traffic center for real-time monitoring of traffic, and updating of signal timing.
 - Synchronization is accomplished through signal coordination to optimize progression as well as reduce delay.
 - Transit signal prioritization includes adjusting signal priority for transit vehicles to optimize travel times for public transit riders and vehicular traffic.
 - Arterial CMS are used to alert travelers about unusual road conditions, special event traffic, accident detours, and other incidents.
 - Arterial video and speed data collection includes cameras and other vehicle detection systems that are connected to a central monitoring location control, thereby allowing for faster detection and response adjustment to traffic incidents and other unusual traffic conditions.

Physical improvements associated with the ITS improvements would be located on existing street poles and/or traffic signals or located underneath the roadway asphalt within the public right-of-way. Figure 2.2.2-1 on the following page shows typical visual representation of these components. The locations of the proposed ITS improvements are shown in Figure 2.2.2-2 and Table 2.2.2-1 on page 2-6.

- **Local Street and Intersection Improvements:** The local street and intersection improvements are proposed within the Cities of Los Angeles, Pasadena, South Pasadena, Alhambra, San Gabriel, Rosemead, Arcadia, Temple City, and San Marino, and in areas of unincorporated Los Angeles County. The locations of the proposed improvements to local streets, intersections, and freeway ramps as well as two new local roadways are shown in Figure 2.2.2-3 and listed in Table 2.2.2-2 on page 2-7. As identified in Table 2.2.2-2 on page 2-8, Other Road Improvement T-1 (Valley Boulevard to Mission Road Connector Road) would only be constructed with the BRT and TSM/TDM Alternatives.
- **Active Traffic Management (ATM):** ATM technology and strategies are also included in the TSM/TDM Alternative. The major elements of ATM are arterial speed data collection and CMS. Data on arterial speeds would be collected and distributed through Los Angeles County's Information Exchange Network (IEN). Many technologies are available for speed data collection or the data could be purchased from a third-party provider.

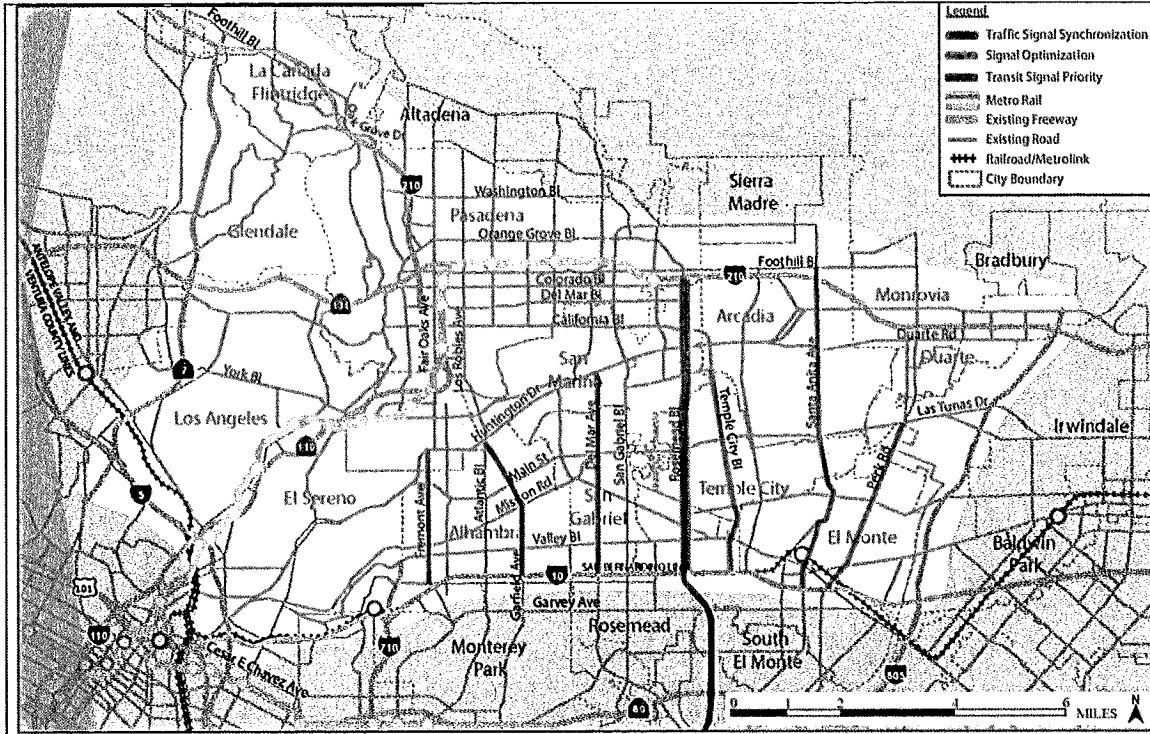
Travel time data collected through this effort could be provided to navigation system providers for distribution to the traveling public. In addition, arterial CMS or "trailblazer" message signs would be installed at key locations to make travel time and other traffic data available to the public. The locations of the proposed ATM improvements are shown in Figure 2.2.2-4 and Table 2.2.2-3 on page 2-9 and Figure 2.2.2-5 on page 2-10.

FIGURE 2.2.2-1:
 TSM/TDM Alternative ITS Improvements

				
<p>Bridge structure for Changeable Message Sign (CMS).</p>	<p>Mast-arm structure for CMS.</p>	<p>Vehicle/bicycle detection loops and turn arrows at intersection.</p>		
				
<p>Vehicle/bicycle detection loops in lane.</p>	<p>Traffic signal pull box.</p>	<p>Traffic signal poles at intersection.</p>		
				
<p>Wireless camera on light pole.</p>	<p>Wireless antenna on light pole.</p>	<p>Traffic signal controller cabinet.</p>	<p>Wireless antenna on traffic light.</p>	<p>Traffic signal poles at crosswalk.</p>

Source: LSA Associates Inc. (2014)

FIGURE 2.2.2-2:
Map of TSM/TDM Alternative ITS Improvements



SOURCE: CH2M HILL (2015)

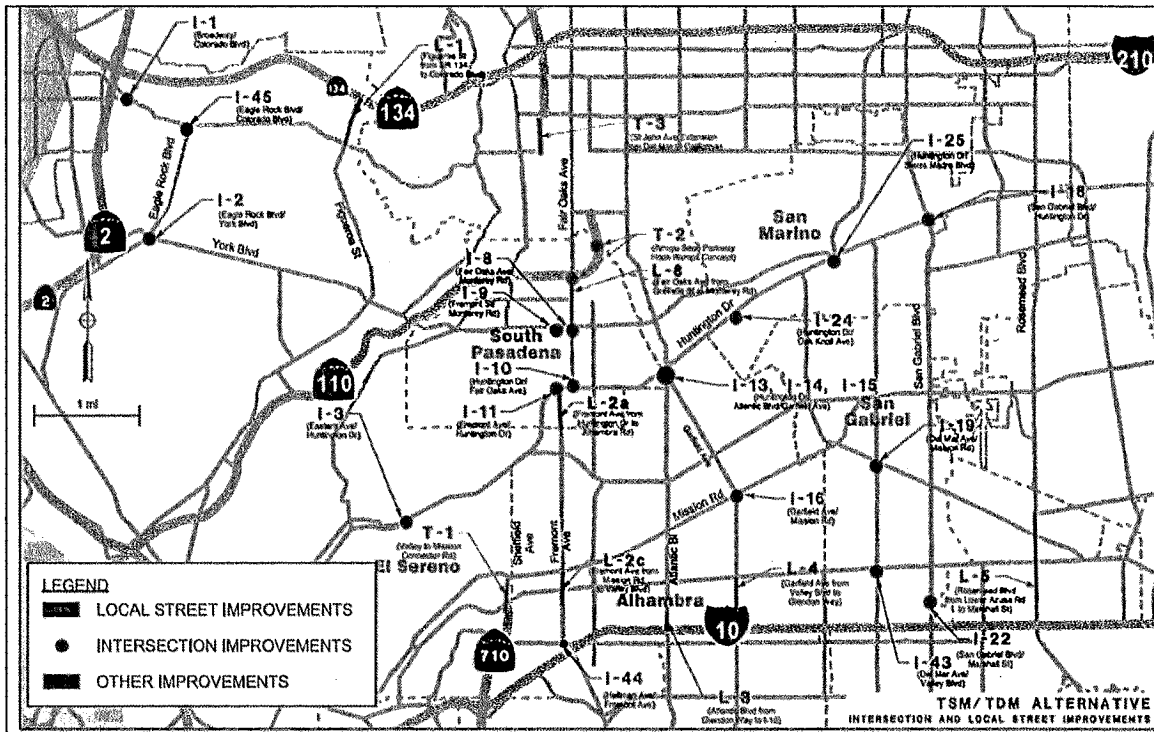
TABLE 2.2.2-1:
TSM/TDM Alternative ITS Improvements

ID No.	Description	Location
ITS-1	Transit Signal Priority	Rosemead Boulevard (from Foothill Boulevard to Del Amo Boulevard)
ITS-2	Install Video Detection System on SR 110	SR 110 north of US-101
ITS-3	Install Video Detection System at Intersections	At key locations in the study area
ITS-4	Arterial Speed Data Collection	On key north/south arterials
ITS-5	Install Arterial CMS	At key locations in the study area
ITS-6	Traffic Signal Synchronization on Garfield Avenue	Huntington Drive to I-10
ITS-7	Signal optimization on Del Mar Avenue	Huntington Drive to I-10
ITS-8	Signal optimization on Rosemead Boulevard	Foothill Boulevard to I-10
ITS-9	Signal optimization on Temple City Boulevard	Duarte Road to I-10
ITS-10	Signal optimization on Santa Anita Avenue	Foothill Boulevard to I-10
ITS-11	Signal optimization on Peck Road	Live Oak Avenue to I-10
ITS-12	Signal optimization on Fremont Avenue	Huntington Drive to I-10

CMS = changeable message signs
 I-10 = Interstate 10
 ITS = Intelligent Transportation Systems
 SR 110 = State Route 110

TDM = Transportation Demand Management
 TSM = Transportation System Management
 US-101 = United States Route 101

FIGURE 2.2.2-3:
Local Street and Intersection Improvements of the TSM/TDM Alternative



SOURCE: CH2M HILL (2015)

TABLE 2.2.2-2:
Local Street and Intersection Improvements of the TSM/TDM Alternative

ID No.	Description	Location
Local Street Improvements		
L-1	Figueroa Street from SR 134 to Colorado Boulevard	City of Los Angeles (Eagle Rock)
L-2a	Fremont Avenue from Huntington Drive to Alhambra Road	City of South Pasadena
L-2c	Fremont Avenue from Mission Road to Valley Boulevard	City of Alhambra
L-3 ¹	Atlantic Boulevard from Glendon Way to I-10	City of Alhambra
L-4	Garfield Avenue from Valley Boulevard to Glendon Way	City of Alhambra
L-5	Rosemead Boulevard from Lower Azusa Road to Marshall Street	City of Rosemead
L-8 ¹	Fair Oaks Avenue from Grevelia Street to Monterey Road	City of South Pasadena
Intersection Improvements		
I-1	West Broadway/Colorado Boulevard	City of Los Angeles (Eagle Rock)
I-2	Eagle Rock Boulevard/York Boulevard	City of Los Angeles (Eagle Rock)
I-3	Eastern Avenue/Huntington Drive	City of Los Angeles (El Sereno)
I-4	I-710 SB On-Ramp/Valley Boulevard	City of Alhambra
I-5	I-710 NB Off-Ramp/Valley Boulevard	City of Alhambra
I-8	Fair Oaks Avenue/Monterey Road	City of South Pasadena
I-9	Fremont Street/Monterey Road	City of South Pasadena
I-10	Huntington Drive/Fair Oaks Avenue	City of South Pasadena
I-11	Fremont Avenue/Huntington Drive	City of South Pasadena
I-13	Huntington Drive/Garfield Avenue	Cities of Alhambra/South Pasadena/San Marino
I-14	Huntington Drive/Atlantic Boulevard	Cities of Alhambra/South Pasadena/San Marino

TABLE 2.2.2-2 (Cont.):

Local Street and Intersection Improvements of the TSM/TDM Alternative

ID No.	Description	Location
Intersection Improvements (cont.)		
I-15	Atlantic Boulevard/Garfield Avenue	Cities of Alhambra/South Pasadena/San Marino
I-16	Garfield Avenue/Mission Road	City of Alhambra
I-18	San Gabriel Boulevard/Huntington Drive	City of San Marino/Unincorporated Los Angeles County (East Pasadena/East San Gabriel)
I-19	Del Mar Avenue/Mission Road	City of San Gabriel
I-22	San Gabriel Boulevard/Marshall Street	City of San Gabriel
I-24	Huntington Drive/Oak Knoll Avenue	City of San Marino
I-25	Huntington Drive/Sierra Madre Boulevard	City of San Marino
I-43	Del Mar Avenue/Valley Boulevard	City of San Gabriel
I-44	Hellman Avenue/Fremont Avenue	City of Alhambra
I-45	Eagle Rock Boulevard/Colorado Boulevard	City of Los Angeles (Eagle Rock)
Other Road Improvements		
T-1 ²	Valley Boulevard to Mission Road Connector Road	Cities of Alhambra/Los Angeles (El Sereno)
T-2	SR 110/Fair Oaks Avenue Hook Ramps (within the Arroyo Seco Parkway Historic District)	Cities of South Pasadena/Pasadena
T-3 ³	St. John Avenue Extension between Del Mar Boulevard and West California Boulevard	City of Pasadena

¹ Local Street Improvements L-3 and L-8 would not be constructed with the BRT Alternative.

² Other Road Improvement T-1 would only be constructed with the BRT and TSM/TDM Alternatives.

³ Other Road Improvement T-3 would not be constructed with either the single-bore or dual-bore design variation of the Freeway Tunnel Alternative.

I-10 = Interstate 10
 I-710 = Interstate 710
 NB = North Bound
 SB = South Bound

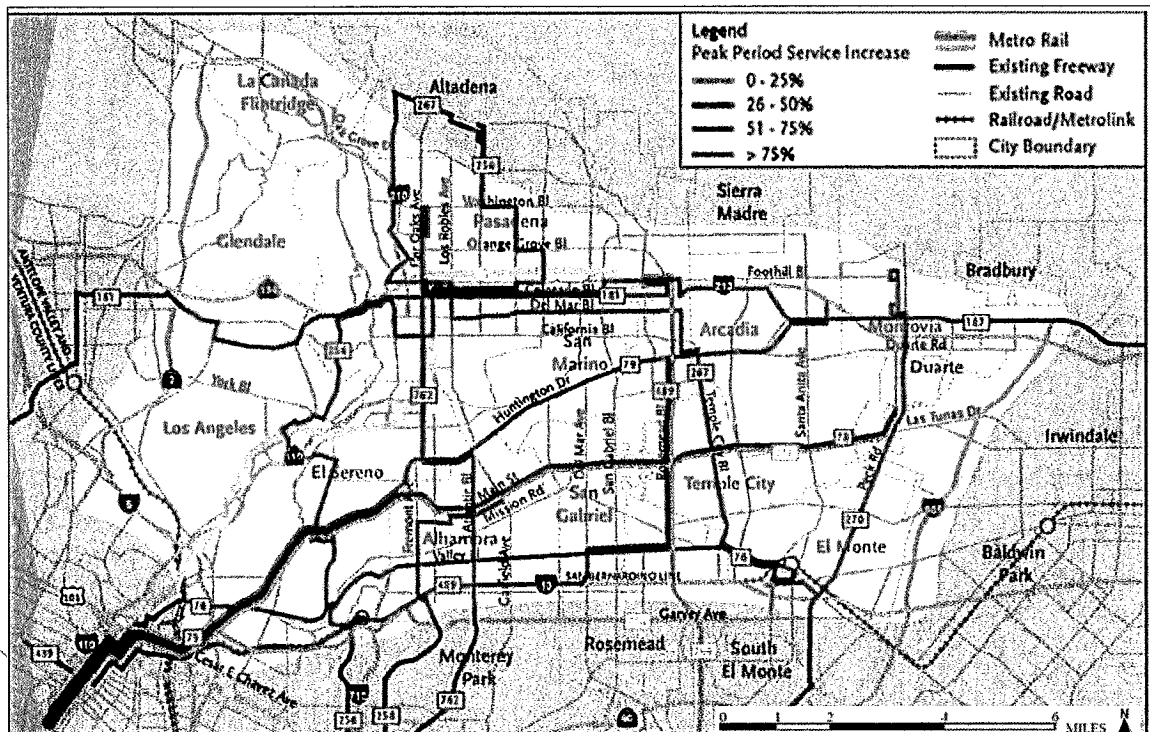
SR 110 = State Route 110
 SR 134 = State Route 134
 TDM = Transportation Demand Management
 TSM = Transportation System Management

Transportation Demand Management (TDM)

TDM strategies focus on regional means of reducing the number of vehicle trips and vehicle miles traveled as well as increasing vehicle occupancy. TDM strategies facilitate higher vehicle occupancy or reduce traffic congestion by expanding the traveler’s transportation options in terms of travel method, travel time, travel route, travel costs, and the quality and convenience of the travel experience. The TDM strategies include reducing the demand for travel during peak periods, reducing the use of motor vehicles, shifting the use of motor vehicles to uncongested times of day, encouraging rideshare and transit use, eliminating trips (i.e., telecommuting), and improved transportation options. The TDM strategies include expanded bus service, bus service improvements, and bicycle improvements:

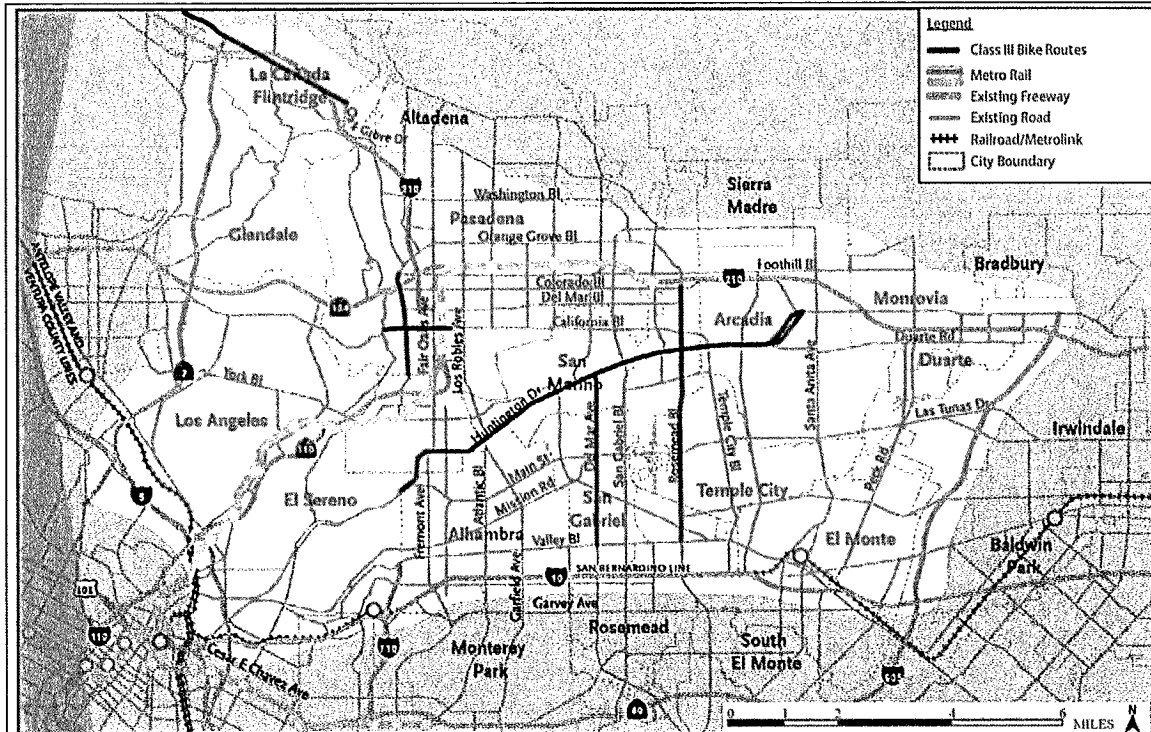
- **Expanded Bus Service and Bus Service Improvements:** The transit service improvements enhance bus headways between 10 and 30 minutes during the peak hour and 15 to 60 minutes during the off-peak period. Bus headways are the amount of time between consecutive bus trips (traveling in the same direction) on the bus route. Some of the bus service enhancements would almost double the existing bus service. The locations of the expanded bus service are illustrated in Figure 2.2.2-4 below.
- **Bicycle Facility Improvements:** The bicycle facility improvements include on-street Class III bicycle facilities that support access to transit facilities through the study area and expansion of bicycle parking facilities at existing Metro Gold Line stations. Proposed bicycle facility improvements are outlined in Figure 2.2.2-5 and Table 2.2.2-3 on page 2-10.

FIGURE 2.2.2-4:
 Proposed Bus Transit Refinement for the TSM/TDM Alternative



SOURCE: CH2M Hill (2015)

FIGURE 2.2.2-5:
 Active Transportation and Bicycle Enhancements in the TSM/TDM Alternative



SOURCE: CH2M HILL (2015)

TABLE 2.2-3:
 Active Transportation and Bus Enhancements in the TSM/TDM Alternative

ID No.	Description	Location
Bus Service Improvements		
Bus-1	Additional bus service	Various
Bus-2	Bus stop enhancements	Along TSM routes
Bicycle Facility Improvements		
Bike-1	Rosemead Boulevard bike route (Class III)	Colorado Boulevard to Valley Boulevard (through Los Angeles County, Temple City, and Rosemead)
Bike-2	Del Mar Avenue bike route (Class III)	Huntington Drive to Valley Boulevard (through San Marino and San Gabriel)
Bike-3	Huntington Drive bike route (Class III)	Mission Road to Santa Anita Avenue (through the City of Los Angeles, South Pasadena, San Marino, Alhambra, Los Angeles County, and Arcadia)
Bike-4	Foothill Boulevard bike route (Class III)	In La Cañada Flintridge
Bike-5	Orange Grove bike route (Class III)	Walnut Street to Columbia Street (in Pasadena)
Bike-6	California Boulevard bike route (Class III)	Grand Avenue to Marengo Avenue (in Pasadena)
Bike-7	Add bike parking at transit stations	Metro Gold Line stations
Bike-8	Improve bicycle detection at existing intersections	Along bike routes in study area

2.2.2.1 Construction Activities Associated with the TSM/TDM Alternative

To better understand how the TSM/TDM Alternative could potentially affect historic properties, this section provides a description of the construction activities associated with the TSM/TDM Alternative, including a description of the methods and equipment that would be employed during construction of the TSM/TDM Alternative. Not all the construction or operational activities described below are necessarily proposed immediately adjacent to or near historic properties. **Chapter 5** describes the thresholds for various construction-related effects and analyzes the potential effects on each historic property identified within the APE.

Construction activities associated with the TSM/TDM Alternative are minimal. The proposed improvements associated with the TSM/TDM Alternative would include installing new mechanical equipment onto existing infrastructure within existing right-of-way or using technology to improve the operation and traffic flow of existing transportation facilities. The proposed ITS improvements such as installing video detection systems, optimizing traffic signals, and collecting arterial speed data would include mounting new mechanical equipment onto existing street poles and/or traffic signals which would not require any physical construction. Therefore, the physical construction activities associated with the TSM strategies would be limited to installation of new Arterial Changeable Message Signs (CMS) and cutting the existing asphalt to install vehicle or bicycle detection devices beneath the roadway within the public right-of-way. Limited small-scale construction equipment such as jackhammers or cement cutters may be used to install the CMS support structures and vehicle and/or bicycle detection systems. Infrastructure improvements for improved bicycle circulation would include striping the existing roadway with new bike lanes and adding bike parking to existing Gold Line transit stations. Some improvements, such as installation of new sidewalks, curbs, and gutters, the installation of traffic monitoring and control equipment, and new traffic lanes, installation/replacement of street lighting, signage, lane and pedestrian crosswalk striping, street furniture (e.g., bus stop amenities, benches, trash cans), and landscaping, could utilize excavators, bulldozers, compactors, graders, concrete trucks, concrete pumping equipment, asphalt pavers, and rollers.

Construction activities associated with improving various local street intersections and interchanges may include slight re-alignment of existing freeway ramps or street configurations; grading or paving; installing medians; replacing curbs, gutters, and sidewalks; restriping the roadway; and the introduction of two new local roadways. Small-scale construction equipment (vehicle size or smaller) such as jackhammers, backhoes, trenchers, trucks hauling materials, cement trucks, generators and compressors, pavers, and compactors might be used for constructing the proposed street improvements. However, all the proposed TSM and TDM improvements would take place in areas where larger-scale infrastructure improvements have already occurred within existing right-of-way.

2.2.2.2 Operational Activities Associated with the TSM/TDM Alternative

The TDM strategies focus on expanding transportation options to reduce the number and length of vehicle trips and increase vehicle occupancy by reducing the demand for travel during peak periods, reducing the use of motor vehicles. It would include expanded bus service (double the existing bus service) and bus service improvements. Therefore, no ongoing physical effects would be anticipated, apart from the addition of more buses and bicycles onto the existing streets during peak periods. Operational effects of the TSM/TDM Alternative could include changes to noise and visual settings associated with proposed improvements.

Attachment B: Area of Potential Effects Map (APE) for TSM/TDM Alternative

Attachment C: Consulting Party Log

PROJECT NAME: 710 North Project
 PROJECT EA # 187900
 Section 106 MOA (first draft)

REVIEWER: Kelly Ewing-Toledo
 DISCIPLINE: Senior Environmental Planner, Principal Architectural Historian

CODES : A - Accept/will comply, B - Basic input req'd from others, C - Clarify/discuss, D - Different submittal applies, N - Comment not applicable

No.	Page No.	Reviewer	Reviewer Comment No.	Comments	Code	Response/Actions	Initial (a)	Initial (b)
1	1	WPRA	1	MOA should add wording that the TSM/TDM is 'the project' and the only Preferred Alternative.	A	Added clarification to <i>Whereas</i> clauses that identifies the TSM/TDM as the preferred alternative.	KET	
2	1	WPRA	2	MOA should add wording that the tunnel alternative analyses are inadequate and should not be certified in the FEIR/FEIS, and that the tunnel alternatives are infeasible under Section 4(f) of the DOT Act of 1968.	D	The MOA is not the appropriate document to include this statement. See revised Section IV. D. 5. for clarification.	KET	
3	1	WPRA	3	MOA should add wording that if the tunnels are considered for implementation at a later time, a new environmental impact process will need to be performed.	C, D	The MOA is not the appropriate document to include this statement. See revised Section IV. D. 5. for clarification.	KET	
4								
5	1	PH	1	Recommend that recital clause be included in the MOA that clearly identifies the Undertaking as the TSM/TDM Alternative, as opposed to the SR-710 North Project.	A	Added clarification to <i>Whereas</i> clauses that identifies the TSM/TDM as the preferred alternative; Name of project or undertaking remains SR-710 North Project.	KET	
6	all	PH	2	MOA should refer specifically to "Consulting Parties," (CPs) as opposed to "all parties," which could be misconstrued to include only signatories.	A	This MOA is inclusive of all parties. Referring specifically to "Consulting Parties" would limit other parties' full participation, i.e. Native American Tribes. Will clarify throughout to include "all parties to this MOA."	KET	
7	2	PH	3	Before treatment plan is prepared, the NR nomination should be updated, especially district boundaries and CDFs; take into consideration the cumulative effects of multiple projects, both present and future.	D	These stipulations are included in the MOA executed 06/26/17 for the SR-110 (Arroyo Seco Parkway) Safety Enhancement Project in the Cities of Los Angeles and S. Pasadena, Los Angeles County.	KET	
8	2	PH	4	CPs should be allowed to review and contribute to the treatment plan.	D	The Consulting Parties for the SR-110 Safety Enhancement Project are City of S. Pasadena and California Preservation Foundation(CPF). No other parties requested consultation. Section IV. B. 6 refers to public objection in writing. TBD which SR-710 CPs desire to "object" (review and comment on the Treatment Plan).	KET	
9	3, II.B	PH	5	Support installation of parkway sign. To be compatible with existing signage and surroundings.	A	Changed language to read "existing signage and its surroundings."	KET	
10	2, II	PH	6	Recommend recodation of the ASPHD prior to the commencement of construction activities.	D	The Historic American Engineering Record for the Arroyo Seco Parkway (HAER no. CA-265), August 1999 remains sufficient recodation of the Parkway.	KET	
11	3, II.C	PH	7	We support the creation of a smart phone traveler application.	A	Included in current draft MOA.	KET	
12	3, II, D & E	PH	8	Design development plans reviewed by SHPO at 60 and 90 percent should also be reviewed by CPs and all comments incorporated.	A	Revised Stipulation II. D to include all parties to the MOA.	KET	

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 Section 106 MOA (first draft)

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No.	Page No.	Reviewer	Reviewer Comment No.	Comments	Code	Response/Actions	Initial (a)	Initial (b)
13	4, III. C	PH	9	Request that Caltrans recognize locally eligible properties and ensure that they be protected.	D, N	Caltrans prepared a HPSR/HRER in December 2014 that identified and evaluated all properties for NR eligibility within the APE for this project. Identification of historical resources and locally significant properties is part of that process as well. A SHPSR was prepared October 2017 that evaluated additional properties. The SHPO concurred on those identification efforts. In addition, all State-owned properties in the SR-710 Corridor Cities of Pasadena, S. Pasadena and Los Angeles were reviewed for NR eligibility, and identified for California Register eligibility and local significance in the HRCRs dated March 2015. SHPO concurred on those identification and evaluations.	KET	
14	4, IV. B. 1	PH	10	Recommend Caltrans make this process (resolving objections) available to all CPs rather than some smaller group such as Signatories.	A	Document reads, "...any party to this MOA..." It does not limit objections and resolution to Signatories only.	KET	
15								
16	1	No 710 AC	1	Title page should not include cities not directly involved with the TSM/TDM alternative.	N	This comment refers to the official title of the project. No change will be made to the official title of the project in the MOA. There are TSM/TDM improvements proposed for all areas listed in title.	KET	
17	1	No 710 AC	2	Suggest the MOA be both MOA and PA since details about future projects on state-owned property impacted by TSM/TDM alternative are unknown.	N	Execution of this MOA is specifically to resolve adverse effects of the TSM/TDM alternative on historic properties, the ASPHD. This alternative is clearly defined. See Attachment A for TSM/TDM description. Any future projects will be subject to a separate environmental process. The MOA is the appropriate document.	KET	
18	2	No 710 AC	3	Supports update to National Register nomination of the ASPHD, review must include SHPO and local interested groups.	D	These stipulations are included in the MOA executed 06/26/17 for the SR-110 (Arroyo Seco Parkway) Safety Enhancement Project in the Cities of Los Angeles and S. Pasadena, Los Angeles County; City of S. Pasadena and CPF are consulting parties for that project. SHPO will review and comment on the update per Stipulation II.B. of that MOA.	KET	

REVIEWER: Kelly Ewing-Toledo
 DISCIPLINE: Senior Environmental Planner, Principal Architectural Historian

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No.	Page No.	Reviewer	Reviewer Comment No.	Comments	Code	Response/Actions	Initial (a)	Initial (b)
19	2	No 710 AC	4	Caltrans should consider a review of properties in Pasadena, S. Pasadena, Los Angeles listed or eligible for the NR. Many years have passed since initial review and properties may qualify now for the NR.	D	Caltrans prepared a HPSR/HRE in December 2014 that identified and evaluated all properties for NR eligibility within the APE for this project. A SHPSR was prepared October 2017 that evaluated additional properties. The SHPO concurred on those identification efforts. In addition, all State-owned properties in the SR-710 Corridor Cities of Pasadena, S. Pasadena and Los Angeles were reviewed for NR eligibility, and identified for California Register eligibility and local significance in the HRCRs dated March 2015. SHPO concurred on those identification and evaluations.	KET	
20	1	No 710 AC	5	Recommend that ACHP be invited to participate and to be Signatory on this MOA.	A	ACHP has been invited and has accepted participation in this MOA. They will be included as a Signatory.	KET	
21								
22	1	City S. Pasadena	1	MOA should state clearly that the preferred alternative is the TSM/TDM.	A	Added clarification to <i>Whereas</i> clauses that identifies TSM/TDM as the preferred alternative.	KET	
23	1	City S. Pasadena	2	MOA should state that tunnel alternatives have significant impacts that do not support the certification of the Final EIR/EIS.	N	The MOA is not the appropriate document to state this. MOA is written only to address adverse effects caused by the preferred alternative.	KET	
24	1	City S. Pasadena	3	MOA should acknowledge Metro's May 25, 2017 decision to select TSM/TDM alternative.	N	The MOA is not the appropriate document to state this.	KET	
25	1	City S. Pasadena	4	MOA should be changed to a PA as effects/impacts from a new list of local TSM/TDM projects is unknown	C, N	There are no additional "early action" or otherwise previously unidentified projects associated with the TSM/TDM for the SR-710 North Project. All projects listed under the preferred alternative are defined. See Attachment A. Any future projects will be subject to a separate environmental review and document. The MOA is the appropriate document for this project.	KET/JR	
26	2	City S. Pasadena	5	A comprehensive analysis of impacts to the ASPHD should be considered to determine minimization/mitigation measures. MOA should identify, develop, incorporate mechanism for defining, assessing cumulative impacts from current, planned and future projects as well as effects of same on excess parcels conveyed by Caltrans to other owners.	D	This MOA is the appropriate document to address resolution of adverse effects to the ASPHD caused by the preferred alternative, including identifying minimization/mitigation measures. A cumulative impact analysis for the ASPHD was completed as part of the SR-110 Safety Enhancement Project, another planning document not related to this project. Discussion of effects resulting from the transfer or sale of state-owned properties is not related to the completion of Section 106 for this project.	KET	
27	2, 3	City S. Pasadena	6	Caltrans, Metro and CPs should develop and implement an Arroyo Seco Corridor Management Plan to help monitor, guide, manage, and mitigate the cumulative effects of multiple projects over time.	D	This stipulation is included in the MOA executed 06/26/17 for the SR-110 (Arroyo Seco Parkway) Safety Enhancement Project in the Cities of Los Angeles and S. Pasadena, Los Angeles County; City of S. Pasadena and CPF are consulting parties for that project.	KET	

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28	2,3	City S. Pasadena	7	Update the ASPHD National Register nomination-contributing features.	D	This stipulation is included in the MOA executed 06/26/17 for the SR-110 (Arroyo Seco Parkway) Safety Enhancement Project in the Cities of Los Angeles and S. Pasadena, Los Angeles County; City of S. Pasadena and CPF are consulting parties for that project; SHPO will review and comment on the update per Stipulation II.B. of that MOA.	KET	
29	2, II D & E	City S. Pasadena	8	Design development plans to be submitted to CPs and comments incorporated into project plans, including annual updates on project implementation.	A	Revised Stipulation II. D to include all parties to the MOA.	KET	
30	1	City S. Pasadena	9	Clarify roles and responsibilities. Clarify role of cities in the header. Specify role of Caltrans and Metro.	A	The header, including the cities within the project limits of the undertaking, is the official title of the project. The <i>Whereas</i> clauses have been revised to clarify roles and responsibilities.	KET	
31	All	City S. Pasadena	10	MOA should replace "all parties," which could be misconstrued to include only the signatories, with Consulting Parties.	A	This MOA is inclusive of all parties. Referring specifically to "Consulting Parties" only would limit other parties full participation, i.e. Native American Tribes. MOA has been clarified to include "all parties to this MOA."	KET	
32	4	City S. Pasadena	11	CPs should be included in the Resolution of Objections referenced in Section IV.B to provide CT an opportunity to resolve issues by consensus. Consultation process should address whether there are ways the TSM/TDM alternative's adverse effects on the ASPHD can be minimized and/or mitigated.	C, N	Section IV. B includes "any party to this MOA..." This MOA, and current consultation, is the appropriate document/process for resolving (minimizing or mitigating) adverse effects to the ASPHD caused by the preferred alternative.	KET	
33	1, All	City S. Pasadena	12	ACHP and Metro should also execute the MOA.	A	ACHP has been invited and has accepted participation in this MOA as a Signatory. Metro will be an Invited Signatory.	KET	
34	NA	City S. Pasadena	13	Pursuant to PRC 21167(f), the City requests to be notified of the approval of the SR-710 North Project.	N, D	Comment not applicable to the execution of this MOA.	KET	
35								
36	1, Nature of doc	National Trust	1	Individual projects under TSM/TDM alternative are still being defined, therefore CT should structure this agreement as PA not MOA.	N	There are no additional "early action" or otherwise previously unidentified projects associated with the TSM/TDM for the SR-710 North Project. All projects listed under the preferred alternative are defined. See Attachment A. Any future projects will subject to a separate environmental review and document. The MOA is the appropriate document for this project.	KET/JR	
37	1, Clarification	National Trust	2	Modify language to include TSM/TDM as the clearly defined project alternative.	A	Added clarification to <i>Whereas</i> clauses that identifies the TSM/TDM as the preferred alternative.	KET	

REVIEWER: Kelly Ewing-Toledo
 DISCIPLINE: Senior Environmental Planner, Principal Architectural Historian

PROJECT NAME: 710 North Project
 PROJECT EA # 187900

Section 106 MOA (first draft)

CODES : A - Accept/will comply, B - Basic input req'd from others, C - Clarify/discuss, D - Different submittal applies, N - Comment not applicable

No.	Page No.	Reviewer	Reviewer Comment No.	Comments	Code	Response/Actions	Initial (a)	Initial (b)
38	2, Clarification	National Trust	3	Once nature and location of all projects are defined, consultation should address ways to minimize/mitigate adverse effects on the ASPHD.	C	All project activities associated with the TSM/TDM (preferred) alternative are identified in the environmental documents and supporting technical studies. This MOA and the current consultation efforts with the CPs is the opportunity to address ways to minimize/mitigate adverse effects to the ASPHD.	KET	
39	2, Clarification	National Trust	4	The agreement should identify, develop and incorporate mechanism for defining and assessing cumulative effects to the ASPHD for current, planned and future projects as well as effects from current and future development on excess parcels to be conveyed by Caltrans to other owners.	D	This MOA is the appropriate document to address resolution of adverse effects to the ASPHD caused by the preferred alternative. A cumulative impact analysis for the ASPHD was completed as part of the SR-110 Safety Enhancement Project, another planning document not related to this project. Discussion of effects resulting from the transfer or sale of state-owned properties is not related to the completion of Section 106 for this project.	KET	
40	1, Roles	National Trust	5	Clarify why other cities are listed in the title. Will they be signatories to this agreement? Would each have the authority to terminate agreement?	C	The cities are listed as that is the official title of the SR-710 North Project. This MOA is being executed between Caltrans, SHPO and the ACHP in consultation with the Section 106 Consulting Parties for this project.	KET	
41	1, Roles	National Trust	6	Specify roles and responsibilities of Metro and Caltrans in this document.	A	Roles and responsibilities of Caltrans and Metro has been clarified in the <i>Whereas</i> clauses.	KET	
42	All	National Trust	7	Document should refer to "Consulting Parties," as opposed to "all parties." This could be misconstrued to include only the agreement signatories.	A	This MOA is inclusive of all parties. Referring specifically to "Consulting Parties" would limit other parties full participation, i.e. Native American Tribes. Clarification has been made to read "all parties to this MOA."	KET	
43	2, Roles	National Trust	8	Entities with a demonstrated interest in the ASPHD, such as Highland Park Heritage Trust, AS Foundation, AS Neighborhood Council, HP Neighborhood Council, should be invited to participate as Consulting Parties.	C	These groups were invited to participate in the Section 106 and overall environmental process since early 2014 through the recent RDEIR/SEIS. No comments have been received from these entities throughout the process.	KET	
44	4	National Trust	9	Resolution of objections in Section IV. B should be open to all CPs and not limited to smaller subsection of Signatories.	N	Section IV. B includes "any party to this MOA..."	KET	
45	1, Roles	National Trust	10	This MOA should be executed by the ACHP and Metro, in addition to Caltrans and the SHPO	A	ACHP has been invited and has accepted participation in this MOA. They will be included as a Signatory. Metro is an Invited Signatory.	KET	

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 Section 106 MOA (first draft)

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46	2	National Trust	11	As projects are yet clearly defined, we welcome opportunity for on-going discussion regarding appropriate mitigation measures to include: an update and revision of the ASPHD Corridor Management Plan. Distribute a copy of the 2003 draft plan to all CPs and Signatories.	C, D, N	All project activities associated with the TSM/TDM (preferred) alternative are clearly identified in the environmental documents and supporting technical studies. This MOA and the current consultation efforts with the CPs is the opportunity to address ways to minimize/mitigate adverse effects to the ASPHD caused by the preferred alternative. Update to the 2003 CMP is subject to the MOA for the SR-110 Safety Enhancement Project. CPF and City of S. Pasadena are Consulting Parties on that project. Do SR-710 North Project CPs wish to receive a draft copy of the CMP?	KET	
47	NA	National Trust	12	Caltrans should consider supporting the development of supplemental plans that address the conveyance of Caltrans-owned excess property at the ends of the SR-710 North to the City of Pasadena and the unincorporated community of Los Angeles.	D, N	This comment is not applicable to the SR-710 North Project, TSM/TDM alternative and resolution of adverse effects to the ASPHD.	KET	
48	2,3	National Trust	13	The ASPHD National Register nomination should be updated.	D	Stipulation included in the MOA executed 06/26/17 for the SR-110 (Arroyo Seco Parkway) Safety Enhancement Project in the Cities of Los Angeles and S. Pasadena, Los Angeles County; City of S. Pasadena and CPF are consulting parties for that project; SHPO will review and comment on the update per Stipulation II.B.	KET	
49	3, II, D & E	National Trust	14	All design development plans should be submitted to CPs for comment and incorporation into project plans, including annual updates on project implementation.	A	Revised Stipulation II. D to include all parties to the MOA.	KET	
50	1	National Trust	15	Section 106 PA should be appended to MOA or weblink to it in the second <i>Whereas</i> clause.	N	Not applicable to MOA. Caltrans Section 106 PA is publically available.	KET/ABN	
51	2	National Trust	16	Last sentence of second <i>Whereas</i> ; What does that mean to more directly and actively participate in the implementation? Construction jobs?	C	This refers to Native American Monitoring during project implementation as outlined in the Post Review Discovery and Monitoring Plan (PRDMP).	KET	
52	2	National Trust	17	Clarify typo referring to Appendix.	A	Done.	KET	
53	2	National Trust	18	Include qualifications for the Architectural Historian.	C	Section IV. A. 2. d. defines Professional Qualifications that guide the development of products required by the Stipulations.	KET	
54	4	National Trust	19	Section IV.A.2. add definition of Consulting Parties.	N	No changes will be made to the boilerplate language that has been previously approved by the SHPO in coordination with the ACHP.	KET	
55	5	National Trust	20	Section D. Termination. What is last sentence referring to? "Such consultation shall not be required if Caltrans proposes termination because the Undertaking no longer meets the definition set forth in 36 CFR 800.16 (y).	C	That is if the project is cancelled, or no longer programmed for implementation.	KET	
56								

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57	1	ACHIP	1	Requests CT address CP's recent concerns regarding the adequacy of the alternatives analyses considering preferred alternative was not identified in the FRDEIR/SEIS. Under CEQA, CT may be required to identify a preferred alternative, explain how this could impact this Section 106 consultation.	A	The TSM/TDM will be identified as the preferred alternative in the MOA. The preferred alternative will be identified in the FEIR/FEIS as well. As Lead Agency, it is Caltrans' decision to identify the preferred alternative after specific effects and reasonable avoidance, minimization, and mitigation measures have been identified for each project alternative and consideration of public comments. The MOA has been revised to identify the TSM/TDM as the preferred alternative.	KET	
58	NA	ACHIP	2				KET/JR	
59	1	ACHIP	3	Will CT identify the preferred alternative in this MOA?	A	The TSM/TDM will be identified as the preferred alternative in the MOA.	KET	
60	NA	ACHIP	4	It does not appear CT has adequately considered the undertaking's cumulative effects on historic properties.	C, D	The Finding of Adverse Effect (FOAE) for the SR-710 North Project, December 2017, adequately analyzed and assessed effects for all alternatives described as the undertaking. On May 25, 2017 Metro Board voted to select the TSM/TDM alternative, therefore the SHPO concurred on the analysis of the effects on May 3, 2018 for the TSM/TDM alternative. Cumulative Impact Analysis as part of the SR-110 (Arroyo Seco Parkway) Safety Enhancement Project in the Cities of Los Angeles and S. Pasadena, Los Angeles County; City of S. Pasadena and CPF are consulting parties for that project.	KET	
61	NA	ACHIP	5	Recommend CT explore potential for reasonably foreseeable effects that may result during the life of the project that could further diminish the characteristics that make the historic properties in the APE eligible for the NRHP.	C, D	It is unclear what this comment is referring to. Effects to the ASPHD are known for the preferred alternative for this undertaking.	KET	
62	NA	ACHIP	6	The evaluation of cumulative effects should include the impacts from the development of the excess lands that CT has conveyed and is conveying to other parties.	D	Discussion of effects resulting from the transfer or sale of state-owned properties is not related to the completion of Section 106 (MOA) for this project.	KET	
63	NA	ACHIP	7	Recommend CT respond to the SPPF's comment in the July letter (FRDEIR/SEIS) regarding whether the agency will reserve the subsurface mineral rights for potential tunneling below properties Caltrans is selling.	D	This comment is not related to the execution of this MOA. The response to SPPF will be addressed in the FEIR/FEIS.	KET	
64	NA	ACHIP	8	Provide a justification explaining how the agency determined that a specific alternative will not have any cumulative effects	D	The effects of each alternative was analyzed in the FOAE. This MOA is being executed to address the adverse effects associated with the preferred alternative, TSM/TDM.	KET	
65	2	ACHIP	9	Add detail about which proposed activities in Stipulation II will involve consultation with CPs, and include specific timeframes for consultation.	A	Clarified in Stipulation II. D.	KET	

PROJECT NAME: 710 North Project
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66	2	ACHP	10	Additional consultation with all CPs will take place to draft and finalize agreed upon minimization and mitigation measures found in Stipulations II.	C	All project activities associated with the TSM/TDM (preferred) alternative are clearly identified in the environmental documents and supporting technical studies. This MOA and the current consultation efforts with the CPs is the opportunity to address ways to minimize/mitigate adverse effects to the ASPHD caused by the preferred alternative.	KET	
67	4	ACHP	11	Develop a Stipulation to address objections from the public regarding MOA's implementation.	A	Done. See IV. B. 6.	KET	

Group	Contact/Department	Address	Telephone	Email	Date/Type of Contact	Response	Follow Up
National Trust for Historic Preservation	Chris Morris, Los Angeles Field Director; Betsy Merritt, Deputy General Counsel; Brian Turner, Sr. Field Officer and Attorney Jesse Lattig, Field Director (06/2018)	Fine Arts Building, 811 West 7th Street, Suite 1138, Los Angeles, CA 90017	424-251-5865 213-705-7122 (c)	C.Morris@savingplaces.org emerritt@savingplaces.org	Requested CP status 06/04/15	Letter granting status 06/15/15	05/2015 Transmit FOIAE 10/05/15 Notify that CT changing finding to Adverse 04/11/16 Mtg/tour @ Caltrans 10/10/16 email (letter) update on FOAE 03/03/17 mtg. @ Pasadena Heritage 10/25/17 SHPSR/update on FOAE transmit 12/22/17 FOAE sent 01/30/18 sent FOAE to E. Merritt, B. Turner 01/12/18 Extend review period to 60 days, comments due 03/01/18 email sent to all CPs, CSO, SHPO 02/14/18 Sec 106 CP meeting-project update, FOAE, MOA discussion 03/01/18 received comments on FOAE 05/04/18 sent CPs SHPO concur. On FOAE and update on RDER/SEIS and MOA prep 06/19/18 telec. With Betsy, Jesse, Chris re. RDER/SEIS. Answered questions, referred to Jason for 4(f). 06/28/18 sent draft MOA. Comment by 07/20/18. Rec'd comments 07/16/18. 08/03/18 sent revised MOA and RTC.
Sequoyah School	Elena Phleger, Director of Development and Communications Josh Brody, Head of Sch James Cooper, Bus. Mng'r Brian Wilson, Trustee	535 S. Pasadena Ave. Pasadena, CA 91105	626-795-4351 ext.215	ephleger@sequoyahschool.org	Requested CP status 03/24/16	Letter granting status 03/28/16	04/11/16 Mtg/tour @ Caltrans 10/10/16 email (letter) update on FOAE 03/21/17 email summary of 03/03 mtg. 10/25/17 SHPSR/update on FOAE transmit 12/22/17 FOAE sent 01/12/18 Extend review period to 60 days, comments due 03/01/18 email sent to all CPs, CSO, SHPO 02/14/18 Sec 106 CP meeting-project update, FOAE, MOA discussion(Brian Wilson, James Cooper, Josh Brody attended) 03/01/18 received comments on FOAE 05/04/18 sent CPs SHPO concur. On FOAE and update on RDER/SEIS and MOA prep 06/28/18 sent draft MOA. Comment by 07/20/18. Rec'd email with signer information and no further comments at this time 07/13/18. 08/03/18 sent revised MOA and RTC.
West Pasadena Resident Association	Sarah Gavitt, Vice President, SR-710 Lead Mic Hansen	580 Arbor Street Pasadena, CA 91105	626-584-0946	Sarah.gavitt@att.net	Requested CP status 04/09/16	Letter granting status 05/20/16	10/10/16 email (letter) update on FOAE 03/21/17 email summary of 03/03 mtg. 10/25/17 SHPSR/update on FOAE transmit 12/22/17 FOAE sent 01/12/18 Extend review period to 60 days, comments due 03/01/18 email sent to all CPs, CSO, SHPO 02/14/18 Sec 106 CP meeting-project update, FOAE, MOA discussion(Mic Hansen attended) 03/01/18 received comments on FOAE 05/04/18 sent CPs SHPO concur. On FOAE and update on RDER/SEIS and MOA prep 06/28/18 sent draft MOA. Comment by 07/20/18. Rec'd comments 07/15/18. 08/03/18 sent revised MOA and RTC.

<p>Pasadena Heritage</p>	<p>Jesse Lattig, Director; Susan Mossman, Executive Director Adam Rajper, Director</p>	<p>651 S. St. John Ave. Pasadena, CA 91105</p>	<p>626-441-6333</p>	<p>jlattig@pasadenaheritage.org smossman@pasadenaheritage.org</p>	<p>Requested CP status 06/03/15</p>	<p>Letter granting status 06/15/15</p>	<p>05/20/15 Transmit FOIAE 10/05/15 Notify that CT changing finding to Adverse 04/11/16 Mtg/tour @ Caltrans 10/10/16 email (letter) update on FOAE 03/03/17 mtg. @ Pasadena Heritage 10/25/17 SHPSR/update on FOAE transmit 12/22/17 FOAE sent 01/12/18 Extend review period to 60 days, comments due 03/01/18 email sent to all CPs, CSO, SHPO 02/14/18 Sec 106 CP meeting-project update, FOAE, MOA discussion(Adam Rajper attended) 03/01/18 received comments on FOAE 05/04/18 sent CPs SHPO concur. On FOAE and update on RDEIR/SEIS and MOA prep 06/28/18 sent draft MOA. Comment by 07/20/18. Rec'd comments 07/17/18. 08/03/18 sent revised MOA and RTC.</p>
<p>Los Angeles Conservancy</p>	<p>Adrian Fine</p>	<p>523 W. 6th St. #826 Los Angeles, CA 90014</p>	<p>213-430-4207</p>	<p>afine@laconservancy.org</p>	<p>Requested CP status 06/25/15</p>	<p>Letter granting status 06/26/15</p>	<p>05/20/15 Transmit FOIAE 10/05/15 Notify that CT changing finding to Adverse 04/11/16 Mtg/tour @ Caltrans 10/10/16 email (letter) update on FOAE 03/03/17 mtg. @ Pasadena Heritage 10/25/17 SHPSR/update on FOAE transmit 12/22/17 FOAE sent 01/12/18 Extend review period to 60 days, comments due 03/01/18 email sent to all CPs, CSO, SHPO 02/14/18 Sec 106 CP meeting-project update, FOAE, MOA discussion 03/01/18 received comments on FOAE 05/04/18 sent CPs SHPO concur. On FOAE and update on RDEIR/SEIS and MOA prep 06/28/18 sent draft MOA. Comment by 07/20/18. No comments received. Called/emailed 07/24/18. No response. 08/03/18 sent revised MOA and RTC.</p>
<p>City of South Pasadena</p>	<p>John Mayer, Sr. Planner; Margaret Lin, Principal Management Analyst, David Watkins, Director Planning and Building</p>	<p>Planning and Building Department 1414 Mission Street South Pasadena, CA 91030</p>	<p>626-403-7228 626-403-7236 (M. Lin) as of 01/02/18</p>	<p>jmayer@southpasadenaca.gov MLin@southpasadenaca.gov</p>	<p>M. Lin requested CP status (email) 06/04/15</p>	<p>Letter granting status 06/16/15</p>	<p>05/20/15 Transmit FOIAE 10/05/15 Notify that CT changing finding to Adverse 04/11/16 Mtg/tour @ Caltrans 10/10/16 email (letter) update on FOAE 03/21/17 email summary of 03/03 mtg. 10/25/17 SHPSR/update on FOAE transmit 11/03/17 J. Mayer no longer with City, emailed D. Watkins who transmitted SHPSR to M. Lin 12/22/17 FOAE sent 01/02/18 spoke w/ M. Lin. She asked when 30 rev. period is up. I told her all CPs would meet first week Feb. 01/12/18 Extend review period to 60 days, comments due 03/01/18 email sent to all CPs, CSO, SHPO 02/14/18 Sec 106 CP meeting-project update, FOAE, MOA discussion 03/01/18 received comments on FOAE 05/04/18 sent CPs SHPO concur. On FOAE and update on RDEIR/SEIS and MOA prep 06/28/18 sent draft MOA. Comment by 07/20/18. Rec'd comments 07/19/18. 08/03/18 sent revised MOA and RTC.</p>

<p>No on 710 Action Committee</p>	<p>Claire Bogaard</p>	<p>581 Garden Lane Pasadena, CA 91105</p>	<p>626-799-9819</p>	<p>cbogaard@earthlink.net</p>	<p>Requested CP status 06/15/15</p>	<p>Letter granting status 06/19/15</p>	<p>05/20/15 Transmit FONAE 10/05/15 Notify that CT changing finding to Adverse 04/11/16 Mtg/tour @ Caltrans 10/10/16 email (letter) update on FOAE 03/03/17 mtg. @ Pasadena Heritage 10/25/17 SHPSR update on FOAE transmit 12/22/17 FOAE sent 01/02/18 SHPSR returned via post; Claire B. emailed me with new address; resent SHPSR and FOAE. 01/12/18 Extend review period to 60 days, comments due 03/01/18 email sent to all CPs, CSO, SHPO 02/14/18 Sec 106 CP meeting-project update, FOAE, MOA discussion 05/04/18 sent CPs SHPO concur. On FOAE and update on RDEIR/SEIS and MOA prep 06/28/18 sent draft MOA. Comment by 07/20/18. Rec'd comments 07/18/18. 08/03/18 sent revised MOA and RTC.</p>
<p>City of Pasadena After Feb 14, 2018 add Steve Mermell (City Manager) smermell@cityofpasadena.net David Reyes, Director Planning and Community Development</p>					<p>Nicole Davis attended via phone the Feb. 14, 2018 CP meeting regarding the FOAE.</p>		<p>Other than formal comments to the DEIR/DEIS, City of Pasadena has not participated in the Section 106 process to date. They were invited to be a CP, and Leon White was informed of meetings, but never responded or attended. On 02/28/18 GFA received email from Nicole Davis of Michael Baker Consulting asking who to submit FOAE comments to. Andrea responded to send them to my attention. 02/28/18 Claudia Harbert received voicemail from John Bellis 310890-9537 asking who to submit comments to, she returned call and left message to send to Ct to my attention. As of 03/06/18 have not received any comments from City of Pasadena 05/04/18 sent CPs SHPO concur. On FOAE and update on RDEIR/SEIS and MOA prep 06/28/18 sent draft MOA. Comment by 07/20/18. No comments received. Emailed David Reyes on 07/24/18. No response. Steve Mermell email address non-deliverable. 08/03/18 sent revised MOA and RTC.</p>

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