

VISUAL IMPACT ASSESSMENT

State Route 210 Mixed Flow Lane Addition from Highland Avenue to San Bernardino Avenue

April 2014

California Department of Transportation

District 8, San Bernardino County, State Route 210

Segment PM R25.0 to R33.2

Federal Project Number: 0812000164

EA Number: 0C700



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Statement of Compliance: Produced in compliance with National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) requirements, as appropriate, to meet the level of analysis and documentation that has been determined necessary for this project.

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Acronyms and Abbreviations

BMP	Best Management Practice
Caltrans	California Department of Transportation
CEQ	Council of Environmental Quality
CEQA	California Environmental Quality Act
FHWA	Federal Highway Administration
FTIP	Federal Transportation Improvement Program
KOPs	key observation points
Msl	mean sea level
NEPA	National Environmental Policy Act
PM	Post Miles
RTP	Regional Transportation Plan
SANBAG	San Bernardino Associated Governments
SCAG	Southern California Association of Governments
SR-210	State Route 210
TCE	Temporary construction easements
VIA	Visual Impact Assessment

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I. PURPOSE OF STUDY

The purpose of this visual impact assessment (VIA) is to document potential visual impacts caused by the State Route 210 Mixed Flow Lane Addition Project (proposed project) and propose measures to lessen any detrimental impacts that are identified. Visual impacts are demonstrated by identifying visual resources in the proposed project area, measuring the amount of change that would occur as a result of the proposed project, and predicting how the affected public would respond to or perceive those changes.

II. PROJECT DESCRIPTION

The San Bernardino Associated Governments (SANBAG), in coordination with the California Department of Transportation (Caltrans) and the City of Highland, proposes to widen State Route 210 (SR-210) from Sterling Avenue to San Bernardino Avenue in the cities of San Bernardino, Highland, and Redlands, and the County of San Bernardino, California. The widening would occur between post miles (PM) R26.3 and R32.4, for a distance of 6.1 miles. The total length of the proposed project limits is approximately 8.2 miles, from PM R25.0 to R33.2, which includes transition striping and signage. This segment of SR-210 currently has two mixed flow lanes in each direction with three mixed flow lanes in each direction existing to the west and four mixed flow lanes in each direction existing to the east. The reduction in lanes within this segment of the freeway restricts capacity and creates poor operating conditions. The proposed project would add one mixed flow lane in each direction within the median of SR-210, create auxiliary lanes between the Base Line and 5th Street interchanges, and add an acceleration lane at the eastbound 5th Street on-ramp. The proposed improvements would include widening of the Highland Avenue undercrossing, Sand Creek bridge, Victoria Avenue undercrossing, City Creek bridge, 5th Street undercrossing, Plunge Creek bridge, Access Road undercrossing, Santa Ana River bridge, and Pioneer Avenue undercrossing. The proposed project would not require the acquisition of new permanent right-of-way. Temporary Construction Easements (TCE) would likely be needed during the construction period for construction of sound walls and construction access. Figures 1 and 2 show the Regional Vicinity Map and the Project Location Map, respectively.

The proposed project is included in the Southern California Association of Government's (SCAG's) 2012 Regional Transportation Plan (RTP) Amendment #1, which was adopted by SCAG on June 12, 2013, and approved by the Federal Highway Administration (FHWA) on July 15, 2013. The 2013 Federal Transportation Improvement Program (FTIP) Amendment #4 was adopted by SCAG on June 12, 2013, and approved by FHWA on July 15, 2013. Both the 2012 RTP and 2013 FTIP include the proposed project as project number 4M01005 and 20111625, respectively. The proposed project is being funded with San Bernardino Sales Tax Measure I funds.

Proposed Project

This VIA examines two alternatives, the proposed Build Alternative and the No-Build Alternative. The Build Alternative would widen SR-210 from four mixed flow lanes (two lanes in each direction) to six mixed flow lanes (three lanes in each direction). Improvements would begin at Sterling Avenue and continue to San Bernardino Avenue, adding a mixed flow lane in each direction within the existing median (see Figures 3, Build Alternative Map, and Figure 4, Typical Cross Section).

The proposed Build Alternative includes the following design features and elements:

- The existing segment of SR-210 from Sterling Avenue to San Bernardino Avenue would be widened from four mixed flow lanes (two lanes in each direction) to six mixed flow lanes (three lanes in each direction) with the addition of one mixed flow lane in each direction. The third lane would be added within the existing SR-210 median. Each of the six resulting mainline lanes would be 12 feet in width. Both directions (eastbound and westbound) would have 10-foot wide left and right shoulders.
- The proposed project would include the creation of an auxiliary lane in each direction between the Base Line and 5th Street interchanges.
- A deceleration lane would be constructed on eastbound SR-210 from Sterling Avenue undercrossing to the proposed two-lane exit at Highland Avenue. Proposed permanent striping would start from Del Rosa Avenue in the eastbound direction.
- The proposed project would include a new acceleration lane at the 5th Street eastbound on-ramp.
- The existing SR-210 median would be re-graded and generally remain unpaved.
- The following existing bridges would be widened to accommodate the new mixed flow lanes: Highland Avenue/Arden Avenue; Sand Creek; Victoria Avenue; 5th Street/Greenspot Road; City Creek; Plunge Creek; Access Road; Santa Ana River; and Pioneer Avenue.
- The proposed project would not require the acquisition of new permanent right-of-way. Temporary Construction Easements (TCE) would likely be needed during the construction period for construction of sound walls and construction access.
- Scour and pier protection would be installed at the drainages as needed to protect bridge foundations.
- Drainage system improvements would be constructed to carry runoff away from the traveled lanes and into traditional drainage courses.
- Storm water treatment Best Management Practice (BMP) features would be included as part of the proposed project at select locations where identified benefits outweigh impacts. To the fullest extent possible, roadside swales and bio-filtration strips would be utilized to convey both stormwater quantity flows and peak flows.
- A new fiber optic backbone system would be constructed within the existing median with branch connections linking the backbone system to existing traffic management system elements along the corridor including wireless vehicle detection stations, ramp metering systems, and a changeable message sign.
- Ramp metering systems would be installed on the existing on-ramps at the 5th Street/Greenspot Road interchange.
- An existing weigh-in-motion system located approximately 0.5 mile north of San Bernardino Avenue would be reconstructed to accommodate the additional lanes on the freeway.
- Utilities would be relocated, as needed, to accommodate the widened facility.
- An existing sound wall would be relocated on top of a new retaining wall along the eastbound portion of the highway south of Base Line and north of City Creek, as well as between Plunge Creek and the Santa Ana River. The portion south of Base Line would be extended northward approximately 200 feet, to just south of Norwood Court, and also pushed outward (westward) from its current placement along a tapering north-south line. At its northerly end, the tapering placement would be approximately eight feet west of the existing sound wall; however, as it

moves southeasterly it would eventually line up with the existing wall placement. The retaining/sound wall would most likely feature a split-face texture and coloration for aesthetic enhancement purposes. The sound wall would attain an approximate height of 12 feet where it would abut the mainline.

- Rebuilt sound walls are also being proposed along the westbound side of the highway extending from Sterling Avenue to Arden Avenue; Central and Orange Avenues; and Orange and Palm Avenues; as well as eastbound, between Victoria Avenue and a point just west of Olive Street. These would range in height from eight to 12 feet along the outside (i.e., community side) perimeter of the Caltrans right-of-way. The longest of these sound walls would be located along the westbound (north side) of the freeway between Sterling and Arden Avenues. It would be 10 feet tall and would extend approximately 2,720 feet. The sound wall segments extending between Orange Avenue to east of Palm Avenue would extend approximately 1,245 and 500 feet, respectively, and would attain a maximum height of eight feet. The sound walls shall employ design enhancements elements (e.g., texturing, coloration, potential landscape screening where appropriate).

The ultimate corridor for SR-210 within the proposed project limits is an eight-lane freeway facility (six mixed flow lanes and two high occupancy vehicle lanes). Improving the facility to six mixed-flow lanes would be compatible with the Route Concept Fact Sheet planning and does not preclude future improvements or make these future improvements more costly to implement.

No-Build Alternative

Under the No-Build Alternative no additional lanes would be constructed along SR-210 between Highland Avenue and San Bernardino Avenue. This alternative, however, does not preclude the construction of future improvements.

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Figure 1
Regional Vicinity Map
State Route 210 Mixed Flow Lane Addition from
Highland Avenue to San Bernardino Avenue

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Figure 2
Project Location Map
State Route 210 Mixed Flow Lane Addition from
Highland Avenue to San Bernardino Avenue

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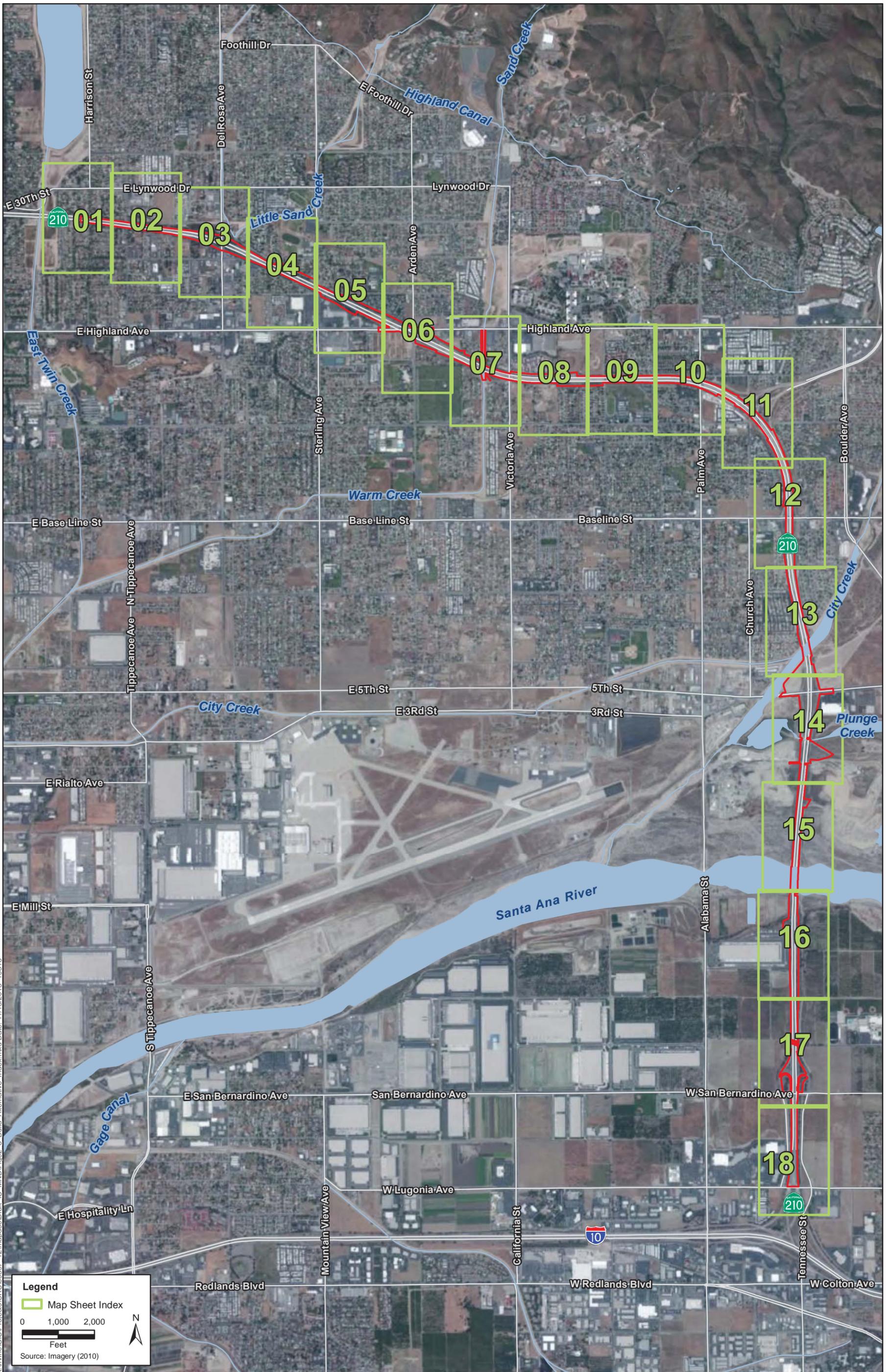


Figure 3
 Build Alternative - Index Map
 State Route 210 Mixed Flow Lane Addition from
 Highland Avenue to San Bernardino Avenue



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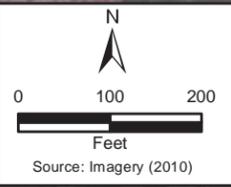
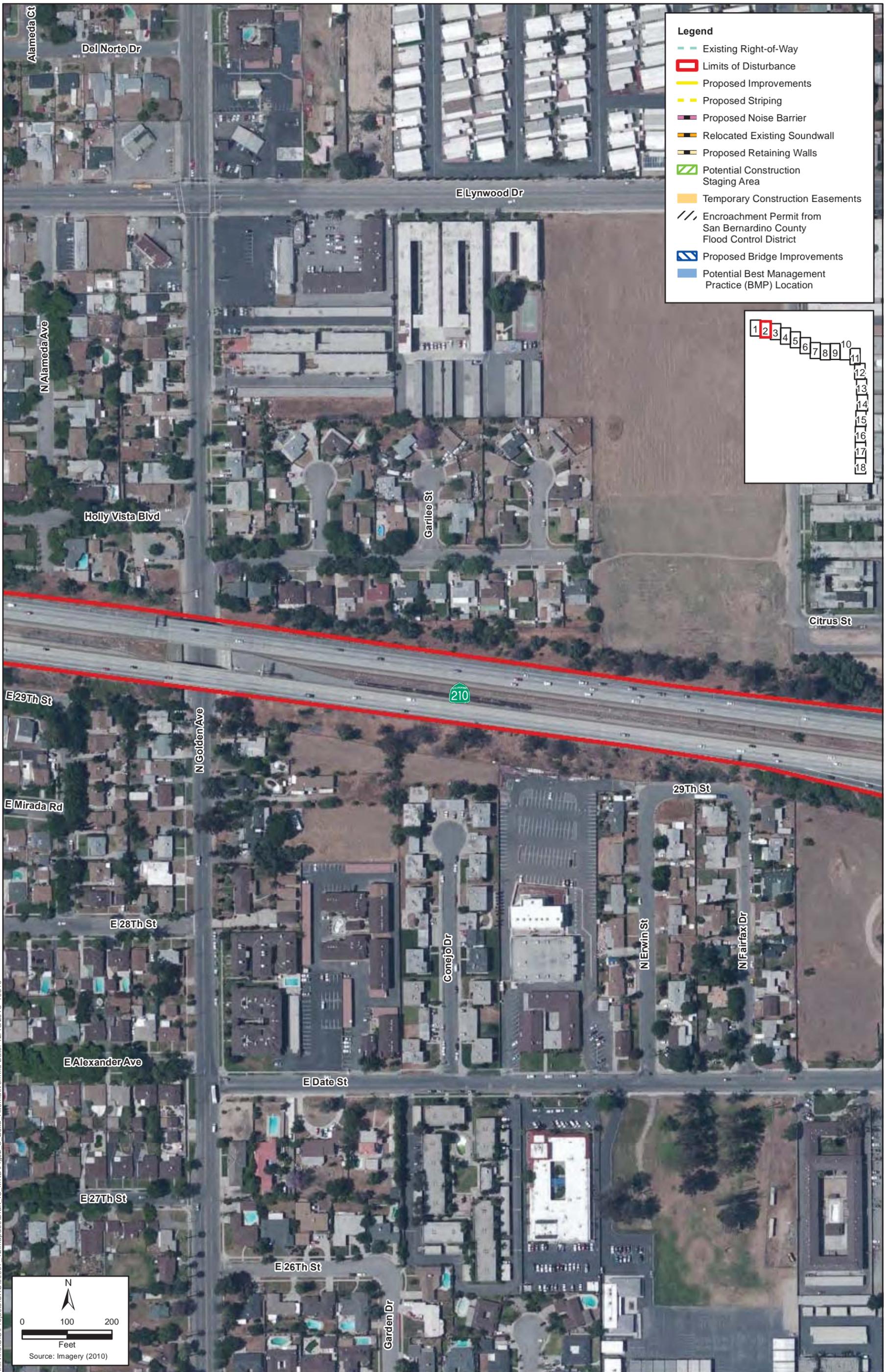
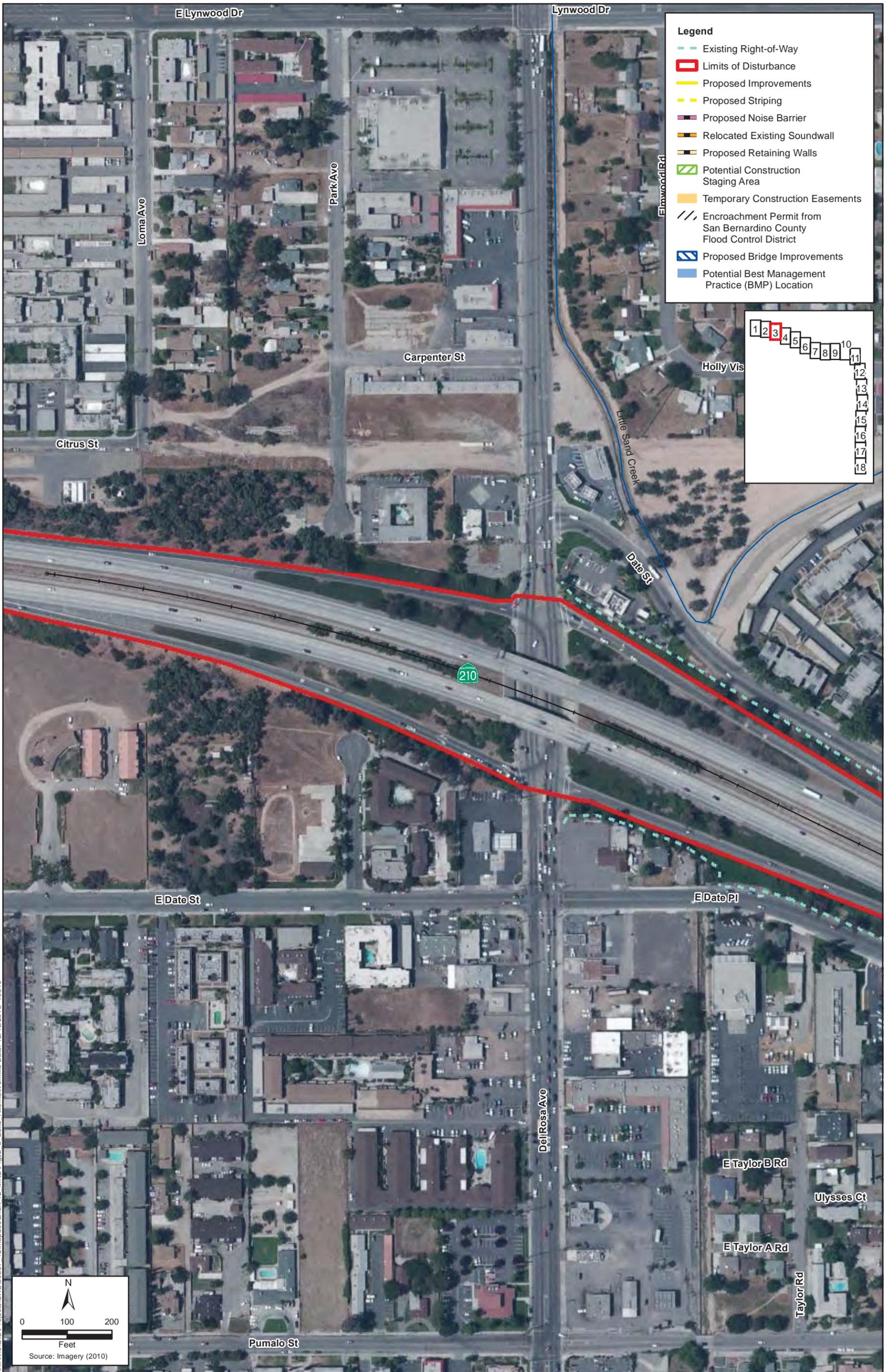


Figure 3
 Build Alternative - Sheet 1
 State Route 210 Mixed Flow Lane Addition from
 Highland Avenue to San Bernardino Avenue



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Figure 3
Build Alternative - Sheet 2
State Route 210 Mixed Flow Lane Addition from Highland Avenue to San Bernardino Avenue



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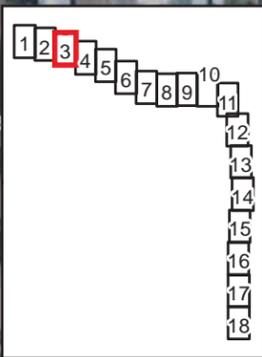
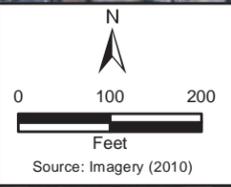
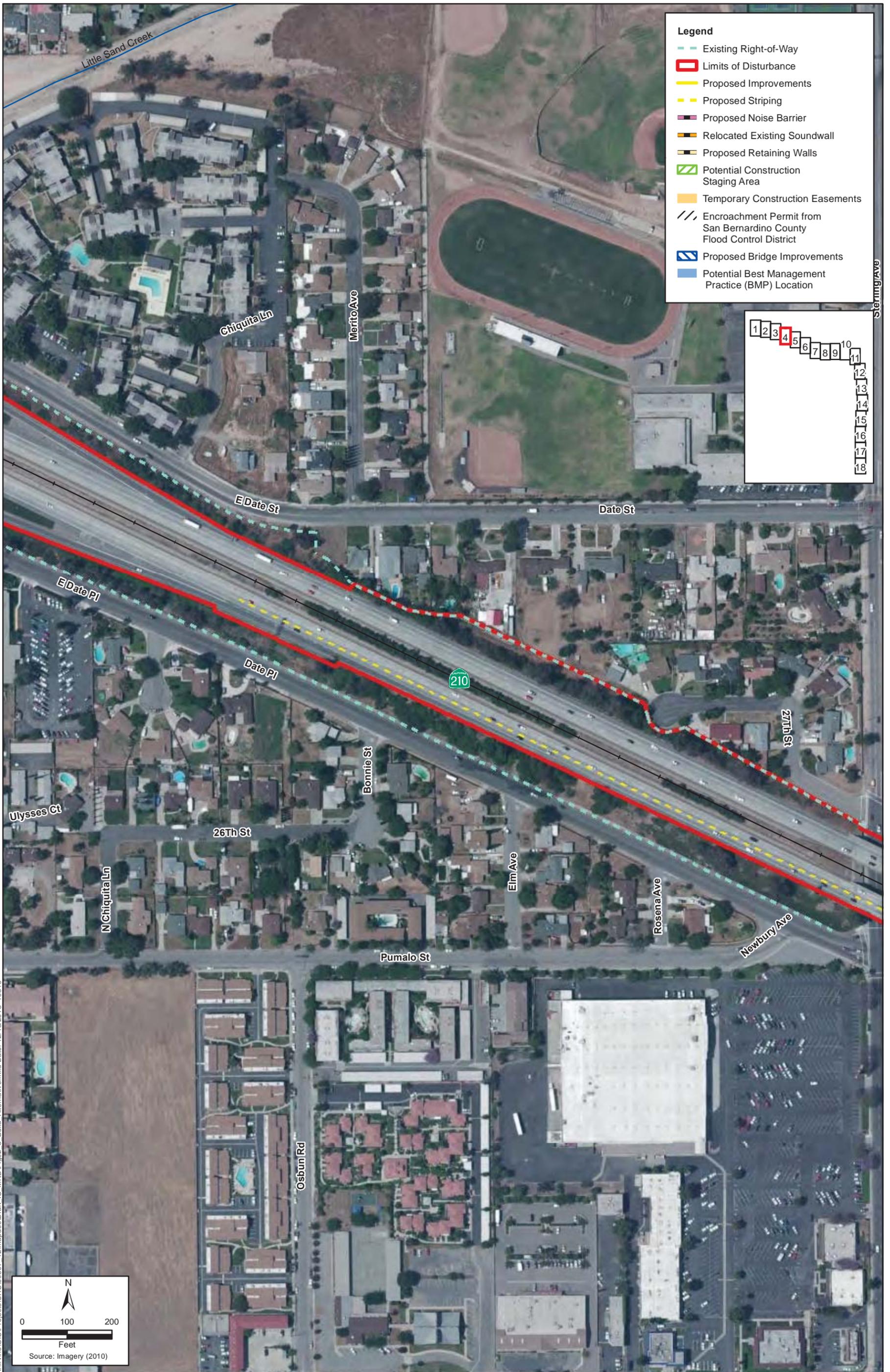
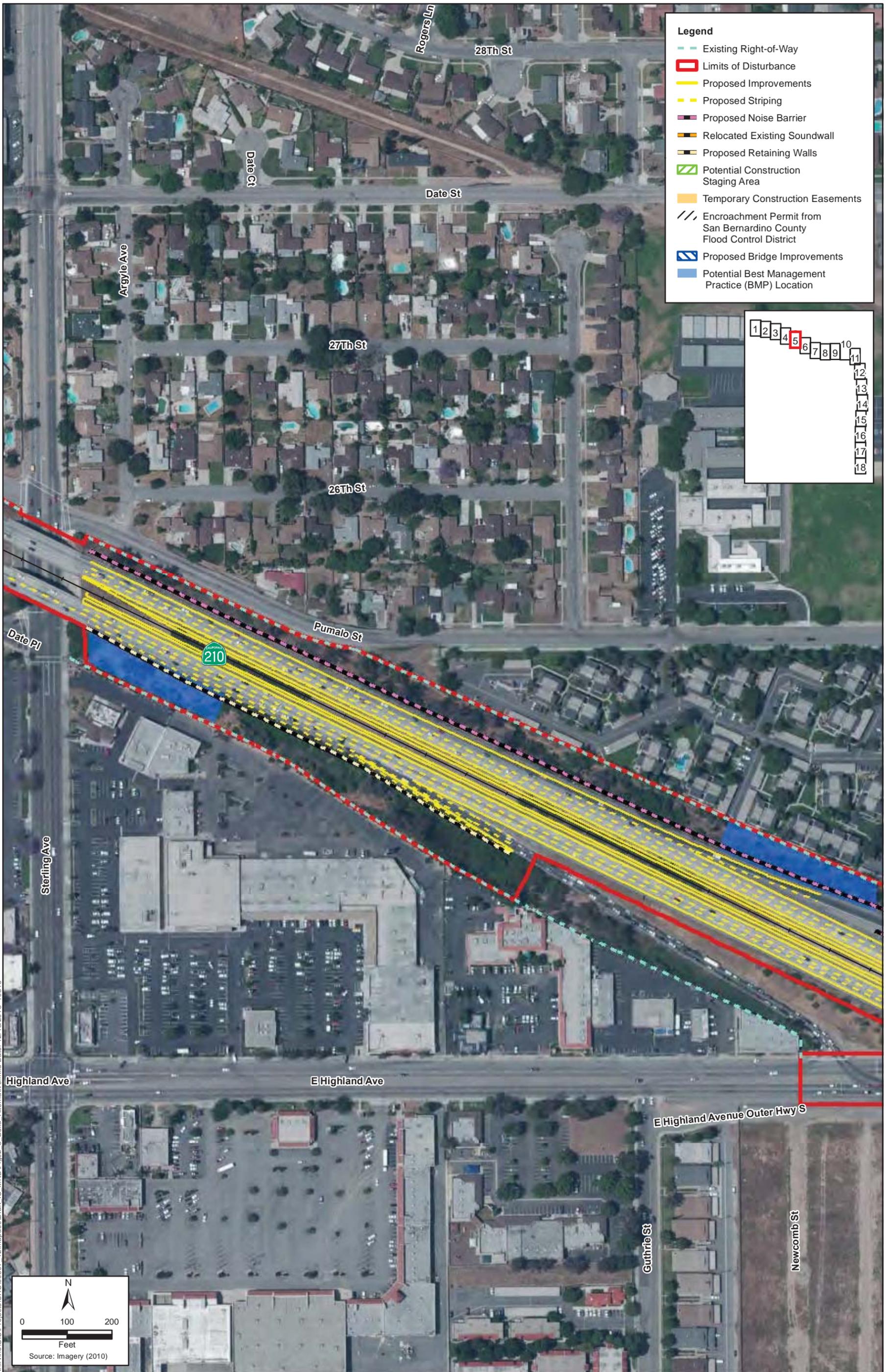


Figure 3
Build Alternative - Sheet 3
 State Route 210 Mixed Flow Lane Addition from
 Highland Avenue to San Bernardino Avenue



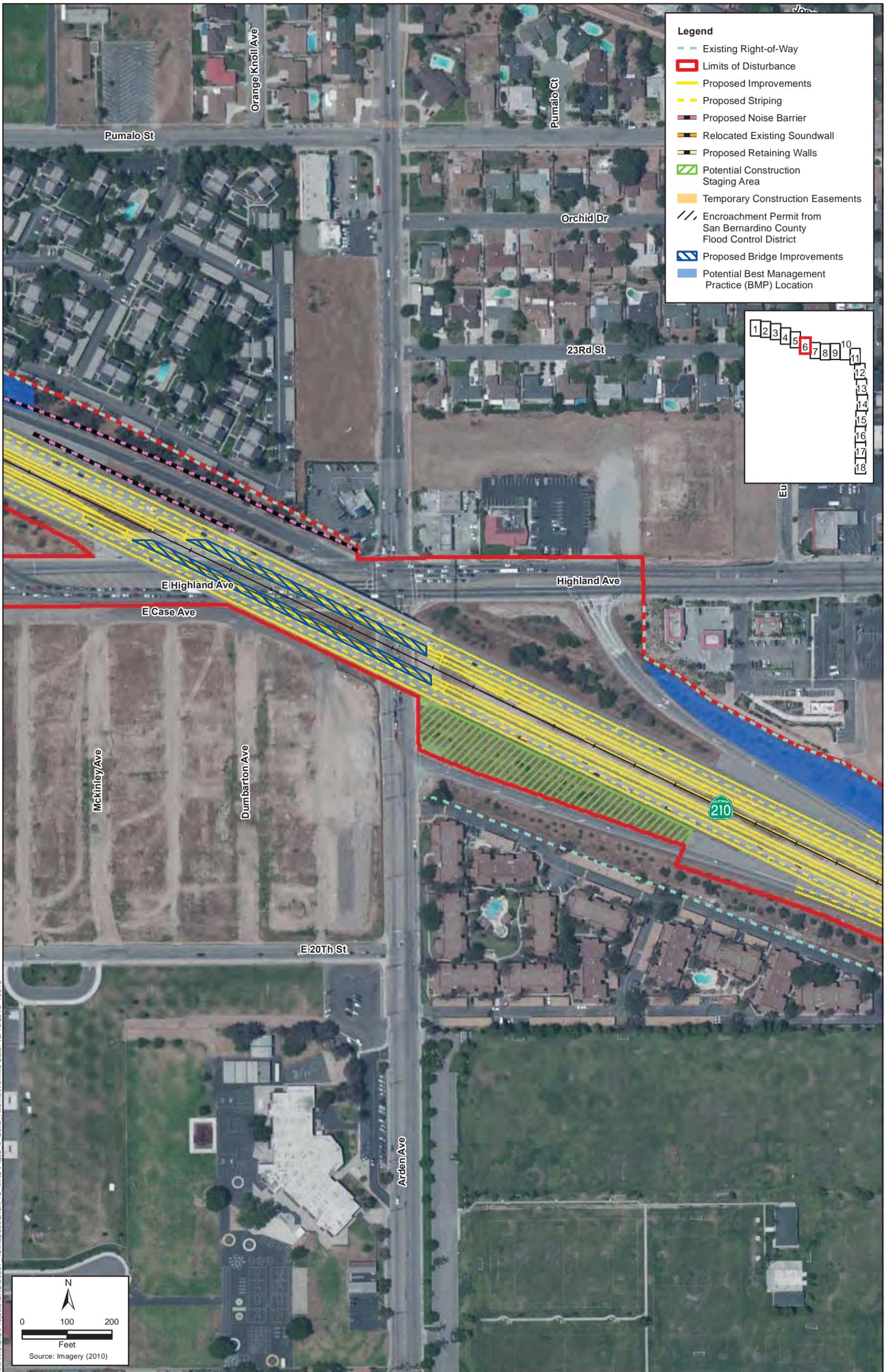
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Figure 3
Build Alternative - Sheet 4
State Route 210 Mixed Flow Lane Addition from Highland Avenue to San Bernardino Avenue



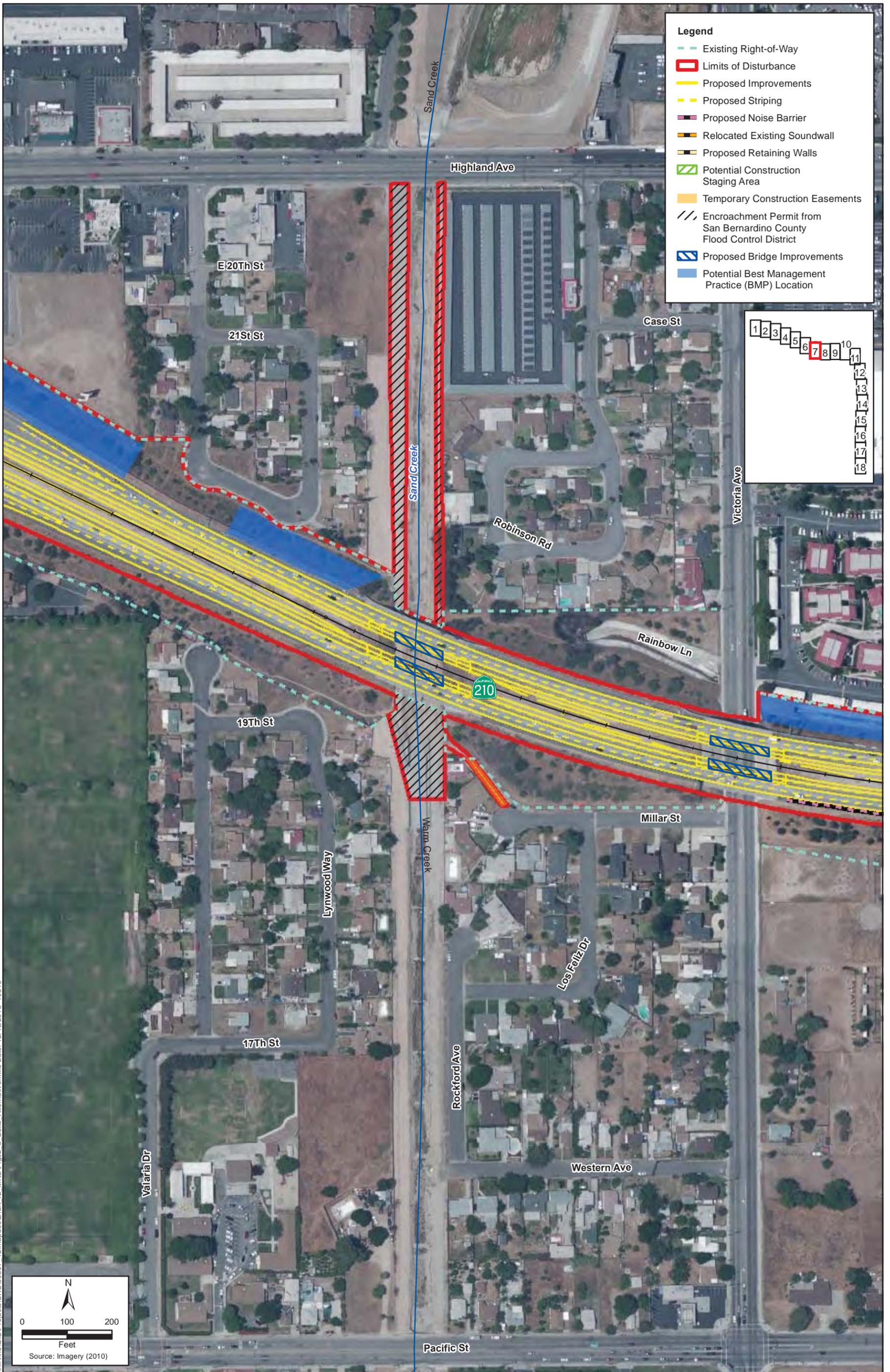
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Figure 3
 Build Alternative - Sheet 5
 State Route 210 Mixed Flow Lane Addition from
 Highland Avenue to San Bernardino Avenue



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Figure 3
 Build Alternative - Sheet 6
 State Route 210 Mixed Flow Lane Addition from
 Highland Avenue to San Bernardino Avenue



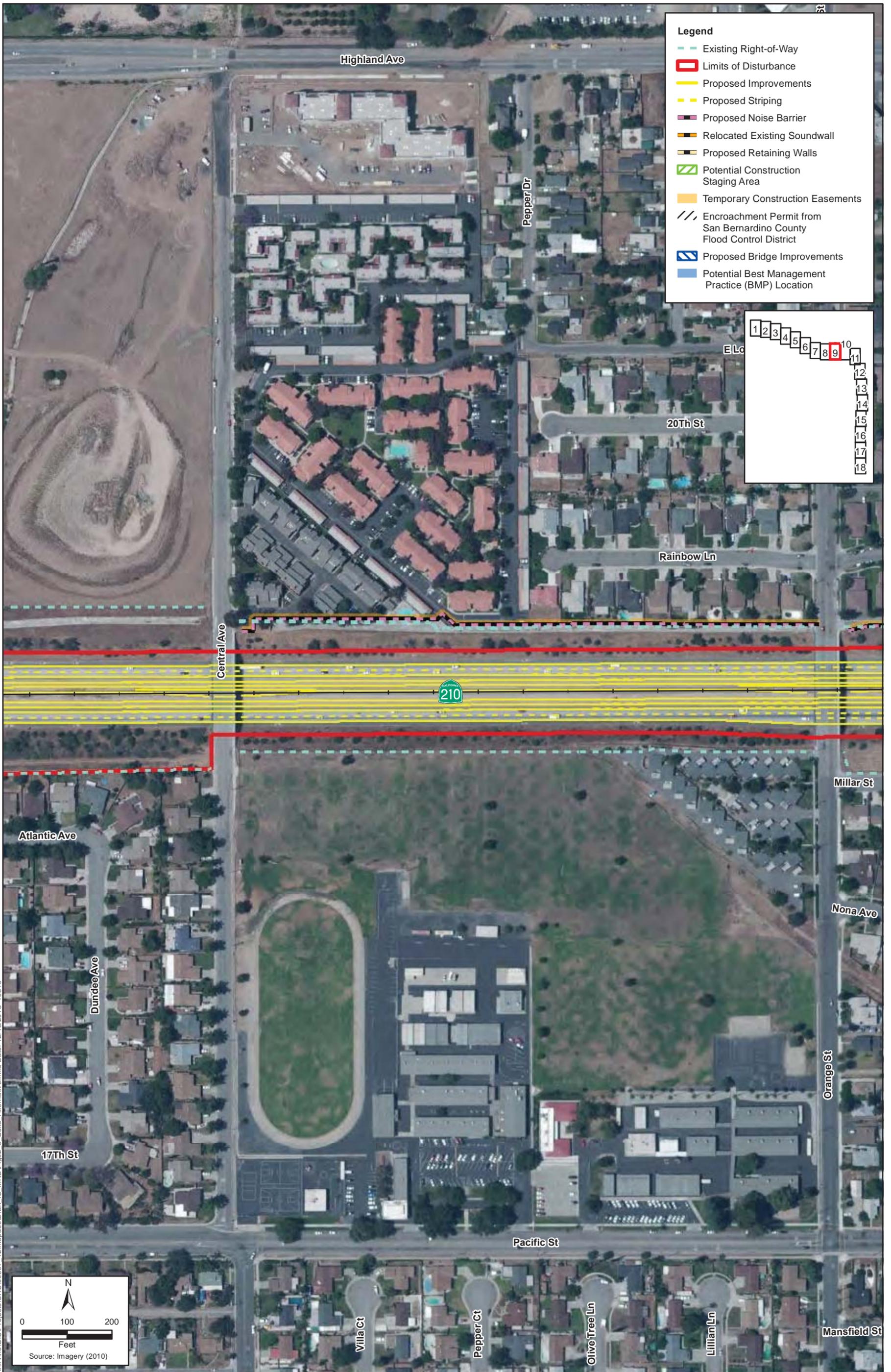
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Figure 3 ,
Build Alternative - Sheet 7
State Route 210 Mixed Flow Lane Addition from
Highland Avenue to San Bernardino Avenue



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Figure 3
 Build Alternative - Sheet 8
 State Route 210 Mixed Flow Lane Addition from
 Highland Avenue to San Bernardino Avenue



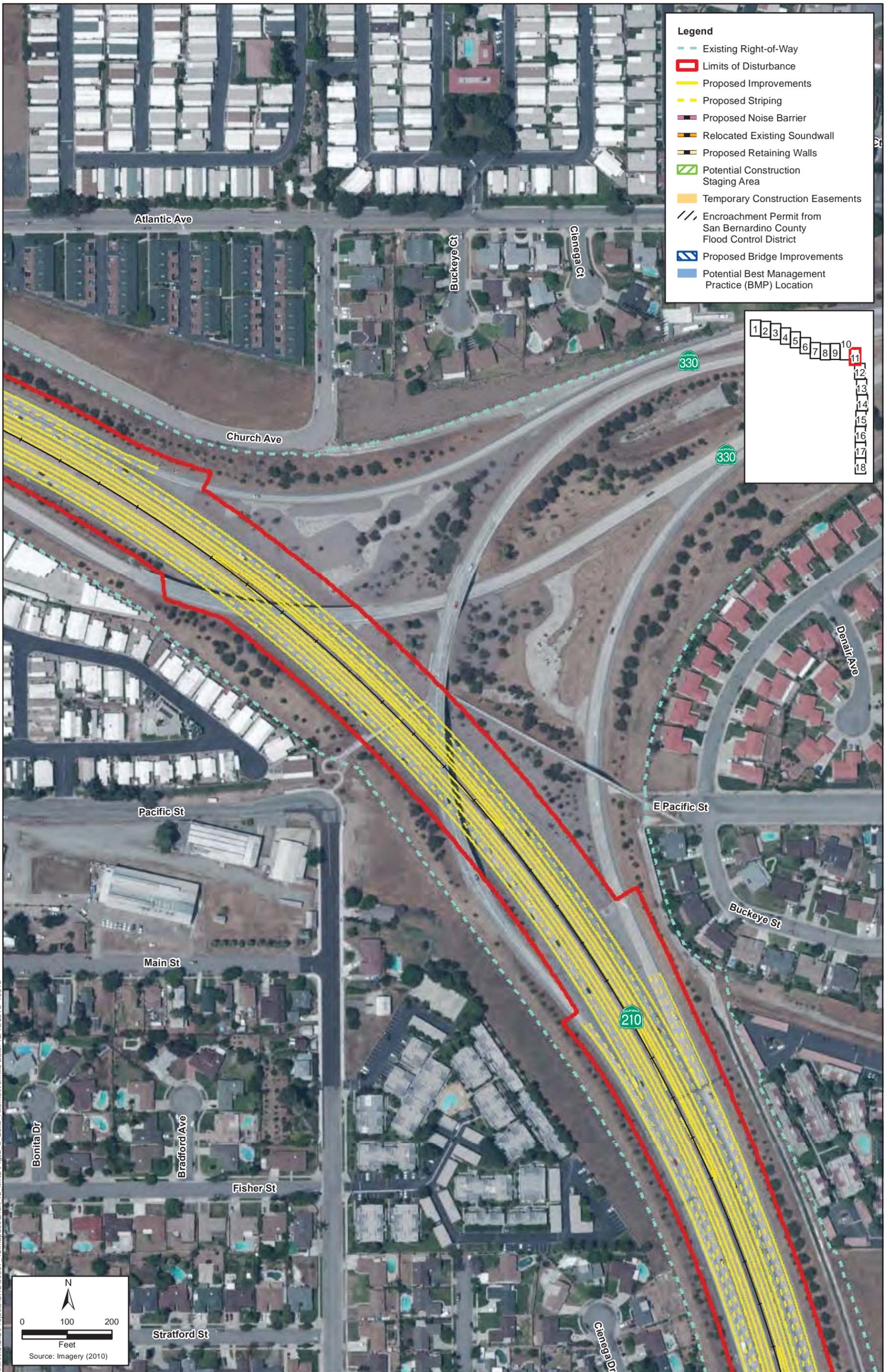
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Figure 3
Build Alternative - Sheet 9
State Route 210 Mixed Flow Lane Addition from Highland Avenue to San Bernardino Avenue



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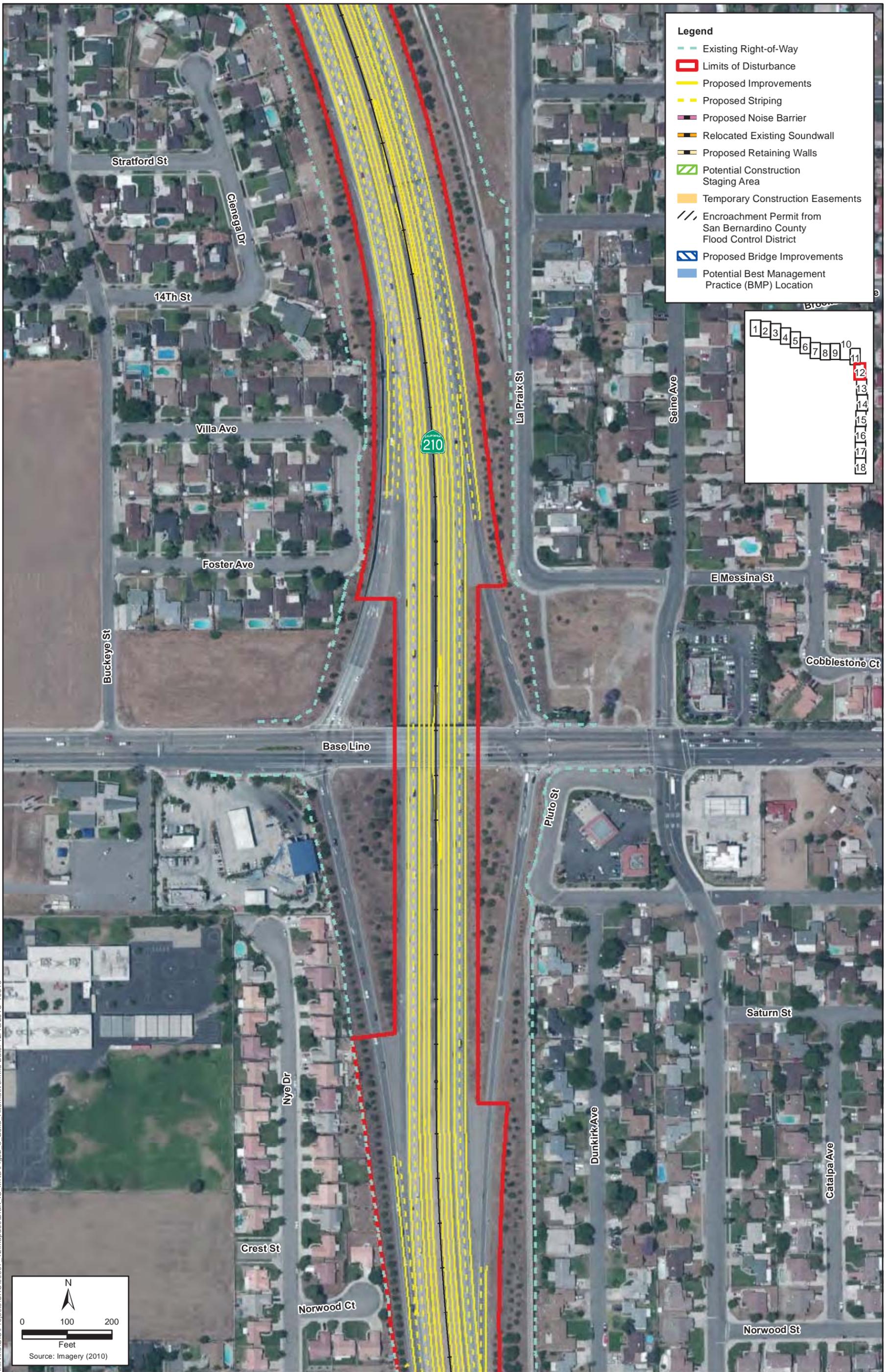
Figure 3
 Build Alternative - Sheet 10
 State Route 210 Mixed Flow Lane Addition from
 Highland Avenue to San Bernardino Avenue



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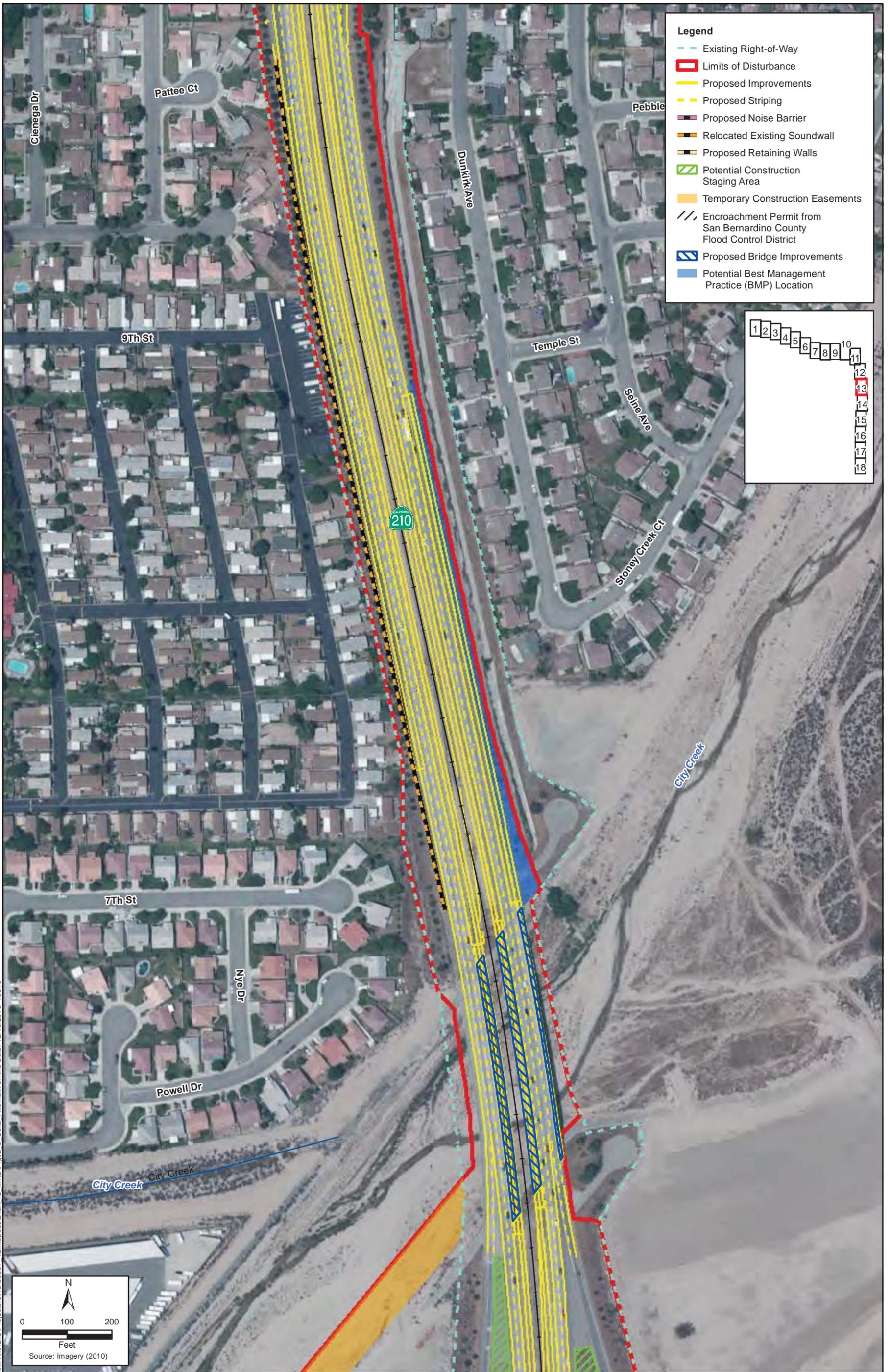
Figure 3

Build Alternative - Sheet 11
State Route 210 Mixed Flow Lane Addition from
Highland Avenue to San Bernardino Avenue



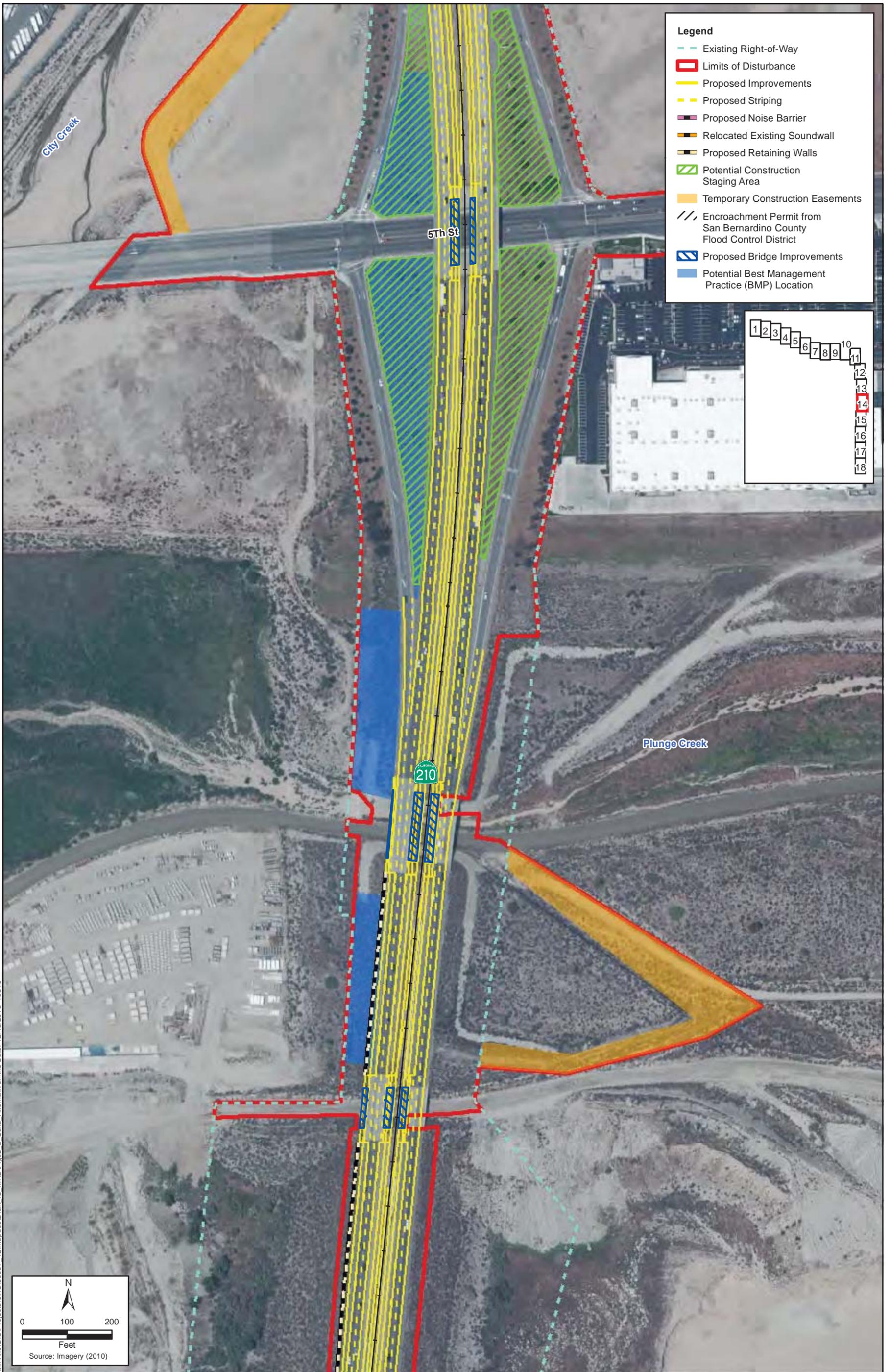
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Figure 3
 Build Alternative - Sheet 12
 State Route 210 Mixed Flow Lane Addition from
 Highland Avenue to San Bernardino Avenue



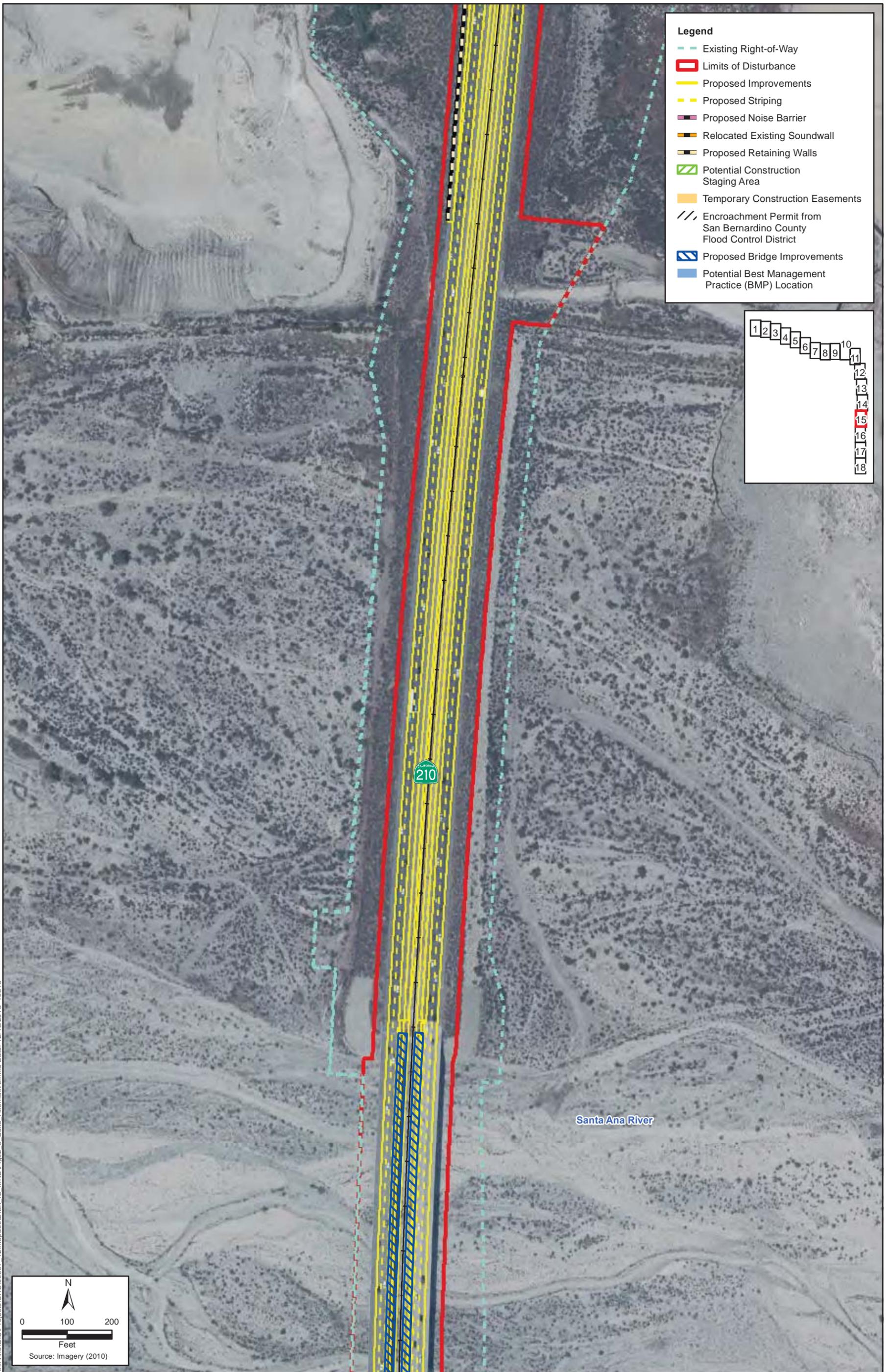
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Figure 3
 Build Alternative - Sheet 13
 State Route 210 Mixed Flow Lane Addition from Highland Avenue to San Bernardino Avenue



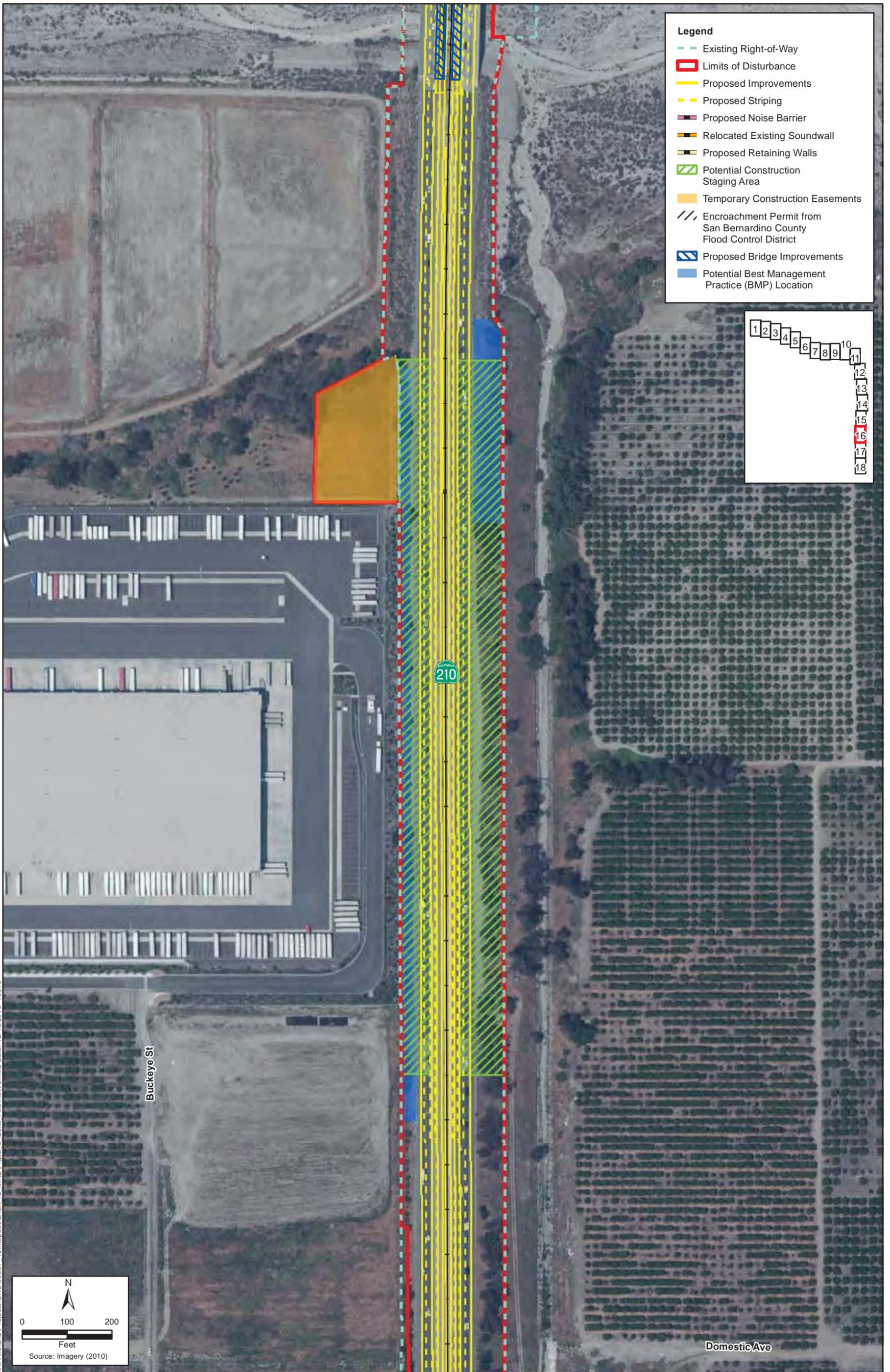
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Figure 3
 Build Alternative - Sheet 14
 State Route 210 Mixed Flow Lane Addition from
 Highland Avenue to San Bernardino Avenue



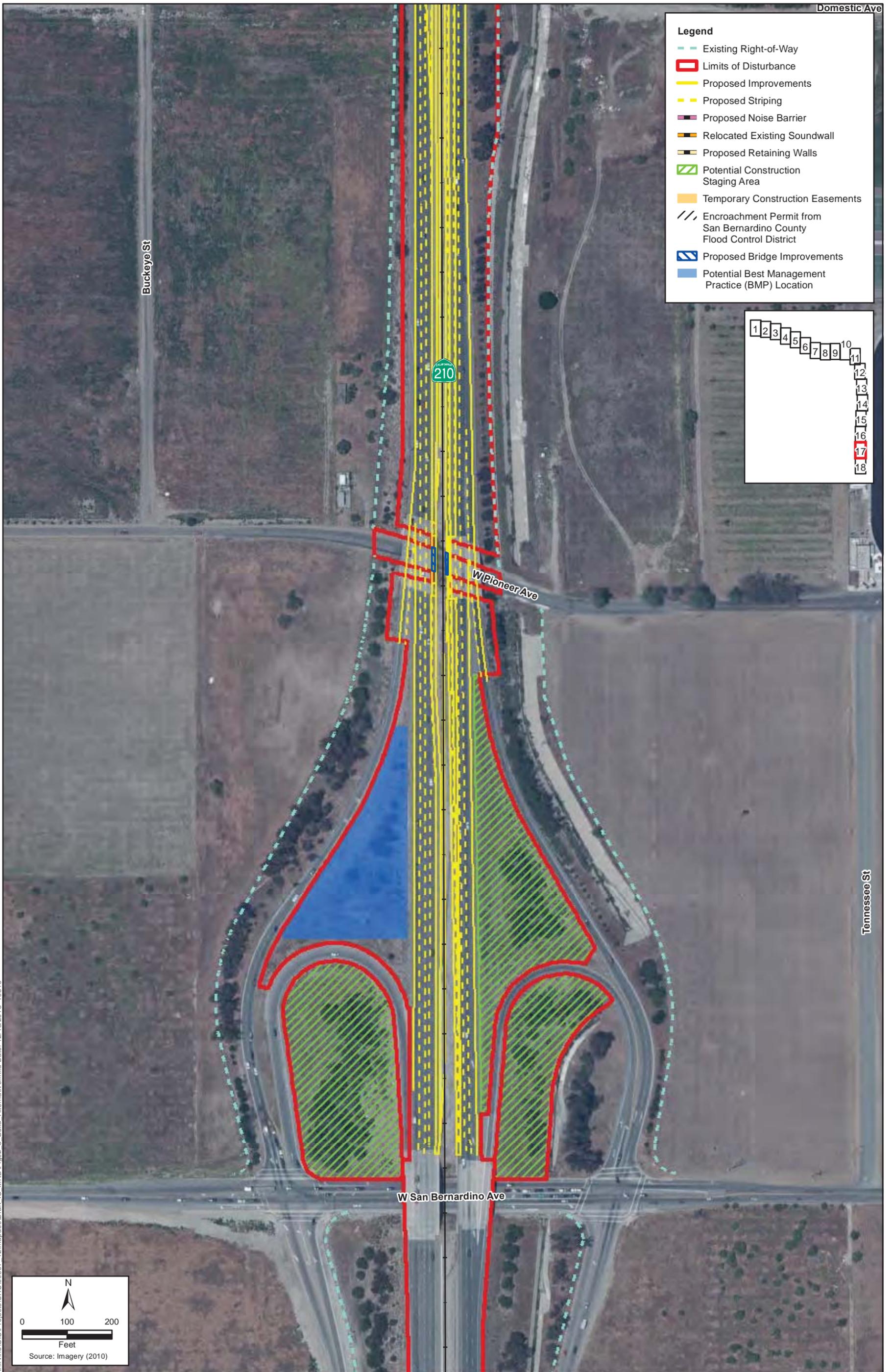
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Figure 3
Build Alternative - Sheet 15
State Route 210 Mixed Flow Lane Addition from Highland Avenue to San Bernardino Avenue



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Figure 3
 Build Alternative - Sheet 16
 State Route 210 Mixed Flow Lane Addition from
 Highland Avenue to San Bernardino Avenue



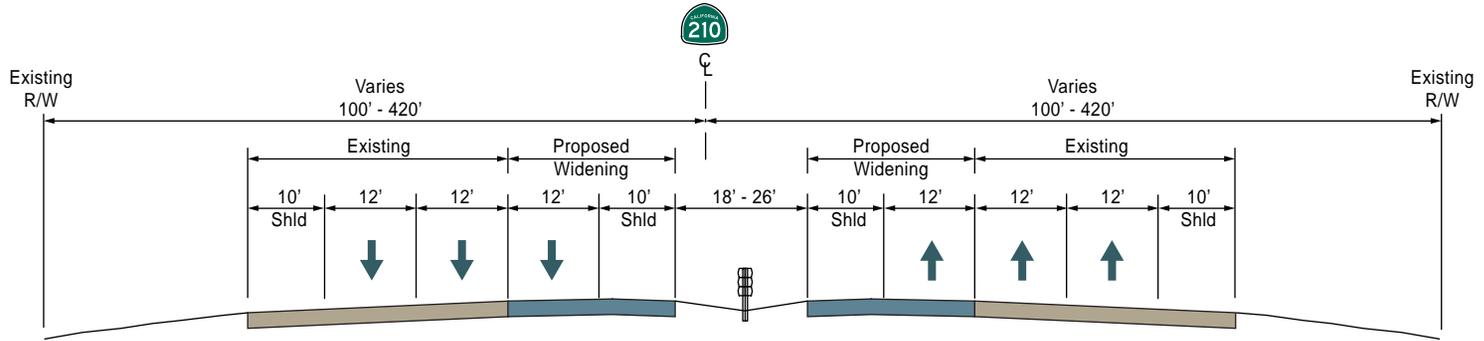
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Figure 3
 Build Alternative - Sheet 17
 State Route 210 Mixed Flow Lane Addition from
 Highland Avenue to San Bernardino Avenue

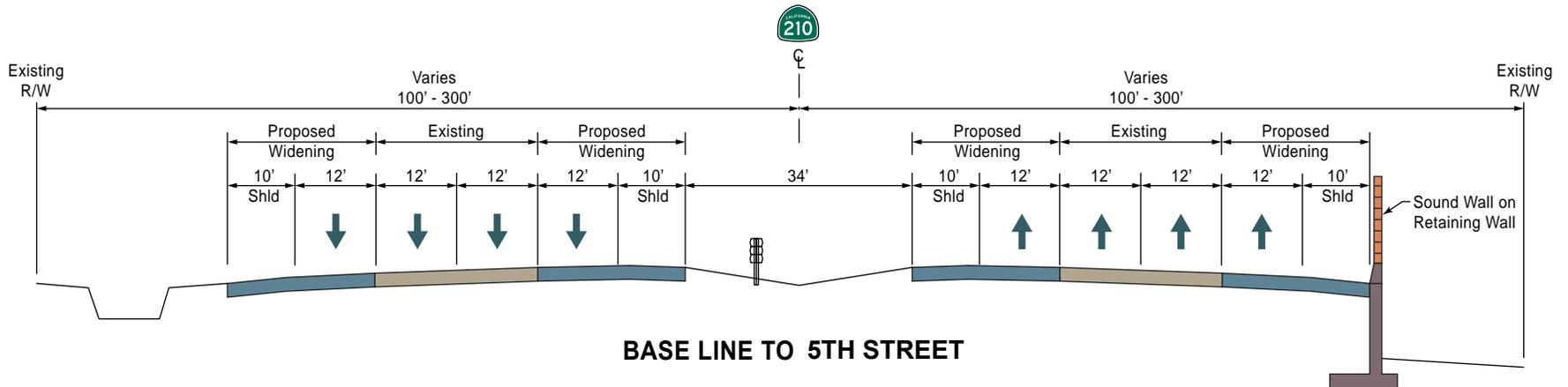


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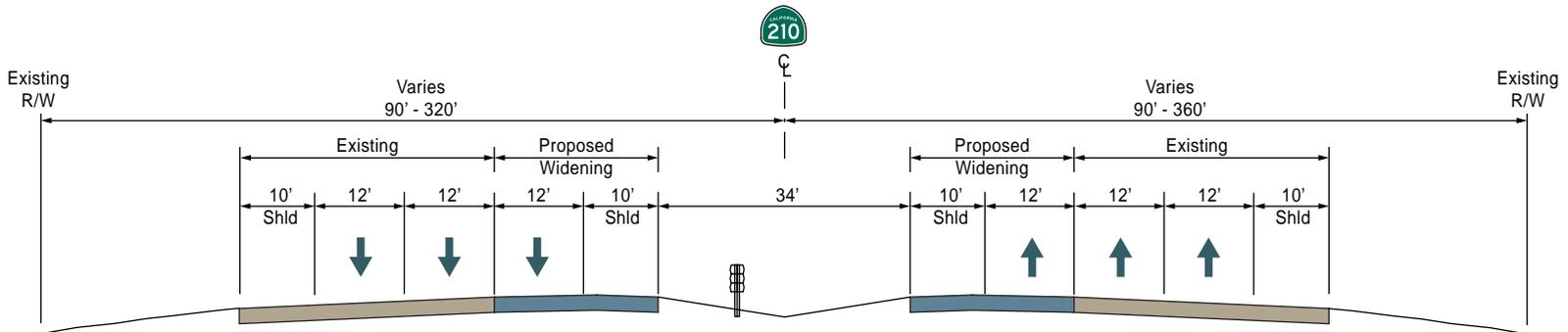
Figure 3
Build Alternative - Sheet 18
State Route 210 Mixed Flow Lane Addition from Highland Avenue to San Bernardino Avenue



5TH STREET TO SAN BERNARDINO AVENUE



BASE LINE TO 5TH STREET



HIGHLAND AVENUE TO BASE LINE

**Figure 4, Typical Cross Sections
State Route 210 Mixed Flow Lane Addition
from Highland Avenue to San Bernardino
Avenue**

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III. PROJECT LOCATION AND SETTING

The proposed project location and setting provides the context for determining the type and severity of changes to the existing visual environment. The terms *visual character* and *visual quality* are defined below and are used to further describe the visual environment. The proposed project setting or *study area* is also referred to as the corridor or proposed project corridor which is defined as the area of land that is visible from, adjacent to, and outside the highway right-of-way, determined by topography, vegetation, and viewing distance. The term *limits of disturbance* represent the area proposed for direct impact, including both permanent and temporary effects. The proposed *limits of disturbance* area extends northwest and south of the physical highway improvements to account for the placement of transition striping and signage during construction (see Figure 3)

SR-210 begins in San Bernardino County as an extension of SR-210 from Los Angeles County. SR-210 traverses portions of Caltrans District 7 in Los Angeles County and Caltrans District 8 in San Bernardino County. The total route length is 42.8 miles with 8.6 miles in Caltrans District 7 and 34.2 miles in Caltrans District 8. SR-210 in Caltrans District 8 begins at the Los Angeles and San Bernardino County line at 16th Street in the City of Upland. Moving easterly, it traverses the cities of Upland, Rancho Cucamonga, Fontana, Rialto, San Bernardino, Highland, and Redlands. In general, existing lanes along SR-210 are 12 feet wide and the inside and outside shoulders are generally ten feet wide (Figure 4). From Highland Avenue to approximately 5th Street, the median is generally 78 feet wide. From 5th Street to San Bernardino Avenue the existing median narrows to 23 feet wide in the eastbound direction and 27 feet wide in the westbound direction. SR-210 is included in the National Highway System and the California Freeway and Expressway System. It is not included in the Department of Defense "26,000 Mile Priority Network" or in the Strategic Highway Corridor Network. There are four service interchanges within the proposed project limits, which include Highland Avenue, Base Line, 5th Street/Greenspot Road, and San Bernardino Avenue, as well as one freeway-to-freeway interchange at State Route 330 (SR-330). Undercrossings occur at Victoria Avenue, Access Road, and Pioneer Avenue. There are existing water-crossing bridges at Sand Creek, City Creek, Plunge Creek, and the Santa Ana River.

The proposed project corridor is located within the eastern portion of the Santa Ana River Basin on a broad, south-sloped alluvial fan distributed from the San Bernardino Mountains on the north. Several local creeks that drain north to south/north to southwest from the San Bernardino Mountains are part of the Santa Ana River Basin. These include Warm, Plunge, and Dry Creeks. On the southerly border of the City of Highland, the Santa Ana River and City Creek together form a wide wash that is dry for much of the year, and which features light gray-colored and pale tan-colored silty and sandy soils overlain with scattered gravel and riverine pebble debris. The wash is also dotted with small clusters of alluvial fan sage scrub plant growth. The mountains of the Peninsular Range frame the Basin on the south. The terrain within the proposed project corridor, and surrounding viewshed, is gently sloping, transitioning from approximately 1,250 above mean sea level (msl) near the Highland Avenue exit to approximately 1,200 msl at the lowest point as it traverses the Santa Ana River Basin, before climbing to approximately 1,270 msl at the southern end of the proposed project corridor near San Bernardino Avenue. Within the Santa Ana River Basin, the elevation of the terrain gradually increases from west to east, reaching approximately 1,600 msl at a distance of approximately two miles east of SR-210.

The land uses surrounding the proposed project corridor are urban and moderately densely developed primarily with residential, public facilities, open space and general commercial uses—as is mirrored in

the land use classifications found in the various community general plans. Generally speaking, the urban development adjoining the proposed project corridor features ordinary ornamental landscape elements that characterize mid- and late twentieth-century suburban communities in the region. This includes extensive areas of grass turf and evergreen ornamental trees and shrubbery, salient among which are eucalyptus, palms, pine, California pepper (*Schinus molle*) and Brazilian pepper (*Schinus terebinthifolius*) trees, as well as privet and lemonade berry (*Rhus integrifolia*) shrubbery. In contrast with these plantings is the more indigenous alluvial fan scrub landscape found in the Santa Ana River Wash, with its broad areas of bare and riverine pebble-strewn sandy soil.

Scenic resources have been identified within the corridor in a Scenic Resource Evaluation. Primary scenic resources along the project corridor are limited to north-facing and northeast-facing views of the ridgelines of the San Bernardino Mountains, south-facing views of the ridgelines of the Peninsular Range, and views into and across Santa Ana River Wash, Plunge Creek, and City Creek. Where large clusters of mature trees and shrubbery are present these are considered visual resources of secondary importance. Due to the presence of such views, the 4.8-mile portion of SR-210 between SR-330 in the City of Highland and I-10 in the City of Redlands has been classified as an “Eligible State Scenic Highway” by Caltrans. Also, portions of adjacent local streets have been proposed for designation as local scenic routes. Local scenic highways include Base Line (east of City Creek) and Highland Avenue (east of City Creek), and Greenspot Road (east of SR-210) (refer to Figure 5). In addition, portions of Palm Avenue, Highland Avenue, Base Line, and Greenspot Road are classified as Class II bicycle routes (refer to Figure 5). In addition, several multi-use trails traverse the proposed project corridor along watercourse-based parklands, including the Sand Creek Trail (which runs north-to-south approximately 650 feet west of Victoria Avenue), as well as the City Creek and Santa Ana River Trails (both located south of Base Line) (refer to Figure 5).

Regulatory Framework

Federal and state policies require that aesthetics and potential impacts to visual resources be considered in the design of the proposed highway improvement project. In addition, the proposed project corridor traverses four local jurisdictions, including the cities of San Bernardino, Highland and Redlands, as well as unincorporated San Bernardino County. Key local policies governing aesthetics, as codified in local general plans, will also be taken into consideration in developing the proposed project. This chapter provides an overview of the pertinent above-referenced policies.

Federal Policies and Regulations

Federal Highway Administration Visual Impact Assessment Guidance

FHWA's *Visual Impact Assessment for Highway Projects* provides an analytical framework for identifying and assessing qualitative changes to the visual environment that could be introduced as part of a transportation project. It is intended to satisfy the provisions of both the National Environment Policy Act (NEPA) and the California Environmental Quality Act (CEQA) as they relate to aesthetic impacts. The process used in the VIA generally follows the guidelines outlined in the publication *Visual Impact Assessment for Highway Projects*, Federal Highway Administration, March 1981.

This analysis has been prepared in accordance with the objectives and methods described in the FHWA visual impact assessment guidelines. Consistent with that guidance, the following steps have been taken in assessing a project's potential to adversely affect visual quality:

- The visual environment and existing landscape characteristics within the visual resources study area have been defined and documented. The visual environment has been evaluated for both the existing condition and the future planned condition.
- Applicable planning documents (e.g., general plans, planning and zoning codes, etc.) have been reviewed for pertinent policy and guidance information.
- Major viewer groups have been identified, and anticipated viewer responses have been documented.
- Typical views for the visual assessment have been identified, based on the actual and anticipated responses of representative viewers.
- Review of the proposed project description, engineering plans, and renderings took place, and the type and degree of visual changes expected to result in the visual resources study area have been documented.
- Design recommendations for specific proposed project features and locations were reviewed to enhance the visual environment for stationary and transient viewers of the proposed project.
- Appropriate mitigation measures have been identified.

Natural Environmental Policy Act (NEPA)

Although specific significance thresholds or screening criteria are not provided under NEPA or CEQ regulations, in its Declaration of Purpose, NEPA states that it is the responsibility of the federal government to “...assure all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings ... and to attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences” (Section 101 [42 USC Section 4331]). However, among the ten types of issues listed in NEPA as important to consider, three touch upon aesthetics indirectly, including the potential to adversely affect the unique character of the affected resource, the potential for controversy, and the potential to violate laws and regulations (Section 1508.27, Council of Environmental Quality (CEQ): Regulations for Implementing NEPA, Index and Terminology).

State Policies and Regulations

California Environmental Quality Act (CEQA)

CEQA requires an evaluation of scenic resources when considering project effects on the environment. The evaluation considers site-specific history, context, and area sensitivity. CEQA guidance is based on Appendix G of the State CEQA Guidelines.

California Scenic Highway Program (Senate Bill 1467, Streets and Highways Code Sections 260 and 263)

The California Scenic Highways Program helps to protect and enhance the scenic beauty of the State’s highway system. The program identifies portions of the state highway system that require special conservation treatments. Preservation includes adjacent scenic corridors, which include areas visible from, adjacent to, and outside of the highway right-of-way. Preservation includes protecting scenic and natural features within the scenic corridor. Any project that may affect the scenic value of an identified scenic corridor is required to consider the provisions of the program. Preservation includes highways that are officially designated as scenic as well as those listed as eligible to become state scenic highways. The portion of SR-210 south from the SR-330 interchange, extending south to the I-10 interchange in the City of Redlands, is considered an eligible state scenic route. No other officially designated or eligible state scenic highways occur within the proposed project area or viewshed.

Local Policies and Regulations

From the proposed project's points of initiation and termination, west to southeast, the general plans for the cities of San Bernardino, Highland, and Redlands as well as San Bernardino County classify property within and abutting the proposed project area for single- and multi-family residential, general commercial, commercial, public/quasi-public, and light industrial uses as well as natural resource conservation. They identify views to the local mountain ridgelines and the Santa Ana River Wash as the area's primary visual resources, and call for continued development of the local and regional trail system. The City of Redlands places a special emphasis on preserving its surviving orange groves as a significant expression of both the community's aesthetic and cultural history.

The City of Highland General Plan Circulation Element references the completion of the proposed project improvements to SR-210 "as a significant need" and the "timely completion of the project" as being of vital importance (page 3-31). The Circulation Element identifies three bikeways and one recreational trail that traverse the proposed project corridor. There is a Class II (on street) bikeway along Palm Avenue—extending south from Highland Avenue to the southern municipal limits, and into the City of Redlands—and along Base Line, and 5th Street (Circulation Element, Figure 3-5). A bikeway is also proposed by the City of Redlands that would traverse SR-210, crossing under the existing SR-210 highway on the proposed extensions of Palmetto and Domestic Avenues (these streets currently terminate before reaching SR-210)(City of Redlands General Plan Open Space and Conservation Element, Figure 7.1). Other designated City of Redlands bikeways are located in distances ranging between 1 and 4 miles from the proposed project corridor.

Both the city of Highland and Redlands general plans refer to a regional multi-jurisdictional trail along the Santa Ana River. In addition, the City of Highland has designated multi-purpose trails within the Santa Ana River Basin, along Plunge and City Creeks. Palm Avenue in the City of Highland traverses the proposed project corridor and is classified as a local scenic route. The City of Redlands also proposes development of the bluff-top scenic route along the southern perimeter of the Santa Ana River Wash. This route provides dramatic views of not only the wash but also the San Bernardino Mountains, which are located north and northeast of the proposed project corridor (City of Redlands Circulation Element, Figure 4.1).

The only public parks/outdoor recreational uses that adjoin the proposed project corridor or occur within the proposed project viewshed are the 47-acre San Bernardino Soccer Complex, located at 2500 Pacific Street, near Arden Avenue and Pacific Street in the City of San Bernardino; the athletic fields at San Andreas High School, 3232 Pacific Street in the City of Highland; and the athletic fields at Citrus Valley High School in the City of Redlands. The San Bernardino Soccer Complex, with its 24 soccer fields, is used by the public and draws many hundreds of players and spectators during weekend tournaments.

In addition to policies presented in the Circulation, City Design, and Open Space Elements, aesthetics are addressed in the City of Highland General Plan Noise Element, wherein noise barriers and site design review are identified as "the preferred means" of mitigating primary transportation-related noise sources.

IV. ASSESSMENT METHOD

This visual impact assessment follows the guidance outlined in the publication *Visual Impact Assessment for Highway Projects* published by the FHWA in March 1981.

The following steps were followed to assess the potential visual impacts of the proposed project:

- A. Define the proposed project location and setting.
- B. Identify visual assessment units and key views.
- C. Analyze existing visual resources, resource change and viewer response.
- D. Depict (*or describe*) the visual appearance of proposed project alternatives.
- E. Assess the visual impacts of proposed project alternatives.
- F. Propose measures to offset visual impacts.

The analysis was supported through the creation of photo simulations. Using Google Earth mapping and high-resolution photos as a starting point, a visual simulation specialist employed Trimble Sketch-Up to prepare 3D digital models of the existing and proposed project features, exporting proposed project drawings corresponding to key observation point locations for use in the simulations. Adobe Photoshop was then used to prepare photo-realistic composites simulating the view with-proposed project conditions.

V. VISUAL ASSESSMENT UNITS AND KEY VIEWS

The VIA guidelines provide an evaluative framework that defines the visual setting in terms of *visual assessment units* or *landscape units* and/or *key views*. As mentioned previously a visual assessment unit or landscape unit is a specific portion of the regional landscape and can be thought of as an outdoor room that exhibits a distinct visual character and visual quality. A landscape unit often corresponds to a place or district that is commonly known among local viewers. A key view is a point from which a select view is analyzed from the perspective of potential key viewer groups. The landscape unit approach is useful when a highway project traverses visually distinct settings that can be readily defined geographically, whereas the key view approach is useful when the views are largely homogeneous throughout the viewshed. The key view approach can be adopted for a densely urbanized and developed setting. Due to the fairly consistent but not necessarily homogenous character of the viewshed along the proposed project corridor, this assessment uses a key view approach in lieu of the landscape unit or visual assessment unit approach.

The *project viewshed* is defined as the area of land that is visible from, adjacent to, and outside the highway right-of-way. It is determined by topography, vegetation, and viewing distance. The limits of a viewshed are defined as the visual limits of the views located from the proposed project. The viewshed also includes the locations of viewers likely to be affected by visual changes brought about by features proposed as part of the proposed project. Although the proposed project corridor is largely paved with concrete and asphalt, there are large unpaved areas within the highway right-of-way, including the existing median, which features disturbed pale gray-colored sandy soil and some gravel, as well as sometimes densely planted embankment landscaping along the outside borders of the highway. As previously referenced, proposed project area landscape features are unremarkable and consist primarily of rather ordinary ornamental plantings (*viz.*, California peppers, willow, privet, lemonade berry shrubs, and eucalyptus trees). Weedy ruderal plant species that thrive on heavily disturbed soil are also present. Though commonplace, in terms of species and form, these plant species becomes a visual resource of secondary importance when mature trees and understory plantings are densely clustered in views along the project alignment (as documented in Appendix A, Photo Figures 1 and 5). Within the Plunge Creek/Santa Ana River Basin sensitive native plant species are distributed that thrive in semi-arid

riverine settings, including the Santa Ana woolly star (*Eriastrum densifolium* ssp. *sanctorum*), Plummer's mariposa lily (*Calochortus plummerae*), bush mallow (*Malacothamnus fasciculatus*), and spineflowers (*Chorizanthe* sp). The creek beds and the Santa Ana River Wash, which include habitat for such sensitive native plants, are primary visual resources within the project viewshed (as documented in Appendix A, Photo Figure 13). It should be noted that views of both primary and secondary visual resources in the viewshed would be negligibly affected by the proposed project components, because the proposed improvements would largely occur at-grade within the Caltrans right-of-way (creek beds are underneath the Caltrans right-of-way); outside of the viewshed from SR-210; and within an already disturbed portion of the creek bed as viewed from other locations.

The analysis identified four key viewpoints that could be noticeably altered by the proposed project designated as key observation points (KOPs). Additional photos were taken at various points along the SR-210 corridor to depict the existing visual setting with a series of representative views. These are included as part of Appendix A. Figure 6, Key View Photo Vantages, depicts the KOP views which will be used to assess visual impacts that may be caused by the proposed project, and the additional photo station locations.

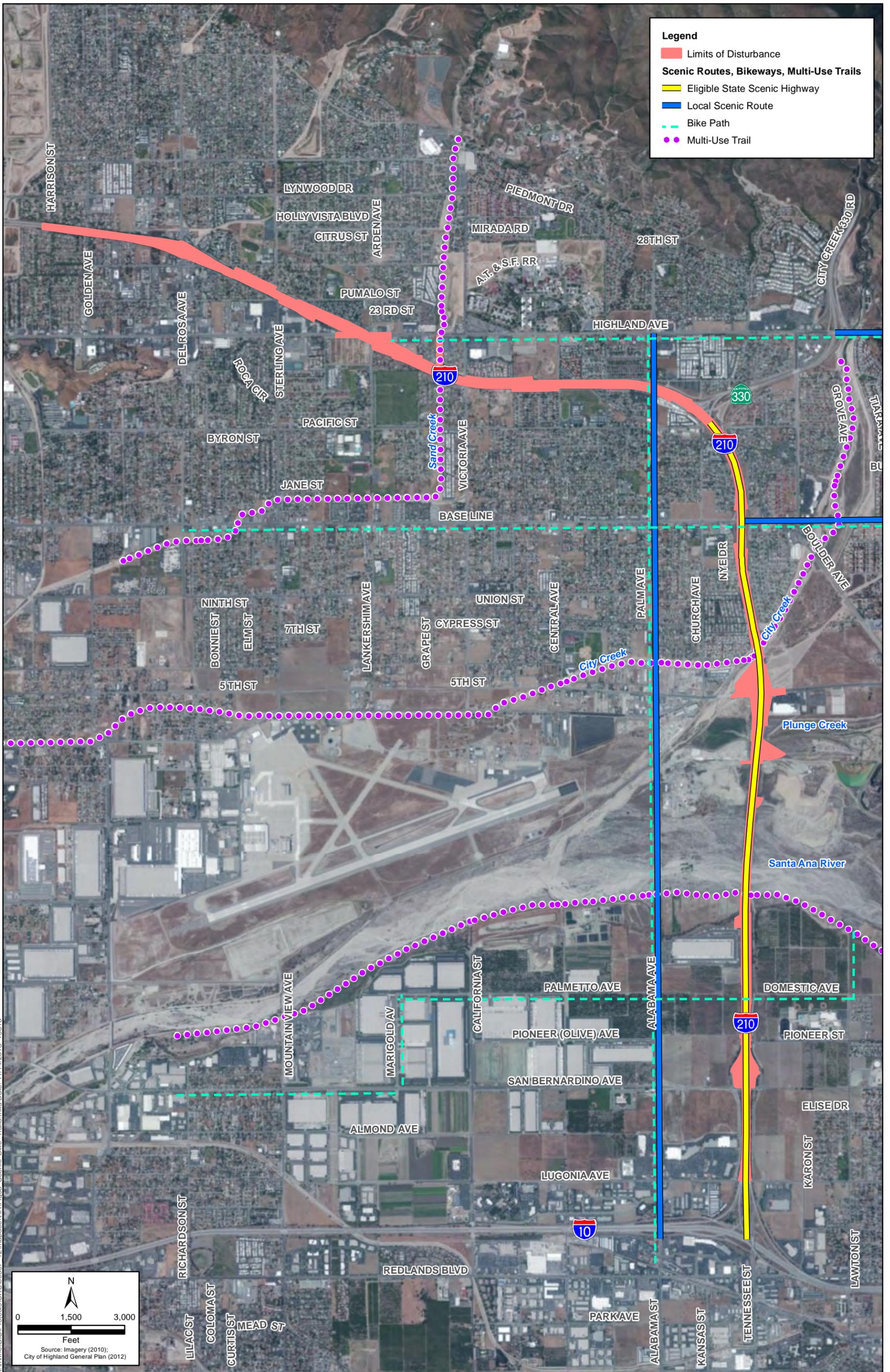


Figure 5
Local and State Scenic Routes, Bikeways and Multi-Use Trails
State Route 210 Mixed Flow Lane Addition from Highland Avenue to San Bernardino Avenue

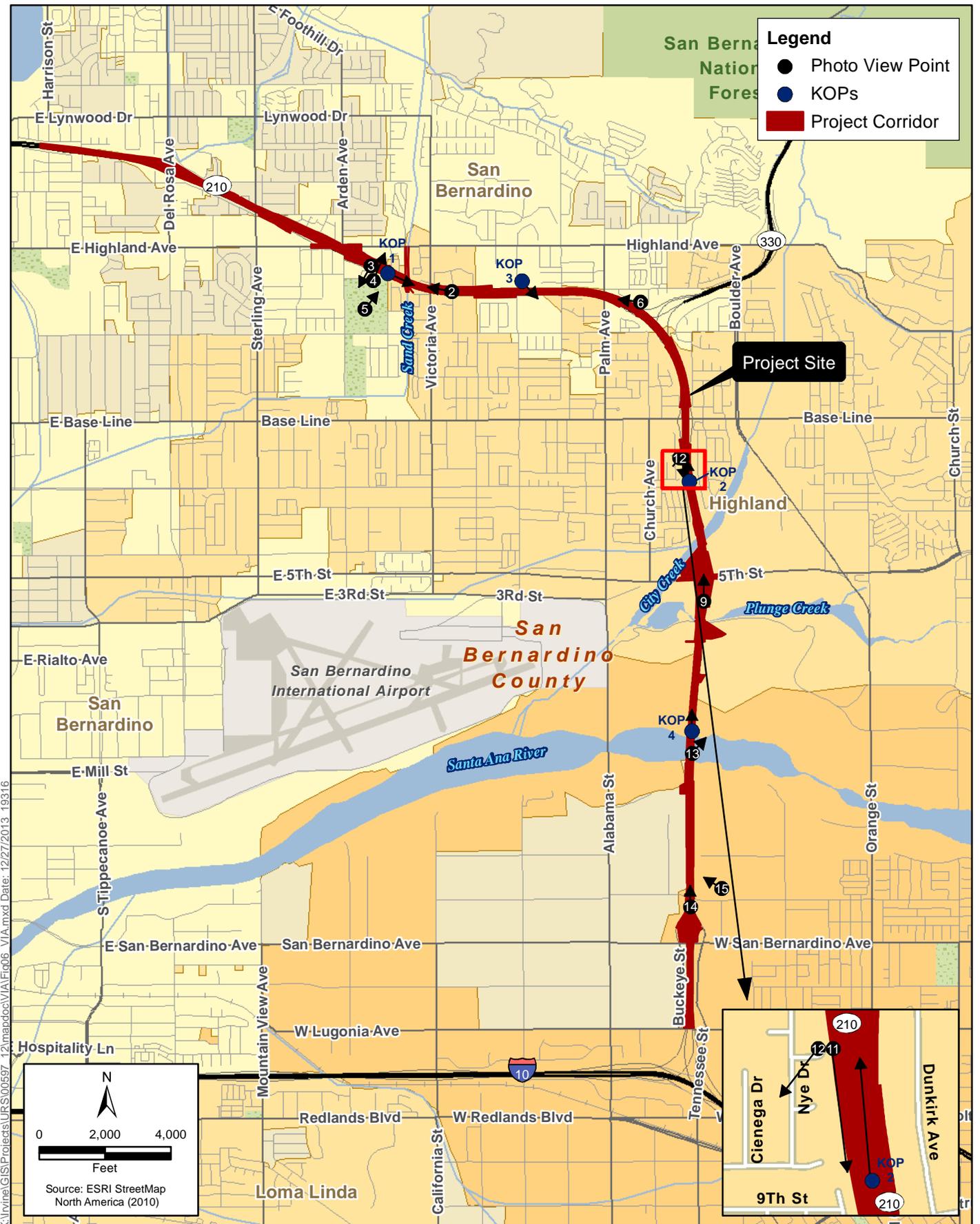


Figure 6
Key View Photo Vantages
State Route 210 Mixed Flow Lane Addition from
Highland Avenue to San Bernardino Avenue

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KOP 1 (Photo 1)—View looking east within the SR-210 median, approximately 1,000 feet east of the Victoria Avenue overcrossing.

KOP 2 (Photo 8)—View looking north within the SR-210 median, approaching the Base Line Overcrossing.

KOP 3 (Photo 7)—View looking southeast across SR-210 towards San Andreas High School playfields, just east of Central Avenue from along the south border of the Willow Creek Townhomes, 1991 N. Central Avenue, Highland.

KOP 4 (Photo 10)—View looking north from SR-210, approximately one mile south of 5th Street/Greenspot Road.

VI. VISUAL RESOURCES AND RESOURCE CHANGE

Resource change is assessed by evaluating the visual character and the visual quality of the visual resources that comprise the proposed project corridor before and after the construction of the proposed project. Resource change is one of the two major variables in the equation that determine visual impacts (the other is viewer response, discussed below in Section VII, Viewers and Viewer Response).

The FHWA methodology used to develop narrative ratings in the analysis included describing existing visual character in terms of land use, form, pattern, line, color and texture, utilizing the measures of vividness, intactness, and unity to establish baseline visual quality ratings. The analysis was done by a design review specialist and a landscape architect with experience performing visual analysis.

Visual Resources

Visual resources of the proposed project setting are defined and identified below by assessing visual character and visual quality in the proposed project corridor.

Visual Character

Visual character includes attributes such as form, line, color, texture, and is used to describe, not evaluate; that is these attributes are neither considered good nor bad. However, a change in visual character can be evaluated when it is compared with the viewer response to that change. Changes in visual character can be identified by how visually compatible a proposed project would be with the existing condition by using visual character attributes as an indicator. For this proposed project the following attributes were considered:

- **Form** - visual mass or shape;
- **Line** - edges or linear definition;
- **Color** - reflective brightness (light, dark) and hue (red, green);
- **Texture** - surface coarseness;
- **Dominance** - position, size, or contrast;
- **Scale** - apparent size as it relates to the surroundings; and
- **Continuity** - uninterrupted flow of form, line, color, or textural pattern.

The visual character of the proposed project will be fully compatible with the existing visual character of the proposed project corridor because it will be consistent with the proposed project corridor in terms of form, line, texture, color, scale, dominance and continuity, without perceptible differences in regards to seasonal aspects, as well as night and day.

Visual Quality

Visual quality is evaluated by identifying the vividness, intactness, and unity present in the proposed project corridor. Public attitudes validate the assessed level of quality and predict how changes to the proposed project corridor can affect these attitudes. This process helps identify specific methods for addressing each visual impact that may occur as a result of the proposed project. The three criteria for evaluating visual quality are defined below:

- **Vividness** is the extent to which the landscape is memorable and is associated with distinctive, contrasting, and diverse visual elements.
- **Intactness** is the integrity of visual features in the landscape and the extent to which the existing landscape is free from non-typical visual intrusions.
- **Unity** is the extent to which all visual elements combine to form a coherent, harmonious visual pattern.

The visual quality of the existing corridor will not be noticeably altered by the proposed project, as measured at key view locations along the proposed project corridor applying the criteria of vividness, intactness, and unity. Visual quality is currently rated as moderately low to moderate, and after the proposed project features are built, would not be noticeably altered, with ratings expected to remain the same. The overall level of resource change in visual quality terms would therefore be low to moderately low.

Views of high quality often have topographic relief, a variety of vegetation, rich colors, impressive scenery, and unique natural and/or built features. Utilizing a rating scale of from 0 through 7, with 0 representing very low visual quality and 7 representing very high visual quality, this is equivalent to rating numbers 5.5 through 7. Views of medium quality typically have interesting but minor landforms, some variety in vegetation and color, and/or moderate scenery (equivalent to rating numbers 3.5 through 5.4). Views of low quality have uninteresting features, little variety in vegetation and color, uninteresting scenery, and/or common elements (equivalent to visual quality rating numbers 0 through 3.4).

Photos 1 through 15 document the present visual character and quality within the proposed project area's viewshed (Appendix A). They also document representative views—four of which would noticeably change to some degree. Development within the viewshed consists of single- and multi-family residential housing, both small- and large-scale retail and commercial buildings, public parks and schools, and large industrial facilities. These are generally commonplace in design and overwhelmingly from the mid- and late twentieth century. Highway landscape elements, sound walls, and solid masonry walls on residential properties to screen views of the highway from outside its boundaries are also depicted (e.g., eastbound side of SR-210 south of Base Line) (refer to Appendix A, Photos 11 and 12).

The proposed project corridor also traverses expanses of open, undeveloped and/or vacant land, as is the case within and adjoining the Santa Ana River Basin in the area straddling the southern and northern boundaries of the cities of Highland and Redlands, respectively (refer to Appendix A, Photo 13).

Horizontal line elements and rectangular forms are predominant in most views across the viewshed. Landforms are gently sloping north to south in foreground and mid-range views. Contrasting curvilinear elements are also present. North- and northeast-facing views across the gently sloping terrain terminate with the dramatic ridgelines of the San Bernardino Mountains, while views to the south terminate with the ridgelines of the Peninsular Range. These mountain ridgelines form a dramatic contrasting curvilinear backdrop during those portions of the year when air quality conditions permit unhampered views (refer to Appendix A, Photos 1, 5, 8, 9, and 10).

Viewshed trees provide an important, but secondary, contrasting curvilinear element and vertical line elements in most foreground and mid-frame views along the proposed project corridor, as does the varied elevational configuration of the highway as it transitions between its depressed and elevated segments (refer to Appendix A, Photo 1). The color palette within this visual setting is dominated by the light gray color of the soil in the median and slightly darker blue-gray color of the roadway paving. The landscaping—which is comprised of gray-green and medium green-colored, trees, shrubbery, and groundcover plantings—provides contrasting color pattern and texture in the visual setting.

The contrasting line elements from the landscape features, mountain ridgelines, and the topographic variation that results from the variation in the highway's depressed and elevated roadway placements can be seen in some of the corridor views. Together, with the palette of colors, they combine to convey a moderate degree of vividness. The depressed configuration of the roadway along the northerly portion of the corridor serves to strongly focus roadway views, creating an outdoor room effect that screens out much of the development that exists outside the highway right-of-way. The embankment's diagonal grade, along with the vertical line elements of the embankment shrubbery and trees, contrast with the highway's strong horizontal line pattern with respect to form, line, color, and texture. When elevated, the highway landscape screening also serves to constrict most views of the highway roadway from outside the freeway, thereby focusing views (refer to Appendix A, Photos 1 through 5). This provides most portions of the proposed project corridor a moderate degree of unity and intactness.

Resource Change

Resource change is assessed by evaluating the visual character and the visual quality of the visual resources that comprise the proposed project corridor before and after construction of the proposed project. Resource change is one of the two major variables in the equation that determine visual impacts (the other is viewer response, discussed below in Section VII, Viewers and Viewer Response). As summarized below in Section VII, Viewers and Viewer Response, resource change (i.e., changes to visual resources as measured by changes in visual character and visual quality that would result from the proposed project) would be low.

VII. VIEWERS AND VIEWER RESPONSE

The population affected by the proposed project is composed of viewers. Viewers are people whose views of the landscape may be altered by the proposed project—either because the landscape itself has changed or their perception of the landscape has changed.

Viewers, or more specifically the response viewers have to changes in their visual environment, are one of two variables that determine the extent of visual impacts that will be caused by the construction and operation of the proposed project. The other variable is the change to visual resources discussed earlier in Section VII, Viewers and Viewer Response.

Types of Viewers

There are two major types of viewer groups for highway projects: highway neighbors and highway users. Each viewer group has its own particular level of *viewer exposure* and *viewer sensitivity*, resulting in distinct and predictable visual concerns for each group that predict their responses to visual changes.

Highway Neighbors (Views to the Road)

Highway neighbors are people who have views *to* the road. They can be subdivided into different viewer groups by land use. For example, residential, commercial, industrial, retail, institutional, civic, educational, recreational, and agricultural land uses may generate highway neighbors or viewer groups with distinct reasons for being in the corridor and therefore having distinct responses to changes in visual resources. For this proposed project the following highway neighbors were considered: residents, recreationists, and workers at local businesses.

Highway Users (Views from the Road)

Highway users are people who have views *from* the road. They can be subdivided into different viewer groups in two different ways—by mode of travel or by reason for travel. For example, subdividing highway users by mode of travel may yield pedestrians, bicyclists, transit riders, car drivers and passengers, and truck drivers. Dividing highway users or viewer groups by reason for travel creates categories like tourists, commuters, and haulers. It is also possible to use both mode and reason for travel simultaneously, creating a category like *bicycling tourists*, for example. For this proposed project the following highway users were considered: commuting motorists, truck drivers, and persons driving for pleasure.

Viewer Response

Viewer response is composed of two elements: viewer sensitivity and viewer exposure. These elements combine to form a method of predicting how the public might react to visual changes brought about by a highway project.

Viewer Exposure

Viewer exposure is a measure of the viewer's ability to see a particular object. Viewer exposure has three attributes: location, quantity, and duration. *Location* relates to the position of the viewer in relationship to the object being viewed. The closer the viewer is to the object, the more exposure. *Quantity* refers to how many people see the object. The more people who can see an object or the greater frequency an object is seen, the more exposure the object has to viewers. *Duration* refers to how long a viewer is able to keep an object in view. The longer an object can be kept in view, the more exposure. High viewer exposure helps predict that viewers will have a response to a visual change.

Overall viewer exposure for the viewer groups ranges from short-term for workers, commuting motorists and truck drivers to longer-term for some recreationists (i.e., those organizing their recreational activities--to some degree--around the enjoyment of scenic resources), residents and motorists traveling for pleasure, based upon their location, quantity of times they can acquire certain views, and the duration of those views.

Viewer Sensitivity

Viewer sensitivity is a measure of the viewer's recognition of a particular object. It has three attributes: activity, awareness, and local values. *Activity* relates to the preoccupation of viewers—are they preoccupied, thinking of something else, or are they truly engaged in observing their surroundings. The more they are actually observing their surroundings, the more sensitivity viewers will have of changes to

visual resources. *Awareness* relates to the focus of view—the focus is wide and the view general or the focus is narrow and the view specific. The more specific the awareness, the more sensitive a viewer is to change. *Local values* and attitudes also affect viewer sensitivity. If the viewer group values aesthetics in general or if a specific visual resource has been protected by local, state, or national designation, it is likely that viewers will be more sensitive to visible changes. High viewer sensitivity helps predict that viewers will have a high concern for any visual change.

Overall viewer sensitivity for the viewer groups ranges from low for workers, commuting motorists and truck drivers to moderate-to-high for those recreationists organizing their recreational activities around the enjoyment of scenic resources, residents with views into the highway right-of-way and motorists traveling for pleasure based upon their activities, awareness, and local values for the proposed project as a whole.

Group Viewer Response

The narrative descriptions of viewer exposure and viewer sensitivity for each viewer group were merged to establish the overall viewer response of each group.

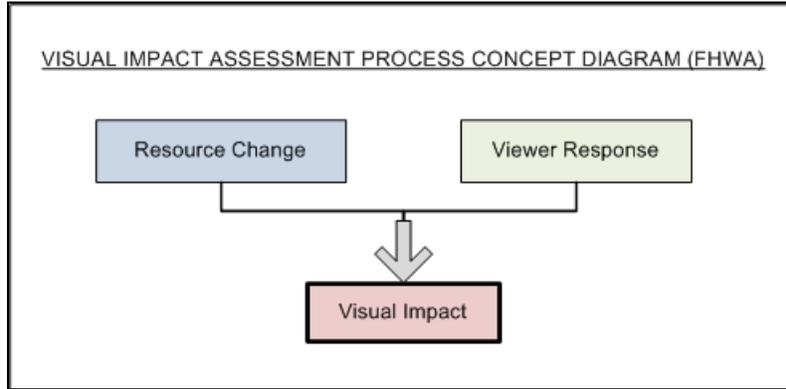
Neighbors (i.e., people with views to the highway) in the viewshed consist primarily of motorists, with non-residential viewers being the predominant group. A majority of the highway motorists in the viewshed consist of commuters who are simply en route to and from their homes, workplaces, and/or running errands. Although the duration of their views are longer-term due to regular travel along the proposed project corridor, such viewers are presumed to have a low-to-moderate degree of sensitivity to the visual changes being proposed as part of the proposed project because their attention usually is focused on driving and other concerns due to the routine nature of their travel; viewer duration, thus, is considered shorter-term. Some of the motorists are persons traveling for pleasure en route to such recreation destinations as Big Bear and Lake Arrowhead. Although their views are typically infrequent, such viewers are considered moderately sensitive because they are more inclined to look for scenic attributes in the viewshed; hence, viewer duration is weighted as longer-term.

Some recreationists are also present in the viewshed. These include bicyclists, hikers, walkers and runners using the multi-use trail system along Sand Creek, City Creek and Santa Ana River, as well as persons engaged in team sports activities. Possibly the largest group of such recreationists are the numerous soccer players and spectators who attend events at the San Bernardino Soccer Complex (Arden Avenue, south of SR-210/Arden Avenue overcrossing), with somewhat smaller and less frequent gatherings occurring at San Andreas High School and Citrus Valley High School. However, only the viewers at San Andreas High School can see the highway and can do so only while standing in a relatively small area adjacent to the north perimeter fence, which abuts the highway right-of-way.

Both residential neighbors and recreationists generally have highly constrained views into the highway right-of-way. At the Park Heights Apartments, located at 2011 Arden Avenue, for example, the highway is elevated, and its embankments are generally heavily landscaped. Although the highway embankment looms along the north perimeter of this complex, due to its elevated placement, no views of the highway can be acquired (see Appendix A, Photo Figures 3 through 5).

VIII. VISUAL IMPACT

Visual impacts are determined by assessing changes to the visual resources and predicting viewer response to those changes. These impacts can be beneficial or detrimental. Cumulative impacts and temporary impacts due to the contractor’s operations are also considered. A generalized visual impact assessment process is illustrated in the following diagram:



The table below provides a reference for determining levels of visual impact by combining resource change and viewer response.

TABLE 1.
Visual Impact Ratings Using Viewer Response and Resource Change

		Viewer Response (VR)				
		Low (L)	Moderate-Low (ML)	Moderate (M)	Moderate-High (MH)	High (H)
Resource Change (RC)	Low (L)	L	ML	ML	M	M
	Moderate-Low (ML)	ML	ML	M	M	MH
	Moderate (M)	ML	M	M	MH	MH
	Moderate-High (MH)	M	M	MH	MH	H
	High (H)	M	MH	MH	H	H

Visual Impacts by Visual Assessment Unit and Alternative

Because it is not feasible to analyze all the views in which the proposed project would be seen, it is necessary to select a number of key views associated with visual assessment units that would most clearly demonstrate the change in the proposed project’s visual resources. Key views also represent the viewer groups that have the highest potential to be affected by the proposed project considering exposure and sensitivity. In addition, these key views will be analyzed for each proposed alternative. Due to the fairly consistent but not necessarily homogenous character of the viewshed along the proposed project corridor, this assessment uses a key view approach in lieu of the landscape unit or visual assessment unit approach.

This VIA also considers the potential impacts of a No-Build Alternative. This analysis considers what visual changes could be reasonably expected to occur in the foreseeable future if the proposed project was not constructed per the No-Build Alternative (e.g., it is expected that such changes would be very gradual—such as the deterioration of highway hardscape and hence not discernible in the short- to medium-term).

The following section describes and illustrates visual impacts using the key view approach, compares existing conditions to the proposed alternatives, and includes the predicted viewer response.

Visual resource change is the sum of the change in visual character and change in visual quality. The first step in determining visual resource change is to assess the compatibility of the proposed project with the visual character of the existing landscape. The second step is to compare the visual quality of the existing resources with the projected visual quality after the proposed project is constructed.

The viewer response to proposed project changes is the sum of viewer exposure and viewer sensitivity to the proposed project as determined in the preceding section.

The resulting level of visual impact is determined by combining the severity of resource change with the degree to which people are likely to oppose the change.

Definition of Visual Impact Levels

Low – The project would result in minor adverse change to existing visual resources, reflected by low viewer response to change in the visual environment. Such a project would likely not require mitigation.

Moderate – The project would result in a moderate degree of adverse change to existing visual resources, accompanied by moderate viewer response. Impacts can be mitigated within five years using conventional practices.

Moderately High – The project would result in moderately adverse change to existing visual resources, accompanied by high viewer response or high adverse visual change with a moderate degree of viewer response. Extraordinary mitigation practices may be required. The landscape treatment proposed as mitigation will generally take longer than five years to implement.

High – A high level of adverse change to the resource or a high level of viewer response to visual change such that architectural design and landscape treatment measures cannot mitigate the impacts to a level that is less than significant. The viewer response level is high, and an alternative project design may be required to avoid the impacts.

Photo Figures 1, 7, 8, and 10 document key views points within the viewshed identified for analysis, and are designated as KOPs because it is not feasible to analyze all the views in which the proposed project would be seen (see Figure 5 for all representative views and KOP photo vantage locations). This assessment of visual quality was done after defining the viewshed and identifying key views for analysis, per the FHWA guidelines (referenced previously in Chapter 2). Carson Anderson, ICF International, an environmental planner with 30 years of design review and community planning experience, and Landscape Architect Thomas Cherry, ICF International prepared the analysis. They were assisted in this assessment by Tim Messick, ICF International, graphics specialist, who created visual simulations depicting the visual appearance of proposed project alternatives, contrasting them with the highway's existing appearance.

As previously referenced, the KOPs include:

KOP 1—View looking east within the SR-210 median, approximately 1,000 feet east of the Victoria Avenue overcrossing.

KOP 2—View looking north within the SR-210 median, approaching the Base Line Overcrossing.

KOP 3—View looking southeast across SR-210 towards San Andreas High School playfields, just east of Central Avenue from along the south border of the Willow Creek Townhomes, located at 1991 N. Central Avenue, Highland.

KOP 4—View looking north from SR-210, approximately one-mile south of 5th Street/Greenspot Road.

Mountain ridgelines and vegetation are the primary visual resources in the proposed project setting, and because these elements frame most views across the viewshed, they confer moderate visual quality. The built environment that frames the proposed project corridor consists of single- and multi-family residential, public schools and parks, general commercial, and industrial buildings dating in many instances, from the recent past. These have commonplace design features typical of suburban communities across the region and are not visual resources. Accordingly, existing visual quality was rated as moderate at three KOP locations and as moderately-low at a fourth location (see Table 2).

Table 2. Existing Visual Quality at Key Observation Points

Key Observation Points	Vividness	Intactness	Unity	Average (V+I+U/3)	Visual Quality Rating
KOP 1	5	4	4	4.33	Moderate
KOP 2	5	3	3	3.66	Moderate
KOP 3	3	3	3	3.0	Moderately-low
KOP 4	5	3	4	4.0	Moderate

As noted, all views from KOPs are rated as moderate or moderately low, and the proposed project would not introduce new structural elements that would block views that exhibit high visual quality. The key visual resources are north-facing views to mountain ridgelines. Also, trees—which are a significant but secondary visual resource within the viewshed—would not be removed.

KEY OBSERVATION POINT 1

KOP 1 - View is looking eastbound on SR-210 in the existing median, approximately 1,000 feet east Victoria Avenue.

KOP1 Existing Condition



Existing visual quality is moderate, with a moderately high degree of vividness due to topographic relief, the curvilinear and vertically aligned forms of the landscaping, and the mountain ridgelines that form a dramatic visual backdrop in the view.

Viewer Response

Viewer sensitivity is generally low because the overwhelming majority of viewers are commuting motorists and truck drivers. A far smaller number of motorists drive for pleasure. Such viewers are considered moderately sensitive.

KOP 1 Proposed Condition – Build Alternative



The roadway would be widened from four to six lanes including a 10-foot-wide left shoulder, all within the existing median. A portion of the unpaved median would remain but would be slightly re-graded and would accommodate a new buried fiber optics system to support existing traffic management elements. Drainage systems improvements and stormwater treatment features, such as bio-filtration swales and strips would be designed in a manner that would blend in with adjoining landscape features and soil colors.

Viewer Response

As shown in Table 3, viewer response is expected to be low. Proposed project features would not be noticeable to certain adjacent, sensitive viewing groups (i.e., Park Hill Heights Apartments residents; recreationists at the San Bernardino Soccer Complex) and would not noticeably change views of scenic resources enjoyed by other sensitive viewing groups, such as motorists traveling along the proposed project corridor for pleasure. The resulting visual impact would be considered low.

Table 3. Visual Quality at Key Observation Points (KOPs) under the Proposed Project

KOP	Vividness	Intactness	Unity	Existing Visual Quality Average (from Table 1)	Visual Quality Average Under Proposed Project	Change from existing Conditions	Visual Quality Rating
1	5	4	4	4.33	4.33	-0.0	Moderate
2	5	3	3	3.66	3.66	-0.0	Moderate
3	3	3	3	3.0	2.66	-0.33	Moderately Low
4	5	3	4	4	4.0	-0.0	Moderate

Resource Change

The proposed project would not result in an adverse effect on views or substantially degrade the existing visual character of the site and the surrounding area. Those elements that define visual character, including form, line, color, scale, and continuity, would change only slightly compared with the existing design. The increase in the amount of pavement, due to the additional traffic lanes and reduced size of the median as well as the consequent reduction in the quantity of bare soil in the median area, would decrease the texture dominance of the median while increasing the texture dominance of the highway’s paved surfaces slightly. These changes would read as extensions of the highway design features rather than as new, sharply contrasting features. Vividness would be reduced slightly because of the slight increase in the amount of paving; the other two measures of visual quality—intactness and unity—would remain generally unchanged. The overall level of resource change, in visual quality terms, would therefore be low.

KEY OBSERVATION POINT 2

KOP 2 - The view is looking north along Westbound SR-210 at the Base Line Overcrossing.

KOP2 - Existing Condition



The view is looking north along Westbound SR-210 at the Base Line Overcrossing. Existing visual quality is moderate, with a moderately high degree of vividness due to topographic relief the presence of the mountain ridgelines as a visual backdrop in the view; however, unattractive manmade elements (e.g., barriers) and the near absence of landscaping diminish the quality of the view.

Viewer Response

Viewer sensitivity is generally low because the overwhelming majority of viewers are commuting motorists and truck drivers. A far smaller number of motorists drive for pleasure. Such viewers are considered moderately sensitive.

KOP 2 Proposed Condition – Build Alternative



The roadway would primarily be widened from four to six lanes including a 10-foot-wide left shoulder, all within the existing median. A portion of the unpaved median would remain but would be slightly regraded and would accommodate new buried fiber optics system to support existing traffic management elements. Within this area proposed project would also include the creation of an auxiliary lane in each direction between the Base Line and 5th Street interchanges. Stormwater management features, such as bio-filtration strips and swales would be designed in a manner that would blend in with adjoining landscape features and soil colors. To the left of (west), and just behind (south) the view captured in this vantage, a change to the existing 10- to approximately 12-foot tall sound wall would occur: the sound barrier would be relocated on top of a new retaining wall. The rebuilt sound wall would be built of split-face concrete masonry units similar to those utilized previously for sound walls in other locations along SR-210. The existing sound wall would be rebuilt approximately eight feet closer to the residential neighborhood that abut the Caltrans right-of-way. The findings in the proposed project noise study will determine the ultimate height of this rebuilt feature.

Resource Change

The proposed project would not result in an adverse effect on views or substantially degrade the existing visual character of the site and the surrounding area. Those elements that define visual character, including form, line, color, scale, and continuity, would change only slightly compared with the existing design. The increase in the amount of pavement, due to the additional traffic lanes and reduced size of the median as well as the consequent reduction in the quantity of bare soil in the median area, would decrease the texture dominance of the median while increasing the texture dominance of the highway's paved surfaces slightly. These changes would read as extensions of the highway design features rather than as new, sharply contrasting features. Vividness would be reduced slightly because of the slight increase in the amount of paving; the other two measures of visual quality—intactness and unity—would remain unchanged. The overall level of resource change, in visual quality terms, would therefore be low.

Viewer Response

Viewer response is expected to be low. Proposed project features would be only slightly more noticeable to most viewer groups, and views of scenic resources (e.g., mountain ridgelines and the Santa Ana River Wash) enjoyed by sensitive viewing groups, such as motorists traveling for pleasure, would not be discernibly affected. Residents' views of scenic resources would not noticeably change. Those residing west of SR-210 and south of Base Line would continue to have their views of SR-210 blocked by topography, property perimeter walls, the rebuilt split-face concrete masonry sound wall, and a moderately dense stand of mature evergreen trees within the freeway embankment and along the embankment's outside perimeter. The existing sound wall would be rebuilt approximately eight feet closer to the residential neighborhood that abut the Caltrans right-of-way. Residents residing east of SR-210 would continue to have constrained views into the freeway that are not noticeably different from current views. The proposed project would not result in an adverse effect on views or substantially degrade the existing visual character of the site and the surrounding area.

KEY OBSERVATION UNIT 3

KOP 3 – The view is looking southeast diagonally across SR-210 towards San Andreas High School athletic fields from along the south side of the Willow Creek Townhomes, located at 1991 N. Central Avenue, Highland.

KOP 3 - Existing Condition



The view is looking southeast into and across SR-210 at Central Avenue. It is intended to document the informal views that a small number of residents at Willow Creek Townhomes have from this vantage point. (Note: Most residents at Willow Creek Townhomes are farther away from the highway, and their views are constrained by the existing masonry sound wall that runs along the outside [northern] edge of the Caltrans right-of-way.) The existing visual quality is moderately low. The degree of vividness is also moderately low because dramatic visual elements, such as mountain ridgelines, are absent; interesting,

dense landscape features are absent; and unattractive manmade highway elements (e.g., paving, barriers) diminish the quality of the view.

Viewer Response

Viewer response is expected to be moderate. The highway is depressed at this location. A small number of residents at the Willow Creek Townhomes would lose their highly constrained views of the highway right-of-way, the highway embankment landscaping, and San Andreas High School and beyond. These south-facing views do not possess high visual quality. The loss of such views would be partially offset by the sound wall, which would include design enhancements elements (e.g., texturing, coloration, potential landscape screening where appropriate and feasible), consistent with the extant sound wall located farther east (neither of the walls are shown in the simulation below). Although this would represent a change in the character of the view, the change would not be substantial. Opposite this vantage, San Andreas High School students and staff would be unable see most of the proposed highway improvements, except from along the fence that borders the State right-of-way. On-campus viewers at all locations would see the proposed sound wall, which would be across the highway from them. The sound wall would read as an unobtrusive feature that would continue the lines and coloration of the existing sound wall to the east.

KOP 3 Proposed Condition – Build Alternative



The roadway would primarily be widened from four to six lanes including a 10-foot-wide left shoulder, all within the existing median. A portion of the unpaved median would remain but would be slightly re-graded and would accommodate new buried fiber optics system to support existing traffic management elements. Stormwater management features, such as bio-filtration strips and swales, and new landscaping would be designed in a manner that would blend in with adjoining landscape features and soil colors. Where existing landscaping would be removed, the design of the new landscaping would be compatible. The sound wall, in terms of materials, texture, and coloration, would be consistent with the extant sound wall located immediately to the east.

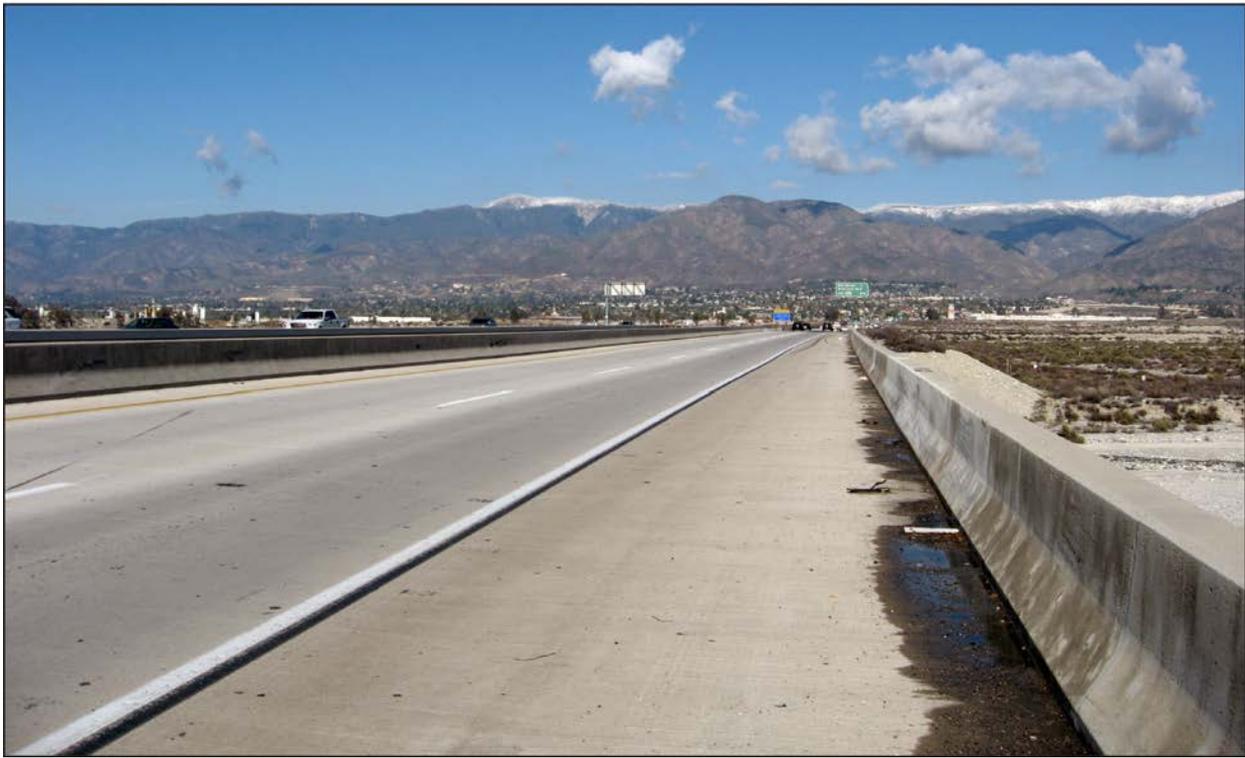
Resource Change

The proposed project would not result in an adverse effect on views or substantially degrade the existing visual character of the site and the surrounding area. Those elements that define visual character, including form, line, color, and continuity, would change noticeably compared with the existing design because of the likely construction of a sound wall. However, because high-quality views are absent at this location, effects related to some views being obscured by an extension of the existing sound wall would not be substantially adverse. Even without the sound wall extension, other highway design features proposed under the proposed project would not be very noticeable from this vantage point because of the current constrained sightlines and topographic separation. Vividness would be reduced because of the insertion of the sound wall, while the other two measures of visual quality—intactness and unity—would remain unchanged. The overall level of resource change in visual quality terms would therefore be low.

KEY OBSERVATION UNIT 4

KOP 4 – The view is looking north along westbound SR-210 from the Santa Ana River Overcrossing.

KOP 4 - Existing Condition



Visual Impact Assessment for the State Route 210 Mixed-Flow Lane Addition from Highland Avenue to San Bernardino Avenue

The Santa Ana River Bridge would be widened to the center (with a new bridge barrier) from four to six lanes, and a 10-foot-wide left shoulder would be provided within the existing median. A portion of the unpaved median would remain but would be slightly re-graded to accommodate a new underground fiber optic system that would support existing traffic management elements. Stormwater systems, such as bio-filtration strips and swales would be designed in a manner that would blend in with adjoining landscape features and soil colors. A new acceleration lane at the 5th Street southbound on-ramp would be installed, and the existing 5th Street /Greenspot Road Bridge would be widened. Road drainage improvements and stormwater treatment features also would be installed. There would be a gap remaining in between the eastbound and westbound bridges after the proposed widening, so the bridge would not be completely closed in the center. Approximately one mile north of this vantage, along the eastbound side, an existing sound wall would be rebuilt, and extended north by approximately 200 feet (this is within KOP 2). The rebuilt wall would be eight feet closer to the residential neighborhood (west) on the northerly end (in an alignment that would be diagonal to the highway's mainline) but would gradually match the existing wall placement at the wall's southerly end.

Viewer Response

Viewer response is expected to be low. Proposed project features would seem like extensions of existing roadway components, and would be only barely noticeable to most viewer groups. Views of scenic resources (e.g., mountain ridgelines, Santa Ana River Wash) that are enjoyed by sensitive viewing groups, such as motorists who travel for pleasure, would not be discernibly affected. Opposite this vantage, residents approximately 0.5 mile to the northwest would be unable to see the roadway improvements because of the highly constrained sightlines to the highway (refer to Appendix A, Photos 11-12). In addition, students at Citrus Valley High School and other moderately sensitive viewing groups are located a considerable distance to the southeast (approximately 0.75 mile away) and have only highly constrained sightlines to the highway (refer to Appendix A, Photo 15).

KOP 4 Proposed Condition – Build Alternative



Resource Change

The proposed project would not result in an adverse effect on views or substantially degrade the existing visual character of the site and the surrounding area. Those elements defining visual character, including form, line, color, scale, and continuity, would change only slightly compared with the existing design. The increase in the amount of pavement, due to the additional traffic lanes and reduced size of the median as well as the consequent reduction in the quantity of bare soil in the median area, would decrease the texture dominance of the median while increasing the texture dominance of the highway's paved surfaces slightly and the rebuilt 5th Street/Greenspot Road overcrossing. These changes would read as extensions of the highway design features rather than as new, sharply contrasting features. Vividness would be reduced slightly because of the slight increase in the amount of paving; the other two measures of visual quality—intactness and unity—would remain unchanged. The overall level of resource change, in visual quality terms, would therefore be low.

Summary of Visual Impacts by Key Observation Point

A summary of visual impacts has been prepared for the following KOPs:

KOP 1

Resource change would be low because the proposed project features would be minor extensions of existing features; viewer response would also be low. Consequently, visual quality rating would not change (-0.0) and visual quality would remain moderate (4.33).

KOP 2

Resource change would be low because the proposed project features would be minor extensions of existing features; viewer response would also be low. Consequently, visual quality rating would not change (-0.0) and visual quality would remain moderate (3.66).

KOP 3

Resource change would be moderately low, notwithstanding the fact that some elements that define visual character, including form, line, color, and continuity, would change noticeably compared with the existing design because of the likely construction of an extension to the adjoining sound wall to the east. However, if the sound wall is not constructed, other highway design features proposed under the proposed project would not be very noticeable from this vantage point because of the current constrained sightlines and topographic separation. The loss of some moderately low-quality views due to the extension of the landscaped sound wall would be considered only minimally adverse. Thus, viewer response is expected to be moderate because of the slightly enhanced presence of the landscaped sound wall. Consequently, while the visual quality rating would be reduced slightly (-0.33), visual quality would remain moderately low (2.66).

KOP 4

Resource change would be low because proposed project features would be minor extensions of existing features; viewer response would also be low. Consequently, the visual quality rating would not change (-0.0) and visual quality would remain moderate (4.0).

The table below summarizes and compares the narrative ratings for visual resource change and viewer response between alternatives for each key view.

KOP	BUILD ALTERNATIVE		NO-BUILD ALTERNATIVE	
	Resource Change	Viewer Response	Resource Change	Viewer Response
1	Low	Low	None	Neutral
2	Low	Low	None	Neutral
3	Moderately Low	Moderate	None	Neutral
4	Low	Low	None	Neutral

Summary of Visual Impacts by Alternative

A summary of visual impacts has been prepared for the following alternatives:

Build Alternative

Under the Build Alternative, the key observable design change would be that the existing highway would be widened from four to six lanes along with a 10-foot-wide left shoulder within the existing median. Other more minor design changes would include a slightly re-graded median to accommodate a new underground fiber optic system that would support existing traffic management elements. Stormwater systems, such as bio-filtration strips and swales will be designed in a manner that would blend in with adjoining landscape features and soil colors. A new acceleration lane at the 5th Street southbound on-ramp would be installed, an auxiliary lane would be added in each direction between the Base Line and 5th Street interchanges, and

the existing 5th Street/Greenspot Road bridge would be widened. Road drainage improvements and stormwater treatment features would be installed. In addition, rebuilding of the 5th Street/Greenspot Road overcrossing is also proposed. These changes would read as extensions of the highway design features rather than as new, sharply contrasting features. Also, the proposed project does not call for the removal of trees to any substantial degree. When landscaping is removed, it would be replaced with commensurate landscaping. Vividness would be reduced slightly because of the slight increase in the amount of paving and the very limited removal of landscaping (until the replacement plantings mature). The other two measures of visual quality—intactness and unity—would remain unchanged. The overall level of resource change, in visual quality terms, would therefore be low.

No-Build Alternative

Under the No-Build Alternative, no design changes would be made to the existing roadway during the foreseeable future. Only routine road maintenance activities would likely occur. Thus, viewer response is expected to be neutral because no new proposed project features would be proposed; accordingly, there would be no visual impact.

IX. PROJECT VISUAL IMPACT SUMMARY

A majority of the highway users in the viewshed consist of commuters who travel to and from their homes and workplaces and/or run errands. Such viewers are presumed to have a low to moderate degree of sensitivity to the visual changes being proposed as part of the proposed project. However, viewers also include those who travel for pleasure (e.g., while en route to Big Bear or Lake Arrowhead), some recreationists (e.g., bicyclists, persons playing team sports), and residents. Such viewers are considered moderately sensitive.

Neighbors in the viewshed consist primarily of motorists, while residential neighbors and recreationists generally have constrained views into the highway right-of-way. Non-residential viewers are the predominant group. Because their attention is focused on work-related activities, they are presumed to have a low to moderate degree of sensitivity to the visual changes proposed as part of the proposed project. Resource Change (changes to visual resources as measured by changes in visual character and visual quality) would therefore be low.

Based on the findings in Table 5 (below), the proposed project’s level of impact on the visual quality in the viewshed was deemed low and can be addressed by implementing standard Caltrans and SANBAG best management/aesthetic enhancement practices, with no mitigation required. Only low viewer response to the change in the visual environment is anticipated.

Table 5. Neighbor Sensitivity and View Duration at All Key Observation Points

Viewing Group	Viewer Sensitivity	View Duration
Commuting Motorists	Low	Short-term
Motorist Traveling for Pleasure	Moderate	Long-term
Recreationists	Moderate	Long-term
Residents	Moderate to High	Long-term

The proposed project would not result in substantial impacts to visual resources under NEPA or significant impacts to visual resources under CEQA. Visual quality under the proposed project would remain moderately low to moderate.

The proposed project would not have a substantial adverse effect on a scenic vista. The proposed project would not obscure significant views. Such views would continue to be available because proposed project features would essentially read as continuations of existing highway features and would not insert substantial new vertical elements that have the potential to block views.

The proposed project would not damage scenic resources along a state highway. The key visual resources in the setting are views of the mountain ridgelines. Such views would not be affected by the proposed project. Viewshed trees, an important but secondary visual resource, would not be removed to any substantial degree as part of the proposed project and if removed would be replaced with commensurate landscaping. The ratings shown earlier in Table 3 indicates that barely discernible, minor changes would occur in terms of vividness, intactness, and unity.

The proposed project would not result in an adverse effect on views or substantially degrade the existing visual character of the site and the surrounding area. The setting is designated in local plans for residential, general commercial, industrial, and public/quasi-public uses, and possesses low to moderately-low visual quality at present. The design elements proposed as part of the proposed project would not materially alter existing visual character and quality.

The proposed project would not result in adverse effect due to lighting or glare. No new lighting is proposed as part of the proposed project.

Thus, it is concluded that the visual character of the proposed project will be compatible with the visual character of the existing proposed project corridor, and that the visual quality of the existing proposed project corridor will not be significantly altered by the proposed project.

Temporary Construction Visual Impacts

Although a portion of the existing median would remain unpaved, minor construction-related impacts would include limited excavation and re-grading within the existing highway median for the laying of new road pavement and new subterranean infrastructure. Other key construction actions would include the excavation and erecting of all falsework/concrete forms needed to widen eight bridges; the dismantling and relocation of an existing sound barrier, and related limited landscaping removal; installation of roadside swales and bio-filtration strips to manage increased stormwater flows; and ramp metering and signage installation. Typical construction staging activities, including the stockpiling of building materials, and the heightened presence of construction equipment, would take place on vacant land within the State right-of-way, and on highway-adjacent vacant land. During construction, traffic detour routes would be established, and related road re-striping, and barricade and detour signage would be installed.

Temporary construction-related visual effects are not considered adverse because of the temporary nature of such construction activities, the moderately-low to moderate visual quality that characterizes most views within the proposed project viewshed, and the fact that construction activities would generally have no effect—or in very limited circumstances—a negligible and temporary effect on views of primary visual resources (e.g., the effect of bridge-widening construction on significant ridgeline views).

Cumulative Visual Impacts

Cumulative effects/impacts are those resulting from past, present and reasonably foreseeable future actions, combined with the potential visual impacts of this proposed project. For this proposed project, it has been determined that cumulative effects under NEPA and cumulative impacts under CEQA are not expected to occur as a result of the proposed project or the No-Build Alternative in relation to other related projects within the proposed project viewshed. Views are low-medium to medium-quality, and no recognized scenic vistas would be affected as a result of the proposed project. The primary visual resources in the proposed project viewshed include views of the San Bernardino Mountains and local foothills, and of Santa Ana River Wash; secondary visual resources are limited to highway right-of-way trees and other landscaping. The proposed project corridor would retain its existing alignment, topographic variation (as the roadway transitions between its elevated and depressed placements), and would not call for land acquisition, extensive landscaping removal, or demolition; and only very limited construction of sound barriers and other vertical elements is being considered that has the potential to obscure the views of sensitive neighbors. Views of primary and secondary visual resources would therefore be retained.

Visual quality ratings at the four key observations points currently range from 3.0 (moderately- low) to 4.33 (moderate). As is shown earlier in Table 3, under the proposed project, visual quality ratings would not change at three of the key observation points and only slightly (-0.33) at one key observation point. Ratings would not change under the No-Build Alternative.

The area of cumulative impact/effect for visual resources is coincidental with the proposed project viewshed, which extends out 1,000 feet along both sides of, and parallel to, the proposed project corridor right-of-way. Seven related projects are proposed within the visual area of cumulative impact/effect, including:

- SR-210/Base Line Interchange Improvements (which would widen on- and off-ramps at the southbound SR-210/Base Line interchange). This project, proposed by the City of Highland, has been accounted for in the 2013 FTIP);
- SR-210 at 5th Street/Greenspot Road Interchange Improvements (which would widen on- and off-ramps at 5th Street-Greenspot Road). This project, proposed by the City of Highland, has been accounted for in the 2013 FTIP;
- SR-210 Southbound On-ramp at 5th Street Improvements (which would widen 5th Street from City Creek to SR-210, widen the 5th Street freeway bridge, add a truck acceleration lane on southbound SR-210 on-ramp and mainline, and require restriping). This project, proposed by the City of Highland, also has been accounted for in the 2013 FTIP;
- New SR-210/Victoria Avenue Interchange Project. This project is being proposed by the City of Highland;
- Highland Marketplace Project (southwest corner of Highland and Arden Avenue). The development is proposed by the City of San Bernardino and calls for the construction of up to 204,720 square feet of general commercial space on an already cleared 17.3-acre site ;
- Redlands Crossing Center (south of San Bernardino Avenue and east of SR-210). The project calls for retail commercial development as part of an approximately 275,500 square-foot regional shopping center on an approximately 24-acre site (City of Redlands);

- Greenspot Village and Marketplace (northeast and east from SR-210 and Greenspot Road), City of Highland. Ongoing development is occurring, guided by a specific plan, of regional and community-scale retail commercial (Planning Area 1). The retail commercial development is being developed closest to SR-210 and will serve to buffer adjoining development proposed under this project that falls outside the area of visual effect/impact, including mixed residential/office development (Planning Area 3) and multi-family residential development (Planning Area 2).

When considered with the above-related projects, the incremental effect of the proposed project on visual resources is not deemed cumulatively substantial under NEPA or significant under CEQA. Four of the planned projects call for modest expansions, or replacements, of existing highway infrastructure that has already been accounted for in approved regional transportation plans (in all but one instance). Three other planned projects call for general or retail commercial development, either abutting or adjacent to the proposed project right-of-way within the proposed project viewshed. However, due to existing highway landscape buffering and the topographic separation of the highway roadway from adjacent development outside the highway right-of-way, the proposed project will be only minimally visible to highway motorists. Commercial development is not considered a visually sensitive receptor, and none of these projects based on available information will affect significant views or destroy significant visual resources—either individually or cumulatively; hence, no cumulative effects or impact on visual resources would result.

X. AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Caltrans and the FHWA mandate that a qualitative/aesthetic approach should be taken to address visual quality loss in the proposed project area. This approach fulfills the letter and the spirit of FHWA requirements because it addresses the actual cumulative loss of visual quality due to a project. Avoidance or minimization measures have been identified and can further lessen visual impacts caused by the proposed project. Also, the inclusion of aesthetic features, discussed in Section II, in the proposed project design previously discussed can help generate public acceptance of a project. Design enhancement strategies utilized as part of other SANBAG and Caltrans transportation improvement projects within the County will be implemented along the proposed project corridor, where applicable, in a manner that is appropriate to the design setting. This section describes additional minimization measures to reduce the proposed project’s visual impacts. These will be designed and implemented with concurrence of the District Landscape Architect.

The following measures to further minimize visual impacts will be incorporated into the proposed project:

1. During the proposed project construction phase, in instances where existing ground cover or other vegetation is removed as a result of proposed project actions, standard soil erosion prevention measures and standard highway planting measures shall be implemented. Vegetation will be replaced at a rate and size determined by the District Landscape Architect.
2. During the proposed project’s design phase, a landscape and aesthetic plan will be developed by the proposed project landscape architect, and subject to input and approval from the Caltrans District Landscape Architect, with the purpose of enhancing the proposed project limits. Such landscape and aesthetic treatments will be designed to be consistent with the recently completed portions of SR-210 corridor in San Bernardino County.

3. The feasibility of sound barrier installations, and the placement and height of those features is under study at present. If and when proposed, these features shall employ design enhancements elements (e.g., texturing, coloration, potential landscape screening where appropriate) and, for corridor consistency, will be designed to be compatible with the design of sound walls on SR-210 west of I-215.
4. Construction staging areas, roads, trails, and other soil disturbed and/or compacted by equipment will be cultivated to a depth of six inches prior to re-vegetation.
5. Water quality basins, if utilized, will be designed as an integral part of the landscape and aesthetic plan. The form of the basins will taking cues from natural water courses found in the surrounding landscape, incorporating planting and inert materials, a freeform perimeter and shallow side slopes.
6. Widened or otherwise modified structures will have aesthetic treatments to bridge abutments, wing walls, slope paving and may also include enhancements to bridge barriers.
7. A rock blanket will be installed at areas beyond modified ramp gore areas, and otherwise unpaved locations too narrow for planting beyond the outside shoulders.

Summary of Avoidance, Minimization, and/or Mitigation Measures by Alternative

The following table summarizes the numbered avoidance, minimization, and/or mitigation measures from above for each alternative.

TABLE 6. Summary of Avoidance, Minimization, and/or Mitigation Measures by Alternative		
ALTERNATIVE	AVOIDANCE AND MINIMIZATION	MITIGATION
Proposed Project	1, 2, 3, 4, 5, 6 and 7	None required
No-Build Alternative	None required	None required

XI. CONCLUSIONS

Under the proposed project, visual character and quality would not noticeably change because proposed project features would read as extensions of existing freeway design components. Sightlines to the primary visual resources in the viewshed—the San Bernardino Mountains and Santa Ana River Wash—would continue to be available to viewers and would not be adversely affected by the proposed project. Although elements that define visual character, including form, line, color, and continuity, would change noticeably compared with the existing design because of the likely construction/rebuilding of extensions to the current sound wall system, views of sensitive neighbors would not be changed in an adversely noticeable way because of the low to moderate visual quality of such views at present as well as the constrained sightlines and topographic separation from the highway.

The recommended measures in Section X, Avoidance, Minimization, and/or Mitigation Measures, would further reduce the proposed project’s visual impact as seen from SR-210 and the surrounding communities. The intent of those measures would be to reduce the urbanizing effect of the proposed project, which would be related primarily to the additional highway lanes, the moderately reduced amount of highway landscaping, and the construction of noise barriers.

XII. REFERENCES

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Appendix A

Representative and Key Observation Point Photos

Photo Figure 1: SR-210 Just East of Arden Avenue, View Looking Southeast (KEY OBSERVATION POINT 1)



Source: ICF International. December 2012.

Photo Figure 2: SR-210, Approaching Highland Avenue, View Looking Westward



Source: ICF International. November 2012.

Photo Figure 3: View from SR-210 Looking Southwest, Overlooking the Park Heights Apartments and San Bernardino Soccer Complex from SR-210



Source: ICF International. November 2012.

Photo Figure 4: View from the Park Heights Apartments, Looking Northeast at SR-210 Embankment



Source: ICF International. December 2012.

Photo Figure 5: View from the San Bernardino Soccer Complex, Looking Northeast Towards SR-210 (screened by the backdrop trees and shrubbery)



Source: ICF International. November 2012.

Photo Figure 6: From Lunt Lane, Looking Westward Along Side SR-210



Source: ICF International. December 2012.

Photo Figure 7: View Looking Southeast across SR-210, Along Side the Summer Wind Condominiums, Central Avenue (KEY OBSERVATION POINT 3)



Source: ICF International. November 2012.

Photo Figure 8: SR-210 Approaching Base Line, View Looking North (KEY OBSERVATION POINT 2)



Source: ICF International. November 2012.

Photo Figure 9: SR-210 at the Greenspot Road/5th Street Exit, Looking North



Source: ICF International. November 2012.

Photo Figure 10: SR-210 at Santa Ana River Overcrossing, View Looking North (Adjoining KEY OBSERVATION POINT 4)



Source: ICF International. November 2012.

Photo Figure 11: Existing Sound Wall Installation, SR-210, 0.25 mile South of Base Line, View Looking South



Source: ICF International. March 2013.

Photo Figure 12: Residences Behind Existing Sound Wall, SR-210, 0.25 mile South of Base Line, View Looking Southeast (note masonry residential perimeter wall)



Source: ICF International. March 2013.

Photo Figure 13: Northeast-facing View from SR-210 Overlooking Santa Ana River



Source: ICF International. December 2012.

Photo Figure 14: SR-210 at NB San Bernardino Avenue On-ramp, Looking North



Source: ICF International. December 2012.

Photo Figure 15: View Looking Northeast Towards SR-210 from the Western Border of Citrus Valley High School, Pioneer Avenue, Redlands



Source: ICF International. November 2012.