Environmental Assessment/
Draft Environmental Impact Report for the
Downtown San Bernardino Passenger Rail Project

State Clearinghouse No. 2011051024

Federal Transit Administration

San Bernardino Associated Governments

June 2012

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ACRONYMS AND ABBREVIATIONS

AB	California Assembly Bill
ACMs	asbestos-containing materials
ADA	Americans with Disabilities Act
AMSL	above mean sea level
APE	area of potential effects
APN	assessors parcel numbers
AQMPs	air quality management plans
ARB	Air Resources Board
AT&SF	Atchison Topeka & Santa Fe Railroad
BACT	Best Available Control Technology
BMPs	Best Management Practices
BNSF	Burlington Northern Santa Fe Railway
BRT	bus rapid transit
BUOW	burrowing owl
bus facility	Omnitrans Bus Facility
C_2H_3Cl	vinyl chloride
CAA	Clean Air Act
Cal/OSHA	California Division of Occupational Safety and Health
Caltrans	California Department of Transportation
CBC	California Building Code
CBD	Central Business District
CCAA	California Clean Air Act of 1988
CCR	California Code of Regulations
CCS	Central City South
CCTC	closed-circuit television
CDFG	California Department of Fish and Game
CEC	California Education Code
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980

CERFA	Community Environmental Response Facilitation Act
CFR	Code of Federal Regulations
CHSSL	California Human Health Screening Level
City	City of San Bernardino
CMAQ	Congestion Management and Air Quality Improvement Program
CMF	Central Maintenance Facility
CNDDB	California Natural Diversity Data Base
CNEL	community noise equivalent level
CNG	compressed natural gas
CNPS	California Native Plant Society
CO	carbon monoxide
CO Protocol	Caltrans' Transportation Project-Level Carbon Monoxide Protocol
CPUC	California Public Utilities Commission
CSRR	California Southern Railroad
CTC	Centralized Traffic Control
dBA	weighted decibels
Depot	Metrolink San Bernardino Station
DPM	Diesel Particulate Matter
DSBPRP or Project	Downtown San Bernardino Passenger Rail Project
EA	Environmental Assessment
EDA	San Bernardino Economic Development Agency
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EVOMF	East Valley Operations and Maintenance Facility
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
FR	Federal Register
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program

Gr	Grangeville Fine Sandy Loam
GHGs	greenhouse gases
H2S	hydrogen sulfide
HABS	Historic American Buildings Survey
HCP	habitat conservation plan
HI	hazard index
HWCL	Hazardous Waste Control Law
I-	Interstate
I-215	Interstate 215
IEMF	Inland Empire Maintenance Facility
IEOC	Inland Empire-Orange County
IH	Heavy Industrial
IVDA	Inland Valley Development Agency
KOPs	key observation points
Ldn	day-night average sound level
LEED	Leadership in Energy and Environmental Design
Leq	equivalent sound level
LOS	Level of service
LT	long term
LUFT	leaking underground fuel tank
MaNIS	Mammal Networked Information System
MARTA	Mountain Area Regional Transit Authority
MBTA	Migratory Bird Treaty Act
MCC	Mayor and Common Council
Metro	Los Angeles County Metropolitan Transportation Authority
Metrolink IEOC line	Inland Empire to Orange County line
Metrolink San Bernardino line	San Bernardino to Los Angeles Union Station line
MICR	maximum individual cancer risk
MOU	memoranda of understanding
MP	Mile Post
mph	miles per hour
MPOs	Metropolitan Planning Organizations
MSAT	mobile source air toxics

mt	metric tons
$MTCO_2e$	metric tons of carbon dioxide equivalent
mty	metric tons per year
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
National Register	National Register of Historic Places
NCCP	Natural Community Conservation Planning
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NO2	nitrogen dioxide
NOP	Notice of Preparation
NPDES	National Pollution Discharge Elimination System
O_3	ozone
ODCs	Ozone Depleting Compounds
OHP	Office of Historic Preservation
OSHA	Occupational Safety and Health Act
PAHs	polycyclic aromatic hydrocarbons
PC	planning commission
PM	particulate matter
PM10	particulate matter less than 10 microns in diameter
PM2.5	particulate matter that is 2.5 microns or less in diameter
POAQC	Project of Air Quality Concern
PPV	peak particle velocity
PRC	Public Resources Code
RCP	Reinforced Concrete Pipe
RCPG	Regional Comprehensive Plan and Guide
RCRA	Resource Conservation and Recovery Act of 1976
ROW	right-of-way
RTC	Rail Traffic Controller
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan

RWQCB	Regional Water Quality Control Board
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users of 2005
SANBAG	San Bernardino Associated Governments
SB	Senate Bill
SBAIC	San Bernardino Archaeological Information Center
SBD	San Bernardino International Airport
SBI	San Bernardino International
SBIAA	San Bernardino International Airport Authority
SBKR	San Bernardino kangaroo rat
sbX	San Bernardino Express
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCRRA	Southern California Regional Rail Authority
SHPO	State Historic Preservation Officer
SHRC	State Historical Resources Commission
SIP	State Implementation Plan
SO_2	sulfur dioxide
SO_4	sulfates
SP	Southern Pacific Railroad
SRA	Source Receptor Area
ST	short term
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TACs	toxic air contaminants
Tanner Act	Tanner Toxic Air Contaminant Identification and Control Act (AB 1807)
TCMs	transportation control measures
TDS	total dissolved solids
TMDL	total maximum daily load
TMP	traffic management plan
TSA	Transportation Security Administration
TSCA	Toxic Substances Control Act
TvC	Tujunga Gravelly Loam Sand

UBC	Federal Uniform Building Code
ULI	Urban Land Institute
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tank
V/C ratio	volume-to-capacity ration
Valley	San Bernardino Valley
VIA	Visual Impact Assessment
VMT	vehicle miles traveled
VVTA	Victor Valley Transit Authority
WQMP	Water Quality Management Plan

EXECUTIVE SUMMARY

ES.1 INTRODUCTION AND BACKGROUND

The San Bernardino Associated Governments (SANBAG) is proposing to extend Metrolink regional passenger rail service approximately 1 mile east from its current terminus at the existing San Bernardino Metrolink Station/Santa Fe Depot (Depot) located at 1170 West 3rd Street to new Metrolink commuter rail platforms proposed near the intersection of Rialto Avenue and E Street in the City of San Bernardino (City), San Bernardino County, California. The primary features of the Downtown San Bernardino Passenger Rail Project (DSBPRP or Project) include: construction of a second track, rail platforms, parking lots, a pedestrian overpass at the Depot, and an Omnitrans Bus Facility (bus facility); grade crossing improvements; railroad signalization; and roadway closures. The proposed Project's secondary features include: construction of drainage improvements, utility accommodation, and implementation of safety controls.

In 2001, the Southern California Association of Governments (SCAG) initiated a visioning process, known as the Compass Blueprint Program, resulting in a regional strategy to accommodate projected growth in southern California. The program seeks to accommodate growth through the development of demonstration projects that capitalize on the collaboration of regional planning agencies, local communities, and jurisdictions. As part of this visioning program, SANBAG completed the *Redlands Rail Feasibility Study* and the *Redlands Passenger Rail Station Area Plans*. These studies explored the feasibility of establishing passenger rail service between the City of San Bernardino and the City of Redlands, while identifying transportation alternatives, potential station locations, and multi-modal transit development opportunities. Since 2001, the vision for the DSBPRP has been modified to its current concept as described in Section ES.3, "Description of Proposed Action/Proposed Project." A number of studies and reports have been conducted to date that identify a locally preferred alternative consisting of extending Metrolink passenger rail service approximately 1 mile east to downtown San Bernardino.

This Environmental Assessment (EA)/Draft Environmental Impact Report (DEIR) was prepared to evaluate the significant or potentially significant environmental impacts associated with implementation of the proposed Project and address appropriate and feasible mitigation measures and alternatives to the proposed Project that would reduce or eliminate those impacts. The analysis contained in this EA/DEIR reflects the level of detail necessary for SANBAG and the Federal Transit Administration (FTA) to evaluate the merits of the proposed Project and alternatives.

ES.2 PROJECT LOCATION AND SETTING

The City is located in the eastern half of the San Bernardino Valley (Valley) and is approximately 60 miles east of the City of Los Angeles. The Valley encompasses approximately 500 square miles and holds approximately 75% of San Bernardino County's population.

The Valley is largely suburban in character with concentrations of commercial and industrial development particularly along I-10, I-15, and I-215. The Project contains a diverse collection of land-use types including residential, commercial, storage/warehouse, office, and industrial uses. Most of the Project Study Area is located within the Santa Fe Depot Strategic Policy Area and

the Downtown Strategic Policy Area, included as part of the City's General Plan Land Use Element.

The proposed Project is primarily located within the existing Redlands branch line right-of-way, which extends 10 miles east from the Depot to the University of Redlands through downtown San Bernardino and downtown Redlands, basically running parallel to I-10. Project-related improvements would be limited to the first mile along the western portion of the rail corridor.

ES.3 DESCRIPTION OF PROPOSED ACTION/PROPOSED PROJECT

SANBAG is proposing to extend Metrolink regional passenger rail service approximately 1 mile east from its current terminus at the existing Depot located at 1170 West 3rd Street to new Metrolink commuter rail platforms proposed near the intersection of Rialto Avenue and E Street. Figure ES-1 depicts the Project Study Area and primary project components.

The project components include the following:

Railroad Track Improvements: Track improvements include realignment of the existing railroad track and construction of a second track parallel to the existing track, extending from the Depot to the proposed rail platforms near Rialto Avenue and E Street. The Project also includes realignment and reconstruction of the two mainline tracks at the Depot and improvements to the Burlington Northern Santa Fe (BNSF) Railway Short Way.

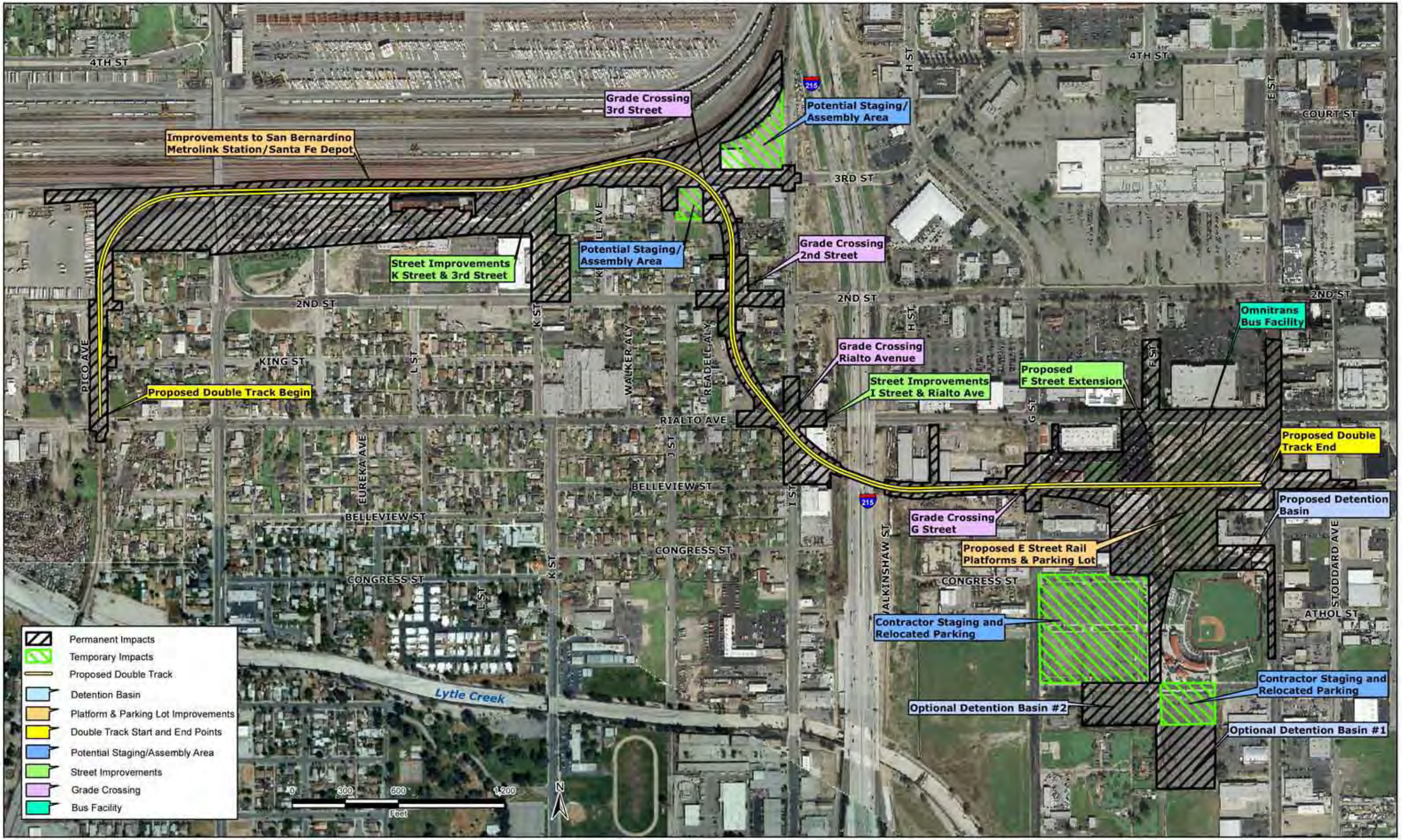
San Bernardino Metrolink Station/Santa Fe Depot: The Project would involve track and platform, pedestrian access, and parking lot improvements at the Depot. An Americans with Disabilities Act (ADA)–compliant pedestrian overpass bridge would be constructed at the Depot, possibly in the Mission Revival architectural style. Two new platforms would be constructed north of the Depot, with new benches, canopies, platform amenities, ticket vending machines, lighting, and closed-circuit television security cameras that would serve both Metrolink and Amtrak passengers. In addition, minor interior and exterior improvements are proposed for the Depot that include the following: (1) installation of new window awnings, (2) new exterior and interior wayfinding signage for bathrooms and SANBAG/SCAG/Whistle Stop Cafe/Museum, (3) new clock in the lobby, (4) new sign in the lobby that details the railroad's role in creating time zones, and (5) new monument sign and flagpole to be placed at the Depot entrance.

The parking lot located directly east of the Depot would be reconfigured to accommodate additional vehicles and landscaping, necessitating the realignment of 3rd Street.

E Street Rail Platforms: The Project would include the installation of three new station platforms, canopies, benches, mini-high ramps, variable message signs, lighting, closed-circuit television security cameras, drinking fountains, ticket vending machines, and trash receptacles near the intersection of Rialto Avenue and E Street.

Omnitrans Bus Facility: The Omnitrans bus facility would include up to 22 bus bays and a bus circulation roadway with bus turnouts, as well as frontage street access improvements, pedestrian access improvements (e.g., crosswalks), new 265-space parking lot, and associated support facilities (e.g., security and lighting).

Pedestrian Connection to San Manuel Stadium: A lighted pedestrian pathway that would connect the proposed rail platforms to San Manuel Stadium may be included as part of the Project. The following amenities would be provided: park benches, trash disposals, and bicycle racks.



Source: HDR (2012), ESRI (2011)

Figure ES-1
Project Study Area and Primary Project Components
Downtown San Bernardino Passenger Rail Project

Street Improvements:[1] The intersection of K Street and 3rd Street would be reconfigured as the west leg of a new T intersection. I Street at Rialto Avenue would be converted to a cul-de-sac on the south side, with the north leg of the intersection converted to a right-in/right-out configuration. Other improvements are proposed. The changes to the roadway system would require approval of a General Plan Amendment to the City's Circulation Map of the 2005 General Plan Update.

Rail Alignment at I-215 Freeway: The I-215 freeway overpass was designed and constructed to accommodate the existing single track alignment within the Redlands Subdivision and would necessitate the use of compound horizontal curves in order to maintain a side clearance. The new corridor pier walls on the east side of the freeway constrict the overpass's opening width, which would necessitate the use of compound horizontal curves in order to maintain a side clearance.

Grade Crossings: Three existing at-grade crossings would be reconstructed to accommodate the second track, raised medians, and widened sidewalks (2nd Street, Rialto Avenue/I Street, and G Street).

Parcel Acquisitions and Relocations: Acquisition of additional rights-of-way along the corridor would be required. This may require approximately 69 partial and full parcel acquisitions, as well as easements (i.e., roadway, temporary construction, sidewalk, utility, and alley vacations). Some of the parcels that would be acquired support active businesses and inhabited residences, which would require relocation.

Drainage Facility Improvements: A system of perforated underdrains and ditches would be constructed adjacent to the tracks to convey stormwater to the existing storm drain system. Catch basins would also need to be relocated to accommodate proposed roadway improvements. Detention basins adjacent to the San Manuel Stadium are also proposed.

Utility Replacement and Relocation: Existing subsurface water, sewer, storm drain, power, gas, fiber optic, and telephone lines that cross the tracks would be evaluated for conformance with Metrolink engineering standards. Overhead utilities, such as power and communication lines, would be raised if they fail to meet Metrolink's overhead clearance requirements. Railroad signal houses and streetlights would be relocated to accommodate the second track. Billboards may be removed and relocated.

Relocation of Monitoring Wells: Fourteen wells within the Project Study Area would remain in place. Four wells may need to be closed, and four wells may need to be relocated.

Safety Controls (Traffic and Rail Signals): Safety controls, including new traffic signals, railroad signal equipment (compatible with Metrolink's and BNSF's new positive train control [PTC] systems), and railroad/pedestrian crossing equipment, would be provided at each at-grade railroad crossing.

Rail Operations: An operating plan has been developed using Rail Traffic Controller (RTC) modeling and an operational analysis based on input from SANBAG, Metrolink, Amtrak, and BNSF personnel. Metrolink operations between the Depot and the new rail platforms are projected to start in the middle of 2014.

[1] The I-215 widening project, under construction in 2010–2011, will convert I Street south of 3rd Street to a cul-de-sac. That project is separate from the proposed Project.

Omnitrans Bus Facility Operations: The bus facility would act as a transfer point between Metrolink regional passenger rail service, the Omnitrans E Street Corridor (or Corridor 1),[2] and fixed-route bus service that would connect the northern portion of the City with the City of Loma Linda.

Maintenance: Typical railroad maintenance and inspections would be conducted throughout the operational phase of the Project in accordance with Southern California Regional Rail Authority (SCRRA)/Metrolink, BNSF, and Amtrak standard practices.

Construction Schedule and Details: Construction of the proposed Project could begin in early to mid-2013 and take approximately 18 to 24 months to complete. The work would be accomplished over three phases and proceed generally from west (Mt. Vernon Avenue) to east (E Street).

ES.4 PURPOSE AND NEED FOR THE PROJECT

The former San Bernardino Economic Development Agency—now referred to as just the City of San Bernardino (City), its successor agency—developed the San Bernardino Downtown Core Vision/Action Plan to promote strategies for the revitalization and redevelopment of downtown San Bernardino. A component of the San Bernardino Downtown Core Vision/Action Plan is development of a centralized transit district providing new commuter rail service and intermodal opportunities to the downtown area. The proposed Project meets this objective of the City's plan by extending Metrolink service to downtown San Bernardino and providing a centralized bus facility for existing fixed-route and planned rapid bus transit service.

The need for the proposed Project is multi-faceted and in response to current population and employment forecasts that suggest significant growth in San Bernardino County from now through 2035. Over the past 30 years, population growth has been robust in San Bernardino County, contributing to increased travel demand and a decline in transportation system performance. Increasing roadway congestion has led to corresponding increases in commute times for work or recreational purposes, hours of lost productivity, increased fuel use contributing to air pollution, interference with emergency response vehicles, and spillover effects to secondary and alternative routes. Given this growth, mass transit must play a larger role in serving future travel demand to lessen the burden on San Bernardino County's freeways and roads, guide responsible growth, and accommodate increased transit ridership.

The proposed Project would extend Metrolink commuter service into downtown San Bernardino, thereby providing an alternative mode of transportation for individuals currently reliant on passenger vehicles and long commutes to Riverside and Los Angeles Counties. The proposed Project would also incorporate a centralized bus facility that would be integrated with existing bus service offered by Omnitrans, thereby providing a local linkage to Metrolink passenger rail service. The combination of these transit options is expected to contribute to a reduction of 67,510 fewer daily vehicle miles traveled (VMT) in future buildout year 2035 on local roadways, which would not otherwise occur under the No-Build/No-Project Alternative (Iteris, Inc. 2012).

[2] Omnitrans prepared an Initial Study/Mitigated Negative Declaration (IS/MND) for the San Bernardino Express (sbX) E Street Corridor Bus Rapid Transit (BRT) Project and adopted the MND in August 2009. The FTA issued a Finding of No Significant Impact (FONSI) for the sbX E Street Corridor BRT Project in September 2009. These previously prepared documents are incorporated by reference into this EA/DEIR and evaluate the construction and operational effects of the sbX E Street Corridor BRT Project. For this reason, this EA/DEIR does not revisit bus operations associated with the sbX E Street Corridor BRT Project and focuses the EA on effects related to the construction and operations of the bus facility.

This reduction in vehicle trips would also result in corresponding reductions in the generation of criteria air pollutants for which the local air basin is designated as nonattainment.

ES.5 PROJECT OBJECTIVES

The proposed Project's objectives are identified below:

- Construct a second track and associated railroad improvements to extend regional Metrolink passenger rail service between the existing Depot and downtown San Bernardino.
- Encourage the integration of current and future passenger rail operations with other forms of transit in the region by providing a Metrolink passenger rail connection to downtown San Bernardino.
- Accommodate forecasted ridership between the Depot and downtown San Bernardino by providing a convenient and efficient transit alternative to automobile travel.
- Improve the mobility opportunities for transit-dependent populations in the City to employment centers in Los Angeles and Orange Counties and support local and regional planning goals of SANBAG for the development of transit corridors in the Inland Empire.
- Improve safety and accessibility at the existing Depot by constructing a pedestrian bridge that will connect the station's two reconstructed platforms, thereby eliminating existing at-grade pedestrian crossings.
- Facilitate intermodal transit opportunities by constructing the Omnitrans Bus Facility close to Metrolink passenger rail service.

ES.6 NO-BUILD/NO-PROJECT ALTERNATIVE AND DESIGN OPTIONS TO THE PROPOSED PROJECT

SANBAG is considering a No-Build/No Project Alternative as well as three design options for the proposed Project. These design options include one or more modifications to a specific component of the proposed Project. These options are not considered alternatives to the proposed Project given that each option would be functionally equivalent in terms of the associated Project Study Area and operational characteristics, except as noted.

ES.6.1 No-Build/No-Project Alternative

This alternative assumes that the Action/Project would not occur. Under the No-Build/No-Project Alternative, proposed improvements to approximately 1 mile of track included as part of the Project would not be implemented. Specifically, passenger rail service would not be extended east to downtown San Bernardino. Additionally, the No-Build/No-Project Alternative would not include 1) improvements to or reconstruction of rail infrastructure to accommodate passenger rail service, 2) grade crossing improvements, 3) railroad signalization, 4) roadway closures, 5) rail platform or station facilities, or 6) a bus facility. Metrolink passenger rail service would continue to originate and/or terminate at the Depot. The pedestrian overcrossing proposed to improve pedestrian safety would not be constructed. Existing conditions within the rail corridor would remain unchanged, and the rail line east of the Depot would continue to be used for low-speed, local freight service. A new bus facility would not be constructed at the southwest corner of Rialto Avenue and E Street. Consequently, the No-Build/No-Project Alternative would not achieve or fulfill any of the goals and objectives of the proposed Project or those of the City's General Plan with the overall objective of providing mass transit opportunities, increasing

mass transit services, or increasing connectivity between and providing convenience for residents and employees traveling to and from San Bernardino.

ES.6.2 Pedestrian Overpass Design Options 1A and 1B

Pedestrian Overpass Options 1A and 1B are being considered to allow efficient use of the Metrolink system and facilitate an orderly, safe evacuation of the platforms in the event of station emergencies. These design options would be situated just west of the Depot to minimize visual impacts on the Depot, maximize circulation space around the new structures, and maintain fire truck access to the trackside of the Depot.

The prominent differences between Pedestrian Overpass Options 1A and 1B are the railing design and elevator enclosure design. Option 1A contains glass railings and translucent glass elevator enclosures. Option 1B presents a more industrial aesthetic, with metal bar railings and a minimized glass elevator enclosure. Both design options would have a security booth at the base of the stair tower on Platform A. Massing would be reduced in comparison with the pedestrian overpass bridge design proposed as part of the Project.

ES.6.3 Pedestrian Underpass Design Option 2

Pedestrian Underpass Design Option 2 is being considered to minimize potential visual impacts that could detract from the aesthetic value of the historic Depot structure. Pedestrian Underpass Design Option 2 would both protect the welfare of pedestrians and facilitate efficient operation of the Metrolink and Amtrak facilities housed at the Depot. Pedestrian Underpass Design Option 2 would allow efficient use of the Metrolink system and facilitate an orderly, safe evacuation of the platforms in the event of station emergencies. Pedestrian Underpass Design Option 2 would result in less constriction of the train platform at the stair locations.

ES.6.4 3rd Street Open Design Option 3

Third Street Open Design Option 3 is being considered to avoid costs associated with the closing of 3rd Street under the proposed Project and corresponding potential disruptions to existing traffic circulation patterns. This option would result in upgrades to the existing at-grade crossing between J Street and I Street. Vehicular and pedestrian traffic along 3rd Street between the J Street intersection and North I Street intersection would remain. All other improvements associated with this design option would be similar to those described for the proposed Project.

Third Street Open Design Option 3 would require the following infrastructure improvements:

- 3rd Street would be open between J Street and the rail line, and the existing grade crossing would remain.
- The existing at-grade crossing would be redesigned in accordance with the latest SCRRA *Highway Grade Crossing Manual* guidelines.
- The street improvements at the intersection of Rialto Avenue and I Street would be the same as those for the proposed Project.
- K Street would not be widened on the east side, as proposed for the Project, and properties along K Street would not be affected.

ES.7 AREAS OF CONTROVERSY

During the public scoping process, a number of persons and agencies submitted oral and written comments. Written comments provided by the agencies include the following:

- Crossing safety improvements.
- Cultural resource accidental discovery.
- Hazardous materials review.
- Addition of Omnitrans Bus Facility.

Comment topics received from the public that were relevant to the scope of the environmental analysis included the following:

- Protection from train/pedestrian conflicts.
- Traffic circulation and access to parking facilities.
- Closures/access during construction.
- Noise and vibration impacts on buildings.
- Air pollution close to rail system.
- Use and capacity of rail yards affecting adjacent land uses.
- Property value impacts.
- Recommendation for undergrounding pedestrian egress to minimize visual and historic impacts on the historic Depot.

These comments were addressed in Chapters 3 and 4 within each of the CEQA and NEPA sections of this EA/DEIR. No other areas of controversy are currently known.

ES.8 ISSUES TO BE RESOLVED

There are no issues to be resolved that are currently known.

ES.9 SUMMARY OF IMPACTS AND AVOIDANCE/MITIGATION MEASURES

Table ES-1 summarizes environmental impacts, avoidance/mitigation measures proposed for implementation under the proposed Project. Table ES-2 includes a summary of the NEPA effects and corresponding avoidance and minimization measures. Table ES-3 compares the impacts of the proposed Project, design options, and the No-Build/No-Project Alternative.

The analysis summarized in Table ES-3 indicates that 3rd Street Open Design Option 3 would be the environmentally superior alternative and the build alternative with the least amount of adverse effects. Specifically, 3rd Street Open Design Option 3 would have reduced impacts because of the reduced study area associated with this design option. This design option would result in reduced impacts on air quality, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, and transportation, and would have impacts similar to those for the proposed Project with regards to land use and planning. In addition, 3rd Street Open Design Option 3 would have fewer impacts on aesthetics and biological resources due to the retention of trees. Accordingly, 3rd Street Open Design Option 3 is considered the environmentally superior alternative.

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
Aesthetics and Visual Quality			
Have a substantial significant impact on a scenic vista. No scenic vistas or corridors are present within the Project viewshed. The views along the rail corridor are of low or medium quality and visual resources are limited to sporadic clusters of mature evergreen trees and the Santa Fe Depot—an architectural/ historical landmark. Key views are limited to somewhat seasonal far-off views of the mountains. No significant impact would occur.	No mitigation is required.	Less than significant	Not adverse
Substantially damage scenic resources including scenic highways. No thoroughfares in San Bernardino have been locally designated as scenic corridors, and only two are under consideration as eligible scenic highways. These two (State Route 30 [south from State Route 330] and State Route 330) are approximately 7 miles away from the rail corridor, well outside the Project viewshed. No other scenic resources, such as rock outcroppings or significant stands of trees, were identified within the Project area or its viewshed. No significant impact is anticipated.	No mitigation is required.	Less than significant	Not adverse
Result in impacts on views or substantially degrade the existing visual character of the site and surrounding area. Minor potential aesthetics impacts would result from earthmoving activities, limited removal of vegetation in the construction zone, and other construction activities. Although they would be of temporary duration, construction activities would be visible from most of the adjacent commercial/industrial properties as well as	No mitigation is required.	Less than significant	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
from residential properties. With the exception of the Depot environs, existing visual quality in this setting ranges from low to moderate. Significant visual impacts due to construction activities are not anticipated. Changes in key observation points (KOPs) are considered in the context of existing visual quality and character, viewer group and viewer group sensitivity, visual resources. As described in Section 3.2, significant aesthetics impacts would not occur under operation of the proposed Project.			
Result in significant impacts to lighting. SCRRA standard recommendations for station platform lighting are an average of 5 foot-candles for platforms and an average of 10 foot-candles at all other areas, including station canopies. A commensurate approach would be taken in designing parking lot lighting (e.g., E Street rail and bus facilities). All such lighting features would be positioned and shielded so as to avoid spillover light pollution and glare. Hence, no significant impacts related to lighting and glare are anticipated. Also, no lighting would be installed at other nonstation locations along the rail corridor. Thus, no significant light- or glare-related impacts would occur as a result of the proposed Project.	No mitigation is required.	Less than significant	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
Air Quality and Global Climate Change			
Result in obstruction of an applicable air quality plan. The proposed Project conforms with the most recently adopted Regional Transportation Plan (RTP) and Federal Transportation Improvement Program (FTIP); it has not significantly changed in design concept and scope; there has been less than 3 years since the last major conformity milestone; and a supplemental environmental document for air quality purposes has not been initiated. Therefore, a new conformity determination is not required. Consequently, because the Project would conform to the RTP and FTIP, which were found to conform to the State Implementation Plan (SIP), the Project would not obstruct implementation of the applicable air quality plan, which is the region's SIP.	No mitigation is required.	Less than significant	Not adverse
Result in violations of air quality standards. Maximum daily criteria pollutant emissions would not exceed South Coast Air Quality Management District (SCAQMD) regional construction-period thresholds for any pollutant during construction activities. Implementation of the proposed Project would decrease emissions of all criteria air pollutants relative to existing conditions except for a minor increase in sulfur oxide (SO_X), and would not exceed SCAQMD threshold levels. Emissions would be net negative and result in a net regional air quality benefit at the project level.	No mitigation is required.	Less than significant	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
Result in cumulatively considerable net increases of any criteria pollutant. Potential cumulative air quality impacts would result when cumulative projects' pollutant emissions would combine to degrade air quality conditions below acceptable levels. 2035 with-project emissions would decrease for all criteria air pollutants except nitrogen oxide (NO_X) under forecast year conditions compared to no-project conditions, although this increase in NO_X emissions would be below SCAQMD's operational thresholds of significance. Therefore, the proposed Project would not result in a significant and cumulatively considerable net increase in nonattainment pollutants.	No mitigation is required.	Less than significant	Not adverse
Expose sensitive receptors to substantial pollutant concentrations. Localized emissions during both construction and operations would not exceed localized significance thresholds for the project area. The Project would result in increased diesel-powered Metrolink train activity within the rail corridor.	No mitigation is required.	Less than significant	Not adverse
Create objectionable odors. The proposed Project would not include any uses identified by the SCAQMD as being associated with odors and therefore would not produce objectionable odors. Odors resulting from the construction of these projects are not likely to affect a substantial number of people, due to the fact that construction activities do not usually emit offensive odors. Potential odor emitters during construction activities include	No mitigation is required.	Less than significant	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
asphalt paving and the use of architectural coatings and solvents. SCAQMD Rule 1108 limits the amount of volatile organic compounds (VOCs) from cutback asphalt during paving activities. Given mandatory compliance with SCAQMD rules, no construction activities or materials are proposed that would create a significant level of objectionable odors.			
Generate significant greenhouse gases. Short-term construction activities would result in greenhouse gas (GHG) emissions from fuel combustion within off- and onroad construction equipment and vehicles. GHG emissions would increase with implementation of the proposed Project during 2035 forecast year with-project conditions when compared to no-project conditions. While the proposed Project would remove a number of single occupancy vehicles within the transportation network and redistribute motor vehicle trips that would otherwise drive to their destination, GHG emissions under full build-out conditions in 2035 with-project would increase by 822 metric tons of carbon dioxide equivalent ($MTCO_2e$)/year over 2035 no-project conditions. However, the net increase in emissions would be well below adopted or drafted SCAQMD threshold levels of 10,000 and 3,000 $MTCO_2e$/year.	No mitigation is required.	Less than significant	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
Conflict with an applicable plan adopted for the purpose of reducing greenhouse gas emissions. The proposed Project would improve mobility opportunities for transit-dependent populations in the City of San Bernardino to employment centers in Los Angeles and Orange Counties and support local and regional planning goals of SANBAG for the development of transit corridors in the Inland Empire. The Project would be consistent with statewide efforts by promoting alternative forms of transportation around existing and planned future transit-oriented development. Overall, the proposed Project would be consistent with the California Assembly Bill (AB) 32 goal of reducing state-wide GHG emissions to 1990 levels by year 2020.	No mitigation is required.	Less than significant	Not adverse
Biological Resources			
Have a substantial adverse effect on sensitive or special-status species. Land within and adjacent to the survey area is largely developed and/or disturbed and would not support sensitive botanical species. Implementation of the Project would not result in a significant impact on sensitive botanical species. The survey area does not contain suitable habitat for burrowing owl, and no significant impacts would occur. Suitable nesting, roosting, and/or foraging habitat for avian species protected under the Migratory Bird Treaty Act (MBTA) was observed in the survey area. Should construction occur during the avian nesting season, implementation of Mitigation Measures BR-1 through BR-3 would	Should construction occur during the avian nesting season, the following would be required: **BR-1: Conduct Preconstruction Nest Survey for Migratory Birds**. Prior to habitat removal during the avian breeding season, a preconstruction nest survey for migratory birds will be conducted within 10 days of the onset of construction by a qualified biologist. Verification surveys will be conducted if the Project has not commenced within 10 days of the original preconstruction survey. **BR-2: Establish Buffer Area for Migratory Bird Nests.** Should an active nest of any MBTA-covered species occur in or adjacent to	Less than significant	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
be required to reduce impacts on migratory birds to a less-than-significant level.	the survey area, a 100-foot buffer (300 feet for raptors) will be established around the nest, and no construction will occur within this area until the young have fledged. A qualified biologist will determine when the nest is no longer active or the young have fledged. **BR-3: Restrict Uses within Project Study Area Boundaries.** SANBAG will clearly delineate the boundaries of the Project Study Area by posting stakes, flags, and/or rope or cord, as directed by the project biologist. Signs will be posted and fencing installed as necessary to exclude vehicle traffic unrelated to project construction. All parking and equipment storage related to the Project will be confined to the construction or temporary staging area or to previously disturbed off-site areas. Undisturbed areas and off-site species habitat will not be used for parking or equipment storage. Construction-related vehicle traffic will be restricted to established roads, construction areas, storage areas, and staging and parking areas.		
Have a substantial adverse effect on any riparian habitat or other sensitive natural community. Natural riparian vegetation or other riparian habitat is absent from the survey area. None of the existing vegetation communities in the survey area are considered sensitive. Therefore, direct and indirect (i.e., future modification of an adjacent land use or type) impacts on sensitive communities would not occur.	No mitigation is required.	Less than significant	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
Have a substantial adverse effect on any federally protected wetlands, as defined by Section 404 of the Clean Water Act. As described previously, no indicators of potential jurisdictional areas were identified in the survey area. The closest offsite potential jurisdictional areas are Lytle Creek (to the south) and a small unnamed drainage (to the east), both of which are entirely concrete lined, have vertical concrete banks, and lack any natural riparian vegetation. Therefore, significant direct and indirect impacts on federally protected wetlands would not occur.	No mitigation is required.	Less than significant	Not adverse
Interfere with the movement of any native resident migratory fish or wildlife species. The survey area consists largely of urban development and disturbed habitat in an area surrounded by urban development. Therefore, wildlife corridors do not exist in or near the survey area. Significant direct and indirect impacts related to the movement of native wildlife species within a corridor would not occur. Please refer to the impact above regarding sensitive or special-status species for a discussion of migratory birds.	Mitigation regarding migratory birds is discussed above.	Less than significant	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
Conflict with a policy or ordinance protecting biological resources. The proposed Project, which would require the removal of more than five trees within the Project Study Area, would be implemented by and under the auspices of SANBAG. SANBAG, as a government entity, is not subject to the City's tree ordinance, and a tree removal permit would not be required. Given the Project would require minimal tree removal and those trees that would require removal are exotic, project-related tree removal would not conflict with the City's tree protection ordinance, and no significant impacts would occur.	No mitigation is required.	Less than significant	Not adverse
Conflict with an adopted habitat conservation plan. The survey area is not in or adjacent to an approved or adopted habitat conservation plan (HCP) area; therefore, threatened or endangered species, as designated by the U.S. Fish and Wildlife Service (USFWS) or the California Department of Fish and Game (CDFG), are not covered. No significant impacts would occur.	No mitigation is required.	Less than significant	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
Cultural Resources			
Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5. The proposed Project includes potential indirect impacts on the Depot at 1170 West 3rd Street. In addition, there could be an indirect impact on the dwelling located at 907 West Rialto Avenue. Specifically, because of the proximity of the tracks to the northwest corner of the property, there could be a noise impact on the historic resource. The proposed Project would include demolition of the following historic resources: 961 West 2nd Street, the commercial properties located at 981 West 3rd Street (Valley Linen Supply offices/Allgood Shower Door Company), and the industrial properties located at 111 South I Street, 131 South I Street (Jenco Productions, Inc.), 123 South G Street (JG Wholesale Product), and 170 South E Street. There could also be a potential direct impact on the dwelling located at 907 West Rialto Avenue. As a result, because of the potential impact on the historic setting and feeling of the resource, Mitigation Measure CR-1 would be required to implement this element of the proposed Project.	**CR-1: Provide Photographic Documentation of Historic Resources and Noise Reduction Measures.** The following mitigation measure addresses the proposed Project's potential for significant direct impacts on properties identified as historic resources (i.e., the residential properties located at 961 West 2nd Street and 907 West Rialto Avenue, the commercial property located at 981 West 3rd Street (Valley Linen Supply and offices/Allgood Shower Door Company), the industrial properties located at 111 South I Street, 131 South I Street (Jenco Productions, Inc.), 123 South G Street (JG Wholesale Product), and 170 South E Street. *Photography and Recordation.* Prior to the issuance of demolition permits for the aforementioned historic resources, a photographic documentation report will be prepared for each property by a qualified architectural historian, historic architect, or historic preservation professional who satisfies the Secretary of the Interior's Professional Qualification Standards for History, Architectural History, or Architecture, pursuant to 36 CFR 61. Each report shall document the significance of the property and its physical conditions, both historic and current, through photographs and text (e.g., an expanded Department of Parks and Recreation [DPR] form). Photographic documentation noting all elevations and additional details of architectural features will be taken using 35-millimeter black-and-white film. The photographer will be familiar with the	Significant and unavoidable	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
	recordation of historic resources. Photographs will be prepared in a format consistent with the Historic American Buildings Survey (HABS) standard for field photography. Copies of the report will be submitted to the City of San Bernardino Community Development Department, the San Bernardino Public Library (main branch), and the City of San Bernardino Historical and Pioneer Society. *Noise Mitigation—907 West Rialto Avenue.* Prior to the initiation of construction of the proposed Project in the vicinity of the dwelling located at 907 West Rialto Avenue, specific measures related to the minimization of noise impacts on the residence will be implemented. Such measures will include the installation of soundproof windows, exterior door and window seals, and interior insulation as well as sealing crevices and other openings to reduce sound intrusion. All construction must meet the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving Historic Buildings (Weeks and Grimmer 1995).		
Cause a substantial adverse change in the significance of an archaeological resource as defined in Section 15064.5. No new archaeological resources were identified within the project Area of Potential Effects (APE). Furthermore, none of the previously recorded archaeological resources within the project APE are eligible for the National Register of Historic Places. These previously recorded resources are also not eligible for the California Register of Historical Resources. The potential	**CR-2: Conduct Cultural Resources Monitoring.** SANBAG shall prepare a cultural resources monitoring and discovery plan in consultation with SHPO prior to construction to ensure appropriate mitigation of any unanticipated discoveries. The plan will define areas within the APE, including the Omnitrans Bus Facility, requiring archaeological monitoring by a qualified archaeologist during ground-disturbing construction-related activities. If during cultural resources monitoring the	Less than significant	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
for the project APE to yield buried prehistoric or historic-period archaeological resources is considered to be low. However, construction-related ground-disturbing activities for the proposed Project, including construction activities involving the Omnitrans bus facility and parking lot sites, could disturb, damage, or degrade unknown, intact, and potentially significant archaeological resources, even though the potential for this is considered to be low. If not mitigated, this could result in a significant impact.	qualified archaeologist determines that the sediments being excavated are previously disturbed or unlikely to contain significant cultural materials, the qualified archaeologist can specify that monitoring be reduced or eliminated in that area. In general, this plan will specify that if additional cultural materials (prehistoric or historic artifacts) are encountered during construction, work should stop in the vicinity of the find until a qualified archaeologist can assess the material and recommend further action if necessary. Treatment measures typically include development of avoidance strategies, capping with fill material, or mitigation of effects through data recovery programs, such as excavation or detailed documentation, or other mitigation measures, following standard archaeological procedures.		
Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. The proposed Project is situated on Quaternary alluvium, which is older at depth. Quaternary Holocene-age alluvium near the modern ground surface has a low potential for vertebrate fossils, but older Quaternary deposits have a higher potential for vertebrate fossils, primarily mammals of the Pleistocene epoch. Surface grading or very shallow excavation in the project APE is unlikely to uncover significant fossil vertebrates. Deeper excavations that extend 5 feet or more into older Quaternary deposits may encounter significant fossil vertebrate	**CR-3: Conduct Paleontological Monitoring.** The project applicant will develop a program to mitigate impacts on nonrenewable paleontological resources prior to excavation or construction of any components of the proposed Project. During construction, this program will include paleontological monitoring in designated project locations, including the Omnitrans bus facility and parking lot sites. This mitigation program will be conducted by a qualified vertebrate paleontologist and consistent with the proposed guidelines of the Society of Vertebrate Paleontology. This program will include the following: • Assessment of site-specific excavation	Less than significant	Not evaluated under NEPA

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
remains. Because the proposed Project would require groundbreaking activities during construction that may exceed 5 feet in depth, the potential to unearth previously unidentified paleontological resources exists. Therefore, Mitigation Measure CR-3 would be required to reduce impacts to less-than-significant levels.	plans to determine areas that will be designated for paleontological monitoring during initial ground disturbance. • Development of monitoring protocols for designated areas. Areas consisting of artificial fill materials or areas of ground disturbance less than 5 feet in depth will not require monitoring. Paleontological monitors qualified to Society of Vertebrate Paleontology standards will be equipped to salvage fossils as they are unearthed to avoid construction delays and remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. Monitors must be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Monitoring may be reduced if some of the potentially fossiliferous units are determined upon exposure and examination by qualified paleontologic personnel to have a low potential to contain fossil resources. • Preparation of all recovered specimens to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates, if paleontological resources are encountered. Preparation and stabilization of all recovered fossils are essential to mitigate fully adverse impacts on the resources.		

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
	• If paleontological resources are encountered, identification and curation of all specimens into an established, accredited museum repository with permanent retrievable paleontologic storage. These procedures are also essential steps in effective paleontologic mitigation and CEQA compliance (San Bernardino County Museum; Scott and Springer 2003). The paleontologist must have a written repository agreement in hand prior to the initiation of mitigation activities. Mitigation of adverse impacts on significant paleontologic resources is not considered complete until such curation into an established museum repository has been fully completed and documented. • If paleontological resources are encountered, preparation of a report of findings with an appended itemized inventory of specimens. The report and inventory, when submitted to the appropriate lead agency, along with confirmation of the curation of recovered specimens into an established, accredited museum repository, will signify completion of the program to mitigate impacts on paleontologic resources.		

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
Disturb human remains including those interred outside formal cemeteries. Ground disturbance associated with construction of the proposed Project, including the Omnitrans bus facility and parking lot sites, has the potential to damage or destroy buried human remains that were not identified using standard archaeological inventory methods. However, no documented cemeteries or burial sites occur within the project APE. If human remains are exposed during construction, State Health and Safety Code Section 7050.5 states that no further disturbance will occur until the county coroner has made the necessary findings as to origin and disposition, pursuant to Public Resources Code Section 5097.98. If the coroner determines the remains to be Native American, the coroner must contact the Native American Heritage Commission (NAHC), and the Project must comply with state laws related to Native American burials, which are under the jurisdiction of the NAHC (Public Resources Code Section 5097). Furthermore, construction must halt in the area of the discovery of human remains, the area must be protected, and consultation and treatment must occur as prescribed by law.	**CR-4: Stop Work if Unanticipated Human Remains Are Encountered.** If human remains are exposed during construction, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the county coroner has made the necessary findings as to origin and disposition pursuant to PRC 5097.98. If the coroner determines the remains to be Native American, the coroner must contact the Native American Heritage Commission and the Project must comply with state laws relating to the disposition of Native American burials that are under the jurisdiction of the Native American Heritage Commission (PRC Section 5097). Construction must halt in the area of the discovery of human remains, the area must be protected, and consultation and treatment would occur as prescribed by law.	Less than significant	Not adverse
Geology, Soils, and Seismicity			
Expose people or structures to significant adverse effects related to seismicity, including fault rupture, ground shaking, ground failure, or landslides. The Project Study Area is located in a seismically active area of southern California. The potential exists	**G-1: Comply with Geotechnical Recommendations.** Construction and structural design of the Project will comply with all of the geotechnical recommendations, including design measures, provided in the final geotechnical investigation report prepared for	Less than significant	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
for the site to experience strong ground shaking from nearby faults during an earthquake. Implementation of the proposed Project would require various site grading and construction activities. In general, the geologic and seismic hazards identified for the Project Study Area would be mitigated by employing required standard engineering practices. Furthermore, the proposed Project would integrate the geotechnical recommendations prescribed in the geotechnical investigation report.	the Project (see Appendix E). This includes implementation of the geotechnical recommendations for project-specific improvements, based on the site investigation, engineering analysis, and standard design criteria, as stated in the geotechnical investigation report for the following: • Pedestrian overcrossing stair tower buildings • Pole foundations • Concrete platforms • Retaining walls • Concrete culverts • Track subgrade grading • Imported soils • Subballast and ballast • Soil corrosivity • Pavement design • Temporary excavations • Shored excavation • Pavement design Through integration of the required geotechnical recommendations, final design will reflect compliance with the applicable Seismic Design Category (e.g., D, E, or F) for each proposed structural facility in accordance with the CBC.		
Result in substantial soil erosion or be located on unstable soil. Construction of the proposed Project would require grading and excavation activities, which would expose soils within the Project Study Area to wind and water erosion. Although implementation of industry-standard stormwater pollution-control best	See Mitigation Measures G-1, HYD-1, and HYD-2.	Less than significant	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
management practices (BMPs) would minimize potential soil erosion and other water quality impacts during construction, localized erosion could still occur and would require appropriate mitigation.			
Be located on a geologic unit that would become unstable and potentially result in a landslide, lateral spreading, liquefaction, or collapse. The Project Study Area has a low potential for liquefaction hazards because groundwater levels are 70 feet or more below grade and the local geologic substrate is composed predominantly of medium-dense to dense silty sand interbedded with stiff to very stiff silt. The Project Study Area is generally level and, therefore, not prone to landslide hazards. It is located within an alluvial depositional landscape characterized by unconsolidated sediments at depth. These unconsolidated materials are susceptible to both total and differential settlement with the placement of additional loads. Hazards related to settlement would be mitigated through the integration of several geotechnical recommendations into the project design.	See Mitigation Measure G-1.	Less than significant	Not adverse
Be located on expansive soils. Soils within the Project Study Area are not known to have expansive qualities. Specifically, near the surface, subgrade soils at the site consist predominantly of silty sand with very low expansion potential. Therefore, impacts related to expansive soils would not occur under construction or operation of the Project.	No mitigation is required.	Less than significant	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
Have soils that are incapable of supporting septic tanks. All habitable structures constructed in conjunction with the Project would connect to the local sanitary sewer collection service provided by the City. In this context, the proposed Project would not require the construction or use of septic tanks or other alternative wastewater disposal systems; therefore, no impacts would occur.	No mitigation is required.	No impact	Not adverse
Hazardous Waste and Materials			
Create a significant hazard through transport, use, or disposal of hazardous materials or through accident conditions. During construction, hazardous materials handling could involve removal or export of small amounts of contaminated soils from off site. If construction contractors encounter potentially hazardous wastes or identify an odor or substantially stained soil, all applicable regulations regarding discovery and response for hazardous materials would be followed immediately. Several REC or historical REC sites were identified within or surrounding the Project Study Area. Ground disturbance during construction activities proposed near these sites could result in impacts related to hazardous wastes.	**HM-1: Comply with Hazards and Hazardous Materials Recommendations.** The proposed Project will comply with all recommendations provided in both Phase I Environmental Site Assessments, both Phase II Environmental Site Assessments, and the associated Technical Memorandum of Additional Findings prepared for the Project (see Appendix F). This includes recommendations related to subsurface activities, additional investigations, and proper handling and removal of previously unknown wastes and soils affected by lead. **HM-2: Plan and Monitor for Hazardous Materials.** Prior to the start of ground-disturbing activities, the contractor will be provided with a copy of the Phase I Environmental Site Assessment and advised that hazardous wastes may be present anywhere along the rail corridor. The contract specifications will require the contractor to be responsible for appropriate handling, storage, and disposal of any hazardous wastes encountered on the site or generated during project-related construction	Less than significant	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
	and demolition activities, in accordance with applicable local, state, and federal laws.		
Emit hazardous emissions within 0.25 mile of an existing school. The land use technical memorandum prepared for the proposed Project did not identify any schools adjacent to the rail corridor. However, one school, Lytle Creek Elementary, is located approximately 900 feet (0.17 mile) southwest of the nearest portion of the Project Study Area at I Street. Allred Children's Center (0.26 mile), Richardson Preparatory High School (0.26 mile), Conrad Junior High School (0.32 mile), Alessandro Elementary School (0.38 mile), Harding School (0.38 mile), Juanita Blakely Jones Elementary School (0.41 mile), Burbank Elementary School (0.5 mile), Mt. Vernon Elementary School (0.75 mile), and San Bernardino Valley College (1 mile) are also located in the area surrounding the rail corridor, although they are not located within a 0.25 mile radius of the Project Study Area. The proposed use may involve the release of hazardous emissions during construction. However, Lytle Creek Elementary is separated from the Project Study Area by a few city blocks with other land uses. In addition, emissions releases would occur in the area for only a short period of time (during project construction). Furthermore, construction activities would be conducted in accordance with all applicable federal, state, and local requirements designed to reduce emissions. No significant impacts would occur.	No mitigation is required.	Less than significant	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
Included on a list of a hazardous materials sites. Twenty-eight sites of concern have been recorded within and adjacent to the Project Study Area. No sites of concern were identified from the site reconnaissance and records review of the Short Way rail line located west of the Project Study Area. To characterize known or suspected contamination sites identified in the Phase I assessment more fully, further investigation at 14 sites is recommended and mitigation measures are included to reduce construction impacts.	See Mitigation Measures HM-1 and HM-2.	Less than significant	Not adverse
Interfere with an adopted emergency plan. Construction of the proposed Project could have a temporary impact on local traffic patterns and cause temporary traffic delays for emergency service vehicles. However, this impact would be minimized through standard construction practices, implementation of a traffic management plan, and pre-construction coordination with emergency service responders. Operation of the proposed Project would be in accordance with all applicable state and local requirements regarding any emergency evacuation plans. Therefore, impacts would be less than significant.	No mitigation is required.	Less than significant	Not adverse
Be located within an airport land use plan or within 2 miles of a public airport or public use airport, or within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area. The rail corridor is not located within 2 miles of an airport or private airstrip. No safety	No mitigation is required.	No impact	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
hazards for people working or residing in the Project Study Area would occur, and no impact would result.			
Expose people or structures to a significant risk of loss, injury, or death involving wildland fires. The San Bernardino City Fire Department service area contains approximately 19 miles of wildland interface area. The rail corridor is not located in or in the vicinity of the City's hillsides. The rail corridor is not located within or adjacent to the Foothill Fire Zone Overlay District. No wildland fire hazard would occur, and no impact would result.	No mitigation is required.	No impact	Not adverse
Hydrology, Floodplains, and Water Quality			
Violate water quality standards or waste discharge requirements. Impacts associated with constructing the proposed Project would be limited to the construction footprint (Project Study Area) and temporary staging areas. In general, the severity of construction-related water quality impacts depends on soil erosion potential; construction practices; the frequency, magnitude, and duration of precipitation events; and the proximity of construction to stream channels or water bodies. Overall, temporary construction-related impacts on water quality, in relation to a violation of any water quality standard or waste discharge requirement, may have a significant impact. Project operations have the potential to contribute to 303(d)-listed impaired waters and could violate Basin Plan standards if not properly controlled. Operational water quality	**HYD-1: Develop and Implement a Stormwater Pollution Prevention Plan.** The construction contractor will develop a SWPPP and implement the BMPs described in the plan. The SWPPP will mitigate temporary construction-related impacts related to hydrology and water quality by using a combination of BMPs to protect downstream hydrology and maintain runoff rates during construction at pre-construction levels. The BMPs will either capture or filter stormwater flow to ensure that sedimentation or other construction-related contaminants will not result in impacts on water quality. Standard erosion control measures, such as management, structural, and vegetative controls, will be implemented for all construction activities that expose soil. Erosion in disturbed areas will be controlled by the following:	Less than significant	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
impacts can occur from vehicle traffic over time and when the "first flush" storm event occurs because stormwater may transport contaminants to waterways. Such impacts are considered significant.	• Grading so that direct routes for conveying runoff to drainage channels and inlets are eliminated. • Constructing erosion-control barriers, including silt fences, fiber rolls, or mulching material. • Reseeding disturbed areas with grass or other plants as soon as possible. Following construction, SANBAG will ensure the provision of sufficient drainage inlet and outlet protection through the use of energy dissipaters, vegetated riprap, and/or other appropriate BMPs to slow runoff velocities and prevent erosion at discharge locations from the rail platforms and parking areas. **HYD-2: Develop and Implement a Water Quality Management Plan.** Opportunities for low-impact development will be integrated into the final drainage plan to the maximum extent practical and reflected in a project-specific water quality management plan. The final water quality management plan for the Project will demonstrate no net increase in runoff for the post-project condition.		
Substantially deplete groundwater supplies or interfere substantially with groundwater recharge. The proposed Project may result in a slight increase in the area of impervious surfaces within the Project Study Area; however, the effect on groundwater recharge is anticipated to be negligible. Current groundwater levels in the Project Study Area are more than 70 feet below the ground	No mitigation is required.	Less than significant	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
surface elevation; therefore, shallow groundwater is not anticipated to cause design issues for proposed improvements. Concurrence has been obtained from the City of San Bernardino to consider use of infiltration basins, consistent with Section XI.E.3 of permit order R8-2010-0036. Therefore, no significant impacts are anticipated.			
Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion on site or off site. Construction activities would result in the removal of sparse vegetation and reduce natural soil resistance to rainfall impact erosion. However, much of the site is disturbed and developed (e.g., the existing rail line and adjacent land uses). Temporary construction-related impacts on drainage systems may occur. Implementation of Mitigation Measures HYD-1 and HYD-2 would reduce these impacts to less-than-significant levels.	See Mitigation Measures HYD-1 and HYD-2.	Less than significant	Not adverse
Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide additional sources of polluted runoff. Drainage improvements that are part of the project design include the extension of a 36-inch drainage culvert, construction of a series of catch basins and drains, detention basins, and drainage improvements in existing and proposed parking lots. These facilities would improve the conveyance of stormwater	See Mitigation Measures HYD-1 and HYD-2.	Less than significant	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
runoff as well as the quality of runoff leaving the site. Additionally, implementation of Mitigation Measures HYD-1 and HYD-2 would reduce impacts to less-than-significant levels.			
Otherwise substantially degrade water quality. See impact discussion above.	See Mitigation Measures HYD-1 and HYD-2.	Less than significant	Not adverse
Place housing or other structures within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, impede or redirect flood flows. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) maps, the Project Study Area is not located within a 100-year floodplain and is outside the area required by FEMA to consider development constraints. The proposed Project does not involve construction of housing or structures within the 100-year floodplain as mapped by FEMA FIRMs. There would be no impact.	No mitigation is required.	No impact	Not adverse
Expose people or structures to a significant risk of loss, injury, or death involving flooding as a result of the failure of a levee or dam. See discussion above. Additionally, the Project Study Area would not expose people or structures to flooding due to levee or dam failure.	See Mitigation Measures HYD-1 and HYD-2.	Less than significant	Not adverse
Contribute to inundation by seiche, tsunami, or mudflow. Because of the proposed Project's lack of proximity to the ocean, a large lake, or other body of water and because the Project is located on relatively flat ground, risks related to exposing people or	No mitigation is required.	No impact	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
structures to a tsunami, seiche, or mudflow are very low. No significant impact is anticipated.			
Land Use and Land Use Planning			
Physically divide an established community. The proposed Project would require partial and full acquisitions of adjacent parcels for right-of-way purposes. However, these acquisitions are not expected to divide established residential neighborhoods along the rail corridor because adjacent residential uses are generally west of I-215 and north of Rialto Avenue. Because improvements are proposed to provide safe egress for pedestrians and vehicles traveling through the rail corridor, no significant impacts on the physical division of a neighborhood would occur. In addition, the reconfiguration or creation of parking lots would take place adjacent to the existing rail right-of-way and station platforms, and would not restrict or prohibit safe pedestrian and vehicular access. Therefore, no significant impact would occur.	No mitigation is required.	Less than significant	Not adverse
Be incompatible with surrounding land uses. Land uses surrounding the rail corridor include commercial, office, light industrial, warehouse, vacant, and scattered single- and multi-family uses. The proposed loss of commercial uses is not expected to result in a change in land use character for the surrounding area. Commercial uses would continue to be located adjacent to portions of the rail corridor. Additionally, no change in land use is proposed for the rail corridor because the Project	No mitigation is required.	Less than significant	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
proposes to expand existing transit service 1 mile east from an existing station and to provide additional rail platforms and a bus facility to support existing bus and rail transit service. Therefore, overall implementation of the proposed Project would be compatible with surrounding land uses.			
Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted to avoid or mitigate an environmental effect. The proposed Project would not result in new land uses that would change land use plans, policies, and regulations; however, the Project would require a General Plan Amendment to the City's Circulation Map of the 2005 General Plan Update Circulation Element for street closures and roadway reconfigurations. The proposed Project is anticipated to be consistent with all the local, regional, state, and federal jurisdictions and their plans for the rail corridor upon approval of a General Plan Amendment. Specifically, the proposed Project would be consistent with the goals of the 2008 RTP and Regional Comprehensive Plan and Guide (RCPG), and the City of San Bernardino General Plan.	No mitigation is required.	Less than significant	Not adverse
Noise and Vibration			
Result in noise levels in excess of established standards. Construction of the proposed Project would result in temporary but relatively high levels of noise along the rail corridor. During the noisiest periods of construction, noise impacts are predicted to	**NOI-1: Employ Noise-Reducing Measures during Construction.** The project sponsor will require its construction contractors to employ measures to minimize and reduce construction noise. Measures that will be implemented to reduce construction noise to acceptable levels	Less than significant	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
occur at Category 2 (i.e., residential) land uses along the project rail corridor at distances of up to approximately 240 feet under daytime impact criteria and approximately 410 feet under nighttime impact criteria. Although it is anticipated that most construction work would take place during daytime hours, some work may occur during nighttime hours (e.g., work at major street crossings).	include the following: • Comply with local noise regulations and limit construction hours to the extent practicable (i.e., between the hours of 7:00 a.m. and 8:00 p.m.). • Use available noise suppression devices and techniques, including: • Equipping all internal combustion engine-driven equipment with mufflers, air-inlet silencers, and any other shrouds, shields, or other noise-reducing features that are in good operating condition and appropriate for the equipment (5 to 10 dB reduction possible). • Using “quiet” models of air compressors and other stationary noise sources where such technology exists. • Using electrically powered equipment instead of pneumatic or internal combustion-powered equipment, where feasible. • Using noise-producing signals, including horns, whistles, alarms, and bells, for safety-warning purposes only. • Locating stationary noise-generating equipment, construction parking, and maintenance areas as far as reasonable from sensitive receivers adjoining or near the Project Study Area. • Prohibiting unnecessary idling of internal combustion engines (i.e., in excess of 5 minutes).		

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
	• Placing temporary soundwalls or enclosures around stationary noise-generating equipment when located near noise-sensitive areas (5 to 15 dB reduction possible). • Ensuring that project-related public address or music systems are not audible at any adjacent receiver. • Notifying adjacent residents in advance of construction work. **NOI-2: Prepare a Community Awareness Program for Project Construction.** In consultation with the representatives of the neighboring cities, the construction contractor will prepare and maintain a program to enhance community awareness of project construction issues, including noise, vibration, nighttime noise, nighttime lighting, and roadway closures. Initial information packets will be prepared and mailed to all residences within a 500-foot radius of project construction, with updates prepared as necessary to indicate new scheduling or processes. A project liaison will be identified who will be available to respond to community concerns regarding noise, vibration, and light. See Mitigation Measure NOI-7 (for NEPA only).		
Result in excessive groundborne vibration or groundborne noise levels. Construction of the proposed Project would result in temporary vibration along the rail corridor from use of heavy equipment and machinery. FTA construction vibration damage thresholds	See Mitigation Measure NOI-2. **NOI-3: Use Ballast Mats, Resiliently Supported Ties, or Measures of Comparable Effectiveness on Portions of the Rail near Sensitive Receivers.** The project sponsor's	Less than significant	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
would not be exceeded at any of the representative receiver locations, indicating that the potential for damage to any of the structures along the rail corridor is low. FTA construction annoyance criteria would be exceeded at representative receivers as far as 120 feet from the rail corridor during operation of construction equipment, with relatively high levels of vibration from equipment such as vibratory rollers. The construction vibration (annoyance) impact is considered significant. Operation of the proposed Project would result in groundborne vibration along the rail corridor. Impacts are predicted to occur at residential land uses within the area near the rail corridor located east of the Depot and west of I-215 (represented by Receivers 11 and 15) and within the area near the rail corridor located west of the Depot and north of the Inland Empire Maintenance Facility (IEMF) (Receiver Site 35). The groundborne vibration impact would be considered potentially significant.	design team will ensure the track design specifications include the use of ballast mats or resiliently supported ties (under-tie pads) on portions of the track near sensitive receivers to minimize project-related groundborne vibration generated when the trains pass sensitive receivers.		
Result in permanent increases in ambient noise levels in the project area. Increased rail noise would result in moderate and severe impacts at residential land uses along the rail corridor. Moderate impacts from project-related rail noise are predicted to occur at residential land uses near the rail corridor located east of the Depot and west of I-215 (represented by Receivers 6, 7, 14, 16, 24, 26, 27, 31, 32) and within the area near the rail corridor located west of the Depot and north of the IEMF (Receiver 37). Significant impacts from project-related rail	**NOI-4: Establish Quiet Zones.** SANBAG will support the establishment of quiet zones by constructing certain supplemental safety measures (SSMs) that, when implemented at an existing grade crossing, allow the governing agency or railroad to designate a quiet zone. Under FRA and CPUC guidelines, SSMs allowed in California include the installation of raised medians, placement of exit gates with vehicle-presence detection systems, and permanent closure. SSMs will be established at the following grade crossings within the Project Study Area: 2nd Street, Rialto Avenue/I Street,	Operational rail noise would remain significant with implementation of mitigation measures	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
noise are predicted to occur at residential land uses within the area near the rail corridor located east of the Depot and west of I-215 (represented by Receivers 11, 15, 17, 18, 19, 22, 25, 28, 29) and within the area near the project alignment located west of the Depot and north of the IEMF (Receivers 35 and 36). In summary, the impact would be considered moderate at a total of 10 receivers, representing 28 residential land uses, and significant at a total of 11 receivers, representing 30 residential land uses.	and G Street. **NOI-5: Provide Building Noise Insulation to Severe- and Moderate-Impact Residences Where Sound Barriers Are Infeasible.** For the three residential structures represented by Receivers 11 and 15, the project sponsor will provide sound insulation. Effective treatments include caulking and sealing gaps in the building façade and installing new doors and windows that are specially designed to meet acoustical transmission-loss requirements. Exterior doors facing the noise source will be replaced with well-gasketed solid-core wood doors and well-gasketed storm doors. Acoustical windows are usually made of multiple layers of glass with air spaces between to provide noise reduction. Acoustical performance ratings are published in terms of Sound Transmission Class (STC) for these special windows. A minimum STC rating of 39 will be used on any window exposed to the noise source. Additional building sound insulation, if needed, will be provided by sealing vents and ventilation openings and relocating them to a side of the building and away from the noise source. Particularly in the case of Receiver 15, it may be necessary to increase the mass of the building façade of wood-frame houses by adding a layer of sheathing to the exterior walls. To ensure that the windows and doors can be kept closed while still maintaining habitable conditions, a central heating, ventilation, and air-conditioning (HVAC) system will also be provided.		

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
	NOI-6: Lubricate Wayside Rail. Wayside applicators will be installed for all tight-radius curves on the project alignment. If the wayside applicators are not able to reduce squeal to an acceptable level, additional reductions may be possible through customized profiling of the rail to reduce the forces required for trains to negotiate the curve. **For NEPA Only** **NOI-7: Construct Sound Barriers.** Sound barriers will be constructed along portions of the rail alignment to reduce noise levels at receivers with severe or moderate noise impacts. Barrier locations and details are contained in Table 8-2 of Appendix I and are shown in Figure 4.3.6-2.		
Result in substantial temporary or periodic increases in ambient noise levels in the Project Study Area. Construction of the proposed Project would result in temporary but relatively high levels of noise along the rail corridor. Noise impacts are predicted to occur at Category 2 land uses along the rail corridor at distances of up to approximately 240 feet under daytime impact criteria and approximately 410 feet under nighttime impact criteria. Although it is anticipated that most construction work would take place during daytime hours, some work may require nighttime work (e.g., work at major street crossings).	See Mitigation Measures NOI-1 and NOI-2.	Less than significant	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
Be located within an airport land use plan area, or, where such a plan has not been adopted, within two miles of a public airport, public use airport, or private airstrip. The rail corridor is not located within 2 miles of an airport or private airstrip. Ontario International Airport is located approximately 25 miles southwest of the City, and Riverside Municipal Airport is located approximately 12 miles south. The Rialto Airport is located approximately 8 miles northwest of the western portion of the rail corridor, and the San Bernardino International Airport is located approximately 2.5 miles east of the proposed bus facility site. The Redlands Municipal Airport is also located east of I-215. As the proposed Project is not within 2 miles of an airport, no significant impact would result.	No mitigation is required.	Less than significant	Not adverse
Transportation and Traffic			
Conflict with an applicable plan, ordinance, or policy establishing measure of effectiveness for the performance of the circulation system. Construction of the bus facility would likely result in temporary detours along E Street and Rialto Avenue. Additionally, the Project would result in temporary and permanent use of the existing parking lot areas located east and south of the San Manuel Stadium. Two unsatisfactory intersections would result—Intersection 5 (J Street and 2nd Street), which would operate at LOS F in the PM peak hour, and Intersection 6 (J Street and Rialto Avenue), which would operate at LOS F in the AM peak hour. This constitutes a	**T-1: Prepare and Implement a Traffic Management Plan.** Prior to initiating construction, SANBAG will ensure that the construction contractor prepares a Traffic Management Plan that includes construction detour plans and designates construction truck access routes for each phase of construction. During each phase of construction, the construction contractor will provide signage indicating the construction limits, access routes, detour routes, and entrances to individual business sites. In addition, the construction contractor will supply “open for business” signs to encourage normal business activity during construction.	Less than significant	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
significant adverse impact because it would conflict with an applicable policy establishing the threshold effectiveness for intersection performance within the circulation system. The proposed Project would improve rail and bus transit facilities and nonmotorized (pedestrian) travel. Therefore, the Project would have a beneficial effect and would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the non-vehicular circulation system.	**T-2: Prepare and Implement a Stadium Parking Plan.** SANBAG or its construction contractor will prepare a stadium parking plan for review and approval by the City of San Bernardino for use of the parking lot areas west and south of the San Manuel Stadium as temporary staging locations and one future detention basin. SANBAG will consult with the City for approval to ensure that adequate parking is provided in the area during scheduled events and that designated replacement parking is conveniently located near San Manuel Stadium for use by stadium visitors. **T-3: Install a Traffic Signal at the J Street/2nd Street Intersection.** To address the unsatisfactory LOS conditions at the J Street/2nd Street intersection in 2035, under the proposed Project only, a traffic signal will be installed at this intersection. In accordance with City standards, SANBAG will contribute its fair share to the funding of this improvement based on the City's impact fees at the time the improvement is required. **T-4: Install All-Way Stops at the J Street/Rialto Avenue Intersection.** To address the unsatisfactory LOS conditions at the J Street/Rialto Avenue intersection in 2035 (under any design option), this intersection will be converted to an all-way stop-controlled intersection. In accordance with City standards, SANBAG will contribute its fair share to the		

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
	funding of this improvement based on the City's impact fees at the time the improvement is required.		
Conflict with an applicable congestion management program. The proposed Project would not contribute to traffic congestion and would improve circulation by providing better access to mass transit, thereby resulting in a beneficial effect on travel demand for roads and highways. Implementation of public transit improvement projects, such as the proposed Project, would help remove vehicles from roadways and freeways and convert single-occupancy vehicular commuters to transit commuters, which would result in a decrease in vehicle miles traveled (VMT) and fuel use. This would result in a regional benefit. The Project would also improve rail and bus transit facilities and nonmotorized (pedestrian) travel. No significant impact would occur.	No mitigation is required.	Less than significant	Not adverse
Result in changes in air traffic patterns that would result in substantial safety risks. No airports are located within the rail corridor. The nearest airport is the San Bernardino International Airport located approximately 1.5 miles from the easternmost extent of the Project Study Area. Due to the nature of the Project, no changes in air traffic patterns would result and no substantial safety risks would occur. The proposed Project would have no impact regarding changes in air traffic patterns.	No mitigation is required.	No impact	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
Result in inadequate emergency access. The proposed Project would result in temporary changes to local traffic patterns during construction and may cause temporary traffic delays for emergency service vehicles. This impact, however, would be minimized through implementation of standard construction practices and a Traffic Management Plan as well as preconstruction coordination with emergency service responders. Construction activities would occur in accordance with all applicable state and local requirements and permits. As such, the proposed Project is not anticipated to result in significant impacts related to inadequate emergency access. The proposed Project would have less-than-significant impacts on emergency access with implementation of Mitigation Measure T-1.	See Mitigation Measure T-1.	Less than significant	Not adverse
Substantially increase hazards because of a design feature. The proposed Project would reduce hazards by improving pedestrian access throughout the rail corridor and separating pedestrians from bus and rail traffic. Other project elements that serve to reduce hazards include installing at-grade crossings at selected intersections and easing the severe curvature of the rail alignment. Therefore, implementation of the proposed Project is anticipated to improve existing safety conditions and would therefore reduce hazards associated with the existing design.	No mitigation is required.	Less than significant	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
Conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or decrease the performance or safety of such facilities. The Project would result in improvements to alternative transportation modes, specifically improvements to commuter rail and bus facilities and pedestrian access. The proposed Project would also improve the accessibility of public transportation for seniors and persons with disabilities by proposing the installation of an ADA-compliant pedestrian overcrossing. Therefore, the proposed Project would not conflict with adopted policies regarding public transit and would be consistent with applicable City of San Bernardino's General Plan policies (Policy 6.6.4).	No mitigation is required.	Less than significant	Not adverse
Community Impacts			
Community character and cohesion. No substantial adverse effects on community character and cohesion are anticipated. The proposed Project would not isolate any established community because the majority of the Project would operate within the existing rail right-of-way. Established neighborhoods and business centers would not be divided, urbanization would not increase, and isolation would not occur within the rail corridor. The Project would also result in benefits to the community by providing additional transit opportunities, improving pedestrian access, and installing safety features.	No mitigation is required.	Topic evaluated for NEPA compliance. See also CEQA Land Use and Planning section.	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
Land Acquisitions, Displacement, and Relocation			
Land acquisitions, displacement, and/or relocation. Displacement and relocation from land acquisitions under the proposed Project have the potential to generate direct effects on affected parties. To minimize relocation effects, all relocations resulting from the Project would be in compliance with the Uniform Act and the California Relocation Act, and commensurate compensation would be provided to all affected parties. Thus, no direct or indirect adverse effects from land acquisitions, displacement, or relocation would occur.	No mitigation is required.	Topic evaluated for NEPA compliance. No evaluation required under CEQA.	Not adverse
Socioeconomic, Economic, and Fiscal Impacts			
Changes to the existing economic and fiscal condition. Project implementation would generate several economic effects both during construction and once operational. Initially, the Project and design options would create a temporary increase in employment and subsequent housing demand in the City from construction jobs. Over the longer term, the Project and design options would be expected to support rail and bus transit use by providing these opportunities at a centralized location within downtown San Bernardino. No adverse direct or indirect effects are anticipated.	No mitigation is required.	Topic evaluated for NEPA compliance. No evaluation required under CEQA.	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
Safety and Security			
Safety conditions; right-of-way; risk of accidents, collisions, or major structural failures. With implementation of proper design and installation of appropriate safety upgrades and mitigation measures, potentially adverse effects would be further reduced. The proposed Project would incorporate all necessary crime prevention measures, including City, Metrolink, and Omnitrans crime prevention policies, to deter criminal acts and protect passengers, employees, and the community. The proposed Project would also incorporate fire prevention measures to protect the Project Study Area from incidents of fire. No adverse effects would occur.	**SAFE-1: Verify the Installation of Rail Safety Measures.** Prior to issuance of operating permits, Metrolink will provide verification to CPUC that all rail safety measures identified in the hazard analysis have been installed. **SAFE-2: Develop Rail Facility Safety and Security Plans.** Metrolink will coordinate and consult with LASD and SBPD to develop safety and security plans for the alignment, parking facilities, and station areas. **SAFE-3: Develop a Bus System Safety Program Plan.** Omnitrans will coordinate and consult with SBPD to develop a system safety program plan for the proposed bus facility.	Topic evaluated for NEPA compliance. No evaluation required under CEQA.	Not adverse
Energy, Utilities, and Public Services			
Energy consumption. During construction, short-term energy consumption would result from the manufacture of construction materials, use of petroleum fuels by construction equipment, workers' motor vehicles, and delivery trucks. Because construction impacts would be temporary, adverse effects are not anticipated. The Project would require use of energy to electrify station facilities. The Project would accommodate increases in rail and bus transit demand in the region. The Project would have an indirect beneficial impact on energy resources, as improved transit service would	No mitigation is required.	Less than significant	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
encourage use of public transit services and reduce the number of personal vehicles on the roads requiring fuel consumption and reducing VMT. No adverse effects would occur.			
Environmental Justice			
Disproportionate effects on low-income and/or minority residents. The proposed Project would not be appreciably more severe or greater in magnitude on minority or low-income populations compared to the effects on nonminority or non-low-income populations as the area within the rail corridor presents a mix of minority (persons of Hispanic origins) and low-income populations that would be similar to that of the City as a whole. Therefore, these populations occur throughout the City and cannot be reasonably avoided. Furthermore, all mitigation measures described previously are expected to be equally effective for all groups, and no adverse effects are anticipated. The proposed Project would provide improved pedestrian safety and egress improvements within the rail corridor, improve mobility opportunities for transit-dependent populations, provide additional transit opportunities, and reduce greenhouse gas emissions, which	Implementation of the following mitigation measures would reduce adverse construction effects: • BR-1 (Conduct Preconstruction Nest Survey for Migratory Birds) • BR-2 (Establish Buffer Area for Migratory Bird Nests) • BR-3 (Restrict Uses within Project Study Area Boundaries) • CR-2 (Conduct Cultural Resources Monitoring) • CR-4 (Stop Work if Unanticipated Human Remains Are Encountered) • G-1 (Comply with Geotechnical Recommendations) • HM-1 (Comply with Hazards and Hazardous Materials Recommendations) • HM-2 (Plan and Monitor for Hazardous Materials) • HYD-1 (Develop and Implement a Stormwater	Topic evaluated for NEPA compliance. No evaluation required under CEQA.	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
would result in a beneficial effect.	Pollution Prevention Plan) • NOI-1 (Employ Noise-Reducing Measures during Construction) • NOI-2 (Prepare a Community Awareness Program for Project Construction) • T-1 (Prepare and Implement a Traffic Management Plan) • T-2 (Prepare and Implement a Stadium Parking Plan) Implementation of the following mitigation measures would reduce adverse operational effects: • HYD-2 (Develop and Implement a Water Quality Management Plan) • NOI-3 (Ballast Mats, Resiliently Supported Ties, or Measures of Comparable Effectiveness on Portions of the Rail near Sensitive Receivers) • NOI-4 (Establish Quiet Zones) • NOI-5 (Provide Building Noise Insulation to Severe- and Moderate-Impact Residences Where Sound Barriers Are Infeasible) • NOI-6 (Lubricate Wayside Rail) • NOI-7 (Construct Sound Barriers) • T-3 (Install a Traffic Signal at the J Street/2nd Street Intersection) • T-4 (Install All-Way Stops at the J Street/Rialto Avenue Intersection)		

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
Section 4(f)			
The potential Section 4(f) resources in the vicinity of the proposed Project may include the City-owned San Manuel Stadium and two National Register of Historic Places–eligible significant historic sites (Santa Fe Railroad Depot and the Southern California Gas Company Plant). No adverse effects would occur with mitigation incorporated.	Implementation of the following mitigation measures would reduce adverse construction effects: • BR-1 (Conduct Preconstruction Nest Survey for Migratory Birds) • BR-2 (Establish Buffer Area for Migratory Bird Nests) • BR-3 (Restrict Uses within Project Study Area Boundaries) • CR-2 (Conduct Cultural Resources Monitoring) • CR-4 (Stop Work if Unanticipated Human Remains Are Encountered) • G-1 (Comply with Geotechnical Recommendations) • HM-1 (Comply with Hazards and Hazardous Materials Recommendations) • HM-2 (Plan and Monitor for Hazardous Materials) • HYD-1 (Develop and Implement a Stormwater Pollution Prevention Plan) • NOI-1 (Employ Noise-Reducing Measures during Construction) • NOI-2 (Prepare a Community Awareness Program for Project Construction) • T-1 (Prepare and Implement a Traffic Management Plan) • T-2 (Prepare and Implement a Stadium Parking Plan) Implementation of the following mitigation measures would reduce adverse operational	Topic evaluated for NEPA compliance. No evaluation required under CEQA.	Not adverse

Table ES-1. Summary of Impacts and Avoidance/Mitigation Measures under the Proposed Project

Potential Environmental Impacts	Mitigation Measures	CEQA Impact Level after Mitigation	NEPA Effect Level after Mitigation
	effects: • HYD-2 (Develop and Implement a Water Quality Management Plan) • NOI-3 (Ballast Mats, Resiliently Supported Ties, or Measures of Comparable Effectiveness on Portions of the Rail near Sensitive Receivers) • NOI-4 (Establish Quiet Zones) • NOI-5 (Provide Building Noise Insulation to Severe- and Moderate-Impact Residences Where Sound Barriers Are Infeasible) • NOI-6 (Lubricate Wayside Rail) • NOI-7 (Construct Sound Barriers) • T-3 (Install a Traffic Signal at the J Street/2nd Street Intersection) • T-4 (Install All-Way Stops at the J Street/Rialto Avenue Intersection)		

Table ES-2. NEPA Summary of Impacts Requiring Avoidance/Mitigation Measures

Potential Environmental Impacts Under NEPA	Mitigation Measures	NEPA Impact Level after Mitigation	Section and Page Location
Transportation			
Increase traffic in relation to existing traffic and exceed a level of service standard. Construction of the bus facility would likely result in temporary detours along E Street and Rialto Avenue. Additionally, the Project would result in temporary and permanent use of the existing parking lot areas located east and south of the San Manuel Stadium. Two unsatisfactory intersections would result—Intersection 5 (J Street and 2nd Street), which would operate at LOS F in the PM peak hour, and Intersection 6 (J Street and Rialto Avenue), which would operate at LOS F in the AM peak hour. This constitutes a significant adverse effect because it would conflict with an applicable policy establishing the threshold effectiveness for intersection performance within the circulation system. The proposed Project would improve rail and bus transit facilities and nonmotorized (pedestrian) travel, and mitigation would reduce impacts at noted locations. Also, the Project would have a beneficial effect and would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the non-vehicular circulation system.	Implementation of the following mitigation measures would reduce adverse construction effects: • T-1 (Prepare and Implement a Traffic Management Plan) • T-2 (Prepare and Implement a Stadium Parking Plan) Implementation of the following mitigation measures would reduce adverse operational effects: • T-3 (Install a Traffic Signal at the J Street/2nd Street Intersection) • T-4 (Install All-Way Stops at the J Street/Rialto Avenue Intersection) Mitigation and avoidance measures are provided in Section 4.2.3.4 on page 4-26.	Not adverse	Section 4.2.3 begins on page 4-19. Refer to Section 4.2.3.3 on page 4-20 for a discussion of environmental consequences and Section 4.2.3.4 on page 4-26 for any mitigation.
Inadequate emergency access. The proposed Project would result in temporary changes to local traffic patterns during construction and may cause temporary traffic delays for emergency service vehicles. This impact, however, would be minimized	Mitigation Measures T-1 (Prepare and Implement a Traffic Management Plan) addresses construction impacts, as provided in Section 4.2.3.4 on page 4-26.	Not adverse	Refer to Section 4.2.3.3 on page 4-25 for a discussion of environmental consequences and Section 4.2.3.4 on

Table ES-2. NEPA Summary of Impacts Requiring Avoidance/Mitigation Measures

Potential Environmental Impacts Under NEPA	Mitigation Measures	NEPA Impact Level after Mitigation	Section and Page Location
through implementation of standard construction practices and a Traffic Management Plan as well as preconstruction coordination with emergency service responders. Construction activities would occur in accordance with all applicable state and local requirements and permits. As such, the proposed Project is not anticipated to result in adverse effects with mitigation related to inadequate emergency access.			page 4-26 for any mitigation.
Inadequate parking capacity. The Project would increase the amount of parking capacity at both the Depot and south of the E Street rail platforms and bus facility sites. Any temporary or permanent impact, including at the San Manuel Stadium, would be mitigated and the proposed Project would not result in inadequate parking capacity.	Mitigation Measures T-1 (Prepare and Implement a Traffic Management Plan) and T-2 (Prepare and Implement a Stadium Parking Plan) address parking and construction impacts, as provided in Section 4.2.3.4 on page 4-26.	Not adverse	Refer to Section 4.2.3.3 on page 4-25 for a discussion of environmental consequences and Section 4.2.3.4 on page 4-26 for any mitigation.
Cultural Resources			
Effects on unknown human remains. Ground disturbance associated with construction of the proposed Project, including the Omnitrans bus facility and parking lot sites, has the potential to damage or destroy buried human remains that were not identified using standard archaeological inventory methods. Inadvertent damage to or destruction of human remains would result in a substantial adverse effect. Therefore, mitigation measures would be required to reduce any potential adverse effect associated with the proposed Project during construction. No adverse operational effects would are anticipated.	Implementation of the following mitigation measures would reduce adverse construction effects, as provided in Section 4.2.5.4 on page 4-51: • CR-2 (Conduct Cultural Resources Monitoring) • CR-4 (Stop Work if Unanticipated Human Remains Are Encountered)	Not adverse	Refer to Section 4.2.5.3 on page 4-50 for a discussion of environmental consequences and Section 4.2.5.4 on page 4-51 for any mitigation.

Table ES-2. NEPA Summary of Impacts Requiring Avoidance/Mitigation Measures

Potential Environmental Impacts Under NEPA	Mitigation Measures	NEPA Impact Level after Mitigation	Section and Page Location
Safety and Security			
Safety conditions; right-of-way; risk of accidents, collisions, or major structural failures. With implementation of proper design and installation of appropriate safety upgrades and mitigation measures, potentially adverse effects would be further reduced. The proposed Project would incorporate all necessary crime prevention measures, including City, Metrolink, and Omnitrans crime prevention policies, to deter criminal acts and protect passengers, employees, and the community. The proposed Project would also incorporate fire prevention measures to protect the Project Study Area from incidents of fire. No adverse effects would occur.	Implementation of the following mitigation measures would reduce adverse effects, as provided in Section 4.2.8.4 on pages 4-88: • SAFE-1 (Verify the Installation of Rail Safety Measures) • SAFE-2 (Develop Rail Facility Safety and Security Plans) • SAFE-3 (Develop a Bus System Safety Program Plan)	Not adverse	Section 4.2.8 begins on page 4-80. Refer to Section 4.2.8.3 on page 4-85 for a discussion of environmental consequences and Section 4.2.8.4 on page 4-88 for any mitigation.
Physical Environment			
Floodplain and Hydrology			
Hydrology and drainage. Construction activities would result in the removal of sparse vegetation and reduce natural soil resistance to rainfall impact erosion. Temporary construction-related impacts may occur, and implementation of mitigation measures would reduce adverse effects. After construction is completed, the Project Study Area would have a slightly larger area with impervious surfaces. This could concentrate and redirect stormwater runoff. This increase in runoff could alter or contribute to downstream hydrology and increase the potential for localized adverse effects. Although the proposed Project would include drainage	Implementation of the following mitigation measures would reduce adverse construction effects, as provided in Section 4.3.1.4 on page 4-93: • HYD-1 (Develop and Implement a Stormwater Pollution Prevention Plan) • HYD-2 (Develop and Implement a Water Quality Management Plan)	Not adverse	Section 4.3.1 begins on page 4-90. Refer to Section 4.3.1.3 on page 4-91 for a discussion of environmental consequences and Section 4.3.1.4 on page 4-93 for any mitigation.

Table ES-2. NEPA Summary of Impacts Requiring Avoidance/Mitigation Measures

Potential Environmental Impacts Under NEPA	Mitigation Measures	NEPA Impact Level after Mitigation	Section and Page Location
improvements and BMPs to offset effects related to additional impervious surfaces and subsequent increases in flow rates, additional engineering design and planning would also be included to ensure that post-construction runoff would be maintained at pre-construction levels. Implementation of mitigation measures would also reduce the potential for adverse effects.			
Water Quality			
Water quality. Effects associated with constructing the proposed Project would be limited to the Project Study Area and temporary staging areas. During construction, the total disturbed area would be approximately 85 acres. The Project would be subject to the requirements of the Construction General Permit, which would require the preparation of a SWPPP and implementation of construction BMPs during construction activities to minimize effects on surface waters. Overall, temporary construction-related impacts on water quality would not be adverse. An increase in impervious area would result in a corresponding increase in the volume of runoff generated during storm events and would be capable of transporting pollutants of concern, including sediments, heavy metals, oil and grease, trash and debris, pesticides, and organic compounds, to local receiving waters. Proposed site design BMPs include minimizing impervious surface areas by constructing rail track sections using ballast, which is permeable and conducive to infiltration. Drainage improvements that are part of the	Implementation of the following mitigation measures would reduce adverse construction effects, as provided in Section 4.3.2.4 on page 4-100: • HYD-1 (Develop and Implement a Stormwater Pollution Prevention Plan) • HYD-2 (Develop and Implement a Water Quality Management Plan)	Not adverse	Section 4.3.2 begins on page 4-95. Refer to Section 4.3.2.3 on page 4-95 for a discussion of environmental consequences and Section 4.3.2.4 on page 4-100 for any mitigation.

Table ES-2. NEPA Summary of Impacts Requiring Avoidance/Mitigation Measures

Potential Environmental Impacts Under NEPA	Mitigation Measures	NEPA Impact Level after Mitigation	Section and Page Location
project design would improve the conveyance of stormwater runoff as well as the quality of runoff leaving the site. Additionally, implementation of mitigation measures would reduce adverse effects during operations.			
Geology, Soils, and Seismicity			
Seismicity. The potential exists for the site to experience strong ground shaking from nearby faults during an earthquake. Implementation of the proposed Project would require various site grading and construction activities. In general, the geologic and seismic hazards identified for the Project Study Area would be mitigated by employing required standard engineering practices. Furthermore, the proposed Project would integrate the geotechnical recommendations prescribed in the geotechnical investigation report and mitigation, which would further reduce potential effects on constructed facilities. Local hazards related to fault rupture and seismically generated ground shaking would be unlikely to affect the Project adversely.	Implementation of Mitigation Measure G-1 (Comply with Geotechnical Recommendations) would reduce adverse effects, as provided in Section 4.3.3.4 on page 4-107.	Not adverse	Section 4.3.3 begins on page 4-101. Refer to Section 4.3.3.3 on page 4-101 for a discussion of environmental consequences and Section 4.3.3.4 on page 4-107 for any mitigation.
Soil erosion. Construction of the proposed Project would require grading and excavation activities, which would expose soils within the Project Study Area to wind and water erosion. Although implementation of industry-standard stormwater pollution-control BMPs would minimize potential soil erosion and other water quality impacts during construction, localized erosion could still occur and would require appropriate mitigation. A minimal amount of exposed surfaces, which could be subjected to	Implementation of the following mitigation measures would reduce adverse effects, as provided in Section 4.3.3.4 on page 4-107: • G-1 (Comply with Geotechnical Recommendations) • HYD-1 (Develop and Implement a Stormwater Pollution Prevention Plan) • HYD-2 (Develop and Implement a Water Quality Management Plan)	Not adverse	Refer to Section 4.3.3.3 on page 4-103 for a discussion of environmental consequences and Section 4.3.3.4 on page 4-107 for any mitigation.

Table ES-2. NEPA Summary of Impacts Requiring Avoidance/Mitigation Measures

Potential Environmental Impacts Under NEPA	Mitigation Measures	NEPA Impact Level after Mitigation	Section and Page Location
accelerated soil erosion during operations, would be present. Therefore, substantial soil erosion is not anticipated to occur during operation of the proposed Project, and no adverse effects are anticipated to occur.			
Landslides, liquefaction, collapse, or expansive soils. The Project Study Area has a low potential for liquefaction hazards because groundwater levels are 70 feet or more below grade and the local geologic substrate is composed predominantly of medium-dense to dense silty sand interbedded with stiff to very stiff silt. The Project Study Area is generally level and, therefore, not prone to landslide hazards. It is located within an alluvial depositional landscape characterized by unconsolidated sediments at depth. These unconsolidated materials are susceptible to both total and differential settlement with the placement of additional loads. Hazards related to settlement would be mitigated through the integration of several geotechnical recommendations into the project design. Soils within the Project Study Area are not known to have expansive qualities. Near the surface, subgrade soils at the site consist predominantly of silty sand with very low expansion potential. Therefore, effects related to expansive soils would not be adverse under construction or operation of the Project.	Implementation of Mitigation Measure G-1 (Comply with Geotechnical Recommendations) would reduce adverse effects, as provided in Section 4.3.3.4 on page 4-107.	Not adverse	Refer to Section 4.3.3.3 on page 4-105 for a discussion of environmental consequences and Section 4.3.3.4 on page 4-107 for any mitigation.

Table ES-2. NEPA Summary of Impacts Requiring Avoidance/Mitigation Measures

Potential Environmental Impacts Under NEPA	Mitigation Measures	NEPA Impact Level after Mitigation	Section and Page Location
Hazardous Waste and Materials			
Disposal of hazardous materials. During construction, hazardous materials handling could involve removal or export of small amounts of contaminated soils from off site. All applicable regulations regarding discovery and response for hazardous materials would be followed during construction. Construction activities would also be short-term or one-time events; would be subject to federal health and safety requirements; and would not adversely affect on-site construction workers or the public. Several REC or historical REC sites were identified within or surrounding the Project Study Area. Ground disturbance during construction activities proposed near these sites could result in impacts related to hazardous wastes and mitigation would be required to reduce potentially adverse effects that could occur during construction. Because only small amounts of hazardous materials are anticipated to be used during operations and maintenance, no adverse effects would occur with implementation of the Project. Additionally, hazardous materials would be stored, used, and disposed of in accordance with existing federal hazardous materials regulations and would not adversely affect on-site construction workers or the public. No significant long-term adverse effects are anticipated to occur.	Implementation of the following mitigation measures would reduce adverse construction effects, as provided in Section 4.3.4.4 on page 4-113: • HM-1 (Comply with Hazards and Hazardous Materials Recommendations) • HM-2 (Plan and Monitor for Hazardous Materials)	Not adverse	Section 4.3.4 begins on page 4-108. Refer to Section 4.3.4.3 on page 4-109 for a discussion of environmental consequences and Section 4.3.4.4 on page 4-113 for any mitigation.

Table ES-2. NEPA Summary of Impacts Requiring Avoidance/Mitigation Measures

Potential Environmental Impacts Under NEPA	Mitigation Measures	NEPA Impact Level after Mitigation	Section and Page Location
Hazardous materials sites. Twenty-eight sites of concern have been recorded within and adjacent to the Project Study Area. No sites of concern were identified from the site reconnaissance and records review of the Short Way rail line located west of the Project Study Area. To characterize known or suspected contamination sites identified in the Phase I assessment more fully, further investigation at 14 sites is recommended, and mitigation measures are included to reduce adverse effects during construction. Operation of the proposed Project is not anticipated to result in substantially adverse effects related to recorded sites of concern. No adverse effects are anticipated to occur.	Implementation of the following mitigation measures would reduce adverse effects, as provided in Section 4.3.4.4 on page 4-113: • HM-1 (Comply with Hazards and Hazardous Materials Recommendations) • HM-2 (Plan and Monitor for Hazardous Materials)	Not adverse	Refer to Section 4.3.4.3 on page 4-112 for a discussion of environmental consequences and Section 4.3.4.4 on page 4-113 for any mitigation.
Noise and Vibration			
Increased noise levels during construction and operation. Construction of the proposed Project would result in temporary but relatively high levels of noise along the rail corridor. During the noisiest periods of construction, noise impacts are predicted to occur at Category 2 (i.e., residential) land uses along the project rail corridor at distances of up to approximately 240 feet under daytime impact criteria and approximately 410 feet under nighttime impact criteria. Although it is anticipated that most construction work would take place during daytime hours, some work may occur during nighttime hours. The construction noise effect is considered adverse and implementation of mitigation measures would minimize this adverse effect.	Implementation of the following mitigation measures would reduce adverse construction and operational effects, as provided in Section 4.3.6.4 on page 4-131: • NOI-1 (Employ Noise-Reducing Measures during Construction) • NOI-2 (Prepare a Community Awareness Program for Project Construction) • NOI-3 (Ballast Mats, Resiliently Supported Ties, or Measures of Comparable Effectiveness on Portions of the Rail near Sensitive Receivers) • NOI-4 (Establish Quiet Zones) • NOI-5 (Provide Building Noise Insulation to Severe- and Moderate-Impact Residences Where Sound Barriers Are Infeasible)	Not adverse	Section 4.3.6 begins on page 4-124. Refer to Section 4.3.6.3 on page 4-127 for a discussion of environmental consequences and Section 4.3.6.4 on page 4-131 for any mitigation.

Table ES-2. NEPA Summary of Impacts Requiring Avoidance/Mitigation Measures

Potential Environmental Impacts Under NEPA	Mitigation Measures	NEPA Impact Level after Mitigation	Section and Page Location
Increased rail noise would result in moderate and severe impacts at residential land uses along the rail corridor. Moderate impacts from project-related rail noise are predicted to occur at residential land uses near the rail corridor located east of the Depot and west of I-215 (represented by Receivers 6, 7, 14, 16, 24, 26, 27, 31, 32) and within the area near the rail corridor located west of the Depot and north of the IEMF (Receiver 37). Significant impacts from project-related rail noise are predicted to occur at residential land uses within the area near the rail corridor located east of the Depot and west of I-215 (represented by Receivers 11, 15, 17, 18, 19, 22, 25, 28, 29) and within the area near the project alignment located west of the Depot and north of the IEMF (Receivers 35 and 36). The impact would be considered moderate at a total of 10 receivers, representing 28 residential land uses, and significant at a total of 11 receivers, representing 30 residential land uses. Other forms of noise including traffic and bus facility noise would not result in adverse effects.	• NOI-6 (Lubricate Wayside Rail) • NOI-7 (Construct Sound Barriers)		

Table ES-2. NEPA Summary of Impacts Requiring Avoidance/Mitigation Measures

Potential Environmental Impacts Under NEPA	Mitigation Measures	NEPA Impact Level after Mitigation	Section and Page Location
Increased vibration levels during construction and operation. Construction of the proposed Project would result in temporary vibration along the rail corridor from use of heavy equipment and machinery. FTA construction vibration damage thresholds would not be exceeded at any of the representative receiver locations, indicating that the potential for damage to any of the structures along the rail corridor is low. The construction vibration (annoyance) impact would be reduced with mitigation. Operation of the proposed Project would result in groundborne vibration along the rail corridor. Impacts are predicted to occur at residential land uses within the area near the rail corridor located east of the Depot and west of I-215 (Receivers 11 and 15) and within the area near the rail corridor located west of the Depot and north of the Receiver Site 35. The groundborne vibration impact would be potentially adverse and would be reduced with mitigation.	Implementation of the following mitigation measures would reduce adverse operational effects, as provided in Section 4.3.6.4 on page 4-131: • NOI-2: (Prepare a Community Awareness Program for Project Construction) • NOI-3 (Ballast Mats, Resiliently Supported Ties, or Measures of Comparable Effectiveness on Portions of the Rail near Sensitive Receivers)	Not adverse	Refer to Section 4.3.6.3 on page 4-129 for a discussion of environmental consequences and Section 4.3.6.4 on page 4-131 for any mitigation.
Biological Environment—Threatened and Endangered Species			
Sensitive or special-status species. Land within and adjacent to the survey area is largely developed and/or disturbed and would not support sensitive botanical species. Implementation of the Project would not result in and adverse effect on sensitive botanical species. The survey area does not contain suitable habitat for burrowing owl, and no adverse effect would occur. Suitable nesting, roosting, and/or foraging habitat for avian species protected under the MBTA was	Implementation of the following mitigation measures would reduce adverse construction effects should construction occur during the avian nesting season, as provided in Section 4.4.3.4 on page 4-150: • BR-1 (Conduct Preconstruction Nest Survey for Migratory Birds) • BR-2 (Establish Buffer Area for Migratory Bird Nests) • BR-3 (Restrict Uses within Project Study	Not adverse	Section 4.4.3 begins on page 4-146. Refer to Section 4.4.3.3 on page 4-148 for a discussion of environmental consequences and Section 4.4.3.4 on page 4-150 for any mitigation.

Table ES-2. NEPA Summary of Impacts Requiring Avoidance/Mitigation Measures

Potential Environmental Impacts Under NEPA	Mitigation Measures	NEPA Impact Level after Mitigation	Section and Page Location
observed in the survey area. Should construction occur during the avian nesting season, implementation of Mitigation Measures BR-1 through BR-3 would be required to reduce adverse effects on migratory birds.	Area Boundaries)		
Environmental Justice			
Disproportionate effects on low-income and/or minority residents. The proposed Project would not be appreciably more severe or greater in magnitude on minority or low-income populations compared to the effects on nonminority or non-low-income populations as the area within the rail corridor presents a mix of minority (persons of Hispanic origins) and low-income populations that would be similar to that of the City as a whole. Therefore, these populations occur throughout the City and cannot be reasonably avoided. Furthermore, all mitigation measures described previously are expected to be equally effective for all groups, and no adverse effects are anticipated. The proposed Project would provide improved pedestrian safety and egress improvements within the rail corridor, improve mobility opportunities for transit-dependent populations, provide additional transit opportunities, and reduce greenhouse gas emissions, which would result in a beneficial effect.	Implementation of the following mitigation measures would reduce adverse construction effects: • BR-1 (Conduct Preconstruction Nest Survey for Migratory Birds) • BR-2 (Establish Buffer Area for Migratory Bird Nests) • BR-3 (Restrict Uses within Project Study Area Boundaries) • CR-2 (Conduct Cultural Resources Monitoring) • CR-4 (Stop Work if Unanticipated Human Remains Are Encountered) • G-1 (Comply with Geotechnical Recommendations) • HM-1 (Comply with Hazards and Hazardous Materials Recommendations) • HM-2 (Plan and Monitor for Hazardous Materials) • HYD-1 (Develop and Implement a Stormwater Pollution Prevention Plan) • NOI-1 (Employ Noise-Reducing Measures during Construction) • NOI-2 (Prepare a Community Awareness Program for Project Construction) • T-1 (Prepare and Implement a Traffic Management Plan)	Not adverse	Section 4.5 begins on page 4-151. Refer to Section 4.5.3 on page 4-156 for a discussion of environmental consequences and Section 4.5.4 on page 4-162 for any mitigation.

Table ES-2. NEPA Summary of Impacts Requiring Avoidance/Mitigation Measures

Potential Environmental Impacts Under NEPA	Mitigation Measures	NEPA Impact Level after Mitigation	Section and Page Location
	• T-2 (Prepare and Implement a Stadium Parking Plan) Implementation of the following mitigation measures would reduce adverse operational effects: • HYD-2 (Develop and Implement a Water Quality Management Plan) • NOI-3 (Ballast Mats, Resiliently Supported Ties, or Measures of Comparable Effectiveness on Portions of the Rail near Sensitive Receivers) • NOI-4 (Establish Quiet Zones) • NOI-5 (Provide Building Noise Insulation to Severe- and Moderate-Impact Residences Where Sound Barriers Are Infeasible) • NOI-6 (Lubricate Wayside Rail) • NOI-7 (Construct Sound Barriers) • T-3 (Install a Traffic Signal at the J Street/2nd Street Intersection) • T-4 (Install All-Way Stops at the J Street/Rialto Avenue Intersection)		
Section 4(f)			
The potential Section 4(f) resources in the vicinity of the proposed Project may include the City-owned San Manuel Stadium and two National Register of Historic Places–eligible significant historic sites (Santa Fe Railroad Depot and the Southern California Gas Company Plant). No adverse effects would occur with mitigation incorporated.	Implementation of the following mitigation measures would reduce adverse construction effects: • BR-1 (Conduct Preconstruction Nest Survey for Migratory Birds) • BR-2 (Establish Buffer Area for Migratory Bird Nests) • BR-3 (Restrict Uses within Project Study Area Boundaries) • CR-2 (Conduct Cultural Resources Monitoring)	Not adverse	Section 4.6 begins on page 4-164. Refer to Section 4.6.5 on page 4-175 for a discussion of Section 4(f) impacts and mitigation.

Table ES-2. NEPA Summary of Impacts Requiring Avoidance/Mitigation Measures

Potential Environmental Impacts Under NEPA	Mitigation Measures	NEPA Impact Level after Mitigation	Section and Page Location
	• CR-4 (Stop Work if Unanticipated Human Remains Are Encountered) • G-1 (Comply with Geotechnical Recommendations) • HM-1 (Comply with Hazards and Hazardous Materials Recommendations) • HM-2 (Plan and Monitor for Hazardous Materials) • HYD-1 (Develop and Implement a Stormwater Pollution Prevention Plan) • NOI-1 (Employ Noise-Reducing Measures during Construction) • NOI-2 (Prepare a Community Awareness Program for Project Construction) • T-1 (Prepare and Implement a Traffic Management Plan) • T-2 (Prepare and Implement a Stadium Parking Plan) Implementation of the following mitigation measures would reduce adverse operational effects: • HYD-2 (Develop and Implement a Water Quality Management Plan) • NOI-3 (Ballast Mats, Resiliently Supported Ties, or Measures of Comparable Effectiveness on Portions of the Rail near Sensitive Receivers) • NOI-4 (Establish Quiet Zones) • NOI-5 (Provide Building Noise Insulation to Severe- and Moderate-Impact Residences Where Sound Barriers Are Infeasible) • NOI-6 (Lubricate Wayside Rail) • NOI-7 (Construct Sound Barriers)		

Table ES-2. NEPA Summary of Impacts Requiring Avoidance/Mitigation Measures

Potential Environmental Impacts Under NEPA	Mitigation Measures	NEPA Impact Level after Mitigation	Section and Page Location
	• T-3 (Install a Traffic Signal at the J Street/2nd Street Intersection) • T-4 (Install All-Way Stops at the J Street/Rialto Avenue Intersection)		

Table ES-3. Comparison of Proposed Project, Design Options, and No-Build/No-Project Alternative

Environmental Topic	Alternatives				No-Build/No-Project Alternative
	Proposed Project	Pedestrian Overpass Design Options 1A and 1B	Pedestrian Underpass Design Option 2	3rd Street Open Design Option 3	
Aesthetics and Visual Quality	Less-than-significant impact/not adverse.	Less-than-significant impact/not adverse. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse. Fewer impacts than the proposed Project because of the reduced 3rd Street Open Design Option 3 Study Area.	Less-than-significant impact/not adverse
Air Quality and Global Climate Change	Less-than-significant impact/not adverse.	Less-than-significant impact/not adverse. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse. Fewer impacts than the proposed Project because of the reduced 3rd Street Open Design Option 3 Study Area.	Less-than-significant impact/not adverse
Biological Resources	Less-than-significant impact/not adverse with Mitigation Measures BR-1 through BR-3.	Less-than-significant impact/not adverse with mitigation. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse with mitigation. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse with mitigation; however, fewer impacts than the proposed Project because of the reduced 3rd Street Open Design Option 3 Study Area.	No impact

Table ES-3. Comparison of Proposed Project, Design Options, and No-Build/No-Project Alternative

Environmental Topic	Alternatives				No-Build/No-Project Alternative
	Proposed Project	Pedestrian Overpass Design Options 1A and 1B	Pedestrian Underpass Design Option 2	3rd Street Open Design Option 3	
Cultural Resources	Significant impact on historic resources with Mitigation Measures CR-1 through CR-4 for CEQA. Not adverse for archaeological or paleontology resources with Mitigation Measures CR-2 and CR-4 for NEPA.	Potentially significant impact with mitigation. Impacts similar to those for the proposed Project. Not adverse with mitigation measures for NEPA.	Potentially significant impact with mitigation. Impacts similar to those for the proposed Project. Not adverse with mitigation measures for NEPA.	Potentially significant impact with mitigation; however, fewer impacts than the proposed Project due to fewer CEQA eligible historic resources affected within a reduced APE. Not adverse with mitigation measures for NEPA.	No impact
Geology, Soils, and Seismicity	Less-than-significant impact/not adverse with Mitigation Measures G-1, HYD-1, and HYD-2.	Less-than-significant impact/not adverse with mitigation. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse with mitigation. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse with mitigation; however, fewer impacts than the proposed Project because of the reduced 3rd Street Open Design Option 3 Study Area.	No impact
Hazardous Waste and Materials	Less-than-significant impact/not adverse with Mitigation Measures HM-1 and HM-2.	Less-than-significant impact/not adverse with mitigation. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse with mitigation. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse with mitigation; however, fewer impacts than the proposed Project because of the reduced 3rd Street Open Design Option 3 Study Area.	No impact

Table ES-3. Comparison of Proposed Project, Design Options, and No-Build/No-Project Alternative

Environmental Topic	Alternatives				No-Build/No-Project Alternative
	Proposed Project	Pedestrian Overpass Design Options 1A and 1B	Pedestrian Underpass Design Option 2	3rd Street Open Design Option 3	
Hydrology, Floodplains, and Water Quality	Less-than-significant impact/not adverse with Mitigation Measures HYD-1 and HYD-2.	Less-than-significant impact/not adverse with mitigation. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse with mitigation. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse with mitigation; however, fewer impacts than the proposed Project because of the reduced 3rd Street Open Design Option 3 Study Area.	Less-than-significant impact/not adverse
Land Use and Land Use Planning	Less-than-significant impact/not adverse.	Less-than-significant impact/not adverse. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse. Impacts similar to those for the proposed Project.	No impact
Noise and Vibration	Significant impact with Mitigation Measures NOI-1 through NOI-6 for CEQA. Not adverse with Mitigation Measures NOI-1 through NOI-7 for NEPA.	Potentially significant impact with mitigation. Impacts similar to those for the proposed Project. Not adverse with mitigation measures for NEPA.	Potentially significant impact with mitigation. Impacts similar to those for the proposed Project. Not adverse with mitigation measures for NEPA.	Potentially significant impact with mitigation; however, fewer impacts than the proposed Project because of the reduced 3rd Street Open Design Option 3 Study Area. Not adverse with mitigation measures for NEPA.	Less-than-significant impact/not adverse

Table ES-3. Comparison of Proposed Project, Design Options, and No-Build/No-Project Alternative

Environmental Topic	Alternatives				No-Build/No-Project Alternative
	Proposed Project	**Pedestrian Overpass Design Options 1A and 1B**	**Pedestrian Underpass Design Option 2**	**3rd Street Open Design Option 3**	
Transportation and Traffic	Less-than-significant impact/not adverse with Mitigation Measures T-1 through T-4 (1 intersection for 2014; 2 intersections for 2035).	Less-than-significant impact/not adverse with mitigation. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse with mitigation. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse with mitigation. 1 intersection for 2035: fewer impacts than the proposed Project. Fewer intersections in 2035 requiring Mitigation Measures T-1 and T-4.	Less-than-significant impact/not adverse
Community Impacts	Not adverse.	Less-than-significant impact/not adverse. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse; however, fewer impacts than the proposed Project because of the reduced 3rd Street Open Design Option 3 Study Area.	Less-than-significant impact/not adverse
Land Acquisitions, Displacement, and Relocation	Not adverse with compliance with Uniform Act and California Relocation Act.	Less-than-significant impact/not adverse. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse; however, fewer impacts than the proposed Project because of the reduced 3rd Street Open Design Option 3 Study Area.	No impact
Socioeconomic, Economic, and Fiscal Impacts	Not adverse.	Less-than-significant impact/not adverse. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse. Impacts similar to those for the proposed Project.	No impact

Table ES-3. Comparison of Proposed Project, Design Options, and No-Build/No-Project Alternative

Environmental Topic	Alternatives				No-Build/No-Project Alternative
	Proposed Project	Pedestrian Overpass Design Options 1A and 1B	Pedestrian Underpass Design Option 2	3rd Street Open Design Option 3	
Safety and Security	Not adverse with Mitigation Measures SAFE-1, SAFE-2, SAFE-3.	Less-than-significant impact/not adverse with mitigation. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse with mitigation. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse with mitigation. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse
Energy, Utilities, and Public Services	Less-than-significant impact/not adverse.	Less-than-significant impact/not adverse. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse
Environmental Justice	Not adverse with implementation of all mitigation.	Less-than-significant impact/not adverse. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse; however, fewer impacts than the proposed Project because of the reduced 3rd Street Open Design Option 3 Study Area.	No impact
Section 4(f)	Not adverse with implementation of all mitigation.	Less-than-significant impact/not adverse with mitigation. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse with mitigation. Impacts similar to those for the proposed Project.	Less-than-significant impact/not adverse with mitigation; however, fewer impacts than the proposed Project because of the reduced 3rd Street Open Design Option 3 Study Area.	No impact

1.0 INTRODUCTION

1.1 OVERVIEW

1.1.1 Project Introduction and Location

The San Bernardino Associated Governments (SANBAG) is proposing to extend Metrolink regional passenger rail service approximately 1 mile east from its current terminus at the existing San Bernardino Metrolink Station/Santa Fe Depot (Depot) located at 1170 West 3rd Street to new Metrolink commuter rail platforms proposed near the intersection of Rialto Avenue and E Street in the City of San Bernardino (City), San Bernardino County, California (see Figures 1-1 and 1-2). The primary features of the Downtown San Bernardino Passenger Rail Project (DSBPRP or Project) include: construction of a second track, rail platforms, parking lots, a pedestrian overpass at the Depot, and an Omnitrans Bus Facility (bus facility); grade crossing improvements; railroad signalization; and roadway closures. The proposed Project's secondary features include: construction of drainage improvements, utility accommodation, and implementation of safety controls.

1.1.2 Purpose of the EA/DEIR

This Environmental Assessment (EA)/Draft Environmental Impact Report (DEIR) was prepared to evaluate the significant or potentially significant environmental impacts associated with implementation of the proposed Project and address appropriate and feasible mitigation measures and alternatives to the proposed Project that would reduce or eliminate those impacts. A detailed description of the proposed Project is provided in Section 2.2, "Proposed Action/Proposed Project."

The EIR portion of the document (Chapter 3) has been prepared pursuant to the California Environmental Quality Act (CEQA) Guidelines (California Code of Regulations [CCR], Title 14, Section 15000 et seq.) and CEQA statutes provided in California Public Resources Code (PRC) Section 21000 et seq. In accordance with CEQA, SANBAG is the lead agency for the preparation and certification of the EIR portion of this joint environmental document.

The EA portion of the document (Chapter 4) has been prepared pursuant to the National Environmental Policy Act (NEPA), to determine the effects of the proposed Project on the quality of the human, physical, and biological environment. The EA portion of this joint document is prepared for consideration by the Federal Transit Administration (FTA), which is the lead federal agency for the proposed Project.

It is important to note the differences between CEQA and NEPA in the way significance is determined. CEQA requires the lead agency to identify each significant impact on the environment resulting from a project and present ways to mitigate each significant impact. If the project may have a significant impact on any environmental resource that cannot be mitigated to a less-than-significant level, then an EIR must be prepared. Each and every significant impact on the environment must be disclosed in the EIR and mitigated if feasible. In addition, the CEQA Guidelines list a number of mandatory findings of significance, which also require the preparation of an EIR.

NEPA requires that an Environmental Impact Statement (EIS) be prepared when the proposed federal action (a project) as a whole has the potential to "significantly affect the quality of the human environment." The determination of significance is based on context and intensity (Council on Environmental Quality [CEQ] regulations [40 Code of Federal Regulations (CFR) Sections 1500–1508]). Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. NEPA does not require that a determination of significant impacts be stated in the environmental documents. Also, there are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA.

For the FTA as lead agency, the process for complying with NEPA is defined in the joint Federal Highway Administration/FTA Environmental Impact and Related Procedures (23 CFR 771). Based on this regulation, the FTA determines the level of documentation required in the NEPA process.

The following are examples of actions that normally require an EIS:

1. A new controlled access freeway.
2. A highway project of four or more lanes on a new location.
3. New construction or extension of fixed rail transit facilities (e.g., rapid rail, light rail, commuter rail, automated guideway transit).
4. New construction or extension of a separate roadway for buses or high occupancy vehicles not located within an existing highway facility.

Of these actions, only #3 applies to the proposed Project; however, the potential environmental effects associated with the Project are not of sufficient magnitude to be determined significant under NEPA with mitigation incorporated. An EA is required for all actions in which the significance of the environmental impact is not clearly established. An EA can result in either a Finding of No Significant Impact (FONSI), requiring no further environmental evaluation, or identification of potentially significant impacts requiring an EIS. After careful review and assessment of impacts of the proposed Project on the quality of the human, physical, and biological environment, the Project would not result in adverse effects with mitigation, as described in detail in Chapter 4. As such, this EA was prepared for the Project and will provide the basis for a FONSI.

All projects in the State of California are required to undergo environmental review in accordance with CEQA to determine if implementation of the proposed project would result in any environmental impacts. Accordingly, a project is defined as requiring environmental review pursuant to CEQA if, upon implementation, the project has the potential to result in either a direct physical change to the environment or a reasonably foreseeable indirect physical change to the environment. More specifically, a project requires environmental review if it incorporates an action undertaken by a public agency; is an activity that is supported in whole or in part through public agency contracts, grants, subsidies, etc.; or is an activity requiring a public agency to issue a lease, permit, license, certificate, or other entitlement.

CEQA was enacted in 1970 by the California legislature to disclose to decision makers and the public significant environmental effects of proposed activities and methods to avoid or reduce those effects by requiring implementation of feasible alternatives or mitigation measures. CEQA applies to California government agencies at all levels, including local government agencies that must issue permits or provide discretionary approvals for projects proposed with the potential to affect the environment. Therefore, the public agency is required to conduct an environmental review of the project and consider its environmental effects before making a decision on the project.

In accordance with Section 15121(a) of the CEQA Guidelines (California Administrative Code, Title 14, Division 6, Chapter 3), the purpose of an EIR is as follows:

> *An EIR is an informational document which will inform public agency decision makers and the public generally of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.*

This EIR evaluates the direct, indirect, and cumulative impacts of the proposed Project and alternatives in accordance with the provisions set forth in CEQA and the CEQA Guidelines. It will be used to address potentially significant environmental issues and recommend adequate and feasible mitigation measures, where possible, that could reduce or eliminate potentially significant environmental impacts.

1.1.3 Focus of the EA/DEIR

SANBAG has initiated the DSBPRP within the 10-mile Redlands rail corridor between the Depot and the E Street rail platforms in the City. Using federal Congestion Management and Air Quality Improvement Program (CMAQ), 5307, and 5309 funds and local County of San Bernardino funding sources, SANBAG proposes to extend Metrolink service from the existing Depot located at 1170 West 3rd Street to new rail platforms near the southwest corner of Rialto Avenue and E Street. The Project also proposes to provide a centralized bus facility for existing fixed-route and planned rapid bus transit service.

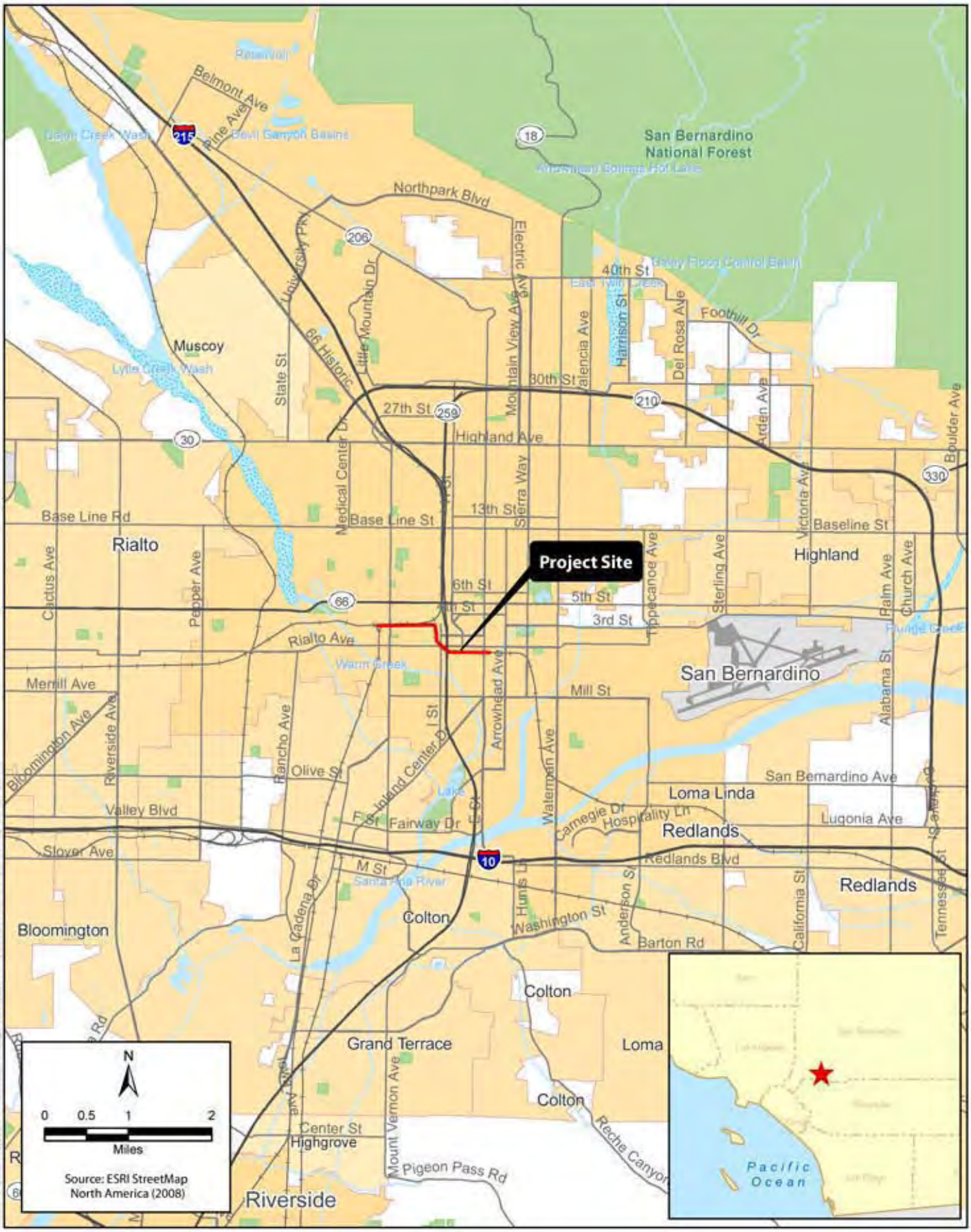


Figure 1-1
Regional Location
Downtown San Bernardino Passenger Rail Project

Figure 1-2
Project Location
Downtown San Bernardino Passenger Rail Project

The analysis contained in this EA/DEIR reflects the level of detail necessary for SANBAG and the FTA to evaluate the merits of the proposed Project and build alternatives. Additionally, consistent with Section 15180 of the CEQA Guidelines, this is a "project" EIR for the construction and operation of the proposed Project. This EA/DEIR focuses on the effects that may be expected with the approval and subsequent implementation of the proposed Project, resulting in the following potential impacts:

- Aesthetics and visual quality
- Air quality and global climate change
- Biological resources
- Cultural resources
- Geology, soils, and seismicity
- Hazards and hazardous materials
- Hydrology and water quality
- Land use and planning
- Noise and vibration
- Traffic and circulation
- Environmental justice
- Community impacts
- Land acquisitions, displacements, and relocations
- Socioeconomics and fiscal impacts
- Safety and security
- Energy

1.1.4 Organization of the EA/DEIR

- Executive Summary. The Executive Summary provides an overview and introduction of the detailed information contained in subsequent chapters. This chapter includes a table that summarizes the potential environmental impacts in each resource area and the significance determination, mitigation measures, and level of significance after mitigation for those impacts.
- Chapter 1, "Introduction," provides an overview of the proposed Project; describes the project location and the purpose, need, and objectives for the Project; and includes an overview of the environmental review process and the agencies involved. In addition, a description of the intended uses of the EA/DEIR is included in this chapter.
- Chapter 2, "Alternatives," provides a detailed description of the proposed Project, including the proposed construction scenario and schedule. It also describes the design options to the proposed Project, and the No-Build/No-Project Alternative.
- Chapter 3, "CEQA Environmental Impact Report Evaluation," provides the CEQA evaluation of the proposed Project. This includes the determination of significance under CEQA; the discussion of environmental setting for each resource area; a discussion of significant environmental impacts on aesthetics, air quality and greenhouse gases, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, and traffic and circulation; and the required mitigation measures for significant impacts under CEQA.
- Chapter 4, "NEPA Environmental Assessment Evaluation," provides the NEPA evaluation of the proposed Project and describes the potential environmental effects on the human, physical, and biological environments. A discussion of the affected environment for each resource area, the environmental effects resulting from the Project, and the required mitigation measures is provided for each resource area.

- Chapter 5, “List of Preparers,” provides a list of preparers, including public agencies and consultants.
- Chapter 6, “Agency and Community Participation,” provides agency and community participation information, including community public outreach efforts, EA/DEIR participants, and comments and coordination information.
- Chapter 7, “References,” provides sources, references, and a list of persons consulted in the preparation of this document.

1.1.5 Intended Uses of the EA/DEIR

This EA/DEIR is being circulated to the public and agencies for review and comment. The document is meant to inform agencies and the public of potential significant environmental effects associated with the proposed Project, describe and evaluate reasonable alternatives, and propose mitigation measures that would avoid or reduce the proposed Project’s significant effects.

The information used in this EA/DEIR will be used to apply for Project approvals that may be required by SANBAG, FTA, and other participating agencies. Accordingly, this EA/DEIR will be used by SANBAG, as the lead agency under CEQA, and by FTA, as the lead agency under NEPA, when making decisions regarding approval of the Project and its implementation. The information in this EA/DEIR may also be used by other agencies, such as the City and Omnitrans when deciding whether to grant the permits or approvals necessary to construct or operate portions of the Project.

1.2 PROJECT HISTORY AND BACKGROUND

In 1992, SANBAG purchased a freight rail corridor that extends from San Bernardino to Redlands from the Atchison Topeka & Santa Fe Railroad (AT&SF), predecessor to the Burlington Northern Santa Fe Railway (BNSF), also referred to as the Redlands rail corridor. BNSF continues to operate freight service on the line and retains a perpetual easement for freight service. SANBAG’s intent to purchase the corridor was to use all or a portion of the rail line for the implementation of passenger rail service to Redlands and beyond.

In 2001, the Southern California Association of Governments (SCAG) initiated a visioning process, known as the Compass Blueprint Program, resulting in a regional strategy to accommodate projected growth in southern California. The program seeks to accommodate growth through the development of demonstration projects that capitalize on the collaboration of regional planning agencies, local communities, and jurisdictions. As part of this visioning program, SANBAG completed the *Redlands Rail Feasibility Study* and the *Redlands Passenger Rail Station Area Plans*. These studies explored the feasibility of establishing passenger rail service between the City of San Bernardino and the City of Redlands, while identifying transportation alternatives, potential station locations, and multi-modal transit development opportunities. The City of San Bernardino also held meetings in 2006 and 2007 in front of the Joint Mayor and Common Council and the Planning Commission to support the Redlands Passenger Rail Station Area Plan and transit improvements along the rail corridor (refer to Chapter 6, “Agency and Community Participation,” for a discussion of agency and community meetings).

In 2001, the initial track and grade crossing infrastructure for the future DSBPRP was constructed. At that time, the corridor was envisioned to be served by diesel multiple units running on a single track with passing sidings. In addition, the initial project upgraded five at-grade crossings with new automatic warning devices, crossing surfaces, and raised medians. Since 2001, the vision for the DSBPRP has been modified to its current concept as described in Section 2.3, “Proposed Action/Proposed Project.” A number of studies and reports have been conducted to date that identify a locally preferred alternative consisting of extending Metrolink passenger rail service approximately 1 mile east to downtown San Bernardino.

As part of the CEQA Notice of Preparation (NOP) process, SANBAG received a comment from the FTA that requested SANBAG incorporate the Omnitrans Bus Facility into the DSBPRP EA/DEIR. (The NOP, NOP distribution list, public review comments, and scoping meeting summary are included in

Appendix A.) The DSBPRP and the bus facility are not connected actions (40 CFR 1508.25[a][1]) and have independent utility (23 CFR Part 771, Section 771.111[f]) from one another. However, based on the close proximity of the two projects and an opportunity to consolidate the analysis of the two separate projects in one EA/DEIR, SANBAG has incorporated the analysis of the Omnitrans Bus Facility into this EA/DEIR.

1.3 STATEMENT OF PURPOSE AND NEED

1.3.1 Purpose of the Proposed Project

The former San Bernardino Economic Development Agency (EDA), now referred to as just the City of San Bernardino (City), which is the successor agency to the EDA, developed the San Bernardino Downtown Core Vision/Action Plan to promote strategies for the revitalization and redevelopment of downtown San Bernardino. A component of the San Bernardino Downtown Core Vision/Action Plan is development of a centralized transit district providing new commuter rail service and intermodal opportunities to the downtown area. The proposed Project includes the extension of Metrolink regional passenger rail service approximately 1 mile east from its current terminus at the existing Depot to near the intersection of Rialto Avenue and E Street in the downtown area. The proposed Project meets this objective of the City's plan by extending Metrolink service to downtown San Bernardino and providing a centralized bus facility for existing fixed-route and planned rapid bus transit service.

Proposed rail platforms would be located west of the E Street and Rialto Avenue intersection and would be designed to be compatible with the proposed centralized bus facility to be located north of the platforms. The proposed Metrolink extension is also intended to help bolster economic development opportunities in San Bernardino's Central Business District (CBD). It is envisioned that transit-oriented development opportunities in downtown San Bernardino and the region would be maximized through a logical and convenient passenger rail connection between the Depot and downtown San Bernardino and the addition of other transit opportunities (i.e., Omnitrans) and connections.

The proposed Project supports California Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006, which requires the Air Resources Board (ARB) to monitor and reduce greenhouse gas emissions. In addition, the proposed Project helps achieve the objectives of Senate Bill (SB) 375, which also requires a reduction in greenhouse gas emissions. The main objective of these two bills is to develop more efficient communities by reducing sprawl and providing residents with alternatives to using single-occupant vehicles. Construction of the proposed Project would provide local municipalities with an opportunity to better comply with these mandatory laws.

Future planned projects that meet the objective of the City's plan include Omnitrans' San Bernardino Express (sbX) bus rapid transit (BRT) service, future Redlands Passenger Rail service, and the San Bernardino option of the Los Angeles to San Diego (via the Inland Empire) section of the California High-Speed Train Project. This option of the high-speed train project would operate adjacent to the existing San Bernardino Metrolink line and would include a platform(s) adjacent to the rail platforms proposed as part of the proposed Project. Overall, the Project is consistent with the vision in the City's general plan for goals and policies that promote a network of multi-modal transportation facilities that are connected to various points of the City and region (i.e., Goal 6.6 of the general plan).

1.3.2 Need for the Proposed Project

The need for the proposed Project is multi-faceted and in response to current population and employment forecasts that suggest significant growth in San Bernardino County from now through 2035. Over the past 30 years, population growth has been robust in San Bernardino County, contributing to increased travel demand and a decline in transportation system performance. Increasing roadway congestion has led to corresponding increases in commute times for work or recreational purposes, hours of lost productivity, increased fuel use contributing to air pollution, interference with emergency response vehicles, and spillover effects to secondary and alternative routes. By 2035, the County is expected to continue its growth, with 36% more population, 42% more households, 77% more jobs, and 53% more travel trips

(Parsons et al. 2009). Given this growth, mass transit must play a larger role in serving future travel demand to lessen the burden on San Bernardino County's freeways and roads and guide responsible growth and accommodate increased transit ridership.

The Riverside-San Bernardino metropolitan area is ranked 14th in population nationally (according to 2009 estimates by the U.S. Census Bureau), but it ranks 32nd among large metropolitan areas in the Texas Transportation Institute's Travel Time Index (Texas Transportation Institute 2010). This index is a measure of congestion based on the ratio of travel time for trips made in the peak period as compared to travel times under free-flowing conditions. The 2008 Regional Transportation Plan (RTP) prepared by SCAG does not identify any major improvement or capacity expansion projects for Interstate (I)-10 beyond routine maintenance. With no major capacity improvements planned or programmed for the region, roadway productivity losses are anticipated to contribute to increased congestion and less than desirable levels of service on local highways and arterials.

The San Bernardino line, paralleling the Interstate (I-)10 freeway, contains the highest ridership in the Metrolink system and serves six stations in San Bernardino Valley (Valley). The Riverside line paralleling State Route 60 serves one station in the Valley. The Inland Empire-Orange County Line originates in San Bernardino and parallels State Route 91. The proposed Project would extend Metrolink commuter service into downtown San Bernardino, thereby providing an alternative mode of transportation for individuals currently reliant on passenger vehicles and long commutes to Riverside and Los Angeles Counties. The proposed Project would also incorporate a centralized bus facility that would be integrated with existing bus service offered by Omnitrans, thereby providing a local linkage to Metrolink passenger rail service. The combination of these transit options is expected to contribute to a reduction of 67,510 daily vehicle miles traveled (VMT) in future buildout year 2035 on local roadways, which would not otherwise occur under the No-Build/No-Project Alternative (Iteris, Inc. 2012). This reduction in vehicle trips would also result in corresponding reductions in the generation of criteria air pollutants for which the local air basin is designated as nonattainment.

Improvements to the Depot are also needed to address pedestrian safety and accessibility issues at the rail platforms and eliminate at-grade pedestrian crossings. Without the proposed pedestrian egress, rail patrons would continue to walk along the tracks to exit the station, thereby increasing the risk of accidents and train/pedestrian conflicts.

1.4 STATEMENT OF PROJECT OBJECTIVES

The proposed Project's objectives are identified below:

1. Construct a second track and associated railroad improvements to extend regional Metrolink passenger rail service between the existing Depot and downtown San Bernardino.
2. Encourage the integration of current and future passenger rail operations with other forms of transit in the region by providing a Metrolink passenger rail connection to downtown San Bernardino.
3. Accommodate forecasted ridership between the Depot and downtown San Bernardino by providing a convenient and efficient transit alternative to automobile travel.
4. Improve the mobility opportunities for transit-dependent populations in the City to employment centers in Los Angeles and Orange Counties and support local and regional planning goals of SANBAG for the development of transit corridors in the Inland Empire.
5. Improve safety and accessibility at the existing Depot by constructing a pedestrian bridge that will connect the station's two reconstructed platforms, thereby eliminating existing at-grade pedestrian crossings.
6. Facilitate intermodal transit opportunities by constructing the Omnitrans Bus Facility close to Metrolink passenger rail service.

1.5 INCORPORATION BY REFERENCE

The pertinent documents related to this EA/DEIR have been cited in accordance with Section 15148 of the CEQA Guidelines. The incorporation by reference reduces redundancy and the length of environmental reports to manageable levels. The following documents, which are available for public review at SANBAG's office, are hereby incorporated by reference into this environmental document:

- City of San Bernardino. 2005a. San Bernardino General Plan and General Plan Update. Available: <http://www.ci.san-bernardino.ca.us/pdf/DevSvcs/General%20Plan%20Document.pdf>.
- City of San Bernardino. 2005b. Draft San Bernardino General Plan Update and Associated Specific Plans Environmental Impact Report. SCH #2004111132. Available: <http://www.ci.san-bernardino.ca.us/cityhall/community_development/planning/planning_documents.asp>.
- City of San Bernardino. San Bernardino Development Code, Title 19: Land Use/Subdivision Regulations, Article II - Land Use Zoning Districts. Available: <http://www.ci.san-bernardino.ca.us/cityhall/community_development/development_code.asp>.
- City of San Bernardino. Zoning Map. Available: < http://www.ci.san-bernardino.ca.us/pdf/maps/Zoning-42x42-MasterPlanUpdate.pdf>.
- Parsons. 2009a. sbX E Street Corridor BRT Project Environmental Assessment/Initial Study (SCH# 2008091107). June. Prepared for Omnitrans and FTA. Available: <http://www.omnitrans-sbx.com/about/environment-assessment.html>.
- Parsons. 2009b. sbX E Street Corridor BRT Project Finding of No Significant Impact. September. Prepared for FTA. Available: <http://www.omnitrans-sbx.com/about/environment-assessment.html>.
- Parsons. 2010. Final Re-Evaluation/Addendum Environmental Assessment/Initial Study for the sbX E Street Corridor BRT Project. June. Prepared for Omnitrans. Available: <http://www.omnitrans-sbx.com/about/environment-assessment.html>.

2.0 ALTERNATIVES

Under NEPA, the range of alternatives required to be evaluated is governed by the "rule of reason," which requires an analysis of only those alternatives necessary to permit a reasoned choice. In addition to a no-action alternative, which maintains existing conditions on a project site, the evaluated alternatives must fulfill the basic requirements of a project's statement of purpose and need. NEPA also requires that alternatives be feasibly carried out in the context of technical, economic, environmental, and other factors. If alternatives have been eliminated from detailed study, the analysis must briefly discuss the reasons for their elimination. Under NEPA, feasible alternatives must be addressed at a similar level of detail as a proposed project. In addition, under NEPA, the alternatives analysis should present the environmental effects of the proposed project and the alternatives in comparative form, thereby defining the issues and providing a clear basis for choice among options by the decision maker and the public.

State CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the project or to the location of the project which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any significant environmental impacts. According to the State CEQA Guidelines, the EIR should compare merits of the alternatives and determine an environmentally superior alternative. Alternatives for an EIR usually take the form of no project, reduced project size, different project design, or suitable alternative project sites. The range of alternatives discussed in an EIR is governed by the "rule of reason," which requires the identification of only those alternatives necessary to permit a reasoned choice between the alternatives and the proposed project. An EIR need not consider an alternative that would be infeasible. State CEQA Guidelines Section 15126.6(f)(1) explains that the evaluation of project alternative feasibility can consider "site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site." The EIR is also not required to evaluate an alternative that: 1) has an effect that cannot be reasonably identified or that has remote or speculative implementation and 2) would not achieve the basic project objectives.

This section sets forth potential alternatives to the proposed Project and evaluates their suitability. The following sections describe these alternatives, including the No-Build/No-Project Alternative required by CEQA Section 15126.6 and NEPA Section 102(2)(E).

2.1 PROJECT LOCATION AND ENVIRONMENTAL SETTING

The City is located in the eastern half of the San Bernardino Valley (Valley) and is approximately 60 miles east of the City of Los Angeles. The Valley encompasses approximately 500 square miles and holds approximately 75% of San Bernardino County's population.

The Valley is largely suburban in character with concentrations of commercial and industrial development particularly along I-10, I-15, and I-215, as shown previously on Figures 1-1 and 1-2. Much of the Valley's residential development is concentrated on blocks between major arterial streets. The Valley's primary housing type is single-family residential with apartments and condominiums comprising a small percentage. The Valley's commercial development consists of retail and office buildings located along major arterials as well as large shopping centers typically near freeways. The Valley's industrial uses are generally concentrated adjacent to the I-10 and I-15 freeways close to the Ontario International Airport and San Bernardino Airport (see Appendix H).

The Project contains a diverse collection of land-use types including residential, commercial, storage/warehouse, office, and industrial uses. Most of the Project Study Area is located within the planning areas within the Santa Fe Depot Strategic Policy Area and the Downtown Strategic Policy Area, included as part of the City of San Bernardino General Plan Land Use Element. Generally, the area is designated with Industrial (I) and Commercial General (CG) land uses and is zoned Commercial General (CG-1), Commercial General-2 (CG-2), Industrial Heavy (IH), Industrial Light (IL), Central City South (CCS-1), and Residential Suburban (RA). Non-conforming residential land uses are present within the Depot station area. Major activity centers surrounding the Project Study Area include the Depot, City and County of San Bernardino administration uses, Carousel Mall, and the San Manuel Stadium (previously known as the Arrowhead Credit Union Park) (see Appendix H).

2.1.1 Rail Corridor

The proposed Project is primarily located within the existing Redlands branch line right-of-way, which extends 10 miles east from the Depot to the University of Redlands through downtown San Bernardino and downtown Redlands, basically running parallel to I-10. Project-related improvements would be limited to the first mile along the western portion of the rail corridor.

2.2 NO-BUILD/NO-PROJECT ALTERNATIVE

This alternative assumes that the proposed Action/proposed Project (proposed Project, as described in Section 2.3 below) would not occur. Under the No-Build/No-Project Alternative, proposed improvements to approximately 1 mile of track included as part of the Project would not be implemented. Specifically, passenger rail service would not be extended east to downtown San Bernardino. Additionally, the No-Build/No-Project Alternative would not include 1) improvements to or reconstruction of rail infrastructure to accommodate passenger rail service, 2) grade crossing improvements, 3) railroad signalization, 4) roadway closures, 5) rail platform or station facilities, or 6) a bus facility. Metrolink passenger rail service would continue to originate and/or terminate at the Depot. The pedestrian overcrossing proposed to improve pedestrian safety would not be constructed. Existing conditions within the rail corridor would remain unchanged, and the rail line east of the Depot would continue to be used for low-speed, local freight service. A new bus facility would not be constructed at the southwest corner of Rialto Avenue and E Street. Consequently, the No-Build/No-Project Alternative would not achieve or fulfill any of the goals and objectives of the proposed Project or those of the City's general plan with the overall objective of providing mass transit opportunities, increasing mass transit services, or increasing connectivity between and providing convenience for residents and employees traveling to and from San Bernardino.

2.3 PROPOSED ACTION/PROPOSED PROJECT

The proposed Action/proposed Project (proposed Project) would consist of the extension of Metrolink regional passenger rail service approximately 1 mile east from its current terminus at the existing Depot to new Metrolink commuter rail platforms proposed near the intersection of Rialto Avenue and E Street in the City of San Bernardino (City), California. The proposed Project's primary features include: construction of a second track, rail platforms, parking lots, a pedestrian overpass at the Depot, an Omnitrans Bus Facility (bus facility), and grade crossing improvements; railroad signalization; and roadway closures. Proposed secondary features include: construction of drainage improvements, utility accommodation, and implementation of safety controls.

2.3.1 Project Description and Features

SANBAG is proposing to extend Metrolink service approximately one mile east from the existing Depot to new rail platforms south of the proposed bus facility located at the southwest corner of Rialto Avenue and E Street in the City. Figure 2-1 depicts the Project Study Area and primary project components. Figures 2-2 through 2-7 provide details of each primary project component.

2.3.1.1 Railroad Track Improvements

The proposed Project's railroad track improvements include realignment of the existing railroad track and construction of a second parallel railroad track extending from the Depot to the proposed rail platforms near Rialto Avenue and E Street. Figures 2-2A and 2-2B depict the proposed track improvements. Beginning at the Depot, the alignment heads due east and then curves to the south across 3rd Street where it continues on a southerly bearing to 2nd Street. After crossing 2nd Street, the alignment then curves to the southeast, where it crosses the intersection of Rialto Avenue and I Street on a southeasterly bearing. After the tracks cross the intersection of Rialto Avenue/I Street, the alignment curves to the east, where it crosses under the I-215 freeway and then crosses G Street on an easterly bearing to the eastern terminus of the proposed rail platforms at E Street. The proposed Project also includes realignment and reconstruction of the two mainline tracks at the Depot and improvements to the BNSF Short Way (i.e., westerly construction of additional tracks from the Depot to Rialto Avenue). It is anticipated that a majority of the existing rail and concrete ties, as well as grade crossing panels, between the Depot and E Street would be salvaged because the line was reconstructed in 2002.The proposed track, turnouts, and special trackwork design would adhere to the latest Southern California Regional Rail Authority (SCRRA)/Metrolink/BNSF/Amtrak Engineering Standards. The track alignment has been designed to accommodate trains traveling at a maximum speed of 25 miles per hour (mph) following Metrolink's track alignment design criteria and engineering standards. The new double-track segment would include Centralized Traffic Control (CTC). Finally, the existing Inland Empire Maintenance Facility (IEMF) located east of the Depot and adjacent to I Street would be modified to accommodate the proposed double tracking and retained for train storage.

2.3.1.2 San Bernardino Metrolink Station/Santa Fe Depot Improvements

A component of the proposed Project involves railroad track and platform, pedestrian access, parking lot improvements, and minor interior and exterior improvements at the existing Depot. The historic Santa Fe Depot in San Bernardino is located at 1170 W. 3rd Street between Mt. Vernon Avenue and I Street. The Depot was once a busy passenger and freight rail transportation center that included Santa Fe and Amtrak personnel, Santa Fe dispatchers, a restaurant, living quarters, and offices. Currently, the train station includes a lobby, café, and museum on the first floor and office space for SANBAG on the second floor. The SANBAG parking lot is located on the east side of the Depot, while the Metrolink/Amtrak passenger parking lots are located on the south and west side of the Depot.

Proposed improvements at the Depot, including reconstruction of two main tracks and rail platforms, east parking lot improvements, a new pedestrian overpass bridge, and other Depot improvements, are described in more detail below. Figures 2-2A through 2-2C illustrate the proposed improvements that would occur adjacent to the Depot building.

Main Track and Rail Platform Reconstruction

The proposed Project would necessitate the complete reconstruction of Metrolink's two main tracks and platforms located between the Depot building and BNSF Main Track 3. Figures 2-2A

and 2-2B depict these proposed improvements. Proposed Metrolink/Amtrak Platform "A" would be approximately 1,000 feet long and 26.5 feet wide and would be located between Metrolink Main Track 1 and BNSF Main Track 3. Proposed Metrolink Platform "B" would be approximately 843 feet long and 17 to 22 feet wide and would be located between the Depot building and Metrolink Main Track 2. In addition, the three storage tracks (SANBAG Tracks P4, P5, and P6) and platform located directly west of the existing Depot building would be completely reconstructed to accommodate the proposed location of Platform "B." Lastly, the BNSF Short Way located southwest of the Depot would be completely reconstructed and realigned in order to accommodate two additional tracks (Metrolink Main Track 2 and SANBAG Track P5) within the existing railroad right-of-way. The reconstructed platforms would include new canopies, benches, mini-high ramps, variable message signs, lighting, closed-circuit television security cameras, drinking fountains, ticket vending machines, and trash receptacles, all of which would serve both Metrolink and Amtrak passengers at the Depot.

East Parking Lot Improvements

The proposed railroad track and platform improvements at the Depot would necessitate the removal of trees and the reconfiguration of the east parking lot used as office parking for the Depot. The reconfigured parking lot would provide additional parking (57 marked parking spaces would be replaced with 79 marked parking spaces and four handicapped spaces) and landscaping. These proposed improvements would necessitate the realignment and closure of 3rd Street (to be discussed in Section 2.3.1.5, "Street Improvements and Closures"). Figure 2-2B depicts the proposed east parking lot improvements.

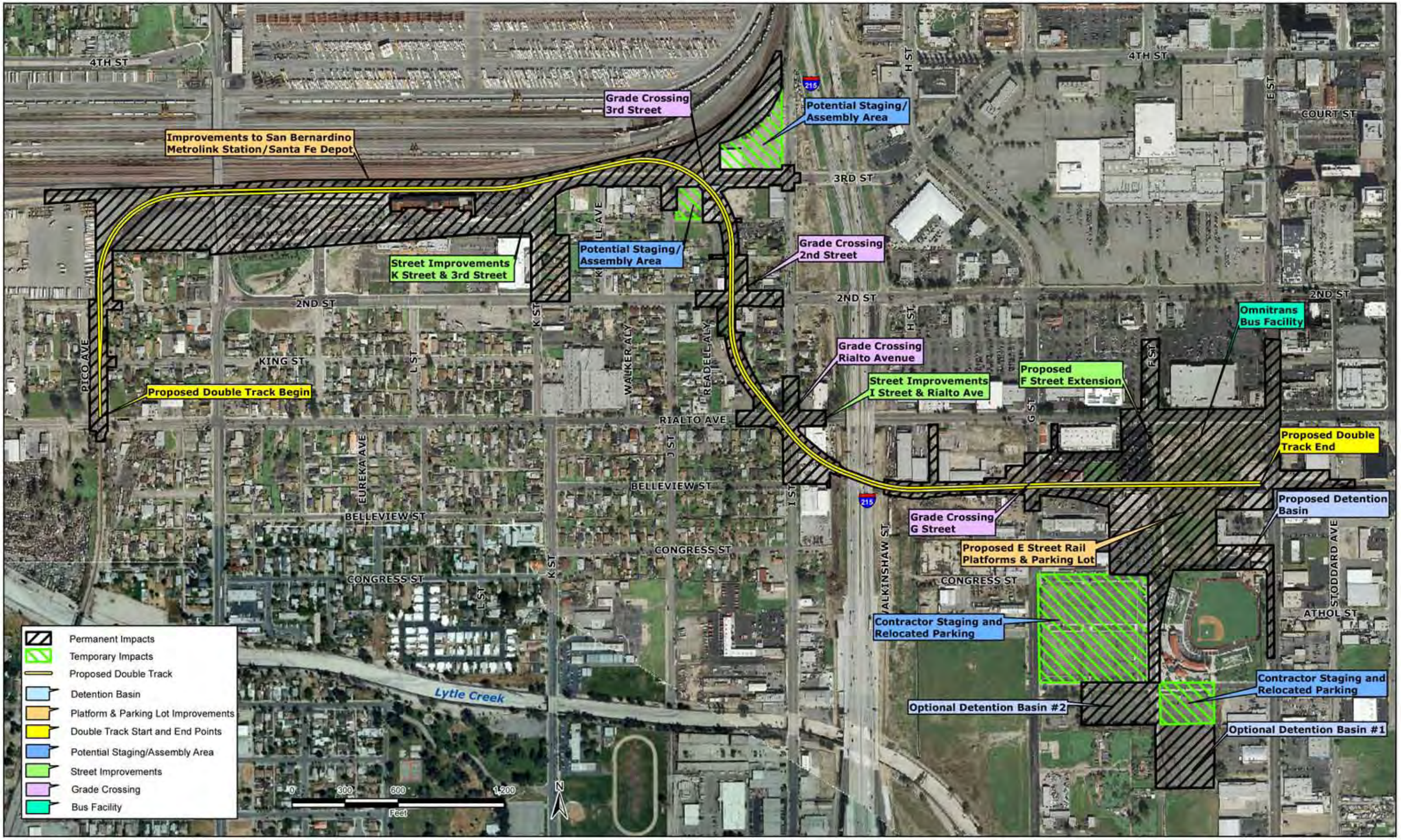
Pedestrian Overpass Bridge

To facilitate efficient pedestrian circulation and to increase safety at the Depot, a pedestrian overpass bridge is proposed approximately 28 feet west of the Depot building. Figure 2-2B depicts the location of the proposed pedestrian overpass bridge, and Figure 2-2C provides architectural renderings of the proposed pedestrian bridge. The pedestrian overpass bridge would consist of two enclosed stair/elevator towers, a protected and covered elevated passageway over the tracks connecting the two towers, and a security booth at the base of the southern tower. The pedestrian overpass bridge would comply with Americans with Disabilities Act (ADA) requirements to allow ambulatory and wheelchair access to the train platforms.

The proposed pedestrian overpass bridge may be designed in the Mission Revival architectural style consistent with the architectural elements of the historic Depot. Architectural elements borrowed from the Depot's Mission Revival style include an arched canopy roof, stucco or Exterior Insulation Finish Systems finish, large arched windows, and metal trim. The bridge's color palette would be consistent with the Depot's natural tan exterior, which is complimented by light green trim and an orange roof. The bridge's design would respect the Depot's character while offering a contemporary complement to the station site. Proposed structural bridge elements include precast panels, light gauge protection mesh, stair railings, roofing, glass windows, and two elevators at each stair/elevator tower. The pedestrian overpass bridge would also include lighting, electrical facilities, plumbing facilities, and a fire protection system.

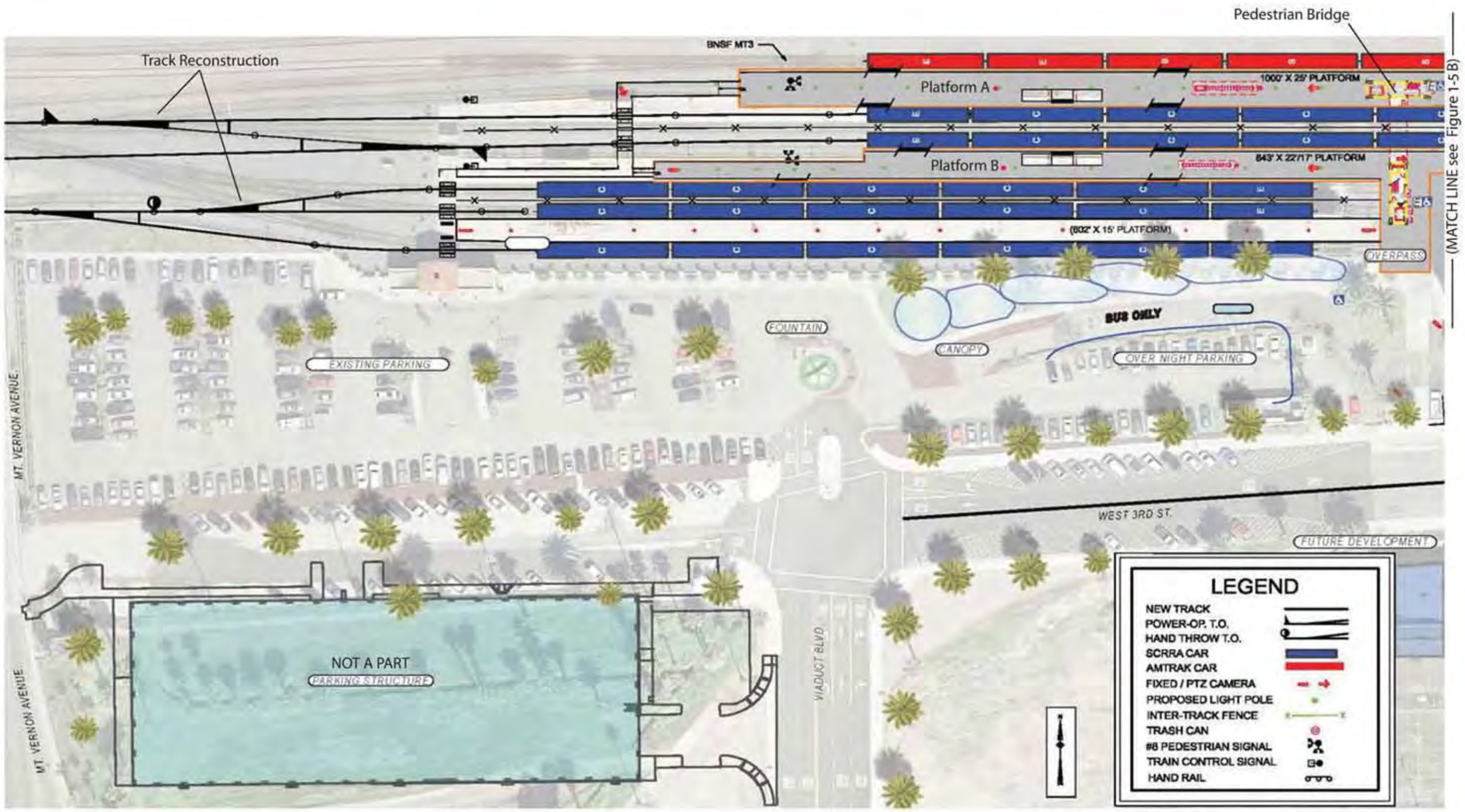
Other Depot Improvements

Minor interior and exterior improvements are also proposed for the Depot, which would be coordinated with the State Historic Preservation Officer (SHPO). These improvements would include the following: (1) installation of four historically sensitive window awnings on the east side of the lower level of the Depot building adjacent to the café, (2) the addition of exterior and



Source: HDR (2012), ESRI (2011)

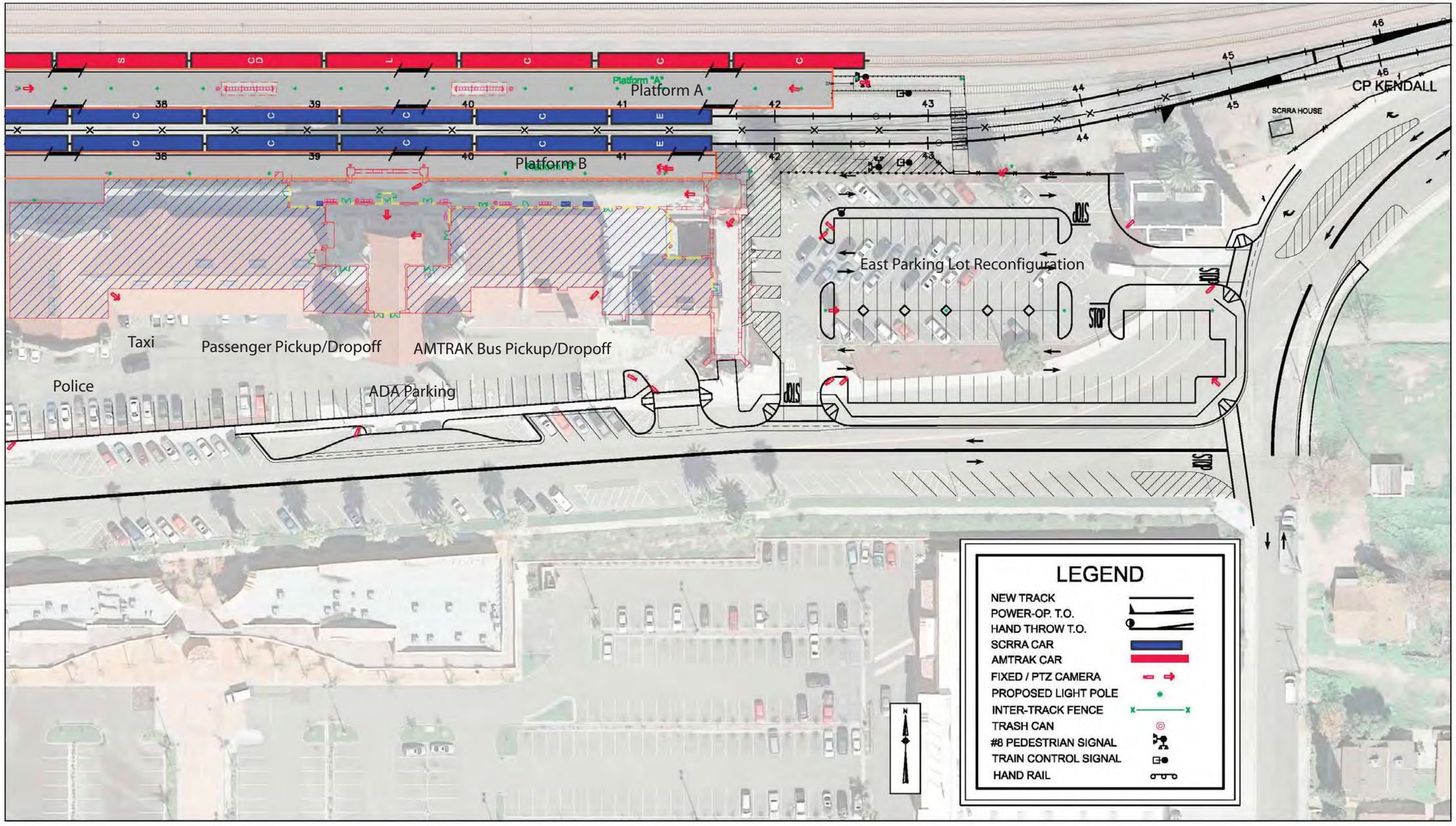
Figure 2-1
Project Study Area and Primary Project Components
Downtown San Bernardino Passenger Rail Project



SOURCE: DSBPRP Project Definition Report, May 2011

Figure 2-2A
Proposed Improvements to the Depot
Downtown San Bernardino Passenger Rail Project

(MATCH LINE see Figure 2-3B)



Source: DSBPRP Project Definition Report, May 2011

Figure 2-2B
Proposed Improvements to San Bernardino Metrolink Station / Santa Fe Depot
Downtown San Bernardino Passenger Rail Project

SOURCE: DSBPRP Project Definition Report, May 2011

Figure 2-2C
Proposed Pedestrian Overpass Renderings at the Depot
Downtown San Bernardino Passenger Rail Project

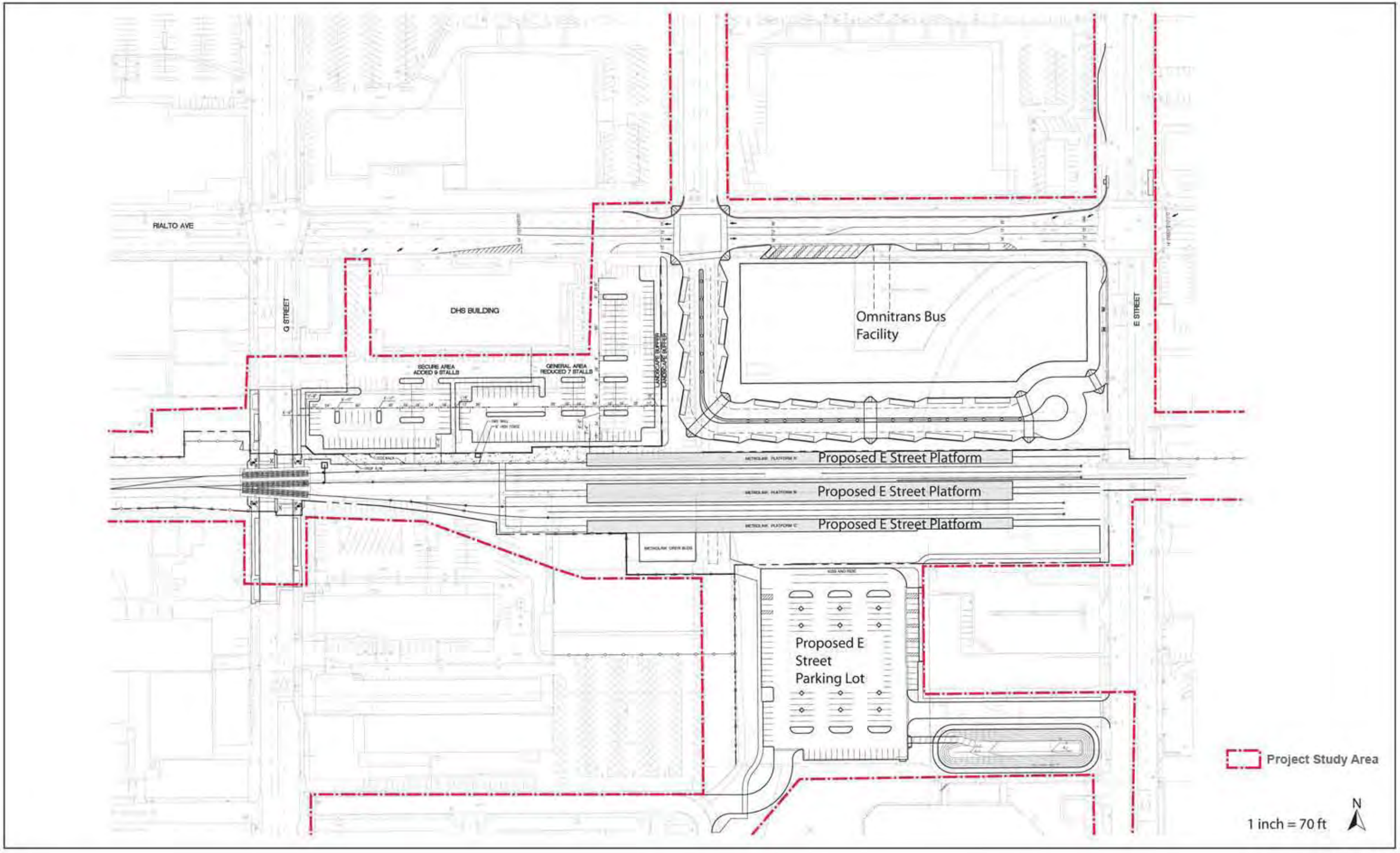
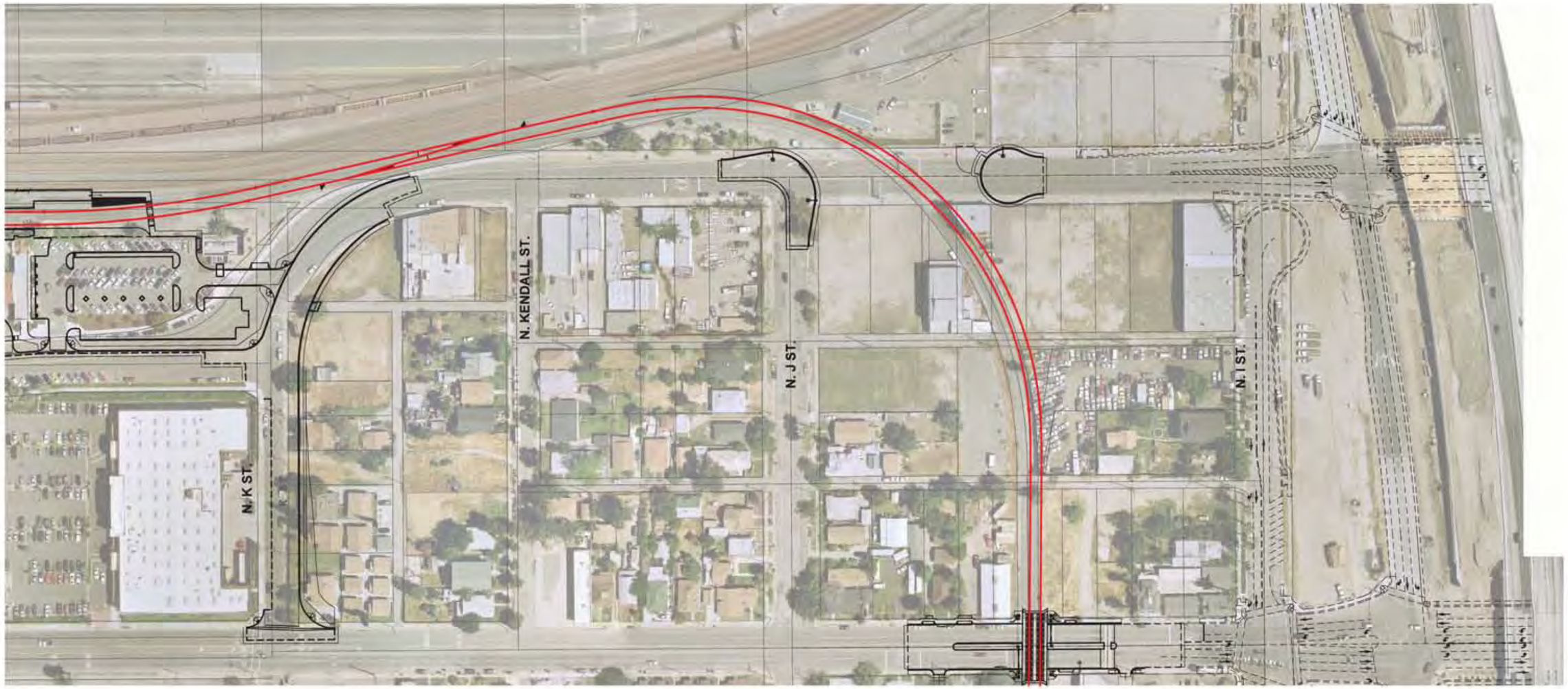


Figure 2-3
Proposed E Street Rail Platforms and Omnitrans Bus Facility
Downtown San Bernardino Passenger Rail Project

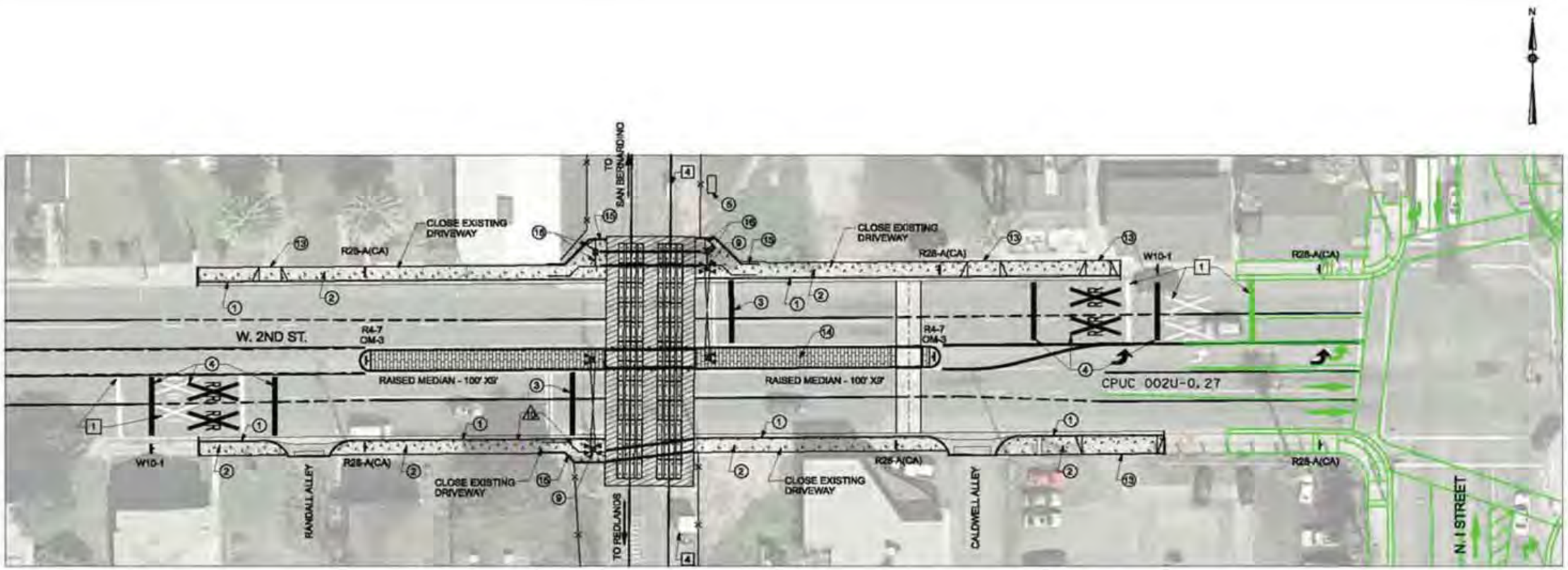


Source: DSBPRP Project Definition Report, August 2011

Figure 2-4A
Proposed Street Improvements - K Street & 3rd Street
Downtown San Bernardino Passenger Rail Project

SOURCE: DSBPRP Project Definition Report, May 2011

Figure 2-4B
Proposed Street Improvements – I Street & Rialto Avenue
Downtown San Bernardino Passenger Rail Project



NOTES:

1. CONSTRUCT P.C.C. CURB & GUTTER PER CITY OF SAN BERNARDINO STD. PLAN NO. 200
2. CONSTRUCT P.C.C. SIDEWALK PER CITY OF SAN BERNARDINO STD.
3. INSTALL STOP LINE PER CA MUTCD 2010
4. INSTALL HIGHWAY-RAIL GRADE CROSSING PAVEMENT MARKING PER CA MUCTD 2010
5. INSTALL SIGNAL HOUSE
9. INSTALL CPUC STANDARD NO. 9 FLASHING LIGHTS WITH GATE (BY SCRRA)
12. INSTALL REMOVABLE BOLLARDS
13. CONSTRUCT DRIVEWAY APPROACH PER CITY OF SAN BERNARDINO STD. PLAN NO. 204.
14. ADJUST MANHOLE TO GRADE
15. INSTALL STEEL TUBE RAIL
16. INSTALL PEDESTRIAN GATE ARM , SWING GATE AND WARNING DEVICE (BY SCRRA)

[1] REMOVE EXISTING PAVEMENT MARKING

[4] REMOVE EXISTING SIGNAL HOUSE

RELOCATE FIRE HYDRANT

LEGEND:

- STAMPED CONCRETE
- CONSTRUCT NEW CONCRETE
- PROPOSED TRACK
- PROPOSED RIGHT OF WAY W/ FENCE
- EXISTING RIGHT OF WAY
- PEDESTRIAN EDGE LINE PER SCRRA STANDARD
- I-215 IMPROVEMENTS
- FIRE HYDRANT
- STREET LIGHT

SIGNAGE REFERENCES:

W10-1 R4-7 OM-3 (YELLOW) R-28 A

ROADWAY DATA:

AADT 21,323 PER CITY
SPEED LIMIT = 35 MPH

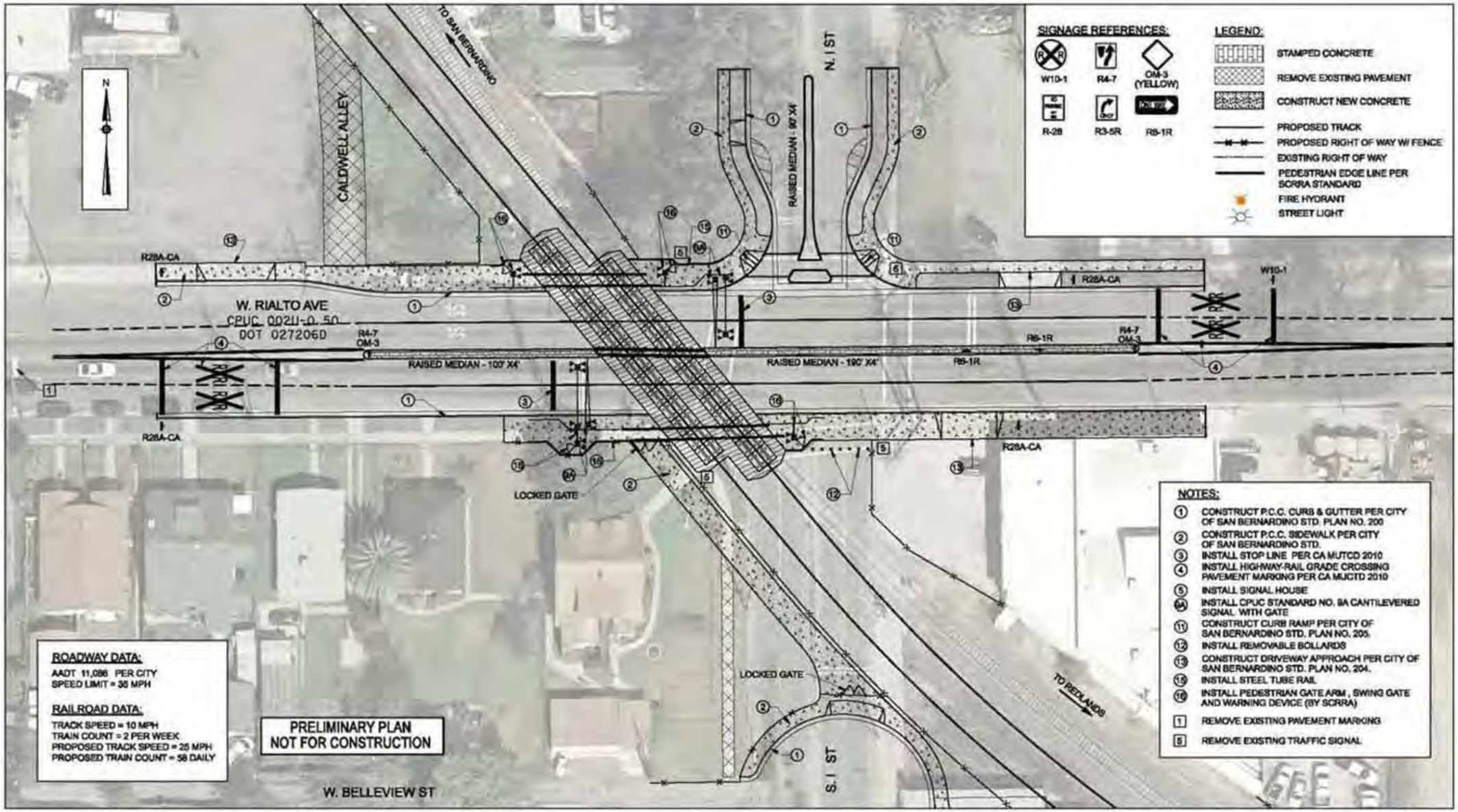
RAILROAD DATA:

TRACK SPEED = 10 MPH
TRAIN COUNT = 2 PER WEEK
PROPOSED TRACK SPEED = 25 MPH
PROPOSED TRAIN COUNT = 58 DAILY

PRELIMINARY PLAN
NOT FOR CONSTRUCTION

SOURCE: DSBPRP Project Definition Report, May 2011

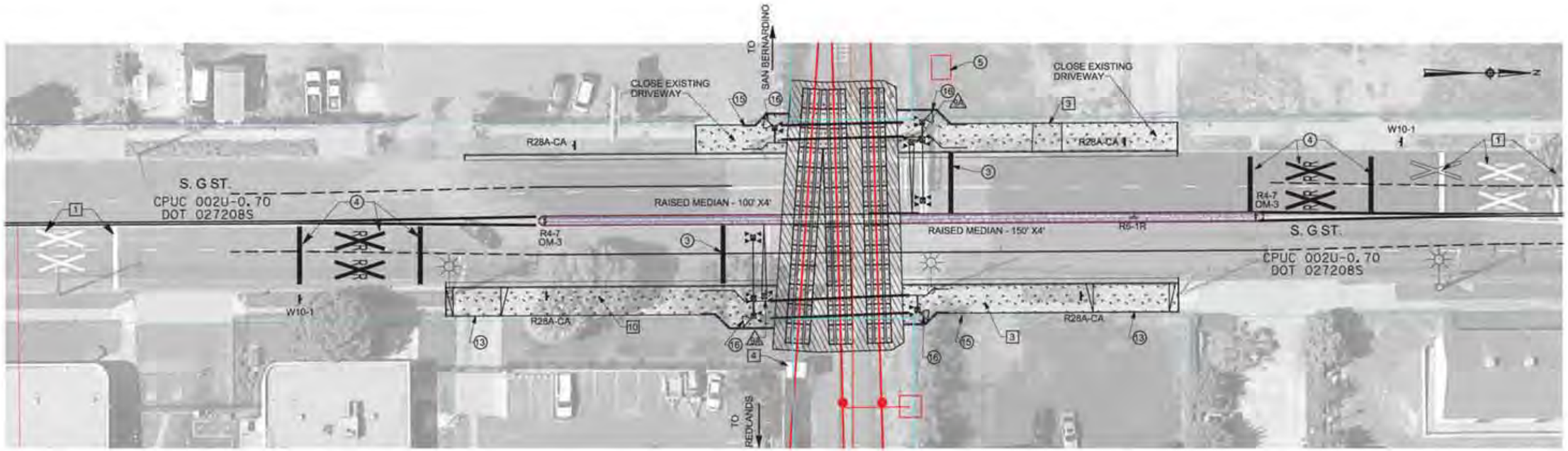
Figure 2-5A
Proposed West 2nd Street Grade Crossing
Downtown San Bernardino Passenger Rail Project



NOTE:
GENERAL PLAN SECTION = 64' - 66' CURB TO CURB
CURRENT SECTION = 54.50' CURB TO CURB

SOURCE: DSBPRP Project Definition Report, May 2011

Figure 2-5B
Proposed West Rialto Avenue & I Street Grade Crossing
Downtown San Bernardino Passenger Rail Project



NOTES:

- (3) INSTALL STOP LINE PER CA MUTCD 2010
- (4) INSTALL HIGHWAY-RAIL GRADE CROSSING PAVEMENT MARKING PER MUCTD
- (5) INSTALL SIGNAL HOUSE
- (13) CONSTRUCT DRIVEWAY APPROACH PER CITY OF SAN BERNARDINO STD. PLAN NO. 204.
- (15) INSTALL STEEL TUBE RAIL
- (16) INSTALL PEDESTRIAN GATE ARM , SWING GATE AND WARNING DEVICE (BY SCRRA)

- [1] REMOVE EXISTING PAVEMENT MARKING
- [2] REMOVE EXISTING CROSSING PANELS
- [3] REMOVE EXISTING DRIVEWAY, EXTEND CURBFACE, RECONSTRUCT SIDEWALK
- [4] REMOVE EXISTING SIGNAL HOUSE
- [10] TRIM TREE TO IMPROVE SIGNAL VISIBILITY
- (9A) RELOCATE CPUCSTANDARD 9A CANTILEVERED SIGNAL WITH GATES

LEGEND:

- STAMPED CONCRETE
- PROPOSED TRACK
- PROPOSED RIGHT OF WAY
- PROPOSED RIGHT OF WAY W/ FENCE
- EXISTING RIGHT OF WAY
- PEDESTRIAN EDGE LINE PER SCRRA STANDARD
- FIRE HYDRANT
- EXISTING STREET LIGHT
- PROPOSED SIGNAL HOUSE

SIGNAGE REFERENCES:

W10-1 R4-7 OM-3 (YELLOW) R-28 A

R6-1R

ROADWAY DATA:

AADT 8,800 PER CITY
SPEED LIMIT = 40 MPH

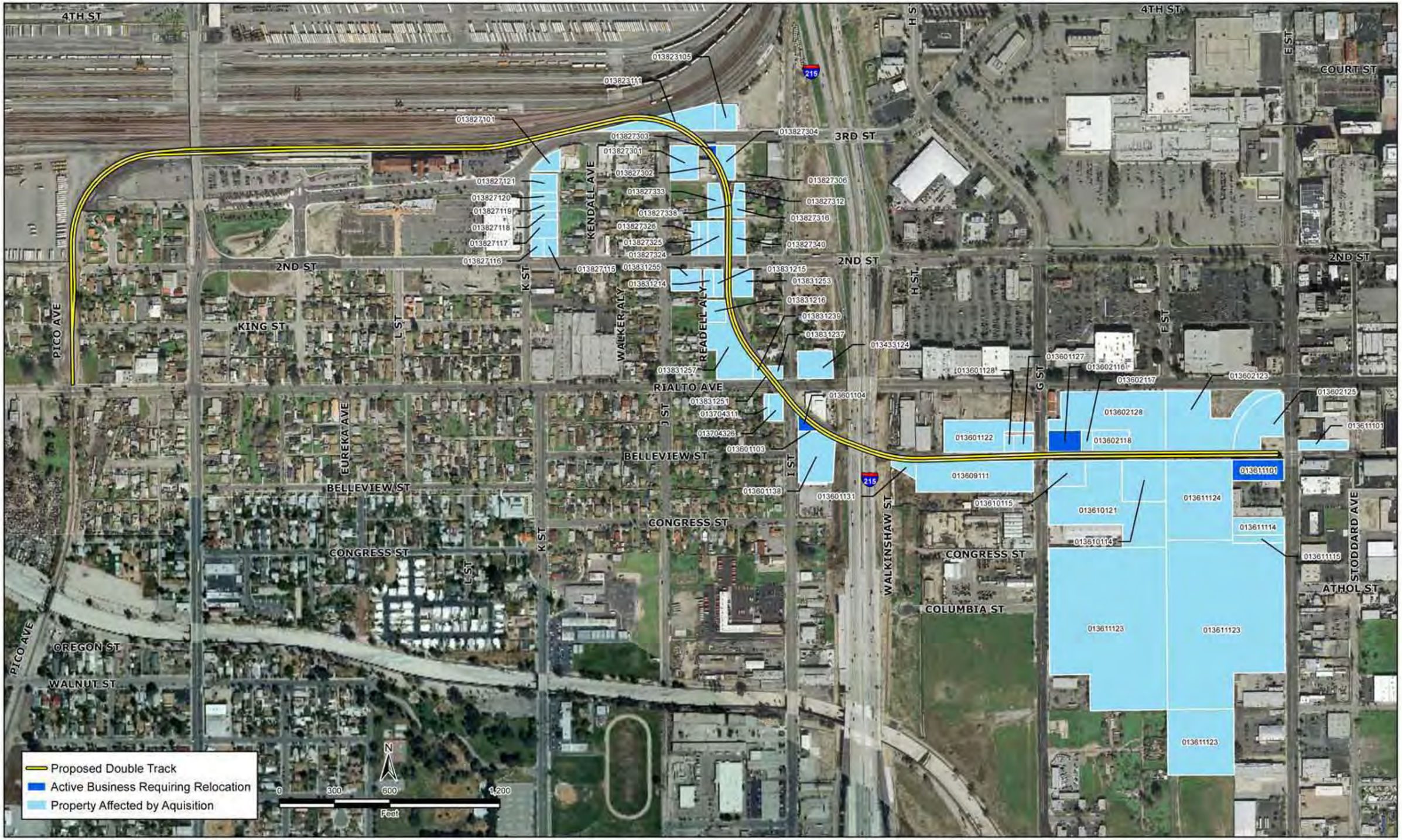
RAILROAD DATA:

TRACK SPEED = 10 MPH
TRAIN COUNT = 2 PER WEEK
PROPOSED TRACK SPEED = 25 MPH
PROPOSED TRAIN COUNT = 58 DAILY

PRELIMINARY PLAN
NOT FOR CONSTRUCTION

SOURCE: DSBPRP Project Definition Report, May 2011

Figure 2-5C
Proposed South G Street Grade Crossing
Downtown San Bernardino Passenger Rail Project



Proposed Double Track
Active Business Requiring Relocation
Property Affected by Aquisition

0 300 600 1,200
Feet

Source: HDR Engineering (December, 2011)

Figure 2-6
Project-Related Parcel Acquisitions and Relocations
Downtown San Bernardino Passenger Rail Project

SOURCE: DSBPRP Project Definition Report, May 2011

Figure 2-7
Monitoring Wells
Downtown San Bernardino Passenger Rail Project

interior way-finding signage for SANBAG/SCAG/Whistle Stop Cafe/Museum, (3) placement of a battery-operated clock in the main lobby, (4) installation of a new sign in the lobby that details the railroad's role in creating time zones, (5) placement of a portable Metrolink and Amtrak map and brochure case, (6) installation of new bathroom signage in the main lobby, and (7) construction of a new monument sign and flagpole at the Depot entrance on the south elevation of the building.

2.3.1.3 Proposed E Street Rail Platforms, Omnitrans Bus Facility, and Parking Lot

E Street Rail Platforms

The proposed Project includes construction of two, 20-foot-wide side platforms and one 30-foot-wide center platform, along with construction of two new stub tracks (Tracks 3 and 4) that would terminate just west of E Street (see Figure 2-3). Metrolink Main Track 1 and 2 would follow the existing track alignments to E Street, which may necessitate slight resurfacing and realignment of the existing tracks. The new platforms would include canopies, benches, mini-high ramps, variable message signs, lighting, closed-circuit television security cameras, drinking fountains, ticket vending machines, and trash receptacles.

Omnitrans Bus Facility

The bus facility site is located south of Rialto Avenue between E Street and F Street on a 4.8-acre undeveloped site, as shown in Figure 2-3. The undeveloped site consists of four assessor's parcel numbers (APNs) (0136-021-12, -23, -24, and -25) in addition to parking areas that are used by the Department of Homeland Security building to the west of the site. The bus facility would include up to 22 bus bays and an on-site bus circulation roadway with bus turnouts as well as frontage street access improvements, including signalization at the new Rialto/F Street intersection, pedestrian access improvements (e.g., crosswalks), and associated support facilities (e.g., security and lighting). Two of the bus bays would be constructed along the southern portion of Rialto Avenue adjacent to and north of the bus facility. Bus ingress and egress would occur from a proposed southern extension of F Street from Rialto Avenue to the southwestern corner of the bus facility site. From the southwestern corner of the bus facility site, bus movements would be routed to the east along the southern perimeter to a turnaround located at the southeastern corner of the site. Additional parking and pedestrian improvements would also be constructed along the southern portion of Rialto Avenue and the new extension of the F Street intersection.

The bus facility would include up to a 14,000-square-foot building on the southern portion of the site. The building would be designed to meet energy performance requirements to achieve a U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) Gold rating. The facility building would include a central building expected to provide a range of functions, including ancillary passenger services, ticketing, waiting, public meeting room, offices, public restrooms, bicycle facility with showers, lunch room, restrooms/locker rooms, break rooms, transit store, and storage. These facilities would be supported by mechanical, electrical, and plumbing systems. The remaining acreage comprising the bus facility site would be graded and/or paved to the extent necessary and would remain undeveloped.

In conjunction with the bus facility's construction, pedestrian access improvements would be constructed to facilitate connections between the E Street rail platforms and the parking lot to the south. Pedestrian circulation would generally occur via a new sidewalk along the west side of E Street and east of the proposed track improvements. Given that pedestrian circulation

would occur to the east of the proposed rail improvements, no underpass or overpass is currently proposed.

The bus facility site may also be used as a potential staging area for the proposed Project prior to construction of the bus facility.

Parking Lot

A 265-space parking lot is proposed on a vacant lot directly south of the new rail platforms that would serve Metrolink train crews and passengers. Figure 2-3 illustrates the proposed rail platforms and parking lot.

A temporary SCRRA crew building is also proposed that would include a kitchen, offices, restrooms, lockers, a check-in area, and customer service facilities. The temporary crew building would likely be constructed south of the proposed platforms adjacent to the 265-space parking lot.

2.3.1.4 Pedestrian Connection to San Manuel Stadium

The proposed Project may include a pedestrian path connecting the proposed rail platforms to the San Manuel Stadium, which is located south of the proposed 265-space parking lot. The pedestrian connection may consist of a sidewalk located in an improved corridor that includes landscaping, lighting, benches, trash receptacles, and bicycle racks.

2.3.1.5 Street Improvements and Closures

The proposed Project would require the following street closures:

- The intersection of 3rd Street and J Street would be reconfigured as a “dog leg” and 3rd Street would be closed between J Street and the rail line. This would result in a new 3rd Street cul-de-sac, the removal of the existing grade crossing, and restriping of northbound and southbound lanes to include one dedicated left-turn lane and one shared through right-turn lane.
- The intersection of K Street and 3rd Street would be reconfigured so that it becomes the west leg of a new T-intersection with K Street.
- I Street at Rialto Avenue would be converted to a cul-de-sac on the south side with the north leg of the intersection converted to a right-in/right-out configuration. An emergency access connection would be constructed between the I Street cul-de-sac and Rialto Avenue that would be controlled by locked gates and utilized by the City fire department.
- F Street would be extended south of Rialto Avenue to create a four-way intersection (see Figure 2-3). This intersection would be signalized.
- The southbound lane of E Street north of Rialto Avenue would include a bus turn-out and other associated curb and shoulder work.
- Rialto Avenue between F Street and E Street would be reconfigured to include turn lanes, bus bays, and parking.

Figure 2-4A depicts the proposed street improvements at 3rd Street and K Street, and Figure 2-4B depicts the proposed street improvements at I Street and Rialto Avenue.

The changes to the roadway system, including roadway closures and street reconfigurations, would require approval by the City for a General Plan Amendment to the City's Circulation Map of the 2005 General Plan Update.

2.3.1.6 Rail Alignment at I-215 Freeway

The I-215 freeway overpass was designed and constructed to accommodate the existing single track alignment within the Redlands Subdivision, which present several challenges for designing an adjacent second track alignment. The new corridor pier walls on the east side of the freeway constrict the overpass's opening width, which would necessitate the use of compound horizontal curves in order to maintain a side clearance. Clearance distances with compound horizontal curves would be slightly less than that required by Metrolink, but would satisfy California Public Utilities Commission (CPUC) minimum horizontal clearance requirements of 8 feet 6 inches. The proposed double-track and associated drainage improvements under the I-215 would require a review by the California Department of Transportation (Caltrans).

2.3.1.7 Grade Crossings

In accordance with the CPUC requirements, upgrades would be made to several existing at-grade crossings along the rail corridor to improve public safety. The proposed Project includes the complete re-construction of three at-grade crossings at 2nd Street, Rialto Avenue/I Street, and G Street to accommodate a second track. The three crossings would be re-designed in accordance with the latest SCRRA Highway Grade Crossing Manual guidelines that require raised medians, widened sidewalks, traffic striping, flashing lights, pedestrian gate arms, and swing gates.

Figures 2-5A through 2-5C illustrate the improvements to existing at-grade crossings.

2.3.1.8 Property Acquisitions and Relocations

The addition of a second track within the rail corridor between the Depot and the proposed rail platforms would necessitate the acquisition of right-of-way along the corridor, south of the Depot along K Street, and in the vicinity of the proposed rail platforms near Rialto Avenue and E Street. The proposed Project would require the acquisition of approximately 69 properties, including full acquisitions, partial acquisitions, and easements (roadway, temporary construction, sidewalk, utility, and alley vacations). Approximately four properties, identified as full acquisitions, would require full tenant relocations to allow each business to remain open during and after construction. Seven inhabited homes on four residential properties are also included as full property acquisitions. It is anticipated that temporary construction easements would be established for approximately 18 to 24 months during construction. Utility easements may be established for a permanent storm drain facility located adjacent to the proposed parking lot.

Figure 2-6 depicts the properties subject to potential acquisition and active businesses subject to relocation.

2.3.1.9 Drainage Facility Improvements

Several drainage facility improvements would be necessary due to the addition of a second track between the Depot and the proposed rail platforms near Rialto Avenue and E Street. Several existing drainage structures would also be impacted by the complete reconstruction of Metrolink's two main tracks and platforms at the Depot and by the configuration of track at the BNSF Short Way.

The proposed Project's major drainage facility improvements are described as follows:

- An existing 36-inch diameter drainage culvert would need to be extended to accommodate construction of a second track within the BNSF Short Way at 2nd Street. The culvert's required extension length and headwall reconfiguration would be determined by the grading limits of the second track.
- A series of catch basins, junction structures, storm drains, perforated under drains, and concrete-lined ditches would be constructed along the entire rail corridor between the Depot and the proposed rail platforms to properly convey storm water that would prevent fouling of the ballast. In addition, a network of track under drains would be constructed adjacent to the proposed station platforms to adequately convey storm runoff from the platforms and track subgrade.
- Drainage facility improvements are proposed for the existing parking lots to be reconstructed at the east and south sides of the Depot.
- Drainage facility improvements are proposed for the 265-space parking lot to be constructed south of the proposed rail platforms. The parking lot would be graded to convey storm runoff into a new retention basin adjacent to the southeast corner of the parking lot near E Street north of San Manuel Stadium. These drainage facilities would then connect to a new 24 or 30 inch drainage pipe that would convey flows in excess of the retention basin's capacity to the south along E Street, terminating before an unnamed street that provides access to the stadium at E Street.
- Other drainage facilities are proposed south of San Manuel Stadium. The new 24- or 30-inch drainage pipe would be extended to a secondary detention basin located south of San Manuel Stadium, within existing parking lots areas associated with the stadium. Two optional 1.2-acre sites are currently under consideration for the second detention basin. These two optional sites are located south of the stadium, one at the southwest corner of the unofficial intersection of F Street and an unnamed access road for San Manuel Stadium and the other at the southernmost extent of the southeastern parking area (see Figure 2-1). Only one optional site will be developed as a detention basin as part of the Project.
- The existing H Street storm drain passes under the rail corridor between the I-215 freeway and G Street. The existing box culvert is 9 feet, 2 inches wide and 11 feet tall and is located approximately 10 to 15 feet below the top of rail. The portion of the box culvert within the existing railroad right-of-way consists of precast concrete sections jacked into place. The sections were designed to support the existing cover along with a Cooper's E-72 live loading. The portion of the box culvert located outside of the existing railroad right-of-way was designed as a cast-in-place concrete structure capable of supporting highway truck loading which is not adequate to support the required railroad loading.

  The removal and replacement of the aforementioned culvert section would likely necessitate excavation, shoring, installation of bedding material, new reinforcing steel doweled into the remaining culvert sections, placement of concrete backfill, and compaction around the newly completed section.
- An existing 18-inch diameter drainage culvert located at F Street would need to be extended to accommodate construction of the bus facility and a second track within the rail corridor. The culvert's required extension length and headwall reconfiguration would be determined by the grading limits of the second track.

2.3.1.10 Utility Replacement and Relocation

The proposed Project would likely necessitate the relocation of existing subsurface and overhead crossing utilities (i.e., water, sewer, storm drain, power, gas, fiber optic, and telephone lines) following Metrolink's utility accommodation design criteria and engineering standards. These utilities would be evaluated for conformance with Metrolink Engineering Standards for flammable and nonflammable underground utility crossings. Each subsurface utility located within the proposed railroad right-of-way would be exposed and surveyed during the final design phase of the proposed Project to verify its location, size, and material type. It is anticipated that the majority of existing subsurface utilities would already adhere to BNSF utility accommodation criteria for minimum utility depth and encasement. However, the addition of a second track within the rail corridor would likely necessitate utility casing extensions to adhere to Metrolink's requirements for casing flammable and nonflammable utilities across the entire width of the railroad right-of-way. Existing utilities would be lowered if their depth below the top of the rail is less than Metrolink's requirements. Likewise, existing utility casings would be extended if their limits are less than the required distance from the track centerlines. Overhead crossing utilities such as power and communication lines would be raised if found to not adhere to Metrolink's overhead clearance requirements. Railroad signal houses and street lights would also be relocated to accommodate the second track.

A summary of the existing utility crossings along the rail corridor is as follows:

- **Reinforced Concrete Pipe (RCP) Storm Drain:** The proposed rail corridor crosses existing storm drain facilities at Mount Vernon Avenue, the Depot, 3rd Street, 2nd Street, I Street, and I-215. In addition, existing longitudinal storm drain lines run parallel to the tracks within the existing railroad right-of-way at the following locations:
  - Between 2nd Street and Rialto Avenue.
  - Between H Street Channel and G Street.
  - Between G Street and E Street.

  It is anticipated that the majority of crossing storm drain facilities would be protected in place and would not need to be lowered to meet minimum depth requirements. However, it is likely that the majority of the crossing storm drain casings would need to be extended spanning the entire width of the proposed railroad right-of-way. In addition, the aforementioned longitudinal storm drain lines located within the proposed railroad right-of-way would need to be relocated at least 10 feet from the proposed track centerlines to comply with Metrolink's engineering standards.
- **Sanitary Sewer:** The rail corridor crosses existing sanitary sewer lines at King Street, 3rd Street, West Broadway Street (no longer a grade crossing), 2nd Street, Rialto Avenue, and I Street. These utility crossings may require additional encasement for the additional track to meet rail loading standards.
- **Water:** Water lines of various sizes traverse King Street, 3rd Street, West Broadway Street (no longer a grade crossing), Main Street (no longer a grade crossing), 2nd Street, Rialto Avenue, I Street, and G Street. These utility crossings may require additional encasement for the additional track to meet rail loading standards.
- **12-inch Sub-drain:** This sub-drain runs parallel along the west side of the existing track between 3rd and 2nd Streets, 2nd Street and Rialto Avenue, and a 200-foot-long segment underneath the I-215 overpass. It crosses the tracks perpendicularly before the I-215 freeway overpass. Some of the perpendicular segments would require encasement extensions while

some of the parallel segments would require relocation due to potential conflict with the proposed additional track. Where applicable, sub-drains would be left in use.

- **Railroad Signal Equipment:** The existing railroad signal equipment at 3rd Street, 2nd Street, Rialto Avenue/I Street, and G Street may require replacement or relocation to accommodate the proposed rail infrastructure and street improvements.
- **Street Lights:** Street light poles at 3rd Street and Rialto Avenue/I Street may require relocation and/or replacement to accommodate the proposed rail infrastructure and street improvements.
- **Power:** Power poles along the existing and proposed rail infrastructure as well as at Rialto Avenue and I Street may require relocation and/or replacement to accommodate the proposed rail infrastructure and street improvements.
- **Fiber Optic:** The fiber optic line placed on the power pole at Rialto Avenue and I Street may require relocation to accommodate the proposed rail infrastructure and street improvements.
- **Billboard (Commercial):** The billboard at Rialto Avenue and I Street may require relocation to accommodate the proposed rail infrastructure and street improvements. Other billboards within or immediately adjacent to the Project Study Area may also be removed if not allowed to be relocated pursuant to City codes, specifically for any existing billboard not legally permitted by the City.
- **Oil:** The oil line adjacent to Mile Post (MP) 1 that crosses under the tracks into the Bekins property may require additional encasement.

2.3.1.11 Relocation of Monitoring Wells

The proposed Project would require a number of groundwater monitoring wells to be abandoned or relocated. Figure 2-7 depicts the monitoring wells to be abandoned and relocated. Fourteen wells within the Project Study Area are designated to remain in place, four wells may need to be closed, and four wells may need to be relocated. All of monitoring well relocation or abandonment would be performed by BNSF prior to the start of the proposed Project.

Monitoring Wells to Be Relocated

Monitoring wells (MW-30, MW-39, MW-56, and MW-64) are located within and/or close to the proposed track alignment and may need to be relocated or closed prior to construction.

Monitoring Wells to Be Abandoned

Monitoring wells (MW-21, MW-44, MW-71, and MW-75) are located within and/or close to the proposed parking lot and/or within the 3rd Street improvement areas and may be protected in place prior to or during the construction phase. Well covers may need to be readjusted to grade upon completion of construction.

The remaining monitoring wells (MW-10, MW-11, MW-13, MW-14, MW-28, MW-33, MW-43, MW-55, MW-57, MW-60, MW-62, MW-63, MW-73, and MW-74) are located outside of the proposed improvements and would not likely require any future action associated with proposed improvements.

2.3.1.12 Safety Controls (Traffic and Rail Signals)

Safety control features are proposed as part of the proposed Project. These safety control features include but are not limited to new traffic signals, railroad signal equipment (compatible

with Metrolink's and BNSF's new positive train control systems), and railroad/pedestrian crossing equipment located at each at-grade railroad crossing. The at-grade railroad crossings and signals would be designed in accordance with Federal Railroad Administration (FRA) standards, CPUC standards, and SCRRA standards.

2.3.1.13 Rail Operations

The proposed Project would extend existing and future Metrolink commuter train operations from the existing terminus at the Depot to a new terminus approximately one-mile east in downtown San Bernardino. Specifically, trains from the San Bernardino to Los Angeles Union Station line (Metrolink San Bernardino line) and Inland Empire to Orange County line (Metrolink IEOC line) would use the proposed 1-mile extension. Trains coming into service would depart the layover facility at the existing Eastern Maintenance Facility for the revenue start at the new rail platform improvements located at Rialto Avenue and E Street. From there, trains would travel west to the Depot and then continue on their respective routes. At the end of their service line, trains would drop off their last passengers at the Depot and the new rail platforms. Typical trains would consist of one locomotive and four to six passenger coaches; by 2020, the typical train could consist of up to eight passenger coaches pushed and pulled by two locomotives.

An operating plan for the proposed Project was developed using Rail Traffic Controller (RTC) modeling with the operational analysis based on input from SANBAG, Metrolink, Amtrak, and BNSF (HDR Engineering, Inc. 2010a). SANBAG anticipates that the proposed Project would be operational in the middle of 2014. According to the plan, rail operations are not anticipated to increase service lines and no additional trains would be required. The proposed Project would involve only existing train service with the addition of one new station stop.

2.3.1.14 Omnitrans Bus Facility Operations

The bus facility would act as a transfer point between Metrolink regional passenger rail service, the Omnitrans E Street Corridor (or Corridor 1)[1], and fixed-route bus service that would connect the northern portion of the City with the City of Loma Linda. Construction of the E Street Corridor improvements is currently scheduled to be completed by fall 2013, with bus service beginning in January 2014. The bus facility would service a bus fleet consisting of 60-foot articulated compressed natural gas (CNG) propulsion buses (Parsons 2009a), similar to the existing sbX fleet. In addition to Omnitrans bus service, the Victor Valley Transit Authority (VVTA) and Mountain Area Regional Transit Authority (MARTA) may also use the bus facility for part of their bus service.

Bus maintenance activities for Omnitrans operations would continue to occur at the East Valley Operations and Maintenance Facility (EVOMF) site located at the corner of 5th Street and Medical Center Drive in the southwestern portion of the City. This facility includes a fuel/wash/vault pull for the bus fleet, heavy maintenance and body/paint functions, a centralized parts storeroom for the entire fleet, and coach and employee parking. Based on the continued use of the EVOMF, the proposed bus facility would not involve any heavy maintenance or refueling activities on site.

[1] Omnitrans prepared an Initial Study/Mitigated Negative Declaration (IS/MND) for the sbX E Street Corridor BRT Project and adopted the MND in August 2009. The FTA issued a FONSI for the sbX E Street Corridor BRT Project in September 2009. These previously prepared documents are incorporated by reference into this EA/DEIR and evaluate the construction and operational effects of the sbX E Street Corridor BRT Project. For this reason, this EA/DEIR does not revisit bus operations associated with the sbX E Street Corridor BRT Project and focuses the environmental assessment on effects related to the construction and operations of the bus facility.

Starting January 2014, sbX buses would operate at 10-minute headways throughout the day from 6:00 a.m. to 8:00 p.m. during weekdays. Weekend service may be provided, but would be contingent on initial ridership. The sbX E Street Corridor (or Corridor 1) would require 16 vehicles initially to serve the 10-minute headway while maintaining sufficient vehicles for backup purposes. Eventually, the fleet may grow to 24 vehicles to accommodate 5-minute headway service (Parsons 2009a).The E Street Corridor route is forecast to provide service for approximately 11,400 daily transit trips in 2030 (Parsons 2009a). It is expected that many of these transit riders would be diverted from other transit routes, including Route 2, which currently has approximately 4,000 daily passenger boardings along an approximately 16-mile-long route serving the Cities of San Bernardino and Loma Linda (Parsons 2009a). With the completion of the E Street Corridor, approximately 3,000 new daily transit trips are projected to be diverted from personal automobiles.

2.3.1.15 Maintenance

Maintenance of the rail right-of-way is the responsibility of SANBAG. The maintenance of the SCRRA commuter rail system is governed by the FRA regulations and by the CPUC General Orders. SCRRA owns a fleet of locomotives and coaches that are maintained at the Central Maintenance Facility (CMF) in Los Angeles and at the Eastern Maintenance Facility in Colton. Routine vehicle inspection and light repair are also performed at various layover sites throughout the SCRRA commuter rail system including the existing IEMF. Typical railroad maintenance and inspections would be conducted throughout the operational phase of the proposed Project in accordance with SCRRA/Metrolink, BNSF, and Amtrak standard practices.

2.3.1.16 Construction Schedule and Details

Construction of the proposed Project could begin in early to mid-2013 and take approximately 18 to 24 months to complete. The work would be accomplished over three phases and proceed generally from west (Mt. Vernon Avenue) to east (E Street). A description of the phasing concept is as follows:

- During Phase 1:
  - Relocate utility to remove conflicts.
  - Construct embankments, culvert extensions, and retaining walls for the proposed Project west of the Depot.
  - Construct and remove track for the proposed Project west of the Depot.
  - Close 3rd Street and I Street.
  - Remove some of the platform tracks at the Depot.
  - Construct the remainder of the track west of the Depot.
- During Phase 2:
  - Remove existing platform tracks as needed at the Depot.
  - Re-grade, install drainage, and construct retaining walls between the Depot and Rialto Avenue.
  - Remove and reconstruct platforms at the Depot.
  - Construct new rail platforms near the intersection of Rialto Avenue and E Street.
  - Construct track between Mt. Vernon bridge and E Street.
  - Install pedestrian overpass west of the Depot.

- During Phase 3 (cutover):
  - Remove the remainder of tracks not needed at the Depot.
  - Construct the remainder of tracks at the BNSF Short Way and the Depot.
  - Construct bus facility and supporting access improvements.
  - Resurface tracks as specified.

During peak construction (Phase 2), up to 100 construction workers, supervisory staff, and inspectors would be on site. Construction of the proposed Project would require nearly 13,000 linear feet of new track, with ties, ballast/sub-ballast, and other track materials. In total, the anticipated construction disturbance area is estimated at approximately 85 acres; however, actual physical disturbance would generally be limited to 5 acres or less on any given day. Some of these materials would likely be delivered to the construction site via rail. Other construction materials, such as asphalt, concrete, drainage pipe, metal handrails and fences, and other specialty items would most likely be provided from local vendors whenever possible and would likely be delivered to the site via truck. The proposed Project would not require significant amounts of earthwork because the new track is essentially matching existing grades.

2.4 PROJECT DESIGN OPTIONS

SANBAG is considering the following design options for the proposed Project. These design options include one or more modifications to a specific component of the proposed Project. These options are not considered alternatives to the proposed Project given that each option would be functionally equivalent in terms of the associated Project Study Area and operational characteristics, except as noted.

2.4.1 Pedestrian Overpass Design Options 1A and 1B

Pedestrian Overpass Options 1A and 1B are being considered to allow efficient use of the Metrolink system and facilitate an orderly, safe evacuation of the platforms in the event of station emergencies. These design options would be situated just west of the Depot to minimize visual impacts on the Depot, maximize circulation space around the new structures, and maintain fire truck access to the trackside of the Depot.

Pedestrian Overpass Options 1A and 1B may include open-to-air steel structure variations for the pedestrian overpass, as shown in Figures 2-8 and 2-9. Though not in the style of the Depot, the truss structure and exposed, painted steel would reflect the ingenuity and robustness of rail construction and American rail networks. These design options would have one stairway entering and exiting a protected and covered elevated passageway. All other railway, station, and bus facility improvements proposed as part of the Project would remain the same.

The prominent differences between Pedestrian Overpass Options 1A and 1B are the railing design and elevator enclosure design. Option 1A contains glass railings and translucent glass elevator enclosures. Option 1B presents a more industrial aesthetic, with metal bar railings and a minimized glass elevator enclosure. Both alternatives would have a security booth at the base of the stair tower on Platform A. Massing would be reduced in comparison with the pedestrian overpass bridge design proposed as part of the Project. Pedestrian Overpass Options 1A and 1B would achieve the goals and objectives of the proposed Project.

Figure 2-8. Pedestrian Overpass Design Option 1A

Figure 2-9. Pedestrian Overpass Design Option 1B

2.4.2 Pedestrian Underpass Design Option 2

Pedestrian Underpass Design Option 2 is being considered to minimize potential visual impacts that could detract from the aesthetic value of the historic Depot structure. Pedestrian Underpass Design Option 2 would both protect the welfare of pedestrians and facilitate efficient operation of the Metrolink and Amtrak facilities housed at the Depot. Pedestrian Underpass Design Option 2 would allow efficient use of the Metrolink system and facilitate an orderly, safe evacuation of the platforms in the event of station emergencies.

Pedestrian Underpass Design Option 2 would result in less constriction of the train platform at the stair locations, as shown in Figure 2-10. The stairs could be minimized to 8 feet wide, or approximately 9 feet with curb, which would leave 7 feet to the Metrolink platform edge and 10 feet to the platform edge. Pedestrian Underpass Design Option 2 would have two stairwells entering the passageway at Platform A and a combined stairway exiting just west of the Depot. Pedestrian Underpass Design Option 2 would have a standalone security booth situated along Platform A. All other railway, station, and bus facility improvements proposed as part of the Project would remain the same. Pedestrian Underpass Design Option 2 would achieve the goals and objectives of the proposed Project.

Figure 2-10. Pedestrian Underpass Design Option 2

2.4.3 3rd Street Open Design Option 3

Third Street Open Design Option 3 is being considered to avoid costs associated with the closing of 3rd Street under the proposed Project and corresponding potential disruptions to existing traffic circulation patterns. This option would result in upgrades to the existing at-grade crossing between J Street and I Street. Vehicular and pedestrian traffic along 3rd Street between the J Street intersection and North I Street intersection would remain. All other improvements

associated with this design option would be similar to those described for the proposed Project. Figure 2-11 depicts the study area associated with 3rd Street Open Design Option 3, and Figure 2-12 depicts this option's preliminary design. As shown, the study area for this alternative would be slightly reduced along K Street, north of 2nd Street.

Third Street Open Design Option 3 would require the following infrastructure improvements:

- 3rd Street would be open between J Street and the rail line, and the existing grade crossing would remain.
- The existing at-grade crossing would be redesigned in accordance with the latest SCRRA *Highway Grade Crossing Manual* guidelines.
- The street improvements at the intersection of Rialto Avenue and I Street would be the same as those for the proposed Project.
- K Street would not be widened on the east side, as proposed for the Project, and properties along K Street would not be affected (see Figure 2-13).

With 3rd Street open at the grade crossing, traffic using 3rd Street to access the Depot or Mt. Vernon Avenue (via West 2nd Street) would not be rerouted to access the Depot using West 2nd Street. Therefore, 3rd Street Open Design Option 3 would achieve the goals and objectives of the proposed Project.

2.5 ALTERNATIVES CONSIDERED AND REJECTED FROM FURTHER ANALYSIS

Section 15126.6(c) of the CEQA Guidelines states that alternatives may be eliminated from detailed consideration in the EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid any significant environmental effects. Similarly, NEPA requires a brief discussion of the reasoning for eliminating those alternatives that have been rejected for further detailed study (40 CFR 1502.14).

The following sections identify the alternatives that were considered but rejected from further consideration.

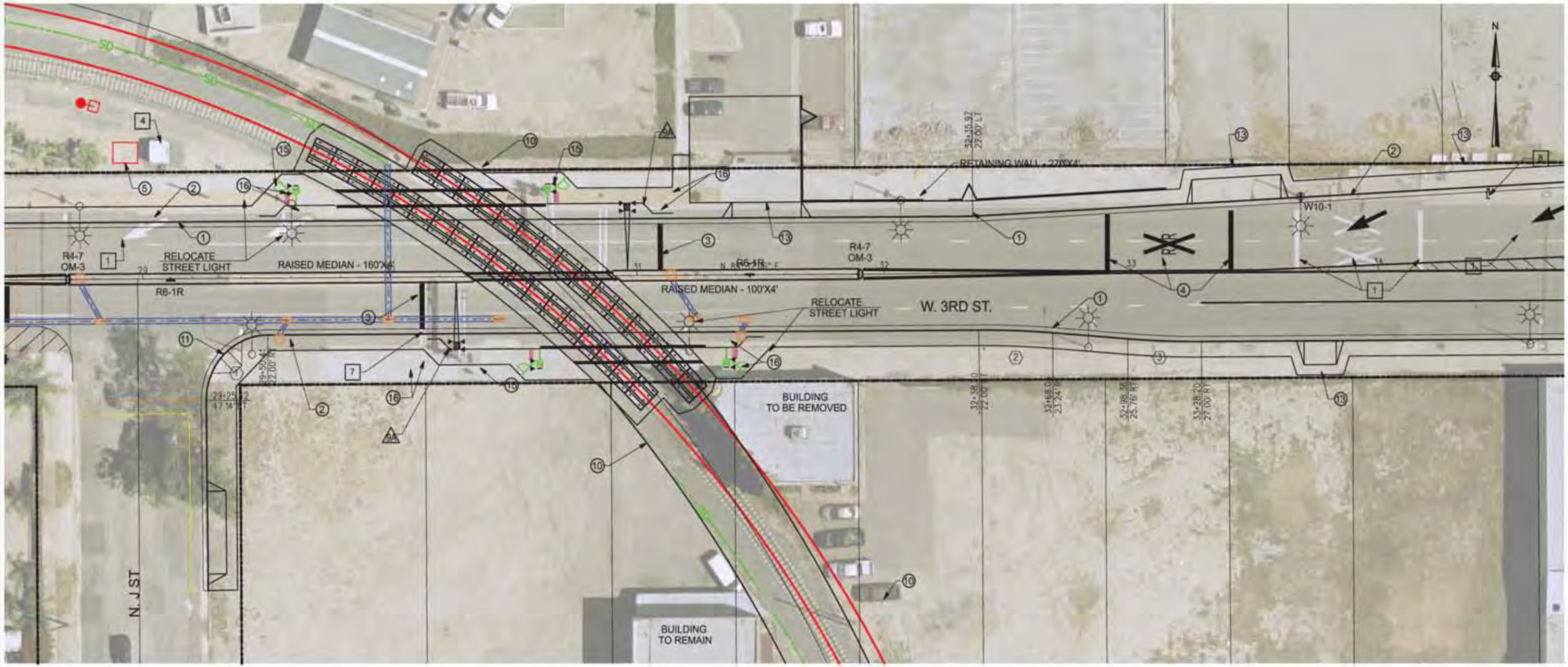
2.5.1 Existing Rail Alignment Alternative

This alternative would include only some of the improvements presented for the proposed Project. The Existing Rail Alignment Alternative would include only some of the station improvements proposed by the Project and only minimal upgrades to the existing rail infrastructure to accommodate Metrolink rail service throughout the 1-mile existing single-track alignment. This alternative would allow use of the current rail line for existing freight and proposed Metrolink service, but would not involve a second track in locations where only a single track currently exists throughout the rail corridor.

This alternative would result in the provision of Metrolink transit service between the Depot and the proposed station at E Street and Rialto Avenue to accommodate high existing passenger rail ridership in the Inland Empire. However, this alternative would not include expansion or improvements to at-grade crossings at five locations and, therefore, would result in only few segments of the rail alignment being upgraded to the one mainline track. This alternative, similar to the proposed Project, would result in an additional rail platform, thereby increasing the frequency of trains throughout the alignment. By not expanding the rail alignment to provide a second track, this alternative would not require full and partial property acquisitions of some of the properties adjacent to the Project Study Area, including historically significant structures that

Source: HDR (2012), ESRI (2011)

Figure 2-11
Project Study Area and 3rd Street (Open) Project Design Option Components
Downtown San Bernardino Passenger Rail Project



SOURCE: HDR Engineering (November, 2010)

Figure 2-12
Design of 3rd Street Open Design Option
Downtown San Bernardino Passenger Rail Project

Proposed Double Track
Property with Active Business
Property Affected by Aquisition

N

0 300 600 1,200
Feet

SOURCE: HDR Engineering (July, 2011)

Figure 2-13
Parcel Acquisitions and Relocations for the 3rd Street Open Design Option
Downtown San Bernardino Passenger Rail Project

would otherwise be demolished under the proposed Project. Additionally, the alternative would not result in other needed improvements to the 1-mile track segment of rail alignment including:

- The track would not be designed to accommodate trains traveling at a maximum speed of 25 mph; therefore, trains would need to travel at slower speeds to ensure safe travel.
- The alignment would not be redesigned to ease the severe curvature at the 3rd Street crossing.

This alternative would be capable of achieving some, but not all, of the goals and objectives of the proposed Project and would avoid some of the environmental impacts identified for the proposed Project. However, this alternative would involve operations on a single track instead of a double track, which would force Metrolink to run reduced frequency train service along the 1-mile extension relative to current service on the Metrolink San Bernardino and Inland Empire to Orange County lines. As a result, this alternative would likely involve slower train speeds and would require a more coordinated scheduling system for operations to prevent train delays or collisions. Additionally, this alternative would not include additional safety measures included in the Project, which are needed to reduce the potential for vehicle and pedestrian conflicts with trains traveling through the rail corridor. Consequently, this alternative would not provide passenger and rail safety measures and upgrades needed to fully and effectively expand Metrolink service in San Bernardino and would be inconsistent with SCRRA, CPUC, and Metrolink standards. For these reasons, this alternative was not carried forward for consideration in the EA/EIR.

2.5.2 Alternative Train Technologies

In conjunction with SANBAG's and FTA's consideration of alternative forms of transportation for the proposed Project, several train technologies were initially considered in addition to the use of commuter rail (e.g., extension of Metrolink service) as proposed. These other technologies included light-rail transit, diesel multiple unit, and bus rapid transit. The main reason for the elimination of these alternative technologies is that they would require a transfer of service at the Depot and would be unable to provide uninterrupted service to the remainder of the Metrolink system. Additionally, these technologies would be unable to operate on existing freight lines and would require a separate parallel track system, which could result in greater impacts to adjacent uses as compared to the proposed Project. Based on these considerations, these alternative technologies would be unable to accomplish the basic objectives of the proposed Project and were not carried forward for additional consideration in the EA/DEIR.

2.5.3 Alternative Layover Facilities

The extension of Metrolink train service through the Project Study Area would result in corresponding changes in current overnight layover operations, which may include the use of the IEMF, platform tracks, and Mount Vernon Yard. In conjunction with the proposed Project, several alternative layover facilities and configurations to accommodate the Project were considered. As described previously, the Project would include the extension of the Metrolink San Bernardino line and Metrolink IEOC line train service to the E Street rail platforms. As a consequence, the Depot would effectively become a run-through location, thereby precluding the continued use of the existing layover storage pattern with the exception of IEMF, which would continue to provide train storage capacity. The following discussion describes the layover facilities considered for the Project.

2.5.3.1 Use of Existing San Bernardino Layover Facilities

The use of existing San Bernardino layover facilities was initially considered through a reconnection of the IEMF, platform tracks, and Mount Vernon yard to the proposed main lines. However, preliminary evaluation of the Project's operations using these combined would not provide sufficient storage capacity to include eight-car/two-locomotive trainsets by the year 2030. Based on these considerations, it was determined that the continued use of the existing San Bernardino layover facilities would not achieve the applied criteria and would not reduce or avoid any significant impacts associated with the Project. Therefore, this alternative was not carried for additional consideration in the EA/DEIR.

2.5.3.2 Sierra Layover Facility

A Sierra layover facility was initially considered and was to be located on a large vacant property along the northerly side of the Redlands subdivision between Sierra Way and Arrowhead Way. This site would have been capable of accommodating up to six eight-car trainsets but would have needed to be further expanded to accommodate 18 trainsets by 2030. The size and configuration of this site location would likely have required a stub-ended track configuration, which is considered a significant drawback from an operational standpoint, given that it provides no escape route in the event that the ladder-track is obstructed or becomes inoperable. Ideally, a run-through track would have been required along the northerly side of the site; however, unless the site was expanded east of Sierra Way, there would have been no possibility of a tail track. This would have significantly added to the site's acquisition costs.

The site is zoned for heavy industrial uses; however, there are residential uses north and east of the site that could be adversely affected by this alternative. Further, a new elementary school is planned at a location one block east of this site at the corner of Rialto Avenue and Allen Street. In SANBAG's discussions with the City in relation to this issue, it was concluded that the placement of a layover facility at this site location would be incompatible with the City's long-range plan for the area. Based on these considerations and the fact that it would result in impacts that would not otherwise occur under the Project, the Sierra layover facility site was not carried forward for additional consideration in the EA/DEIR.

2.5.3.3 G Street Layover Facility

A G Street layover facility site was also considered and would have been located south of the Redlands subdivision right-of-way and bounded by the I-215 freeway on the west and G Street on the east. The site would have accommodated up to 16 trainsets, which would have exceeded the current requirement for opening day but would have been insufficient for accommodating 2030 layover requirements. The presence of Lytle Creek along the southern boundary would have effectively impeded any expansion of this site location to the south. Additionally, areas immediately along G Street would have needed to be made available for commercial uses to help offset acquisition costs; therefore, expansion along G Street is not feasible. Likewise, the H Street storm drain bisects this site and a significant portion of the structure would need to be retrofitted to accommodate railroad loading. The layover facility would also have required stub-ended track, which is less desirable than a tail track, because a stub-ended track could trap equipment in the yard in the event of a malfunctioning switch or derailment at the yard lead. Based on these considerations, a G Street layover facility was determined to be infeasible. Further, the use of a G Street layover facility would not have reduced or avoided any significant impacts associated with the Project. Therefore, this alternative was not carried for additional consideration in the EA/DEIR.

2.5.3.4 Layover Facility Criteria Considered

As discussed above, additional layover storage configurations that were initially considered but not carried forward for evaluation in the EA/DEIR include the use of the existing San Bernardino layover facilities, a Sierra layover facility, and a G Street layover facility. Each of these alternatives was briefly described along with SANBAG's reasoning for not carrying them forward for consideration in the EA/DEIR. Each concept was evaluated according to the following criteria:

- Capacity: Determined the minimum threshold to maintain the existing 11-car capacity with the ability to expand to 18 trains by 2030 and provide storage for eight-car/two-locomotive trainsets.
- Operations: Reviewed the site location to verify if it satisfies train and cumulative delay criteria based on the position of each proposed site relative to the network and station stops.
- Land Use: Looked at current and proposed land uses adjacent to the site and within the immediate vicinity.
- Cost: Reviewed whether site acquisition and development costs exceed the available funds.

As indicated previously, the proposed Project would incorporate the use of existing layover facilities already constructed at the Eastern Maintenance Facility, located on the BNSF Short Way, and IEMF. The Eastern Maintenance Facility in combination with IEMF currently provides trainset storage for the Metrolink San Bernardino line and the Metrolink IEOC line. Given that these existing facilities would provide the necessary layover storage capacity along with maintenance, fueling, and cleaning facilities for Metrolink trains, no additional layover alternatives were carried forward for consideration in the EA/DEIR. Additionally, plans to add capacity to meet future demand for trainset storage at the existing Eastern Maintenance Facility were approved by the SCRRA on April 21, 2011. Therefore, the Eastern Maintenance Facility and IEMF are the logical choices for a layover facility to meet current and future demand for trainset storage for the region, and no additional layover facilities would be proposed.

2.6 RESPONSIBLE AND TRUSTEE AGENCIES

In accordance with Section 15367 of the State CEQA Guidelines, a lead agency is defined as "the public agency which has the principal responsibility for carrying out or approving a project." With respect to NEPA, the lead agency has the authority and responsibility to: a) take such actions as are necessary and proper, within the authority of the lead agency, to facilitate the expeditious resolution of the environmental review process for the project; and b) prepare or ensure that any required EIS or other document required to be completed under NEPA is completed in accordance with this section and applicable federal law.

In the case of the proposed Project, the lead agency is SANBAG for CEQA compliance and FTA for NEPA compliance. State law requires that all EIRs be reviewed by trustee and responsible agencies. A "trustee agency" is defined in Section 15386 of the State CEQA Guidelines as "a state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of the State of California." In accordance with Section 15381 of the CEQA Guidelines, the term "responsible agency" includes "all public agencies other than the [l]ead [a]gency which have discretionary approval power over the project."

2.6.1 Federal Agencies

2.6.1.1 Federal Transit Administration

The FTA is the Federal lead agency under NEPA for the proposed project and based on the findings of this document, will prepare a FONSI or NOI to prepare an EIS. The FTA provides stewardship of combined formula and discretionary programs to support a variety of locally planned, constructed, and operated public transportation systems throughout the United States. Transportation systems typically include buses, subways, light rail, commuter rail, streetcars, monorail, passenger ferry boats, inclined railways, or people movers. The proposed Project is within Region 9 (IX), an area that oversees the States of Arizona, California, Hawaii, and Nevada, as well as the territories of Guam, American Samoa, and the Northern Mariana Islands.

2.6.2 State Agencies

2.6.2.1 California Department of Transportation

Caltrans manages more than 50,000 miles of California's highway and freeway lanes, provides intercity rail services, permits more than 400 public-use airports and special-use hospital heliports, and works with local agencies. Caltrans carries out its mission of improving mobility across California with six primary programs: Aeronautics, Highway Transportation, Mass Transportation, Transportation Planning, Administration, and the Equipment Service Center. The Project Study Area is within Caltrans District 8, an area that covers Riverside and San Bernardino Counties in southern California. The Project will require an encroachment permit from Caltrans for improvements for the right-of-way for I-215.

2.6.2.2 State Historic Preservation Officer

The State Historic Preservation Officer (SHPO) is responsible for the operation and management of the California State Office of Historic Preservation, as well as long-range preservation planning. SHPO assists the State Historical Resources Commission (SHRC) in accomplishing its goals and duties by developing and administering a program of public information, education, training, and technical assistance. SHPO also serves as Executive Secretary to the SHRC and is responsible for developing an administrative framework for the SHRC and implementing its preservation programs and priorities (California State Office of Historic Preservation 2011).FTA is required to consult with SHPO as part of the NEPA process per the requirements of the Section 106 process.

2.6.2.3 California Public Utilities Commission

The CPUC regulates privately-owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies. The CPUC serves the public interest by protecting consumers and ensuring the provision of safe, reliable utility service and infrastructure at reasonable rates, with a commitment to environmental enhancement and a healthy California economy (California Public Utilities Commission 2011).

2.6.2.4 California Department of Fish and Game

The California Department of Fish and Game (CDFG) has jurisdiction over the conservation, protection, and management of wildlife, native plants, and habitat necessary to maintain biologically sustainable populations. CDFG is responsible for consultation with lead and responsible agencies to provide the requisite biological expertise to review and comment on environmental documents and impacts arising from project activities.

2.6.2.5 California Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB) through the Regional Water Quality Control Board (RWQCB), Santa Ana Region, would require SANBAG's construction contractor to file a notice of intent to comply with the National Pollution Discharge Elimination System (NPDES), general stormwater permit for construction activities and, if applicable, the NPDES general stormwater permit for industrial activity.

2.6.3 County Transportation Agencies

2.6.3.1 SANBAG

SANBAG is the CEQA lead agency for the proposed Project. As the County Transportation Commission, SANBAG supports freeway construction projects, regional and local road improvements, train and bus transportation, railroad crossings, call boxes, ridesharing, congestion management efforts, and long-term planning studies. SANBAG administers Measure I, the half-cent transportation sales tax approved by county voters in 1989.

SANBAG is also a member agency of SCRRA, which is a Joint Powers Authority consisting of the five county transportation planning agencies—the Los Angeles County Metropolitan Transportation Authority (Metro), the Orange County Transportation Authority, the Riverside County Transportation Commission, the Ventura County Transportation Commission, and SANBAG. The SCRRA, commonly known as Metrolink, was formed to develop a regional transit service to reduce the congestion on highways and improve mobility throughout the southern California region. Metrolink is a regional rail system, including commuter and other passenger services, that links communities to employment and activity centers.

2.6.3.2 Omnitrans

Omnitrans is the public transit agency serving the San Bernardino Valley. Omnitrans is a joint powers authority governed by a 20-member board of directors representing the County of San Bernardino and the 15 cities Omnitrans serves. Founded in 1976 through a joint powers agreement, Omnitrans carries over 15 million passengers each year throughout its 480-square-mile service area (Omnitrans 2011).

2.6.4 Local Agencies

2.6.4.1 City of San Bernardino

The City encompasses approximately 59.3 square miles (City of San Bernardino 2011), and the Project Study Area is in the southern part of the City. The City has primary land use authority within the city limits. The exception to this occurs within existing BNSF rail right-of-way, which is under the jurisdiction of the Surface Transportation Commission.

2.6.5 Discretionary Actions and Project Approval

The Project will require certification of the EIR by SANBAG's Board of Directors and issuance of a FONSI by the FTA. Approvals for the Project will be required by the agencies listed in Table 2-1.

Table 2-1. Agencies Requiring Discretionary Actions

Agency	Discretionary Action
SANBAG	Board of Director's approval of project and certification of EIR.
FTA	Determination of FONSI and signature.
Caltrans	Possible consultation for right-of-way. Most of the construction would be conducted within the existing right-of-way, which would be exempt.
City of San Bernardino	Design review. Approval of General Plan Amendment to the City's Circulation Map and roadway encroachment permits. Parcel map approval for extension of F Street and the bus facility turnout.
CPUC	Grade crossing improvements.
SCRRA	Design review.
Omnitrans	Design review.
SHPO	Section 106 National Historic Preservation Act (NHPA) consultation and concurrence for improvements at the Depot.
CDFG	Consultation if burrowing owl is identified.
RWQCB	Approval of notice of intent for compliance the general construction permit and supporting stormwater pollution prevention plan (SWPPP).

3.0 CEQA ENVIRONMENTAL IMPACT REPORT EVALUATION

3.1 ENVIRONMENTAL IMPACT REPORT INTRODUCTION

This chapter presents the EIR analysis for the proposed Project. The EIR includes an evaluation of project-specific and cumulative impacts for each resource area considered as part of this analysis. The sections below present the local and regional context applied in this environmental analysis and the criteria and terminology used in determining the significance for resource-specific impacts.

3.1.1 Regional and Local Environmental Setting

The City of San Bernardino, in the eastern half of the San Bernardino Valley (Valley), is approximately 60 miles east of the City of Los Angeles. The Valley is largely suburban in character with concentration of commercial and industrial development particularly along the I-10, I-15, and I-215 freeways. The regional area contains a diverse collection of land-use types including residential, commercial, storage/warehouse, office, and industrial uses. Land uses within and adjacent to the Project Study Area are generally characterized by older industrial and commercial areas typically found along railway corridors with some adjacent residential neighborhoods.

The proposed Project is located in the San Bernardino Basin, in the northern Peninsular Ranges geomorphic province, which extends north to the foothills of the San Bernardino and Santa Monica Mountains, and south to the 28th parallel in Baja California, Mexico. The Peninsular Ranges are bounded to the north by the Transverse Ranges and to the east by the Salton Trough, with a majority of the province continuing southward beyond the United States and into Mexico (Norris and Webb 1990; Smith et al. 2008). The San Bernardino pull-apart basin is bounded to the north by the San Bernardino and San Gabriel Mountains and to the south by the Perris and San Jacinto Mountain structural blocks. The basin is dominated by Quaternary-age alluvial deposition associated with the Santa Ana River system. These alluvial fan deposits variously consist of sand, gravel, and cobbles as well as strongly eroded gravel and pebbly sands.

The Project Study Area's general topographic character is relatively flat, sloping slightly to the south. The elevation of the Project Study Area ranges from approximately 1,100 to 1,080 feet above mean sea level (amsl) (Appendix C) and is characterized as being a relatively flat-lying, alluvium filled valley. The Project Study Area is located near several perennial streams emanating from the nearby San Bernardino Mountains, including City Creek and Lytle Creek. The areas within the Project Study Area are underlain by very young alluvium, and the alluvial soils are composed primarily of sand and gravel with some local finer and coarse deposit (Appendix E).

3.1.2 Determining Significance under CEQA

Based on public comments, public agency input, and preliminary studies (e.g., traffic impact analysis, air quality technical memorandum, cultural resources technical memorandum, noise technical memorandum, etc.), SANBAG determined that an EIR would be required for the Project. In addition, SANBAG considered agency and public input received during the notice of preparation (NOP) comment period (May 10, 2011 to June 11, 2011) and a scoping meeting held on May 17, 2011 to determine the scope of the evaluation for the EIR.

The NOP, agency and/or public comments, and preliminary technical analyses identified ten issue areas as potentially significant environmental impacts associated with the proposed Project. These environmental issues and their corresponding section numbers are as follows:

- 3.2, Aesthetics
- 3.3, Air Quality and Greenhouse Gases
- 3.4, Biological Resources
- 3.5, Cultural Resources
- 3.6, Geology and Soils
- 3.7, Hazards and Hazardous Materials
- 3.8, Hydrology and Water Quality
- 3.9, Land Use and Planning
- 3.10, Noise and Vibration
- 3.11, Transportation and Traffic

Sections 3.2 through 3.11 provide a detailed discussion of the environmental setting, thresholds of significance, impacts associated with the proposed Project, mitigation measures designed to reduce significant impacts, and cumulative impacts. Other environmental issues identified in Appendix G of the CEQA Guidelines that were identified as having less-than-significant or no impacts are detailed in Section 3.12.

For each impact identified in the EIR, a statement of the level of significance of the impact is provided. Impacts are categorized in the following categories:

- A designation of **no impact** is given when no adverse changes in the environment are expected.
- A **less-than-significant impact** would cause no substantial adverse change in the environment.
- A **significant (but mitigable) impact** would have a substantial adverse impact on the environment but could be reduced to a less-than-significant level with incorporation of mitigation measure(s).
- A **significant unavoidable impact** would cause a substantial adverse effect on the environment, and no feasible mitigation measures would be available to reduce the impact to a less-than-significant level.
- **Level of significance after mitigation** is the remaining impact after the identified mitigation is implemented.

This EIR uses specific terminology in determining the area involved in the assessment of the proposed Project, as defined in Table 3.1-1.

Table 3.1-1. Area Definitions and Distinctions

Area Title	Area Location	Description
regional area	Regional area extending outside of the Project Study Area to include surrounding areas outside of the Project.	Area generally depicted in Figure 1-1 (Regional Location) in Section 1.1.
Project	Area within the established Project Study Area map for the proposed Project. (Also used in the evaluation of the Pedestrian Overpass Design Options 1A and 1B and Pedestrian Underpass Design Option 2.)	Area depicted in Figure 2-1 in Section 2.3.
Project Study Area	Same as the Project.	Same as the Project. See Figure 2-1 in Section 2.3.
bus facility	Area including the Omnitrans Bus Facility and extension of F Street and all other ancillary improvements to the southwest corner of Rialto Avenue and E Street.	Area depicted in Figure 2-1 in Section 2.3 as the "Omnitrans Bus Facility," including areas west of E Street, east of F Street, south of 2nd Street (for street improvements to E and F Streets), and north of the rail right-of-way.
3rd Street Open Design Option 3 Study Area	Area within a study area map prepared specifically for consideration of the 3rd Street Open Design Option 3.	Includes a smaller area than the Project Study Area, specifically by eliminating the area east of K Street between 2nd and 3rd Streets from consideration. See Figure 2-11 in Section 2.4.
rail corridor	Existing rail right-of-way within the Project Study Area.	The rail alignment depicted in Figure 1-2 in Section 1.1.
survey area	500-foot buffer survey area that extends from the rail corridor.	Only relevant in terms of the biological resources evaluation. Depicted in Figure 3.4-2.
traffic study area	Area within downtown San Bernardino, including the entire Project Study Area and areas south and east of an existing freight yard, and bisected by I-215 Freeway.	Only relevant in terms of the transportation evaluation. Depicted in Figure 3.11-1.
Area of Potential Effects (APE)*	Area delineated by complete parcel boundaries of properties affected within the Project Study Area. Includes areas potentially having permanent and temporary effects.	Only relevant in terms of the cultural resources evaluation. Defined by the SHPO guidance requiring that all parcels that are affected be included within an evaluated project APE (depicted in Figure 3.5-1).

*The APE, analyzed in compliance with NEPA, was also used in this CEQA analysis for evaluating cultural resource impacts. The APE was analyzed in accordance with SHPO guidance and contains a larger area of potential effect than the Project Study Area.

This terminology will be used throughout this chapter.

3.1.3 Cumulative Impact Assessment

The combined, incremental effects of human activity, referred to as cumulative impacts, pose a serious threat to the environment. While they may be insignificant on their own, cumulative impacts accumulate over time, from one or more sources, and can result in the degradation of important resources. Section 15355 of the CEQA guidelines (2005) defines cumulative impacts as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

The individual effects may be changes resulting from a single project or a number of separate projects, whereas the cumulative impact is the change in the environment from the incremental impact of a project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor, but collectively significant, projects taking place over a period of time. An adequate discussion of significant cumulative impacts involves analyzing either (1) “a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency,” or (2) “a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact.” This cumulative impact analysis applies a combination of the methods described above. For example, as described in the traffic impact analysis, traffic volume forecasts are based on the results of a 5% increase in traffic demand. The model was prepared and refined specifically for use in the traffic, air quality, and noise evaluations. The remaining environmental resource areas evaluated in the EIR were analyzed in relation to past, present, and foreseeable future development projects, as listed in Table 3.1-2.

Table 3.1-2. Past, Present, and Potentially Foreseeable Future Projects

Title	Schedule	Location	Project Description
Freight Service	Existing service.	Redlands rail corridor along BNSF Railroad.	Freight service to three customers per month along the rail line.
Local Omnitrans Bus Service	Existing service.	Throughout San Bernardino.	Existing bus services include 12 local bus routes (1, 2, 3/4, 5, 7, 8, 9, 10, 11, 14, 15, and 215).
Amtrak Long-Distance Passenger Rail Service	Existing service.	Existing rail right-of-way.	Existing Amtrak train service routes #3 (westward) and #4 (eastward), the Southwest Chief, operate daily on BNSF Main Track 3 through the Project Study Area, stopping at the Depot.
Metrolink Commuter Passenger Rail Service	Existing service.	Existing rail right-of-way.	Existing commuter service includes 11 existing Metrolink trains—eight San Bernardino to Los Angeles Union Station trains via the Metrolink San Bernardino line and three trains to Oceanside via the Metrolink IEOC line.
Widening of the I-215 Freeway	Construction in 2009–2013.	I-215 between I-10 and SR-210 in San Bernardino.	Widening of I-215, and addition of a carpool lane in both directions between I-10 and SR-210, connector ramps, and auxiliary lanes along the corridor.

Title	Schedule	Location	Project Description
Eastern Maintenance Facility	Construction in 2011–2012. Operational in 2012.	1945 Bordell Avenue, with W. Mill Street to the north, E. Laurel Street to the south, and Bordell Avenue to the east in the City of Colton.	A layover and maintenance facility for Metrolink passenger train service would be developed from the Inland Empire to Orange and Los Angeles Counties.
Mount Vernon Avenue Overhead Replacement Project Bridge	Unknown, likely to be constructed in 2012. Operational in 2012.	Mount Vernon Avenue between 2nd and 5th Street in San Bernardino.	Bridge No. 54C-0066 to propose replacement of a length of 1,000 feet or more to accommodate four lanes of traffic at Mount Vernon Avenue.
Omnitrans sbX Bus Rapid Transit Project	Construction in 2012–2013. Operational in 2013.	E Street corridor right-of-way in San Bernardino.	The future planned sbX service/ E Street Corridor Project with 16 station locations designed to provide rapid bus transit (RBT) with platform-level boarding, landscaped stations, public art, and 60-foot-long coaches.
San Bernardino Transit Center	Construction in 2012–2013. Operational in 2013.	North of E Street platforms at corner of Rialto Avenue and E Street in San Bernardino.	The transit center would be designed to serve Metrolink commuter rail, Omnitrans sbX bus rapid transit, and Redlands corridor rail transit passengers. Would include 22 bus bays.
National Orange Show Industrial Project	Unknown, likely to be constructed in 2012 or 2013. Operational in 2013.	Bounded by Arrowhead Avenue, Esperanza Street, and Central Avenue in San Bernardino.	Construction of four industrial buildings and 752,770 square feet of building area.
Transit-Oriented Development - Land Use Intensity Increases	Beginning 2012.	Cities of San Bernardino, Loma Linda, and Redlands adjacent to the Redlands rail corridor.	Increase in land use densities and development of updated land use plans and development regulations to advance transit-oriented development within 0.5 mile of proposed transit stations in the Redlands corridor.
Redlands Passenger Rail Project	Construction in 2013–2016, Operational in 2016	From downtown San Bernardino to the vicinity of the University of Redlands along the 9-mile Redlands rail corridor.	Light rail passenger service with 5 stations located at the Rialto Avenue and San Bernardino Transit Center, Tippecanoe Avenue, New York Street, Downtown Redlands, and the University of Redlands.
Midnight & Pick-A-Part Auto Recycling Center Project	Unknown. Likely to be constructed in 2013 and operational in 2013.	701 North Waterman Avenue; east side of Waterman Avenue between 6th and 9th Streets in San Bernardino.	Modifications to existing facility, including construction of 17 new canopies, addition of 1,118 square feet, and various on-site improvements for expansion of the existing auto recycling business.

Title	Schedule	Location	Project Description
California High-Speed Train Project, San Bernardino option of the Los Angeles to San Diego (via the Inland Empire)	Unknown. Likely to be constructed after 2015 and operational in 2020	Various locations within the Inland Empire, including through San Bernardino	The option of the high-speed train project would operate adjacent to the existing San Bernardino Metrolink line and would include a platform(s) adjacent to the rail platforms proposed as part of the proposed Project.
I-215 Bi-County HOV Lane Gap Closure Project	Adoption of mitigated negative declaration in 2011. Construction in 2012–13	Portions of I-215 from south of the I-215/ SR-60/SR-91 interchange to north of I-215/I-10 interchange.	Project includes a new high-occupancy vehicle lane in each direction on I-215.
Long-Term Maintenance of Flood Control and Transportation Facilities Located throughout San Bernardino County	Notice of preparation issued in October 2010. Draft EIR planned for late 2011.	Drainage facilities (March 2010) throughout Zone 2, which includes the City of San Bernardino	The project includes maintenance of various flood control channels, basins, earthen streams and dams, bridges, and road culvert crossings throughout San Bernardino County. The purpose of the project is flood protection and road safety.
Palm/Industrial Distribution Center	Construction starts in late 2011 and ends in 2013.	Located on a 38.4-acre site adjacent (south) to I-215 at the northeast corner of the intersection of Palm Avenue and Industrial Parkway	The project includes the construction of a 678,275-square foot warehouse/distribution facility on 38.4 acres.

Source: HDR Engineering, Inc. 2010b, 2011a.

ICF, SANBAG, City of San Bernardino, sbX, San Bernardino County, Caltrans, and Omnitrans websites, accessed September 2011.

3.2 AESTHETICS

This section evaluates the impacts of the proposed Project on aesthetics. The technical information within this section is based on field reconnaissance and regulatory setting research conducted for the proposed Project.

3.2.1 Environmental Setting

3.2.1.1 Regional Setting

The Project is proposed within the City of San Bernardino, which is located approximately 60 miles east of the City of Los Angeles, in the southwestern portion of San Bernardino County. San Bernardino serves as the governmental/administrative center for the County and is also a major commercial and industrial center.

The City is located in what is known as the Valley, which includes some 15 cities and unincorporated areas, and nearly 75% of the county population, but occupies only about 2.5% of San Bernardino County's approximately 500-square mile land area (SANBAG 2009: 1). The primary defining geographic features include the San Bernardino Mountains to the north, which on clear air days form a dramatic visual backdrop to the City and Valley, and the Santa Ana River Watershed to the south. The Valley floor slopes downward gently from the San Bernardino Mountains such that much of downtown San Bernardino and the adjoining neighborhoods to the west and south appear to be essentially flat to a casual observer.

Both the City of San Bernardino and the Valley are urbanized and characterized by extensive commercial and industrial development that is often adjacent to rail corridors and the freeways serving the region, including the I-10, I-15, and I-215 freeways. Single-family dwellings predominate when residential development is present, as found both in the more suburban portions of the Valley as well as in the neighborhoods that adjoin downtown San Bernardino.

3.2.1.2 Local Setting

The Project Study Area contains a diverse collection of land-use types including residential, commercial, storage/warehouse, office, industrial uses, and some vacant land. The majority of the Project is located within the Santa Fe Depot Strategic Policy Area and the Downtown Strategic Policy Area. Nonconforming residential land uses are present within the Santa Fe Depot station area. Major activity centers surrounding the Project Study Area include the Santa Fe Depot, City and County administration uses, Carousel Mall, and San Manuel Stadium.

Visual Resources within the Rail Corridor

Key Views and Landscape Units

The Visual Impact Assessment (VIA) guidelines provide an evaluative framework that defines the visual setting in terms of landscape units and/or key views. A *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. 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 or railroad 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 within the rail corridor, this assessment uses a key view approach in lieu of the landscape unit approach.

A *viewshed* comprises all the surface areas visible from an observer's viewpoint. The limits of a viewshed are defined as the visual limits of the views from the proposed Project. The viewshed also includes the locations of viewers likely to be affected by visual changes brought about by the proposed Project.

Within the evaluative framework, changes in the quality and character of visual resources in the viewshed are assessed with respect to viewer response, as discussed in the following sections.

Determining Quality and Character of Visual Resources

Identify Visual Character—The *visual character* of a view is described by the topography, land uses, scale, form, and natural resources depicted in the view. The assessment of the visual character is descriptive and not evaluative because it is based on defined attributes such as physical traits—including form, color, line, and texture (pattern elements)—as well as pattern character traits—the dominance, scale, and diversity or continuity of visual elements.

Assess Visual Quality—*Visual quality* refers to the aesthetics of the view. Determining the quality of a view can be subjective because it is based in part on the viewer's values and notions about what constitutes a quality setting. In an effort to establish an objective framework, this assessment applies the evaluative criteria (i.e., vividness, intactness, and unity) and qualitative rankings (low, medium, and high) presented in the FHWA guidelines.

FHWA states that this method should correlate with public judgments of visual quality well enough to predict those judgments. This approach to evaluating visual quality can also help identify specific methods for mitigating each adverse impact that may occur as a result of a project. The three criteria for evaluating visual quality can be defined as follows:

- *Vividness* is the visual power or memorability of landscape components as they combine in distinctive visual patterns.
- *Intactness* is the visual integrity of the natural and human-built landscape and its freedom from encroaching elements. It can be present in well-kept urban and rural landscapes, as well as in natural settings.
- *Unity* is the visual coherence and compositional harmony of the landscape considered as a whole. It frequently attests to the careful design of individual human-made components in the landscape.

Views of high quality may 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 the very low visual quality and 7 representing very high visual quality, this is equivalent to visual quality rating numbers 5.5 through 7. Views of medium quality may have interesting but minor landforms, some variety in vegetation and color, and/or moderate scenery (equivalent to visual quality 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).

Assessing 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 or railroad project.

Viewer exposure is typically assessed by measuring the number of viewers exposed to the resource change, type of viewer activity, duration of their view, speed at which the viewer moves, and position of the viewer. High viewer exposure heightens the importance of early consideration of design, art, and architecture and their roles in managing the visual resource effects of a project. Because objects in the foreground have more detail, views from nearby locations are more detailed compared to objects that are indistinguishable in the distance. Viewers would experience visibility of a proposed project to varying degrees in a particular viewshed, depending on distance or other intervening structures or obstacles.

Viewer sensitivity is defined both as the viewer's concern for scenic quality and the viewer's response to change in the visual resources that make up the view. Local values and goals may confer visual significance on landscape components and areas that would otherwise appear unexceptional in a visual resource analysis. The sensitivity of viewers in their perception of visual quality, as well as their sensitivity to changes in visual quality, varies based on familiarity with the view, sense of ownership of the view, and the nature of one's activity while receiving the view. In turn, these considerations determine how much attention the receptor focuses on the view.

Most residential viewers are typically sensitive to visual quality and changes in visual quality due to their familiarity with the view, investment in the area (as, for example, homeowners or long-time residents), and sense of ownership of the view. In a way, the view from residences and their yards represents a visual extension of residents' property, and changes in this view are noticeable and can result in strong positive or negative reactions. Other nonresidential viewers, with exceptions, usually have an average sensitivity to visual quality or change. These include people on the local roadway system, including commuting motorists and pedestrians. However, at those times when these "other" viewers are traveling for pleasure, they may be somewhat more sensitive to their surroundings. Recreationists also have a range of potential sensitivities. Players participating in team sports activities and spectators at such sports events are presumed to have a low to average sensitivity to the visual setting outside the playing field because their attention is generally intently focused on the playfield. By contrast, recreationists engaged in bicycling, hiking, and running often have higher levels of sensitivity because they frequently choose settings with more visual appeal for their recreational activities.

Viewers in the project viewshed include residential viewers, Depot patrons and existing transit riders, commuting motorists, a small number of workplace viewers (workers in nearby office, retail, commercial, and industrial settings), business patrons, and spectators at San Manuel Stadium events.

Key Views

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 viewpoints that would most clearly display the visual effects of the proposed Project. Key views also represent the primary viewer groups that would potentially be affected by the proposed Project.

For purposes of this analysis, a view is considered key if at least one of the following circumstances apply:

- Visual resources are present, regardless of the quality of the view. The sensitivity of the affected viewer group is medium or high, and the duration of the view is long-term.
- The quality of the view is medium or high, regardless of whether visual resources are present. The sensitivity of the viewer group is medium or high, and the duration of the view is long-term.
- The view is distinct, clear, and unobstructed from the highway or railroad to adjacent businesses and is viewed regularly by a large number of commuters. In this case, the viewer sensitivity is medium, and the view is long-term.

The analysis identified 23 specific viewpoints that could be noticeably altered by the proposed Project, as described in Table 3.2-1. The location of and direction of the views are depicted in Figure 3.2-1, and the views are shown in Figures 3.2-2 through 3.2-24 (including one rendering of the proposed pedestrian overcrossing at the Depot). Figures 3.2-1 through 3.2-24 can be found at the back of this section. The key views were chosen:

- To provide a representative cross-section for scenic quality
- To represent typical views along the alignment
- To represent views from a potential nearby sensitive viewer group (i.e., residents)

Table 3.2-1. Key Observation and View Points Representative of the Alignment

Observation/ View Point	Location Description	Figure Number
VP A	Railroad Crossing at Rialto and Pico Avenues, View Southeast	Figure 3.2-2
VP B	Housing along West Side, Pico Avenue, View North	Figure 3.2-3
KOP 1	Pico Avenue at Rialto Avenue, View Northeast across Railroad Right-of-Way	Figure 3.2-4
KOP 2	Santa Fe Depot Building, along Third Street Looking Northeast	Figure 3.2-5
Rendering	Potential Proposed Passenger Overpass Bridge/Towers Design, at Rear of Depot Building, Looking from West to East	Figure 3.2-6
KOP 3	Railroad Crossing, Looking Northwest, Third Street, East of J Street	Figure 3.2-7
VP C	Looking Northeast at Acquisition Site, K Street and Second Street	Figure 3.2-8
VP D	Looking West, Third Street at J Street	Figure 3.2-9
VP E	Looking Northeast, across Third Street, Potential Staging Site	Figure 3.2-10
VP F	Looking South, Vacant Lot, Southeast Corner of J and 3rd Streets	Figure 3.2-11
KOP 4	Looking West along the South Side of Rialto Avenue at I Street and the Railroad	Figure 3.2-12
VP G	Looking North, Railroad Crossing, Rialto Avenue at I Street	Figure 3.2-13
VP H	Southeast Corner of I Street and Rialto Avenue, View Southeast	Figure 3.2-14
VP I	Looking West, G Street at Railroad Right-of-Way	Figure 3.2-15
VP J	Looking East, G Street at Railroad Right-of-Way	Figure 3.2-16
KOP 5	Looking South, E Street at Railroad Crossing/Bekins Moving and Storage at Bus Facility Site	Figure 3.2-17
VP K	Looking East, E Street at Railroad Crossing	Figure 3.2-18
VP L	Looking West along Railroad Right-of-Way at E Street at Bus Facility	Figure 3.2-19

Observation/ View Point	Location Description	Figure Number
	Site	
VP M	Looking South from Rialto Avenue, Just West of E Street at Bus Facility Site	Figure 3.2-20
VP N	Looking South, F Street at Rialto Avenue at Bus Facility Site	Figure 3.2-21
VP O	Looking North (along F Street extension), Just West of San Manuel Stadium	Figure 3.2-22
VP P	Looking Northwest (along F Street extension), West of San Manuel Stadium	Figure 3.2-23
VP Q	Looking Northeast at North End of San Manuel Stadium	Figure 3.2-24

Note
KOP: Key Observation Point
VP: View Point
KOPs with numbers (1-5) indicate key observation points chosen for analysis to represent the rail corridor's visual character and quality.
OPs with letters (A-K) indicate key observation points not chosen for analysis yet represents specific key views that could be noticeably altered by the Project.
One rendering is included to represent the proposed passenger rail overpass at the Depot.

In addition, five of these representative views have been designated as *key observation points* (*KOPs*). These KOPs were chosen for analysis of the rail corridor's visual character and quality because they uniquely convey the visual character and quality of the railroad viewshed at locations where components of the proposed Project are proposed and/or where sensitive viewers are present.

- KOP 1 (Figure 3.2-4)—View northeast along Pico Avenue just north of Rialto Avenue
- KOP 2 (Figure 3.2-5)—Depot railroad tracks and passenger platforms, view east
- KOP 3 (Figure 3.2-8)—Third Street near J Street at railroad crossing, view northwest
- KOP 4 (Figure 3.2-12)—View west along Rialto Avenue from I Street
- KOP 5 (Figure 3.2-17)—View south along E Street at railroad crossing at bus facility site

Definition of Visual Impact Levels

The VIA is intended to ensure that visual resources are adequately considered as part of the CEQA environmental review process. The VIA considers whether the proposed Project could result in character inconsistency and obstruction of views, thus affecting the area's visual character and quality.

- Criterion 1 (*Character Consistency*): A significant impact on visual resources would occur if a proposed project would introduce new visual elements that would strongly contrast or be incompatible with the character of the existing landscape or key view.
- Criterion 2 (*Obstruction of Views*): A significant impact on visual resources would occur if a proposed project would obstruct key views. The importance of a view is based on its character and quality, its viewers, and the duration of the view. For purposes of this analysis, a view is considered key if at least one of the following circumstances applies.
    a) Visual resources are present, regardless of the quality of the view. The sensitivity of the affected viewer group is medium or high, and the duration of the view is long-term.

b) The quality of the view is medium or high, regardless of whether visual resources are present. The sensitivity of the viewer group is medium or high, and the duration of the view is long-term.

c) The view is distinct, clear, and unobstructed from the highway to adjacent businesses and is viewed regularly by a large number of commuters. In this case, the viewer sensitivity is medium, and the view is long-term.

Impacts are characterized by their potential levels of significance.

- *Very Low*—Minor adverse change to the existing visual resource, with low viewer response to change in the visual environment. Unlikely to require mitigation.
- Low—Minor adverse change to the existing visual resource, with low viewer response to change in the visual environment. May or may not require mitigation.
- *Moderate*—Moderate adverse change to the visual resource with moderate viewer response. Impact can be mitigated within 5 years using conventional practices.
- *Moderately High*—Moderate adverse visual resource change with high viewer response or high adverse visual resource change with moderate viewer response. Extraordinary mitigation practices may be required. Landscape treatment required will generally take longer than 5 years to mitigate.
- *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 cannot mitigate the impacts. Viewer response level is high. An alternative project design may be required to avoid significant impacts.

Overall Assessment of Visual Character and Quality

Visual character within the project viewshed can be described as urban and densely developed. Land uses are somewhat varied, and mixed uses are common. A large proportion of the built environment consists of detached, single-story buildings. This accentuates, rather than contrasts with, the nearly flat topography of the area. In the western portion of the rail corridor viewshed, along Rialto Avenue west of Mount Vernon Avenue, there are several older commercial vehicle-service uses, adjoined to the north, south, and west in the vicinity of Pico Avenue by older single-family residences on small lots (Figures 3.2-2 through 3.2-4). This is also characteristic of the rail corridor between K and I Streets, where residential and sporadic commercial and industrial development occurs (Figures 3.2-7 through 3.2-14). The Depot building, both a significant historic and visual landmark, is located between these two mixed-residential neighborhoods (Figures 3.2-5 and 3.2-6). Adjacent to the Depot are extensive, related railroad yards that extend far west and east of the building on its north side.

East of the I-215 undercrossing, the rail corridor is bordered by industrial development on large parcels (Figures 3.2-15 and 3.2-16). Near E Street, this development transitions to office, general retail, and service commercial uses that are typical of suburban communities in southern California (Figure 3.2-17 through 3.2-20). A shopping center, bordered by parking lots on the north extends along the north side of Rialto Avenue between E and F Streets. Across Rialto Avenue, to the south, is a large vacant lot that extends west from E Street to the intersection of F Street (Figure 3.2-21), and is the proposed location of the Omnitrans Bus Facility.

San Manuel Stadium, a minor league baseball stadium, adjoins the commercial uses at E Street and Rialto Avenue, and is located approximately 150 feet south of the railroad alignment. Although the back of the stadium scoreboard structure abuts the west side of E Street, in many instances, sight lines into and from the stadium are obscured by its large expanse of parking lots, topography within the stadium, landscaping, and stadium architectural elements. In addition, the commercial and industrial uses located along the south side of the railroad alignment currently serve to buffer views from the north and northeast (Figures 3.2-21 through 3.2-24).

Horizontal lines dominate most east, south, and west-facing views within the project viewshed, with many of the south and west-facing views terminating at the horizon. In the portion of the project viewshed west of I-215, east-facing views terminate with the freeway's elevated roadway. East of the freeway, a small number of the taller office buildings can be seen in the downtown San Bernardino area, and clusters of mature trees peak above the freeway and provide contrasting vertical line elements. On clear days, the San Bernardino Mountains provide a dramatic backdrop to north-facing views, and the mountain ridgelines provide a significant contrasting curvilinear line pattern to the predominant horizontal line patterns found throughout the viewshed. Scattered clusters of mature evergreen trees provide another important contrasting curvilinear element to the predominant horizontal line patterns, as well as a contrasting color element in a setting in which gray, tan, white, and pale brown predominate within the palette of colors.

3.2.2 Regulatory Setting

3.2.1.3 Federal Policies and Regulations

Federal Highway Administration (FHWA) 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 NEPA as it relates to aesthetic impacts. The process used in the Visual Impact Assessment (VIA) generally follows the guidelines outlined in *Visual Impact Assessment for Highway Projects* (Federal Highway Administration 1988), as follows:

- Define the project setting and viewshed.
- Identify key views for visual assessment.
- Assess existing visual resources and viewer response.
- Depict the visual appearance of project alternatives.
- Assess changes to visual resources and predict viewer response to those changes.
- Assess the visual impacts of project alternatives.
- Propose methods to mitigate adverse visual impacts.

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

- 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 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 project features and locations were reviewed to enhance the visual environment for stationary and transient viewers of the DSBPRP.
- Appropriate mitigation measures have been identified.

A number of variables affect the degree of visibility, visual contrast, and the ultimate impact of a project. Such variables include the scale and size of facilities, distances and viewing angles, color and texture, and the influences of adjacent scenery or land uses. Even where visible, viewer response and sensitivity vary depending on viewer attitudes and expectations. Viewer sensitivity is distinguished among adjacent viewers in recreation, residential, and commercial and office/industrial areas, with the first considered to have the highest potential for sensitivity, while the latter two generally possess low levels of sensitivity, in part, because viewer activities can either encourage a viewer to observe the surrounding area more closely (e.g., driving for pleasure) or discourage close observation (e.g., commuting in heavy traffic). All of these viewer elements are considered when evaluating expected viewer response.

3.2.1.4 State Policies and Regulations

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, and is listed in Section 3.2.3, “Thresholds of Significance.”

3.2.1.5 Local Policies and Regulations

City of San Bernardino General Plan

The City of San Bernardino General Plan (City of San Bernardino 2005a) is the primary policy document governing aesthetics within the rail corridor. The Project Study Area also falls within the City’s General Plan and the key policies are reflected in the General Plan as follows.

Circulation Element

The General Plan’s Circulation Element specifies the following two components of its overall transportation-related vision:

- Establishing the Santa Fe Depot as a communitywide landmark and destination.
- Providing transportation alternatives, including light rail, bus, bicycle, and pedestrian paths and trails.

Goal 6.6 includes the promotion of a network of multi-modal transportation facilities that are safe, efficient, and connected to both the City and region. Related Policy 6.6.2 discusses the creation of a partnership with Omnitrans to identify public transportation infrastructure needs.

Goal 6.7 more explicitly references railroad transit and discusses the City's intention of working with railroads and other public agencies to minimize impacts on adjacent land uses.

Policy 6.7.3 encourages the use of buffers between residential land uses and railway facilities and encourages the construction of sound walls.

Policy 6.7.4 proposes that existing and future at-grade railroad crossings be identified and commits the City to pursuing funding.

No thoroughfares in San Bernardino have been designated as scenic corridors in the Circulation Element, and only two are under consideration as eligible scenic highways. These include State Route 30 (south from State Route 330) and State Route 330. Both highways are on the far northeastern boundaries of San Bernardino, and are approximately 7 miles away from the rail corridor, well outside the project viewshed.

Land Use Element

One of the relevant components of the Land Use Element supports enhancing the City's many significant features, such as the San Bernardino Mountains, Santa Ana River, and Cajon Wash. Several other goals either touch upon or directly address aesthetics concerns.

Goal 2.2 promotes development that integrates with and minimizes impacts on surrounding neighborhoods. Related Policy 2.2.5 ensures that ongoing dialogue is maintained with Caltrans, the railroads, and other agencies.

Goal 2.4 encourages enhancement of the quality of life and economic vitality by strategic infill of new development and revitalization of existing development. Related Policy 2.4.6 recommends collaboration with Omnitrans to promote redevelopment near transit stops and provide incentives for the provision of pedestrian amenities.

Goal 2.3 intends to make the City a dynamic and recognizable place for its residents, employees, and visitors. Goal 2.5 includes enhancing the aesthetic quality of land uses and structures in San Bernardino. Related Policy 2.5.6 requires that development be designed to complement and not devalue the physical characteristics of the surrounding environment.

Community Design Element

The Community Design Element contains the key goals and policies related to aesthetics, but none that are directly germane to highway and railroad improvement projects. Key components of the vision include the provision of transit improvements, creation of designed points of entry, communitywide and neighborhood design themes and sub-themes, enhanced communitywide maintenance, the preservation and integration of historic resources, the undergrounding of overhead utility lines, improving the quality of/and reducing the quantity of business signage, and installation of aesthetic enhancement along public rights-of-way, including landscaping and other forms of streetscape improvements.

The vision also encourages the development of unique entry features into the City as a whole and into distinct neighborhoods and districts to help define boundaries and act as landmarks, as specified in Goal 5.1. Related Policy 5.1.2 describes the provision of monumentation, including secondary entry points like the Santa Fe Railroad Passenger Terminal, which is listed as a secondary entryway and a gateway location.

Other goals and policies within the Community Design Element promote maintenance of major corridors. E Street is a corridor enhancement area, as designated on Figure CD-1 of the Community Design Element. Policy 5.2 states that San Bernardino's major corridors should be attractively designed, landscaped, and maintained.

Goal 5.4 states that individual projects should be well designed and maintained. Related Policy 5.4.2 states that the design of public facilities should fit well into their surroundings and incorporate symbolic references to the City.

Other General Plan Elements

The remaining General Plan Elements briefly reference aesthetics. For example, the Utilities Element contains goals that call for the undergrounding of utilities unless such undergrounding is infeasible due to environmental or other constraints (Goals 9.6, 9.8, and related Policy 9.8.2). The Natural Resources and Conservation Element includes Goal 12.8 and related Policy 12.8.1, which address the preservation of natural features that are important visual elements in the community.

3.2.3 Thresholds of Significance

For the purposes of the analysis in this EIR, in accordance with Appendix G of the State *CEQA Guidelines*, the proposed Project would have a significant environmental impact under CEQA on aesthetics if it would:

- Have a substantial adverse effect on a scenic vista.
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway.
- Substantially degrade the existing visual character or quality of the site and its surroundings.
- Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area.

3.2.4 Project Impacts

Impact Aesth-1: Have a substantial significant impact on a scenic vista

As previously described, no scenic vistas or corridors are present within the project viewshed. The views along the rail corridor are of low or medium quality and visual resources are limited to sporadic clusters of mature evergreen trees and the Santa Fe Depot—an architectural/historical landmark. Key views are limited to somewhat seasonal far-off views of the mountains. No significant impact would occur.

Impact Aesth-2: Substantially damage scenic resources including scenic highways

The Project Study Area is urbanized and essentially flat. All ground surfaces appear to be disturbed, paved, or developed with landscape features or buildings. No thoroughfares in San Bernardino have been locally designated as scenic corridors, and only two are under consideration as eligible scenic highways. These include State Route 30 (south from State Route 330) and State Route 330. Both highways are on the far northeastern boundaries of San

Bernardino, and are approximately 7 miles away from the rail corridor, well outside the project viewshed.

No other scenic resources, such as rock outcroppings or significant stands of trees, were identified within the Project Study Area or its viewshed during the field reconnaissance, or referenced as being present in local plans. No scenic resources, including scenic highways, are located in the project viewshed. No significant impact is anticipated to occur.

Impact Aesth-3: Result in impacts on views or substantially degrade the existing visual character of the site and surrounding area

Minor potential aesthetics impacts would result from earthmoving activities, limited removal of vegetation in the construction zone, and other construction activities (e.g., staging/stockpiling road-building materials, the presence of construction equipment, and temporary traffic barricades). Construction activities would include grading work, other routine construction activities, and truck shipments. No nighttime construction activities that would necessitate obtrusive lighting installations, or that would result in significant glare impacts, are proposed. Although they would be of temporary duration, construction activities would be visible from most of the adjacent commercial/industrial properties as well as from residential properties. With the exception of the Depot environs, existing visual quality in this setting ranges from low to moderate. Commercial, industrial, and disturbed vacant land uses are not considered sensitive to changes in the visual setting. Residents fronting the railroad right-of-way would have direct sight lines to the proposed site during the construction. However, due to the prevailing low-to-moderate visual quality within the visual setting, the long-standing presence of the railroad, the resulting minor and temporary changes associated with the construction process are not viewed as significant. Therefore, significant visual impacts under CEQA due to construction activities are not anticipated.

Once construction has been completed and the Project is operational, the visual character of the site would be transformed. All structural improvements at the Depot, rail platforms, bus facility, and parking lots would be designed in accordance with design guidelines and development standards as required by SCRRA, Omnitrans, and the City, and no significant impacts would result.

This analysis considers project-related changes at KOPs described in the affected environment. These changes are considered in the context of existing visual quality and character, viewer group and viewer group sensitivity, visual resources, features of the proposed Project, change to visual quality and character, change in views, and resulting visual impact.

KOP 1 (Figure 3.2-4)—View along Pico Avenue North from Rialto Avenue, Looking Northeast across the Railroad Right-of-Way

Figure 3.2-4 shows current conditions at KOP 1. Few significant foreground or mid-frame visual resources are present in this portion of the viewshed, and views in this location possess a low degree of vividness, notwithstanding the presence of clusters of mature evergreen trees. This is due to the large expanses of gray-colored, gravel-covered ground and asphalt pavement, as well as the visibility of the Depot railroad yard as a mid-frame visual element (visual quality rating 2). Disparate manmade elements are present in the views, giving views a low level of intactness and unity or compositional harmony (visual quality ratings 2 and 1, respectively). The key visual resource is the mature evergreen trees. Also, on clear days, views to the mountain ridgelines, as a distant backdrop element, would be the most significant visual resource. As

shown in Table 3.2-2, existing visual quality is 2 (very low). The primary viewer groups consist of commuting motorists traveling along Rialto Avenue, neighborhood motorists, and a small group of residents in the adjoining Pico Avenue neighborhood. Under the proposed Project, the double track configuration would begin mid-way between Rialto Avenue and Second Street and would be accommodated within the existing right-of-way.

Table 3.2-2. Existing Visual Quality at Key Observation Points

	Vividness	Intactness	Unity	Average (V+I+U)/3	Visual Quality
KOP 1	3	2	1	2	Very Low
KOP 2	7	6	5	6	Moderately High
KOP 3	2	3	2	2.33	Very Low
KOP 4	5	4	4	4.33	Moderate
KOP 5	3	2	2	2.33	Very Low

Changes in Visual Character

Under the proposed Project, design changes would occur fully within the existing right-of-way. No property acquisitions are proposed, and only partial removal of right-of-way trees is anticipated. Because the proposed improvements would be essentially at ground level and would occur within the current right-of-way, the Project would not strongly contrast with the existing visual character along the rail corridor.

Changes in Views

The proposed Project could potentially require removal of some of the existing mature trees; however, it would not alter key views of distant mountain ridgelines at KOP 1.

Impacts

The change in visual quality is shown in Table 3.2-3. Visual quality under the proposed Project would not change, remaining very low due to the very minor nature of the new project features being proposed as well as the improved maintenance that would accompany it. Although there is the potential for removal of some of the existing trees, appropriate replacement landscaping would address such a loss of trees and would essentially maintain visual quality as it exists at present (i.e.,-0.0). Thus, these minor changes would not be considered significant.

Table 3.2-3. Visual Quality at Key Observation Points under the Proposed Project

	Vividness	Intactness	Unity	Average	Average (As Proposed)	Change	Revised Visual Quality
KOP 1	3	2	1	2	2	-0.0	Very Low
KOP 2	7	6	5	6	6	0.0	High
KOP 3	2	3	2	2.33	2	-0.33	Very Low
KOP 4	5	4	4	4.33	4	-0.33	Moderate
KOP 5	3	2	2	2.33	1.83	-0.5	Very Low

KOP 2 (Figure 3.2-5)—View of the Depot Building from 3rd Street, Looking Northeast (Railroad Right-of-Way at Rear)

Figure 3.2-5 shows current conditions at KOP 2. The Depot building is the preeminent visual resource in the view and is a visually commanding presence in the neighborhood setting due to its architectural design, large scale, and topographically prominent siting in relation to the properties located to the south. The Depot building possesses a high degree of vividness due to its elaborate architectural design, massing, and scale. However, the setting contains other disparate design elements, including wide expanses of gray-colored street and sidewalk paving, surface parking lots, views into the Depot railroad yard at the ends of the building, and the presence of newer commercial development to the south that is not of similar architectural design quality. The resulting views possess a moderate level of intactness and unity (visual quality ratings 6 and 5, respectively). Although only a small number of mature trees are present in the viewshed, many of those trees are Canary Island Palms. The graceful crown of these trees and the long, straight, vertical lines of the trunks provide a contrasting vertical line element in the viewshed. On clear days, views to the mountain ridgelines would be a significant and complementary but distant backdrop element and visual resource. As shown in Table 3.2-2, existing visual quality is 6 (high). The primary viewer groups consist of commuting motorists traveling to and from the Depot along 3rd Street, neighborhood motorists, transit patrons, and Superior Market Center shoppers.

Under the proposed Project, the two main tracks and platforms located between the Depot building and BNSF Main Track 3 would be completely reconstructed. New platforms would be established that are between 17 and 22 feet wide and that range in length from 843 to 1,000 feet. Three nearby storage tracks and the BNSF Short Way (located southwest of the Depot) would be completely reconstructed and realigned to accommodate two new tracks within the existing railroad right-of-way. The reconstructed platforms will include new canopies, benches, mini-high ramps, variable message signs, lighting, closed-circuit television (CCTC) security cameras, drinking fountains, ticket vending machines, and trash receptacles.

The proposed railroad track and platform improvements at the Depot will necessitate the removal of trees and the reconfiguration of the east parking lot. As reconfigured, the parking lot will include new landscaping and would accommodate additional parking spaces (57 marked spaces will be replaced with a total of 83 marked spaces, including four handicapped spaces). In order to accommodate the reconfigured parking lot, 3rd Street would be realigned (see Figure 2-2B in Chapter 2.0, “Alternatives”).

To increase safety and to facilitate efficient pedestrian circulation at the Depot, a pedestrian overpass bridge is proposed approximately 28 feet west of/and at the rear of the Depot building. Figure 2-2A (see Chapter 2.0, “Alternatives”) depicts the location of the proposed element, and Figure 2-2C (see Chapter 2.0, “Alternatives”) provides architectural renderings of the proposed pedestrian bridge, which would consist of two enclosed stair/elevator towers (accommodating two elevators), connected by a protected and covered elevated passageway over the tracks. A security booth would occupy the base of the southern tower. Due to the status of the Depot building as a listed nationally-significant architectural and historic property, the proposed design would be sympathetic in terms of height, architectural detail, and placement, and its color palette would be consistent with the Depot’s natural tan exterior, light green trim, and orange colored roof. The bridge’s design is intended to respect the Depot’s design character while offering a contemporary complement to it. Proposed structural bridge elements include precast panels, light gauge protection mesh, stair railings, roofing, glass windows, as well as lighting.

Additional improvements at the Depot would include a number of elements that are proposed primarily on the building interior, such as new wayfinding signage, clocks, and portable brochure display cases. These features would not affect views of the building as a community visual resource. Other improvements proposed on the building exterior, including window awnings, and a flagpole and monument sign at the Depot entrance, would be designed in a manner that would be compatible with the design and historic character of the building.

Changes in Visual Character

Under the proposed Project, design changes would occur primarily within the existing Depot property but not exclusively. A large part of the Project involves removing and relaying tracks and building new platforms in locations where such features have been located historically, and would not dramatically diverge from or strongly contrast with current ground-level features. The most visible design change would be construction of the pedestrian overpass bridge and elevator/stair towers. Due to the plan to design this element in a manner that is sympathetic and complementary to the Depot building, no reduction of visual quality for this feature is anticipated; considered together, it would have the potential to improve the appearance of the back-of-Depot area. These changes would not affect the front of the Depot building. Changes proposed at the front of the Depot, including the installation of window awnings, a flagpole, and a sympathetically designed monument sign, also would not reduce visual quality.

In order to accommodate the reconfiguration of the east parking lot, a major realignment of 3rd Street is being proposed between K and J Streets. The 3rd Street alignment would shift southward, and partial or full property acquisitions are proposed to the south along K Street. The removal of right-of-way trees is also anticipated. Some of the proposed improvements would be essentially at ground level and would not dramatically diverge from or strongly contrast with current ground-level features. The proposed improvements also have the potential to slightly enhance visual quality in the setting. However, the removal of trees, if not replenished with commensurate new landscape features, is expected to reduce visual quality slightly.

Changes in Views

The proposed Project could require removal of some of the existing mature trees; however, it would not alter occasional key north-facing views of distant mountain ridgelines at KOP 2. Located behind the Depot building, the proposed passenger overpass bridge/towers structure would be screened from most views outside the platform area. Other proposed features, such as window awnings, the flagpole and monument signage would neither substantially alter the existing appearance of the building nor affect key views,

Impacts

The change in visual quality is shown in Table 3.2-3. Visual quality under the proposed Project would remain the same due to cancelling effects of the new design features being proposed, such as the proposed sympathetically designed passenger overpass bridge behind the Depot building, awnings, flagpole, and monument signage, weighed against the slightly adverse changes, such as the removal of some of the existing trees. Replacement landscaping would serve to minimize the impact of these changes, and potentially, could slightly enhance the visual quality of the area.

The area included within KOP 1 is an existing gateway entry into the City and a destination for transit opportunities via existing Metrolink, Amtrak, and bus service. The incorporation of constructed elements, decorative treatments, wayfinding/signage, and other architectural and landscaped features proposed in this area would result in an aesthetic change to the existing

Depot building and surrounding area. These changes would build upon the existing character-defining elements of the Depot rather than detract from them. Therefore, no impacts are anticipated.

KOP 3 (Figure 3.2-8)—View Northwestward across 3rd Street east of J Street, along the Railroad Right-of-Way

Figure 3.2-8 shows current conditions at KOP 3. Few significant foreground or mid-frame visual resources are present in this portion of the viewshed, and views in this location possess a low degree of vividness due to expanses of gray-colored, gravel-covered ground and asphalt pavement as well as the visibility of the Depot railroad yard as a mid-frame visual element. The presence of clusters of mature evergreen trees provides one of the few visual resources in the setting, making the vividness rating slightly higher (visual quality rating 2) than it would be otherwise. Disparate manmade elements are present in the views, giving views a low level of intactness and unity (visual quality ratings 3 and 2, respectively). Occasional views to the mountain ridgelines, as a distant backdrop element, would be the most significant visual resource. As shown in Table 3.2-3, existing visual quality is 2 (very low). The primary viewer groups consist of commuting motorists traveling along 3rd Street, neighborhood motorists, and residents in the neighborhood located directly to the south.

Under the proposed Project, the intersection of 3rd Street and J Street will be reconfigured as a "dog leg" and 3rd Street will be closed between J Street and the rail line. This would result in a new cul-de-sac, the removal of the existing grade crossing, and the restriping of northbound and southbound lanes to include one dedicated left-turn lane and one shared through right-turn lane. In addition, during the construction period the vacant lot at the southeast corner of 3rd and J Streets as well as the triangular-shaped lot located east of the railroad yard at the northwest corner of I and 3rd Streets may be used as a potential staging areas for the Project.

Changes in Visual Character

Under the proposed Project, design changes would occur fully within the existing street and railroad rights-of-way. With the exception of potential temporary construction easements (proposed on two adjacent vacant lots), no property acquisitions are proposed, and no removal of right-of-way trees is anticipated. Because the proposed improvements would be essentially at ground level and would occur within the current right-of-way, the Project would not strongly contrast with existing visual character along the rail corridor.

Changes in Views

The proposed Project would not alter seasonal key north-facing views of distant mountain ridgelines at KOP 3.

Impacts

The change in visual quality is shown in Table 3.2-3. Visual quality under the proposed Project would diminish only slightly but would remain very low due to the reconfiguration and closing of through access on the existing streets and the potential associated utilitarian road closure paving/hardscape features being proposed. These impacts would not be considered significant.

KOP 4 (Figure 3.2-12)—View West along Rialto Avenue from I Street, Adjoining the Railroad Right-of-Way

Figure 3.2-12 shows current conditions at KOP 4. The foreground and mid-frame views document a modest but well-maintained single-family residential neighborhood comprised of

early-twentieth century housing, all with fairly consistent front yard setbacks. Front yard and parkway lawn areas, as well as scattered small and large trees, make the views moderately vivid. Also, as is typical within the project viewshed, horizontal lines predominate and this west-facing view terminates at the horizon. Although somewhat unsightly, the regularized spacing and height of the power lines adds an interesting contrasting vertical element to the view. Disparate manmade elements consisting of differing building types on the south versus north sides of Rialto Avenue and sporadic commercial and industrial buildings with divergent massing and setback characteristics are present in the view, giving it only a moderate level of intactness and unity (visual quality ratings 4 and 4, respectively). As a distant backdrop element, occasional partially constrained north-facing views to the mountain ridgelines would be the most significant visual resource. As shown in Table 3.2-2, existing visual quality is moderate. The primary viewer groups consist of neighborhood motorists and pedestrians.

Changes in Visual Character

Under the proposed Project, design changes would occur within the existing street and railroad rights-of-way, and full property acquisitions are proposed along the east side of I Street south of the railroad right-of-way. I Street at Rialto Avenue will be converted to a cul-de-sac on the south with the north leg of the intersection converted to a right-in/right-out configuration. An emergency access connection will be constructed between the I Street cul-de-sac and Rialto Avenue that will be controlled by locked gates and utilized by the City Fire Department (see Figure 2-4B in Chapter 2.0, “Alternatives”). In addition, full acquisition of the properties bordering the railroad right-of-way on the east side of I Street is proposed.

Some limited removal of right-of-way trees may also occur. Because the majority of the proposed improvements would be essentially at ground level and would occur within the current right-of-way, the Project would not strongly contrast with existing visual character along the rail corridor. Potential demolitions of the modest industrial buildings along the east side of I Street may also reduce visual quality slightly.

Changes in Views

The proposed Project would not alter seasonal key north-facing views of distant mountain ridgelines at KOP 4.

Impacts

The change in visual quality is shown in Table 3.2-3. Visual quality under the proposed Project would diminish only slightly but would remain moderate due to the reconfiguration and closing of through access on I Street and the associated road closure paving/hardscape features and potential demolitions being proposed. The impact would not be considered significant.

KOP 5 (Figure 3.2-17)—View along E Street South of Rialto Avenue, Looking South across the Railroad Right-of-Way to the Bus Facility Site

The photo provided in Figure 3.2-17 shows current conditions at KOP 5. The view in this setting is distinguished by the diverse range of commercial building styles and placements and related pole signs. On the west side of E Street abutting the railroad right-of-way (on the south) is the distinctive four-story Bekins Moving and Storage Building, the tallest building along the rail corridor (vividness rating 3). Approximately 150 feet wide, this large building blocks north-facing views from the south and southwest. Note that vacant land borders the right-of-way on the west and north (outside the photo frame) where the bus facility is proposed. Other than scattered clusters of trees, no visual resources are present in this portion of the viewshed. Disparate manmade elements are present in the views, giving them a low level of intactness and unity

(visual quality ratings 2 and 2, respectively). As a distant backdrop element, seasonal north-facing views of the mountain ridgelines would be the most significant visual resource present. As shown in Table 3.2-2, existing visual quality is 2 (very low). The primary viewer groups consist of commuting motorists traveling E Street, neighborhood motorists, employees of neighboring office uses, commercial patrons for businesses along E Street, as well as San Manuel Stadium patrons.

Changes in Visual Character

Under the proposed Project, two 20-foot-wide side platforms and one 30-foot-wide center platform would be constructed, as well as two new stub tracks that would terminate just west of E Street. The new platforms would include canopies, benches, mini-high ramps, variable message signs, lighting, CCTV security camera, drinking fountains, ticket vending machines, and trash receptacles. The bus facility would include additional amenities, buildings, and roadway improvements and parking. Approximately 300 feet west of E Street and directly south of the new platforms, a 265-space parking lot is proposed on property bordering San Manuel Stadium on the north. The parking lot would serve Omnitrans bus patrons, Metrolink customers, and train crews. Establishment of a pedestrian path connecting the proposed E Street station platforms to San Manuel Stadium is under consideration and would include related landscaping, lighting, benches, trash receptacles, and bicycle racks.

The San Manuel Stadium parking lots located directly south and southwest of the stadium would also accommodate detention basin infrastructure, which would be constructed beneath them. The parking lots to the west and south of the stadium would also serve as staging areas during the construction process. Both processes involve temporary changes within the viewshed that would occur during the construction period only.

In addition, during the construction period the vacant lot bordering the station site on the north may be used as a potential staging area for the Project prior to construction of the Omnitrans bus facility. The approximately 12,000 square-foot bus facility would have vehicle ingress/egress from the northwest corner of the property at F Street and Rialto, include up to 22 bus bays and bus turnouts, frontage street access improvements, pedestrian access improvements (e.g., crosswalks) to facilitate movement between the bus facility and adjacent rail platforms, and associated support facilities (e.g., security and lighting). A LEED gold rating is being sought for the development.

The proposed Project would not be constructed fully within the existing right-of-way and would require a combination of partial and full property acquisitions along the south side of the right-of-way. The features would clearly contrast with existing visual character along the rail corridor, but the degree of change proposed would not be incompatible with the current visual setting's features. New lighting features would be proposed as part of the Project at the bus facility, rail platforms, and parking lot; however, light-sensitive viewers are not present in the setting and, in any case, the project lighting would be designed to avoid spill light pollution and glare.

Changes in Views

The proposed Project would require removal of some existing mature trees and the demolition of the abutting four-story Bekins Moving and Storage Building, changing views in all directions within this portion of the viewshed. The Project would also result in new building construction, including the approximately 12,000-square foot building and other changes involving the Omnitrans bus facility. However, visual quality in this location is low and the proposed Project would not materially diminish key north-facing views of distant mountain ridgelines at KOP 5. Due to the absence at present of other key visual resources in this setting, north-facing views

(i.e., views of mountain ridgeline) from San Manuel Stadium would be enhanced rather than negatively affected.

Impacts

The change in visual quality is shown in Table 3.2-3. Visual quality under the proposed Project would be reduced slightly but would still retain a visual quality rating of "low." This is because the new design features, such as the new bus facility and pedestrian walkways, and improved maintenance that would accompany it would be offset by potential building demolitions, tree removals, installation of rail platforms, and the establishment of a new surface parking lot. No significant impact would occur.

The area included within KOP 5 would become a gateway entry and destination in the City in the provision of transit opportunities and development potential associated with the proposed bus facility and rail station. The incorporation of constructed elements, decorative treatments, wayfinding/signage, and other architectural and landscaped features proposed in this area would result in an aesthetic change to the existing vacant site and provide for an inviting designation within the City. A beneficial impact is anticipated, and no impacts would result.

Impact Aesth-4: Result in significant impacts on lighting

SCRRA standard recommendations for station platform lighting are an average of 5 foot-candles for platforms and an average of 10 foot-candles at all other areas, including station canopies. A commensurate approach would be taken in designing parking lot lighting (e.g., near E Street). All such lighting features would be positioned and shielded so as to avoid spillover light pollution and glare. Hence, no significant impacts related to lighting and glare are anticipated. Also, no lighting would be installed at other nonstation locations along the rail corridor. Thus, no significant light or glare-related impacts would occur as a result of the proposed Project.

3.2.5 *Mitigation Measures*

The proposed Project would not result in significant impacts under CEQA. Although there is some potential for quiet zone mitigation measures to be required along portions of the alignment, further analysis will be needed in order to determine an approach that best meets the standards of reasonableness and appropriateness for the local community/design context. Therefore, at present, no mitigation measures are called for. SANBAG best management practices (e.g., local design context-appropriate landscape replenishment/enhancement practice along rail corridors) and compliance with development standards in place by the City would further ensure that no significant impacts on visual resources would result.

3.2.6 *Level of Significance after Mitigation*

No mitigation measures are required.

3.2.7 *Cumulative Impacts*

A list of related projects includes a combination of railroad operations improvement programs and/or physical construction projects. Of the projects listed in Table 3.1-2, four are railroad operational improvement programs that have had, or would have, no discernible significant impact on aesthetics (freight service changes along the Redlands corridor, local Omnitrans bus service improvements, and Metrolink and Amtrak train service changes). Eight other projects

call for construction; however, of these eight only three of the projects occur within the project viewshed. These include:

- widening of I-215 in the project viewshed north-south along I street
- replacement of the Mount Vernon Bridge (north-south and west of the Depot)
- operation of the Omnitrans express bus rapid transit service along E Street (Project involves construction of a bus facility only and not service)

The area of effect for cumulative impacts on visual resources would consist of a viewshed extending out 1 mile north and south from the rail corridor along the 1-mile length of the rail corridor. Visual quality within the rail corridor viewshed was assessed as low-to-moderate, with visual quality ratings at the five key observation points ranging from 1.66 (very low) to 4.33 (moderate). The ratings were generally highest where significant vegetation, particularly mature trees, was present, property maintenance levels were high, and pleasing but unexceptional architectural elements were also present (e.g., the south side of Rialto Avenue west from I Street).

It is not anticipated that the proposed Project would result in a cumulative impact in relation to the other related projects in the San Bernardino that fall within the project viewshed. No scenic vistas or corridors are present within the project viewshed. The views within the rail corridor are of low or medium quality, and visual resources are limited to sporadic clusters of mature evergreen trees and somewhat seasonal far-off views of the mountains. In instances where trees would be removed for the Project, following best management practice, SANBAG, in cooperation with the City, would identify measures that would be taken to replace existing trees with new landscaping of commensurate quality appropriate to the setting. Finally, the proposed Project would not introduce new structural elements that would substantially block existing significant views of mountain ridgelines because improvements would largely be limited to ground level. Although there is some potential for quiet zone mitigation measures to be required, further analysis will be needed in order to identify the approach that best meets the standards of reasonableness and appropriateness for the local community/design context, and to ensure that no substantial impact on visual resources would occur.

Where project elements would be slightly more prominent in visual terms, as in the case of the rail and bus station improvements proposed at E Street, the low-rise, largely open passenger station platform and bus bay features would only minimally constrain north-facing sightlines of the mountain ridgelines, and most views would continue to be available to viewers at the location with the exception of on the interior and along the south side of the Omnitrans building.

At the Depot, the most design-sensitive element, the passenger overpass bridge and stair/elevator towers, would be designed to be sympathetic in terms of height, architectural detail and placement, and color to the Depot. The bridge's design is intended to respect the Depot's design character while offering a contemporary complement to it. Similarly, the window awnings, monument sign, and flagpoles proposed at the Depot entrance would not result in significant changes to visual quality in this location. Therefore, no significant impacts on visual quality at the Depot location are anticipated.

In summary, adverse operational and construction-related cumulative aesthetics impacts under CEQA are not anticipated.

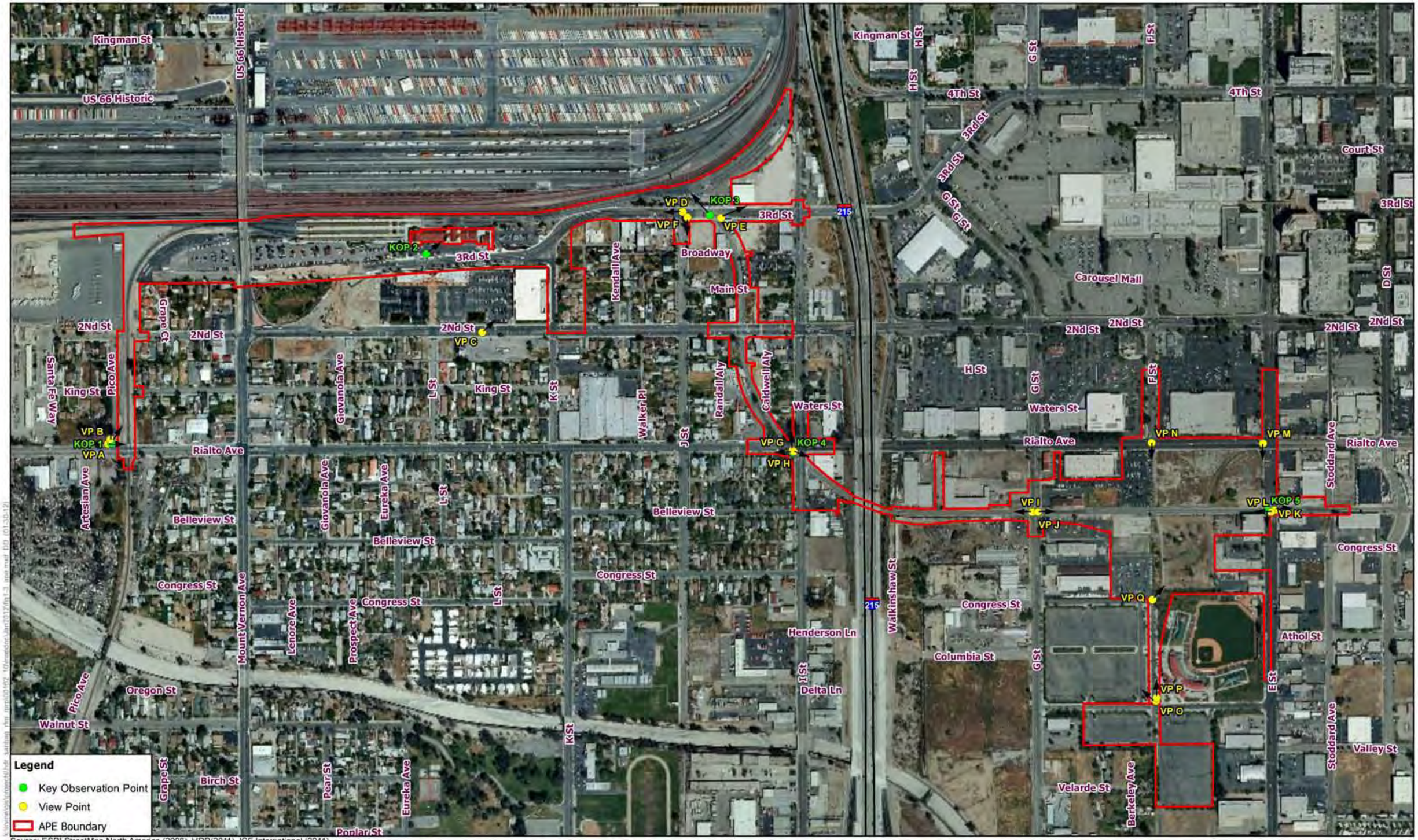


Figure 3.2-1
Key Observation and View Points
Downtown San Bernardino Passenger Rail Project

LOG OF VANTAGE POINT (VP) AND KEY OBSERVATION POINT (KOP) FIGURES

Figure 3.2-2 (VP A):
Railroad Crossing at Rialto and Pico Avenues, View Southeast

Figure 3.2-3 (VP B):
Housing along West Side, Pico Avenue, View North

Figure 3.2-4 (KOP 1):
Pico Avenue at Rialto Avenue, View Northeast across Railroad Right-of-Way

The view is of low visual quality, with disparate visual elements, and gray is the dominant color. Clusters of mature trees provide visual relief and contrasting form and color.

Figure 3.2-5 (KOP 2):
Santa Fe Depot Building, along 3rd Street Looking Northeast

The view is of high visual quality due to the vivid character of the building's architectural elements, scale, and massing. The presence of parking and the dominance of gray-colored paving and other disparate features in the setting serve to somewhat reduce visual quality.

Vividness = 7 Intactness = 6 Unity = 5 Visual Quality Ratio = 6 (High Visual Quality)

Figure 3.2-6 (Rendering):
Potential Proposed Passenger Overpass Bridge/Towers Design, at Rear of Depot Building, Looking from West to East

Source: HDR Engineering, Inc. 2010c.

Figure 3.2-7 (VP C):
K and 3rd Street Improvements Acquisition Area, Looking Northeast, 2nd Street, at Southwest Corner of K Street

Figure 3.2-8 (KOP 3):
Railroad Crossing, Looking Northwest, 3rd Street, East of J Street

Views in this location possess a low degree of vividness due to expanses of gray-colored, gravel-covered ground and asphalt pavement as well as the visibility of the Depot railroad yard as a mid-frame visual element. The presence of clusters of mature evergreen trees provides one of the few visual resources in the setting, making the vividness rating slightly higher than it would be otherwise.

Vividness = 2 Intactness = 3 Unity = 2 Visual Quality Ratio = 2.33 (Low Visual Quality)

Figure 3.2-9 (VP D): Looking West, 3rd Street at J Street

Figure 3.2-10 (VP E): Looking Northeast, across 3rd Street, Potential Staging Site

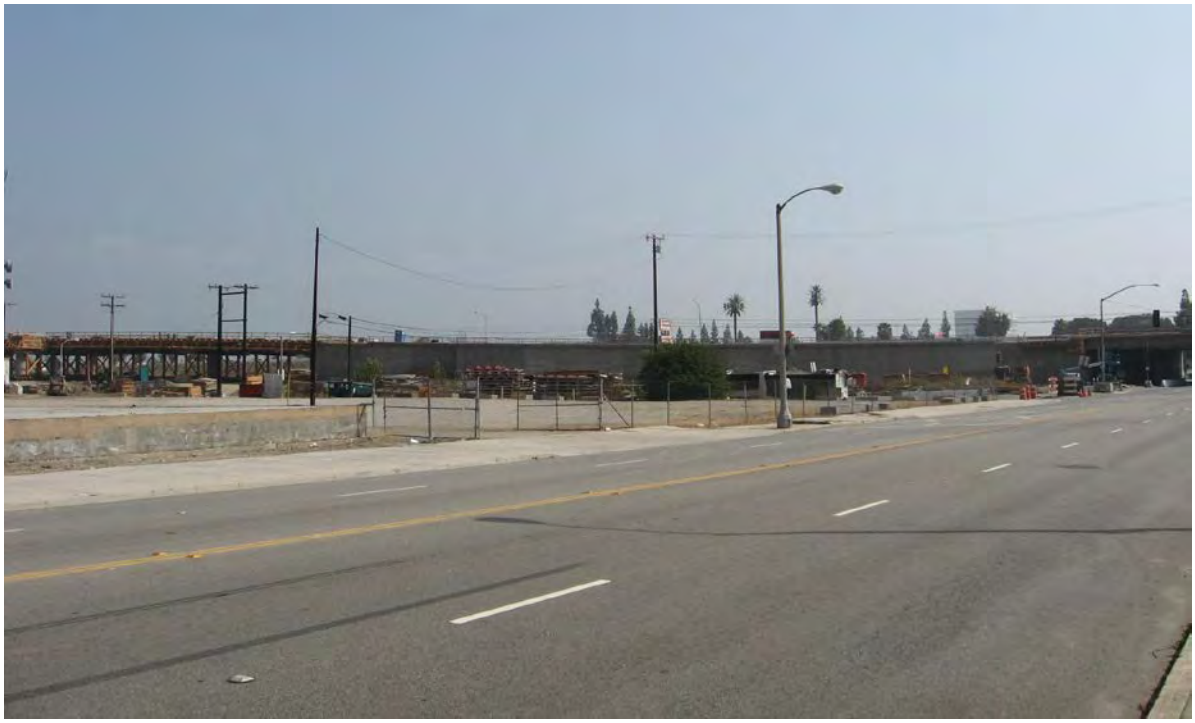


Figure 3.2-11 (VP F): Looking South, Vacant Lot, Southeast Corner of J and 3rd Streets

Figure 3.2-12 (KOP 4):
Looking West along the South Side of Rialto Avenue at I Street and the Railroad

The foreground and mid-frame views document a modest but well-maintained single-family residential neighborhood comprised of early 20th-century housing stock, all with fairly consistent front yard setbacks. Front yard and parkway lawn areas, as well as scattered small and large trees, make the views moderately vivid. Disparate manmade elements (viz., differing building types on the south versus north sides of Rialto Avenue, scattered "spot" commercial and industrial building with divergent massing and setback characteristics) are present in the view, giving it only a moderate level of intactness and unity.

Vividness = 5 Intactness = 4 Unity = 4 Visual Quality Ratio = 4.33 (Moderate Visual Quality)

Figure 3.2-13 (VP G): Looking North, Railroad Crossing, Rialto Avenue at I Street

Figure 3.2-14 (VP H): Southeast Corner of I Street and Rialto Avenue, View Southeast

Figure 3.2-15 (VP I): Looking West, G Street at Railroad Right-of-Way

Figure 3.2-16 (VP J): Looking East, G Street at Railroad Right-of-Way

Figure 3.2-17 (KOP 5):
Looking South, E Street at Railroad Crossing/Bekins Moving and Storage at Bus Facility Site

The view in this setting is somewhat animated by the diverse range of commercial building styles and placements and related pole signs. On the north side of E Street abutting the railroad right-of-way is the distinctive four-story Bekins Moving and Storage Building—the tallest building along the rail corridor. Other than scattered clusters of trees, no visual resources are present in this portion of the viewshed, and disparate manmade elements are present in the views, giving them a low level of intactness and unity.

Vividness = 3 Intactness = 2 Unity = 2 Visual Quality Ratio = 2.33 (Low Visual Quality)

Figure 3.2-18 (VP K): Looking East, E Street at Railroad Crossing

Figure 3.2-19 (VP L): Looking West along Railroad Right-of-Way at E Street at Bus Facility Site

Figure 3.2-20 (VP M): Looking South from Rialto Avenue, Slightly West of E Street at Bus Facility Site

Figure 3.2-21 (VP N): Looking South, F Street at Rialto Avenue at Bus Facility Site

Figure 3.2-22 (VP O): Looking North, Adjoining San Manuel Stadium

Figure 3.2-23 (VP P): Looking Northwest, San Manuel Stadium Parking Lot

Figure 3.2-24 (VP Q):
Looking Northeast, Adjoining North End, San Manuel Stadium

3.3 AIR QUALITY AND GREENHOUSE GASES

This section evaluates the impacts of the proposed Project on air quality and greenhouse gases (GHGs). The technical information within this section is based on the Air Quality and Greenhouse Gas Technical Memorandum report (Appendix B) that was prepared for the proposed Project in February 2012.

3.3.1 Environmental Setting

3.3.1.1 Regional Context

Ambient air quality is affected by climatological conditions, topography, and the types and amounts of pollutants emitted. The area potentially affected by the proposed Project is located within the City of San Bernardino, which is located within the South Coast Air Basin (SCAB). SCAB is an area of approximately 6,745 square miles bounded by the Pacific Ocean to the west and south, and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The SCAB includes all of Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The terrain and geographical location determine the distinctive climate of the SCAB, which is a coastal plain with connecting broad valleys and low hills.

The southern California region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the SCAB is a function of the area's natural physical characteristics (weather and topography) as well as human-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and dispersion of pollutants throughout the SCAB, making it an area of high pollution potential.

The greatest air pollution impacts in the SCAB occur from June through September, mainly because of the combination of large amounts of pollutant emissions, light winds, and shallow vertical atmospheric mixing. This frequently reduces pollutant dispersion, causing elevated air pollution levels. Pollutant concentrations in the SCAB vary with location, season, and time of day. Ozone concentrations, for example, tend to be lower along the coast, higher in the near inland valleys, and lower in the far inland areas of the SCAB and adjacent desert.

3.3.1.2 Local Climate

The mean annual temperature in the vicinity of the project area is 64.1°F. The average project area summer (August) high and low temperatures are 93.7 and 57.6°F, respectively, while the average winter (January) high and low temperatures are 67.3 and 39.4, respectively. There is a wide range in seasonal temperatures, with temperatures exceeding 100°F an average 107 times per year and dropping below 32°F an average 19 times per year. The average annual rainfall is 16.12 inches, with the annual ranging for a 5.45 inch low in 1947 to 35.45 inch high in 1941 (WRCC 2011). Wind patterns for 2005 through 2007 within the project vicinity display a nearly unidirectional flow, primarily from the southwest, at an average speed of 3.22 miles per hour (mph) or 1.44 meters per second (SCAQMD 2009).

3.3.1.3 Local Air Quality

The South Coast Air Quality Management District (SCAQMD) has divided the SCAB into air monitoring areas and maintains a network of air quality monitoring stations located throughout the SCAB. The project site is located in the Central San Bernardino Valley Monitoring Area (Source Receptor Area [SRA] 34). The nearest monitoring station is the San Bernardino-4th Street Monitoring Station (ARB 36203), in the City of San Bernardino, approximately 2 miles east of the project area. Criteria pollutants monitored at the San Bernardino Station include ozone(O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), particulate matter less than 10 microns in diameter (PM10), and particulate matter that is 2.5 microns or less in diameter (PM2.5). The nearest monitoring station that monitors sulfur dioxide (SO_2) is the Fontana-Arrow Highway Monitoring Station (SRA 34, ARB 36197), which is approximately 9 miles from the project area, also within the Central San Bernardino Monitoring Area. Concentrations of pollutants from the two stations over the last 3 years show frequent exceedences of air quality standards.

Further, ambient levels of selected toxic air contaminants (TACs) are measured by both the California Air Resources Board (ARB) and SCAQMD at several locations throughout the SCAB. According to the most current SCAQMD inhalation cancer risk data (MATES III), the project area is located within a cancer risk zone of approximately 931 to 1,058 cases per million (SCAQMD 2008b). This cancer risk is largely due to the project area's proximity to I-215, which runs north-south through the project area; SR-66, which runs east-west just north of the project site; and the Depot/Amtrak/Metrolink station within the Project Study Area. The highest cancer risks are located in areas just east of I-215, with slightly lower cancer risks located in the area west of I-215. For comparison, the average cancer risk in the SCAB is 1,194 per million. For perspective, one out of three Americans will eventually develop cancer, and one out four will die from cancer. Therefore, the national average background cancer incidence is equivalent to 333,000 chances in 1 million.

3.3.1.4 Sensitive Receptors

Chapter 4 of the SCAQMD's Air Quality Analysis Guidance Handbook defines land uses considered to be sensitive receptors as long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, child care centers, and athletic facilities (SCAQMD 1993). The Project Study Area is located in an urbanized area of mixed-use development that includes railroad tracks, the Depot, residential development, a variety of office uses, commercial, vacant and occupied commercial and industrial warehouses, and other retail facilities. Scattered undeveloped lots are also found in the area.

3.3.2 Regulatory Setting

Air quality in California is governed by the California Clean Air Act of 1988 (CCAA) and administered by ARB at the state level and by air districts at regional and local levels. Refer to Section 4.3.5, "Air Quality and Global Climate Change," of this document for a detailed discussion regarding the regulatory setting for federal laws and guidelines that are relevant to the assessment of air quality and climate change impacts.

3.3.1.5 State Regulations

California Clean Air Act

The CCAA substantially added to the authority and responsibilities of air districts. The CCAA designates air districts as lead air quality planning agencies, requires air districts to prepare air

quality plans, and grants air districts explicit authority to implement transportation control measures (TCMs) and regulate indirect sources of air pollution. The CCAA focuses on attainment of the state ambient air quality standards, which, for certain pollutants and averaging periods, are more stringent than the comparable federal standards. There are six criteria pollutants that both the ARB and U.S. Environmental Protection Agency (EPA) regulate: CO; NO_2; SO_2; O_3; two subsets of particulate matter, both PM10 and PM2.5; and lead. California Ambient Air Quality Standards (CAAQS) are generally more stringent than the National Ambient Air Quality Standards (NAAQS) and incorporate additional standards for sulfates (SO_4), hydrogen sulfide (H_2S), and vinyl chloride (C_2H_3Cl), and visibility-reducing particles.

The CCAA is administered by ARB at the state level and by air districts at regional and local levels. The CCAA requires designation of attainment and nonattainment areas with respect to CAAQS. The CCAA also requires that local and regional air districts expeditiously adopt and prepare an air quality attainment plan if the district violates CAAQS for CO, SO_2, NO_2, or O_3. These clean air plans are specifically designed to attain these standards and must be designed to achieve an annual 5% reduction in district-wide emissions of each nonattainment pollutant or its precursors. Where an air district is unable to achieve a 5% annual reduction in district-wide emissions of each nonattainment pollutant or its precursors, the adoption of “all feasible measures” on an expeditious schedule is acceptable as an alternative strategy.

The CCAA requires that the CAAQS be met as expeditiously as practicable but, unlike the federal Clean Air Act (CAA), does not set precise attainment deadlines. Instead, the act established increasingly stringent requirements for areas that will require more time to achieve the standards.

California‘s Toxic Air Contaminants Regulations

The Tanner Toxic Air Contaminant Identification and Control Act (AB 1807) (Tanner Act) created California’s program to reduce exposure to TACs. The Air Toxics “Hot Spots” Information and Assessment Act (AB 2588) (Hot Spots Act) supplements the AB 1807 program by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks. The Tanner Act sets forth a formal procedure for the ARB to designate substances as TACs. This includes research, public participation, and scientific peer review before the ARB designates a substance as a TAC. To date, the ARB has identified 21 TACs, and has also adopted the EPA's list of hazardous air pollutants as TACs. Since August 1998, diesel particulate matter was added to the ARB list of TACs (ARB 1998).

The Hot Spots Act requires that existing facilities that emit toxic substances above specified levels 1) prepare a toxic emission inventory, 2) prepare a risk assessment if emissions are significant, 3) notify the public of significant risk levels, and 4) prepare and implement risk reduction measures.

In some cases, the particulate matter reduction strategies also reduce smog-forming emissions such as nitrogen oxide (NO_X). As an ongoing process, the ARB reviews air contaminants and identifies those that are classified as TACs. The ARB also continues to establish new programs and regulations for the control of TACs, including diesel particulate matter, as appropriate.

California‘s Greenhouse Gas Regulations

In the absence of federal regulations, control of GHG is generally regulated at the state level and is typically approached by setting emission reduction targets for existing sources of GHG, setting policies to promote renewable energy and increase energy efficiency, and developing statewide action plans. California has adopted statewide legislation addressing various aspects

of climate change and GHG emissions mitigation. Much of this establishes a broad framework for the state's long-term GHG reduction and climate change adaptation program. The Governor of California has also issued several executive orders related to the state's evolving climate change policy. Of particular importance to local governments is the direction provided by the Assembly Bill (AB) 32 and the AB 32 Scoping Plan, which recommend local governments reduce their GHG emissions by a level consistent with state goals (i.e., 15% below current levels). The AB 32 Scoping Plan is currently being revised following litigation (see Association of Irritated Residents, et al. v. California Air Resources Board, Case No. CPF-09-509562, March 18, 2011). In addition, Senate Bill 375 requires Metropolitan Planning Organizations (MPOs) to incorporate a "sustainable communities strategy" in their regional transportation plans that will achieve GHG emission reduction targets set by the ARB. Senate Bill 375 also includes provisions for streamlined CEQA review for some infill projects such as transit-oriented development.

The CEQA Guidelines require lead agencies to describe, calculate, or estimate the amount of GHG emissions that would result from a project, and identify mitigation to reduce impacts.

Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006

AB 32 codified the state's GHG emissions target by requiring that the state's global warming emissions be reduced to 1990 levels by 2020. Since being adopted, ARB, the California Energy Commission (CEC), the California Public Utilities Commission (CPUC), and the Building Standards Commission have been developing regulations that will help meet the goals of AB 32 and Executive Order S-03-05. The Scoping Plan for AB 32 identifies specific measures to reduce GHG emissions to 1990 levels by 2020, and requires ARB and other state agencies to develop and enforce regulations and other initiatives for reducing GHGs. Specifically, the Scoping Plan articulates a key role for local governments, recommending they establish GHG reduction goals for both their municipal operations and the community consistent with those of the state (i.e., approximately 15% below current levels).

3.3.1.6 Regional and Local Air Quality Agencies and Regulations

South Coast Air Quality Management District

The SCAQMD has jurisdiction over an area of approximately 10,743 square miles, including all of Orange County, all of Los Angeles County (except for the Antelope Valley), the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County. The SCAB is a sub-region within SCAQMD jurisdiction. While air quality in this area has improved, the SCAB requires continued diligence to meet air quality standards.

Air Quality Management Plan

To ensure continued progress toward clean air and to comply with state and federal requirements, SCAQMD, in conjunction with the CARB, SCAG, and the EPA, updates its air quality management plans (AQMPs) every 3 years. These plans require emissions-reducing activities, control technology for existing sources, control programs for area sources and indirect sources, and includes transportation control measures and a SCAQMD permitting system designed to allow no net increase in emissions from any new or modified (i.e., previously permitted) emission sources.

The most recent AQMP is the 2007 update, which employs the most up-to-date science and analytical tools and incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, onroad and offroad mobile sources, and area sources.

The 2007 AQMP highlights the significant amount of reductions needed and the urgent need to identify additional strategies, especially in the area of mobile sources, to meet all NAAQS within the timeframes allowed under the federal CAA. Specifically, the 2007 AQMP was prepared because the federal CAA required an 8-hour O_3 nonattainment area to prepare a state implementation plan (SIP) revision by June 2007 and a PM2.5 nonattainment area to prepare a SIP by April 2008.

The 2007 AQMP concluded that substantial emission reductions from all sources are necessary. Without aggressive measures to reduce emissions, particularly of NO_X, SO_X, volatile organic compounds (VOCs), and particulate matter, attaining the 8-hour O_3 NAAQS by 2023 and the $PM_{2.5}$ standard by 2014 will be very difficult.

As of April 2012, the SCAQMD is currently drafting an update to the 2007 AQMP.

SCAQMD Rules and Regulations

Through the attainment planning process, the SCAQMD develops the SCAQMD Rules and Regulations to regulate sources of air pollution in the SCAB (SCAQMD 2011a). The SCAQMD rules likely most pertinent to the proposed Project are listed below. The emission sources associated with the proposed Project are considered mobile sources and locomotives and, therefore, they are not subject to the SCAQMD rules that apply to stationary sources, such as Regulation XIII (New Source Review), Rule 1401 (New Source Review of Toxic Air Contaminants), or Rule 431.2 (Sulfur Content of Liquid Fuels).

SCAQMD Rule 402—Nuisance. This rule prohibits discharge of air contaminants or other material that

- Cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public.
- Endanger the comfort, repose, health, or safety of any such persons or the public.
- Cause, or have a natural tendency to cause, injury, or damage to business or property.

SCAQMD Rule 403—Fugitive Dust. This rule prohibits emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area that remains visible beyond the emission source property line. During construction of the proposed Project or one of the design options, best available control measures identified in the rule would be required to minimize fugitive dust emissions from proposed earth-moving and grading activities. These measures would include site prewatering and rewatering as necessary to maintain sufficient soil moisture content. Additional requirements apply to construction projects on property with 50 or more acres of disturbed surface area, or for any earth-moving operation with a daily earth-moving or throughput volume of 5,000 cubic yards or more three times during the most recent 365-day period. These requirements include submittal of a dust control plan, maintaining dust control records, and designating a SCAQMD-certified dust control supervisor.

SCAQMD Regulation XIII. This regulation sets forth pre-construction review requirements for new, modified, or relocated facilities, to ensure that the operation of such facilities does not interfere with progress in attainment of the national ambient air quality standards, and that future economic growth within the SCAQMD is not unnecessarily restricted. The specific air quality goal of this regulation is to achieve no net increases from new or modified permitted sources of nonattainment air contaminants or their precursors.

In addition to nonattainment air contaminants, this regulation will also limit emission increases of ammonia and Ozone Depleting Compounds (ODCs) from new, modified, or relocated facilities by requiring the use of Best Available Control Technology (BACT).

SCAQMD Regulation XIV. This rule specifies limits for maximum individual cancer risk (MICR), cancer burden, and non-cancer acute and chronic hazard index from new permit units, relocations, or modifications to existing permit units that emit TACs. The rule establishes allowable risks for permit units requiring new permits.

SCAQMD Rule 1403—Asbestos Emissions from Demolition/Renovation Activities. The purpose of this rule is to limit emissions of asbestos (a TAC) from structural demolition/renovation activities. The rule requires people to notify the SCAQMD of proposed demolition/renovation activities and to survey these structures for the presence of asbestos-containing materials (ACMs). The rule also includes notification requirements for any intent to disturb ACM; emission control measures; and ACM removal, handling, and disposal techniques. All proposed structural demolition activities associated with proposed Project construction would need to comply with the requirements of Rule 1403.

SCAQMD Regulation XXXV. This regulation sets forth rules for railroads and railroad operations, including requiring operators to keep a record of idling events of 30 minutes or more (Rule 3501), idling restriction on freight trains (Rule 3502), and requirements for health risk assessments at rail yards (Rule 3503).

Southern California Association of Governments

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties. It addresses regional issues relating to transportation, the economy, community development, and the environment. SCAG is the federally designated MPO for the majority of the southern California region and is the largest MPO in the nation. With respect to air quality planning, SCAG has prepared the Regional Comprehensive Plan and Guide (RCPG) for the SCAG region, which includes Growth Management and Regional Mobility chapters. These chapters form the basis for the land use and transportation components of the AQMP, and are utilized in the preparation of air quality forecasts and the consistency analysis that is included in the AQMP.

3.3.3 Thresholds of Significance

For the purposes of the analysis in this EIR, in accordance with Appendix G of the State *CEQA Guidelines*, the proposed Project would have a significant environmental impact under CEQA related to air quality and GHG emissions if it would:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).
- Expose sensitive receptors to substantial pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

With respect to violating air quality standards, the SCAQMD regional thresholds identified in Table 3.3-1 are used. SCAQMD guidelines suggest using the same thresholds to determine a project-level impact and a "cumulatively considerable" net increase in criteria pollutants.

With respect to exposing sensitive receptors to substantial pollutant concentrations, the SCAQMD localized significance thresholds identified in Table 3.3-1 are used. Further, because the proposed Project would result in diesel-related fuel combustion within the project corridor, SCAQMD's thresholds for cancer (maximum incremental cancer risk of 10 in 1 million (1.0 x 10-5)) and non-cancer (acute or chronic hazard index of 1.0) (SCAQMD 2005, 2011b) health risks are used to evaluate health risks associated with the proposed Project. Lastly, a project is considered to have a significant impact with respect to carbon monoxide at nearby roadways if project emissions would exceed of 1- and 8-hour CAAQS at nearby receptor locations.

Table 3.3-1. SCAQMD Daily Significance Thresholds

Criteria Air Pollutant	Construction Threshold (pounds per day)	Operational Threshold (pounds per day)
Regional Significance Thresholds		
VOCs	75	55
NO_X	100	55
CO	550	550
SO_X	150	150
PM10	150	150
PM2.5	55	55
Lead	3	3
*Localized Significance Thresholds**		
NO_X	270	270
CO	1,746	1,746
PM10	14	4
PM2.5	9	2

* LSTs are based on the project location (SRA 34, Central San Bernardino Valley), project size that could be active on any given day (assumed to be 5 acres), and distance to the nearest receptor location (assumed to be 25 meters).
Sources: SCAQMD 2008, 2011b.

To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, the SCAQMD staff is convening an ongoing GHG CEQA Significance Threshold Working Group. Members of the working group include government agencies implementing CEQA and representatives from various stakeholder groups that provide input to the SCAQMD staff on developing GHG CEQA significance thresholds. To date, SCAQMD has only formally adopted a 10,000 metric tons of carbon dioxide equivalent ($MTCO_2e$) threshold for industrial facilities. Previously, in October 2008, SCAQMD identified a tiered approach for determining the significance of GHG impacts within its Draft Guidance Document – Interim CEQA Greenhouse Gas Significance Threshold (SCAQMD 2008a), as discussed below.

There are currently no adopted quantitative GHG thresholds relevant to the proposed Project. The SCAQMD has adopted a 10,000 MT screening significance threshold level for industrial projects, and has also drafted a 3,000 MT screening significance threshold level for commercial/residential projects. The proposed Project is a transportation project that does not fit into the industrial, commercial, or residential project categories. The SCAQMD has not proposed or adopted a threshold level for transportation projects. Thus, for purposes of this analysis, both direct and indirect GHG emissions from the proposed Project are discussed with respect to both the 10,000 and 3,000 MT threshold levels.

3.3.4 Project Impacts

Impact AQ-1: Result in obstruction of an applicable air quality plan

Under federal and state mandates, the Regional Council of SCAG is tasked with developing a Federal Transportation Improvement Program (FTIP) every 4 years. The improvements to the Rialto and E Street rail platforms and track improvements are listed as Project Number 200809 within SCAG's 2011 FTIP. (SCAG 2011a.) While the proposed Project is also listed in the SCAG 2011 FTIP under Project Number 20061012, the proposed Project is only listed as a part of the larger Redlands Passenger Rail Project. As such, the SCAG 2011 FTIP will be amended to reflect the DSBPRP as currently proposed, and separate from the Redlands Passenger Rail Project. In addition, SCAG lists the Project in the Regional Transportation Improvement Program (RTIP) as "Metrolink Commuter Rail" for rail service expansion in San Bernardino under Project Number 4CR04 (SCAG 2011b). Similarly, the project is listed in SCAG's 2008 RTP (RTP ID 4TR0101) as part of the 10-mile "San Bernardino-Redlands Extension." The 2008 RTP is currently being updated, and the Draft 2012 RTP and EIR were released and are currently undergoing public review. The Omnitrans portion of the Project is included in the 2008 RTP Amendment #1 and 2008 RTIP Amendment #08-01 Project Listing as Project ID 200625 with the description "E Street Transit Corridor – from San Bernardino to Loma Linda." The amendments were adopted by SCAG on December 4, 2008. The design concept and scope of the Omnitrans facility have not changed materially from what was analyzed in the adopted amendments to 2008 RTP and 2008 RTIP. The Omnitrans portion is also listed in the financially constrained Draft 2012 RTP as Project ID 200625.

Air quality modeling conducted by SCAG has shown that emissions associated with the RTP and FTIP are within the allowable air pollutant emission budgets. Consequently, the proposed Project is considered a conforming transportation project.

Because the proposed Project conforms with the most recently adopted RTP and FTIP; has not significantly changed in design concept and scope; there has been less than 3 years since the last major conformity milestone and a supplemental environmental document for air quality purposes has not been initiated, a new conformity determination is not required. Consequently, because the Project would conform to the RTP and FTIP, which were found to conform to the SIP, the Project would not obstruct implementation of the applicable air quality plan, which is the region's SIP. This impact is considered less than significant. No mitigation is required.

Impact AQ-2: Result in violations of air quality standards

Construction of the proposed Project has the potential to create air quality impacts through the use of heavy-duty construction equipment, construction worker vehicle trips, material delivery trips, and heavy-duty haul truck trips generated from construction activities. In addition, earthwork activities would result in fugitive dust emissions, and paving operations would release reactive organic gases (ROGs) from off-gassing. Construction emissions can vary substantially from day to day depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions. The assessment of construction air quality impacts considers each of these potential sources. Fugitive PM10 and PM2.5 emissions estimates take into account compliance with SCAQMD Rule 403.

Construction-related emissions are shown in Table 3.3-2 below. Maximum daily criteria pollutant emissions would not exceed SCAQMD regional construction-period thresholds for any pollutant during construction activities. Therefore, no mitigation is required.

Table 3.3-2. Conservative Estimate of Construction-Period Criteria Pollutant Emissions – Unmitigated Scenario

Construction Phase	Work Crew	Pounds per Day					
		ROG	NO_X	CO	SO_X	PM10	PM2.5
Mobilization/demobilization	A1	0.5	4.1	8.5	0.00	0.6	0.3
Concrete work	C1	0.4	1.9	7.8	0.00	0.2	0.1
	C2	1.6	4.6	46.8	0.00	0.5	0.2
Demolition	D1	5.3	12.8	142.8	0.01	2.3	2.1
	D2	7.8	21.9	174.7	0.02	2.7	2.5
	D3	0.8	3.2	22.7	0.00	0.3	0.1
	D4	2.2	9.2	33.0	0.01	0.6	0.4
Electrical	E1	0.1	0.9	1.1	0.00	0.1	0.0
	E2	1.2	7.5	9.2	0.00	0.6	0.4
	E3	0.5	2.9	1.0	0.00	0.2	0.2
Iron work	IW1	2.0	5.8	46.8	0.01	0.2	0.2
Landscaping	L1	1.5	8.5	8.2	0.00	0.6	0.5
Miscellaneous	M1	1.2	6.5	12.7	0.00	0.5	0.4
	M2	1.5	5.5	33.9	0.00	0.4	0.3
	M3	0.6	1.3	21.2	0.00	0.2	0.1
	M4	0.4	1.4	9.5	0.00	0.2	0.1
Paving	P1	1.3	10.1	5.5	0.01	0.9	0.6
	P2	1.6	10.8	6.4	0.01	1.0	0.7
Signals	S1	0.4	1.6	7.6	0.00	0.1	0.0
	S2	0.7	4.3	12.4	0.00	0.4	0.2
Track work	T1	2.0	13.1	21.6	0.01	1.0	0.6
	T2	2.9	14.5	52.9	0.01	1.3	1.0
	T3	3.1	10.2	73.3	0.01	1.1	0.8
	T4	0.0	0.0	0.0	0.00	0.0	0.0
Utilities	U1	1.5	4.8	35.9	0.00	0.5	0.4
	U2	1.1	4.3	26.1	0.00	0.4	0.3

Construction Phase	Work Crew	Pounds per Day					
		ROG	NO_X	CO	SO_X	PM10	PM2.5
Precast block walls	W1	0.8	5.7	6.4	0.01	0.4	0.3
Excavation/site prep	X1	1.6	11.3	7.9	0.01	0.7	0.6
	X2	1.2	7.9	6.1	0.00	0.6	0.5
	X3	0.9	4.2	15.1	0.00	0.5	0.4
	X4	1.0	8.1	4.4	0.01	0.5	0.4
Maximum Daily Emissions		16.5	53.6	352.4	0.1	5.2	4.6
SCAQMD Construction Thresholds		75	100	550	150	150	55
Significant?		No	No	No	No	No	No

[1] All work crews were assumed to work 5 weekdays per work week, except for work crews D2, P2, and T3, which were assumed to work 1 weekend day.

Maximum daily emissions occur when the following work crews are active overlap activities:

Week 34 of construction for VOC and CO: Work crews C1, C2, D1, E2, IW1, M1, S1, S2, T1, and T2. Weekend crews of P2 and T3 are also active this week, but those activities occur on the weekend and thus do not overlap with weekday activities.

Week 17 of construction for NO_X, SO_X, PM10, and PM2.5: C1, D1, P1, S2, T1, T2, W1, and X2. No weekend crews are active this week.

Source: ICF emissions modeling, Appendix B of Appendix B.

Long-term operation of the proposed Project has the potential to create air quality impacts primarily associated with increased train activity and motor vehicle trips associated with the park and ride lot. In addition, by providing a regional alternative non-automobile form of transportation, the Project would indirectly alter regional onroad motor vehicle travel. Emissions of ROG, NO_X, CO, PM10, and PM2.5 for existing year (2009), opening year (2014), and forecast year (2035) with- and without-project conditions with respect to train operations, new and displaced park and ride motor vehicle trips, and regional vehicle miles traveled (VMT) on the roadway network were evaluated (see Tables 3.3-3 through 3.3-5). Table 3.3-3 summarizes the estimated daily emissions for the existing and existing plus project scenarios. The differences in emissions between the existing and existing plus project scenarios represent emissions generated directly as a result of implementation of the proposed Project. As shown in Table 3.3-3, implementation of the proposed Project would decrease emissions of all criteria air pollutants relative to existing conditions except for a minor increase in SO_X, and would not exceed SCAQMD threshold levels. Emissions would be net negative and result in a net regional air quality benefit at the project level. Therefore, the operational impact would be less than significant, and no mitigation is required.

Table 3.3-3. Modeled Existing and Existing plus Project Operational Emissions

		Pounds per Day					
Scenario	Project Element	ROG	NO_X	CO	SO_X	PM10	PM2.5
Existing	Onroad VMT	232,720	911,363	2,827,734	3,926	471,369	138,056
Existing Plus Project	Onroad VMT	232,678	911,295	2,827,611	3,926	471,334	138,046
	Train Activity	2.57	45.65	10.34	0.04	1.67	1.66
	Parking Lot Motor Vehicle Trips (new trips)	0.33	1.16	3.90	0.01	0.95	0.27
	Parking Lot Motor Vehicle Trips (re-distributed trips)	(5.58)	(19.32)	(65.10)	(0.15)	(0.91)	(0.85)
	Total Existing plus Project	232,675	911,322	2,827,560	3,926	471,336	138,047
Existing Plus Project Net Minus Existing		**(45.1)**	**(40.8)**	**(174.1)**	**0.1**	**(32.9)**	**(8.9)**
SCAQMD Thresholds		55	55	550	150	150	55
Exceed Thresholds?		No	No	No	No	No	No

Numbers in parentheses indicate negative numbers.
Source: Appendix B.

Table 3.3-4. Modeled Opening Year 2014 Operational Emissions

		Pounds per Day					
Scenario	Project Element	ROG	NO_X	CO	SO_X	PM10	PM2.5
No Project	Onroad VMT	175,755	664,348	2,067,671	4,501	530,435	151,121
Proposed Project	Onroad VMT	175,733	664,370	2,067,851	4,502	530,451	151,128
	Train Activity	2.57	45.65	10.34	0.04	1.67	1.66
	Parking Lot Motor Vehicle Trips (new trips)	0.33	1.16	3.90	0.01	0.95	0.27
	Parking Lot Motor Vehicle Trips (re-distributed trips)	(5.58)	(19.32)	(65.10)	(0.15)	(0.91)	(0.85)
	Total Project	175,730	664,397	2,067,800	4,502	530,452	151,129
2014 Future With-Project Net Minus Future No Project		**(25.0)**	**49.0**	**128.8**	**0.8**	**17.8**	**8.1**
SCAQMD Thresholds		55	55	550	150	150	55
Exceed Thresholds?		No	No	No	No	No	No

Numbers in parentheses indicate negative numbers.
Source: Appendix B.

Table 3.3-5. Modeled Forecast Year 2035 Operational Emissions

		Pounds per Day					
Scenario	Project Element	ROG	NO_X	CO	SO_X	PM10	PM2.5
No Project	Onroad VMT	92,815	271,841	975,868	5,833	645,999	176,881
Proposed Project	Onroad VMT	92,807	271,831	975,831	5,832	645,925	176,864
	Train Activity	2.95	53.31	13.78	0.05	1.94	1.92
	Parking Lot Motor Vehicle Trips (new trips)	0.15	0.40	1.50	0.01	0.94	0.25
	Parking Lot Motor Vehicle Trips (re-distributed trips)	(2.43)	(6.75)	(25.11)	(0.15)	(15.75)	(4.32)
	Total Project	92,807	271,878	975,822	5,832	645,912	176,862
2035 Future With-Project Net Minus Future No Project		**(7.5)**	**36.8**	**(46.4)**	**(0.7)**	**(86.8)**	**(19.0)**
SCAQMD Thresholds		55	55	550	150	150	55
Exceed Thresholds?		No	No	No	No	No	No

Numbers in parentheses indicate negative numbers.
Source: Appendix B.

Impact AQ-3: Result in cumulatively considerable net increases of any criteria pollutant

Potential cumulative air quality impacts would result when cumulative projects' pollutant emissions would combine to degrade air quality conditions below acceptable levels. This could occur on a local level, such as through increases in vehicle emissions at congested intersections and due to concurrent construction activities, or at a regional level through the potential impacts of multiple past, present, and reasonably foreseeable projects on O_3 within the SCAB; or globally, such as the potential impact of GHG emissions on global climate change.

The SCAB is currently extreme nonattainment for O_3, serious nonattainment for PM10, nonattainment for PM2.5, serious maintenance for CO under NAAQS, and nonattainment for O_3, PM10, PM2.5, and NO_2 under CAAQS, which is a result of past and present projects and will be further impeded by reasonably foreseeable future projects. These nonattainment conditions within the region are considered cumulatively significant and SCAQMD thresholds have been established to ensure attainment of NAAQS and CAAQS. Therefore, exceedence of SCAQMD threshold levels would be considered a significant cumulative impact and adverse cumulative consequence. As discussed under Impact AQ-2, project-related criteria pollutant emissions would decrease compared to existing conditions, as the mass transit opportunities associated with the proposed Project would reduce single-occupancy vehicle trips on regional roadways, resulting in a net regional air quality benefit and a reduction in nonattainment pollutants and GHG emissions. 2014 with-project emissions would increase for all criteria air pollutants except ROG under opening year conditions compared to no-project conditions, although these increases would be below SCAQMD's operational thresholds of significance. 2035 with-project emissions would decrease for all criteria air pollutants except NO_X under forecast year conditions compared to no-project conditions, although this increase in NO_X emissions would be

below SCAQMD's operational thresholds of significance. Therefore, the proposed Project would not result in a significant and cumulatively considerable net increase in nonattainment pollutants. No mitigation is required. See Section 3.3.6, "Cumulative Impacts," for a complete discussion on the proposed Project's cumulative air quality impacts.

Impact AQ-4: Expose sensitive receptors to substantial pollutant concentrations

The SCAQMD has developed a set of mass emissions rate look-up tables that can be used to evaluate localized impacts that may result from construction- and operations-period emissions. If the onsite emissions from proposed construction activities are below the localized significance threshold (LST) emission levels found in the LST mass rate look-up tables for the project site's source receptor area (SRA), then project emissions would not have the potential to cause a significant localized air quality impact. When quantifying mass emissions for LST analysis, only emissions that occur on site are considered. Consistent with SCAQMD LST guidelines, emissions related to offsite delivery/haul truck activity and employee trips during construction are not considered in the evaluation of localized impacts. However, because emissions associated with project construction are almost entirely generated on site, all construction-related emissions are considered in the localized analysis herein. In addition, during long-term operations the only emissions that would occur on site would be train-related fuel combustion. Other sources of regional operational emissions (motor vehicles operating on the regional network and park and ride lot, specifically) are not evaluated, per SCAQMD guidance, in the LST analysis. As shown in Table 3.3-6, localized emissions during both construction and operations would not exceed LSTs for the project area. Impacts would be less than significant, and no mitigation is required.

Table 3.3-6. Modeled Localized Criteria Pollutant Emissions during Construction and Operations

Phase	NO_X	CO	PM10	PM2.5
Construction				
Max Daily Construction Emissions (Table 3.3-1)	53.6	352.4	5.2	4.6
Localized Significance Thresholds[a]	270	1,746	14	9
Exceed Threshold?	No	No	No	No
Operations				
Train Activity (Table 3.3-5)	53.31	13.78	1.94	1.92
Localized Significance Thresholds[a]	270	1,746	4	2
Exceed Threshold?	No	No	No	No

[a] The project site is located in SCAQMD SRA No 34. These LSTs are based on the site location SRA, distance to nearest sensitive receptor location from the project site (25 meters), and project area that could be under construction or operation on any given day (5 acres).

In addition to localized criteria pollutant emissions, SCAQMD has developed thresholds and guidance with respect to analyzing TAC concentrations and health risk associated at nearby sensitive receptor locations. According to SCAQMD, land uses considered to be sensitive receptors are long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, child care centers, and athletic facilities.

The proposed Project is surrounded by a mix of residential, industrial, and recreational[1] land uses along the proposed Project corridor; residential and commercial land uses near the Depot; and commercial, residential, and recreation land uses near the proposed E Street rail platforms, with the closest sensitive receptors located within 25 meters of idling activities at the Depot.

The Project would result in increased diesel-powered Metrolink train activity within the rail corridor. Mass construction- and train-related DPM emissions at nearby receptor locations were quantified using EPA's AERSCREEN dispersion model, as described in the methodology in Appendix B. The construction portion of this health risk assessment includes DPM emissions from the sBx E Street Corridor BRT Project Re-Evaluations/Addendum (Parsons 2010). As shown in Table 3.3-7, health risk impacts associated with the sum of short-term construction and long-term operations would be below SCAQMD thresholds for identifying health risk impacts. Health risk impacts are considered to be less than significant.

Table 3.3-7. Summary of Health Risk Associated with Project Construction and Operations

Project Component	Cancer Risk (per million)	Chronic Non-Cancer Hazard Index
Train Idling	4.81	0.0153
Train Movement	0.09	0.0001
Project Construction	1.05	0.0007
MICR	5.95	0.02
SCAQMD Risk Thresholds	10	1.0
Exceed Risk?	No	No

Source: Appendix B.

Further, as in most urban areas, high short-term concentrations of CO, known as "hot spots," can be a problem in San Bernardino County. Hot spots typically occur in areas of high motor vehicle use, such as in parking lots, at congested intersections, and along highways. Since elevated CO concentrations typically occur at locations with high traffic volumes and congestion, elevated CO concentrations are often correlated with level of service (LOS) at intersections (SCAQMD 1993). LOS expresses the congestion level for an intersection and is designated by a letter from A to F, with LOS A representing the best operating conditions and LOS F the worst, as stated in Section 3.11, "Transportation and Traffic." Significant concentrations of CO sometimes occur (depending on temperature, wind speed, and other variables) at intersections where LOS is rated D or worse.

The analysis of CO hot spots at nearby intersections was completed consistent with Caltrans' Transportation Project-Level Carbon Monoxide Protocol (CO Protocol) and SCAQMD guidance. CO concentrations were evaluated through CO dispersion modeling using EMFAC2007, the CALINE4 model, and traffic data provided by the traffic engineers.

As shown in Table 3.3-8, the proposed Project would not result in violations of the state or federal 1- or 8-hour CO standards at nearby congested roadways. As such, the Project would not expose sensitive receptors to substantial pollutant concentrations. Impacts are considered less than significant.

[1] The recreational land in question is the San Manuel Stadium, which is considered a commercial recreational facility and not a public park open to the general public.

Table 3.3-8. Modeled CO Levels Measured at Receptors in the Vicinity of Affected Intersections during 2009 Existing, 2014 Opening Year, and 2035 Forecast Year Scenarios

Intersection	Receptor	PM Peak Hour									
		2009 Existing		2014 Future No Project		2014 Future with Project		2035 Future No Project		2035 Future with Project	
		1-Hr	8-Hr	1-Hr	8-Hr	1-Hr	8-hr	1-Hr	8-Hr	1-Hr	8-hr
K Street and 2nd Street	1	4.4	3.5	4.3	3.4	4.5	3.5	3.9	3.1	4.0	3.2
	2	4.5	3.5	4.1	3.3	4.5	3.5	3.8	3.0	4.0	3.2
	3	4.6	3.6	4.3	3.4	4.6	3.6	3.9	3.1	4.0	3.2
	4	4.7	3.7	4.3	3.4	4.5	3.5	3.9	3.1	4.0	3.2
K Street and Rialto Avenue	5	5.2	4.0	4.6	3.6	4.7	3.7	4.0	3.2	4.0	3.2
	6	5.2	4.0	4.5	3.5	4.5	3.5	3.9	3.1	3.9	3.1
	7	5.3	4.1	4.7	3.7	4.8	3.7	4.0	3.2	4.0	3.2
	8	5.2	4.0	4.5	3.5	4.7	3.7	3.9	3.1	4.0	3.2
E Street and 2rd Street	9	6.2	4.7	5.2	4.0	5.2	4.0	4.2	3.3	4.2	3.3
	10	6.4	4.9	5.3	4.1	5.3	4.1	4.2	3.3	4.2	3.3
	11	6.2	4.7	5.2	4.0	5.2	4.0	4.2	3.3	4.2	3.3
	12	6.4	4.9	5.3	4.1	5.3	4.1	4.2	3.3	4.2	3.3
E Street and Rialto Avenue	13	5.8	4.4	4.9	3.8	5.1	4.0	4.1	3.3	4.1	3.3
	14	5.8	4.4	4.9	3.8	5.1	4.0	4.1	3.3	4.1	3.3
	15	5.6	4.3	4.8	3.7	4.9	3.8	4.1	3.3	4.1	3.3
	16	5.7	4.4	4.9	3.8	5.0	3.9	4.1	3.3	4.1	3.3
H Street and 5th Street	17	6.2	4.7	5.2	4.0	5.2	4.0	4.2	3.3	4.3	3.4
	18	6.4	4.9	5.3	4.1	5.4	4.2	4.3	3.4	4.4	3.5
	19	6.1	4.7	5.1	4.0	5.0	3.9	4.2	3.3	4.2	3.3
	20	6.6	5.0	5.5	4.2	5.5	4.2	4.4	3.5	4.4	3.5
E Street/ Inland Center Drive and Mill Street	21	6.5	4.9	5.3	4.1	5.4	4.2	4.4	3.5	4.3	3.4
	22	6.3	4.8	5.1	4.0	5.3	4.1	4.6	3.6	4.3	3.4
	23	6.5	4.9	5.2	4.0	5.1	4.0	4.2	3.3	4.6	3.6
	24	6.3	4.8	5.4	4.2	5.4	4.2	4.4	3.5	4.3	3.4

[1] Background concentrations of 3.6 and 2.9 ppm were added to the modeling 1- and 8-hour results, respectively, based on SCAQMD projected future year concentrations for San Bernardino.

The federal and state 1-hour standards are 35 and 20 ppm, respectively.

The federal and state 8-hour standards are 9 and 9.0 ppm, respectively. The difference lies in the rounding convention.

Source: Appendix B.

Impact AQ-5: Create objectionable odors

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The

proposed Project would not include any uses identified by the SCAQMD as being associated with odors and therefore would not produce objectionable odors. Odors resulting from the construction of these projects are not likely to affect a substantial number of people, due to the fact that construction activities do not usually emit offensive odors. Potential odor emitters during construction activities include asphalt paving and the use of architectural coatings and solvents. SCAQMD Rule 1108 limits the amount of VOCs from cutback asphalt during paving activities, respectively. Given mandatory compliance with SCAQMD rules, no construction activities or materials are proposed that would create a significant level of objectionable odors. As such, potential impacts during short-term construction would be less than significant. No mitigation is required.

Impact AQ-6: Generate significant greenhouse gas emissions

GHG emissions for transportation projects can be divided into those produced during construction and those produced during operations.

Construction Emissions

Short-term construction activities would result in GHG emissions from fuel combustion within off- and onroad construction equipment and vehicles. Emissions associated with the approximately 18- to 24-month construction period are summarized in Table 3.3-9. Consistent with SCAQMD draft guidelines, construction emissions are summed and amortized over a 30-year project life, and then added to operational emissions.

Table 3.3-9. Modeled Construction-Related GHG Emissions

Project Element		Metric Tons per Year			
		CO_2	CH_4	N_2O	CO_2e
Construction	2012	584	0.04	0.02	592
	2013	151	0.01	0.01	154
	Total	736	0.06	0.03	746
	Amortized Total (30-year Average)	--	--	--	*24.9*

Source: Appendix B.

Operational Emissions

Implementation of the proposed Project would increase train activity and result in new motor vehicle trips to the park and ride lot. Additionally, availability of the park and ride lot would create new trips and re-distribute others from within the region. Further, the proposed Project would make available mass transit opportunities that would remove a number of single occupancy vehicles within the transportation network, resulting in a decrease in regional VMT. Annual operational emissions were summed and added to the amortized construction totals. Note that motor vehicle emission calculations herein do not account for reductions associated with implementation of national- and state-wide GHG reduction regulations and strategies, including Pavley, LCFS, among others.

GHG emissions would increase with implementation of the proposed Project during 2035 forecast year with-project conditions when compared to no-project conditions. While the proposed Project would reduce regional VMT by approximately 67,510 (0.012% decrease) miles

per day and redistribute approximately 13,260 VMT associated with park and ride trips (see Section 4.3.5, "Air Quality and Global Climate Change"), emissions associated with regional VMT would increase slightly over no-project conditions, as a result of an increase in traffic speeds, causing a slight increase in 2035 emissions over no-project conditions.

As previously discussed, SCAQMD currently has not adopted or drafted thresholds levels for GHGs relevant for transportation projects, but has adopted a threshold level for industrial projects (10,000 MT) and drafted a threshold level for commercial and residential projects (3,000 MT), which are used in this analysis to evaluate project significance under CEQA.

As shown in Table 3.3-10, while the proposed Project would remove a number of single occupancy vehicles within the transportation network and re-distribute motor vehicle trips that would otherwise drive to their destination, GHG emissions under full build-out conditions in 2035 with-project would increase by 822 $MTCO_2e$/year over 2035 no-project conditions. However, the net increase in emissions would be well below adopted or drafted SCAQMD threshold levels of 10,000 and 3,000 $MTCO_2e$/year. Therefore, this impact is considered less than significant under CEQA, and no mitigation is required.

Table 3.3-10. Modeled Forecast Year 2035 No-Project and with-Project GHG Emissions

Project Element		Metric Tons per Year			
		CO_2	CH_4	N_2O	CO_2e
No Project	Onroad VMT	72,114,791	3,795,515		75,910,306
With Project	Onroad VMT	72,116,620	3,795,612		75,912,232
	Train Fuel Use	623	0.05	0.02	629
	New Park & Ride Lot Trips	106	6		113
	Re-Distributed Park & Ride Lot Trips	-1,777	-94		-1,870
	Total Operations	72,115,573	3,795,525		75,911,104
	Total With Project *	--	--	--	75,911,129
	Project Net over No Project	--	--	--	+822
	SCAQMD Threshold	--	--	--	3,000 / 10,000
	Exceed Threshold?	--	--	--	No

Train emissions based on 88 daily train trips at forecast year 2035.
Park and Ride emissions based on new and re-distributed methodology discussed in Section 4.2.2 of Appendix B and year 2035 vehicle emission rates.
Total with-project emissions are the sum of operational GHG emissions and amortized construction emissions summarized in Table 3.3-9.
Source: Appendix B.

Impact AQ-7: Conflict with an applicable plan adopted for the purpose of reducing greenhouse gas emissions

The proposed Project would improve mobility opportunities for transit-dependent populations in the City of San Bernardino to employment centers in Los Angeles and Orange Counties and support local and regional planning goals of SANBAG for the development of transit corridors in the Inland Empire. The Project would be consistent with statewide efforts by promoting alternative forms of transportation around existing and planned future transit-oriented

development. For example, SB 375 calls on SCAG and other MPOs to integrate land use, housing, and transportation planning efforts to achieve the SB 375 regional GHG targets, consistent with the transportation goals of AB 32. Further, SCAQMD has adopted and drafted numeric mass emissions thresholds as a method to close the gap between emissions reductions from land-use and driven sectors that would occur at the state level (including Pavley, low carbon fuel standard, and Renewable Portfolio Standard, among others) and the emission reductions necessary from land use development projects that have a lower carbon intensity within the region, consistent with the goals of AB 32. Therefore, because emissions would not exceed the numeric threshold that was adopted to help achieve the reduction goals of AB 32, the proposed Project would not conflict with AB 32.

Overall, the proposed Project would be consistent with the AB 32 goal of reducing state-wide GHG emissions to 1990 levels by year 2020. Currently no other GHG reduction plan (i.e., SCAG, SCAQMD, County, or City) applies to the proposed Project. The proposed Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs; therefore, impacts would be less than significant, and no mitigation is required.

3.3.5 Mitigation Measures

No mitigation measures are required.

3.3.6 Cumulative Impacts

Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time. The region of analysis for cumulative effects on air quality is the SCAB. The SCAB experiences chronic exceedances of state and federal ambient air quality standards. These nonattainment conditions within the region are considered cumulatively significant and SCAQMD thresholds have been established to ensure attainment of NAAQS and CAAQS. Therefore, the construction and operational impacts of related projects in areas surrounding the program and project would be cumulatively considerable within the SCAB if their combined construction or their combined operational emissions would exceed the SCAQMD daily emission thresholds for construction and operation, respectively. As discussed in Section 3.3.4, “Project Impacts,” the proposed Project is listed in a conforming RTP and FTIP, and is therefore consistent with the AQMP and SIP. Construction-related criteria pollutant emissions would be below both regional and localized SCAQMD thresholds of significance during construction. With-project future year project-related criteria pollutant emissions would increase for all pollutants except ROG compared to no-project conditions in 2014 and would decrease for all criteria air pollutants except NO_X compared to 2035 no-project conditions, but any increases would be below regional and localized SCAQMD thresholds of significance during operations. Therefore, the proposed Project’s long-term contribution to cumulative air quality impacts would not be considerable, but would result in a net cumulative air quality benefit.

With respect to GHG, GHGs and climate change are exclusively cumulative impacts, and there are no non-cumulative GHG emission impacts from a climate change perspective. As such, GHGs and climate change are cumulatively considerable even though the contribution may be individually limited (SCAQMD 2008). SCAQMD methodology and thresholds are thus cumulative in nature. As discussed in Section 3.3.4, “Project Impacts,” the Project would be below SCAQMD adopted or drafted thresholds and significance, and would be consistent with adopted plans and regulations that aim to reduce GHG emissions. Therefore, the proposed Project would not contribute to a cumulatively significant impact related to air quality and GHGs.

3.4 BIOLOGICAL RESOURCES

This section evaluates the impacts of the proposed Project on biological resources, including impacts on wetlands and other waters and threatened and endangered species. The technical information in this section is based on the biological technical memorandum (Appendix C) that was prepared for the proposed Project.

3.4.1 Environmental Setting

3.4.1.1 Regional Setting

The survey area is in the San Bernardino Basin in the northern Peninsular Ranges geomorphic province. It extends north to the foothills of the San Bernardino and Santa Monica Mountains and south to the 28th parallel in Baja California, Mexico.

3.4.1.2 Local Setting

The Project Study Area, which includes the existing track and right-of-way, begins at the Depot just west of North Mt. Vernon Avenue and runs east and south through residential and commercial areas. It terminates at Rialto Avenue and E Street. The Project Study Area includes the Omnitrans bus facility site.

The site's general topographic character is flat to gently sloping. Elevations in the survey area range from 1,080 to 1,100 feet above mean sea level. The survey area includes all land within 500 feet of either side of the centerline of the proposed double track alignment and is approximately 1 mile long. It encompasses approximately 281.56 acres (see Figure 3.4-1).

The survey area was mapped and evaluated for potential direct and indirect effects on biological resources that could result from project implementation. The Project Study Area is defined as the limit of effects associated with full buildout of the proposed Project. The Project Study Area includes approximately 85 acres of the total 281.56 acres; however, the larger survey area is used when determining the affected environment and effects.

Vegetation Communities

The survey area supports three vegetation communities: urban/developed land, disturbed habitat, and nonnative grassland (see Figure 3.4-2).

- The survey area consists primarily of urban development (259.6 acres), which has no biological function or value. Development in this area consists generally of the existing railroad track, roads, existing parking areas, landscaped vegetation, and residential and commercial development.
- Approximately 21 acres of disturbed habitat occurs throughout the survey area, primarily as disturbed right-of-way and vacant land. In general, the disturbed habitat is vegetated by weedy species, planted ornamentals, and mature eucalyptus and palm trees.
- Two small areas of nonnative grasslands (1.13 acres) occur in this area adjacent to residential/commercial land uses and within vacant lots.

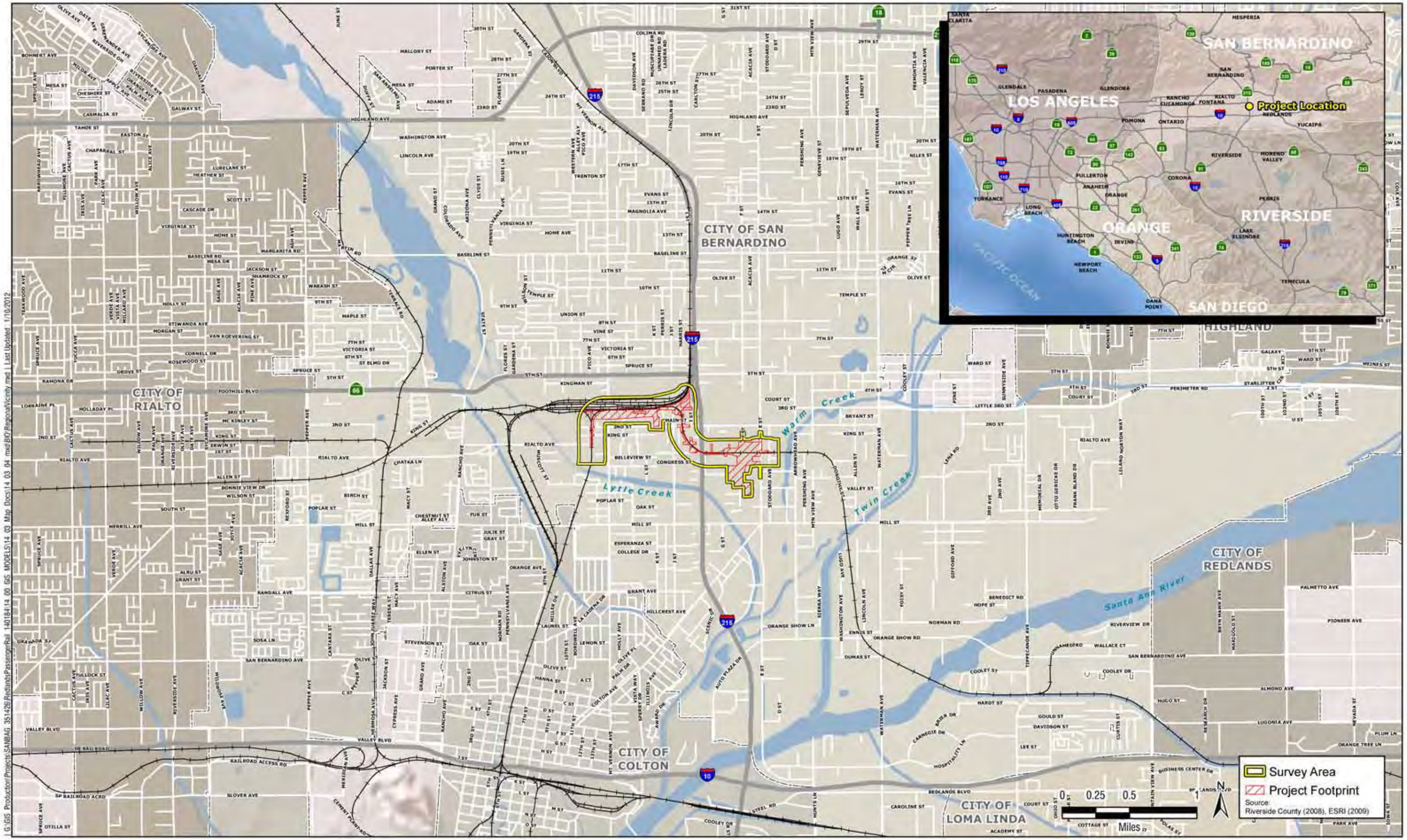


Figure 3.4-1
Biological Survey Area
Downtown San Bernardino Passenger Rail Project

Figure 3.4-2
Impacts on Vegetation Communities
Downtown San Bernardino Passenger Rail Project

Wildlife Movement Corridors

Wildlife movement corridors, also called dispersal corridors or landscape linkages, are linear features that connect at least two habitat areas. Their viability and quality depend on site-specific factors, such as topography and vegetative cover. A quality corridor provides cover for both predator and prey species and directs animals to areas of contiguous open space or resources and away from humans and development. Wildlife movement corridors are important features in the landscape and, therefore, should be buffered from human encroachment and other disturbances (e.g., light, loud noises, domestic animals).

According to the City of San Bernardino General Plan EIR, the City is mostly developed; wildlife movement has ceased because of this development. Similarly, as described above, the survey area consists largely of urban development and disturbed habitat in an area surrounded by urban development. As a result, the survey area does not function as a wildlife movement corridor (City of San Bernardino 2005b).

Depot Tree Grouping

The Depot tree grouping contains 19 mature *Washingtonia robusta*, *Washingtonia filifera*, and *Phoenix canariensis* palm trees in addition to one bottle tree (*Brachychiton populneus*) in the Project Study Area. The trees are located on a 400-foot-long sliver of property running parallel to 3rd Street, roughly 850 feet northeast of the Depot building. The property is 40 feet wide and bounded by the arcing tracks of the BNSF Redlands Corridor rail right-of-way. Ten of the 19 palm trees, subspecies *Washingtonia robusta*, are 75 to 100 feet tall. These taller trees are located on the eastern portion of the property. The shorter *Washingtonia filifera* variety is located predominately on the western portion of the property, as is the sole bottle tree. The two *Phoenix canariensis* trees are located near the middle of the grouping. Additional crated *Washingtonia filifera* trees are also present. These appear to have been recently relocated to the property. Beneath the trees are smaller, younger tree specimens. The trees are arranged in an irregular line, and no other landscaping is present. A metal mesh fence separates the grouping from 3rd Street. The trees appear to be a remnant of a park dating from c.1886, the year in which an earlier depot opened. It burned in 1915 (Appendix C).

Habitat Conservation Plans

The survey area is not within or adjacent to any adopted or approved habitat conservation plan (HCP) area; therefore, threatened or endangered species, as designated by the U.S. Fish and Wildlife Service (USFWS) or CDFG, are not covered. The nearest HCP area, which is located several miles to the east in the cities of Highland and Redlands, is part of the Upper Santa Ana River Wash Land Management and Habitat Conservation Plan. This 4,365-acre HCP area begins at the mouth of Santa Ana Canyon at Greenspot Road, 1 mile downstream from Seven Oaks Dam, and extends westward for approximately 6 miles to Alabama Street.

Sensitive Plant Species

Sensitive plant species include species listed by USFWS and CDFG, candidates for listing by USFWS and CDFG, and/or species considered sensitive by CDFG and/or the California Native Plant Society (CNPS). A search of California Natural Diversity Database (CNDDB) records uncovered 43 occurrences of rare or sensitive plant species within the nine quadrangles surrounding the survey area. However, the survey area supports suitable habitat for only one sensitive plant species, smooth tarplant (*Centromadia pungens* ssp*. laevis*). Smooth tarplant is a sensitive species that is known to occur in dry, open, and sometimes disturbed habitat.

Sensitive Wildlife Species

Sensitive animals are species or subspecies listed as threatened, endangered, or being evaluated (proposed) for listing by USFWS or CDFG and/or considered sensitive by CDFG. A search of CNDDB records uncovered 56 occurrences of rare or sensitive botanical species within the nine quadrangles surrounding the survey area. Species that are not considered sensitive under federal or state criteria were eliminated from consideration, as described in the biological technical memorandum (Appendix C).

A habitat assessment was conducted within the survey area for western burrowing owl (BUOW) (*Athene cunicularia hypugaea*) and San Bernardino kangaroo rat (SBKR) (*Dipodomys merriami parvus*), as summarized below.

Western Burrowing Owl

BUOW is a federal Species of Concern and California Species of Special Concern. The survey area is within the historic range of BUOW. Although there are no records for the survey area, the CNDDB contains two records from the surrounding area, as follows:

- Four individuals were observed in 1998 northeast of the intersection of Wildrose Avenue and Wood Pine Avenue, north of I-10, in West Colton (approximately 3.5 miles southwest of the survey area).
- In 1983, an undetermined number of owls used a burrow site at the east end of the main runway at Norton Air Force Base (approximately 4.5 miles east of the survey area).

No BUOW or their sign were observed in the survey area or adjoining areas. No potential nesting sites for BUOW were observed in the survey area.

San Bernardino Kangaroo Rat

The historical range for SBKR extends from the San Bernardino Valley in San Bernardino County to the Menifee Valley in Riverside County. The survey area is within the outline of the historical range of SBKR. The USFWS designation of critical habitat for SBKR includes Lytle Creek/Cajon Wash, areas that are known or expected to be occupied by this species. However, the SBKR critical habitat in Lytle Creek/Cajon Wash occurs only north of I-210, which is outside of the survey area for the proposed Project.

There are no SBKR records for the survey area, but the CNDDB and the Mammal Networked Information System (MaNIS) contain several records from the vicinity. These include:

- Specimens were collected on April 1, 1917, by L. M. Huey of UCLA at a location east of the south end of the Lytle Creek wash, about 3 miles north of Colton. This locality is approximately 1 mile north-northwest of the Depot.
- In 1909, specimens were collected at Herron's Ranch in Reche Canyon, 4 miles southeast of Colton. This location is about 3 miles south-southwest of the Depot.

The SBKR records nearest to the survey area are from the early 20th century, when the Santa Ana River and Lytle Creek/Cajon Wash areas experienced far fewer impacts from surrounding development.

Other Species of Concern—Bats

According to the CNDDB search, the survey area contains suitable habitat for western yellow bat (*Lasiurus xanthinus*). This species has a moderate potential to occur on site (i.e., in palm trees), but it was not observed during the general biological survey. In general, western yellow

bat, which is thought to be noncolonial, roosts individually. Should the species occur in the survey area, it is anticipated that it would be in low numbers given the limited available habitat and preferred roosting densities. The survey area does not support suitable habitat for any other sensitive bat species. Therefore, focused bat surveys were not conducted.

Jurisdictional Areas

No indicators of potential jurisdictional areas or any riparian habitat were identified in the survey area; however, two potential jurisdictional areas were identified off site at the southern and eastern terminus of the survey area.

- Lytle Creek is located adjacent to the southernmost survey area boundary. This creek is entirely concrete lined and has vertical concrete banks; no riparian habitat is associated with this portion of the creek.
- A small unnamed drainage was identified adjacent to the easternmost survey area boundary. The channel is concrete lined and has vertically incised banks. It supports a low flow of water. Natural riparian vegetation is not associated with this portion of the drainage.

3.4.2 Regulatory Setting

3.4.2.1 Natural Community Conservation Planning Act of 1991

The Natural Community Conservation Planning (NCCP) Act is designed to conserve natural communities at the ecosystem scale while accommodating compatible land uses. CDFG is the principal state agency to implement the NCCP Program. NCCP plans developed in accordance with the act provide for comprehensive management and conservation of multiple wildlife species as well as regional or area-wide protection and perpetuation of natural wildlife diversity while allowing compatible and appropriate development and growth.

3.4.2.2 Section 2080 of the California Fish and Game Code

This section of the code states that “no person shall import into this state [California], export out of this state, or take, possess, purchase, or sell within this state any species, or any part or product thereof, that the commission [California Fish and Game Commission] determines to be an endangered species or threatened species or attempt any of those acts, except as otherwise provided in this chapter [Chapter 1.5, Endangered Species] or the Native Plant Protection Act or the California Desert Native Plants Act” (Justia US Laws 2010).

Pursuant to Section 2081 of the code, CDFG may authorize individuals or public agencies to import, export, take, or possess any state-listed endangered, threatened, or candidate species. These otherwise prohibited acts may be authorized through permits or memoranda of understanding (MOU) if the take is incidental to an otherwise lawful activity, if impacts of the authorized take are minimized and fully mitigated, if the permit is consistent with any regulations adopted pursuant to any recovery plan for the species, and if the applicant ensures adequate funding to implement the measures required by CDFG. CDFG shall make this determination based on available scientific information and shall include consideration of the ability of the species to survive and reproduce.

Because of the potential presence of state-listed rare, threatened, endangered, or candidate species in the survey area, Sections 2080 and 2081 of the code were considered in the evaluation of the proposed Project.

3.4.2.3 Sections 3503 and 3503.5 of the California Fish and Game Code

These sections of the code provide regulatory protection to resident and migratory birds and all birds of prey within the State of California. This includes a prohibition pertaining to the taking of nests and eggs, unless otherwise provided for by the code. Specifically, these sections of the code make it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code.

Because of the presence of resident and migratory nesting birds in the survey area, Sections 3503 and 3503.5 of the code were considered in the evaluation of the proposed Project.

3.4.2.4 Sections 1600 to 1603 of the *California* Fish and Game Code

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California are subject to the regulatory authority of CDFG pursuant to Sections 1600 through 1603 of the California Fish and Game Code and require preparation of a Streambed Alteration Agreement. Pursuant to the code, a *stream* is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. Given this definition, a watercourse with surface or subsurface flows that support or have supported riparian vegetation is a stream and is subject to CDFG jurisdiction. Altered or artificial waterways that are valuable to fish and wildlife are subject to CDFG jurisdiction.

Because of the presence of ephemeral streams in the survey area, Sections 1600 through 1603 of the code were considered in the evaluation of the proposed Project.

3.4.2.5 Section 404 Permit (Clean Water Act)

The Clean Water Act establishes a program to regulate the discharge of dredged and fill material into waters of the United States, including wetlands. Activities regulated under this program include the discharge of fill for development, including water resource projects (e.g., dams and levees) and infrastructure development (e.g., highways and airports), and the conversion of wetlands to uplands for farming or forestry uses. Either an individual Section 404b permit or authorization to use an existing U.S. Army Corps of Engineers (USACE) nationwide permit will need to be obtained if any portion of construction requires the discharge of fill into a river, stream, or streambed that has been determined to be a jurisdictional waterway. When applying for a permit, a company or organization must show that it will avoid wetlands when practicable, minimize wetland impacts, and provide compensation for any unavoidable destruction of wetlands (California Wetland Information System 2007).

3.4.2.6 Section 401 Water Quality Certification (Clean Water Act)

The Clean Water Act protects water quality by regulating dumping and the flow of pollutants into streams, lakes, and rivers. Water quality certification from a California RWQCB must be obtained to receive a Section 404 permit or be authorized under the Section 404 nationwide permits (EPA 2011).

3.4.2.7 California Endangered Species Act

The California Endangered Species Act prohibits taking any species that CDFG determines to be threatened or endangered. Incidental take of listed species can be approved by CDFG, which administers the act.

3.4.2.8 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) was enacted in 1918. Its purpose is to prohibit killing or transporting native migratory birds or any part, nest, or egg of any such bird unless allowed by another regulation adopted in accordance with the MBTA.

3.4.2.9 City of San Bernardino Municipal Code

San Bernardino Municipal Code ordinances MC-1027, 9-8-98, and MC-682, 11-6-89 (Municipal Code, Title 15, Chapter 15.34) prohibit the removal and/or destruction of more than five trees within any 36-month period at a development site or parcel without a permit from the Development Services Department. In accordance with the ordinances, a permit is not required when a lawful order to remove the trees for health and safety purposes has been issued by a local, state, or federal government agency or removal is to be carried out by or under the auspices of a governmental entity.

3.4.3 Thresholds of Significance

For the purposes of the analysis in this EIR, in accordance with Appendix G of the State CEQA Guidelines, the proposed Project would have a significant environmental impact under CEQA related to biological resources if it would:

- Have a substantial adverse effect, either directly or indirectly or through habitat modification, on any species identified as being a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by CDFG or USFWS.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFG or USFWS.
- Have a substantial adverse effect on any federally protected wetlands (e.g., marsh, vernal pool, coastal areas), as defined by Section 404 of the Clean Water Act, through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident migratory fish or wildlife species or the use of established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted HCP or other approved local, regional, or state HCP.

3.4.4 Project Impacts

Impact BR-1: Have a substantial adverse effect on any sensitive or special-status species

Sensitive Plant Species

As described in Section 3.4.1, “Environmental Setting,” one sensitive plant species, smooth tarplant, has the potential to occur in the survey area. However, it was not observed when surveys were conducted during the blooming season for the species. Therefore, the survey area is not expected to support a significant population of smooth tarplant, and potential direct and indirect impacts would be less than significant.

Land within and adjacent to the survey area is largely developed and/or disturbed and would not support sensitive botanical species. Implementation of the Project would not result in significant indirect impacts (i.e., future modification of an adjacent land use or type) on any sensitive botanical species. Implementation of the Project would not result in a significant impact on sensitive botanical species. No mitigation is proposed.

Sensitive Wildlife Species

As discussed above, the only sensitive species with a moderate potential to occur in the survey area is the western yellow bat. Although highly urbanized, the survey area contains suitable habitat (e.g., palm trees, buildings) that could support roosts, including maternal roosts, for this species. The proposed Project would result in the removal of individual trees that may be periodically used for roosting. However, potential direct and indirect impacts would be less than significant because of the small amount of habitat that would be removed relative to the species' range and available habitat, and few, if any, individuals would be disturbed during construction.

BUOW were not observed within or adjacent to the survey area, and evidence of their presence or potential nesting sites was not found. Although BUOW can persist in fragmented habitats, the small disturbed habitat patches in the survey area occur within a largely urbanized area and do not provide sufficient foraging habitat to sustain BUOW. Therefore, the survey area does not contain suitable habitat for BUOW, and no significant impact would occur.

Migratory Birds

Suitable nesting, roosting, and/or foraging habitat for avian species protected under the MBTA was observed in the survey area. Should construction activities occur during the avian breeding season (February 15–August 31), the proposed Project would permanently and directly affect suitable nesting, roosting, and/or foraging habitat (e.g., mature eucalyptus, palm, and ornamental trees) for these species. Direct impacts on these species are considered significant. As a result, it is recommended that construction activities occur outside of the nesting season to avoid impacts. However, should construction occur during the avian nesting season, implementation of Mitigation Measures BR-1 (Conduct Preconstruction Nest Survey for Migratory Birds), BR-2 (Establish Buffer Area for Migratory Bird Nests), and BR-3 (Restrict Uses within Project Study Area) would be required to reduce impacts on migratory birds to a less-than-significant level.

Potential indirect impacts would not be significant because of the small amount of habitat that would be used by avian species. Because the potential for suitable habitat to occur on site is minimal, indirect impacts on avian species would not occur.

Impact BR-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community

As described above, the survey area supports three vegetation communities: nonnative grassland, disturbed habitat, and urban/developed areas. Natural riparian vegetation or other riparian habitat is absent from the survey area. None of the existing vegetation communities in the survey area are considered sensitive.

Construction of the proposed Project, which would occur primarily within the railroad right-of-way, would affect existing vegetation communities found on site, as shown in Table 3.4-1. However, none of these communities are considered sensitive. Therefore, with implementation

of the proposed Project, direct and indirect (i.e., future modification of an adjacent land use or type) impacts on sensitive communities would not occur. No mitigation is proposed.

Table 3.4-1. Impacts on Vegetation Communities in the Survey Area

Vegetation Communities	Survey Area Acreage	Temporary Impacts (acres)	Permanent Impacts (acres)	Total Impacts (acres)
Disturbed Habitat	20.83	0.60	10.83	11.43
Nonnative Grassland	1.13	0.00	1.13	1.13
Urban/Developed	259.6	12.37	60.02	72.4
Total	**281.56**	**12.97**	**71.98**	**84.95**

Impact BR-3: Have a substantial adverse effect on any federally protected wetlands, as defined by Section 404 of the Clean Water Act

As described previously, no indicators of potential jurisdictional areas were identified in the survey area. The closest off-site potential jurisdictional areas are Lytle Creek (to the south) and a small unnamed drainage (to the east), both of which are entirely concrete lined, have vertical concrete banks, and lack any natural riparian vegetation. Therefore, significant direct and indirect impacts on federally protected wetlands would not occur. No mitigation is proposed.

Impact BR-4: Interfere substantially with the movement of any native resident migratory fish or wildlife species

As described earlier, the survey area consists largely of urban development and disturbed habitat in an area surrounded by urban development. Therefore, wildlife corridors do not exist in or near the survey area. Significant direct and indirect impacts related to the movement of native wildlife species within a corridor would not occur. Please refer to Impact BR-1 for a discussion of migratory birds.

Impact BR-5: Conflict with a policy or ordinance protecting biological resources

As described previously, San Bernardino Municipal Code ordinances prohibit the removal and/or destruction of more than five trees within any 36-month period from a development site or parcel without a permit from the Development Services Department. In accordance with the ordinances, a permit is not required when a lawful order to remove the trees for health and safety purposes has been issued by a local, state, or federal government agency or removal is to be carried out by or under the auspices of a governmental entity.

The Project Study Area contains ornamental trees, mature eucalyptus trees, and palm trees that are proposed for removal with implementation of the proposed Project. The proposed Project, which would require the removal of more than five trees within the Project Study Area, would be implemented by and under the auspices of SANBAG, a government entity. Although the Project would be designed to minimize the need for tree removal, SANBAG, as a government entity, is not subject to the City's tree ordinance. Therefore, a tree removal permit would not be required for the Project. Notwithstanding this circumstance, given that the Project would require minimal tree removal and those trees that would require removal are generally exotic, Project-related

tree removal would not conflict with the City's tree protection ordinance, and no significant impacts would occur.

Impact BR-6: Conflict with an adopted habitat conservation plan

As discussed above, the survey area is not in or adjacent to an approved or adopted HCP area; therefore, threatened or endangered species, as designated by USFWS or CDFG, are not covered. No significant impacts would occur.

3.4.5 Mitigation Measures

Listed below are mitigation measures related to MBTA-covered species. Should construction activities occur during the avian breeding season (February 15–August 31), the proposed Project or the design options may affect suitable nesting habitat for avian species protected under the MBTA. Effects on active bird nests of species protected under the MBTA are not permitted. Therefore, it is recommended that construction activities occur outside of the nesting season to avoid effects. However, should construction occur during the avian nesting season, the following would be required:

BR-1: Conduct Preconstruction Nest Survey for Migratory Birds. Prior to habitat removal during the avian breeding season, a preconstruction nest survey for migratory birds will be conducted within 10 days of the onset of construction by a qualified biologist. Verification surveys will be conducted if the Project has not commenced within 10 days of the original preconstruction survey.

BR-2: Establish Buffer Area for Migratory Bird Nests. Should an active nest of any MBTA-covered species occur in or adjacent to the survey area, a 100-foot buffer (300 feet for raptors) will be established around the nest, and no construction will occur within this area until the young have fledged. A qualified biologist will determine when the nest is no longer active or the young have fledged.

BR-3: Restrict Uses within Project Study Area Boundaries. SANBAG will clearly delineate the boundaries of the Project Study Area by posting stakes, flags, and/or rope or cord, as directed by the project biologist. Signs will be posted and fencing installed as necessary to exclude vehicle traffic unrelated to project construction. All parking and equipment storage related to the Project will be confined to the construction or temporary staging area or to previously disturbed off-site areas. Undisturbed areas and off-site species habitat will not be used for parking or equipment storage. Construction-related vehicle traffic will be restricted to established roads, construction areas, storage areas, and staging and parking areas.

3.4.6 Cumulative Impacts

The proposed Project, in combination with other potential projects in the area, would not contribute to a significant cumulative impact on biological resources after mitigation. Tree removal along the rail corridor could result in impacts on migratory birds and their active nests, and construction activities related to the proposed Project and other projects in the area could result in significant cumulative impacts on migratory birds. However, mitigation measures have been identified to ensure that impacts on nesting birds would be reduced to less-than-significant levels. Therefore, a cumulatively significant impact on nesting birds or their habitat is not anticipated to occur. No significant impacts on jurisdictional areas, riparian habitat, or other sensitive natural communities would occur, and no conflicts with established tree ordinances, HCPs, or known wildlife corridors would occur.

3.5 CULTURAL RESOURCES

This section evaluates the impacts of the proposed Project on cultural resources per the requirements of CEQA. The technical information in this section is based on the *Cultural Resources Technical Memorandum for the Downtown San Bernardino Passenger Rail Project*, prepared February 2012 (Appendix D).

3.5.1 Environmental Setting

The historic resources study area was identified based on the anticipated direct and indirect effects of the proposed Project on identified historic resources. As discussed in Table 3.1-1 of Section 3.1.2, "Determining Significance under CEQA," this study area is slightly different from the Project Study Area and is referred to as the Area of Potential Effects (APE). The APE consists of 1) Project Study Area along the existing Redlands Subdivision railway from the Depot to the E Street rail platforms and bus facility site 1 mile to the east at Rialto Avenue and E Street, 2) right-of-way acquisition areas and temporary construction areas along the route, and 3) the entirety of the property affected within the Project Study Area. Figure 3.5-1 presents an aerial view of the APE used in the analysis of cultural resources.

3.5.1.1 Prehistory

Building on early studies and focusing on data synthesis, Wallace (1955, 1978) developed a prehistoric chronology for the southern California coastal region that is applicable to coastal and many inland areas and consists of the following sequence: Early Man, Milling Stone, Intermediate, and Late Prehistoric.

Early Man Period/San Dieguito (circa [c.] 10,000–6,000 B.C.)

Archaeological work has identified numerous older sites dating prior to 10,000 years ago, including ones on the coast and Channel Islands (e.g., Erlandson 1991; Rick et al. 2001:609; Johnson et al. 2002; Moratto 1984). The earliest accepted dates for occupation are from two of the northern Channel Islands, located off the coast from Santa Barbara. On San Miguel Island, Daisy Cave clearly establishes the presence of people in this area about 10,000 years ago (Erlandson 1991). On Santa Rosa Island, human remains have been dated from the Arlington Springs site to approximately 13,000 years ago (Johnson et al. 2002; Smith et al. 2008).

Recent data from inland as well as coastal sites during this period indicate that the economy was a diverse mixture of hunting and gathering. At near-coastal and inland sites, it appears that an emphasis on hunting may have been greater during the Early Man Period than in later periods; numerous Clovis-like or Folsom-like fluted points have been found in San Bernardino County along shorelines of Pleistocene lakes in the desert portion of the County. Common elements in many San Dieguito Tradition sites include leaf-shaped bifacial projectile points and knives and stemmed or shouldered projectile points (e.g., Silver Lake and Lake Mojave series), scrapers, engraving tools, and crescents (Warren 1967:174–177; Warren and True 1961:251–254). Use of the atlatl during this period facilitated launching spears with greater power and distance. Subsistence patterns shifted around 6000 B.C. coincident with the gradual desiccation associated with the onset of the Altithermal, a warm and dry period that lasted for about 3,000 years (Smith et al. 2008).

Milling Stone/Encinitas Period (c. 6000–3000/1000 B.C.)

The Milling Stone Period of Wallace (1955, 1978) and Encinitas Tradition of Warren (1968) are characterized by an ecological adaptation to collecting, and by the dominance of small seed grinding. Milling stones, such as metates and slabs, and handstones, such as manos and mullers, occurred in large numbers for the first time, and were even more numerous near the end of this period. As indicated by their toolkits, people during this period practiced a mixed food procurement strategy. Subsistence patterns varied somewhat as groups became better adapted to their regional or local environments (Smith et al. 2008). Milling Stone Period sites are common in the southern California at many inland locations, including Prado Basin in western Riverside County and the Pauma Valley in northeastern San Diego County (e.g., True 1958; Herring 1968; Langenwalter and Brock 1985; Sutton 1993; Sawyer and Brock 1999).

During the Milling Stone Period and Encinitas Tradition, stone chopping, scraping, and cutting tools were abundant, and generally made from locally available raw material. Projectile points, which are rather large and generally leaf-shaped, and bone tools such as awls were generally rare. The large points are associated with the spear, and probably with an atlatl. Items made from shell, including beads, pendants, and abalone dishes, are generally rare as well. Evidence of weaving or basketry is present at a few sites. Kowta (1969) attributes the presence of numerous scraper-planes in Milling Stone sites to the preparation of agave or yucca for food or fiber. The mortar and pestle, associated with the vertical motion of pounding foods, such as acorns, were introduced during the Milling Stone Period, but were not common (Smith et al. 2008).

Two types of artifacts that are considered diagnostic of the Milling Stone Period are the cogged stone and discoidal, most of which have been found within sites dating between 4000 and 1000 B.C. (Moratto 1984:149). The cogged stone is a ground stone object that has gear-like teeth on the perimeter and is produced from a variety of materials. The function of cogged stones is unknown, but they have been attributed to ritualistic or ceremonial uses by several scholars (Eberhart 1961:367; Dixon 1968:64–65). Similar to cogged stones, discoidals are found in the archaeological record subsequent to the introduction of the cogged stone. Cogged stones and discoidals were often purposefully buried or “cached.”

Koerper and Drover (1983) suggest that Milling Stone Period sites reflect migratory settlement patterns of hunters and gatherers who used marine resources during the winter and inland resources the remainder of the year. More recent research indicates that residential bases or camps were moved to resources in a seasonal round (de Barros 1996; Mason et al. 1997; Koerper et al. 2002), or that some sites were occupied year-round, with portions of the village population leaving at certain times of the year to exploit available resources (Cottrell and Del Chario 1981). Regardless of settlement system, it is clear that subsistence strategies during the Milling Stone Period included hunting small and large terrestrial mammals, marine mammals, and birds; collecting shellfish and other shore species; extensive use of seed and plant products; the processing of yucca and agave; and near-shore fishing (Reinman 1964; Kowta 1969).

Characteristic mortuary practices during the Milling Stone Period or Encinitas Tradition included extended and loosely flexed burials interred beneath cobble or milling stone cairns. Some burials contain red ochre and few grave goods, such as shell beads and milling stones. “Killed” milling stones, exhibiting purposely made holes, may occur in the cairns.

Source: ESRI StreetMap North America (2008); HDR(2011); ICF International (2011)

0 200 400
Feet

N

Figure 3.5-1
Cultural Resources APE
Downtown San Bernardino Passenger Rail Project

Intermediate Period (c. 3000/1000 B.C.–A.D. 500)

Wallace's Intermediate Period and Warren's Campbell Tradition date from approximately 3000 B.C. to A.D. 500. This era is characterized by a shift toward a hunting and maritime subsistence strategy along with a wider use of plant foods. During the Intermediate Period, there was a pronounced trend toward greater adaptation to regional or local resources. For example, chipped stone tools suitable for hunting were more abundant and diversified, and shell fishhooks became part of the toolkit during this period. Larger knives, a variety of flake scrapers, and drill-like implements are common in deposits dating to this period. Projectile points include large side-notched, stemmed, and lanceolate or leaf-shaped forms. Koerper and Drover (1983) consider Gypsum Cave and Elko series points, which have a wide distribution in the Great Basin and Mojave Deserts between c. 2000 B.C. and A.D. 500, to be diagnostic of this period. Bone tools, including awls, were more numerous than in the preceding period, and the use of asphaltum adhesive was common as well (Smith et al. 2008).

Mortars and pestles, used for processing acorns, became more common during this period, gradually replacing manos and metates as the most abundant milling stone implements. In addition, hopper mortars and stone bowls, including steatite vessels, appear to have entered the toolkit at this time. This shift appears to be a correlate of a diversification in subsistence resources. Many archaeologists believe this change in milling stone signals a shift away from the processing and consuming of hard seed resources to the increasing importance of the acorn (e.g., Glassow et al. 1988; True 1993).

Characteristic mortuary practices during the Intermediate Period include fully flexed burials placed face down or face up and oriented toward the north or west (Warren 1968:2–3). Red ochre is common, and abalone shell dishes are infrequent. Internments sometimes occur beneath cairns or broken artifacts. Shell, bone, and stone ornaments, including charmstones, were more common than in the preceding Encinitas Tradition. Some later sites include olive shell (*Olivella* spp.) and steatite beads, mortars with flat bases and flaring sides, and a few small points. The broad distribution of steatite from the Channel Islands and obsidian from distant inland regions, among other items, attests to the growth of trade, particularly during the latter part of this period (Smith et al. 2008).

Late Prehistoric Period (c. A.D. 500–A.D. 1769)

Wallace (1955, 1978) places the beginning of the Late Prehistoric Period around A.D. 500. In all chronological schemes for southern California, the Late Prehistoric Period lasts until European contact occurred in A.D. 1769. During the Late Prehistoric Period, there was an increase in the use of plant food resources and an increase in land and marine mammal hunting. There was a concurrent increase in the diversity and complexity of material culture during this period, demonstrated by more classes of artifacts. The recovery of a greater number of small, finely chipped projectile points, usually stemless with convex or concave bases, indicates an increased use of the bow and arrow—rather than the atlatl and dart—for hunting. Cottonwood series triangular projectile points in particular are diagnostic of this period (Koerper and Drover 1983). Other items include steatite cooking vessels and containers, the increased presence of smaller bone and shell circular fishhooks, perforated stones, arrow shaft straighteners made of steatite, a variety of bone tools, and personal ornaments made from shell, bone, and stone (Smith et al. 2008). Ceramics were introduced during this time period, and pottery jugs, bowls, and smoking pipes become increasingly common.

Late Prehistoric Period sites contain complex objects of utility, art, and decoration. Ornaments include drilled whole Venus clam (*Chione* spp.) and drilled abalone. Steatite effigies become

more common, with scallop (*Pecten* spp. and *Argopecten* spp.) shell rattles common in middens. Another feature typical of Late Prehistoric Period occupation is an increase in the frequency of obsidian in site assemblages, especially imported from the Obsidian Butte source in Imperial County. Much of the rock art found today is thought to date to this period (Whitley 2000:41). Mortuary customs were elaborate, including cremation and interment, with abundant grave goods (Smith et al. 2008).

During this period, there was an increase in population size accompanied by the advent of larger, more permanent villages (Wallace 1955:223). Large populations and, in places, high population densities were characteristic, with some coastal and near-coastal settlements containing as many as 1,500 people. Many of the larger settlements were permanent villages where people resided year-round. The populations of these villages may have also increased seasonally (Smith et al. 2008).

In Warren's (1968) cultural ecological scheme, the period between A.D. 500 and European contact is divided into three regional patterns. The Chumash Tradition is present mainly in the region of Santa Barbara and Ventura Counties; the Takic or Numic Tradition is present in the Los Angeles, Orange, western Riverside, and southwestern San Bernardino Counties region; and the Yuman Tradition is present in the San Diego region. The seemingly abrupt changes in material culture, burial practices, and subsistence focus at the beginning of the Late Prehistoric Period are considered to be the result of a migration to the coast of peoples from inland desert regions to the east. In addition to the small triangular and triangular side-notched points similar to those found in the desert regions in the Great Basin and Lower Colorado River, Colorado River pottery and the introduction of cremation in the archaeological record are diagnostic of the Yuman Tradition in the San Diego region. This combination certainly suggests a strong influence from the Colorado Desert region (Smith et al. 2008).

In Los Angeles, Orange, western Riverside and southwestern San Bernardino Counties, similar changes (introduction of cremation, pottery, and small triangular arrow points) are thought to have resulted from Takic migration to the coast from inland desert regions. This Takic or Numic Tradition was formerly referred to as the "Shoshonean wedge" or "Shoshonean intrusion" (Warren 1968).

3.5.1.2 Ethnography

The rail corridor is located within an ethnographic transition zone between the Gabrielino/Tongva, Serrano, and Cahuilla Native American groups. All three groups are speakers of Takic languages, which are part of the Uto-Aztecan linguistic stock. Since the project area occupies a transitional zone among Gabrielino/Tongva, Serrano, and Cahuilla, it is necessary to consider all three groups to fully understand the occupation history of the rail corridor.

Gabrielino/Tongva

The Gabrielino/Tongva are characterized as one of the most complex societies in native southern California, second perhaps only to the Chumash, their coastal neighbors to the northwest (Bean and Smith 1978a:538; Kroeber 1925:621). The Gabrielino/Tongva language, as well as that of the Juaneno and Luiseno to the south, was derived from the Takic family. The Takic family is part of the Uto-Aztecan linguistic stock and can be traced to the Great Basin (Mithun 2001:539). This language group represents an origin quite different from that of the Chumash to the north and Ipai and Tipai further south. Linguistic analysis suggests that Takic-speaking immigrants from the Great Basin moved into southern California around 500 B.C.

(Kroeber 1925:579). This migration may have displaced both Chumashan- and Yuman-speaking peoples. The timing and extent of the migrations and their impact on indigenous peoples is poorly understood.

The Gabrielino/Tongva established large, permanent villages in the fertile lowlands along rivers and streams, and in sheltered areas along the coast that stretched from the foothills of the San Gabriel Mountains to the Pacific Ocean. The tribal population at contact is estimated to be at least 5,000 (Bean and Smith 1978a:540), though recent ethnohistoric work suggests a number approaching 10,000 is more likely (O'Neil 2002).

Houses constructed by the Gabrielino/Tongva were large, circular, domed structures made of willow poles thatched with tule that could hold up to 50 people (Bean and Smith 1978a). Other structures served as sweathouses, menstrual huts, ceremonial enclosures, and communal granaries. Cleared fields for races and games, such as lacrosse and pole throwing, were created adjacent to villages (McCawley 1996:27).

The fundamental economy of the Gabrielino/Tongva was one of subsistence gathering and hunting. The surrounding environment was rich and varied, and the tribe exploited mountains, foothills, valleys, deserts, riparian, estuarine, and open and rocky coastal environmental zones. With a large portion of their territory situated inland, they had access to juniper, yucca, and other vegetation from higher and drier areas than exclusively coastal peoples. As with most Native American Californians, acorns were the staple food, supplemented by the roots, leaves, seeds, and fruit of a wide variety of flora. Fresh and saltwater fish, shellfish, birds, and insects, as well as large and small mammals, were also exploited (Smith et al. 2008). Numerous other plants were used as medicines; as twine for the production of baskets, ornaments, and tools; and in religious ceremonies (O'Neil 2001; Smith et al. 2008).

A wide variety of tools and implements were used by the Gabrielino/Tongva to gather and collect food resources. These included the bow and arrow, traps, nets, blinds, throwing sticks and slings, spears, harpoons, and hooks. Groups residing near the ocean used ocean-going plank canoes and tule balsa canoes for fishing, travel, and trade between the mainland and the Channel Islands (McCawley 1996:7). Foods were processed with a variety of tools, including hammer stones and anvils, mortars and pestles, manos and metates, strainers, leaching baskets and bowls, knives, bone saws, and wooden drying racks. Food was consumed from a variety of vessels. Catalina Island steatite was used to make ollas and cooking vessels (Kroeber 1925:629).

Deceased individuals were either buried or cremated (Harrington 1942; McCawley 1996). Cremation was the standard practice for the mainland Gabrielino/Tongva during the contact period. Cremation ashes have been recovered from various archaeological contexts, including being buried within stone bowls and in shell dishes (Ashby and Winterbourne 1966:27). Archaeological and ethnographic data describe a wide variety of grave offerings, including seeds, stone grinding tools, otter skins, baskets, wood tools, shell beads, bone and shell ornaments, and projectile points and knives. Offerings varied with the sex and status of the deceased. Graves were sometimes marked, and in the San Pedro area headstones or boards were etched with figures (Smith et al. 2008).

The Gabrielino/Tongva were apparently first contacted by Europeans in 1542 when Juan Rodríguez Cabrillo entered the area. Following subsequent Spanish visits to the region, colonization began in 1769, precipitating the establishment of Missions San Gabriel (1771) and San Fernando (1797). Due in part to the introduction of Euro-American diseases and the harsh effects of mission life, the Gabrielino/Tongva population and culture suffered a gradual deterioration. Following the secularization of the missions, most surviving Gabrielino/Tongva

became wage laborers on the ranchos of Mexican California. In the early 1860s, a smallpox epidemic nearly wiped out the remaining Gabrielino/Tongva. The combination of disease, forceful reduction, and poor diet contributed to the disappearance of the Gabrielino/Tongva as a culturally identifiable group in the 1900 federal census (Bean and Smith 1978a). However, persons of Gabrielino/Tongva descent have continued to live in the Los Angeles area to the present time.

Serrano

The Serrano were originally a relatively small group located within the San Bernardino and Sierra Madre Mountains, and the term “Serrano” has come to be ethnically defined as the name of the people in the San Bernardino Mountains (Kroeber 1925:611). The Vanyume, who lived along the Mojave River and associated Mojave Desert areas, also referred to as the Desert Serrano, spoke either a dialect of Serrano or a closely related language (Mithun 2001:543).

The Serrano language is part of the Serran division of a branch of the Takic family of the Uto-Aztecan linguistic stock (Mithun 2001:539, 543). The two Serran languages, Kitanemuk and Serrano, are closely related. Kitanemuk ethnographic lands were located to the northwest of the Serrano (Smith et al. 2008).

The Serrano occupied an area in and around the San Bernardino Mountains between approximately 1,500 and 11,000 feet above mean sea level. Their territory extended west into the Cajon Pass, east as far as Twentynine Palms, north past Victorville, and south to the Yucaipa Valley. Year-round habitation tended to be located out on the desert floor, at the base of the mountains, and up into the foothills, with all habitation areas requiring year-round water sources (Kroeber 1908a; Bean and Smith 1978b).

Most Serrano lived in small villages located near water sources (Bean and Smith 1978b:571). Houses measuring 12 to 14 feet in diameter were domed and constructed of willow branches and tule thatching. The interiors were encircled with tule mats. Each house was occupied by a single extended family, comprising a husband, wife (or wives), children, grandparents, and perhaps a widowed aunt or uncle, and was a central family unit gathering place for sleeping and storage.

Much of the daily routine occurred outdoors in the open or under square armadas constructed of at least four posts, cross-beams, and tule-thatched roofs. Many of the villages had a ceremonial house, used both as a religious center and the residence of the lineage leaders. When hunting, the men would sometimes construct individual dwellings away from the village. Additional structures within a village might include granaries and a large circular subterranean sweathouse. The sweathouses were typically built along streams or pools (Smith et al. 2008).

Serrano territory was a trade nexus between inland tribes and coastal tribes. Ethnohistory also suggests that the Serrano played a role in the trade of horses from the southwest to the California coast (Bean and Vane 2002). The subsistence economy of the Serrano was one of subsistence hunting and collecting plant goods, with occasional fishing (Bean and Smith 1978b:571). Large and small animals were hunted, including mountain sheep, deer, antelope, rabbits, small rodents, and various birds, particularly quail. Plant staples consisted of seeds; acorn nuts of the black oak; pinon nuts; bulbs and tubers; and shoots, blooms, and roots of various plants, including yucca, berries, barrel cacti, and mesquite. Fire was used as a management tool to increase yields of specific plants, particularly chia (Smith et al. 2008).

Trade and exchange was an important aspect of the Serrano economy. Those living in the lower-elevation desert floor villages traded foodstuffs with people living in the foothill villages

who had access to a different variety of edible resources. In addition to intervillage trade, ritualized communal food procurement events—such as rabbit and deer hunts and pinon, acorn, and mesquite nut-gathering events—integrated the economy and helped distribute resources that were available in different ecozones (Smith et al. 2008).

A variety of materials were used for hunting, gathering, and processing food, many of which were also used for shelter, clothing, and ceremonial items. Shell, wood, bone, horn, stone, plant materials, animal skins, and feathers were used for making money, baskets, rabbit skin blankets, mats, nets, and bags. The Serrano made pottery and used it daily to carry and store water or foodstuffs; ceramics were also used as ceremonial objects. They also made awls, sinew-backed bows, arrows, arrow straighteners, throwing sticks (for hunting), traps, fire drills, stone pipes, musical instruments of various types (rattles, rasps, whistles, and bull-roarers), yucca fiber cordage for snares, nets and carrying bags, and clothing (Bean and Smith 1978b:571; Bean and Vane 2002). A strong tradition of basket weaving incorporated the use of juncus sedge, deergrass, and yucca fiber. Foods were cooked either in earth ovens, in watertight baskets using heated cooking rocks and constant stirring, or by parching through use of hot embers and a constant tossing motion of shallow trays containing the grains. Animal bones were boiled and then cracked for access to the marrow. A variety of methods were used in the drying and preserving of foods for later consumption (Smith et al. 2008).

Mainly due to the inland territory that Serrano occupied beyond Cajon Pass, contact between Serrano and Europeans was relatively minimal prior to the early 1800s. As early as 1790, Serrano began to be drawn into mission life (Bean and Vane 2002). More Serrano were relocated to Mission San Gabriel in 1811 after a failed indigenous attack on that mission. Most of the remaining western Serrano were moved to an *asistencia* built near Redlands in 1819 (Bean and Smith 1978b:573). By 1834, most western Serrano had been moved to the missions, with some Serrano possibly moved to the mission at San Fernando Rey (Kroeber 1908b). Only small groups of Serrano remained in the area northeast of the San Gorgonio Pass and were able to preserve some their native culture (Smith et al. 2008).

In the 1860s, a smallpox epidemic decimated many indigenous southern Californians, including the Serrano (Bean and Vane 2002). Surviving Serrano sought shelter at Morongo with their Cahuilla neighbors; Morongo later became a reservation (Bean and Vane 2002). Other survivors followed the Serrano leader Santos Manuel down from the mountains and toward the valley floors, and eventually settled what later became the San Manuel Band of Mission Indians Reservation. This reservation was established in 1891 (Smith et al. 2008).

Cahuilla

The Cahuilla settled in a territory that extended west to east from the present-day City of Riverside to the central portion of the Salton Sea in the Colorado Desert, and south to north from the San Jacinto Valley to the San Bernardino Mountains. Evidence suggests the Cahuilla migrated to southern California about 2,000 to 3,000 years ago, most likely from the southern Sierra Nevada ranges of east-central California with other related socio-linguistic (Takic-speaking) groups (Moratto 1984:559).

Cahuilla villages were usually located in canyons or on alluvial fans near accessible water such as springs or where large wells could be dug. Each family and lineage had houses (*kish*), granaries for the storage of food, and armadas for work and cooking. Sweat houses and song houses (for nonreligious music) were typically present within the villages, and each community constructed a separate house for the lineage or clan leader. Major religious ceremonies of the

clan were held in a separate ceremonial house. Houses and ancillary structures were often spaced apart, and villages typically spread over a mile or two (Smith et al. 2008).

The Cahuilla used more than 200 desert and mountain plants (Bean and Saubel 1972). Though 60% of Cahuilla territory was in the Lower Sonoran Desert environment, 75% of their diet came from plant resources acquired in Upper Sonoran and Transition environmental zones (Bean 1978). Key plant foods included acorns, screwbean and honey mesquite, pinon nuts, prickly-pear cactus fruit and leaves, and yucca blossoms and stalks.

The Cahuilla employed a wide variety of tools and implements to gather and collect food resources. Hunting was achieved using the bow and arrow, traps, nets, slings, and blinds for land mammals and birds and nets for fish when Lake Cahuilla was filled. Throwing sticks were used to procure individual rabbits and hares, whereas clubs and large nets were used during communal rabbit drives. Food processing was achieved using a variety of tools: portable and bedrock mortars, basket hopper mortars, pestles, manos and metates, bedrock grinding slicks, hammerstones and anvils, woven strainers and winnowers, leaching baskets and bowls, woven parching trays, knives, bone saws, and wooden drying racks. Food was consumed from woven, carved wood, and pottery vessels. Ground meal and unprocessed hard seeds were stored in large, finely woven baskets, whereas unprocessed mesquite beans were stored in large granaries woven from willow branches and placed on raised platforms to protect them from vermin.

Pottery was initially introduced to the Cahuilla during the Late Prehistoric Period, and the art of ceramic production was later adopted by the Cahuilla, who used the paddle and anvil technique. Typical culinary wares included jars, cooking vessels, and ladles. Ceramic pipes were also commonly manufactured. Ceramic ollas (large, round pots with small necks) were used for storing seeds, and sealed ollas with foodstuffs were sometimes cached in caves and rock shelters for consumption during hunting and gathering forays (Bean 1978:578–579).

Asistencias were established near Cahuilla territory at San Bernardino and San Jacinto by 1819. Interaction with Europeans was less intense in the Cahuilla region than for coastal groups because the topography and paucity of water rendered the inland area inhabited by the Cahuilla unattractive to colonists. By the 1820s, however, the Pass Cahuilla experienced consistent contact with the ranchos of Mission San Gabriel, whereas the Mountain Cahuilla frequently received employment from private rancheros and were recruited to Mission San Luis Rey (Smith et al. 2008).

Mexican ranchos were located near Cahuilla territory along the upper Santa Ana and San Jacinto Rivers by the 1830s, providing the opportunity for the Cahuilla to earn money ranching and to learn new agricultural techniques. The Bradshaw Trail, established in 1862, was the first major east-west stage and freight route through the Coachella Valley. Traversing the San Gorgonio Pass, the trail connected gold mines on the Colorado River to the coast. Bradshaw developed his trail using the model employed for the Cocomaricopa trail, which had maps and guides provided by local Native Americans. Journals by early travelers along the Bradshaw Trail described encounters with Cahuilla villages and walk-in wells as they journeyed through the Coachella Valley (Smith et al. 2008).

The expansion of immigrants into the region introduced the Cahuilla to European diseases. The single worst recorded event was a smallpox epidemic in 1862–1863. By 1891, only 1,160 Cahuilla remained within what was left of their territory, down from an aboriginal population estimated at 6,000 to 10,000 (Bean 1978:583–584). By 1974, approximately 900 people claimed Cahuilla descent, most of who resided on reservations.

Between 1875 and 1891, the United States established ten reservations for the Cahuilla within their territory: Agua Caliente, Augustine, Cabazon, Cahuilla, Los Coyotes, Morongo, Ramona, Santa Rosa, Soboba, and Torres-Martinez (Bean 1978:585). Four of these reservations are shared with other Native American groups, including the Chemehuevi, Cupeno, and Serrano. The Cahuilla on the Morongo Reservation established the Malki Museum in 1965 (Smith et al. 2008).

3.5.1.3 Historic Context

San Bernardino County

Spanish missionaries settled the San Bernardino Valley in the early 19th century and colonized local native populations. Father Francisco Dumetz of Mission San Gabriel arrived in 1810 and named the area after the Italian San Bernardino of Siena (City of San Bernardino 2010). The missionaries ran Rancho San Bernardino, which functioned as a cattle ranch and adjunct to Mission San Gabriel until 1834 when the missions were closed by order of the Mexican governor of California. Following the secularization of the missions, the rancho was purchased by Jose de Carmen Lugo in 1842 and then sold to Mormon missionaries in the 1850s (Mission Tour n.d.). Mormon pioneers, under the aegis of Brigham Young, arrived in the San Bernardino Valley in 1851 and purchased 35,000 acres of Rancho San Bernardino. However, the missionaries were recalled to Salt Lake City by Brigham Young in 1857, leaving behind schools, roads, and a local government (City of San Bernardino 2010).

While the southwestern part of the county remained primarily an agricultural and logging area throughout the 19th century, some commercial interest was sparked by the Holcomb Valley Gold Rush from 1861 to 1862. Commercial interests were also served by the Southern Pacific Railroad, which arrived in Colton in 1875, and the California Southern Railroad, which arrived in San Bernardino in 1883 (Myra L. Frank & Associates 1993:8).

After the departure of the Mormon missionaries, Dr. Benjamin Barton bought Rancho San Bernardino, which became the property of San Bernardino County in 1925. The historic complex was restored in 1937 (Mission Tour n.d.). San Bernardino County is an important regional economic center and the “gateway” to the San Bernardino mountain resorts, including Lake Arrowhead (Stone 1966:409).

San Bernardino

When the City of San Bernardino was officially incorporated in 1854, two-thirds of the population was Mormon. Their influence ensured that San Bernardino would be a “temperance town,” with no drinking or gambling allowed. Growth in San Bernardino faltered when, in 1874, townspeople initially refused to accommodate railroad interests. As a result, Colton, a small city to the southwest, became the regional hub of the Southern Pacific Railroad – the first transcontinental railroad to pass through the Inland Empire – instead of San Bernardino. Later, when the AT&SF proposed that San Bernardino become a major facility for its operations, the city was much more amenable. With the AT&SF as an important growth engine for the area, the greater San Bernardino region thrived with citrus, grape, and steel industries (Schuiling 1984:100–101). After World War II, San Bernardino’s economic and population growth continued, with suburban development rapidly replacing former agricultural land. Only in the 1970s did the region’s growth begin to falter with the demise of citrus and steel production and lessening demand for railroad transportation. While this trend has affected the historic core of downtown San Bernardino, residents have recently begun to return to the area as a result of redevelopment efforts (Schwartz 2005).

Transportation History

San Bernardino and the Santa Fe

In large part because of its strong railroad presence, at the turn of the last century San Bernardino was seen not just as a center for the Inland Empire's citrus industry but as the gateway to southern California.

However, within the Inland Empire, it was neighboring town of Colton that in January of 1883 first became the regional home to a transnational line. The Southern Pacific Railroad (SP) established the city itself after San Bernardino had rejected SPs conditions and overtures for laying track through its boundaries. However, the SP's chief rival—the Atchison, Topeka and Santa Fe Railway—through its subsidiary, the California Southern Railroad (CSRR), was able to convince San Bernardino that having a transcontinental railroad pass through the city would lead to an economic boom. Following a Supreme Court ruling in September, 1883, the CSRR arrived at its San Bernardino depot (Robinson 1958:50). Though this first depot was basically a boxcar, San Bernardino's citizens were elated by its presence.

In 1886, the AT&SF constructed a large wood and brick depot and began work just north of the tracks on a massive complex of shops that continued expanding until the 1950s. This depot was destroyed by fire in 1916 and was replaced with the current Moorish Revival style depot, a National Register–listed property, 2 years later. Santa Fe's complex of depot, shops, and numerous track alignments made San Bernardino the railway's primary hub in the western United States. Meanwhile, competitive price wars during the years 1887–1888 between SP and Santa Fe lured tens of thousands of visitors and new residents—primarily Midwesterners—to southern California. As a result, the boom of the 1880s led to a substantial rise in San Bernardino's population, similar to many other southern California communities of the time. By 1900, 85% of all San Bernardino citizens directly or indirectly worked for the Santa Fe, and San Bernardino had become a "railroad town" (Raup 1940:39).

Development near the Santa Fe Depot

One of southern California's oldest cities, San Bernardino saw its first European residents in the 1850s in the form of a Mormon Colony. As originally subdivided in 1866, the town consisted of 72 blocks located due east of where the AT&SF depot would later be built. The construction of the Santa Fe Depot shifted the City's general development trend westward. Numerous light industrial properties began to develop near the tracks, primarily west of H Street—now the I-215 freeway. Within the rail corridor, a few examples remain that were constructed between 1920 and 1950. Additionally, this westward shift included substantial residential construction, much of which was for the railroad workers themselves. The focus of this development, which included both single and multiple-family dwellings, occurred just south of the depot with much of it constructed between 1885 and 1920. Adjacent to the APE, the residential subdivisions below the depot included Carter's Subdivision, with two blocks originally subdivided in 1884, and Elizabeth M. Wallace's Subdivision of 1886.

The styles of the homes in the vicinity of the railroad depot reflect broader trends popular between 1885 and 1920, the period in which many of these homes were erected. The earliest houses appear to have been constructed prior to 1895 and reference Second Empire Baroque and Italianate styles—revivalist, "picturesque" design systems focused on aesthetically pleasing exterior imagery that referenced a romanticized past. In residential architecture, picturesque design systems were a reaction to the new mechanization of the industrial revolution and were often used in worker housing, particularly in company towns of the latter 19th century.

Near the Project, the Folk Victorian style and the simpler National style were vernaculars commonly seen in other parts of the western United States between 1880 and 1915. Usually consisting of square or rectangular plans with simple, gabled massing, both of these styles were dispersed across the country largely by, and in-tandem with, the railroad itself (McAlester and McAlester 2003:310). It was along rail lines that the prefabricated, pre-cut components of these homes, including their often standardized applied ornamental details, were shipped to the railroad's new destinations. In this regard, these styles as seen within the worker housing near the Santa Fe Depot are highly contextual.

Within the Project area along North K Street and West 2nd Street, a second wave of construction consists primarily of Craftsman-influenced homes erected between 1912 and 1925. The Craftsman style was influenced by the English Arts and Crafts movement, which, like the picturesque styles mentioned above, was a reaction to the industrial revolution—the demise of its products compared to the handcrafted, and a hearkening back to earlier, nonmechanized vernacular styles. Craftsman architecture in southern California was most famously refined by the firm of Greene and Greene of Pasadena who emphasized nature through the generous use of wood in the aesthetic (McAlester and McAlester 2003:454). Many of these ideas derived from traditional Japanese architecture, and the southern California climate lent itself well to such a focus on nature.

Redlands and the San Bernardino Valley Railway Company

The arrival of the CSRR/Santa Fe also stimulated the growth of other nearby communities. Among those that indirectly benefitted was the community of Redlands, which was the cultural center of the Inland Empire and itself, a locus of the citrus industry. On January 12, 1887, just four months after the Santa Fe's arrival in San Bernardino, a consortium of Redlands businessmen established the San Bernardino Valley Railway Company (Beattie 2009). Their San Bernardino Valley line is the branch from the San Bernardino Depot to Redlands that is the focus of the proposed Project. With $42,750 they purchased all required rights-of-way and the land for a Redlands depot (Beattie 2009). By December 31, 1887 the company was consolidated into the California Central Railway Company, which finished the alignment to the town of Mentone just northeast of Redlands (Robertson 1986:87). Fred T. Perris, the California Southern engineer who supervised the railroad's completion through the Cajon Pass, also supervised the construction of this segment. The line, next to which the proposed Project would add a second set of tracks, began operation in 1888, the same year of Redlands' incorporation. On November 7, 1889, the California Central and the California Southern were officially given the AT&SF moniker. The railroad, now known as BNSF, continues to operate the Project segment to the present time (Robertson 1986:237).[2]

The Kite-Shaped Track

Aside from being a significant contributor to Redlands' growth and development, the proposed Project rail line from the Depot in San Bernardino to Redlands is also notable for being a segment of the "Kite-Shaped Track," a popular southern California excursion route at the turn of the twentieth century. Named for a figure-8-shaped 19th century horseracing track, Santa Fe Railway's Kite-Shaped Track was a figure-8-shaped 166-mile continuum of track across the greater Los Angeles basin. Began in 1891, the line, which was also called "The Loop," was highly promoted and was itself a tool for promoting the southern California lifestyle. The line was marketed as a recreational excursion for both residents and visitors. Much of the line's focus was the imagery of the southern California citrus industry and the beautiful natural terrain

[2] Though BNSF presently operates light freight on this line, the line has been owned by SANBAG since 1993.

surrounding it. Additionally, the line served as a means for citrus farmers themselves to market their fruit and is credited with stimulating the development of many communities along its path.

To board, tickets were purchased at La Grande Station (1893-1939), the Los Angeles AT&SF depot that would be replaced by Union Station in 1939. The line passed through numerous towns and areas including Pasadena, the San Gabriel foothills, Riverside, Orange County, Redlands, San Bernardino, and Mentone, which served as the far eastern edge of the Route. Aside from Los Angeles itself, all of the areas were citrus and agricultural communities at that time. People were encouraged to periodically disembark to absorb the local flavor and then continue on their journey. Though the motto of the line was "No Scene Twice Seen," the San Bernardino Depot served as the crux of the figure 8, and was indeed passed twice.

A 1914 *Santa Fe Magazine* article about the Kite-Shaped Track twice discussed the original setting between San Bernardino and Redlands, albeit in slightly contradictory terms. The first states, "The ride from San Bernardino to Redlands is very short, too short in fact for a wealth of scenery. The mountains showed up behind the dark green of the orchards, and as the train sped along they seemed to grow higher and higher every moment…" (Breene 1914:51). Then later in the same article appeared, "From San Bernardino to Redlands is perhaps the most beautiful part of the trip. It lies in the orange belt, and along almost all the distance there is nothing but miles of orange groves, with the fruit in all stages of maturity….the line of green is unbroken" (Breene 1914:52). A diminutive scaled 25x35 passenger depot originally built for the line stood at the northwest corner of E street and the tracks (Landis 2008). The building, which no longer exists, was constructed in 1888. Around 1926 it was removed from the property and relocated to the Santa Fe Railroad facility near the depot (Landis 2008).

Before the dominance of the automobile in southern California, the Kite-Shaped Track presaged the trend of mobility itself as recreation. With the advent of the mass-produced automobile, the Kite-Shaped Track quickly decreased in popularity. By 1917 the excursion had lost most of its relevance as a recreational journey (Landis 2008). The route was formally discontinued by the AT&SF in 1938. The alignment between Bernardino and Redlands, which includes the APE, is all that remains of the Kite-Shaped Track's eastern loop (Landis 2008).

3.5.1.4 Records Search

As stated in the cultural resources technical memorandum prepared for the Project (Appendix D), a literature and records search was conducted at the San Bernardino Archaeological Information Center (SBAIC) at the San Bernardino County Museum, Redlands on May 21, 2010. The search included a review of all recorded archaeological sites within a 1 mile radius of the Project as well as a review of the on-file cultural resource reports. In addition, records from the California Points of Historical Interest, California Historical Landmarks, the California Register of Historical Resources, the National Register, and the California State Historic Resources Inventory were reviewed. The historic U.S. Geological Survey (USGS) quadrangle maps, San Bernardino, CA (1896, 1901) were inspected as well.

The results of the records search indicated that 55 cultural resource sites have been recorded in a 1-mile radius of the project location. Of these recorded sites there are five prehistoric archaeological sites, one multi-component archaeological site (prehistoric and historic), and 49 historic period sites.

3.5.1.5 Historic Resources

Figure 3.5-1 presents an aerial view of the APE and surrounding areas. Twelve properties within the Project Study Area were previously identified as part of the *Historic Resources*

Reconnaissance Survey, San Bernardino, California, that was prepared by architect Milford Wayne Donaldson, A.I.A., for the City of San Bernardino Department of Planning and Building Services dated April 30, 1991 (1991 survey). A tabular listing of these resources is included as an appendix to the 1991 survey (Donaldson 1991:20–21). Because San Bernardino has yet to adopt a historic preservation ordinance, the 1991 survey has been used by the City as a de facto list of its historic resources (City of San Bernardino 2005b). As a result, properties within the Project Study Area that are on the 1991 survey list are identified in the current assessment recordation documents as either a) individually eligible for local listing or b) both individually eligible and eligible as a contributor to the potential district (see Appendix D).

A portion of the Project cuts through the Santa Fe Railroad Workers Overlay Zone, a potential historic district identified in the 1991 survey that "consists of a residential neighborhood developed between 1900 and the 1920s and originally occupied by Santa Fe Railroad workers and their families" (City of San Bernardino 2005b). Of the 12 historic resources within the Project Study Area, four are also contributors to this overlay zone.

The survey process undertaken for purposes of this evaluation was conducted per California Office of Historic Preservation (OHP) instructions, which gives a 45-year threshold for surveying properties for significance. Those properties that were of post-1966 construction (under 45 years of age) were not documented in the current survey unless they exhibited potentially "exceptional" importance (U.S. Department of the Interior, National Park Service 1997:42).

The following discussion of resources is specific to the CEQA evaluation.

1170 West 3rd Street—Atchison Topeka & Santa Fe Railroad Depot

The Depot, located at the southern boundary of the former rail yards, is a large Mission Revival-style building. The design of this massive building was derived largely from historic California missions. The building includes four domed mission-style bell towers that surround a central waiting room with a larger dome. The wings of the Depot, housing various work and office spaces, are similarly designed with reference to mission façades and arcades and include shaped "bell walls," buttress and pilaster wall detailing, and other characteristic features (Donaldson 1991:18–19).

The building is regarded as unique among the AT&SF stations in California. Its architecture contributes to the significance of the property at both state and local levels. Furthermore, it is listed in the National Register of Historic Places (National Register) (1S CHRC status code). Because the property is listed in the National Register, as well as the California Register of Historical Resources (California Register), it is considered a historic resource for the purposes of CEQA pursuant to the State CEQA Guidelines, Section 15064.5(a).

Depot Tree Grouping

The Depot tree grouping consists of 19 mature *Washingtonia robusta, Washingtonia filifera*, and *Phoenix canariensis* palm trees in addition to one bottle tree (*Brachychiton populneus*). The trees are located on a 400-foot-long sliver of property running parallel to 3rd Street, roughly 850 feet northeast of the Depot. The sliver is 40 feet wide and bounded by the arcing tracks of the BNSF Redlands Subdivision rail line. Ten of the 19 palm trees, subspecies *Washingtonia robusta*, are 75 to 100 feet tall. These trees are located on the eastern portion of the sliver. The shorter *Washingtonia filifera* variety is located predominately on the western portion of the sliver as is the sole bottle tree. The two *Phoenix canariensis* are located near the middle of the grouping. Additional *Washingtonia filifera* trees are present in crates; these appear to have been recently relocated to the property. Beneath the trees are smaller specimens, which are young

and not from the historic period (1885–1916).The trees are arranged in an irregular line. No other landscaping is present. A metal mesh fence separates the grouping from 3rd Street.

Early aerial imagery, postcards, and Sanborn Fire Insurance Company maps indicate that the Depot tree grouping was originally part of a park dating from 1886, the year when an earlier depot first opened. This original depot, which burned in 1915, was located east of the present one and adjacent to the tree grouping. The *Washingtonia robusta* palm trees in the grouping, some of which are nearly 100 feet tall, appear to date from the historic period (c.1886–1915). An early Sanborn Fire Insurance Company map places an "R.R. Park" near the present location of the trees (the Sanborn imagery cuts off before the exact spot), and aerial imagery confirms that the present grouping was extant in 1926. Such parks and landscape features contributed to the excursion and recreational aspects of train travel in Southern California at the end of the 19th century. Travelers were encouraged to stop at various train destinations for the purpose of strolling and taking in the sights of a given locale. This was particularly true of the kite-shaped track alignment, a 166-mile-long figure eight that crossed Southern California, with the Depot at the crux. As part of a highly significant stop along the kite-shaped route, the park likely served as landscaped strolling grounds for travelers, although it predates the route itself.

Palm specimens of various types grew in the region's warm Mediterranean climate. Such trees were seen as novel and exotic, unlike those of the midwestern and eastern hometowns of Southern California's many visitors at that time. Today, the boundaries of the original park have been severely altered and the majority of its trees removed. The portion of the park that was originally located east of the BNSF Redlands Subdivision rail line has been completely redeveloped.

Although the Depot tree grouping appears to be very early, because of numerous alterations and tree removal, the grouping does not adequately represent the densely landscaped recreational park of which it was once a part. It appears ineligible for the National Register under Criterion C. Likewise the grouping does not possess the integrity necessary to convey the broad social pattern of regional railroad-related recreation and, therefore, is ineligible for National Register Criterion A. Research yielded no persons of historic significance who were associated with the park. The resource appears ineligible for National Register Criterion B. For similar reasons, the park does not appear eligible for listing in the California Register under any criterion. Therefore, it is not considered a historic resource for the purposes of CEQA pursuant to the State CEQA Guidelines, Section 15064.5(a).

Atchison Topeka & Santa Fe Kite-Shaped Track

Originally part of AT&SF's network of tracks, the segment known as the kite-shaped track consisted of a 166-mile continuum arranged in roughly a figure-eight pattern. The kite-shaped track route traveled across the Los Angeles basin, with its crossing point located in San Bernardino. It was officially in operation from 1891 until 1938. Although no longer identified as the kite-shaped track, a portion of the original eastern route between San Bernardino and Redlands is located within the boundaries of the Project Study Area.

The location of the kite-shaped track within the Project Study Area is the same as it was 100 years ago. However, the integrity of the route's design, workmanship, and materials has been compromised by ongoing routine maintenance, including periodic replacement of the original track and associated materials as necessary. Concrete railroad ties have replaced the original wooden ties. Furthermore, economic development in the area has negatively affected the integrity of the setting, which was a mixed residential and agricultural region in the route's heyday. In addition, its association with a popular tourist attraction has been lost because of the

cessation of passenger service along the route. As a result, the overall integrity of the railroad segment has been substantially degraded.

Because of substantial degradation of setting, feeling, and association after passenger service was discontinued in 1938, the portion of the kite-shaped track that corresponds with the Project Study Area does not meet the requirements for listing in the National Register under Criterion A for historic associations. In addition, under National Register Criterion B, current research did not reveal that a specific historic figure was directly associated with the kite-shaped track, particularly the portion located within the boundaries of the Project Study Area. Finally, because of the loss of integrity arising from the replacement of the original track, wooden ties, and other related materials associated with the kite-shaped track, integrity of design, workmanship, and materials has been substantially compromised. Therefore, the requirements for designation under National Register Criterion C have not been met. For similar reasons the kite-shaped track does not appear to meet California Register Criterion 1, 2 or 3. As a result, it is not considered a historic resource for the purposes of CEQA pursuant to the State CEQA Guidelines, Section 15064.5(a).

155 South G Street—Southern California Gas Company Plant

This expansive property used as a plant for the Southern California Gas Company contains two large buildings, a one- and two-story North Building and a one-story South Building. The architectural style of both buildings is Streamline Moderne, which was popular during the 1930s and is reflected in the flat roofs with parapets, curved corners facing the street, stucco finish, and broad horizontality of the connected sills and lintels that form belt courses along each façade. At the rear of the North Building is a two-story portion that is utilitarian in design. Fenestration along the primary elevations consists of a band of multiple four-light aluminum frame windows that most likely replaced original steel frame windows. Above the street-facing windows of the North Building are the words "SOUTHERN CALIFORNIA GAS COMPANY" in period lettering. On the South Building, the word "AUDITORIUM" in similar lettering tops the original corner metal and glazed double doors of the main northwest-facing entrance. To the rear of the South Building is a long, low utilitarian shed-like portion capped by a low-pitched gabled roof apparently used for storage and to shelter vehicles. Most likely, it is this portion that building permits indicate was added in 1952. Landscaping consists of narrow lawns fronting both buildings, clipped hedges, and a few mature trees. A prominent metal security fence surrounds the property at the sidewalk. The remainder of the parcel is paved for surface parking. Alterations include the aforementioned window replacements and the application of a rough-textured stucco finish over the original smooth stucco. Nonetheless, the overall integrity of design, materials, feeling, and workmanship remains moderate to high. In addition, integrity of location, setting, and association is high because the property has been in continuous use as the Southern California Gas Company's plant since it was constructed. A windshield survey of San Bernardino suggests that the Streamline Moderne architectural style is relatively uncommon in the City. As such, the subject property represents a rare example of the style in San Bernardino.

The original building permit was not located; however, a subsequent permit indicates that a storage building was erected in 1952. The 1937 San Bernardino city directory does not include the subject address and, unfortunately, the 1938 and 1939 city directories were not available. However, in the 1940 city directory the subject property appears as Southern California Gas Company. Given the buildings' Streamline Moderne architectural style, it can be surmised that the property has a circa 1938 construction date.

The overall integrity of design, materials, feeling, and workmanship remains relatively high. In addition, integrity of location, setting, and association is high because the property has been in continuous use as a Southern California Gas Company plant since it was constructed. A windshield survey of San Bernardino suggests that the Streamline Moderne architectural style is relatively uncommon in the City. As such, the subject property represents a rare example of the style in San Bernardino. Therefore, it appears that the subject property achieves the level of architectural merit necessary for listing in the National Register under Criterion C at the local level of significance (3S status code). However, because no known persons or events of local, state, or national significance appear to be associated with the resource, and because its association with the Southern California Gas Company does not appear to be especially noteworthy, the property does not warrant National Register listing under Criterion A or B.

The subject property is considered a historical resource pursuant to the State CEQA Guidelines, Section 15064.5(a), because it was found eligible for the National Register and because it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey (5S3 status code).

950 West 2nd Street

This one-story utilitarian industrial building is rectangular in plan. It sits on a concrete foundation and is capped by a front-gabled roof that is sheathed with metal. A pair of gabled vents appears along the ridgeline. Exterior surfaces are clad in board-and-batten siding or nonoriginal stucco. The primary entrances and several windows are located on the west elevation. The openings on the south elevation have been covered by stucco. The east elevation originally included a loading dock and a large opening so that freight could be transferred to the railroad spur that paralleled the building when it was first constructed. The metal chain link fence that surrounds the property exhibits a low level of integrity.

Original building permits were not located for the subject property. However, city directories and Sanborn maps indicate that it was erected circa 1942. Pestco Laboratories was the initial occupant. By 1944, the business had been renamed Archie Ruttan Fumigator; by 1949, it was Pestco Company Fumigator. However, in 1951, the building took on a new use when the Inland Neon Company became the owner or tenant. By 1958, the Own Neon Company appeared at the address. Ten years later, in 1968, the Color-Ad Sign Company was the occupant.

Current research did not uncover any evidence to suggest that this building was associated with any events or personages important to local, state, or national history; therefore, the building does not appear eligible for listing in the National Register under Criterion A or B. With respect to architectural merit, this utilitarian building has undergone substantial alterations, particularly to its primary (south) elevation, that have negatively affected its physical integrity. As a result, the building does not appear eligible for listing in the National Register under Criterion C (6Y status code).

Note that the subject property was not included in the tabular listing of the City's surveyed historic resources found in the 1991 survey. As a result, it is not considered a historic resource for the purposes of CEQA pursuant to the State CEQA Guidelines, Section 15064.5(a).

777 West Rialto Avenue—Richfield Oil Company Building

The subject property contains a one-story commercial building designed in the Spanish Colonial Revival style with Mission Revival-style elements. Symmetrically arranged and rectangular in plan, the building is crowned by a medium-pitched side-gabled roof, with flanking stepped parapets that were clearly influenced by the Mission Revival style. Red clay tiles clad the roof,

which features extremely shallow eaves. Exterior surfaces are finished with smooth stucco. Windows consist of rectangular openings (now covered by plywood) within incised arch designs, which are typical of the Spanish Colonial Revival style. The parapeted secondary elevations boast identical window designs. Round vents punctuate the upper portions of the stepped parapets. Centering the façade is the raised entrance, which is accessed from broad concrete steps with concrete railings. The main entry door is covered by plywood. Slumpstone block walls topped by chain link fencing and concertina wire enclose the property. An asphalt parking area is found to the south, and a lawn fronts the commercial building. The property exhibits a relatively high level of integrity, although the integrity of the windows behind the plywood is undetermined.

Original building permits for this property were not available from the City. Sanborn maps and city directories show that the subject property was constructed for the Richfield Oil Company as an office building in 1925. The 1926 city directory indicates that R. A. Owen was the manager of the location at that time. The company continued to occupy the property until approximately 1958; it was listed as unoccupied through at least 1961. However, the 1968 city directory shows that the C. S. Older Construction Company was the occupant. No additional information regarding Richfield Oil Company operations in San Bernardino was uncovered during the current research, which included a search of the *Los Angeles Times* via ProQuest.

Although the subject property exhibits a relatively high level of physical integrity (despite the presence of plywood covering all fenestration), the former office building does not exhibit a level of architectural refinement and attention to detail that would make it an excellent example of the Spanish Colonial Revival/Mission Revival style. In addition, there is no information to suggest that a master architect or designer was associated with the subject property. As a result, the property does not rise to a level of architectural merit that would qualify it for listing in the National Register under Criterion C. With respect to historic associations, current research did not uncover any evidence to suggest that the Richfield Oil Company's ownership/occupancy of the subject property would be considered historically important at the local, state, or national level of significance. That, combined with an apparent lack of association with historic personages, leads to the conclusion that the property does not meet Criterion A or B for listing in the National Register (6Y status code).

Note that the subject property is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a) because it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey (a 5S3 status code).

907 West Rialto Avenue

The subject property is a two-story single-family residence designed in the Transitional Arts and Crafts style. Rectangular in plan, the residence is sheathed in wide clapboard siding. It features a steeply pitched side-gable roof with slightly curved overhanging eaves, exposed rafter tails, and triangular braces. Two large front-gabled dormers emerge on the primary (north) elevation, with designs that mirror the main roof (a large evaporative cooling unit is imbedded in one of the dormer windows). Fenestration consists of a mix of original wood-frame double-hung sash windows and nonoriginal aluminum sliders and vinyl units. A squared bay capped by a shed roof centers the east elevation. Asymmetrically divided and three bays wide, the primary façade features a full-width front porch. The porch is sheltered by the main roof, which is supported by battered wood posts on clinker brick pedestals. Within the porch area is a diagonally positioned primary entrance with a nonoriginal door, sidelights, and a pair of wood-frame windows. The porch is accessed from concrete steps. A thin wooden belt course that spans the entire elevation forms a water table. A clinker brick exterior chimney is located on the west elevation.

At the rear of the dwelling are several alterations, including a two-story shed-roofed addition, which is accessed from a nonoriginal exterior staircase, and several nonoriginal windows. The house was converted into a multi-unit dwelling in the 1940s. Landscaping consists of a lawn, mature bushes, and a large pine tree. A cyclone fence bounds the property.

The original building permit for this property was not available from the City. Sanborn maps, tax assessor records, and city directories confirm that the dwelling was erected in 1915. City directories indicate that Damon G. Cooley, proprietor of the White Auto Machine Shop, located at 378 3rd Street, was the first occupant of the home. Mr. Cooley lived there until approximately 1920 when William J. and Belle Gillard became the residents. Mr. Gillard was a foreman with AT&SF. In 1922, William and Belle Gillard continued to reside at the address along with Etta Gillard, a signal operator with AT&SF. Two years later, in 1924, the Gillards were joined by Geraldine Gillard, who was an assistant to Dr. Willard O. Rife, a local optometrist. The property was vacant in 1926, but by 1928, Edward H. and Geraldine Townsend lived there (it can be assumed that Geraldine Gillard married Mr. Townsend, who was a mechanic with the Western Motor Transportation Equipment Company). The 1930 city directory has Thomas E. Booth, a mechanic with White Garage, residing at the house. Three years later, in 1933, Mr. Booth occupied the house with his wife Blanche. In 1937, the house was again occupied by William J. Gillard and his wife, along with Lee and Irene Braswell (Mr. Braswell was a brakeman). The reappearance of Mr. Gillard at the address suggests that the house had served as his rental property for a number of years. Indeed, the 1940 city directory shows four individuals or couples residing at the dwelling. During the 1940s, a number of different people appear as householders. In 1955, the property is referred to as apartments 1, 2, and 3. In 1968, there were four apartments. Today, the subject property is used as an after-care inpatient/outpatient facility and has the capacity to accommodate 22 people while enrolled in sober living programs for 3 to 6 months.

ProQuest *Los Angeles Times* research revealed that Damon Cooley, as proprietor of the White Auto Machine Shop, was involved in organizing stock car contests, one of which occurred in 1917 on the “Rim of the World” route at Waterman Canyon, located north of San Bernardino. No additional information regarding Mr. Cooley was uncovered, nor was any information regarding longtime dwelling owner William J. Gillard found during the current research. The same is true of the other residents listed in the city directories.

Architecturally, the subject property represents a good but not stellar example of the Transitional Arts and Crafts style because of a number of harmful alterations. Specifically, window replacements, front door replacement, additions to the rear of the house, and the conversion to a multi-family dwelling have rendered it ineligible for the National Register under Criterion C, which is related to architectural merit. With respect to historic associations, current research suggests that the property was not the residence of a notable figure, nor does it appear that any important event of local, state, or national significance occurred there. Therefore, the property does not meet Criterion A or B, which is required for National Register listing (6Y status code). However, the subject property is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a) because it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey. In addition, the property was identified in the 1991 survey as a contributor to the potential Santa Fe Railroad Workers Overlay Zone (5B status code).

958 West Rialto Avenue

The subject property contains a large one-story industrial building, which is rectangular in plan, with a smaller recessed addition located at the north end of the east elevation. Both elements

are utilitarian in style. The older portion is capped by a medium-pitched front-gabled roof. The newer portion features a low-pitched front gable. The older portion is clad in corrugated metal and has a metal roof. The newer portion is sheathed with common metal siding. A pair of nine-light metal-frame windows, each topped by a milled aluminum vent, flank the large south-facing freight opening of the original portion; similar windows (without vents) punctuate its east and west elevations. The newer portion is raised on a concrete foundation, with a large freight opening facing south and three similar openings facing east. The entire blacktopped property is bounded by a chain link fence. The older building exhibits a relatively high level of physical integrity.

Building permit information on the property was not available from the City. However, city directories and Sanborn maps indicate that this industrial building was erected circa 1949, with Belfast Bottling Company as the initial occupant. In subsequent years, city directories show that there were a number of other occupants, including Certified Beverage Company, Vernors Ginger Ale Company, and, by 1968, Los Angeles City Express Trucking. With respect to architectural merit, the subject building represents an unremarkable example of a utilitarian industrial building with a later addition. As such, it does not rise to a level of architectural significance to meet Criterion C of the National Register. Current research did not uncover any evidence to suggest that this building was associated with any events or personages important to the history of the City, state, or nation from its various uses over the years. Therefore, the property does not meet National Register Criterion A or B (6Y status code).

Although the subject property is within the boundaries of the Santa Fe Railroad Workers Overlay Zone, it was not identified as a contributor to this zone. In addition, the property is not included in the tabular listing of the City's surveyed historic resources found in the 1991 survey. Therefore, the property is not a historic resource under CEQA.

123 South G Street—JG Wholesale Product

The subject property contains a two-story utilitarian warehouse. The structure is capped by a medium-pitch front-gable roof. The lower portion of the building is sheathed in a rough-textured stucco finish that appears to have been applied later; its upper portion is sheathed with board-and-batten siding. A large freight opening on the primary (west) elevation is fronted by a raised concrete loading dock. The property exhibits a moderate level of integrity.

Original building permits for this property were not available from the City. Sanborn maps and city directories indicate that the building made its appearance on the parcel circa 1954 as Ray Snell Wholesale Produce. In 1958, Ray Snell occupied the front of the building and Bachelor & Livacich Fruits occupied the rear. By 1968, Ray Snell continued to occupy the front, but the rear was the home of Glenn Shuey Restaurant Supply Company. The building is now used by the JG Wholesale Product company.

This building represents an undistinguished example of utilitarian architectural design from the middle decades of the 20th century. Although the building retains integrity of design and materials, aside from stucco cladding, it lacks the necessary quality of significance in architecture. As a commercial building with minimal character-defining features, it does not embody characteristics of a method of construction that warrant special recognition. No information has been uncovered to suggest that it was associated with a significant designer or craftsman. Within the context of utilitarian architecture and development, the property does not appear eligible under National Register Criterion C. No known persons or events of local, state, or national significance are associated with the resource. This makes the building ineligible for the National Register under Criterion A or B (6Y status code).

Note that the subject property is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a) because it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey (5S3 status code).

144 South G Street

The subject property contains a one-story utilitarian commercial building. It was originally an automobile wrecking facility. The building displays steel frame construction, with corrugated metal walls and a hipped metal roof. It is open on its east and west sides; however, a broad metal shelter runs along the east elevation. The building is surrounded by a large asphalt parking lot and bounded by a tall metal fence. The property exhibits a moderate level of integrity.

This property is not eligible for the National Register under any criterion. This building is an undistinguished example of a utilitarian commercial building. Although the property retains a moderate level of integrity, it does not rise to a level of architectural merit to warrant listing in the National Register under Criterion C.

The original building permit was not located. Current city directory research revealed that the building was erected in 1942 and its original occupant was Hyman-Weisser Auto Wrecker. In 1951, the occupant was National Auto Wrecking & Pipe Company. Seven years later, in 1958, the occupant was the San Bernardino Iron & Metal Company, a name that would be associated with the property as late as 1968. As a result of this research, it can be concluded that no known persons or events of local, state, or national significance are associated with the property. Therefore, the subject property is ineligible for the National Register under Criterion A or B (6Y status code) and not considered a historic resource under CEQA.

106 North I Street—Toman's Machine Shop

The building at 106 North I Street is a one-story utilitarian structure with an irregular plan. It was originally constructed as a machine shop. The building's rear elevation is angled, following the railroad tracks that border the parcel. The building is clad in corrugated metal siding and has an off-center, medium-pitched front-gable roof with overhanging eaves and corrugated metal roofing. The building is asymmetrically composed. The primary elevation faces east and contains two garage bays. One has a corrugated metal sliding door, and the second has been converted into a pedestrian entry. An additional pedestrian entry with a nonoriginal single-panel door is also present. Flanking the garage door to the south is a square window opening that has been boarded up with plywood. Three six-light metal-frame windows are also present. Several additions have been made to the building (rear and south elevations). These are also clad in corrugated metal. Mature tree specimens are present at the property.

The original building permit for this property was not available from the City. In the late 1940s, the McDonald brothers were operating their original McDonald's drive-in restaurant at 1396 North E Street in San Bernardino. As they refined their "Speedee Service System," the brothers commissioned the design and manufacture of a mechanical device for delivering identical quantities of ketchup and mustard for their hamburgers. They chose Toman's Machine Shop (the subject property) for the task. Owner Florian A. J. Toman invented a stainless steel condiment dispenser, which he patented in 1950, that performed as specified by the McDonald brothers. In doing so, Toman had created the tool that allowed kitchen workers to dress a hamburger with the same amount of ketchup and mustard every time so that consistency of product was assured. Toman's condiment dispenser was used in all McDonald's restaurants, continuing into the Ray Kroc era (Kroc purchased the McDonald's business in 1961). As a

result, Toman's invention helped usher in the fast food industry that would soon dominate the restaurant business nationwide. A variation of Toman's dispenser is still being used at McDonalds and other fast food restaurants worldwide today. Unfortunately, in 2010, the entire contents of Toman's Machine Shop, including original prototypes of the dispenser, were removed and scrapped. After the interior was gutted, new drywall, a drop ceiling, and a pedestrian entrance were installed.

The period of significance for the property is 1948–1950, corresponding to the time when Toman designed and patented his stainless steel condiment dispenser at the subject property. Unfortunately, the loss of all machinery and prototypes associated with the invention and manufacture of the condiment dispenser at the building has resulted in a substantial loss with respect to integrity of feeling and association, which are key to understanding the significance of the property in the context of the invention of an important tool. Therefore, the property does not meet National Register Criterion A for historic associations. Although Florian Toman invented the condiment dispenser discussed above, as a historic personage, his importance does not rise to the level of significance necessary for the property to be eligible for National Register listing under Criterion B. As for architectural merit, the property retains moderate integrity of design, materials, and workmanship as an early 20th-century example of vernacular light industrial design. However, it does not appear that the property's style and type rise to the level of significance necessary for it to be considered eligible for the National Register under Criterion C. For similar reasons, the property does not appear eligible for listing in the California Register under any criterion. Nonetheless, the subject property is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a) because it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey (5S3 CHRC status code).

271 North K Street

This one-story concrete block commercial building is utilitarian in design, with a flat roof and parapet. Entrances on its west and north elevations have been covered with plywood. A wide clerestory window, also fronted by plywood, punctuates the north elevation adjacent to the entrance. The building is surrounded by tall grass. It exhibits a moderate level of integrity.

The original building permit for this multi-family property was not available from the City. However, Sanborn maps exist for this parcel. Inspection of the archival Sanborn books at the main branch of the City's public library revealed that the six-unit Ideal Hotel was originally located on the site. However, by 1951, Sanborn maps show that it had already been demolished. It appears that the small commercial building that currently occupies the parcel was erected circa 1955.

This property is located within the Santa Fe Railroad Workers Overlay Zone, which was identified as part of the 1991 survey conducted for the City. According to the report, this area consists of a residential neighborhood that was developed between 1900 and the 1920s and originally home to AT&SF workers and their families. Most of the homes in this neighborhood are small wood-frame residences built in the California Bungalow and Neoclassic Cottage styles. The zone retains its cohesive character as an exemplar of a working-class neighborhood with single-family homes, which were constructed early in the 20th century and intended to be an improvement over the older 19th-century urban tenement neighborhoods of the East. Although some homes in the zone have been altered by intent or by deterioration, a large proportion of the homes retain their architectural integrity. This zone was proposed in response to its significance in the context of industry and turn-of-the-century labor movements, which were, in part, responsible for the creation of suburban-style residences for working-class families.

Since the 1991 survey, there have been substantial alterations to the group of dwellings located between North K Street and the alley to the west and east and West 3rd Street and West 2nd Street to the north and south, respectively. In the case of the subject property, the Ideal Hotel, the original building on the site, had already been replaced with a small commercial building by circa 1955. As for architectural merit, the utilitarian building is a nondescript example of a type that is ineligible for listing in the National Register under Criterion C. In addition, no known persons or events of local, state, or national significance are associated with the property. Therefore, the property is ineligible for the National Register under Criterion A or B. For similar reasons, the property does not appear eligible for listing in the California Register under any criterion (6Y CHRC status code). Nonetheless, the subject property is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a) because it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey. In addition, the property was identified in the 1991 survey as a contributor to the potential Santa Fe Railroad Workers Overlay Zone (a 5B CHRC status code).

263 North K Street

This parcel contains two buildings, a one-story duplex situated adjacent to K Street and a smaller single-family dwelling at the rear of the lot. Both are Craftsman in style. The duplex is capped by a medium-pitched cross-gabled roof with triangular braces beneath the eaves. The exterior is clad in asbestos shingles. Windows have all been replaced with vinyl sliders or single-hung vinyl sash units. Partly recessed entry porches are located on the northwest and southwest corners of the duplex, with shed porch roofs supported by square wooden posts. Each entrance is fronted by a nonoriginal metal security door. The building exhibits a poor level of integrity. The rear building is side-gabled with asbestos siding and vinyl windows. Its entrance, beneath a shed porch roof, is also fronted by a metal security door. Landscaping consists of a lawn, clipped bushes, and a few trees. The property exhibits a low level of integrity.

The original building permit for this multi-family property was not available from the City. Furthermore, the Sanborn maps for this area do not include most of North K Street and 2nd Street, the area with this and other properties that were developed around the same time. However, City directory research revealed that the property was occupied in 1920 by Mrs. Laura Jones, a matron at the Depot (a matron was the senior nurse associated with the railway); Archie Cudy (occupation not listed); and Peter J. and Sarah Amadisto. Mr. Amadisto was a pipefitter with AT&SF. By 1924, all of the above had vacated the dwellings and others were now listed as residing there, including fireman Charles M. Murray and his wife Lea; Fred M. and Mabel Roberts, with Mr. Roberts identified as an engineer; and Marion L. James (no occupation listed).

This property is located within the Santa Fe Railroad Workers Overlay Zone, which was identified as part of the 1991 survey conducted for the City. According to the report, this area consists of a residential neighborhood that was developed between 1900 and the 1920s and originally home to AT&SF workers and their families. Most of the homes in this neighborhood are small wood-frame residences built in the California Bungalow and Neoclassic Cottage styles. The zone retains its cohesive character as an exemplar of a working-class neighborhood with single-family homes, which were constructed early in the 20th century and intended to be an improvement over the older 19th-century urban tenement neighborhoods of the East. Although some homes in the zone have been altered by intent or by deterioration, a large proportion of the homes retain their architectural integrity. This zone was proposed in response to its significance in the context of industry and turn-of-the-century labor movements, which were, in part, responsible for the creation of suburban-style residences for working-class families.

Since the 1991 survey, there have been substantial alterations to the group of dwellings located between North K Street and the alley to the west and east and West 3rd Street and West 2nd Street to the north and south, respectively. The subject property is one example of a parcel with altered dwellings. The two buildings have had their original windows replaced with vinyl sash units, the exterior surfaces have been clad with asbestos siding, and modifications have been made to the main entrances. As a result of these modifications, the dwellings do not exhibit sufficient integrity of design, materials, workmanship, feeling, or association to be eligible as contributors to a National Register district or individually eligible for listing under Criterion C because of the lack of architectural merit. In addition, no known persons or events of local, state, or national significance are associated with the property, including the occupants identified above. Therefore, the property is ineligible for the National Register under Criterion A or B. For similar reasons, the property does not appear eligible for listing in the California Register under any criterion (6Y CHRC status code). Nonetheless, the subject property is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a) because it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey. In addition, the property was identified in the 1991 survey as a contributor to the potential Santa Fe Railroad Workers Overlay Zone (5B CHRC status code).

221–229 North K Street

This fairly large parcel contains four residential buildings, all of which have experienced substantial alterations. The largest dwelling is a two-story house that is vaguely Colonial Revival because of its massing, clipped gable roof, wide dormers, and front porch configuration. However, it has been almost completely stripped of its original character-defining features. Specifically, all wood-framed fenestration has been replaced with vinyl windows, many of which are within resized openings. Exterior surfaces have been sheathed with nonoriginal rough-textured stucco. The projecting porch has also been altered, with the entrance fronted by a metal security door. Overall, the dwelling exhibits a low level of integrity. The other three dwellings are Craftsman in style and similar in arrangement, with side-gabled roofs, exposed rafters, and rough-textured stucco finishing exterior surfaces. All windows have been replaced with vinyl, and entrances are now fronted by metal security doors. Concrete paths connect the various buildings. Landscaping consists of a lawn, shrubs, and a row of mature Cypress trees near the front porch of the two-story house. The property exhibits a low level of integrity.

The original building permit for this multi-family property was not available from the City. Furthermore, the Sanborn maps for this area do not include most of North K Street and 2nd Street, the area with this and other properties that were developed around the same time. City directory research revealed that the property, with its two-story Colonial Revival-style residence and three single-story Craftsman bungalows, was occupied in 1924 by Harold L. and Mabel Koch, with Mr. Koch's occupation listed as “train man;” laborer Alvin M. Johnson; Lester Patterson, a carpenter, and his wife, Zaka; Claude Harkness, a laborer, and his wife, Bertha; and Robert R. and Beulah Watts. Mr. Watts was a blacksmith.

This property is located within the Santa Fe Railroad Workers Overlay Zone, which was identified as part of the 1991 survey conducted for the City. According to the report, this area consists of a residential neighborhood that was developed between 1900 and the 1920s and originally home to AT&SF workers and their families. Most of the homes in this neighborhood are small wood-frame residences built in the California Bungalow and Neoclassic Cottage styles. The zone retains its cohesive character as an exemplar of a working-class neighborhood with single-family homes, which were constructed early in the 20th century and intended to be an improvement over the older 19th-century urban tenement neighborhoods of the East. Although some homes in the zone have been altered by intent or by deterioration, a large proportion of

the homes retain their architectural integrity. This zone was proposed in response to its significance in the context of industry and turn-of-the-century labor movements, which were, in part, responsible for the creation of suburban-style residences for working-class families.

Since the 1991 survey, there have been substantial alterations to the group of dwellings located between North K Street and the alley to the west and east and West 3rd Street and West 2nd Street to the north and south, respectively. The subject property is one example of a parcel with altered dwellings. The two-story dwelling had its original windows replaced with vinyl sash units within nonoriginal openings, nonoriginal rough-textured stucco applied to its exterior surfaces, and modifications made to its entry porch and front entrance. Similarly, original windows have been replaced with vinyl sash units and rough-textured stucco has been applied to exterior surfaces of the three bungalows located on the parcel. As a result of these modifications, the dwellings do not exhibit sufficient integrity of design, materials, workmanship, feeling, or association to be eligible as contributors to a National Register district or individually eligible for listing under Criterion C because of the lack of architectural merit. In addition, no known persons or events of local, state, or national significance are associated with the property, including the occupants identified above. Therefore, the property is ineligible for the National Register under Criterion A or B. For similar reasons, the property does not appear eligible for listing in the California Register under any criterion (6Y CHRC status code). Nonetheless, the subject property is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a) because it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey. In addition, the property was identified in the 1991 survey as a contributor to the potential Santa Fe Railroad Workers Overlay Zone (5B CHRC status code).

203 North K Street

Capped by a side-gabled roof with exposed rafter tails, this one-story Craftsman-style single-family dwelling is sheathed in nonoriginal rough-textured stucco. Fenestration consists of nonoriginal vinyl sash units within resized openings. A projecting front-gabled porch roof, supported by nonoriginal posts, centers the primary (west) elevation. Within the porch area, concrete steps lead to the entrance, which is fronted by a nonoriginal metal security door. A pair of single-car garages has been carved into the slope beneath the dwelling, which is raised above the street. A metal fence surrounds the property. Landscaping consists of shrubs and a few trees. The property exhibits a low level of integrity.

The original building permit for this multi-family property was not available from the City. Furthermore, the Sanborn maps for this area do not include most of North K Street and 2nd Street, the area with this and other properties that were developed around the same time. However, City directory research revealed that the property was occupied by Melvin Darton and Leon and Jessie Ritter in 1924. Mr. Ritter was a carpenter. No occupation was given for Mr. Darton.

This property is located within the Santa Fe Railroad Workers Overlay Zone, which was identified as part of the 1991 survey conducted for the City. According to the report, this area consists of a residential neighborhood that was developed between 1900 and the 1920s and originally home to AT&SF workers and their families. Most of the homes in this neighborhood are small wood-frame residences built in the California Bungalow and Neoclassic Cottage styles. The zone retains its cohesive character as an exemplar of a working-class neighborhood with single-family homes, which were constructed early in the 20th century and intended to be an improvement over the older 19th-century urban tenement neighborhoods of the East. Although some homes in the zone have been altered by intent or by deterioration, a large proportion of

the homes retain their architectural integrity. This zone was proposed in response to its significance in the context of industry and turn-of-the-century labor movements, which were, in part, responsible for the creation of suburban-style residences for working-class families.

Since the 1991 survey, there have been substantial alterations to the group of dwellings located between North K Street and the alley to the west and east and West 3rd Street and West 2nd Street to the north and south, respectively. The subject property is one example of a parcel with an altered dwelling. The building had its original windows replaced with vinyl sash units in resized openings, nonoriginal rough-textured stucco applied to its exterior, roof posts replaced on the porch, and a metal security door installed over the entrance. As a result of these modifications, the property does not exhibit sufficient integrity of design, materials, workmanship, feeling, or association to be eligible as a contributor to a National Register district or individually eligible for listing under Criterion C because of the lack of architectural merit. In addition, no known persons or events of local, state, or national significance are associated with the property, including original occupants, Melvin Darton and Leon and Jessie Ritter. Therefore, the property is ineligible for the National Register under Criterion A or B. For similar reasons, the property does not appear eligible for listing in the California Register under any criterion (6Y CHRC status code). Nonetheless, the subject property is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a) because it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey. In addition, the property was identified in the 1991 survey as a contributor to a potential Santa Fe Railroad Workers Overlay Zone (a 5B CHRC status code).

111 South I Street

The subject property is a one-story industrial building. The concrete block construction is capped by a truss roof with a Mission Revival-influenced peaked parapet. The primary (west) elevation is sheathed in stucco and features a large center freight opening flanked by large windows on either side. The south window is fronted by a concrete block screen, and the top portion of the north window is infilled with bricks. Similar infill characterizes the window on the north elevation. A blank backlit sign is centered above the garage bay. The property exhibits a moderate level of integrity.

The original building permit was not available for this property. Sanborn maps and city directory research revealed that the building was originally owned by United Parcel Service. The subject property contains an undistinguished example of a Mission Revival-influenced industrial building from the first half of the 20th century that, because of the infill or covering of its windows, does not rise to the level of significance necessary to meet eligibility requirements for listing in the National Register under Criterion C. Furthermore, no information has been uncovered to suggest that it was associated with a significant designer or craftsman. Although associated with United Parcel Service, the importance of that business to the industrial development of San Bernardino appears limited. Current research did not identify any specific person associated with the property who achieved local, state, or national significance. Therefore, the building appears ineligible for the National Register under Criterion A or B. For similar reasons, the property does not appear eligible for listing in the California Register under any criterion (6Y CHRC status code). Nonetheless, the subject property is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a) because it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey (5S3 CHRC status code).

131 South I Street—Jenco Productions

This large one-story industrial building is utilitarian in style and rectangular in plan. The concrete structure has an office area on its north side, which is capped by a flat roof. A warehouse occupies the center of the building and is crowned by a pair of side-gabled truss roofs. On the east is a loading area with a shed roof. Fenestration consists of steel-framed windows fronted by metal screens. A pair of double-door entrances centers the primary (west) elevation. This is the only part of the building with any architectural character (i.e., a front-gabled parapet with cornice and molded fascia). Beneath a deep metal canopy on the south elevation is a row of freight bays. The building is surrounded on the north and south elevations by a large parking lot. Overall, the property exhibits a moderate to high level of integrity.

The original building permit was not available for this property. Sanborn maps and city directory research revealed that the building was originally a Southern California Edison warehouse. Although relatively unaltered, the subject property represents an undistinguished example of a utilitarian industrial building from the first half of the 20th century that does not rise to the level of significance necessary to meet eligibility requirements for listing in the National Register under Criterion C. Furthermore, no information has been uncovered to suggest that it was associated with a significant designer or craftsman. With respect to the property's association with Southern California Edison, as a warehouse for the utility, its historic significance is minimal in comparison with the highly ornate revival-style buildings that were normally constructed for the company, including in San Bernardino. Current research did not identify any specific person associated with the property who achieved local, state, or national significance. Therefore, the building appears ineligible for the National Register under Criterion A or B. For similar reasons, the property does not appear eligible for listing in the California Register under any criterion (6Y CHRC status code). Nonetheless, the subject property is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a) because it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey (a 5S3 CHRC status code).

134 South E Street—Bekins Storage

Designed as a storage facility for the Bekins moving company, this large, flat-roofed four-story commercial building is rectangular in plan. The building is Vernacular Modern in design, with an asymmetrical entrance on the primary (east) elevation. Fenestration consists of steel-framed, multi-pane windows sheltered by a deep cantilevered canopy. The canopy also shelters the pedestrian entrance. Small, unadorned square windows are present on all four levels of the north-facing elevation. The building abuts the concrete sidewalk of E Street and the railroad right-of-way to the north. The rear of the building is dominated by a large raised freight platform that is sheltered by an expansive corrugated metal shed roof. The storage building exhibits a high level of integrity.

At the rear of the property is a modest one-story concrete brick warehouse. The barely visible ghost sign on its parapet reads “Lumber Co.” The building is capped by a flat roof. A review of the available Sanborn maps suggests that it was constructed circa 1930. The maps also indicate that it was one of a number of buildings associated with the Gibson Lumber Company. Freight openings punctuate the building’s south elevation, which faces an asphalt parking area. A nonoriginal wood-frame structure with corrugated metal sides that serve as parapets fronts the building’s east elevation. The small warehouse exhibits a moderate level of integrity.

City directories and Sanborn maps indicate that the large four-story building was erected for Bekins Storage Company in 1948. It represents a typical, if unexceptional, example of the

Vernacular Modern style applied to a storage building. As such, it does not rise to a level of architectural significance that would meet Criterion C of the National Register. Bekins constructed numerous large storage facilities, similar to the subject property, throughout Southern California, some of which are still in existence. Current research did not uncover any evidence to suggest that this Bekins facility was associated with any events or personages important to the history of the City, state, or nation that would make it eligible for listing under National Register Criterion A or B.

As for the rear warehouse building, it appears to be the only remaining building associated with the former Gibson Lumber Company, which occupied the parcel prior to the construction of the Bekins storage facility. Yet, despite its status as the last remnant of the lumberyard, by itself, it does not evoke the feeling or association of its original purpose. As such, it does not meet National Register Criterion A for historic associations. The same is true for National Register Criterion B because the building has no known association with historic personages. Furthermore, as a utilitarian warehouse building, its architectural significance does not rise to a level that would allow it to be considered eligible for the National Register under Criterion C. For similar reasons, the property does not appear eligible for listing in the California Register under any criterion. Therefore, the property receives a 6Y status code.

170 South E Street

Rectangular in plan and constructed primarily of brick, this one-story industrial building rests on a concrete foundation. The building has two elements. The front portion, which is Moderne in style, has a flat roof with a parapet. The utilitarian rear portion has multiple bays and is capped by a sawtooth corrugated metal roof. The east-facing front portion is symmetrical in composition and consists of three bays, which are separated by brick pilasters with stepped bases and chevron-like capitals. The stepped parapet originally had a zigzag design but has been infilled with concrete, creating a flat parapet for seismic strengthening. Fenestration consists of narrow slit windows with nonoriginal metal-frame glazing. The center pedestrian entrance features a glazed nonoriginal metal-frame door. The much deeper rear portion consists of nine bays, with buttressed pilasters and narrow metal-frame windows. A large freight opening occupies one of the bays on the south elevation. A sawtooth corrugated metal roof with north-facing windows caps the composition. The building exhibits a moderate level of integrity because of the replacement of fenestration.

The original building permit was not available for this property. Sanborn maps and city directory research revealed that the building was originally a machine shop and owned by Fred G. Walter. It specialized in welding, metal spraying, and engine rebuilding. The subject property represents an undistinguished example of the Moderne architectural style as applied to an industrial building from the first half of the 20th century. Because of the replacement of fenestration, the building lacks integrity of design and materials. No information has been uncovered to suggest that it was associated with a significant designer or craftsman. As a result, the property does not appear eligible for listing in the National Register under Criterion C. In addition, no information was uncovered during the current survey process to suggest that Mr. Walter or his machine shop achieved local, state, or national significance. Therefore, the building appears ineligible for the National Register under Criterion A or B. For similar reasons, the property does not appear eligible for listing in the California Register under any criterion (6Y CHRC status code). Nonetheless, the subject property is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a) because it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey (a 5S3 CHRC status code).

174 South E Street

This Vernacular Modern one-story commercial building with masonry construction is capped by a flat roof with a parapet. The primary elevation with its east-facing storefront is two bays wide, with each bay containing a pair of plate glass windows flanking a glazed center entrance. A red brick water table enhances each storefront beneath the windows. A full-width cantilevered canopy shelters the façade. Above the canopy is a tall parapet that was once used as a signboard. Fenestration on secondary elevations consists of small rectangular windows fronted by metal bars. Nonoriginal expandable security grills protect the storefronts. The property exhibits a high level of integrity.

The original building permit was not available for this property. Sanborn maps and city directory research revealed that the building was originally the Reliable Bearing & Supply Company. Although exhibiting a high level of integrity, the subject property represents an undistinguished example of the Vernacular Modern architectural style as applied to a commercial building from 1948. In addition, no information has been uncovered to suggest that it was associated with a significant designer or craftsman. As a result, the property does not appear eligible for listing in the National Register under Criterion C. Furthermore, no information was uncovered during the current survey process to suggest that the Reliable Bearing & Supply Company achieved local, state, or national significance. Therefore, the building appears ineligible for the National Register under Criterion A or B. For similar reasons, the property does not meet California Register criteria for designation (6Y CHRC status code).

961 West 2nd Street

The property contains a one-story duplex designed in the Craftsman style. Rectangular in plan, the residence is clad in wood-lap siding and capped by a medium-pitched front-gabled roof with overhanging eaves and a lattice attic vent beneath the gable peak. The primary (north) elevation is symmetrically arranged and features a projecting porch that is sheltered by a second front gable peak supported by square tapered posts atop concrete pedestals. Concrete steps lead to the two entrances and large windows within the porch area. These windows have been replaced with nonoriginal sliders. Landscaping consists of a lawn with a mature tree and small shrubs. The dwelling exhibits a moderate to high level of integrity.

A modest one-story single-family vernacular cottage is located at the rear of the property. Rectangular in plan, it is capped by a medium-pitched front-gable roof with slightly overhanging eaves. The building is clad in wood-lap siding, and the fenestration features wood-frame windows. The primary façade faces west and features a front porch with square wood supports and balustrade. Within the porch area is the primary entrance, which is fronted by a metal security door. A single window is also secured with metal bars. The building, which is surrounded by natural vegetation and an asphalt driveway, exhibits a moderate to high level of integrity.

The original building permit was not available for this property. City directory research revealed that, in 1918, William Egerton resided at the address. In 1940, O. H. Crow was listed there. By 1951, Erwin and J. M. Watterson were living at the address. In 1959, W. Macias and E. Muller were listed.

The Craftsman duplex at the front of the property represents an undistinguished example of the style. In addition, because of the replacement of fenestration on the primary elevation, the building lacks integrity of design and materials. No information has been uncovered to suggest that it was associated with a significant designer. With respect to the rear dwelling, as a vernacular cottage, it does not appear to rise to the level of architectural importance that would

allow it to be considered an excellent example of the type or style. As a result, the property as a whole does not appear eligible for listing in the National Register under Criterion C. In addition, no information was uncovered during the current survey process to suggest that the property's various residents achieved local, state, or national significance. Therefore, the property appears ineligible for the National Register under Criterion A or B. For similar reasons, the subject property does not appear eligible for listing in the California Register under any criterion (6Y CHRC status code). Nonetheless, the subject property is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a) because it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey. In addition, the property was identified in the 1991 survey as a contributor to the potential Santa Fe Railroad Workers Overlay Zone (a 5B CHRC status code).

1056–1066 West 2nd Street

This bungalow court consists of six nearly identical Craftsman-style dwellings, each capped by a side-gabled roof with exposed rafters. Nonoriginal rough-textured stucco sheathes exterior surfaces. The original wood-frame windows have been replaced with vinyl sash units. Each dwelling features a gabled entry porch roof supported by square wood posts and a nonoriginal metal security door fronting the entrance. A wide concrete path down the center of the court leads to a concrete porch stoop at each unit. Landscaping consists of patches of grass and some shrubs at the front of most units. The property exhibits a low level of integrity.

The original building permit for this multi-family property was not available from the City. Furthermore, the Sanborn maps for this area do not include most of North K Street and 2nd Street, the area with this and other properties that were developed around the same time. City directory research revealed that the property, with six modest bungalows, was occupied in 1926 by Sidney E. and Evelyn Archerd, with Mr. Archerd employed as a driver; Thomas C. Huntington, an electrician, and his wife, Alice; and William Wilson, a brakeman.

This property is located within the Santa Fe Railroad Workers Overlay Zone, which was identified as part of the 1991 survey conducted for the City. According to the report, this area consists of a residential neighborhood that was developed between 1900 and the 1920s and originally home to AT&SF workers and their families. Most of the homes in this neighborhood are small wood-frame residences built in the California Bungalow and Neoclassic Cottage styles. The zone retains its cohesive character as an exemplar of a working-class neighborhood with single-family homes, which were constructed early in the 20th century and intended to be an improvement over the older 19th-century urban tenement neighborhoods of the East. Although some homes in the zone have been altered by intent or by deterioration, a large proportion of the homes retain their architectural integrity. This zone was proposed in response to its significance in the context of industry and turn-of-the-century labor movements, which were, in part, responsible for the creation of suburban-style residences for working-class families.

Since the 1991 survey, there have been substantial alterations to the group of dwellings located between North K Street and the alley to the west and east and West 3rd Street and West 2nd Street to the north and south, respectively. The subject property is one example of a parcel with altered dwellings. The buildings have had their original windows replaced with vinyl sash units and an application of nonoriginal rough-textured stucco applied to their exterior surfaces. As a result of these modifications, the dwellings do not exhibit sufficient integrity of design, materials, workmanship, feeling, or association to be eligible as contributors to a National Register district or individually eligible for listing under Criterion C because of the lack of architectural merit. In addition, no known persons or events of local, state, or national significance are associated with the property, including the original occupants identified above.

Therefore, the property is ineligible for the National Register under Criterion A or B. For similar reasons, the subject property does not appear eligible for listing in the California Register under any criterion (6Y CHRC status code). Nonetheless, the subject property is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a) because it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey. In addition, the property was identified in the 1991 survey as a contributor to the potential Santa Fe Railroad Workers Overlay Zone (a 5B CHRC status code).

971 West 3rd Street—Valley Linen Supply

Located at the rear of this parcel is a two-story industrial building. It was designed as a vernacular expression of the early 20th-century style. Rectangular in plan, the masonry building has a truss roof and peaked parapet. The primary (north) façade is symmetrically divided and four bays wide. The first floor features two central delivery openings on the north elevation; the openings are slightly recessed and sheltered by a metal roof. The second floor is punctuated by steel-frame multi-pane windows on all elevations. The rear of the building is characterized by one- and two-story elements that appear original to the design. The building's east elevation features an exterior staircase. A one-story portion is capped by a shed roof. The building exhibits a high level of integrity.

Original building permits were not available for this property. However, the 1951 Sanborn map revealed that this was the location of Valley Linen Supply. This property represents a very good example of a masonry 1920s-era industrial building and exhibits a high level of physical integrity. Specifically, Sanborn maps revealed that the building's footprint has not changed markedly, and visual inspection confirmed that the steel-frame multi-pane windows are original. Given its proximity to the Depot and the rail alignment, which was adjacent to its loading dock, there is a high probability that Valley Linen Supply had some relationship with railroad operations. A windshield survey of the vicinity suggests that the subject property is unusual with respect to its high level of integrity and potential association with AT&SF. However, it does not appear to reach the level of significance required for listing in the National Register or California Register under any criterion. Nonetheless, the property may satisfy local designation criteria for architectural merit and historic associations. As a result, the property appears individually eligible for local listing and remains a contributor to the previously identified Santa Fe Railroad Workers Overlay Zone (a 5B CHRC status code). The subject property is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a).

981 West 3rd Street—Valley Linen Supply Offices (Allgood Shower Door Company)

Situated on the streetside portion of the property is a one-story commercial office building. Designed in the Moderne style and capped by a flat roof with a parapet, the building is irregular in plan, with the contour of its west elevation following the curve of the railroad right-of-way. A distinguishing feature of the building is the tall, round tower (or former smokestack) located on the northwest corner. Nonoriginal rough-textured stucco sheathes the exterior surfaces. The façade is asymmetrically arranged and five bays wide. Steel-frame multi-pane fixed and awning-type windows punctuate the façade's three center bays. Flanking the window bays on either end are recessed pedestrian entrances with curved, fluted walls, which are typical of the style. The westernmost entrance is sheltered by an awning, and the easternmost entrance features original lighting below the soffit. The northeast corner is highlighted by a slightly tiered pylon that extends above the roofline. A band of original blue tiles is located below the window bays along the façade. The building abuts a concrete sidewalk.

Original building permits were not available for this property. However, the 1951 Sanborn map revealed that this was the location of the offices of Valley Linen Supply. This property represents a very good example of a 1930s-era Moderne-style commercial building and exhibits a moderate to high level of physical integrity. Sanborn maps revealed that the building's footprint has not changed markedly, and visual inspection confirmed that the fenestration, fluted inward-curving entrances, and blue tile are original. Given its proximity to the Depot, there is a high probability that Valley Linen Supply had some relationship with railroad operations. However, the property does not reach the level of significance required for listing in the National Register or California Register under any criterion. Nonetheless, the property may satisfy local designation criteria for architectural merit and historic associations. As a result, the property appears individually eligible for local listing and remains a contributor to the previously identified Santa Fe Railroad Workers Overlay Zone (5B CHRC status code). The subject property is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a).

3.5.1.6 Archaeological Resources

The records search included five prehistoric archaeological recorded sites and one multi-component archaeological site (prehistoric and historic).Of these recorded cultural resources, four are located within the APE. The current project route, the former AT&SF Railroad line, also known as the “Old Kite Route,” is recorded as a historic resource (36-006847). The Depot located at the project route’s west end is recorded as a historic resource (36-017975), is listed in the National Register (01000025), and is a California Point of Historical Interest (No. 53). There are two other recorded historic period sites within the APE that are associated with the former AT&SF Railroad: a railroad spur of the former Pacific Electric Railway line (36-006101), which crosses the project location, and the site of the former Pacific Electric Substation No. 24 (36-013886), which was demolished sometime between 1991 and 2008 and was located in the APE north of the rail line at E Street and Rialto Avenue. In addition, the record search indicated that 52 surveys have been conducted within a 1-mile radius of the Project and three of these surveys investigated a portion of the project area.

Archaeological surveys identified no new archaeological resources within the APE. None of the previously recorded archaeological resources within the APE are eligible for listing in the National Register or meet the criteria for historic properties.

In terms of prehistoric archaeology, the presence or absence of water is a crucial predictor of site location in southern California. Prehistoric camps or villages usually were located adjacent to permanent water sources, often at springs or along rivers. The APE is located on an alluvial fan near the junction of Lytle Creek and Warm Creek, two moderately substantial streams that flow from the nearby mountains. Prehistorically, these intermittent streams probably supported riparian vegetation that would have attracted Native Americans for plant products or for the hunting of game. However, the Project is some distance from these small flows, and it is unlikely that the area within the APE was attractive to Native American occupation and use, being a dry, open alluvial surface. Therefore, the potential for the APE to yield buried prehistoric archaeological resources is considered to be low.

In terms of historic period archaeological resources, the APE is urbanized, occupied by structures and roads built in the 20th Century. Sanborn fire insurance maps from 1906 depict the rail corridor as partially occupied by scattered buildings along the streets and along the AT&SF railroad line. Approximately one-third of the lots adjacent to the AT&SF rail line in the rail corridor are depicted as occupied by buildings; the remainder are open lots, or what the Sanborn maps label “Vacant.” This depicts what was a typical pattern in expanding towns, indicating that the area was being developed at the time the fire insurance maps were first

prepared. It also indicates that the area of San Bernardino being developed, which encompasses the APE, was open land prior to about 1906. The 1896 and 1901 USGS maps depict this area as open land with the railroad lines and a few main streets present.

Because the APE was developed in the early 20th Century, some hollow fill historic features such as privy pits (a few appear to be depicted on the Sanborn maps) or trash deposits may exist within the APE. However, as the City likely developed modern trash and sewer disposal at about the same time, this potential is considered to be low, and the potential for the APE to yield buried historic period archaeological resources of any significance is also considered to be low.

3.5.1.7 Paleontological Resources

Paleontological resources are the fossilized remains of organisms from prehistoric environments that are found in geologic strata. Fossil remains may occur throughout the City, although the evenness of their distribution is not known (City of San Bernardino 2005b). The potential for fossil occurrence depends on the rock type or sediment type exposed at the surface in a given area (City of San Bernardino 2005b). The Project Study Area has been previously disturbed and is currently developed as a rail corridor.

The proposed Project is situated on Quaternary alluvium (Morton and Miller 2006), which is older at depth. Quaternary Holocene-age alluvium near the modern ground surface has a low potential for vertebrate fossils, but older Quaternary deposits have a higher potential for vertebrate fossils, primarily of mammals of the Pleistocene epoch. Surface grading or very shallow excavation in the Project Study Area is unlikely to uncover significant fossil vertebrates. Deeper excavations that extend 5 feet or more into older Quaternary deposits may encounter significant fossil vertebrate remains.

3.5.2 Regulatory Setting

Historic resources fall within the jurisdiction of several levels of government. Federal laws provide the framework for the identification and, in certain instances, protection of historic resources. Additionally, states and local jurisdictions play active roles in the identification, documentation, and protection of such resources within their communities. Refer to Section 4.2.5, “Cultural Resources,” for a further discussion regarding federal regulations.

3.5.2.1 State Policies and Regulations

OHP, as an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. OHP also carries out the duties set forth in the PRC and maintains the California Historic Resources Inventory (California Public Resources Code Section 5024.1(a)). The SHPO is an appointed official who implements historic preservation programs within the state’s jurisdictions. Also implemented at the state level, CEQA requires projects to identify any substantial adverse impacts that may affect the significance of identified historical resources.

3.5.2.2 California Register of Historical Resources

Created by Assembly Bill 2881, which was signed into law on September 27, 1992, the California Register is “an authoritative listing and guide to be used by state and local agencies, private groups, and citizens to identify the existing historical resources of the state and indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change” (California Public Resources Code Section 5024.1(a)) The criteria for eligibility for the California Register are based on National Register criteria (California Public Resources

Code Section 5024.1(b)). Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register (California Public Resources Code Section 5024.1(d)).

The California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed in the National Register and those formally determined eligible for the National Register.
- California Registered Historical Landmarks from No. 770 onward.
- Those California Points of Historical Interest that have been evaluated by OHP and have been recommended to the State Historical Commission for inclusion in the California Register (California Public Resources Code Section 5024.1(d)).

Other resources that may be nominated to the California Register include:

- Individual historical resources.
- Historical resources contributing to historic districts.
- Historic resources identified as significant in historical resources surveys, with significance ratings of Category 1 through 5.
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as a historic preservation overlay zone (California Public Resources Code Section 5024.1(e)).

To be eligible for the California Register, a historic resource must be significant at the local, state, or national level, under one or more of the following four criteria:

- The resource is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- The resource is associated with the lives of persons important in our past;
- The resource embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of an important creative individual or possesses high artistic values.
- The resource has yielded, or may be likely to yield, information important in prehistory or history.

A historic resource eligible for listing in the California Register must meet one or more of the criteria of significance described above and retain enough of its historic character or appearance to be recognizable as a historic resource and convey the reasons for its significance. Historical resources that have been rehabilitated or restored may be evaluated for listing (California Code of Regulations, California Register of Historical Resources, Title 14, Chapter 11.5, Section 4852(c)).

Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. The resource must also be judged with reference to the particular criteria under which it is proposed for eligibility. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the National Register, but it may still be eligible for listing in the California Register (California Code of Regulations, California Register of Historical Resources, Title 14, Chapter 11.5, Section 4852(c)).

3.5.2.3 California Office of Historic Preservation Survey

The evaluation instructions and classification system prescribed by OHP in its Instructions for Recording Historical Resources provide a three-digit evaluation code for use in classifying potential historic resources. The first digit indicates one of the following general evaluation categories for use in conducting cultural resource surveys:

- Listed in the National Register or the California Register.
- Determined eligible for listing in the National Register or the California Register.
- Appears eligible for the National Register or the California Register through survey evaluation.
- Appears eligible for the National Register or the California Register through other evaluation.
- Recognized as historically significant by local government.
- Not eligible for any listing or designation.
- Not evaluated for the National Register or California Register or needs re-evaluation.

The second digit is a letter code indicating whether the resource is separately eligible (S), eligible as part of a district (D), or both (B). The third digit is a number that is used to specify significance and refine the relationship of the property to the National Register and California Register. Under this system, categories 1 through 4 pertain to various levels of National Register or California Register eligibility. Category 5 pertains to properties that are ineligible for National Register or California Register listing but are recognized as historically significant by local government. In addition, properties that are not eligible for listing or designation in the National Register or the California Register or at the local level but perhaps are of local interest in the planning process are given an evaluation code of 6.

3.5.3 Thresholds of Significance

For the purposes of the analysis in this EIR, in accordance with Appendix G of the State CEQA Guidelines, the proposed Project would have a significant environmental impact under CEQA related to cultural resources if it would:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
- Disturb any human remains, including those interred outside of formal cemeteries.

The State CEQA Guidelines note that a project involves a “substantial adverse change” when one or more of the following occurs:

- Substantial adverse change in the significance of a historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired (State CEQA Guidelines, 14 CFR Section 15064.2(b)(1)). The significance of a historical resource is materially impaired when a project:

- Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and justify its inclusion in, or eligibility for, inclusion in the California Register.
- Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the Public Resources Code or its identification in a historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant.
- Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA (State CEQA Guidelines, 14 CFR Section 15064.2(b)(1)).

The Secretary of the Interior's Standards for Rehabilitation are codified at 36 CFR Section 67.7. These standards are designed to ensure that rehabilitation does not impair the significance of a historic property. In most circumstances, the standards are relevant in assessing whether there is a substantial adverse change under CEQA. Section 15064.5(b)(3) of the State CEQA Guidelines states, in part, that "…a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995), Weeks and Grimmer, shall be considered as mitigated to a level of less than a significant impact on historic resources."

3.5.4 Project Impacts

Impact CR-1: Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5

Indirect Impacts

Under the State CEQA Guidelines, the significance of a historical resource is materially impaired when a project materially alters in an adverse manner those physical characteristics that account for its inclusion in the California Register (State CEQA Guidelines, 14 CFR Section 15064.5(b)(2)(A)). The proposed Project includes potential indirect impacts on the Depot at 1170 West 3rd Street. In addition, there could be an indirect impact on the dwelling located at 907 West Rialto Avenue. Specifically, because of the proximity of the tracks to the northwest corner of the property, there could be a noise impact on the historic resource.

1170 West 3rd Street – Atchison Topeka & Santa Fe Railroad Depot

The Depot is listed in the National Register and the California Register (CHRC 1S). In accordance with Section 15064.5(a) of the State CEQA Guidelines, this property is considered a historical resource for the purposes of CEQA. The proposed Project would extend Metrolink service from the Depot located at 1170 West 3rd Street to new rail platforms and a bus facility near the southwest corner of Rialto Avenue and E Street. An important component of the Project would be the construction of an ADA-compliant overpass, which would be erected adjacent to the existing Depot. The structure would be designed in the Mission Revival

architectural style. New platforms would be built north of the Depot to access the additional rail lines.

The Depot qualifies for the National Register and California Register not only because of its history as part of AT&SF and its association with the economic development of San Bernardino and the Inland Empire but also because of its distinctive physical characteristics (e.g., the overall massing and form, fenestration, Mission Revival-style parapets, red tile roof, domed towers).

The proposed Project would not alter the Depot's distinctive physical or historical characteristics, nor would it alter the Depot's integrity of location, design, materials, workmanship, feeling, or association. This applies to the proposed interior and exterior improvements for the Depot, including: (1) installation of new window awnings, (2) new exterior and interior wayfinding signage for bathrooms and SANBAG/SCAG/Whistle Stop Cafe/Museum, (3) a new clock in the lobby, (4) a new sign in the lobby that details the railroad's role in creating time zones, and (5) a new monument sign and flagpole to be placed at the Depot entrance.

Using the Secretary of the Interior's Standards for Rehabilitation, three of the standards directly apply to the proposed improvements:

- **Standard 6.** Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
- **Standard 9.** New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
- **Standard 10.** New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Installation of new awnings. In meeting the Secretary of the Interior's Standards for Rehabilitation as relates to the replacement of missing features such as window awnings, a historic photograph of the interior of the Depot's Harvey House Restaurant was obtained. The photograph confirms the existence of exterior awnings that sheltered the large windows at the east end of the restaurant. The designs appear to be compatible with the historic materials, features, size, scale, and proportion of the original. In addition, the new awnings, if removed in the future, would leave the essential form and integrity of the Depot and its environment unimpaired.

New exterior and interior way-finding signage for bathrooms and SANBAG/SCAG/Whistle Stop Cafe/Museum. As relates to size, typeface, or supporting metal hardware (where applicable), the proposed wayfinding signage is not based on specific documentary evidence, which was apparently unavailable following a search for such material, photographic or otherwise. Nonetheless, it appears that the proposed designs are consistent with the Secretary of the Interior's Standards for Rehabilitation in terms of compatibility with historic materials, features, size, scale, and reversibility.

New clock in the lobby. The design of the proposed clock is not based on specific documentary evidence, which was apparently unavailable following a search for relevant historic

photographs. Nonetheless, it appears that the proposed clock design is consistent with the Secretary of the Interior's Standards for Rehabilitation in terms of compatibility with historic materials, features, size, scale, and reversibility.

New sign in the lobby that details the railroad's role in creating time zones. Similar to the wayfinding signage, the proposed lobby sign recounting the history of time zones and the railroad is not based on specific documentary evidence. In this case, the information and display is contemporary. It appears that the proposed design and its placement adjacent to the double doors along the east elevation of the main lobby is consistent with the Secretary of the Interior's Standards for Rehabilitation in terms of compatibility with historic materials, features, size, scale, and reversibility.

New monument sign and flagpole to be placed at the Depot entrance. The proposed exterior entrance monument sign is not based on documentary evidence because it appears that such a sign did not originally exist at the Depot. However, the proposed design and its placement at the Depot entrance appear to be consistent with the Secretary of the Interior's Standards for Rehabilitation in terms of compatibility with historic materials, features, size, scale, and reversibility. For similar reasons, the design and placement of the proposed flagpole appears consistent with the standards.

As related to the proposed overpass, because it would not physically touch the Depot, the new construction, if removed in the future, would not impair the essential form and integrity of the historic property and its environment. However, there is the potential that the proposed Project would introduce a visual element (the overpass) that might indirectly diminish the setting of the Depot.

Figure 2-2C in Chapter 2.0, "Alternatives," provides a southeast view of the Depot, which is viewed from a raised vantage point (i.e., the nearby vehicular bridge located west of the Depot). From this perspective, the south half of the Depot's west elevation is visible as is the building's overall massing and form, fenestration, Mission Revival-style parapets, red tile roof, and domed towers. However, the Depot's north (track-facing) elevation and the north end of the west elevation are obscured from view.

From the vantage point of a passenger standing on the west end of the north rail platform and looking east toward the Depot, the south elevator/stair tower of the overpass would sit prominently three bays wide and three stories tall near the Depot's west elevation. The overpass would cross the south railroad tracks, connecting to the three-story north tower on the north rail platform. From this perspective, the south tower of the overpass would block the view of the north half of the Depot's west elevation, including some of its fenestration and parts of the roof and north parapet. In addition, the visual simulation suggests that the physical location of the south tower of the overpass would be quite close to the Depot's west elevation, further blocking views. The overpass itself would obscure views of the Depot's north elevation, including its domed towers.

The historic setting of the Depot is that of a freestanding building, with substantial open space adjacent to its various elevations that affords visibility from all directions. Such visibility is important to appreciating the significance of the property. Indeed, the proposed Project would allow full visibility of the Depot's south, east, and north elevations and the south half of the west elevation when approaching the property from these directions. However, when viewed solely from the perspective of a passenger standing on the west end of the rail platform and looking east, the north elevation and portions of the west elevation would be obscured by the overpass, and the integrity of the Depot's historic setting would be somewhat diminished.

According to the State CEQA Guidelines, the impact of a proposed project must be substantial enough to impair in an adverse manner those physical characteristics that justify its inclusion in the California Register. The diminished integrity of setting arising from obscured views of portions of the Depot's west elevation due to the proposed Project would not rise to the level necessary to qualify as a substantial adverse change in the significance of the resource.

907 West Rialto Avenue

This two-story dwelling is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a) because it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey. In addition, the property was identified in the 1991 survey as a contributor to the potential Santa Fe Railroad Workers Overlay Zone (5B CHRC status code). The proposed Project would include the construction of new railroad tracks near the northeast corner of the subject dwelling and the installation of a warning device (i.e., a pedestrian gate with an arm). Because of the potential increase in noise arising from the proximity of the tracks to the residence and the regular sounding of a pedestrian warning device, Mitigation Measure CR-1 (Provide Photographic Documentation of Historic Resources and Noise Reduction Measures) would be required to minimize this impact prior to the implementation of this phase of the proposed Project.

Direct Impacts

The proposed Project would include demolition of the following historic resources: 961 West 2nd Street, the commercial properties located at 981 West 3rd Street (Valley Linen Supply offices/Allgood Shower Door Company), and the industrial properties located at 111 South I Street, 131 South I Street (Jenco Productions, Inc.), 123 South G Street (JG Wholesale Product), and 170 South E Street. There could also be a potential direct impact on the dwelling located at 907 West Rialto Avenue. Specifically, the proposed Project would include the installation of a steel-tube rail and a concrete sidewalk on a portion of the north end of the parcel, opposite the dwelling, in an area that is currently occupied by a lawn. In addition, a proposed new railroad track, sidewalk, and wall or fence would cut diagonally across the parcel's northeast corner in an area that is currently occupied by a lawn and a concrete entry path that leads to the house. As a result, because of the potential impact on the historic setting and feeling of the resource, Mitigation Measure CR-1 (Provide Photographic Documentation of Historic Resources and Noise Reduction Measures) would be required to implement this element of the proposed Project.

271 North K Street

This one-story commercial building is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a) because it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey. In addition, the property was identified in the 1991 survey as a contributor to the potential Santa Fe Railroad Workers Overlay Zone (5B CHRC status code). The proposed Project would result in the removal of 271 North K Street. Demolition of a historic resource is considered a substantial adverse change that cannot be mitigated to a less-than-significant level.

263 North K Street

This property contains two buildings, a one-story duplex and a smaller single-family dwelling, and is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a) because it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey. In addition, the property was identified in the 1991 survey as a contributor to the

potential Santa Fe Railroad Workers Overlay Zone (5B CHRC status code). The proposed Project would result in the removal of 263 North K Street. Demolition of a historic resource is considered a substantial adverse change that cannot be mitigated to a less-than-significant level.

221–229 North K Street

This property contains four residential buildings, a two-story house and three smaller dwellings, and is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a) because it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey. In addition, the property was identified in the 1991 survey as a contributor to the potential Santa Fe Railroad Workers Overlay Zone (5B CHRC status code). The proposed Project would result in the removal of 221–229 North K Street. Demolition of a historic resource is considered a substantial adverse change that cannot be mitigated to a less-than-significant level.

203 North K Street

This one-story dwelling is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a) because it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey. In addition, the property was identified in the 1991 survey as a contributor to the potential Santa Fe Railroad Workers Overlay Zone (5B CHRC status code). The proposed Project would result in the removal of 203 North K Street. Demolition of a historic resource is considered a substantial adverse change that cannot be mitigated to a less-than-significant level.

111 South I Street

This one-story industrial building is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a) because it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey (5S3 CHRC status code). The proposed Project would result in the removal of 111 South I Street. Demolition of a historic resource is considered a substantial adverse change that cannot be mitigated to a less-than-significant level.

131 South I Street—Jenco Productions

This large one-story industrial building is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a) because it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey (5S3 CHRC status code). The proposed Project would result in the removal of Jenco Productions at 131 South I Street. Demolition of a historic resource is considered a substantial adverse change that cannot be mitigated to a less-than-significant level.

170 South E Street

This one-story industrial building is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a) because it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey (5S3 CHRC status code). The proposed Project would result in the removal of 170 South E Street. Demolition of a historic resource is considered a substantial adverse change that cannot be mitigated to a less-than-significant level.

961 West 2nd Street

This one-story duplex is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a) because it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey. In addition, the property was identified in the 1991 survey as a contributor to the potential Santa Fe Railroad Workers Overlay Zone (5B CHRC status code). The proposed Project would result in the removal of 961 West 2nd Street. Demolition of a historic resource is considered a substantial adverse change that cannot be mitigated to a less-than-significant level.

1056–1066 West 2nd Street

This bungalow court is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a) because it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey. In addition, the property was identified in the 1991 survey as a contributor to the potential Santa Fe Railroad Workers Overlay Zone (5B CHRC status code). The proposed Project would result in the removal of 1056–1066 West 2nd Street. Demolition of a historic resource is considered a substantial adverse change that cannot be mitigated to a less-than-significant level.

981 West 3rd Street – Valley Linen Supply Offices (Allgood Shower Door Company)

This commercial office building is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a) because it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey. In addition, the property was identified in the 1991 survey as a contributor to the potential Santa Fe Railroad Workers Overlay Zone (5B CHRC status code). The proposed Project would result in the removal of the Valley Linen Supply offices (Allgood Shower Door Company) at 981 West 3rd Street. Demolition of a historic resource is considered a substantial adverse change that cannot be mitigated to a less-than-significant level.

907 West Rialto Avenue

This two-story dwelling is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a) because it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey. In addition, the property was identified in the 1991 survey as a contributor to the potential Santa Fe Railroad Workers Overlay Zone (5B CHRC status code).

A review of Figure 2-5B indicates that the proposed Project would install a steel-tube rail and concrete sidewalk on a portion of the north end of the property, opposite the dwelling, in an area that is currently occupied by a lawn. In addition, Figure 2-5B shows that a new sidewalk would cut diagonally across a portion of the property's northeast corner in an area that is currently occupied by a lawn and a concrete entry path that leads to the house. According to the figure, locked gates at the Rialto Avenue sidewalk and at the end of the cul-de-sac on South I Street would be installed, which suggests the existence of a wall or fence to restrict access to the new concrete sidewalk that would connect Rialto Avenue to the new cul-de-sac. Because of the presence of a new wall or fence, the current pedestrian path from the property's northeast corner to the dwelling's entrance would be blocked.

With respect to a potential loss of integrity to the dwelling's historic setting, it does not appear that the incursion of a tube rail and concrete sidewalk on a portion of the north end of the property would reduce the integrity of setting or feeling, which is important to the significance of

the resource. This is because the incursion would be minimal given the distance from the house.

In contrast, it appears that the proposed plans for the northeast portion of the subject property would result in a significant impact on the historic setting and feeling of the resource. Historically, pedestrian access to the dwelling has been via a concrete path from the property's northeast corner to the main entrance. In fact, the design of the house, with its entrance set diagonally, facing northeast, indicates that this was intended as the primary pedestrian access point from the street. The proposed Project would introduce new railroad tracks, a wide sidewalk, locked gates, and a fence or wall that would effectively sever the dwelling's historical pedestrian entry point from the corner of West Rialto Avenue and South I Street. In addition, the encroachment of new construction on the primary north and east elevations of the residence would be deleterious to its historic setting. Furthermore, the character-defining view of a prominent two-story house from the intersection of two major streets would be effectively blocked under the proposed Project. As a result, it appears that there would be a significant impact on the historic setting of the residence as well as the feeling of this prominent upper-middle-class Transitional Craftsman-style dwelling, including its generous lawn with primary access, and views, from the northeast.

Therefore, impacts are significant and unavoidable for this aspect of the proposed Project.

123 South G Street

This warehouse building is considered a historical resource pursuant to State CEQA Guidelines Section 15064.5(a) because it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey (5S3 CHRC status code). The proposed Project would result in the removal of 123 South G Street. Demolition of a historic resource is considered a substantial adverse change that cannot be mitigated to a less-than-significant level.

Southern California Gas Company Plant – 155 South G Street

The Southern California Gas Company plant has been identified as appearing eligible for listing in the National Register (CHRC 3S). In addition, it is included in the tabular listing of the City's surveyed historic resources found in the 1991 survey (5S3 status code). In accordance with Section 15064.5(a) of the State CEQA Guidelines, this property is considered a historical resource for the purposes of CEQA.

The proposed Project would use a very small part of the northern portion of the large property that contains the Southern California Gas Company plant. The southwestern portion of the proposed E Street rail platform would encroach onto the northern portion of the Southern California Gas Company Plant property. More specifically, the project would require an encroachment of up to 25 feet along the north-northwestern perimeter and up to 100 feet along the north-northeastern perimeter of the Gas Company Plant parcel that is currently used for employee parking. The historic Southern California Gas Company buildings are located substantially south of the proposed encroachment. Given the scope of the proposed Project, it does not appear that such an encroachment would directly or indirectly alter the buildings' distinctive physical or historical characteristics, nor would it alter their integrity of location, design, materials, workmanship, feeling, or association. Therefore, the proposed Project would have no impact on the significance of the historic resource. As a result, mitigation would not be required for the potential implementation of this aspect of the proposed Project.

Impact CR-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5

As stated previously, no new archaeological resources were identified within the Project Study Area. Furthermore, none of the previously recorded archaeological resources within the Project Study Area are eligible for the National Register. These previously recorded resources are also not eligible for the California Register. The potential for the Project Study Area to yield buried prehistoric or historic-period archaeological resources is considered to be low. However, construction-related ground-disturbing activities for the proposed Project, including construction activities involving the Omnitrans bus facility and parking lot sites, could disturb, damage, or degrade unknown, intact, and potentially significant archaeological resources, even though the potential for this is considered to be low. If not mitigated, this could result in a significant impact. Therefore, Mitigation Measure CR-2 (Conduct Cultural Resources Monitoring) has been included to reduce impacts associated with the proposed Project to less-than-significant levels.

Impact CR-3: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

As previously stated, fossil remains may occur throughout the City of San Bernardino, although the evenness of their distribution is not known. The proposed Project is situated on Quaternary alluvium (Morton and Miller 2006), which is older at depth. Quaternary Holocene-age alluvium near the modern ground surface has a low potential for vertebrate fossils, but older Quaternary deposits have a higher potential for vertebrate fossils, primarily mammals of the Pleistocene epoch. Surface grading or very shallow excavation in the Project Study Area is unlikely to uncover significant fossil vertebrates. Deeper excavations that extend 5 feet or more into older Quaternary deposits may encounter significant fossil vertebrate remains.

Because the proposed Project would require groundbreaking activities during construction that may exceed 5 feet in depth, the potential to unearth previously unidentified paleontological resources exists. Therefore, Mitigation Measure CR-3 (Conduct Paleontological Monitoring) would be required to reduce impacts to less-than-significant levels.

Impact CR-4: Disturb human remains, including those interred outside of formal cemeteries

Ground disturbance associated with construction of the proposed Project, including the Omnitrans bus facility and parking lot sites, has the potential to damage or destroy buried human remains that were not identified using standard archaeological inventory methods, such as surface surveys. However, no documented cemeteries or burial sites occur within the Project Study Area. If human remains are exposed during construction, State Health and Safety Code Section 7050.5 states that no further disturbance will occur until the county coroner has made the necessary findings as to origin and disposition, pursuant to Public Resources Code Section 5097.98. If the coroner determines the remains to be Native American, the coroner must contact the NAHC, and the Project must comply with state laws related to Native American burials, which are under the jurisdiction of the NAHC (Public Resources Code Section 5097). Furthermore, construction must halt in the area of the discovery of human remains, the area must be protected, and consultation and treatment must occur as prescribed by law. With implementation of Mitigation Measure CR-4 (Stop Work if Unanticipated Human Remains Are Encountered), significant impacts on known human remains are not anticipated to occur.

3.5.5 Mitigation Measures

The following mitigation measures are included to reduce impacts on CEQA-eligible historic buildings and paleontological resources.

CR-1: Provide Photographic Documentation of Historic Resources and Noise Reduction Measures. The following mitigation measure addresses the proposed Project's potential for significant direct impacts on properties identified as historic resources (i.e., the residential properties located at 961 West 2nd Street and 907 West Rialto Avenue, the commercial property located at 981 West 3rd Street (Valley Linen Supply and offices/Allgood Shower Door Company), the industrial properties located at 111 South I Street, 131 South I Street (Jenco Productions, Inc.), 123 South G Street (JG Wholesale Product), and 170 South E Street.

Photography and Recordation. Prior to the issuance of demolition permits for the aforementioned historic resources, a photographic documentation report will be prepared for each property by a qualified architectural historian, historic architect, or historic preservation professional who satisfies the Secretary of the Interior's Professional Qualification Standards for History, Architectural History, or Architecture, pursuant to 36 CFR 61. Each report shall document the significance of the property and its physical conditions, both historic and current, through photographs and text (e.g., an expanded Department of Parks and Recreation [DPR] form). Photographic documentation noting all elevations and additional details of architectural features will be taken using 35-millimeter black-and-white film. The photographer will be familiar with the recordation of historic resources. Photographs will be prepared in a format consistent with the Historic American Buildings Survey (HABS) standard for field photography. Copies of the report will be submitted to the City of San Bernardino Community Development Department, the San Bernardino Public Library (main branch), and the City of San Bernardino Historical and Pioneer Society.

Noise Mitigation—907 West Rialto Avenue. Prior to the initiation of construction of the proposed Project in the vicinity of the dwelling located at 907 West Rialto Avenue, specific measures related to the minimization of noise impacts on the residence will be implemented. Such measures will include the installation of soundproof windows, exterior door and window seals, and interior insulation as well as sealing crevices and other openings to reduce sound intrusion. All construction must meet the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving Historic Buildings (Weeks and Grimmer 1995).

CR-2: Conduct Cultural Resources Monitoring. SANBAG shall prepare a cultural resources monitoring and discovery plan in consultation with SHPO prior to construction to ensure appropriate mitigation of any unanticipated discoveries. The plan will define areas within the APE, including the Omnitrans Bus Facility, requiring archaeological monitoring by a qualified archaeologist during ground-disturbing construction-related activities. If during cultural resources monitoring the qualified archaeologist determines that the sediments being excavated are previously disturbed or unlikely to contain significant cultural materials, the qualified archaeologist can specify that monitoring be reduced or eliminated in that area.

In general, this plan will specify that if additional cultural materials (prehistoric or historic artifacts) are encountered during construction, work should stop in the vicinity of the find until a qualified archaeologist can assess the material and recommend further action if necessary. Treatment measures typically include development of avoidance strategies, capping with fill material, or mitigation of effects through data recovery programs, such as excavation or detailed documentation, or other mitigation measures, following standard archaeological procedures.

CR-3: Conduct Paleontological Monitoring. The project applicant will develop a program to mitigate impacts on nonrenewable paleontological resources prior to excavation or construction of any components of the proposed Project. During construction, this program will include paleontological monitoring in designated project locations, including the Omnitrans bus facility and parking lot sites. This mitigation program will be conducted by a qualified vertebrate paleontologist and consistent with the proposed guidelines of the Society of Vertebrate Paleontology. This program will include the following:

- Assessment of site-specific excavation plans to determine areas that will be designated for paleontological monitoring during initial ground disturbance.
- Development of monitoring protocols for designated areas. Areas consisting of artificial fill materials or areas of ground disturbance less than 5 feet in depth will not require monitoring. Paleontological monitors qualified to Society of Vertebrate Paleontology standards will be equipped to salvage fossils as they are unearthed to avoid construction delays and remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. Monitors must be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Monitoring may be reduced if some of the potentially fossiliferous units are determined upon exposure and examination by qualified paleontologic personnel to have a low potential to contain fossil resources.
- Preparation of all recovered specimens to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates, if paleontological resources are encountered. Preparation and stabilization of all recovered fossils are essential to mitigate fully adverse impacts on the resources.
- If paleontological resources are encountered, identification and curation of all specimens into an established, accredited museum repository with permanent retrievable paleontologic storage. These procedures are also essential steps in effective paleontologic mitigation and CEQA compliance (San Bernardino County Museum; Scott and Springer 2003). The paleontologist must have a written repository agreement in hand prior to the initiation of mitigation activities. Mitigation of adverse impacts on significant paleontologic resources is not considered complete until such curation into an established museum repository has been fully completed and documented.
- If paleontological resources are encountered, preparation of a report of findings with an appended itemized inventory of specimens. The report and inventory, when submitted to the appropriate lead agency, along with confirmation of the curation of recovered specimens into an established, accredited museum repository, will signify completion of the program to mitigate impacts on paleontologic resources.

CR-4: Stop Work if Unanticipated Human Remains Are Encountered. If human remains are exposed during construction, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the county coroner has made the necessary findings as to origin and disposition pursuant to PRC 5097.98. If the coroner determines the remains to be Native American, the coroner must contact the Native American Heritage Commission and the Project must comply with state laws relating to the disposition of Native American burials that are under the jurisdiction of the Native American Heritage Commission (PRC Section 5097). Construction must halt in the area of the discovery of human remains, the area must be protected, and consultation and treatment would occur as prescribed by law.

3.5.6 Level of Significance after Mitigation

Under CEQA, implementation of Mitigation Measure CR-1 (Provide Photographic Documentation of Historic Resources and Noise Reduction Measures) would reduce but not eliminate the significant impacts of the Project on identified historic resources (State CEQA Guidelines, 14 CFR Section 15126.4(b)(2)). The demolition of the following properties would result in a significant adverse change at each of the historic resources that cannot be mitigated to a less-than-significant level: the residential properties located at 203, 221–229, 263, and 271 North K Street and 961 and 1056–1066 West 2nd Street; the commercial property located at 981 West 3rd Street (Valley Linen Supply offices/Allgood Shower Door Company); and the industrial properties located at 111 South I Street, 131 South I Street (Jenco Productions, Inc.), 123 South G Street (JG Wholesale Product), and 170 South E Street. Nevertheless, the measure outlined for the documentation of these historic resources is important to ensure that information regarding each property's contribution to the history of the City of San Bernardino is retained.

With respect to the dwelling located at 907 West Rialto Avenue, under CEQA, the proposed impact of the proposed Project would not be reduced to a less-than-significant level.

Mitigation proposed for the potential discovery of archaeological or paleontological resources would reduce impacts associated with the proposed Project to less-than-significant levels.

3.5.7 Cumulative Impacts

The proposed Project, in combination with other potential projects in the area, would not contribute to a cumulative impact related to cultural resources because all impacts are generally site specific. With mitigation, all project-related impacts would be minimized to a less-than-significant level. The inclusion of other projects in the cumulative study area would not add to the level of significance for impacts related to cultural resources for this or other projects because these impacts would likely be mitigated on a project-specific basis to a less-than-significant level. Therefore, the proposed Project would not contribute to a cumulatively significant impact related to cultural resources.

3.6 GEOLOGY AND SOILS

This section evaluates the impacts of the proposed Project on geology and soils. The technical information within this section is based on the geotechnical investigation report (Appendix E) that was prepared for the proposed Project.

3.6.1 Environmental Setting

The Greater San Bernardino area is located near two major physiographic provinces in California: 1) the Transverse Ranges Geomorphic Province to the north, composed of numerous mountain ranges that extend from the Little San Bernardino Mountains and Pinto Mountains west across the southern end of California into the Pacific Ocean west of Ventura, and 2) the Peninsular Ranges Province to the south, a series of northwest-trending small mountain ranges that extend from the foothills of the San Gabriel and San Bernardino Mountains south into the Baja Peninsula.

The City is at the southern base of the San Bernardino Mountains in the upper Santa Ana River Valley and the Santa Ana River Basin. The valley is surrounded by the San Bernardino Mountains to the northeast and east, Blue Mountain and Box Springs Mountain to the south, and the San Gabriel Mountains and the Jurupa Hills to the northwest and southwest, respectively. The City lies on a gently sloping lowland located at the southwest margin of the San Bernardino Mountains.

The sedimentary formations that underlie the lowland areas of San Bernardino are composed of accumulated layers of gravel, sand, sandy silt, silt, clay, and conglomerates that date from the younger Holocene to late Mesozoic age. Over a period of a few million years, as the sediments accumulated, the increasing thicknesses of the sediments gradually buried the original hill and valley topography in the basin as well as other remnants of the original topography (City of San Bernardino 2005b).

The Project Study Area is located in the central portion of the San Bernardino Valley, west of the former Norton Air Force Base, now known as San Bernardino International Airport, and north of the Santa Ana River. The relatively flat-lying, alluvium-filled valley overlies crystalline basement rock. The Project is located near several perennial streams that emanate from the nearby San Bernardino Mountains, including City Creek, Warm Creek, and Lytle Creek.

3.6.1.1 Soils

Soils in the San Bernardino area formed primarily from alluvial sediments that either eroded from bedrock in the adjacent mountains or were washed by rivers and creeks into the valley region. The soils are classified as Grangeville Fine Sandy Loam (Gr) and Tujunga Gravelly Loam Sand (TvC) in the Soil Survey for San Bernardino County (see Figure 3.6-1). These floodplain deposits are derived from the Santa Ana River and Cajon and Lytle creeks in the vicinity of the Project Study Area and interlain by laterally discontinuous layers of alluvial materials that are highly variable over relatively short distances.

According to the geotechnical investigation report prepared for the proposed Project, the Project Study Area is underlain by very young alluvial soils, composed primarily of sand and gravel but with some local finer and coarser deposits (designated Qya1 through Qya5 in Morton et al. 2003) (Appendix E). The current ground surface elevation ranges from approximately 1,020 feet amsl at E Street to approximately 1,070 feet amsl at the Depot. The ground elevation increases

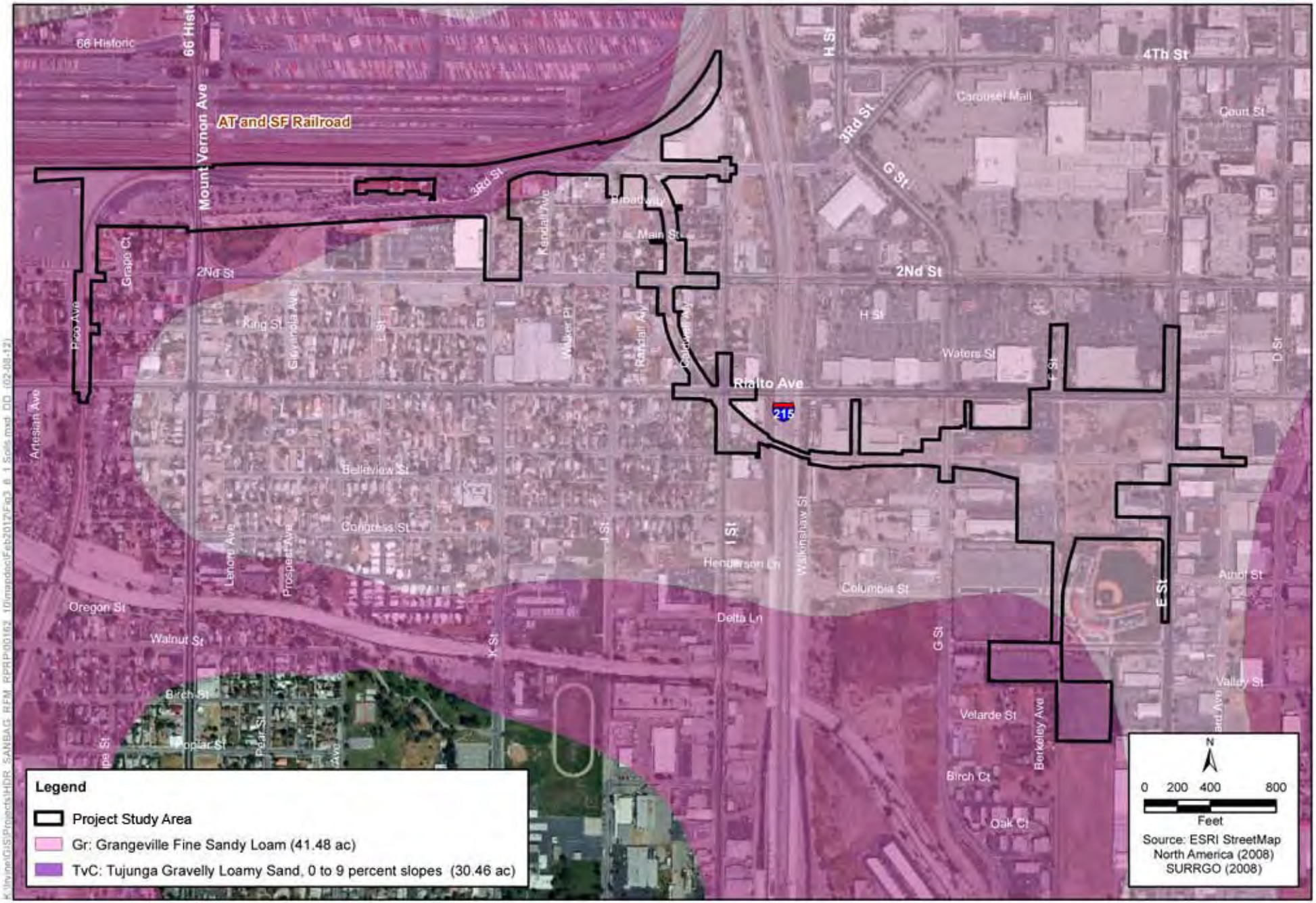


Figure 3.6-1
Soils Map
Downtown San Bernardino Passenger Rail Project

gradually from southeast to northwest. The subsurface soils along the rail corridor are predominantly sand, silty sand, and gravelly sand interbedded with sandy silt. The silt is, in general, described as stiff. The sand and silty sand are generally medium to very dense (see Appendix E).

3.6.1.2 Faulting and Seismicity

Seismicity is defined as the frequency or magnitude of earthquake activity in a given area. An earthquake is a sudden release of energy in the earth's crust or upper mantle, usually caused by movement along a fault plane or by volcanic activity and resulting in the generation of seismic waves.

The Project Study Area is within seismically active southern California, with several active faults in the vicinity. However, the Project Study Area is not within a known earthquake fault or an Alquist-Priolo Study Zone, nor is it included within the Seismic Hazards Mapping Act. The closest fault to the Project is the San Jacinto fault (San Bernardino section), which is located approximately 3,000 feet southwest of the west end of the Project, near Mt. Vernon Avenue. The San Bernardino section of the San Andreas Fault is located approximately 4.5 miles northeast of the eastern end of the Project (near E Street). Both the San Jacinto and the San Andreas faults are right-lateral strike-slip faults. Within the regional area, the San Jacinto fault (San Bernardino section) is capable of generating moment magnitude[3] 6.7 earthquakes, and the San Andreas fault is capable of generating moment magnitude 7.8 earthquakes; however, these faults are capable of generating earthquake magnitudes of 7.5 and 8.5, respectively (City of San Bernardino 2005b). A regional geology and fault map is presented in Figure 3.6-2.

New Holocene-aged faults were discovered approximately 1.9 miles north of the Depot (see Appendix E). After a literature review, it was determined that the San Jacinto fault and the San Andreas fault (San Bernardino section) do not traverse the Project Study Area.

3.6.1.3 Liquefaction

Liquefaction involves a sudden loss of strength in saturated, cohesionless soil (predominantly sand) caused by the buildup of pore water pressure during cyclic loading, such as that produced by an earthquake. This increase in pore water pressure can temporarily transform the soil into a fluid mass, resulting in vertical settlement. It can also cause lateral ground deformations. Typically, liquefaction occurs in areas where there are loose sands and the depth to groundwater is less than 50 feet from the surface. Seismic shaking can also cause soil compaction and ground settlement without liquefaction occurring as well as the settlement of dry sands above the water table.

According to the geotechnical report prepared for the proposed Project, groundwater was not encountered at the maximum depth drilled during field explorations (50 feet); groundwater at the site is more than 70 feet below the current grade. The subsurface soils at this site consist predominantly of medium-dense to dense silty sand interbedded with stiff to very stiff silt. Given these circumstances, the risk of liquefaction occurring during a seismic event within the Project Study Area is considered low (see Appendix E).

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[3] "Moment is a physical quantity proportional to the slip on the fault times the area of the fault surface that slips; it is related to the total energy released in an earthquake. The moment can be estimated from seismograms (and also from geodetic measurements). The moment is then converted into a number similar to other earthquake magnitudes by a standard formula. The result is called the moment magnitude. The moment magnitude provides an estimate of earthquake size that is valid over the complete range of magnitudes, a characteristic that was lacking in other magnitude scales" (U.S. Geological Survey 2009).

3.6.1.4 Total and Differential Settlement

Settlement can occur both uniformly and differentially (i.e., where adjoining areas settle at different rates). Typically, both areas underlain by artificial fills, unconsolidated alluvial sediments, and slope wash as well as areas with improperly engineered construction fills are susceptible to this type of settlement. Settlement of the ground surface can be accelerated and accentuated by earthquakes. During an earthquake, settlement can occur as a result of the relatively rapid compaction and settling of subsurface materials (particularly loose, noncompacted, variable sandy sediments) due to the rearrangement of soil particles during prolonged ground shaking. Given the information contained in the geotechnical report, total dynamic settlement for soils within the Project Study Area is anticipated to be less than 0.5 inch (see Appendix E).

3.6.1.5 Other Geologic and Seismic Hazards

A landslide is defined as slope failure or the downward falling or sliding of a mass of soil or rock on or from a steep slope. The geologic setting of southern California locally is conducive to slope failures and slope-failure deposits (landslides) that can be hazardous to human life and property. These hazards are created when geologic materials are displaced down a topographic slope under the influence of gravity. Factors that determine slope-failure occurrence include slope angle, geologic materials (substrate), climatic conditions, and earthquake shaking (City of San Bernardino 2005b). The Project Study Area is generally level and not located in a landslide hazard zone.

Soil erosion is a naturally occurring process on all land. The agents of soil erosion are water and wind. Soil erosion can be a slow process that continues relatively unnoticed, or it may occur at an alarming rate, causing serious loss of topsoil. The rate and magnitude of soil erosion by water is controlled by the following factors: rainfall intensity and runoff, soil erodibility, slope gradient and length, and vegetation cover (City of San Bernardino 2005b). The Project Study Area is largely developed, but some vacant land is present. The largest areas of vacant land are located at the eastern extent of the Project Study Area, west of E Street on the north and south sides of the existing rail line. Expansive soils are defined as any soils that significantly change volume in horizontal and vertical planes with changes in moisture content.

The Project Study Area is located inland; it is not adjacent to an ocean or a large body of water. Furthermore, it is located at a high elevation. Additionally, the Project would be served by sewer services; no septic tanks or other wastewater disposal systems are in place.

3.6.2 Regulatory Setting

3.6.2.1 California Building Standards Code

The California Building Standards Commission is responsible for coordinating, managing, adopting, and approving building codes in California. In July 2007, the Building Standards Commission adopted and published the 2006 International Building Code as the 2007 California Building Code (CBC). This new code became effective on January 1, 2008, and updated all subsequent codes under CCR Title 24.

The State of California provides minimum standards for building design through the 2007 CBC (CCR Title 24). Where no other building codes apply, Chapter 29 of the 2007 CBC regulates excavation, foundations, and retaining walls. The CBC applies to building design and construction in the state and is based on the federal Uniform Building Code (UBC), which is used widely throughout the country (generally adopted on a state-by-state or district-by-district

Source: Group Delta Consultants Inc. (2010)

Figure 3.6-2
Regional Geology Map
Downtown San Bernardino Passenger Rail Project

basis). The CBC has been modified for California conditions, with numerous more detailed or more stringent regulations. San Bernardino County has adopted the 2007 CBC.

The state earthquake protection law (California Health and Safety Code Section 19100 et seq.) requires structures to be designed to resist stresses produced by lateral forces caused by wind and earthquake. The 2007 CBC replaces the previous "seismic zones," which were assigned a number from 1 to 4 (where 4 required the most earthquake-resistant design), with Seismic Design Categories A through F (where F requires the most earthquake-resistant design). With the shift from seismic zones to seismic design, the CBC philosophy has shifted from "life safety design" to "collapse prevention," meaning that structures are designed to prevent collapse during the maximum level of ground shaking that can reasonably be expected to occur at a site. Chapter 16 of the CBC specifies that each seismic design category is to be determined on a site-specific basis (i.e., according to site-specific soil characteristics and proximity to potential seismic hazards).

3.6.2.2 Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed into law in California to mitigate hazards to structures for human occupancy associated with surface faulting. This state law was a direct result of the 1971 San Fernando earthquake, which resulted from extensive surface fault ruptures that damaged numerous homes, commercial buildings, and other structures. Surface rupture is the most easily avoided seismic hazard. The Alquist-Priolo Earthquake Fault Zoning Act provides a mechanism for reducing losses from surface fault rupture on a statewide basis. The intent of the act is to ensure public safety by prohibiting the siting of most structures for human occupancy across traces of active faults that constitute a potential hazard to structures from surface faulting or fault creep (State of California Department of Conservation, California Geological Survey 2011). The Project is not located in a known Alquist-Priolo Study Zone.

3.6.2.3 Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act, passed in 1990, addresses earthquake hazards from nonsurface fault rupture, including hazards related to liquefaction and seismically induced landslides. The purpose of the Seismic Hazards Mapping Act, which went into effect in 1991, is to identify and map seismic hazard zones to assist cities and counties when preparing the safety elements of their general plans and encourage land use management policies and regulations that reduce seismic hazards. This act has resulted in the preparation of maps that delineate Liquefaction Zones and Earthquake-Induced Landslide Zones of Required Investigation (State of California Department of Conservation, California Geological Survey 2011). The Project is not included on a Seismic Hazards Mapping Act map.

3.6.3 Thresholds of Significance

For the purposes of the analysis in this EIR, in accordance with Appendix G of the State CEQA Guidelines, the proposed Project would have a significant environmental impact under CEQA related to geology or soils if it would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, involving:
    - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zone map issued by the State Geologist for the area or based on other

substantial evidence of a known fault (refer to Division of Mines and Geology Special Publication 42).

  - Strong seismic ground shaking.
  - Seismically related ground failure, including liquefaction.
  - Landslides.
- Result in substantial soil erosion or the loss of topsoil.
- Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the Project and potentially result in an on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.
- Be located on expansive soil, as defined in Table 18-1-B of the UBC (1994), creating substantial risk to life or property.
- Have soils that are incapable of adequately supporting the use of septic tanks or alternative waste disposal systems where sewers are not available for the disposal of wastewater.

3.6.4 Project Impacts

Impact G-1: Expose people or structures to significant adverse effects related to seismicity, including fault rupture, ground shaking, ground failure, or landslides

The Project Study Area is located in a seismically active area of southern California. The potential exists for the site to experience strong ground shaking from nearby faults during an earthquake. As stated in Section 3.6.1, “Environmental Setting,” the Project Study Area is not located within an Alquist-Priolo fault zone or included on a Seismic Hazard Mapping Act map. The closest fault, the San Jacinto fault (San Bernardino section), is located approximately 3,000 feet southwest of the westernmost extent of the Project Study Area, near Mt. Vernon Avenue. The San Bernardino section of the San Andreas Fault is located approximately 4.5 miles northeast of the eastern end of the Project (near E Street). Within the regional area, the San Jacinto fault (San Bernardino section) is capable of generating moment magnitude 6.7 earthquakes, and the San Andreas fault is capable of generating moment magnitude 7.8 earthquakes; however, these faults are capable of generating earthquake magnitudes of 7.5 and 8.5, respectively (City of San Bernardino 2005b).

Analysis of the geotechnical investigation indicates that the San Jacinto fault and the San Andreas Fault (San Bernardino sections) do not impose a surface rupture hazard for the proposed Project. The new Holocene-aged faults, located approximately 1.9 miles north of the Depot, would not have an impact on the proposed Project because of their distance from the site. Therefore, implementation of the proposed Project is not anticipated to subject persons or property to potential significant impacts related to fault surface rupture. The impacts would be less than significant (see Appendix E).

Implementation of the proposed Project would require various site grading and construction activities, including station and platform improvements at the Depot and the bus facility at E Street, construction of a second track along the alignment, the addition of parking facilities, and the construction of concrete foundations, retaining walls, and underground utilities to facilitate the additional mile of rail service. In general, the geologic and seismic hazards identified for the Project Study Area would be mitigated by employing required standard engineering practices, including CBC standards, in the design and construction of the proposed

Project. The proposed bus facility would be designed to meet all applicable design and building engineering practices. Furthermore, the proposed Project would integrate the geotechnical recommendations prescribed in the geotechnical investigation report, as required by Mitigation Measure G-1 (Comply with Geotechnical Recommendations). With the incorporation of these geotechnical recommendations, potential impacts resulting from local geological hazards, including seismic ground shaking, would be mitigated to a less-than-significant level.

Impact G-2: Result in substantial soil erosion or be located on unstable soil

The proposed Project would involve track improvements along an existing rail alignment, from the Depot to E Street, 1 mile to the east. Station improvements would be included at each end. The Project Study Area is located in an urban area that is generally level and largely developed; therefore, the presence of hardscape surfaces limits the amount of soil erosion under existing conditions.

Construction of the proposed Project would require grading and excavation activities, which would expose soils within the Project Study Area to wind and water erosion. Although implementation of industry-standard stormwater pollution-control best management practices (BMPs) would minimize potential soil erosion and other water quality impacts during construction, localized erosion could still occur and would require appropriate mitigation. As provided in Section 3.6.5, “Mitigation Measures,” below, the construction contractor would be required to comply with the NPDES General Construction Permit and prepare and implement a SWPPP for the Project. The SWPPP would include erosion-control BMPs, which would include using proper grading techniques; using proper soil stabilization, sediment control, runoff control, and erosion control practices on the construction site; and covering or stabilizing topsoil stockpiles. Industry-standard stormwater BMPs can be found in the *California Stormwater Best Management Practices Handbook* (Construction). With the implementation of Mitigation Measures G-1 (Comply with Geotechnical Recommendations), HYD-1 (Develop and Implement a Stormwater Pollution Prevention Plan), and HYD-2 (Develop and Implement a Water Quality Management Plan), erosion-related impacts would be minimized to a less-than-significant level.

Impact G-3: Be located on a geologic unit or soil that would become unstable and potentially result in a landslide, lateral spreading, subsidence, liquefaction, or collapse

As indicated previously in Section 3.6.1, “Environmental Setting,” the Project Study Area has a low potential for liquefaction hazards because groundwater levels are 70 feet or more below grade and the local geologic substrate is composed predominantly of medium-dense to dense silty sand interbedded with stiff to very stiff silt. The Project Study Area is generally level and, therefore, not prone to landslide hazards (see Appendix E).

The Project Study Area is located within an alluvial depositional landscape characterized by unconsolidated sediments at depth. These unconsolidated materials are susceptible to both total and differential settlement with the placement of additional loads, with dynamic settlement estimated at less than 0.5 inch (see Appendix E). Settlement can result in utility disruptions, cracking pavement, and damage to rail facilities. Hazards related to settlement would be mitigated through the integration of several geotechnical recommendations into the project design, as prescribed in Mitigation Measure G-1 (Comply with Geotechnical Recommendations), which requires the provision of firm, uniform support for any structure proposed by the Project to reduce potential total and differential settlement and the removal of

5 feet of subsurface soils (below finished grade), as applicable. With implementation of Mitigation Measure G-1 (Comply with Geotechnical Recommendations), potentially significant impacts related to settlement would be reduced to a less-than-significant level.

Impact G-4: Be located on expansive soils

As described in Section 3.6.1, "Environmental Setting," soils within the Project Study Area are not known to have expansive qualities, according to the geotechnical investigation report prepared for the Project. Specifically, the near surface, subgrade soils at the site consist predominantly of silty sand with very low expansion potential (see Appendix E). Therefore, impacts related to expansive soils would not occur under construction or operation of the proposed Project.

Impact G-5: Have soils that are incapable of supporting septic tanks or alternative wastewater disposal systems

All habitable structures constructed in conjunction with the Project would connect to the local sanitary sewer collection service provided by the City. In this context, the proposed Project would not require the construction or use of septic tanks or other alternative wastewater disposal systems; therefore, no impacts would occur.

3.6.5 Mitigation Measures

G-1: Comply with Geotechnical Recommendations. Construction and structural design of the Project will comply with all of the geotechnical recommendations, including design measures, provided in the final geotechnical investigation report prepared for the Project (see Appendix E). This includes implementation of the geotechnical recommendations for project-specific improvements, based on the site investigation, engineering analysis, and standard design criteria, as stated in the geotechnical investigation report for the following:

- Pedestrian overcrossing stair tower buildings
- Pole foundations
- Concrete platforms
- Retaining walls
- Concrete culverts
- Track subgrade grading
- Imported soils
- Subballast and ballast
- Soil corrosivity
- Pavement design
- Temporary excavations
- Shored excavation
- Pavement design

Through integration of the required geotechnical recommendations, final design will reflect compliance with the applicable Seismic Design Category (e.g., D, E, or F) for each proposed structural facility in accordance with the CBC.

3.6.6 Level of Significance after Mitigation

Mitigation Measure G-1 (Comply with Geotechnical Recommendations) and implementation of Mitigation Measures HYD-1 (Develop and Implement a Stormwater Pollution Prevention Plan) and HYD-2 (Develop and Implement a Water Quality Management Plan) provided in Section 3.8, "Hydrology and Water Quality," would reduce impacts related to geology, soils, and erosion potential. Therefore, impacts would be less-than-significant after mitigation.

3.6.7 Cumulative Impacts

The proposed Project, in combination with other potential projects in the area, would not contribute to a cumulative impact related to geology and soils because all impacts would be generally site-specific. With mitigation, all project-related impacts would be minimized to a less-than-significant level. The inclusion of other projects in the cumulative study area would not add to the level of significance for impacts related to geology and soils for this or other projects because these impacts would be likely to be mitigated on a project-specific basis to a less-than-significant level. Therefore, the proposed Project would not contribute to a cumulatively significant impact related to geology or soils.

3.7 HAZARDS AND HAZARDOUS MATERIALS

This section evaluates the effects of the proposed Project related to hazards and hazardous materials. The technical information within this section is based on the Phase I Environmental Site Assessments, a subsequent Phase II, and the associated Technical Memorandum of Additional Findings (Appendix F) that was prepared for the Project. The Phase I report identified recognized environmental conditions (RECs) in connection with the Project Study Area and surrounding buffer.

3.7.1 Existing Setting

The Project Study Area is located in an urbanized area of mixed-use development that includes railroad tracks, the Depot, residential development, a variety of repair facilities (auto repair, furniture upholstery, pool table repair), current and former scrap metal recycling facilities, a Southern California Gas Company plant, vacant and occupied commercial and industrial warehouses, and other retail facilities. Adjacent uses include a Department of Homeland Security office building, an industrial laundry facility, a commercial trucking operation, and a Signal Oil Company office building. Scattered undeveloped lots are also found in the area.

Structures located within or in the area surrounding the Project Study Area are largely first-generation original construction; many have been present since at least 1930. The Depot, located at the northern terminus of the Project Study Area, has been present since 1918 when the original depot building was reconstructed after being destroyed by a fire. The residential properties located in the Project Study Area are located west of I-215. These consist of both single- and two-story homes. The remaining structures include commercial and industrial warehouse facilities and a scrap metal recycling yard (located adjacent to the tracks, west of G Street). Many of the warehouses have large parking areas and loading bays. The scrap metal recycling yard has several warehouses and buildings as well as numerous scrap metal piles.

As shown in Figure 2-1, the Project Study Area spans both sides of an existing rail alignment. The approximately mile-long segment of AT&SF (predecessor to BNSF) Redlands Subdivision railroad track begins at the Depot and extends south and east to a point just east of E Street south of Rialto Avenue. The area analyzed in this section, known as the rail corridor, includes the tracks and proposed right-of-way as well as properties located adjacent to the tracks.

3.7.1.1 Historical Use of the Project Study Area

A review of Sanborn maps for the years 1894 and 1906 was conducted for the area surrounding the Project Study Area. This area was largely residential and undeveloped in the 1894 maps, with the exception of some commercial warehouses and the West Coast Lumber Company, which was located north of the railroad tracks and west of E Street. The railroad tracks currently located within the Project Study Area were present in 1894 in their current configuration and known as the “Kite Shaped Track” (refer to Section 3.5, “Cultural Resources,” for additional information about the Depot and the track). Additional tracks (no longer present) were located between E Street and F Street, along a short segment of Rialto Avenue (formerly 1st Street) west of E Street and along E Street south of Rialto Avenue.

The original depot building was present on the 1906 Sanborn map. The portion of the map corresponding to the western portion of the Project Study Area is largely consistent with the earlier map, with the exception of the Parker Iron Works Machine Shop, which was added at a location just east of the Project Study Area on the south side of 3rd Street. Additional warehouses were located north of the tracks between D Street and E Street. The tracks located along E Street in the 1894 map were no longer present by 1906, but the track between E Street and F Street south of Rialto Avenue was present. A streetcar barn and repair facility and the Edison Electric Powerhouse were located on the south side of the tracks, just east of E Street. According to the Sanborn map, an underground storage tank (UST) was located at the site in 1906. The facility also housed two generators and two transformers. The former barn and powerhouse were within the Project Study Area. Because of the location, the former onsite operations and associated waste streams, and the identification of a UST on the property, this site is considered a high-risk REC site.

Already identified as a site of concern, the SCRRA depot (listed as AT&SF) located at 1260 West 3rd Street was listed because of the identification of six USTs at the site. As indicated in the technical memorandum, the status of the tanks could not be determined from the available information. Additional regulatory file review was conducted. After consideration of the investigation currently under way related to the 1170 West 3rd Street listing, no additional action was recommended for this listing.

A historical aerial photograph review for 1930, 1938, 1953, 1966, 1977, 1989, 1994, 2002, and 2009 found no sites of concern within the Project Study Area. A summary is provided below:

- **1930**: The area surrounding the Project Study Area was developed (similar to the current configuration). The railroad tracks located between E Street and F Street, both north and south of Rialto Avenue, were present in 1930. The Depot was located at the northern terminus of the Project Study Area. The surrounding area was largely residential, with some commercial/industrial development (warehouses). Agricultural and undeveloped land was located throughout the rail corridor.
- **1938**: The western portion of the Project Study Area consisted largely of residential and commercial development. Buildings were located in the northern portion of the Project Study Area, on the south side of 3rd Street (currently vacant lots). Commercial warehouses were located north and south of the railroad tracks in the area where I-215 (not present in 1938) is currently located. Some undeveloped land was present on both the north and south sides of the tracks between E Street and G Street. San Bernardino Central Metal was not present; however, structures were located in the vicinity of the Southwest Metal Company. Several buildings and railroad tracks were present where the currently vacant lots are located south of Rialto Avenue and west of E Street. The repair barn and powerhouse identified in the 1906 Sanborn map were present in 1938.
- **1953**: Additional commercial development was located throughout the Project Study Area, both north and south of the tracks, with only a small portion of undeveloped land located north of the Project Study Area between E Street and G Street. I-215 was not yet constructed, and the agricultural fields previously located south of the Project Study Area were no longer present.
- **1966**: I-215 was present by 1966. The area remained consistent with the 1953 image. However, the repair barn and powerhouse, located south of the railroad tracks (just east of D Street), were no longer present.
- **1977**: Commercial buildings located on the west and east sides of the Project Study Area (on the south side of 3rd Street) were no longer present. The area between E Street and G

Street (north of the Project Study Area) was largely undeveloped in 1977, though some commercial buildings were still present in the area. The railroad tracks previously located north of the Project Study Area (south of Rialto Avenue) were no longer present. The portion of the Project Study Area located between D Street and E Street existed in its current configuration, with the exception of a commercial building located on the north side of the tracks at E Street (currently vacant).

- **1989 and 1994**: The Project Study Area and surrounding areas appear similar to the 1977 image. Residential developments located on the north side of Rialto Avenue were replaced by commercial and retail development by 1989.
- **2002 and 2009**: The largely undeveloped area north of the Project Study Area (between E Street and G Street) included the Department of Homeland Security buildings by 2002. One additional structure (currently not present) was located east of the Department of Homeland Security parking area. The rest of the area was undeveloped. The remainder of the Project Study Area and surrounding areas were consistent with the 1994 image. The commercial building located on the north side of the tracks (at E Street) was no longer present in 2009. The Project Study Area and surrounding areas existed in their current configuration.

Historical research found that development along the Short Way rail line from the intersection of Pico Avenue and Rialto Avenue to the Depot was consistent with the remainder of the Project.

3.7.1.2 City of San Bernardino Directory Review

A City of San Bernardino directory review was conducted at the San Bernardino Public Library's California Room for the years 1949 to 2008 in intervals of five years. The information garnered during the review confirmed that historic development was consistent with the site reconnaissance and historical aerial photograph review.

Five sites of concern were identified during the directory review because of operations at a particular facility, the likely presence of USTs, and/or the waste streams likely associated with on-site operations. Because of the lack of regulatory listings for the sites and additional site details, each is considered an "indeterminate risk" and REC site.

- Carry Shell Service Station (listed in 1949), located at 1077 West 3rd Street.
- Union Oil Company (listed from 1949 to 1961), located at 789 West Rialto Avenue.
- Bob's Service Station (listed from 1949 to 1961), located at 415 West Rialto Avenue.
- Service Station (currently Greenwood's Uniforms) (listed from 1945 to 1961), located at 115 South E Street.
- Economy Cleaners (listed in 1976) and body shop (listed from 1949 to 1976), located at 133 South E Street.

3.7.1.3 Environmental Records Review

The Phase I assessment conducted for the proposed Project included an environmental records search of federal, state, local, and tribal databases. The review identified 418 environmental records for sites located within or adjacent to the rail corridor. Many of the database listings, however, were considered not to be of concern because of the scope of the Project, the distance of the listed site from the Project Study Area, and/or a facility's compliance with, or lack of, previously noted violation(s). Additional database findings were considered not to be of concern to the Project because of the nature of the database. As described in the Phase I report, a result of these factors, as well as the updated Project Study Area, 374 of the 418

records listed were considered not to be of concern to the Project. The remaining 44 records, which correspond to 19 sites (sites are often listed in multiple databases), are considered to be of concern. Details related to the 19 sites of concern are presented below (see Table 3.7-1 and Figure 3.7-1). As a result of an update to the Phase I report (HDR Engineering, Inc. 2011c), additional sites of concern were recorded, for a total of 28 sites (see Table 3.7-1). Table 3.7-2 identifies additional sites of concern associated with the proposed bus facility site.

Historical sources indicate that soil at the proposed bus facility site has been impaired by petroleum hydrocarbons and metals. The historic activities and uses at this location are considered RECs. A Phase I assessment conducted for the proposed Omnitrans facility included an environmental records review of federal, state, and tribal databases. The property was not included in any of the databases. Of the adjacent facilities identified by EDR, only one facility, located at 655 West Rialto Avenue (owned by the Department of Homeland Security), was identified as potentially affecting the Project. This location was identified during previous grading activities as one with lead contamination. However, cleanup activities have occurred on site, and contamination at the facility appears to have a minimal chance of migrating into the Project Study Area. Given the distance, topography, assumed groundwater gradient, current regulatory status, and/or the absence of reported releases, none of the remaining sites listed in the state and tribal databases were considered to be an REC to the Project. A Phase II report conducted for the proposed bus facility included further investigation of this portion of the Project Study Area and adjacent areas based on prior historical uses and possible lead contamination. Although lead was detected in soil samples, all samples were below the commercial/industrial California Human Health Screening Level (CHSSL) for lead.

3.7.2 Regulatory Setting

The primary federal laws regulating hazardous wastes/materials are the Resource Conservation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). The purpose of CERCLA, often referred to as Superfund, is to clean up contaminated sites so that public health and welfare are not compromised. RCRA provides for “cradle to grave” regulation of hazardous wastes. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

HDR Map Code(1)	Site Name	Address/ Assessor Parcel Number	Site Operations Relative to Hazmat Issues(2), Regulatory Listing(2)	Data Source(4)	Risk Ranking L/ I/ H(5)	Add't File Review/ Interviews Conducted	Phase II Preliminary Site Investigation Recommended(6)?
A	SCRRA Depot	1170 and 1260 W. 3rd Street/ (Several APNs)	Railroad depot. Open SLIC, open LUST, HIST Cortese, HIST UST listings.	R, D, H	H	No	Yes, Onsite
B	Precision Automotive	909 W. 2nd Street/ 0138-312-56	Auto repair facility. CA FID UST, SWEEPS UST. No updated UST information available.	R, D, H	I	Interview Only	Yes, Public R/W
C	Historic Service Station	895 W. 2nd Street/ 0134-331-26	HSS. Open LUST case.	R, D, H	H	File Review Only	No
D	Snow Freight Lines/ Super Cal Express	958 W. Rialto Avenue/ 0138-312-16, 57	Commercial trucking facility. One closed LUST case, two USTs listed in HIST UST database.	R, D, H	H	Yes	Yes, Onsite
E	Pacific Van and Storage	815 W. Rialto Avenue/ 0136-011-46	Commercial trucking facility. CA FID UST, and SWEEPS UST listing. No updated UST information available.	R, D, H	I	Interview Only	Yes, Public R/W
F	Viking Tire	747 W. Rialto Avenue/ 0136-011-22, 28, & 27	Tire supply and repair facility. Closed LUST case, and HIST Cortese listing.	R, D, H	H	Yes	Yes, Public R/W
G	San Bernardino Central Metal	144 S. G Street/ 0136-011-31, 0136-091-11, 12	Scrap metal recycling facility. NPDES permit, SWRCY listing, possible CERCLIS listing.	R, D, H	H	Yes	Yes, Onsite
H	Southern California Gas Company	155 S. G Street/ 0136-101-14, 15, & 21	Natural gas facility. Closed LUST case, HIST Cortese, four active USTs onsite.	R, D, H	H	File Review Only	Yes, Onsite
I	Signal Oil Company	173 S. G Street/ 0136-101-11	Office building. Closed Envirostor, CERCLIS-NFRAP.	R, D, H	L	No	No
J	Southwest Metal Company	740 W. Congress Street/ 0136-091-15	Scrap metal recycling facility. Open Envirostor and CERCLIS listings.	R, D, H	H	No	No
K	Department of Homeland Security Office Building	655 W. Rialto Avenue/ 0136-021-28	Federal government office building. Open Envirostor listing.	R, D, H	H	File Review Only	Yes, Onsite
L	Bekins Moving and Storage	134 S. E Street/ 0136-111-01	Former moving company. Three USTs listed in HIST UST database.	R, D, H	H	Yes	Yes, Onsite
M	Pep Boys Automotive	147 S. E Street	Automotive repair facility.	R, D, H	I	No	No
N	San Bernardino City FD Maintenance Shop	120 S. D Street	Fire Dept. maintenance shop. One UST listed in SWEEPS UST and HIST UST databases. No additional UST information available.	R, D, H	H	No	No
O	U-Haul	110 S. D Street	Commercial moving company. Two closed LUST cases onsite.	R, D, H	H	No	No
P	Vacant Lot, site of proposed Transit Village Core Project Area	South of railroad tracks, and west of E Street/ 0136-111-24	Former railroad maintenance area. Targeted Site Investigation area per DTSC review.	R, D, H	I	File Review Only	Yes, Onsite
Q	Former rail car repair facility and Edison Electric Power House	South of railroad tracks, and east of E Street	Former rail car repair facility and power house with UST identified in Sanborn map.	R, H	H	No	No
R	Carry Shell Service Station	1077 W. 3rd Street/ 0138-271-01	HSS.	R, H	H	No	Yes, Public R/W
S	Union Oil Company	789 W. Rialto Avenue/ 0136-011-19	HSS.	R, H	I	Yes	Yes, Public R/W
T	Bob's Service Station	415 W. Rialto Avenue	HSS.	R, H	I	No	No
U	Service Station	115 S. E Street	FSS (currently Greenwood's Uniforms)	R, H	I	Interview Only	No
V	Economy Cleaners/Body Shop	133 S. E Street	Former body shop and laundromat.	R, H	I	Interview Only	No
W	Vacant Building	777 W. Rialto Avenue	Possible former recycling facility.	R, I	I	Interview Only	Yes, Onsite
X	Vacant Lot	Located north of the tracks and west of E Street/ 0136-021-23, 0136-021-23 & 0136-021-12	Former distribution warehouse possibly with USTs onsite.	I, H	I	No	Yes, Onsite
Y	Pacific Pride Service Station	1405 W. Rialto Avenue	CSS. Closed LUST case onsite.	R, D, H	H	File Review Only	No
Z	BNSF Maintenance yard	1500 W. Rialto Avenue	Former BNSF railroad maintenance yard and current commercial trucking operations. CHMIRS, HMIRS, SLIC listings.	R, D, H	H	No	No
AA	Inland Beverage Company	223 S. G Street	Former beverage distribution facility. One closed LUST case onsite.	R, D, H	H	No	No
AB	Chubby Chassis	275 S. G Street	Former auto repair facility. One closed LUST case onsite	R, D, H	H	No	No

Sites listed in bold print are considered by ASTM to be a Recognized Environmental Concern (REC) or Historic REC (HREC). For definition of REC/HREC, please refer to June 2010 Phase I Environmental Site Assessment.

(1) Corresponds to location of site as indicated in Figure 2

(2) CSS = Current Service Station, FSS= Former Service Station, HSS = Historic Service Station (no longer present)

(3) LUST=Leaking Underground Storage Tank, UST= Underground Storage Tank, DTSC = Dept. of Toxic Substances Control. Complete list of acronyms identified in Appendix C of June 2010 Phase I Environmental Site Assessment

(4) Indicates primary information sources for listing: R=Reconnaissance, D=Database, H=Historical Source (city directories, historical aerial photographs), I=Interview

(5) Risk of potential impacts onsite, Low / Indeterminate / High

(6) Column indicates a recommendation for a additional investigation in the form of a Phase II Preliminary Site Investigation (PSI) for the site. The PSI may be conducted within the site's property boundaries (indicated as "Onsite") or within public right-of-way (R/W), which includes railroad R/W and City of San Bernardino R/W (roadways).

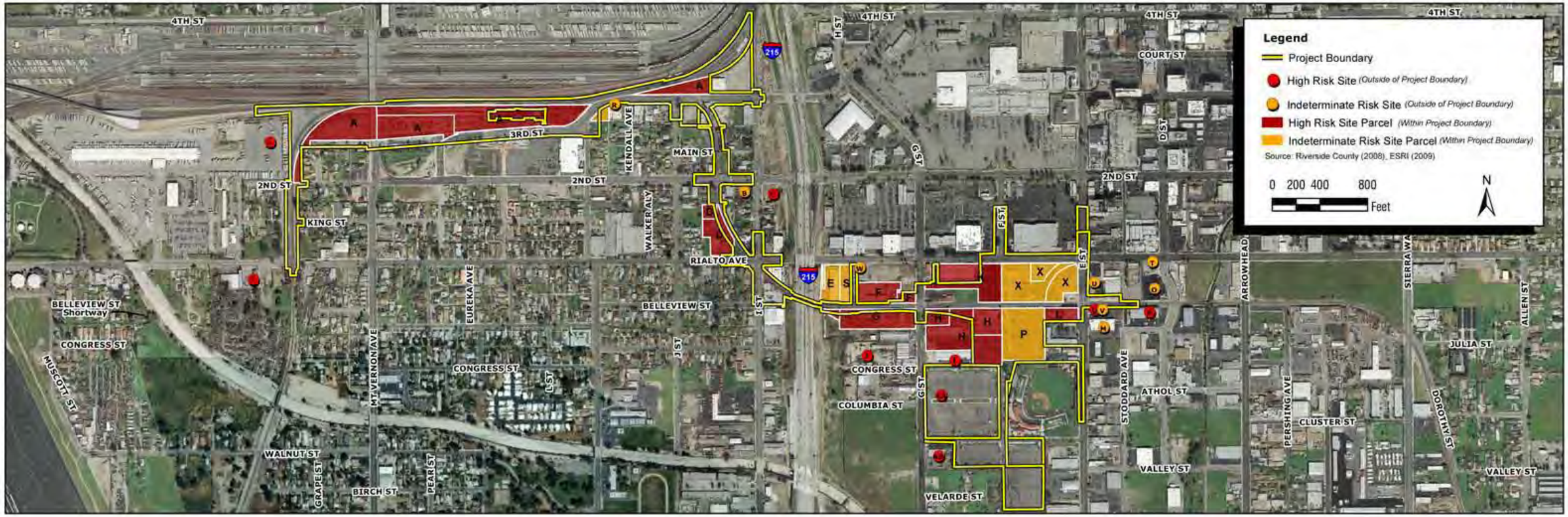


Figure 3.7-1
Phase I Environmental Site Assessment
Downtown San Bernardino Passenger Rail Project

Table 3.7-1. Recorded Sites of Concern

Map Code	Site Name	Address (1)	Site Operations Relative to Hazmat Issues (2), Regulatory Listing (3)	Data Source (4)	Risk Ranking (5)	Located within Project Study Area (6)	Additional Details
A	Depot (listed as AT&SF Railroad and San Bernardino Waste Treatment Plant)	1170 W. 3rd Street	Railroad depot. Open SLIC, open LUST, HIST Cortese, HIST UST listings.	R, D, H	H	Y	The site is listed as open an SLIC and LUST site. Four USTs are listed in the HIST UST database, with one HIST Cortese listing related to leaking USTs. Based on the open status of the SLIC and LUST cases, the site is considered a high-risk site and an REC.
B	Precision Automotive (listed as Motor Car Company and Performance Automotive)	909 W. 2nd Street	Auto repair facility. CA FID UST, SWEEPS UST. No updated UST information available.	R, D, H	I	N	The site is listed in the Cal/EPA, CA FID UST, and SWEEPS UST databases. Three tanks are listed as active. No additional, updated information was available regarding the tanks' status. It is generally considered, based on experience, that soil contamination exists in the surrounding subsurface; however, actual risk cannot be determined. The site is considered an indeterminate-risk site and an REC.
C	Historic service station (listed as Allen Property)	895 W. 2nd Street	HSS. Open LUST case	R, D, H	H	N	One open LUST case is listed at the site; included in the CA FID UST and SWEEPS UST databases, which are no longer updated. According to reviews conducted at the SARWQCB, four USTs were removed from the site in February 2001. Subsequent soil sampling identified soil contamination in the area of the removed tanks; the case remains open. This site is considered a high-risk site and an REC.

Map Code	Site Name	Address (1)	Site Operations Relative to Hazmat Issues (2), Regulatory Listing (3)	Data Source (4)	Risk Ranking (5)	Located within Project Study Area (6)	Additional Details
D	Snow Freight Lines/ Super Cal Express	958 W. Rialto Avenue	Commercial trucking facility. One closed LUST case, two USTs listed in HIST UST database. No updated UST information available.	R, D, H	H	Y	One LUST case at the site closed in August 2001. Two USTs are listed in the HIST UST database. No additional information regarding the status of USTs was provided. As a result of the on-site LUST case and the unknown status of the USTs identified, the site is considered a high-risk site and an REC.
E	Pacific Van and Storage	815 W. Rialto Avenue	Commercial trucking facility. CA FID UST, and SWEEPS UST listing. No updated UST information available.	R, D, H	I	N	The site is listed in the CA FID UST and SWEEPS UST databases, which are no longer updated. It is generally considered, based on observation and experience, that soil contamination exists in the subsurface surrounding USTs not otherwise classified as LUSTs. As a result, the exact risk cannot be determined. The site is considered an indeterminate-risk site and an REC.
F	Viking Tire	747 W. Rialto Avenue	Tire supply and repair facility. Closed LUST case, and HIST Cortese listing.	R, D, H	H	N	A LUST case for the facility was opened in March 1989 and closed in May 1989 after soil excavation. The site is listed in the HIST Cortese database (related to the LUST case). As a result of the on-site LUST case, the site is considered a high-risk site and an REC.

Map Code	Site Name	Address (1)	Site Operations Relative to Hazmat Issues (2), Regulatory Listing (3)	Data Source (4)	Risk Ranking (5)	Located within Project Study Area (6)	Additional Details
G	San Bernardino Central Metal	144 S. G Street	Scrap metal recycling facility. NPDES permit, SWRCY listing. Located adjacent to open CERCLIS site with similar operations.	R, D, H	H	Y	The site is listed in the NPDES, CCA WDS, and SWRCY databases. It is generally considered, based on observation and experience, that scrap metal recycling facilities are often contaminated with heavy metals as a result of cutting and shredding operations. The site is also located immediately adjacent to a property that formerly conducted similar operations and listed as an active CERCLIS site (see Southwest Metal Co. listing). Given the facility's operations and proximity to the CERCLIS site, the site is considered a high-risk site and an REC.
H	Southwest California Gas Company	155 S. G Street	Municipal gas plant. Closed LUST case, HIST Cortese. Four active USTs on site.	R, D, H	H	Y	One closed LUST case is listed for the site. According to on-line files, the case was opened in January 1991 and closed in March 1994. A HIST Cortese record is listed for the site (in connection to the LUST case). Four USTs were identified in the HIST UST and SWEEPS UST databases, with the CA FID UST database identifying the tanks as active. The site is listed as a permitted UST facility in the state UST database. As a result of the on-site LUST case and active USTs on site, the site was initially considered a high-risk site and an REC. However, following a Phase II investigation of the property, no chemicals of concern were detected in concentrations exceeding regulatory action levels (HDR Engineering, Inc. 2011c).

Map Code	Site Name	Address (1)	Site Operations Relative to Hazmat Issues (2), Regulatory Listing (3)	Data Source (4)	Risk Ranking (5)	Located within Project Study Area (6)	Additional Details
I	Signal Oil Company	173 S. G Street	Office building. Closed Envirostor, CERCLIS-NFRAP.	R, D, H	L	N	The facility is listed as a closed Envirostor and CERCLIS-NFRAP site; identified as an Envirostor site in 1983 based on a 1950 listing as “oil company.” A site assessment and CERCLIS assessment were conducted in 1987, and the NFRAP recommended no further action in 1989. Follow-up database verification by DTSC in 2004 confirmed the “no further action” finding. Given the closed status of the cases, the site is considered a low-risk site and a historical REC.
J	Southwest Metal Company	740 W. Congress Street (located immediately south of the San Bernardino Central Metal site)	Scrap metal recycling facility. Open Envirostor and CERCLIS listings.	R, D, H	H	N	The facility, a former metals recycling property, is listed as an active Envirostor and CERCLIS site. Site screenings and assessments identified the site as “highest priority for further assessment” based on metals contamination (cadmium, hexavalent chromium, lead), acid solution contamination associated with the concrete acid pond (formerly on site), and other inorganic solid waste. In 2006, EPA was involved in the case. The site is also listed as a small quantity generator with recorded violations. Given the open status of the cases, this site is considered a high-risk site and an REC.

Map Code	Site Name	Address (1)	Site Operations Relative to Hazmat Issues (2), Regulatory Listing (3)	Data Source (4)	Risk Ranking (5)	Located within Project Study Area (6)	Additional Details
K	Department of Homeland Security office building (address only listed)	655 W. Rialto Avenue	Federal government office building. Open Envirostor listing.	R, D, H	H	Y	The site is listed as an open Envirostor case. According to the GeoTracker website, the site was undergoing characterization in 2000 for lead contamination identified during grading activities on site. As of March 2000, Cal/EPA was in the process of entering into an agreement with the property owner to provide regulatory oversight for investigation and remedial action. No additional information regarding the findings of the investigation was available. Given the open status of the Envirostor listing, the site is considered a high-risk site and an REC.
L	Bekins Moving and Storage	134 S. E Street	Former moving company. Three USTs listed in HIST UST database. No additional UST information available.	R, D, H	H	Y	Three USTs are listed in the HIST UST database. No additional information on the status of the tanks was available. Given the unknown status of the tanks as well as the current location of the site within the proposed right-of-way, the site is considered a high-risk site and an REC.
M	Pep Boys Automotive	147 S. E Street	Automotive repair facility.	R, D, H	I	N	The site is listed in the SWEEPS UST and HIST UST databases, with the CA FID UST database identifying one active waste oil tank. No updated information regarding the tank's status was available. Given the unknown status of the tank, the site is considered an indeterminate-risk site and an REC.

Map Code	Site Name	Address (1)	Site Operations Relative to Hazmat Issues (2), Regulatory Listing (3)	Data Source (4)	Risk Ranking (5)	Located within Project Study Area (6)	Additional Details
N	San Bernardino City Fire Department maintenance shop (listed as Inland Moving and Storage)	120 S. D Street	Fire department maintenance shop. One UST listed in SWEEPS UST and HIST UST databases. No additional UST information available.	R, D, H	H	N	One gasoline UST is listed at the facility in the SWEEPS UST and HIST UST databases. According to the CA FID UST database, the UST on site is active. No updated information regarding the UST's status was available. Given the lack of updated information regarding the tank, as well as the location of the site, the site is considered a high-risk site and an REC.
O	U-Haul	110 S. D Street	Commercial moving company. Two closed LUST cases on site.	R, D, H	H	N	Two closed LUST cases were listed on site. According to the SARWQCB files reviewed, the first case was opened in 1988 after soil contamination was observed during excavation of four USTs located north of the office building on site. A soil vapor extraction system was implemented, and subsequent analytical samples identified contaminant concentrations to be below actionable levels. The case was closed in January 1997. A second case was opened in June 1998 after petroleum contamination was identified during the removal of the UST's dispenser island located north of the office building. The vertical extent of soil contamination was limited to less than 5 feet below ground surface and the lateral extent to less than 5 feet from the dispenser island. The facility's listings in the HIST UST, SWEEPS UST, and CA FID UST databases relate to USTs formerly on site. Given the presence of closed LUST cases, the site is considered a high-risk site and a historical REC.

Map Code	Site Name	Address (1)	Site Operations Relative to Hazmat Issues (2), Regulatory Listing (3)	Data Source (4)	Risk Ranking (5)	Located within Project Study Area (6)	Additional Details
P	Vacant lot; site of proposed bus facility	South of railroad tracks and west of E Street	Former railroad maintenance area. Targeted Site Investigation area per DTSC review.	R, D, H	I	Y	The site is listed as an active DTSC evaluation site. According to DTSC files, the vacant lot formerly housed a railroad maintenance facility in the 1960s and 1970s. DTSC approved a Targeted Site Investigation for the area, which was proposed to include soil, soil gas, and groundwater samples to test for metals, petroleum hydrocarbons, PCBs, chlorinated solvents, and VOCs in soil, soil gas, and groundwater. Given the lack of analytical findings associated with the site, the risk cannot be fully determined. However, given the lack of conditions that indicate an existing release, a past release, or a material threat of a release at the site, it is not considered an REC.
Q	Former rail car repair facility and Edison Electric Powerhouse	South of railroad tracks and east of E Street	Former rail car repair facility and powerhouse, with UST identified in Sanborn map.	R, H	H	N	No additional details available.
R	Carry Shell Service Station	1077 W. 3rd Street	HSS	R, H	I	Y	No additional details available.
S	Union Oil Company	789 W. Rialto Avenue	HSS	R, H	I	N	The portion of the property that extends north of the tracks, immediately east of 789 W. Rialto, is not part of the Project Study Area.
T	Bob's Service Station	415 W. Rialto Avenue	HSS	R, H	I	N	No additional details available.
U	Service station	115 S. E Street	FSS (currently Greenwood's Uniforms).	R, H	I	N	No additional details available.

Map Code	Site Name	Address (1)	Site Operations Relative to Hazmat Issues (2), Regulatory Listing (3)	Data Source (4)	Risk Ranking (5)	Located within Project Study Area (6)	Additional Details
V	Economy Cleaners/body shop	133 S. E Street	Former body shop and laundromat.	R, H	I	N	No additional details available.
W	Vacant building	777 W. Rialto Avenue	Possible former recycling facility.	R, I	I	N	Regulatory files were not requested from SARWQCB, SBCFD, or DTSC because the site was identified as a concern based on interview. The interview source (adjacent property owner) said the site was previously a recycling facility for cardboard, paper, and aluminum cans and had been vacant for 10 years.
X	Vacant lot	Located north of the tracks and west of E Street/ 0136-021-23, 0136-021-25, and 0136-021-12	Former distribution warehouse possibly with USTs on site.	I, H	I	Y (within potential staging/ assembl y area)	Historical research identified a warehouse building on site, with a city directory listing as a beer distribution warehouse. USTs were often located on site at distribution warehouses to fuel delivery trucks. No such listing was identified in the EDR report.
Y	Merit Oil/Pacific Pride	1405 W. Rialto Avenue	CSS. Closed LUST case on site.	R, D, H	H	N	One LUST case was opened at the site in 1998 and closed in 1999. Given its LUST listing, the site is considered a high-risk site of concern and an REC. However, given the closed status of the case, the site is considered a historical REC. Given its cross- to down-gradient location, no additional action is recommended.

Map Code	Site Name	Address (1)	Site Operations Relative to Hazmat Issues (2), Regulatory Listing (3)	Data Source (4)	Risk Ranking (5)	Located within Project Study Area (6)	Additional Details
Z	BNSF maintenance yard	1500 W. Rialto Avenue	Former BNSF railroad maintenance yard and current commercial trucking operations. CHMIRS, HMIRS, SLIC listings.	R, D, H	H	Y	Several HMIRS listings, two CHMIRS listings, and one SLIC listing were found. Given the facility's operations and regulatory listings, the BNSF yard is considered a high-risk site of concern and an REC. However, given the distance and cross- to down-gradient location of the site in relation to the current APE, no additional action is recommended for this site.
AA	Inland Beverage Company	223 S. G Street	Former beverage distribution facility. One closed LUST case on site.	R, D, H	H	No	No
AB	Chubby Chassis	275 S. G Street	Former auto repair facility. One closed LUST case on site.	R, D, H	H	No	No

Sites listed in bold print are considered by ASTM International to be an REC or historical REC.

(1) Corresponds to location of the site as indicated in Phase I Environmental Site Assessment, Figure 3.7-1, also included as Appendix F.

(2) HSS = Historic Service Station (no longer present); FSS = Former Service Station; CSS = Current Service Station; BNSF = Burlington Northern Santa Fe Railway

(3) Cal/EPA = California Environmental Protection Agency; CA FID UST = California Environmental Protection Agency Facility Inventory Database for Active and Inactive Underground Storage Tanks; CA WDS = California Waste Discharge System; CERCLIS = Comprehensive Environmental Response, Compensation and Liability Information System; CHMIRS = California Hazardous Materials Incident Report System; DTSC = Department of Toxic Substance Control; EDR = Environmental Data Resources, Inc.; FID UST = Facility Inventory Database for Active and Inactive Underground Storage Tanks; HIST = Historic; HMIRS = Hazardous Material Incident Report System; UST = underground storage tank; LUST = leaking underground storage tank; NFRAP = no further remedial action planned; NPDES= National Pollutant Discharge Elimination System; PCBs = polychlorinate byphenyls; ROW = right of way; SARWQCB = Santa Ana River Water Quality Control Board; SLIC = Spills, Leaks, Investigations, and Cleanup; SWEEP UST = State Water Resources Control Board, Underground Storage Tank Listing; SWRCY = Solid Waste Recycling; EPA = United States Environmental Protection Agency; VOCs = volatile organic compounds.

(4) Indicates primary information sources for listing: R = Reconnaissance, D = Database, H = Historical Source, I = Interview (city directories, historical aerial photographs).

(5) Risk of potential impacts on site, low/indeterminate/high.

(6) Sites may be partially or entirely within Project Study Area.

Source: HDR Engineering, Inc. 2010d, 2011c.

Table 3.7-2. Additional Sites of Concern Associated with the Proposed Omnitrans Bus Facility Location

Site Name	Address	Site Operations Relevant to Hazmat Issues	Data Source	Risk Ranking	Located within Project Study Area	Additional Details
Lemans Nissan (currently Main Street Hand Car Wash)	101 North E Street	Active UST, with one 550-gallon UST containing waste oil and one 1,000-gallon UST containing leaded fuel product reported at this location.	D	L	N	Given the lack of reported leaks (not identified in the LUST database), this UST location is not considered to present a concern to the Project. In addition, this facility is not listed on the GeoTracker database as a leaking underground fuel tank (LUFT).
Food 4 Less	555 West 2nd Street	This property is an active hazardous materials handler and owned by the Ralphs Grocery Company.	D	L	N	Given the lack of reported leaks (not identified on the LUST database or any other database associated with hazardous materials releases), this facility is not considered to present a concern to the Project. In addition, this facility is not listed on the GeoTracker database as a LUFT or as a UST location.

Source: HDR Engineering, Inc. 2008.

Hazardous waste in California is regulated primarily under the authority of RCRA and the California Health and Safety Code. Other California laws related to hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

Worker health and safety and public safety are key issues when dealing with hazardous materials and hazardous wastes that may affect human health and the environment. Worker protection and proper disposal are vital if hazardous wastes are encountered during project construction.

3.7.2.1 California Hazardous Waste Control Law

The Hazardous Waste Control Law (HWCL), Health and Safety Code Sections 25100–25249, is the primary hazardous waste statute in the State of California. The HWCL implements RCRA as a "cradle-to-grave" waste management system. It specifies that generators' primary duty is to determine whether their wastes are hazardous and ensure their proper management. The HWCL also establishes criteria for the reuse and recycling of hazardous wastes used or reused as raw materials. The HWCL exceeds federal requirements by mandating source reduction planning and a much broader requirement for permitting facilities that treat hazardous waste. It also regulates a number of types of wastes and waste management activities that are not covered by federal law with RCRA.

3.7.2.2 California Education Code

The California Education Code (CEC) (Section 17210 et seq.) describes the requirements of school facilities near or on known or suspected hazardous materials sites or near facilities that emit hazardous air emissions or handle hazardous or acutely hazardous materials, substances, or waste (5 CCR 13). The code requires, prior to commencing the acquisition of property for a new school site, an environmental site investigation to be completed to determine the health and safety risk (if any) associated with a site.

3.7.3 Thresholds of Significance

For the purposes of the analysis in this EIR, in accordance with Appendix G of the State CEQA Guidelines, the proposed Project would have a significant environmental impact under CEQA related to hazards and hazardous materials if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

- Be located within an airport land use plan area or, where such a plan has not been adopted, be within 2 miles of a public airport or public use airport and result in a safety hazard for people residing or working in the project area.
- Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area.
- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

3.7.4 Project Impacts

Impact HM-1: Create a significant hazard through transport, use, or disposal of hazardous materials or through accident conditions

Building construction and construction equipment fueling and servicing could involve hazardous materials handling, including the use of commercially available hazardous materials such as fuels (gasoline, diesel, etc.), brake fluids, coolants, and paints. These activities would be short-term or one-time events; would be subject to federal, state, and local health and safety requirements; and would not adversely affect on-site construction workers or the public.

During construction, hazardous materials handling could also involve removal or export of small amounts of contaminated soils from off site. If construction contractors encounter potentially hazardous wastes or identify an odor or substantially stained soil, all applicable regulations regarding discovery and response for hazardous materials would be followed immediately.

As described in Section 3.7.1, “Existing Setting,” several REC or historical REC sites were identified within or surrounding the Project Study Area. Ground disturbance during construction activities proposed near these sites could result in impacts related to hazardous wastes. Mitigation Measures HM-1 (Comply with Hazards and Hazardous Materials Recommendations) and HM-2 (Plan and Monitor for Hazardous Materials) would be required to reduce potentially significant impacts that could occur during construction. This would result in a less-than-significant impact with mitigation incorporated.

Project operations would be conducted in accordance with all applicable federal, state, and local requirements intended to manage the use of hazardous materials and prevent the release of hazardous wastes into the environment. No significant long-term hazardous materials impacts are anticipated to occur.

Currently, BNSF operates freight service along the rail corridor. The train engines generally operate using oil and diesel fuel. On occasion, freight trains can carry hazardous material for delivery to customers along the rail corridor. The Project proposes a commuter rail service extension, involving the transport of passengers only; hazardous materials would not be transported on commuter trains. The Project does not propose any change that would conflict with freight service. Implementation of the proposed Project would include double-tracking the rail corridor and other safety measures to facilitate train movements.

Routine fueling of commuter trains would not take place within the rail corridor. Any materials handling incidental to operational activities, including routine maintenance or refueling, would occur off site at existing Metrolink-designated maintenance facilities, such as the Colton facility, located south of the Project Study Area, or Taylor Yard, located north of Los Angeles Union

Station and west of the Project Study Area. Because only small amounts of hazardous materials are anticipated to be used during operations and maintenance, no significant impacts would occur with implementation of the Project. Additionally, hazardous materials would be stored, used, and disposed of in accordance with existing federal, state, and local hazardous materials regulations and would not adversely affect on-site construction workers or the public.

Impact HM-2: Emit hazardous emissions within 0.25 mile of an existing school

The proposed Project would include track improvements to an existing rail corridor and the development of new rail platforms and a bus facility, which would be located at the corner of Rialto Avenue and E Street. The land use technical memorandum prepared for the proposed Project by Gruen Associates (Appendix H) did not identify any schools adjacent to the rail corridor. However, one school, Lytle Creek Elementary, is located approximately 900 feet (0.17 mile) southwest of the nearest portion of the Project Study Area at I Street. Allred Children's Center (0.26 mile), Richardson Preparatory High School (0.26 mile), Conrad Junior High School (0.32 mile), Alessandro Elementary School (0.38 mile), Harding School (0.38 mile), Juanita Blakely Jones Elementary School (0.41 mile), Burbank Elementary School (0.5 mile), Mt. Vernon Elementary School (0.75 mile), and San Bernardino Valley College (1 mile) are also located in the area surrounding the rail corridor, although they are not located within a 0.25 mile radius of the Project Study Area.

The proposed use may involve the release of hazardous emissions during construction. However, Lytle Creek Elementary is separated from the Project Study Area by a few city blocks with other land uses. In addition, emissions releases would occur in the area for only a short period of time (during project construction). Furthermore, construction activities would be conducted in accordance with all applicable federal, state, and local requirements designed to reduce emissions. No other schools were identified within a 0.25-mile radius of the Project Study Area. No significant impacts would occur.

The operational air emissions discussion in Section 3.3, "Air Quality and Greenhouse Gases," includes information regarding potential impacts involving the release of potentially hazardous emissions.

Impact HM-3: Included on a list of hazardous materials sites

As listed in Table 3.7-1 and shown in Figure 3.7-1, 28 sites of concern have been recorded within and adjacent to the Project Study Area. Ten of these sites are located within the Project Study Area (one site is listed as a temporary impact within a potential staging/assembly area), and 18 sites are located outside the APE. No sites of concern were identified from the site reconnaissance and records review of the Short Way rail line located west of the Project Study Area. To characterize known or suspected contamination sites identified in the Phase I assessment more fully, further investigation at 14 sites is recommended (Appendix F). Therefore, Mitigation Measures HM-1 (Comply with Hazards and Hazardous Materials Recommendations) and HM-2 (Plan and Monitor for Hazardous Materials) are included to reduce significant construction impacts to less-than-significant levels.

Operation of the proposed Project, including track improvements, a proposed bus facility, and operation of a 1-mile extension of Metrolink service and associated rail station activities, is not anticipated to result in substantially significant impacts on recorded sites of concern. No

significant long-term operational impacts are anticipated to occur, and no operations-related mitigation is required.

Impact HM-4: Interfere with an adopted emergency plan

The proposed Project would extend Metrolink service 1 mile east to proposed new rail platforms at Rialto Avenue and E Street. Construction activities would be required for the proposed track and station improvements. Construction of the proposed Project could have a temporary impact on local traffic patterns and cause temporary traffic delays for emergency service vehicles. However, this impact would be minimized through standard construction practices, implementation of a traffic management plan, and pre-construction coordination with emergency service responders (see Section 3.11 "Transportation and Traffic," for further discussion). Additionally, construction activities would occur in accordance with all applicable state and local requirements and permits. As such, the proposed Project is not anticipated to result in significant impacts related to interference with an adopted emergency plan.

Operation of the proposed Project would be in accordance with all applicable state and local requirements regarding any emergency evacuation plans. Therefore, impacts would be less than significant.

Implementation of the proposed Project would involve roadway closures and grade crossing separations. These changes in the roadway network and their associated impacts are discussed in detail in Section 3.11, "Transportation and Traffic."

Impact HM-5: Be located within an airport land use plan area, within 2 miles of a public airport or public use airport, or within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area

The rail corridor is not located within 2 miles of an airport or private airstrip. Ontario International Airport is located approximately 25 miles southwest of the City, and Riverside Municipal Airport is located approximately 12 miles south. Rialto Airport is located approximately 8 miles northwest of the western portion of the rail corridor, and the San Bernardino International Airport is located approximately 3.5 miles east of the proposed bus facility site. Redlands Municipal Airport is located east of I-215. No safety hazards for people working or residing in the Project Study Area would occur, and no impact would result.

Impact HM-6: Expose people or structures to a significant risk of loss, injury, or death involving wildland fires

According to the San Bernardino General Plan, the threat of wildland fires is a concern in the hillside areas of the City. The San Bernardino City Fire Department service area contains approximately 19 miles of wildland interface area (City of San Bernardino 2005b). The rail corridor is not located in or in the vicinity of the City's hillsides.

The San Bernardino development code and general plan designate the Foothill Fire Zone Overlay District. The purpose of this overlay is to mitigate the spread of fire, help minimize property damage, and reduce risks to the public health and safety. The Foothill Fire Zone Overlay District ranks areas of fire danger (extreme, high, and moderate) and dictates standards

that must be met when developing land within the overlay. Standards address access, vegetation, water supply, erosion control, identification, and design for all new development. The rail corridor is not located within or adjacent to the Foothill Fire Zone Overlay District (City of San Bernardino 2007). No wildland fire hazard would occur, and no impact would result.

3.7.5 Mitigation Measures

HM-1: Comply with Hazards and Hazardous Materials Recommendations. The proposed Project will comply with all recommendations provided in both Phase I Environmental Site Assessments, both Phase II Environmental Site Assessments, and the associated Technical Memorandum of Additional Findings prepared for the Project (see Appendix F). This includes recommendations related to subsurface activities, additional investigations, and proper handling and removal of previously unknown wastes and soils affected by lead.

HM-2: Plan and Monitor for Hazardous Materials. Prior to the start of ground-disturbing activities, the contractor will be provided with a copy of the Phase I Environmental Site Assessment and advised that hazardous wastes may be present anywhere along the rail corridor. The contract specifications will require the contractor to be responsible for appropriate handling, storage, and disposal of any hazardous wastes encountered on the site or generated during project-related construction and demolition activities, in accordance with applicable local, state, and federal laws.

Prior to the demolition of any structures within the Project Study Area, a survey shall be conducted for the presence of hazardous building materials such as asbestos-containing materials, lead based paints, and other materials falling under universal waste requirements. The results of this survey shall be submitted to SANBAG and the City of San Bernardino's Community Development Department. If any hazardous building materials are discovered, a plan for their proper removal shall be prepared in accordance with applicable requirements of the California Division of Occupational Safety and Health (Cal/OSHA) and the County of San Bernardino Environmental Health Services. The contractor performing the work will be required to have a license in the State of California and possess a C-21, A or B classification. Further, and if required, the contractor or its subcontractor will be required to possess a California State Contractor License (ASB) to perform any asbestos-related work. Prior to any demolition activities, the contractor will be required to secure the site and ensure the disconnection of utilities.

3.7.6 Cumulative Impacts

Implementation of the proposed Project, in combination with other potential projects in the area, would not result in a cumulatively significant impact related to hazards or hazardous wastes and/or materials because all impacts would be generally site-specific. The inclusion of other projects in the area would not result in a substantially significant impact for this or other projects, and any potentially significant impact would be mitigated on a project-specific basis. Therefore, no significant impacts would result. All future development projects in the area would be subject to the same local, regional, state, and federal regulations. These regulations require individual site evaluation and cleanup and therefore would not contribute to impacts cumulatively. As with the proposed Project, environmental review would be required for potential future projects, and compliance with County of San Bernardino Department of Environmental Health regulations would be necessary. Therefore, the proposed Project would result in a less-than-significant cumulative impact.

3.8 HYDROLOGY AND WATER QUALITY

This section evaluates the impacts of the proposed Project on hydrology and water quality. The technical information within this section is based on the water quality assessment report (Appendix G) that was prepared for the proposed Project.

3.8.1 Environmental Setting

3.8.1.1 Site Conditions

The Project Study Area, which is mostly developed, is located within an urbanized area of the City of San Bernardino. The Project Study Area, including the tributary drainage area evaluated in this analysis, consists of the existing railway, residential areas, commercial and industrial developments, and some vacant land, mostly within the easternmost portion of the Project Study Area where the bus facility and parking lot are proposed for construction. Although some sparse vegetation exists throughout the Project Study Area, the site is characterized as disturbed and void of any natural drainage feature. The project's topography is typical of lowland valley areas (i.e., relatively flat with gentle slopes). The regional area slopes generally toward the Santa Ana River, with grades ranging from 1% to 3% (Appendix G).

3.8.1.2 Localized Drainage

General drainage flow patterns in the Project Study Area are from north to south or east to west, depending on the location of the facility that is intercepting the drainage and the orientation of the roadway to the drainage collection system. Local storm drainage systems owned, operated, and maintained by the City are responsible for conveying runoff from project tributary areas via surface flow or storm drain systems (e.g., curb and gutter, catch basins). Sheet flow directed toward the north side of the rail line is collected either by parallel channels or directed easterly/westerly to tributary inlets or culverts (Appendix G).

Any tributary stormwater runoff is carried either west or east to an interception point. The existing drainage facilities within the Project Study Area appear to be adequate for collecting surface and subsurface flows. Within the City, there are several local storm drain systems that capture and convey stormwater runoff away from the rail line. Most of these drain inlets appear to be connected by on-site storm drains that outlet to public systems on intersected streets (e.g., 3rd Street, Rialto Avenue, the H Street storm drain, F Street, and Warm Creek [historic]). In general, all drainage flows generated from areas within the Project Study Area west of I-215 are routed approximately 0.5 mile to the south via existing drainage infrastructure and discharged into Lytle Creek. Runoff from areas east of I-215 within the Project Study Area is routed to drainage infrastructure within E Street and discharged into Warm Creek just over 1 mile to the south.

As shown in Figure 3.8-1, the Project Study Area does not directly intersect with any flood control facilities or major washes (Appendix G).

3.8.1.3 Precipitation and Climate

The regional climate can be characterized as Mediterranean, with hot, dry summers and cooler, wetter winters. The average maximum temperature is 91.6°F, and the average minimum temperature is 40.0°F. Rainfall season is from October 1 to May 1, with average annual rainfall

Figure 3.8-1
Surface Water Hydrology of the San Bernardino Valley Watershed
Downtown San Bernardino Passenger Rail Project

depths of 14.5 to 25.1 inches (Appendix G). Average wind speeds in this region range between 5 and 6 mph. However, at times when high pressure stalls over the Great Basin, a wind phenomenon commonly known as the Santa Ana winds develops. During these conditions, humidity levels are generally very low, resulting in very dry conditions. These winds are often strong and gusty, sometimes exceeding 100 mph, particularly near the mouths of canyons oriented along the direction of airflow (Appendix G).

3.8.1.4 Local Soil Conditions

The ability of a precipitation event to induce runoff flow is highly dependent on the ability of the soil to transmit the flow. Factors such as soil characteristics, subsurface transmissivity, and total storage capacity control the amount of runoff captured within the subsurface, resulting in an overall loss in runoff potential. To quantify these parameters, four hydrologic soil groups, labeled Group A through Group D, were developed to characterize the soil drainage, where Group A defines those soils with a low runoff potential and Group D defines those soils with a high runoff potential. The County of San Bernardino's hydrology manual includes maps that identify the various soil groups for the Project Study Area. Based on a review of these maps, the Project Study Area has Group B soils (HDR Engineering, Inc. 2011c).

Within the APE, much of the land base is covered by impervious surfaces, consisting of pavement associated with streets, sidewalks, and parking lots and structures, such as commercial and industrial buildings. Increased impervious surfaces can interrupt the natural cycle of gradual percolation of water through vegetation and soil. Instead, water is collected from surfaces such as asphalt and concrete and routed to drainage systems where large volumes of runoff are discharged to the nearest receiving water (e.g., Lytle Creek). This process is referred to as hydromodification and can contribute to stream bank scouring and downstream flooding. These conditions have necessitated the lining of local drainage ways, including Lytle and Warm Creek, so that they are capable of conveying the increase runoff more efficiently to minimize the risk of downstream flooding.

3.8.1.5 Regional Hydrology

The Project Study Area is located in the Santa Ana River watershed, which is divided into hydrologic areas that are subdivided into hydrologic subareas. The Project Study Area lies within the Bunker Hill Hydrologic Subarea of the Upper Santa Ana River Hydrologic Area, as shown in Figure 3.8-2.

The Santa Ana River watershed covers approximately 2,650 square miles and has more than 50 contributing tributaries. The Santa Ana River extends about 96 miles from its headwaters to the point where it drains into the Pacific Ocean. The headwaters for the Santa Ana River and its tributaries are in the San Gabriel and San Bernardino Mountains to the north and the San Gorgonio and San Jacinto Mountains to the east. From the San Bernardino and San Gabriel Mountains, the Santa Ana River flows through the Santa Ana Valley, then through the Prado Basin and a narrow pass in the Santa Ana Mountains. The Santa Ana River watershed is divided into an upper and lower watershed at Prado Dam. From the Santa Ana Mountains, the Santa Ana River flows southwest to the Pacific Ocean (Appendix G).

As shown in Figure 3.8-1, Lytle Creek Channel is located immediately southwest of the Project. Lytle Creek Channel is also referred to as Lytle Cajon Channel as well as the West Branch of the Lytle Creek System. The Santa Ana River transitions from Reach 5 to Reach 4 at the San Jacinto fault, just east of the Project Study Area. Runoff from the Project Study Area is discharged to either the Lytle Creek Channel or the Historic Warm Creek Channel via local City

storm drain systems, as described above. Historic Warm Creek Channel eventually confluences with Lytle Creek Channel before it discharges into Reach 4 of the Santa Ana River. Reach 4 is defined as the portion of the river from Mission Boulevard in Riverside to the San Jacinto fault in San Bernardino (Appendix G).

3.8.1.6 Floodplains

According to FEMA FIRM maps, the Project Study Area is not located within a 100-year floodplain.[4] The Project is located in Zone X (areas of 0.2% annual chance flood, areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 1% annual chance flood). The Project is outside the area in which FEMA requires development constraints to be considered (Appendix G), as shown in Figure 3.8-3.

3.8.1.7 Groundwater Resources

The Project Study Area is located in the Upper Santa Ana Valley Groundwater Basin, Bunker Hill Subbasin (California Department of Water Resources Basin No. 8-2.06). The Bunker Hill Subbasin covers approximately 89,600 acres or 120 square miles.

3.8.1.8 Erosion

Erosion is the process where materials are worn away from the earth's surface and changed into something else. Erosion generally occurs as a hydraulic action that transports solids (sediment, soil, rock, and other particles) in the natural environment and deposits them elsewhere. It generally results from transport by wind, water, or ice or downslope creep of soil and other material under the force of gravity. Sheet erosion occurs when slope length and runoff velocity increase on disturbed areas. As runoff accumulates, it concentrates into rivulets that cut grooves (rills) into the soil surface. If the flow is sufficient, these rills may develop into gullies. Excessive stream and channel erosion may occur if runoff volumes and rates increase as a result of construction activities or hydromodification within the watershed, as described above.

3.8.1.9 Surface Water Quality

As stated previously, the Project Study Area is located in the Santa Ana River watershed. The most serious water quality issues in the Santa Ana River watershed are related to nitrogen and total dissolved solids (TDS). Historically, the Santa Ana River and its major tributaries flowed year-round; however, diversion for irrigation has resulted in decreased flow and groundwater recharge. Primary water quality concerns in the Middle Santa Ana River Management Area (which includes the Middle Santa Ana River Hydrologic Area and the Rialto-Colton Hydrologic Area) include TDS, total inorganic nitrogen levels, contaminant plumes in groundwater, bacterial quality of surface waters, and impacts from confined animal feeding operations.

USGS maintains several gauging stations in the Santa Ana River. However, most of the data collected are associated only with discharge measurements. Table 3.8-1 summarizes water quality measurements collected by the USGS at Gauge 11074000 in the Santa Ana River below Prado Dam for selected constituents. The data are summarized as averages by water year, which is defined by the USGS as October through September.

[4] The FEMA FIRMs that depict the area within and adjacent to the Project Study Area are 06071C8681H, 06071C8683H, 06071C8584H, 06071C8703H, 06071C8704H, 06071C8712H, and 06071C8716H.

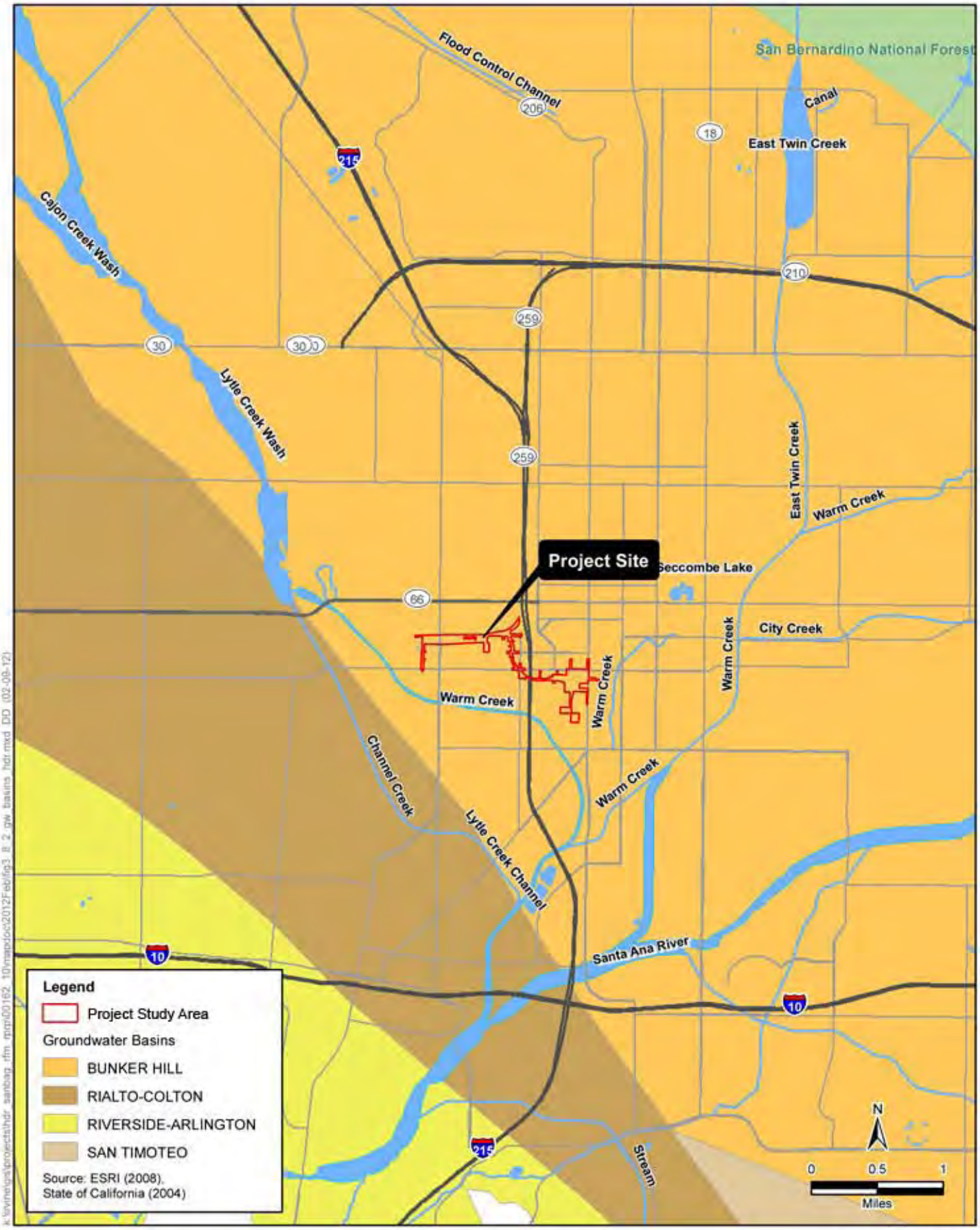


Figure 3.8-2
Groundwater Basins in the Project Area
Downtown San Bernardino Passenger Rail Project

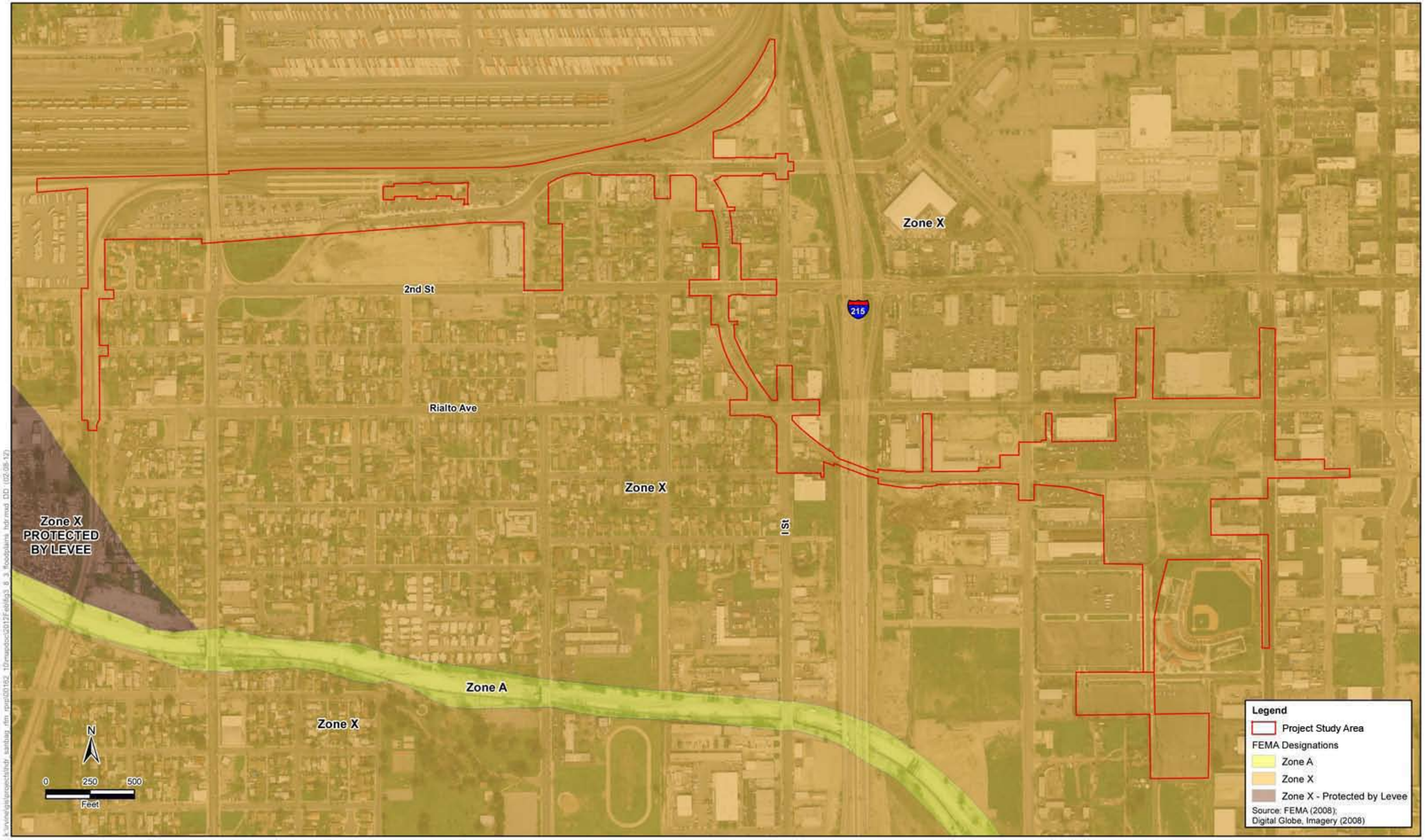


Figure 3.8-3
Floodplains and FEMA Designations within the Project Study Area
Downtown San Bernardino Passenger Rail Project

Table 3.8-1. Average Santa Ana River Water Quality by Water Year

Constituent	Units	1998–1999	1999–2000	2000–2001	2001–2002	2002–2003	2003–2004	2004–2005	2005–2006	2006–2007	2007–2008	2008–2009
Alkalinity	mg/L	187.2	177.6	191.5	202.8	77.1	186.3	193.5	199.8	205	180	200
Ammonia	mg/L as N	0.3	0.2	0.3	0.06	0.1	0.07	0.14	0.11	0.06	0.061	0.49
Calcium	mg/L	71.0	65.2	70.0	—	—	—	—	—	—	—	—
Chloride	mg/L	91.0	93.5	100.6	107.9	—	97.8	95.7	108.3	117.9	106	119
Dissolved Organic Carbon	mg/L	5.9	5.8	4.8	—	—	—	—	—	—	—	—
Dissolved Oxygen	mg/L	9.4	8.7	8.7	9.0	8.7	8.9	9.5	9.8	9.9	10.3	9.9
Fluoride	mg/L	0.4	0.4	0.4	—	—	—	—	—	—	—	—
Hardness	mg/L as $CaCO_3$	244.7	229.3	244.5	—	—	—	—	—	—	—	—
Iron	µg/L	15.1	16.4	15.6	—	—	—	—	—	—	—	—
Magnesium	mg/L	16.6	16.1	16.9	—	—	—	—	—	—	—	—
Manganese	µg/L	96.7	73.0	76.2	—	—	—	—	—	—	—	—
Nitrate and Nitrite	mg/L as N	6.5	5.0	5.0	5.3	3.6	4.3	3.9	5.1	5.4	4.4	3.9
Nitrite	mg/L as N	0.09	0.08	0.11	0.07	0.09	0.13	0.07	0.06	0.05	0.05	0.06
Ortho-phosphate	mg/L as P	0.8	0.7	0.8	0.78	0.6	0.52	0.58	0.68	0.92	1.02	0.97
pH	pH units	8.1	8.1	8.0	8.1	8.1	8.1	8.1	8.1	8.2	8.0	8.1
Phosphorus	mg/L as P	1.3	1.2	1.0	0.89	0.9	0.74	0.69	0.91	1.2	1.2	1.0
Potassium	mg/L	10.2	9.5	10.6	—	—	—	—	—	—	—	—
Silica	mg/L	20.0	18.4	19.5	—	—	—	—	—	—	—	—
Sodium	mg/L	79.1	80.0	86.9	—	—	—	—	—	—	—	—
Specific Conductance	µs/cm	932.8	896.9	911.1	943.4	817.4	884.3	855.4	921.8	1,019	919	1,000
Sulfate	mg/L	96.7	92.1	96.9	100.6	81.7	88.0	92.4	104.5	109.0	93.7	101.4
Temperature	°C	17.8	18.8	18.5	18.2	18.5	18.8	18.5	18.5	19.0	18.4	19.1

Constituent	Units	1998–1999	1999–2000	2000–2001	2001–2002	2002–2003	2003–2004	2004–2005	2005–2006	2006–2007	2007–2008	2008–2009
Total Dissolved Solids	mg/L	541.4	506.6	541.7	—	—	—	—	—	—	—	—
Total Suspended Organic Carbon	mg/L	2.1	1.9	3.0	—	—	—	—	—	—	—	—
Zinc	µg/L	20.8	41.3	16.7	—	—	—	—	—	—	—	—

Source: USGS 1998–2009.
Water quality measurements were collected by the USGS at Gauge Station 11074000 in the Santa Ana River below Prado Dam.
Note: A water year is defined as the period from October to September.
°C = degrees Celsius
mg/L = milligrams per liter
µg/L = micrograms per liter
N = nitrogen
$CaCO_3$ = calcium carbonate
P = phosphorus

The SWRCB approved the 2010 Integrated Report (Clean Water Act Section 303(d) List/305(b) Report) on August 4, 2010. On November 12, 2010, EPA approved the 2010 California 303(d) List of Water Quality Limited Segments. Reach 4 of the Santa Ana River is listed as impaired for pathogens and salinity/TDS/chlorides on the 2010 303(d) list. The potential source of the pathogen impairment is listed as nonpoint sources. The proposed TMDL completion date is January 1, 2019. There are no streams within or immediately adjacent to the Project that are included on the 303(d) list (SWRCB 2010).

3.8.1.10 Urban Runoff

Recognizing that the City's urban area covers a wide range of land uses, the range of potential water quality pollutants within the Project Study Area includes sediments, nutrients, pathogens, oxygen-demanding substances, petroleum hydrocarbons, heavy metals, floatables, polycyclic aromatic hydrocarbons (PAHs), trash, and pesticides and herbicides. The following list describes these pollutants of concern and their associated effects on water quality:

- Sediment is a common component of stormwater and is generally linked with erosion of soil materials. Sediment can transport other pollutants that are attached to it, including nutrients, trace metals, and hydrocarbons, to local waterways.
- Oil and grease includes a wide array of petroleum hydrocarbons, some of which are toxic to aquatic organisms at low concentrations. The main sources of oil and grease are leakage from engines, spills at fueling stations, overfilled tanks, and restaurant grease traps.
- Metals (including lead, zinc, cadmium, copper, chromium, and nickel) are commonly found in stormwater. Many of the artificial surfaces of the urban environment (e.g., galvanized metal, paint, automobiles, or preserved wood) contain metals that enter stormwater as the surfaces corrode, flake, dissolve, decay, or leach.
- Nutrients (typically nitrogen and phosphorous) are the major plant nutrients used for fertilizing landscapes. Soluble forms of nitrogen are readily mobile in water and are often found in stormwater. These nutrients can accelerate growth of vegetation, particularly algae, resulting in excessive concentrations that impair use of water in local waterways.
- Pathogens (bacteria and viruses) are common contaminants of stormwater and are derived from animal excrement, sanitary sewer overflows, and malfunctioning septic systems.
- Organic compounds (including toxic synthetic compounds such as adhesives, cleaners, sealants, and solvents) are widely applied and may be improperly stored and disposed. In addition, deliberate dumping of these chemicals into storm drains and inlets causes environmental harm to waterways and can adversely affect drinking water supplies.
- Pesticides (including herbicides, fungicides, rodenticides, and insecticides) are commonly detected in urban runoff and are of particular concern with respect to drinking water supplies.
- Gross pollutants (trash, debris, and floatables), which are common to urban environments and industrial sites, create an aesthetic "eye sore" in waterways. Gross pollutants can lead to dissolved oxygen levels in waterways as they decay, sometimes causing fish kills, and can also obstruct drainage inlets.

3.8.1.11 Sedimentation

Sedimentation is the settling out of soil particles transported by water. Sedimentation occurs when the velocity of water in which soil particles are suspended is slowed sufficiently to allow particles to settle out. Larger particles, such as gravel and sand, settle out more rapidly than fine particles, such as silt and clay. Furthermore, sediment transports other adsorbed pollutants (e.g., nutrients, hydrocarbons, metals, and typical hydrophobic contaminants, such as organo-chlorine pesticides). The Santa Ana RWQCB considers sediment a pollutant.

Excessive sediment can cause increased turbidity and reduced light penetration, reducing prey capture for sight-feeding predators, reducing the light available for photosynthesis, clogging the gills and filter mechanisms of fish and aquatic invertebrates, reducing spawning and juvenile fish survival, smothering bottom-dwelling organisms, changing substrate composition, and reducing aesthetic values. Concentrations of nutrients and other pollutants (such as metals and certain pesticides) associated with sediment particles could also increase. Although these effects are usually short term and greatly diminish after revegetation of exposed areas, sediment and sediment-borne pollutants may be remobilized under suitable hydrologic and hydraulic conditions.

Although sediment from erosion is the pollutant most frequently associated with construction activity, other pollutants of concern include toxic chemicals from heavy equipment or construction-related materials. A typical construction site uses many chemicals or compounds that are hazardous to aquatic life if they enter a water body. These may include gasoline, oils, grease, solvents, lubricants, and other petroleum products. Many petroleum products contain a variety of toxic compounds and impurities and tend to form oily films on the water surface, altering oxygen diffusion rates. Concrete, soap, trash, and sanitary wastes are other common sources of potentially harmful materials on construction sites.

The closer construction activities are to watercourses, the more potential there is for spilled toxic substances to enter the water. Wash water from equipment and tools and other waste dumped or spilled on the construction site can easily lead to seepage of pollutants into watercourses. Also, construction chemicals may be accidentally spilled into the watercourse.

3.8.1.12 Groundwater Resources and Quality

The San Bernardino Municipal Water Department is the agency with responsibility for groundwater resources in the Project Study Area. There are no current drinking water reservoirs or recharge facilities within the Project Study Area, and the current groundwater levels for the Project are more than 70 feet below the ground surface elevation (Appendix E).

The Bunker Hill Subbasin consists of alluvial materials that underlie the Valley, as shown in Figure 3.8-2. This subbasin is bounded by the San Gabriel Mountains, the San Bernardino Mountains and Crafton Hills, and by several nearby faults. The Santa Ana River, Mill Creek, and Lytle Creek are the main tributaries within this subbasin and contribute more than 60% of the total recharge to the groundwater system (San Bernardino Municipal Valley Water District 2000). Recharge to the Bunker Hill Subbasin historically has resulted from infiltration of runoff from the San Gabriel and San Bernardino Mountains. The total groundwater storage of the subbasin is 5,976,000 acre-feet (California Department of Water Resources 2004b).

Groundwater quality issues in the Bunker Hill Subbasin are predominately attributed to calcium bicarbonate, with TDS ranging from 150 mg/L to 550 mg/L. Department of Health Services data for 204 public supply wells show an average TDS content of 324 mg/L, with a range of 155 to 1,140 mg/L. The Bunker Hill Subbasin contains several contaminated plumes. The Redlands

plume is composed primarily of fuel byproducts and contains approximately 150,000 acre-feet of groundwater. The Norton Air Force Base plume consists of similar fuel byproducts and stretches about 2.5 miles; it contains approximately 100,000 acre-feet of water (Appendix G).

3.8.2 Regulatory Setting

3.8.1.13 National Pollutant Discharge Elimination System

The 1972 amendments to the Federal Water Pollution Control Act established the National Pollutant Discharge Elimination System (NPDES) permit program to control discharges of pollutants from point sources. NPDES is the primary federal program that regulates point-source and nonpointsource discharges to waters of the United States.

The NPDES program requires projects greater than 1 acre to obtain a NPDES Construction General Permit (NPDES Order No. 2009-009-DWQ) and subsequent stormwater pollution prevention plan (SWPPP), which helps control runoff from construction sites and ensures that the sites will not contribute to impacts on downstream hydrology and flooding.

3.8.1.14 Federal Emergency Management Agency and National Flood Insurance Program

Congress, alarmed by the increasing costs of disaster relief, passed the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. The intent of these acts is to reduce the need for large public-funded flood control structures and disaster relief by restricting development on the floodplain.

The Federal Emergency Management Agency (FEMA) leads and supports the nation in a risk-based, comprehensive emergency management system of preparedness, protection, response, recovery, and mitigation. FEMA was established in 1979 by an executive order that merged many of the separate disaster-related responsibilities into a single agency. Since then, FEMA has dedicated itself to the mission of helping communities nationwide prepare for, respond to, and recover from natural and manmade disasters, a mission strengthened when the agency became part of the Department of Homeland Security in 2003 (FEMA 2008).

FEMA administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities that comply with FEMA regulations, which limit development in floodplains. FEMA issues Flood Insurance Rate Maps (FIRMs) for communities participating in the NFIP. These maps delineate flood hazard zones for areas within the NFIP. The FEMA FIRMs that depict the area within and adjacent to the Project Study Area are 06071C8681H, 06071C8683H, 06071C8584H, 06071C8703H, 06071C8704H, 06071C8712H, and 06071C8716H.

The State of California adopts water quality standards to protect beneficial uses of state waters, as required by Section 303(d) of the CWA and the Porter-Cologne Water Quality Control Act of 1969. Section 303(d) of the CWA established the total maximum daily load (TMDL) process to guide the application of state water quality standards. To identify candidate water bodies for TMDL analysis, a list of water-quality limited streams was generated. These streams are impaired by the presence of pollutants such as sediment and are more sensitive to disturbance because of this impairment.

3.8.1.15 State Water Resources Control Board

Created by the state legislature in 1967, the five-member SWRCB protects water quality by setting statewide policy, coordinating and supporting the regional water board efforts, and reviewing petitions that contest regional board actions. The SWRCB is also solely responsible for allocating surface water rights (SWRCB 2011).

3.8.1.16 Regional Water Resources Control Boards

Water quality certifications are issued by RWQCBs in California. Under the CWA, the RWQCB must issue or waive a Section 401 water quality certification for a project to be permitted under Section 404. San Bernardino County falls under the jurisdiction of three regional boards. The Project would be under the jurisdiction of the Santa Ana RWQCB. The northern portion of San Bernardino County falls within the Lahontan RWQCB, outside of the Project Study Area and the southeastern portion of San Bernardino County falls within the Colorado River RWQCB.

The following permit was adopted by the Santa Ana RWQCB for the San Bernardino County area within Region 8 on January 29, 2010 (HDR Engineering, Inc. 2010a):

- Waste Discharge Requirements for the County of San Bernardino and the incorporated cities of San Bernardino County, Order No. R8-2010-0036, NPDES No. CAS618036, Area-wide Urban Stormwater Runoff.

3.8.1.17 County of San Bernardino

San Bernardino County has prepared a Model Water Quality Management Plan Guidance document for preparation of project-specific Water Quality Management Plans (WQMPs). The Model Water Quality Management Plan Guidance document was approved by the Santa Ana RWQCB on April 30, 2004, and updated on June 9, 2005 (Santa Ana RWQCB 2005).

Category projects are required to develop and implement an individual WQMP to reduce pollutants and maintain or reduce downstream erosion. This protects stream habitat from all new development and significant redevelopment projects that fall into one of the categories of the priority projects. The co-permittees must ensure that a category project meets WQMP requirements. Category projects include significant redevelopment projects that create 5,000 square feet or more of impervious surface, home subdivisions of 10 units or more, industrial/commercial developments of 100,000 square feet or more, automotive repair shops, restaurants of 5,000 square feet or more, hillside developments of 10,000 square feet or more, developments of 2,500 square feet of impervious surface or more adjacent to or discharging directly into environmentally sensitive areas, or parking lots of 5,000 square feet or more. In addition, noncategory projects that have a precise plan of development (e.g., all commercial or industrial projects, residential projects with fewer than10 dwelling units, and all other land development projects with potential for significant adverse water quality impacts) or involve a subdivision of land must prepare and implement a WQMP.

3.8.1.18 San Bernardino Valley Municipal Water District

The San Bernardino Valley Municipal Water District covers about 325 square miles in southwestern San Bernardino County and serves a population of about 600,000. It spans the eastern two-thirds of the San Bernardino Valley, the Crafton Hills, and a portion of the Yucaipa Valley and includes the cities and communities of San Bernardino, Colton, Loma Linda, Redlands, Rialto, Bloomington, Highland, East Highland, Mentone, Grand Terrace, and Yucaipa. Water resources in San Bernardino are managed by the San Bernardino Valley Municipal Water District (San Bernardino Valley Municipal Water Department 2011).

3.8.1.19 San Bernardino Associated Governments

Pursuant to 40 CFR 122.26(a), the Santa Ana RWQCB has the authority to require noncooperating entities to adhere to the requirements of the NPDES permit or issue individual discharge permits to those entities. SANBAG is not a co-permittee of the NPDES permit; however, the agency is a potential discharger of urban runoff in the permitted areas. SANBAG generally works cooperatively with the permittees to manage urban runoff on a project-specific basis.

3.8.1.20 City of San Bernardino

Stormwater discharge is also regulated under Title 8, Health and Safety, of the City of San Bernardino Code of Ordinances. Under Title 8, the discharge of nonstormwater is permissible only when connection to the storm drain system is made in accordance with a valid city permit, approved construction plan, or a NPDES permit and/or notice of intent. In addition, projects within the City are required to comply with the requirements of the Construction General Permit and the Municipal NPDES Permit.

3.8.1.21 San Bernardino Municipal Water Department

The groundwater agency that covers the Project Study Area is the San Bernardino Municipal Water Department. This department is organized and operated pursuant to the California Water Code and has the authority to establish and collect all water rates and regulate and control the water system for the City of San Bernardino. The San Bernardino Municipal Water Department prepared a water facilities master plan that includes details regarding service area characteristics, water demand, water supply sources, existing system facilities, and water distribution systems (San Bernardino Municipal Water Department 2007).

3.8.3 Thresholds of Significance

For the purposes of the analysis in this EIR, in accordance with Appendix G of the State CEQA Guidelines, the proposed Project would have a significant environmental impact under CEQA related to hydrology and water quality if it would:

- Violate any water quality standards or waste discharge requirements.
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted).
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on site or off site.
- Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- Otherwise substantially degrade water quality.
- Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.
- Place within a 100-year flood hazard area structures that would impede or redirect flood flows.

- Expose people or structures to a significant risk of loss, injury, or death involving flooding as a result of the failure of a levee or dam.
- Contribute to inundation by seiche, tsunami, or mudflow.

3.8.4 Project Impacts

Impact HYD-1: Violate any water quality standards or waste discharge requirements

Construction Impacts

Impacts associated with constructing the proposed Project would be limited to the construction footprint (Project Study Area) and temporary staging areas. In general, the severity of construction-related water quality impacts depends on soil erosion potential; construction practices; the frequency, magnitude, and duration of precipitation events; and the proximity of construction to stream channels or water bodies. Construction activities often expose disturbed and loosened soils to erosion from rainfall, runoff, and wind.

Although sediment from erosion is the pollutant most frequently associated with construction activity, other pollutants of concern include toxic chemicals from heavy equipment or construction-related materials. A typical construction site uses many chemicals or compounds, such as gasoline, oils, grease, solvents, lubricants, and other petroleum products. Concrete, soap, trash, and sanitary wastes are other common sources of potentially harmful materials on construction sites. The impact of toxic construction-related materials on water quality varies depending on the duration and time of activities. Because of low precipitation, construction occurring in the dry season is less likely to cause soil and channel erosion and runoff of toxic chemicals.

Construction of the proposed Project would involve excavation, soil stockpiling, grading, and the installation of structural foundations, new rail, and auxiliary facilities. Pollutants of concern during construction include sediments, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. Each of these pollutants on its own or in combination with other pollutants can have a detrimental effect on water quality. During construction activities, excavated soil would be exposed, and there would be an increased potential for soil erosion and sedimentation compared with existing conditions. In addition, during storm events, erosion and sedimentation could occur at an accelerated rate. During construction, the total disturbed area would be approximately 85 acres. In addition, chemicals, liquid products, and petroleum products (such as paints, solvents, and fuels), concrete-related waste, and other construction debris and waste may be spilled or leaked, with the potential to discharge into receiving waters. These effects could result in significant impacts on surface water quality during construction.

The Project would be subject to the requirements of the Construction General Permit, which would require the preparation of a SWPPP and implementation of construction BMPs during construction activities to minimize impacts on surface waters (see Mitigation Measure HYD-1). Construction BMPs would include erosion and sediment control BMPs to minimize erosion and retain sediment on site and good housekeeping BMPs to prevent spills, leaks, and discharge of construction debris and waste into receiving waters.

The requirements of the Construction General Permit are based on the risk level of the Project. The overall risk level is based on two factors: receiving water risk and sediment risk. Runoff

from the Project Study Area would not discharge to a 303(d)-listed water body impaired for sediment or discharge to a water body with designated beneficial uses; therefore, the receiving water risk is low. Based on the anticipated construction schedule (beginning middle of 2013, with an 18- to 24-month construction period), the project sediment risk would be low (soil loss would be approximately 5.5 tons/acre). Therefore, according to Appendix G, the Project would be classified as Risk Level 1. Risk Level 1 projects are required to implement good housekeeping, erosion control, and sediment control BMPs and perform quarterly nonstormwater discharge observations and weekly, pre-storm, interim storm, and post-storm inspections as specified in the Construction General Permit.

Construction of the proposed Project would be conducted on relatively flat terrain. Any dewatering from excavation would need to be pumped to an on-site portable settling basin or, if proven to be within Basin Plan water quality standards, discharged to a local creek (i.e., Lytle Creek). When construction BMPs are properly designed, implemented, and maintained to address pollutants of concern, significant water quality impacts can be minimized during construction. Although temporary construction-related activities may have a significant impact on water quality, implementation of Mitigation Measure HYD-1 (Develop and Implement a Stormwater Pollution Prevention Plan) would reduce the impact to a less-than-significant level.

Overall, temporary construction-related impacts on water quality, in relation to a violation of any water quality standard or waste discharge requirement, may have a significant impact, but implementation of Mitigation Measures HYD-1 (Develop and Implement a Stormwater Pollution Prevention Plan) and HYD-2 (Develop and Implement a Water Quality Management Plan) would reduce the impact to below a level of significance.

Operational Impacts

Implementation of the proposed Project would involve a slight increase in the area of impervious surfaces within the Project Study Area, which would serve to concentrate and redirect stormwater runoff. This increase in runoff could carry contaminants to downstream waterways. However, the Project Study Area is generally developed. Therefore, a permanent increase in impervious surfaces would generally be limited to the eastern extend of the Project, including the E Street platforms, the bus facility, and new parking lot area. These components of the Project would increase the impervious surface area by approximately 11 acres compared with existing conditions. A majority of these new surfaces would be associated with a new parking area, rail platforms, and the bus facility. An increase in impervious area would result in a corresponding increase in the volume of runoff generated during storm events and would be capable of transporting pollutants of concern into runoff, including sediments, heavy metals, oil and grease, trash and debris, pesticides, and organic compounds, to local receiving waters. Therefore, significant impacts may result.

The proposed Project also involves the relocation and/or abandonment of several monitoring wells near the Depot. Monitoring well relocation and abandonment activities would be conducted in accordance with all applicable state and local regulations and are not anticipated to contribute in any way to water quality conditions in the rail corridor. Additionally, the current groundwater levels for the Project are more than 70 feet below the ground surface elevation; therefore, shallow groundwater is not anticipated to be an issue for the proposed Project (Appendix E).

The proposed Project involves low-impact development in an already developed urban area. Proposed site design BMPs include minimizing impervious surface areas by constructing rail track sections using ballast, which is permeable and conducive to infiltration. In addition, runoff

from the Project would drain to the adjoining graded ditches and infiltrate directly into the underlying native soils. Potential source control BMPs could include an education program for property owners, activity restrictions, preparation of spill contingency plans, employee training and education program, common area catch basin inspection, protection of slopes and channels, storm drain signage, energy dissipaters (in culverts), trash storage areas and litter control, and alternative building materials (concrete instead of wood ties that are treated with creosote and other chemicals). Potential treatment control BMPs include nonvegetated drainage swales, detention and/or infiltration basin, and/or manufactured/proprietary devices to treat runoff from the Depot area. Figure 3.8-4 provides the general location of these potential BMPs, which would be refined in conjunction with final design of the Project and with implementation of Mitigation Measure HYD-2 (Develop and Implement a Water Quality Management Plan) to minimize the potential for significant water quality impacts.

As stated in the Chapter 2.0, “Alternatives,” drainage improvements that would be part of the project design include the extension of a 36-inch drainage culvert, a series of catch basins and drains, detention basins, and drainage improvements to existing parking lots, among others. Such improvements would improve the conveyance of stormwater flows and also improve water quality by helping to reduce contaminants before runoff leaves the site. Additionally, concurrence has been obtained from the City of San Bernardino to consider use of infiltration basins, consistent with Section XI.E.3 of permit order R8-2010-0036 (Appendix G).

Project operations have the potential to contribute to 303(d)-listed impaired waters and could violate Basin Plan standards if not properly controlled. Operational water quality monitoring will continue as required by the City’s NPDES MS4 permit to determine if water quality has been affected by operational runoff. Water quality monitoring is subject to the effluent and receiving water quality monitoring requirements in the permit. Typically, MS4 permits require water quality monitoring at certain strategic locations. If runoff from the proposed Project is not located in proximity to an existing sampling location, then SANBAG’s construction contractor will work with the Santa Ana RWQCB to determine the best location for sampling, making sure that such sampling is representative of the Project’s runoff. Sampling frequency and requirements will be subject to the requirements of the RWQCB permit. In addition, SWPPPs may require water quality monitoring if inspectors determine that the BMPs are not functioning properly. Water quality monitoring will be performed by qualified personnel, as appropriate. As such, implementation of Mitigation Measure HYD-1 (Develop and Implement a Stormwater Pollution Prevention Plan) would reduce these significant impacts to less-than-significant levels.

Any development project involving category and noncategory projects, including significant redevelopment projects that create additional impervious surfaces, must prepare and implement a WQMP. Therefore, to comply with this requirement, a WQMP will be prepared by SANBAG or its contractor for the proposed Project, in conjunction with Mitigation Measure HYD-2 (Develop and Implement a Water Quality Management Plan), that specifies the BMPs to be implemented during operation.

Operational water quality impacts can occur from vehicle traffic over time and when the “first flush” storm event occurs because stormwater may transport contaminants to waterways. Such impacts are considered significant. Implementation of Mitigation Measure HYD-1 (Develop and Implement a Stormwater Pollution Prevention Plan) would reduce the severity of the impacts to less than significant.

Source: HDR (2012), ESRI (2011)

Figure 3.8-4
Conceptual BMP Layout
Downtown San Bernardino Passenger Rail Project

Impact HYD-2: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge

As stated previously, implementation of the proposed Project may result in a slight increase in the area of impervious surfaces within the Project Study Area; however, the effect on groundwater recharge is anticipated to be negligible. Current groundwater levels in the Project Study Area are more than 70 feet below the ground surface elevation; therefore, shallow groundwater is not anticipated to cause design issues for proposed improvements (Appendix E). Concurrence has been obtained from the City of San Bernardino to consider use of infiltration basins, consistent with Section XI.E.3 of permit order R8-2010-0036 (Appendix G). Therefore, no significant impacts are anticipated. In addition, it is not anticipated that the Project would affect groundwater supplies or any existing wells. No significant impacts would result.

Impact HYD-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion on site or off site

Construction activities would result in the removal of sparse vegetation and reduce natural soil resistance to rainfall impact erosion. However, much of the site is disturbed and developed (e.g., the existing rail line and adjacent land uses). As stated in Impact HYD-1, temporary construction-related impacts on drainage systems may occur. Implementation of Mitigation Measures HYD-1 (Develop and Implement a Stormwater Pollution Prevention Plan) and HYD-2 (Develop and Implement a Water Quality Management Plan) would reduce these impacts to less-than-significant levels.

Impact HYD-4: Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide additional sources of polluted runoff

Drainage improvements that are part of the project design include the extension of a 36-inch drainage culvert, construction of a series of catch basins and drains, detention basins and drainage improvements in existing and proposed parking lots. Specifically, drainage facility improvements are proposed for the existing parking lots, which would be reconstructed on the east and south sides of the Depot and a new 265-space parking lot is proposed south of the rail platforms near E Street. The new parking lot would be graded to convey storm runoff into a new retention basin adjacent to the southeast corner of the parking lot near E Street north of San Manuel Stadium. The drainage facilities would then connect to a new 24- or 30-inch drainage pipe that would convey flows in excess of the retention basin's capacity to the south along E Street, terminating before an unnamed street that provides access to the stadium at E Street. The new 24- or 30-inch drainage pipe would be extended to a secondary detention basin located north of San Manuel Stadium.

Two 1.2-acre sites are currently under consideration for the second detention basin, although only one site is required. These include existing parking areas located on the southwest corner of the unofficial intersection of F Street and an unnamed access road for San Manuel Stadium and the other is located at the southernmost extent of the southeastern parking area.

These facilities would improve the conveyance of stormwater runoff as well as the quality of runoff leaving the site. Additionally, implementation of Mitigation Measures HYD-1 (Develop and

Implement a Stormwater Pollution Prevention Plan) and HYD-2 (Develop and Implement a Water Quality Management Plan) would reduce impacts to less-than-significant levels. There would be no significant impact.

Impact HYD-5: Otherwise substantially degrade water quality

See the Impact HYD-1 and HYD-4 discussions above.

Impact HYD-6: Place housing or other structures within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, impede or redirect flood flows

According to the FEMA FIRM maps, the Project Study Area is not located within a 100-year floodplain and is outside the area required by FEMA to consider development constraints (Appendix G). As stated in Section 3.8.1, "Environmental Setting," the Project is located in a Zone X (areas of 0.2% annual chance flood, areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 1% annual chance flood). The proposed Project does not involve construction of housing or structures within the 100-year floodplain as mapped by FEMA FIRMs. There would be no impact.

Impact HYD-7: Expose people or structures to a significant risk of loss, injury, or death involving flooding as a result of the failure of a levee or dam

See the Impact HYD-6 and HYD-4 discussions above. Additionally, the Project Study Area would not expose people or structures to flooding due to levee or dam failure.

Impact HYD-8: Contribute to inundation by seiche, tsunami, or mudflow

Because of the proposed Project's lack of proximity to the ocean, a large lake, or other body of water and because the Project is located on relatively flat ground, risks related to exposing people or structures to a tsunami, seiche, or mudflow are very low. No significant impact is anticipated.

3.8.5 Mitigation Measures

In addition to the drainage improvements that will be made as part of the Project to offset the additional impervious surface and subsequent increase in flow rates, the following mitigation measure will be required:

HYD-1: Develop and Implement a Stormwater Pollution Prevention Plan. The construction contractor will develop a SWPPP and implement the BMPs described in the plan. The SWPPP will mitigate temporary construction-related impacts related to hydrology and water quality by using a combination of BMPs to protect downstream hydrology and maintain runoff rates during construction at pre-construction levels. The BMPs will either capture or filter stormwater flow to ensure that sedimentation or other construction-related contaminants will not result in impacts on water quality.

Standard erosion control measures, such as management, structural, and vegetative controls, will be implemented for all construction activities that expose soil. Erosion in disturbed areas will be controlled by the following:

- Grading so that direct routes for conveying runoff to drainage channels and inlets are eliminated.
- Constructing erosion-control barriers, including silt fences, fiber rolls, or mulching material.
- Reseeding disturbed areas with grass or other plants as soon as possible.

Following construction, SANBAG will ensure the provision of sufficient drainage inlet and outlet protection through the use of energy dissipaters, vegetated riprap, and/or other appropriate BMPs to slow runoff velocities and prevent erosion at discharge locations from the rail platforms and parking areas.

HYD-2: Develop and Implement a Water Quality Management Plan. Opportunities for low-impact development will be integrated into the final drainage plan to the maximum extent practical and reflected in a project-specific water quality management plan. The final water quality management plan for the Project will demonstrate no net increase in runoff for the post-project condition.

3.8.6 Level of Significance after Mitigation

Mitigation Measures HYD-1 (Develop and Implement a Stormwater Pollution Prevention Plan) and HYD-2 (Develop and Implement a Water Quality Management Plan) would reduce impacts related to hydrology, flooding, and water quality. Therefore, impacts would be less-than-significant after mitigation.

3.8.7 Cumulative Impacts

The proposed Project, in combination with other potential projects in the area, could contribute to a significant cumulative impact related to hydrology, flooding, and water quality by affecting downstream hydrology and/or increasing flooding potential. However, impacts are generally site-specific. With implementation of drainage improvements proposed by the Project, the amount and direction of stormwater flows would not be significant in combination with other development projects. If implementation of the proposed Project does not occur, no proposed drainage improvements would be constructed.

Over time, as growth continues, the circulation improvements and subsequent drainage improvements involved with other development projects could improve water quality, hydrology, and drainage and subsequent downstream flooding conditions and improve the quality of the water exiting the site through implementation of adequate infrastructure improvements within already highly urbanized areas. Additionally, all projects in the RWQCB region are required to meet the current stormwater permit requirements. These permit requirements include BMP provisions that ensure no cumulative water quality impacts. Therefore, is not anticipated that construction or operation of the proposed Project would have a cumulative significant impact related to water quality, floodplains, and hydrology when combined with other potential projects and with implementation of project design measures and mitigation.

The Bunker Hill Hydrologic Subarea of the Upper Santa Ana River Hydrologic Area within the Santa Ana River watershed is considered a cumulative area for water quality and stormwater runoff because the Project Study Area is considered tributary to this watershed. The Bunker Hill Hydrologic Subarea consists of approximately 124,791 acres; therefore, the Project Study Area

represents a very small fraction (or less than 0.005%) of the total watershed. Based on this factor, combined with the existing developed nature of the Project Study Area, the Project's impact on hydrology within the overall watershed would not be cumulatively considerable.

3.9 LAND USE AND PLANNING

This section evaluates the impacts of the proposed Project on land use and land use planning within the rail corridor. This section also identifies any necessary mitigation measures and evaluates the residual impacts after mitigation. Land use information presented in this section is summarized from the Land Use Technical Memorandum prepared in September 2011 for the proposed Project by Gruen Associates (Appendix H).

3.9.1 Environmental Setting

The land use analysis reviews the area within approximately 300 feet of the centerline of the railroad tracks and within a 0.25-mile radius of the station locations. Figure 3.9-1 illustrates existing land use for the entire rail corridor. Figures 3.9-2 through 3.9-4 show the existing land uses within the vicinity of the station areas.

3.9.1.1 Existing Land Uses

A variety of land uses are located adjacent to the approximately 1-mile-long rail corridor. Specifically and as depicted in Figure 3.9-1, the rail corridor is developed with commercial, storage/warehouse, industrial, low-density residential, and office uses. The residential uses are concentrated near the western portion of the rail corridor. Other existing residences are located along the rail corridor, but are considered nonconforming uses due to their commercial or industrial zoning. I-215 bisects the corridor in the central portion of the Project Study Area. Approximately 57% of the total parcels along the rail corridor are vacant, and approximately 16% are for warehouse uses (see Appendix H). Table 3.9-1 shows the breakdown of parcels by land use.

Table 3.9-1. Land Uses Adjacent to the Rail Corridor

Land Use	Number of Parcels
Single Family	3
Multi Family	2
Commercial	3
General Office	2
Light Industrial	3
Storage/Distribution Warehouse	8
Vacant	28
Total	**49**
Source: Appendix H.	

3.9.1.2 Land Uses from the Depot to I-215

The western portion of the rail corridor between the Depot and I-215 includes commercial uses to the south and the Depot to the north (see Figure 3.9-1). The Depot currently serves one Amtrak and three Metrolink lines. A number of existing bus lines serve the Depot, a historical landmark, with bus stops located on 3rd Street.

Land uses in the immediate vicinity of the Depot include the existing station, vacant properties, and neighborhood commercial uses (see Figure 3.9-2). The Depot and train station include a passenger waiting area and a snack booth. SANBAG occupies the second floor of this historic depot. To the south of the Depot is the Second Street Shopping Center, a newly constructed community shopping center anchored by the Superior Grocery Store. A few vacant properties are located along 2nd Street, across from the Superior Grocery Store, between 1st and K Streets. Single-family residential uses with some interspersed industrial and neighborhood commercial uses occur primarily south of 2nd Street (see Figure 3.9-2).

Beginning at the Depot, the rail corridor is surrounded largely by industrial uses with a few vacant lots and some single-family residential uses (see Figure 3.9-2). Scattered commercial uses are also located along the rail corridor near I-215. Industrial uses are the primary use between J and I Streets, north and south of 3rd Street. Single-family residential uses occur south of these industrial uses (see Figure 3.9-2). Then, between 2nd Street and Rialto Avenue, there are industrial uses along the railroad tracks, surrounded by single-family residential and neighborhood commercial uses (see Figure 3.9-1).

3.9.1.3 Land Uses from I-215 to Arrowhead Avenue

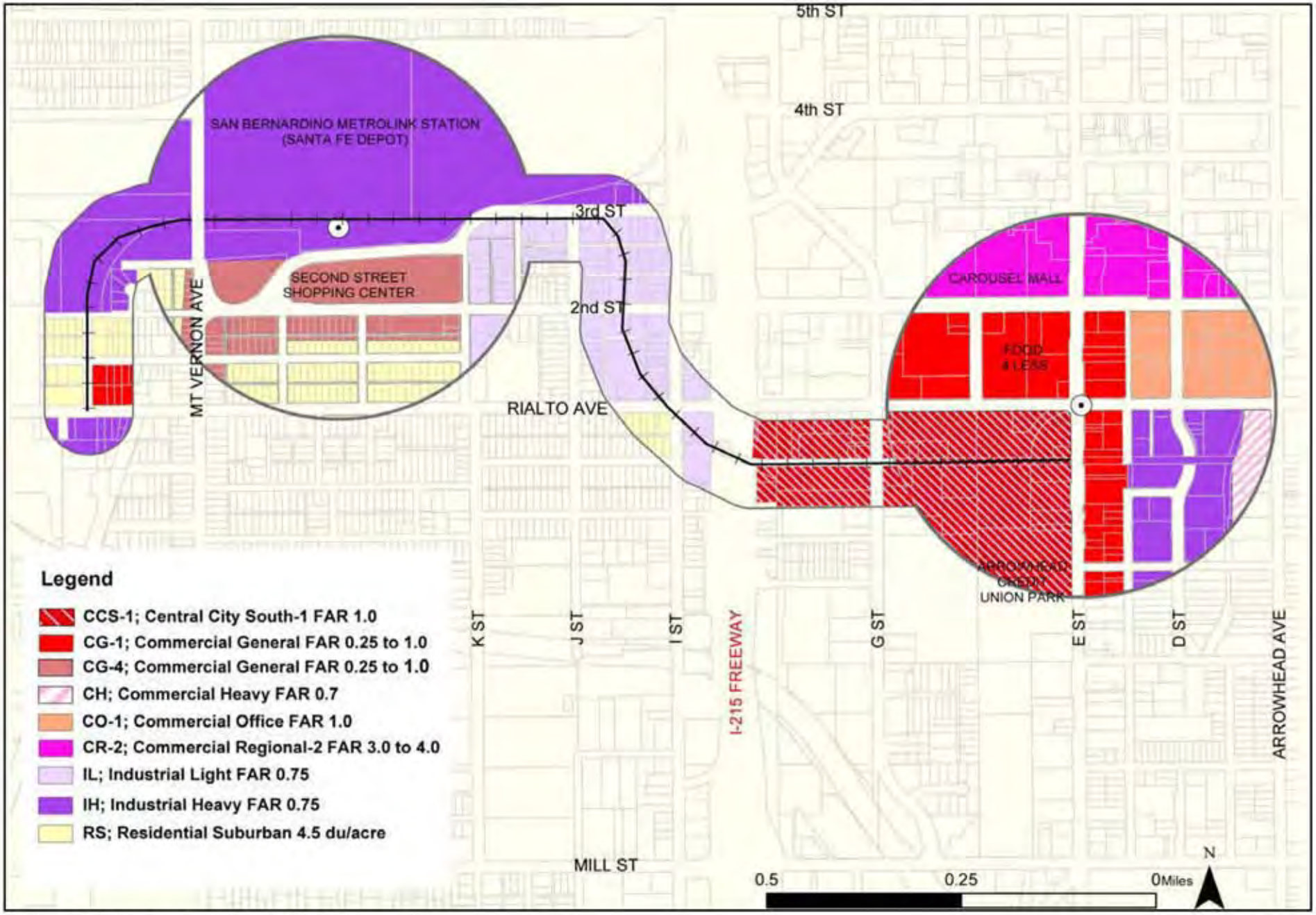
The eastern portion of the rail corridor from I-215 to Arrowhead Avenue mostly consists of commercial, office, and industrial uses. Commercial uses include grocery (Food 4 Less), the Carousel Mall, and the San Manuel Stadium, a privately operated minor league baseball stadium owned by the City of San Bernardino**.**

Between I-215 and G Street, a substantial amount of industrial development surrounds the rail corridor (see Figure 3.9-1). Many vacant properties are located at the northwest corner of the G Street and Rialto Avenue intersection. East of G Street, the character changes to a mix of neighborhood retail, office, and civic use (see Figures 3.9-1 and 3.9-3). In this segment, along E Street, there are older retail developments with parking lots fronting the sidewalk. Offices and civic uses including a lawyer's office and the Department of Homeland Security are located between G Street and F Street south of Rialto Avenue.

The proposed rail platforms and bus facility would be located on the west side of E Street south of Rialto Avenue at the railroad tracks in the eastern portion of the rail corridor. Land uses in this area consist of commercial and industrial uses (see Figure 3.9-3). A Food 4 Less market is located at the northwest corner of the E Street and Rialto Avenue intersection. The Astro Motel is located at the southeast corner of this intersection. A Bekins storage facility is located south of the railroad tracks, on the west side of E Street. Industrial uses are located south of the railroad tracks, and east of Stoddard Avenue. A few vacant buildings are also located within 0.25 mile of this location (see Figure 3.9-3).

North of Rialto Avenue, primarily commercial development occurs at E Street, including automobile sales and vehicle repair shops, small-scale retail development, and restaurants (see Figure 3.9-3). A large number of buildings are vacant and/or in poor condition. Other commercial uses within the area north of Rialto Avenue include a Union Bank of California building, a carwash, medical offices, restaurants, and a few vacant buildings. The Carousel Mall is located on the west side of E Street between 4th and 2nd Streets. The San Bernardino City Hall is located on the east side of E Street and is connected to the Carousel Mall via a pedestrian walkway over E Street.

South of Rialto Avenue, E Street contains primarily commercial and commercial recreational uses (see Figure 3.9-4). Commercial uses include small-scale retail uses, automobile-serving

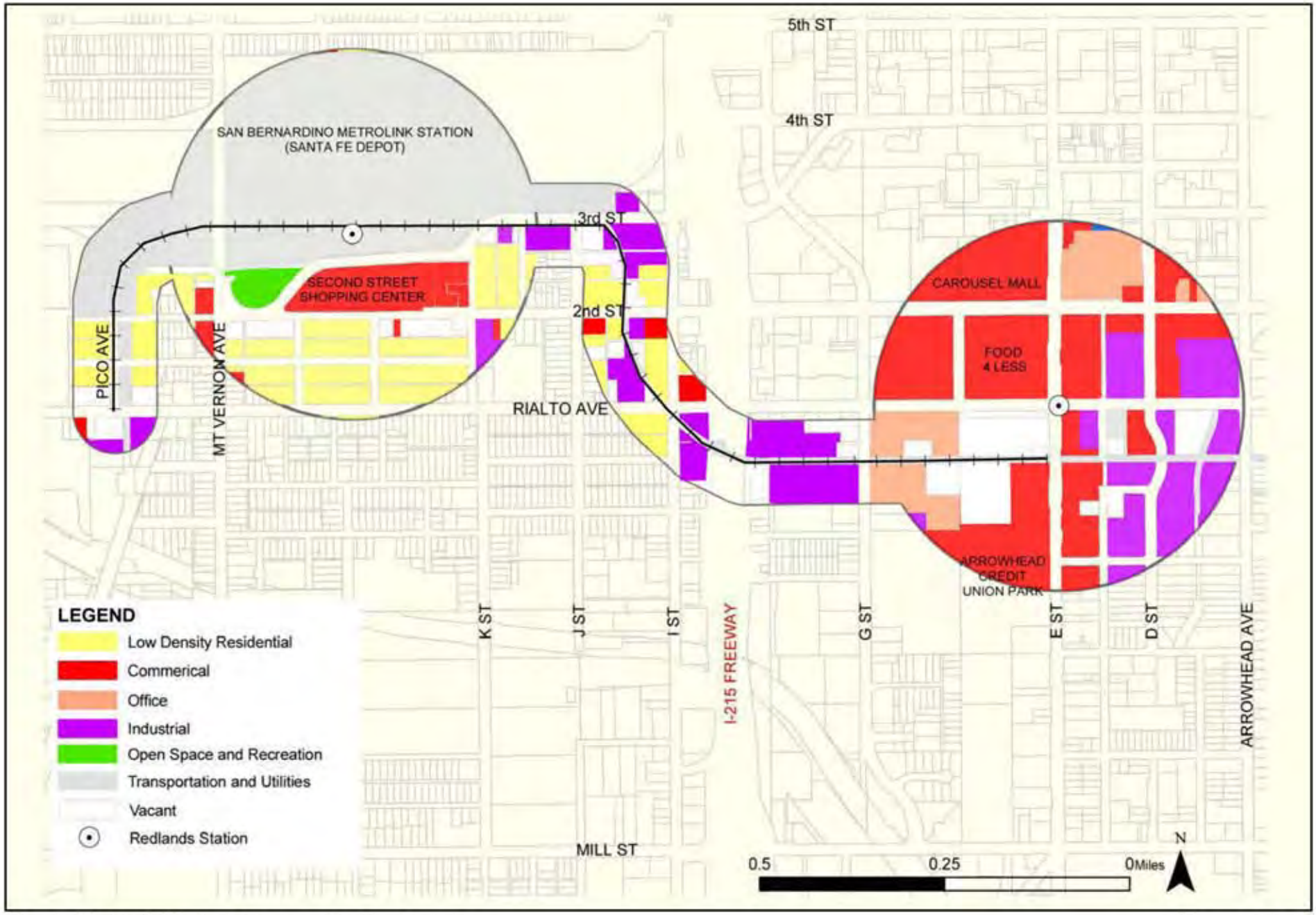


SOURCE: City of San Bernardino General Plan 2005

Figure 3.9-1

City of San Bernardino General Plan Use Designations

Downtown San Bernardino Passenger Rail Project



SOURCE: SANBAG 2008 land use data; prepared by Gruen Associates

Figure 3.9-2

Existing Land Uses along the Corridor and Station

Downtown San Bernardino Passenger Rail Project

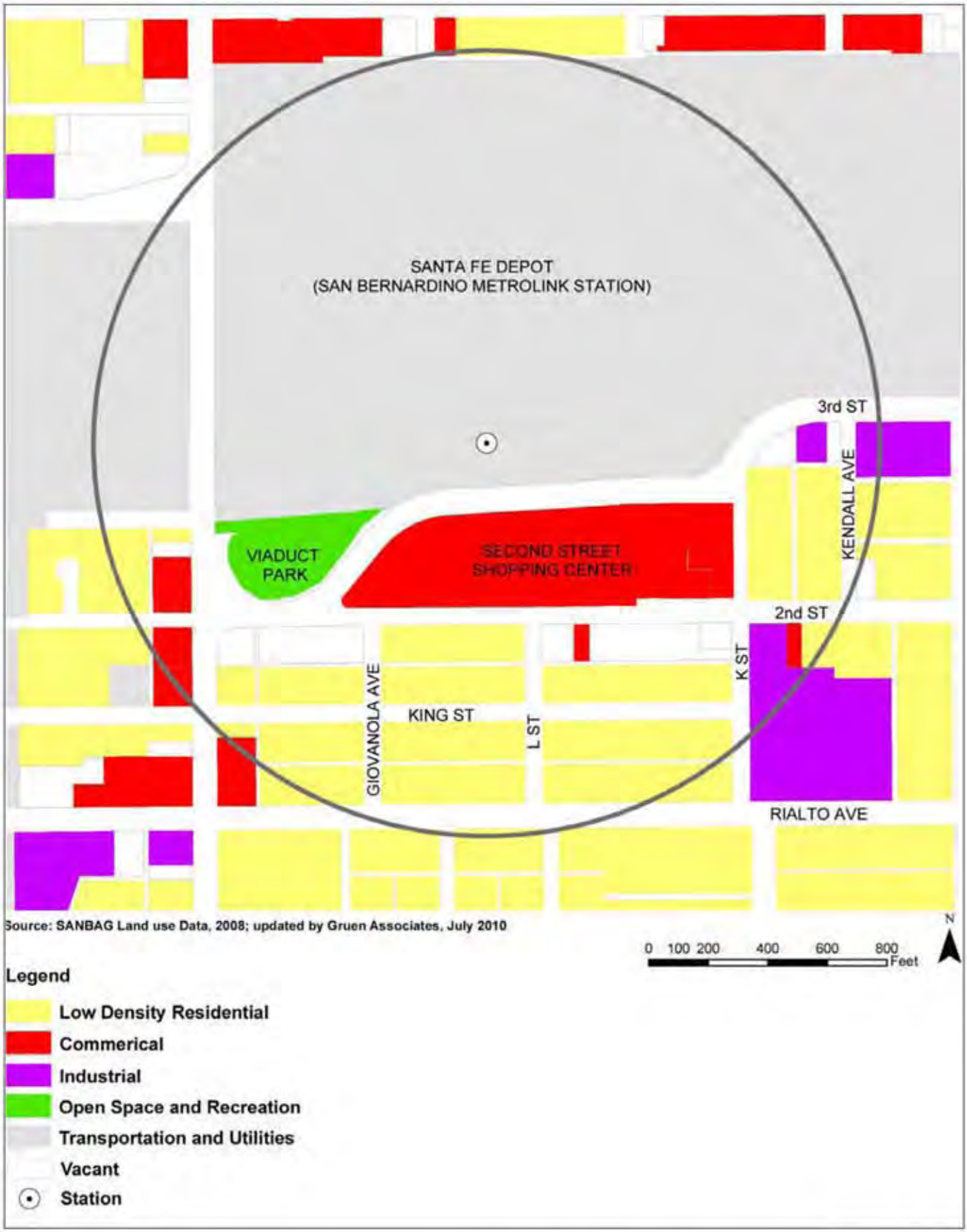


Figure 3.9-3
Santa Fe Station Depot Area Land Use Map
Downtown San Bernardino Passenger Rail Project

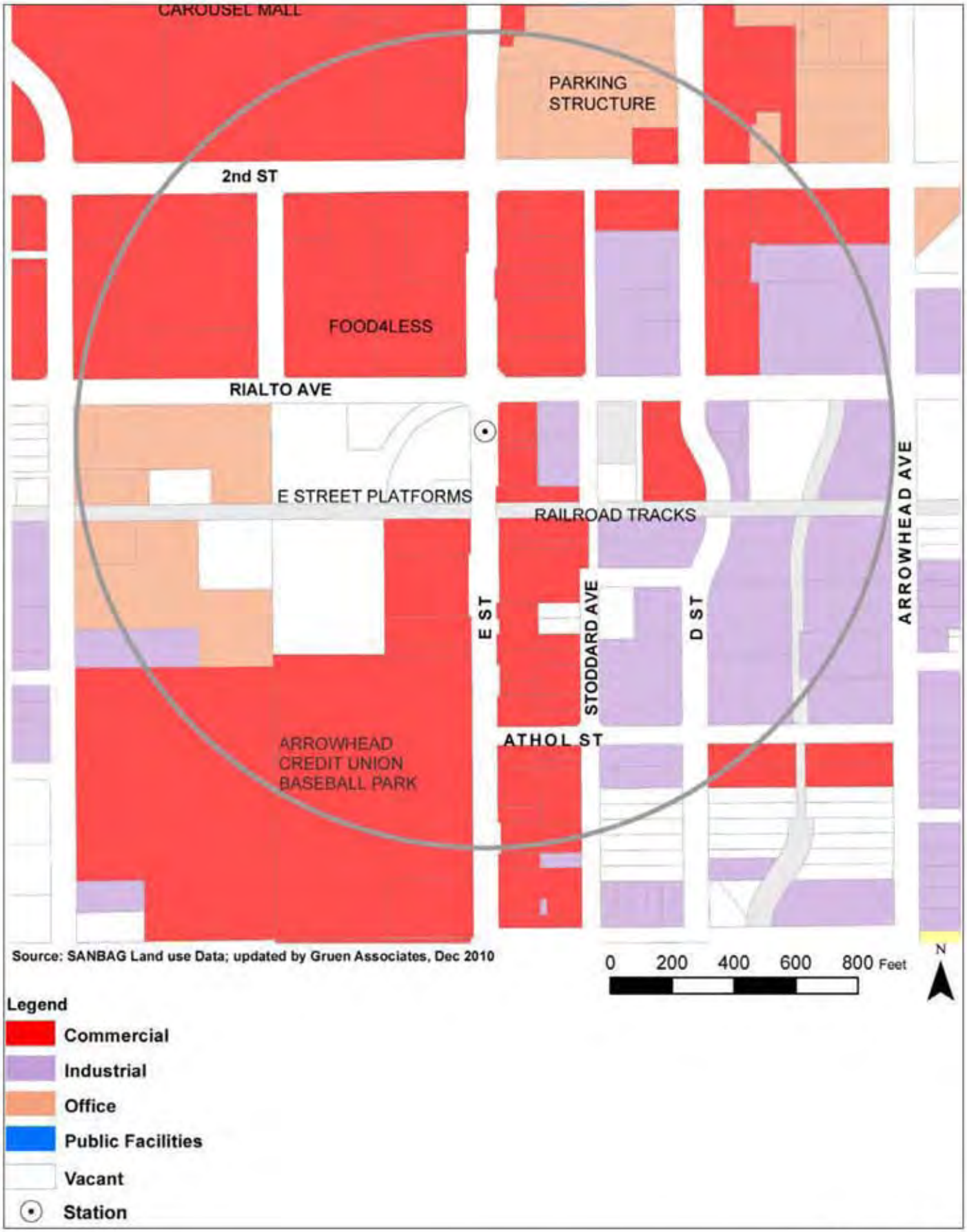


Figure 3.9-4

E Street Rail Platform Area Land Use Map

Downtown San Bernardino Passenger Rail Project

uses such as sales and repair, warehouses, restaurants, medical offices, and a motel. Commercial recreational uses in this segment include the San Manuel Stadium and parking lot areas south and west of the stadium. Many industrial and commercial uses are located in the southeast quadrant of the rail corridor, with some residential units located near the southernmost parking lots of the stadium.

3.9.2 Regulatory Setting

3.9.2.1 Southern California Association of Governments Regional Comprehensive Plan and Guide

SCAG is designated by the federal government as the MPO for Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. SCAG's *Regional Comprehensive Plan and Guide* (RCPG) adopted in 2008 provides a 20-year framework for local and regional development. The RCPG suggests that the region's transportation and planning agencies, in cooperation and coordination with local jurisdictions, should promote policies and strategies that further integrate land use and transportation. The RCPG's Vision statement is as follows:

> To foster a Southern California region that addresses future needs while recognizing the interrelationship between economic prosperity natural resource sustainability, and quality of life. Through measured performance and tangible outcomes, the RCP[G] serves as both an action plan for implementation of short-term strategies and a call to action for strategic, long-term initiatives that are guided by the following Guiding Principles for sustaining a livable region.

The RCPG provides the following land use goals:

- Focus growth in existing and emerging centers and along major transportation corridors
- Create significant areas of mixed-use development and walkable, "people-scaled" communities
- Target growth in housing, employment, and commercial development within walking distance of existing and planned transit stations

3.9.2.2 Southern California Association of Governments Regional Transportation Plan

In addition to the RCPG, SCAG is responsible for the *Regional Transportation Plan* (RTP). The 2008 RTP focuses on making the connections between land use and transportation, and presents the transportation vision of the region through 2035.

The following goals of the 2008 RTP have been expanded from the 2004 RTP to encompass transportation security.

- Maximize mobility and accessibility for all people and goods in the region
- Ensure travel safety and reliability for all people and goods in the region
- Preserve and ensure a sustainable regional transportation system
- Maximize the productivity of our transportation system
- Protect the environment, improve air quality and promote energy efficiency
- Encourage land use and growth patterns that complement our transportation investments
- Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies

3.9.2.3 Southern California Association of Governments Compass Blueprint 2% Strategy

SCAG's *Compass Blueprint 2% Strategy* is a guideline to implement the Growth Vision for southern California. The goals of the Growth Vision are mobility, livability, prosperity, and sustainability. To achieve these goals, the Growth Vision encourages:

- Focusing growth in existing and emerging centers and along major transportation corridors
- Creating significant areas of mixed-use development and walkable communities
- Targeting growth around existing and planned transit stations
- Preserving existing open space and stable residential areas

The identified 2% Opportunity Areas are key areas in the region for targeting growth, where projects, plans, and policies are consistent with Compass Blueprint principles. The 2% Opportunity Areas are primarily composed of Metro Centers, City Centers, Rail Transit Stops, Bus Rapid Transit (BRT) Corridors, Airports, Ports and Industrial Centers, and Priority Residential In-fill Areas. The Project Study Area is located within the Compass 2% Strategy Opportunity Area.

3.9.2.4 San Bernardino County Non-Motorized Transportation Plan—2001 Update

The intent of the *San Bernardino County Non-Motorized Transportation Plan—2001 Update* is to ensure the development of a cohesive, consistent, and quality bikeway system throughout the County, and to coordinate and guide the provision of all bicycle-related plans, programs, and projects within the County.

Several short- to mid-term projects are identified in the plan. These include the Santa Ana River Trail and the San Timoteo Canyon and Transit Access Improvement projects. To achieve greater nonmotorized transportation activity in the County, the Transit Access Improvements project identifies improvements for bicyclists and pedestrians such as improved parking for bicycles at key locations on the County's transit network, development of signing programs to guide bicyclists to these sites, development of access paths and trails to provide more convenient access to transit, and other efforts designed to reduce the real and perceived barriers to safe nonmotorized access to transit services.

3.9.2.5 City of San Bernardino General Plan

The *City of San Bernardino General Plan* was adopted in November 2005. Planned land use and policies that support transit are included in the Land Use (Chapter 2) and Circulation (Chapter 6), Elements of the General Plan. These two elements, as well as the Parks, Recreation, and Trails (Chapter 8) and the Economic Development (Chapter 4) Elements are summarized below. Policies within the Community Design Element (Chapter 5) and specific policies related to the other elements of the General Plan that are relevant to the visual quality of the Project are provided in Section 3.2, "Aesthetics." It is important to note that proposed Project improvements within the existing railroad right-of-way are not subject to polices and land use designations as prescribed in the City's General Plan. Rather, the railroad right-of-way is within the jurisdiction of the City of San Bernardino, which is described further above. In contrast, areas within the Project Study Area that fall outside of the railroad right-of-way are subject to applicable General Plan land use designation, supporting General Plan policies, and corresponding zoning requirements.

Land Use Element

The generalized land use designations along the rail corridor in the General Plan Land Use Map are shown in Figure 3.9-1 and include commercial, industrial, and single-family uses near the Depot and primarily commercial, civic, and industrial uses near the proposed station at E Street.

General Plan land use policies that relate to transit include the following:

- Policy 2.2.3. Sensitively integrate regionally beneficial land uses such as transportation corridors, flood control systems, utility corridors, and recreational corridors into the community. Commercial centers, open spaces, educational facilities, and recreational facilities should be linked to residential neighborhoods.
- Policy 2.3.6. Circulation system improvements shall continue to be pursued that facilitate connectivity across freeway and rail corridors.
- Policy 2.3.2. Promote development that is compact, pedestrian-friendly, and served by a variety of transportation options along major corridors and in key activity areas
- Policy 2.3.7. Improvements shall be made to transportation corridors that promote physical connectivity and reflect consistently high aesthetic values.
- Policy 2.4.6. Work with Omnitrans to explore initiatives that promote redevelopment near transit stops in order to encourage transit ridership, reduce vehicular trips, improve air quality, and improve traffic congestion:
- Policy 2.4.6 (a). Concentrate mixed use development, retail, employment, entertainment, educational, and civic/government uses within walking distance of transit stops.
- Policy 2.4.6 (b). Explore the use of incentives that can be awarded to projects that provide pedestrian amenities (wide sidewalks, public plazas, seating areas, etc.) and/or include desirable uses located within walking distance (1/2 mile) of transit stops. Incentives may include density bonuses, increases in nonresidential floor area, reductions in parking requirements, and modified development standards.

The Land Use Element also includes specialized strategies related to Strategic Areas of the City. The intent of the Strategic Policy Areas is “to achieve a fundamental change in the land use pattern or quality of development.” The Strategic Policy Areas applicable to the rail corridor include:

- **Santa Fe Depot Strategic Policy Area**. The Santa Fe Depot Strategic Policy Area is located in the western portion of the City, immediately west of downtown and I-215. The Strategic Area is bounded on the northern end by the BNSF Railroad line, on the south by Rialto Avenue, on the east by I-215, and on the west by Viaduct and Giovanola Avenues. The goal of the Strategic Policy Area is to integrate the Depot with the surrounding neighborhood and create an identifiable district, help the surrounding businesses become more economically viable, and improve the aesthetics of the area.
- **Corridor Strategic Policy Areas.** The Corridor Strategic Policy Areas within the Project Study Area include the Mount Vernon Avenue and Downtown Strategic Policy Areas. The Mount Vernon Avenue Strategic Policy Area is located along Mount Vernon Avenue and is bounded by Highland Avenue on its northern end and Mill Street on its southern end. The Downtown Strategic Area is bounded by 9th Street on the north, Mill Street on the south, I-215 on the west, and Waterman Avenue on the east.

The strategies that support transit in the Corridor Strategic Policy Areas include:

- Encourage the development of desired projects to provide public amenities through the use of incentives. The following incentives are not cumulative, and the City can choose to award the greatest level of incentives to projects that incorporate numerous desirable features:
  - Proximity to transit. Projects with a residential component that are located within 500 feet of a designated transit stop are eligible to receive up to a 15% density bonus. Mixed-use projects would also receive a 10% increase in floor area ratio to accommodate the additional residential units.
  - Shared parking. Projects that consolidate and combine individual parking lots into shared parking facilities are eligible to receive a 10% increase in floor area ratio and reduce the overall parking requirement by 25%.
  - Pedestrian building orientation. Projects that orient the parking in the rear of the lot and orient the main entrance of the building toward the sidewalk are eligible to receive an increase of up to 5% in floor area ratio.
  - Public plaza. Projects that include a public plaza of at least 625 square feet (no dimension less than 25 feet) adjacent to and accessible from the front sidewalk are eligible to receive an increase of 1 square foot in floor area for every square foot of public plaza.
  - Public art. Projects that provide permanent, outdoor art that is viewable by the public from the front sidewalk are eligible to receive an increase of up to 5% in floor area ratio.

Circulation Element

The Circulation Element of the General Plan includes goals and policies to design and improve the circulation system to meet the current and future needs of the City's residents. The Circulation Element establishes the following goals and policies applicable to the proposed Project:

- Goal 6.6. Promote a network of multi-modal transportation facilities that are safe, efficient, and connected to various points of the City and the region.
  - Policy 6.6.1. Support the efforts of regional, state, and federal agencies to provide additional local and express bus service in the City.
  - Policy 6.6.2. Create a partnership with Omnitrans to identify public transportation infrastructure needs that improve mobility.
  - Policy 6.6.3. In cooperation with Omnitrans, require new development to provide transit facilities, such as bus shelters and turnouts, as necessary and warranted by the scale of the development.
  - Policy 6.6.4. Ensure accessibility to public transportation for seniors and persons with disabilities.
  - Policy 6.6.5. In cooperation with Omnitrans, explore methods to improve the use, speed, and efficiency for transit services. These methods might include dedicated or priority lanes/signals, reduced parking standards for selected core areas, and incorporating Intelligent Transportation System architecture.
  - Policy 6.6.6. Support and encourage the provision of a range of paratransit opportunities to complement bus and rail service for specialized transit needs.

- Policy 6.6.7. Encourage measures that will reduce the number of vehicle-miles traveled during peak periods. Examples of measures include incentives for car-pooling and vanpooling, Preferential parking for car-pools and vanpools and an adequate, safe, and interconnected system of pedestrian and bicycle paths.
- Policy 6.6.8. Promote the use of car-pools and vanpools by providing safe, convenient park-and-ride facilities.
- Policy 6.6.9. Work with Omnitrans to create transit corridors, such as the one currently being explored on E Street linking CSUSB to Hospitality Lane, to increase transit ridership, reduce traffic congestion, and improve air quality.
- Policy 6.6.10. Consider the provision of incentives, such as reduced parking standards and density/intensify bonuses to those projects near transit stops that include transit-friendly uses such as child care, convenience retail, and housing.

- Goal 6.7. Work with the railroads and other public agencies to develop and maintain railway facilities that minimize the impacts on adjacent land uses.
  - Policy 6.7.1. Accommodate railroad services that allow for the movement of people and goods while minimizing their impact on adjacent land uses.
  - Policy 6.7.3. Encourage the provision of a buffer between residential land uses and railway facilities and encourage the construction of sound walls or other mitigating noise barriers between railway facilities and adjacent land uses.

Economic Development Element

The Economic Development Element describes ten Redevelopment Project Areas within the City[5]. The rail corridor would pass through three of the ten: Central City Projects, Mount Vernon Corridor, and Uptown. The Inland Valley Development Agency (IVDA) and San Bernardino International Airport Authority (SBIAA) serve as master developers of 2,100 acres of a former military property now known as San Bernardino International (SBI) Airport and Trade Center. In addition to the Airport property, the IVDA redevelopment project area includes approximately 14,000 acres in a 3-mile radius of surrounding property outside the base. Portions of the rail corridor that traverse the IVDA redevelopment project area include a small portion of Depot station area, south of King Street.

Some of the policies in the Economic Development Element that would directly or indirectly support transit service and transit-oriented development in Redevelopment Project Areas include the following:

- Policy 4.8.1. Examine opportunities to capitalize on the City's train and distribution uses as well as the historic Santa Fe Depot and its Metrolink Passenger Services.
- Policy 4.10-1. Utilize all available redevelopment agency/city tools to revitalize and enhance strategic areas of the City.
- Policy 4.10-2. Market the City and proactively attract users by promoting revitalization of the Carousel Mall Downtown through a mixture of land uses, such as additional office and mixed-use space.

[5] It should be noted that the City no longer has a formal redevelopment agency, as redevelopment has been eliminated pursuant to recent state legislation adoption. However, redevelopment policies are included within the 2005 General Plan Update and will remain as a part of the general plan.

- Policy 4.11-2. Expand opportunities by encouraging an appropriate mix of revenue-generating land uses to maintain a competitive edge and a strong sales tax base.
- Policy 4.14.3. Attract uses that complement and intensify the Convention Center in downtown San Bernardino, including expanding convention facilities, hotels, restaurants, theaters, and similar uses.

Policy 4.15.3. Promote the Santa Fe Depot District as a destination with easy connections via the Metrolink.

3.9.2.6 City of San Bernardino Development Code

The Development Code divides the City into land use zoning districts to consistently implement the General Plan. The Central City South (CCS) District includes the area bounded by the centerline of Rialto Avenue on the north, the centerline of Inland Center Drive on the south, the centerline of E Street on the east, and the east right-of-way of I-215 on the west. The Depot is zoned for Heavy Industrial (IH) uses. The Development Code includes development standards and uses permitted within the CCS District.

The Development Code also includes citywide landscaping standards and landscaping design guidelines. The intent of the landscaping standards is to enhance the aesthetic appearance of development in all areas of the City by providing standards relating to quality, quantity, and functional aspects of landscaping and landscape screening. For example, street trees are required to be 24-inch box specimens planted within the public parkway or on city property.

3.9.2.7 Urban Land Institute's 2007 San Bernardino Advisory Services Panel Report

An *Advisory Services Panel Report* prepared by the Urban Land Institute (ULI) in 2007 recommended strategies, policies, and actions for revitalizing downtown San Bernardino (to be used by the City and the County with respect to land use, transportation, lifestyle, urban design, commerce, and government for the Central Business District [CBD] of San Bernardino).

The Downtown District Focus Area defined in the report is bounded by I-215 to the west, Waterman Avenue to the east, Baseline Street to the north, and Mill Street to the south. Within this focus area, the CBD extends from I-215 in the west to Sierra Way in the east, and 5th Street in the north to the railroad right-of-way just south of Rialto Avenue in the south. Recommendations in the report include redeveloping the Carousel Mall site as a mixed-use urban village with retail, office, and residential uses; relocating the proposed site of the Arrowhead Credit Union corporate headquarters closer to downtown; creating a linear park system enhanced with water features connecting the neighborhoods to downtown; designating an arts and entertainment district near 4th Street; and engaging the citizens of the City in the process of envisioning and developing the future of downtown.

The report stated that the proposed Metrolink extension coupled with the proposed E Street Transit Corridor make the downtown a natural location for entertainment venues and restaurants and will also assist the City in attracting new residents to the area. It also stated that the San Bernardino Transit Village will provide an excellent opportunity for transit-oriented development. The report noted that, "transit projects with thoughtfully planned routes and station locations can set the stage for significant private development: the careful coordination of transit and development is critical so that each can optimally enhance the other."

3.9.2.8 City of San Bernardino Department of Public Works Street Improvement Policy

The Street Improvement Policy provides guidelines and establishes acceptable practices to be used in the design or modification of streets in the City. Its intent is to provide a basis for the preparation and review of submitted plans in conformance with the City's Municipal Code, acceptable design criteria, and adopted standard specification used by the City. It includes design criteria for arterial and collector streets, as well as local and residential streets.

3.9.2.9 Other Plans Currently under Preparation

San Bernardino Downtown Core Vision/Action Plan

The *San Bernardino Downtown Core Vision/Action Plan* is a guide and roadmap for future revitalization and redevelopment of downtown San Bernardino. It proposes that the County administrative facilities and City Hall should be relocated to a new Civic Center closer to the I-215 with greater visibility and access, and that Carousel Mall should be reconfigured as an open air, mixed-use and retail district. The Core Vision/Action Plan provides a vision to revitalize and rehabilitate downtown San Bernardino.

San Bernardino Transit Village

Pre-development, conceptual design, and visioning for a transit village located in downtown San Bernardino is currently underway at the southwest corner of Rialto Avenue and E Street. The proposed Project would include the development of bus and rail facilities that would provide service to downtown San Bernardino and a seamless connection to regional rail and bus transit linkages to the southern California region. These transit improvements are planned to reduce nontransit vehicle use and highway congestion thereby improving air quality in the region. Additionally, these transit improvements are expected to serve as a catalyst for new residential and commercial development planned in the downtown area around the San Bernardino Transit Village. The San Bernardino Transit Village is considered a separate project to that of the Omnitrans Bus Facility and, therefore, is not within the scope of the analysis for this EA/DEIR.

Main Street Overlay District

The City of San Bernardino is currently preparing a Main Street Overlay District to incorporate development standards proposed in the *Core Vision/Action Plan* into the existing code provisions addressing downtown. The Overlay District is bounded by 8th Street to the north, Rialto Avenue on the south, Sierra Way to the east, and I-215 to the west.

3.9.3 Thresholds of Significance

For the purposes of the analysis in this EIR, in accordance with Appendix G of the State *CEQA Guidelines*, the proposed Project would have a significant environmental impact under CEQA related to land use and planning if it would:

- Physically divide an established community.
- Be incompatible with surrounding land uses.
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

3.9.4 Project Impacts

Impact LU-1: Physically divide an established community

As described in Chapter 2.0, "Alternatives," the Project would add a second track within the rail corridor between the Depot and the proposed rail platforms/bus facility, which would necessitate the acquisition of right-of-way along the rail corridor, south of the Depot along K Street and in the vicinity of the proposed rail platforms near Rialto Avenue and E Street. Under the proposed Project, a passenger bridge overcrossing would be constructed at the existing Depot and a rail station would be constructed at the E Street/Rialto Avenue site. Street improvements and grade crossings are proposed along the rail corridor.

The proposed Project would require the acquisition of approximately 69 parcels to be affected, including full parcel acquisitions, partial parcel acquisitions, and easements (roadway, temporary construction, sidewalk, utility, and alley vacations). Approximately four parcels identified as full property acquisitions would require full tenant relocations to allow each business to remain open during and after construction. Seven inhabited homes on four residential properties are also included as full properties acquisitions. It is anticipated that temporary construction easements would be established for approximately 18 to 24 months throughout the duration of construction. Additionally, four residential properties identified as partial acquisitions would require full tenant relocations because the structures would be permanently removed during construction. These parcels include both single- and multi-family uses. The remaining adjacent parcels contain warehouse, industrial, office, and commercial uses, and some vacant properties.

As noted above, the proposed Project would require partial and full acquisitions of adjacent properties for right-of-way purposes. However, these acquisitions are not expected to divide established residential neighborhoods along the rail corridor because adjacent residential uses are generally west of I-215 and north of Rialto Avenue.

The rail corridor is an existing railroad and transportation route along which the corridor communities have historically developed. Construction and operation of the proposed Project would not divide existing residential neighborhoods along the rail corridor even though roadway closures and grade crossings are proposed. The roadways would be configured to maintain circulation in the regional area, and no substantial disruption or permanent access constraints would occur. As the Project would require street closures and roadway reconfigurations, as described in Section 2.3.1.5, "Street Improvements and Closures," a General Plan Amendment to the City's Circulation Map of the 2005 General Plan Update Circulation Element would be required. The General Plan Amendment, once approved by the City, would amend the Circulation Plan, and no inconsistencies would result upon approval of the General Plan Amendment. Therefore, no significant impacts are anticipated and no division of established communities would occur. Mitigation is also included to minimize performance at studied intersections (see Section 3.11, "Transportation and Traffic.")

Construction impacts would be temporary (construction easements would be established for approximately 18 to 24 months) and any access disruptions to the established neighborhoods along the rail corridor also would be temporary. Therefore, access disruptions resulting from proposed construction activities would not result in significant impacts. (Land acquisitions are discussed in detail in Section 4.2.6, "Land Acquisitions, Displacements, and Relocation.")

The proposed Project would allow for pedestrian and vehicle egress at designated intersections where street closures or at-grade crossings would be built within the existing rail right-of-way. Because these improvements are proposed to provide safe egress for pedestrians and vehicles traveling through the rail corridor, no significant impacts on the physical division of a neighborhood would occur. In addition, the reconfiguration or creation of parking lots would take place adjacent to the existing rail right-of-way and station platforms, and would not restrict or prohibit safe pedestrian and vehicular access. Therefore, no significant impact would occur.

Impact LU-2: Be incompatible with surrounding land uses

As indicated in the Chapter 2.0, "Alternatives," the rail corridor consists of the westernmost mile of the existing Redlands Subdivision railway (also known as the Redlands Corridor.) The existing use of the right-of-way within the rail corridor is transportation (rail). This rail transportation use would continue under the proposed Project, which would include a series of improvements to the existing rail corridor in addition to the construction of new rail and bus station amenities. The proposed passenger rail and bus infrastructure improvements would not conflict with existing land uses or zoning in the regional area.

Land uses surrounding the rail corridor include commercial, office, light industrial, warehouse, vacant, and scattered single- and multi-family uses. As previously indicated, the rail corridor is an existing railroad and transportation route along which the corridor communities have historically developed. Existing land uses within the station areas are generally compatible with transit facilities and would support commercial and residential activities along the rail corridor. Therefore, implementation of the proposed Project would not be incompatible with surrounding land uses.

The proposed Project would require partial and full acquisition of adjacent properties for right-of-way purposes. In some instances, proposed acquisitions would result in the loss of commercial uses located along the rail corridor or require the relocation of families for takes on residential properties. The conversion of 3rd Street into a cul-de-sac southeast of the Depot would require acquisition of a vacant building. The partial acquisitions would maintain the minimum setbacks required by the applicable zoning district or an appropriate buffer would be provided. Full acquisitions would be compensated at fair market value by existing law. The proposed Project would include conversion of a few through streets into cul-de-sacs in some locations.

The proposed loss of commercial uses is not expected to result in a change in land use character for the surrounding area. Commercial uses would continue to be located adjacent to portions of the rail corridor. Additionally, no change in land use is proposed for the rail corridor because the Project proposes to expand existing transit service 1 mile east from an existing station and to provide additional rail platforms and a bus facility to support existing bus and rail transit service. Therefore, overall implementation of the proposed Project would be compatible with surrounding land uses. However, the potential for land use impacts at individual facility sites is discussed below:

- Improvements at the Depot:
  - *Track Improvements and Proposed Rail Platforms*—These improvements would occur along the existing transit route, would be located primarily within the existing railroad right-of-way, and would be consistent with the General Plan land use and zoning designations. No additional right-of-way acquisition would be required. No impacts would occur.

- *Minor interior and exterior improvements*—These improvements would include the following: (1) installation of new window awnings, (2) new exterior and interior way finding signage for SANBAG/SCAG/Whistle Stop Cafe/Museum, (3) new clock in the lobby, (4) new sign in the lobby that details the railroad's role in creating time zones, (5) new portable Metrolink & Amtrak map and brochure case, (6) new bathroom signage and (7) new monument sign & flagpole to be placed at the Depot entrance. The placement of these improvements would not result in an inconsistency with adjacent land uses. No impacts would occur.
- *Pedestrian Overpass*—The proposed pedestrian overpass would enhance connectivity and provide safe egress from the platforms to the main areas of the Depot. The placement of this project feature would not be incompatible with the existing Depot. No impacts would occur.
- *Reconfigured Parking Lot*—The reconfigured parking lot would result in additional spaces, landscaping and necessitate the realignment of K Street and 3rd Street intersection. There are no sensitive uses located immediately adjacent to the reconfigured parking lot. Based on these conditions, this project feature would not change or have any impact on the adjacent land use. No impacts would occur.

- Improvements at Rialto Avenue and E Street:
  - *Track Improvements and Proposed Rail Platforms*—These improvements would occur along the existing transit route. The adjacent land uses are primarily commercial and were originally established along the railroad right-of-way; therefore, there would be no impact from the reintroduction of transit service on these tracks.
  - *Proposed Parking Lot*—The proposed parking lot would be located on a vacant lot directly south of the new rail platforms. Commercial uses and their parking lots are located in the immediate vicinity of this parking lot. Parking lots are identified as an allowed use on commercially-zoned properties. The proposed parking lot would be buffered from adjacent uses by landscaping and would be compatible with surrounding uses, which already include parking facilities. No impacts would occur.
  - *Pedestrian Connection to the* San Manuel Stadium—Currently, no official pedestrian connections exist from the San Manuel Stadium parking to the railroad tracks except along the E Street sidewalk. The proposed pedestrian sidewalk, to be located south of the proposed parking lot, with landscaping and lighting would improve the pedestrian connectivity. Additionally, the existing parking lots south and west of the stadium proposed for drainage facilities would not result in inconsistencies in adjacent land uses. No impacts would occur.
  - *Bus Facility*—The construction of the Omnitrans bus facility at the corner of Rialto Avenue and E Street would occur on a vacant, undeveloped property. The bus facility would include up to a 12,000-square foot building on the southern portion of the site. The adjacent land uses are primarily commercial, office, and industrial. Additional parking and pedestrian improvements would also be constructed along the southern portion of Rialto Avenue and the new extension of F Street. The remaining acreage comprising the bus facility site would be graded and/or paved to the extent necessary and would remain undeveloped. Significant impacts are not anticipated to occur.

- Street Improvements and Closures:
  - *3rd Street Closure*—The proposed Project would require conversion of 3rd Street into cul-de-sac. The area primarily contains vacant and/or underutilized properties. Access to existing businesses along this street on the west side of the tracks would still be maintained through routing of traffic to other local streets. The conversion of 3rd Street into a cul-de-sac south of the tracks would require acquisition of a vacant building and some residential uses. Impacts would be less than significant given compensation consistent with the Uniform Relocation Assistance and Real Property Acquisition Policies Act and the California Relocation Act.
  - *I Street to a Cul-de-sac*—The Project would require conversion of I Street into a cul-de-sac, which could affect the existing businesses located along I Street. However, access to these businesses would still be maintained through routing of traffic to other local streets. In this context, impacts would be less than significant.
- Grade Crossings:
  - The proposed Project would include the complete reconstruction of three grade crossings at 3rd Street, 2nd Street, Rialto Avenue/I Street, and G Street. This would provide for safer crossings for pedestrians and vehicles. Uses directly adjacent to the Project include mostly vacant and industrial uses, with some residential uses. There would be no adverse change in the function or access to adjacent uses as a result of these improvements. Considering the existing commercial/industrial nature of some of the area, no impacts would occur.

Impact LU-3: Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted to avoid or mitigate an environmental effect

The proposed Project would involve construction of track improvements along an existing rail corridor to accommodate the proposed extension of existing Metrolink service during Project operations. The proposed Project would also involve other track improvements and the construction of a passenger bridge overcrossing and new rail platforms and a bus facility at Rialto Avenue and E Street. Street improvements and grade crossing modifications would also occur under the proposed Project.

The proposed Project would not result in new land uses that would change land use plans, policies, and regulations; however, the Project would require a General Plan Amendment to the City's Circulation Map of the 2005 General Plan Update Circulation Element for street closures and roadway reconfigurations, as stated previously in Impact LU-1, above. The proposed Project is anticipated to be consistent with all the local, regional, state, and federal jurisdictions and their plans for the rail corridor upon approval of a General Plan Amendment. Table 3.9-2 provides a consistency analysis of the proposed Project with applicable City of San Bernardino land use plans and policies. As shown in Table 3.9-2, no significant impacts related to consistency with applicable land use plans or policies are anticipated.

Similarly, the proposed Project would not conflict with any RTP goals or policies. Tables 3.9-3 and 3.9-4 provide an analysis of the proposed Project's consistency with applicable SCAG planning goals and policies. As shown in this table, the proposed Project would be consistent with the goals of the 2008 RTP and RCPG.

Table 3.9-2. Proposed Project Consistency with Applicable City of San Bernardino Plans

Goals and Policies	Consistency
Land Use Element	
Policy 2.2.3: Sensitively integrate regionally beneficial land uses such as transportation corridors, flood control systems, utility corridors, and recreational corridors into the community. Commercial centers, open spaces, educational facilities, and recreational facilities should be linked to residential neighborhoods.	Consistent. The proposed Project would include a series of improvements and enhancements, including the construction of rail platforms and a bus facility to an existing rail corridor. Proposed track improvements and related components of the proposed Project would require utility replacements and relocations. Drainage culverts located along the rail corridor would also require replacement or extension. Implementation of the proposed Project would extend rail service and provide a bus facility, improving overall linkage to commercial, educational, recreational, and residential uses.
Policy 2.3.6: Circulation system improvements shall continue to be pursued that facilitate connectivity across freeway and rail corridors.	Consistent. The proposed Project would include track improvements to an existing rail corridor, the construction of an ADA-compliant passenger bridge overcrossing at the Depot, the extension of rail service, and construction of a bus facility. Additionally, the proposed Project would include street improvements and grade crossings. This would enhance rail and bus service opportunities in the San Bernardino area and facilitate connectivity.
Policy 2.3.2: Promote development that is compact, pedestrian-friendly, and served by a variety of transportation options along major corridors and in key activity areas	Consistent. The proposed Project would include track improvements to an existing rail corridor, the construction of an ADA-compliant passenger bridge overcrossing at the Depot, and the extension of rail service. This would enhance rail service opportunities in the San Bernardino area and improve all connectivity.
Policy 2.3.7: Improvements shall be made to transportation corridors that promote physical connectivity and reflect consistently high aesthetic values. a. Concentrate mixed use development, retail, employment, entertainment, educational, and civic/government uses within walking distances of transit stops. b. Explore the use of incentives that can be awarded to projects that provide pedestrian amenities (wide sidewalks, public plazas, seating areas, etc.,) and/or include desirable uses located within walking distance (1/2 mile) of transit stops. Incentives may include density bonuses, increases in non-residential floor area, reductions in parking requirements, and modified development standards	Consistent. The proposed Project would include track improvements to an existing rail corridor, the construction of an ADA-compliant passenger bridge overcrossing and other aesthetic improvements at the Depot, the extension of rail service, and construction of a bus facility. Additionally, the proposed Project would include street improvements, grade crossings, and landscaping. This would enhance rail and bus service opportunities in the San Bernardino area and facilitate connectivity.

Goals and Policies	Consistency
Policy 2.4.6: Work with Omnitrans to explore initiatives that promote redevelopment near transit stops in order to encourage transit ridership, reduce vehicular trips, improve air quality, and improve traffic congestion.	Consistent. SANBAG is coordinating with Omnitrans regarding the bus facility proposed by the Project and other projects in the area.
Policy 2.4.6 (a): Concentrate mixed use development, retail, employment, entertainment, educational, and civic/government uses within walking distance of transit stops.	Consistent. The proposed Project would include improvements to the existing Depot and construction of a bus facility. This would provide improved access at two transit stops and provide an expanded development potential.
Policy 2.4.6 (b): Explore the use of incentives that can be awarded to projects that provide pedestrian amenities (wide sidewalks, public plazas, seating areas, etc.) and/or include desirable uses located within walking distance (1/2 mile) of transit stops. Incentives may include density bonuses, increases in nonresidential floor area, reductions in parking requirements, and modified development standards.	Not applicable. The proposed Project would include the extension of rail service in the City and the construction of new Metrolink platforms and a bus facility. No incentives would be necessary.
Circulation Element	
Goal 6.6: Promote a network of multi-modal transportation facilities that are safe, efficient, and connected to various points of the City and the region.	Consistent. The proposed Project would include the construction of new Metrolink platforms and a bus facility at the southwest corner of Rialto Avenue and E Street in the City. An ADA-compliant passenger bridge overcrossing would be constructed at the existing Depot. The proposed extension of rail service and construction of the bus facility would help promote a network of multi-modal transportation facilities. Additionally, the Project would require street closures and roadway reconfigurations to improve roadway safety, and a General Plan Amendment to the City's Circulation Map of the 2005 General Plan Update Circulation Element would be required. The General Plan Amendment, once approved by the City, would amend the Circulation Plan, and no inconsistencies would result.
Policy 6.6.1: Support the efforts of regional, state, and federal agencies to provide additional local and express bus service in the City.	Consistent. The proposed Project would include construction of a bus facility to support existing Omnitrans bus service. This would enhance bus service opportunities in the San Bernardino area and facilitate connectivity.
Policy 6.6.2: Create a partnership with Omnitrans to identify public transportation infrastructure needs that improve mobility.	Consistent. The proposed Project would include construction of a bus facility to support existing Omnitrans bus service. This would enhance bus service opportunities in the San Bernardino area and facilitate connectivity.

Goals and Policies	Consistency
Policy 6.6.3: In cooperation with Omnitrans, require new development to provide transit facilities, such as bus shelters and turnouts, as necessary and warranted by the scale of the development.	Consistent. The proposed Project would involve construction of a bus facility, including bus shelters and turnouts, developed in cooperation with SANBAG and Omnitrans.
Policy 6.6.4: Ensure accessibility to public transportation for seniors and persons with disabilities.	Consistent. The proposed Project would involve the construction of an ADA-compliant passenger bridge overcrossing at the Depot, the extension of rail service, and construction of rail platforms and a bus facility. These improvements would provide increased accessibility to public transportation to seniors and disabled persons.
Policy 6.6.5: In cooperation with Omnitrans, explore methods to improve the use, speed, and efficiency for transit services. These methods might include dedicated or priority lanes/signals, reduced parking standards for selected core areas, and incorporating Intelligent Transportation System architecture.	Consistent. To improve efficiency and accessibility for transit service, the proposed Project would involve construction of a bus facility, developed in cooperation with SANBAG and Omnitrans.
Policy 6.6.6: Support and encourage the provision of a range of paratransit opportunities to complement bus and rail service for specialized transit needs.	Consistent. The proposed Project would include the extension of Metrolink service and the construction of a bus facility in the City. The proposed Project would increase transit access to projects located in the vicinity of the rail corridor, specifically near the Depot and the intersection of E Street and Rialto Avenue.
Policy 6.6.7: Encourage measures that will reduce the number of vehicle-miles traveled during peak periods. Examples of measures include incentives for car pooling and vanpooling. Preferential parking for car pools and van pools and an adequate safe and interconnected system of pedestrian and bicycle paths.	Consistent. The proposed Project would include the extension of Metrolink service and the construction of a bus facility in the City. The proposed Project would increase transit access to projects located in the vicinity of the rail corridor, specifically near the Depot and the intersection of E Street and Rialto Avenue.
Policy 6.6.8: Promote the use of car-pools and vanpools by providing safe, convenient park-and-ride facilities.	Consistent. The proposed Project would include park and ride facilities at the proposed E Street rail platforms/bus facility as well as bicycle racks. Existing parking would be reconfigured at the existing Depot.
Policy 6.6.9: Work with Omnitrans to create transit corridors, such as the one currently being explored on E Street linking CSUSB to Hospitality Lane, to increase transit ridership, reduce traffic congestion, and improve air quality.	Consistent. The proposed Project would include the extension of Metrolink service and the construction of an Omnitrans bus facility. The proposed Project would increase transit access to projects located in the vicinity of the rail corridor, specifically near the Depot and the intersection of E Street and Rialto Avenue. Implementation of the proposed Project would extend rail service and help to increase transit ridership, reduce traffic congestion, and improve air quality.

Goals and Policies	Consistency
Policy 6.6.10: Consider the provision of incentives, such as reduced parking standards and density/intensity bonuses, to those projects near transit stops that include transit-friendly uses such as child care, convenience retail, and housing.	Consistent. The proposed Project would include the extension of Metrolink service and the construction of a bus facility in the City. The proposed Project would increase transit access to projects located in the vicinity of the rail corridor, specifically near the Depot and the intersection of E Street and Rialto Avenue.
Goal 6.7: Work with the railroads and other public agencies to develop and maintain railway facilities that minimize the impacts on adjacent land uses.	Consistent. To improve efficiency and accessibility for transit service, the proposed Project would involve construction of a bus facility, developed in cooperation with SANBAG and Omnitrans in addition to the extension of rail service.
Policy 6.7.1: Accommodate railroad services that allow for the movement of people and goods while minimizing their impact on adjacent land uses.	Consistent. The proposed Project would include the extension of Metrolink service and the construction of a bus facility in the City. The proposed Project would increase transit access to projects located in the vicinity of the rail corridor.
Policy 6.7.3: Encourage the provision of a buffer between residential land uses and railway facilities and encourage the construction of sound walls or other mitigating noise barriers between railway facilities and adjacent land uses.	Consistent. See Section 3.10, “Noise and Vibration,” for discussion of noise impacts and mitigation measures included for the proposed Project.
Economic Development Element	
Policy 4.8.1: Examine opportunities to capitalize on the City’s train and distribution uses as well as the historic Santa Fe Depot and its Metrolink Passenger Services.	Consistent. The proposed Project would include the extension of rail service in the City and the construction of improvements at the Depot, including a pedestrian overpass, shelters, and other measures to improve opportunities for Metrolink passenger rail service to and from the Depot.
Policy 4.10.1: Utilize all available redevelopment agency/City tools to revitalize and enhance strategic areas of the City.	Consistent. The proposed Project would extend Metrolink service to downtown San Bernardino and would include the construction of new Metrolink platforms and a bus facility in the City. The proposed Project would promote transit use and help link a variety of land uses found along the rail corridor.
Policy 4.10.2: Market the City and proactively attract users by promoting revitalization of the Carousel Mall Downtown through a mixture of land uses, such as additional office and mixed-use space.	Consistent. The proposed Project would extend Metrolink service in the City and provide a new bus facility. This would market the City and help to attract uses, thereby promoting the revitalization of the Carousel Mall and other areas of the downtown.
Policy 4.11.2: Expand opportunities by encouraging an appropriate mix of revenue-generating land uses to maintain a competitive edge and a strong sales tax base.	Consistent. The proposed Project would support and encourage the existing mix of land uses along the rail corridor while encouraging new businesses to locate in the area near transit.

Goals and Policies	Consistency
Policy 4.14.3: Attract uses that complement and intensify the Convention Center in downtown San Bernardino, including expanding convention facilities, hotels, restaurants, theaters, and similar uses.	Consistent. The proposed Project would extend Metrolink service to downtown San Bernardino and would include the construction of new Metrolink platforms and a bus facility in the City. Track improvements, rail platforms, and a bus facility included under the proposed Project would complement downtown uses, including the Convention Center, by providing enhanced transit service to downtown.
Policy 4.15.3: Promote the Santa Fe Depot District as a destination with easy connections via the Metrolink.	Consistent. The proposed Project would include the extension of rail service in the City and the construction of improvements at the Depot, including a pedestrian overpass, shelters, and other measures to improve safety and connectivity.
Community Design Element	
Goal 5.1: Develop unique entry features into the City as a whole and into distinct neighborhoods and districts to help to define our boundaries and act as landmarks.	Consistent. The Project has been designed to accommodate these elements. Additionally, the City will review and provide approval for Design Review plans to ensure that the design of the Project is consistent with the goals and policies of the Community Design Element.
Policy 5.1.2: Designate and provide monumentation for important primary and secondary entry points into the City, especially at the following location. b) Santa Fe Railroad Passenger Terminal	Consistent. See Goal 5.1, above.
Policy 5.2.2: Require that landscaping be adequately maintained and replaced if removed due to damage or health.	Consistent. See Goal 5.1, above.
Policy 5.2.3: Require that all new street landscape incorporate an irrigation system to provide proper watering.	Consistent. See Goal 5.1, above.
Policy 5.2.4: Screen public facilities and above-ground infrastructure-support structures and equipment, such as electrical sub-stations and water wells, through sensitive site design, appropriately scaled landscaping, undergrounding of utilities, and other methods of screening.	Consistent. See Goal 5.1, above.
Policy 5.2.5: Use landscaping and façade articulation to break up long stretches of walls associated with residential development along major corridors.	Consistent. See Goal 5.1, above.

Goals and Policies	Consistency
Policy 5.2.6: Ensure implementation of sign regulations, which address issues of scale, type, design, materials, placement, compatibility, and maintenance.	Consistent. See Goal 5.1, above.
Policy 5.2.7: Provide for the use of well-designed and placed banners for City events, holidays, and other special occasions.	Consistent. See Goal 5.1, above.
Policy 5.2.8: Provide for the use of kiosks or other street furniture along the City's streets.	Consistent. See Goal 5.1, above.

Source: Appendix H.
Note: To reflect project changes, ICF made revisions to the tables in Appendix H.

Table 3.9-3. Proposed Project Consistency with the 2008 Regional Transportation Plan Goals

RTP Goal	Consistency
Goal 1: Maximize mobility and accessibility for all people and goods in the region	Consistent. The proposed Project would facilitate improved mobility along the existing rail corridor. The proposed Project would extend Metrolink service from the existing Depot to proposed new rail platforms farther east. A series of general improvements—such as track improvements, a pedestrian connection, and street improvements—would be included under the proposed Project. The Project would also provide opportunities for intermodal transfers to the Omnitrans bus facility and the planned sbX E Street BRT Corridor at the E Street rail platforms to connect to various cities within the region.
Goal 2: Ensure travel safety and reliability for all people and goods in the region	Consistent. The proposed Project would include improvements to an existing rail corridor and would extend Metrolink service. The proposed Project would enhance traffic conditions and include safety controls, street improvements, and the construction of an ADA-compliant passenger bridge overcrossing and a bus facility. These proposed improvements and upgrades would enhance travel safety and improve reliability.
Goal 3: Preserve and ensure a sustainable regional transportation system	Consistent. The proposed Project would include improvements to the existing rail corridor to enhance traffic conditions. Proposed improvements would enhance the regional transportation system by extending Metrolink service and a bus facility. Proposed safety controls such as additional rail and traffic signals would be installed. The Project would serve as a sustainable transportation system in the City of San Bernardino by reducing travel time, easing congestion, and enticing people out of their cars. Greater transit and less auto travel would also result in reduced air emissions, safer driving conditions, and energy savings.

RTP Goal	Consistency
Goal 4: Maximize the productivity of our transportation system	Consistent. The proposed improvements would enhance the regional transportation system by extending Metrolink service, providing a bus facility, and reducing congestion. Under the proposed Project, street improvements would be made and safety controls would be implemented.
Goal 5: Protect the environment, improve air quality and promote energy efficiency	Consistent. The proposed Project would extend Metrolink service and make improvements to an existing rail corridor. This would improve transit opportunities for the area. Implementation of the proposed Project is anticipated to result in a mode shift to reduce reliance on individual automobile use to reduce congestion leading to reduced emissions.
Goal 6: Encourage land use and growth patterns that complement our transportation investment	Consistent. The proposed Project would not alter existing land use patterns. The Project would result in improvements to an existing rail corridor and include the construction of rail platforms at a bus facility. The proposed Project would be consistent with adopted general plan goals and policies aimed at creating priority transit corridors to facilitate east-west regional travel. Transit use would increase with the Project, which would result in a reduction of auto trips, vehicle miles traveled and air emissions, thereby improving air quality and promoting energy efficiency.
Goal 7: Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.	Consistent. The proposed Project would not affect the security of the local or regional transportation system. The Project would provide enhanced transit service which would support transit-oriented development and mixed land use development around platform areas.

Source: Appendix H.
Note: To reflect project changes, ICF made revisions to the tables in Appendix H.

Table 3.9-4. Proposed Project Consistency with SCAG's Regional Comprehensive Plan Guide

RCPG Policy	Consistency
3.12 Support existing or proposed local jurisdictions program aimed at designing land uses which encourage the use of transit and thus reduce the need for roadway expansion, reduce the number of auto trips and vehicle miles traveled (VMT), and create opportunities for residents to walk and bike.	Consistent. The proposed Project would improve transit service and support land use and transportation integration policies in existing and local plans. Transit use would increase with the Project, which would result in a reduction of auto trips and vehicle miles traveled, and create opportunities for residents to have alternative means of transportation.
3.13 Encourage local jurisdiction plans that maximize the use of existing urbanized areas accessible to transit through infill and redevelopment.	Consistent. The proposed Project would provide increased transit service within the City of San Bernardino with potential infill development and redevelopment. The improved transit services could provide opportunities for potential transit-supportive uses in the area.
3.14 Support local plans to increase density of future development located at strategic points along regional commuter rail, transit systems and activity centers	Consistent. The rail platforms and bus facility would be located in areas that could accommodate increased density. The proposed Project would improve accessibility to commercial and activity centers.
3.15 Support local jurisdiction strategies to establish mixed-use clusters and other transit-oriented developments around transit stations and along transit corridors.	Consistent. The proposed Project would provide enhanced transit service which would support transit-oriented development and mixed land use policies and strategies.
3.16 Encourage developments in and around activity centers, transportation corridors, underutilized infrastructure systems, and areas needing recycling and redevelopment.	Consistent. The proposed Project would provide support for this policy by locating new rail platforms/bus facility in activity centers or in areas which have the potential to be redeveloped or "recycled."
3.17 Support and encourage settlement patterns that contain a range of urban densities.	Consistent. The proposed Project would increase accessibility to commercial and activity centers within the City of San Bernardino.
3.18 Encourage planned development in locations least likely to cause adverse environmental impact.	Consistent. The proposed Project would be located in urbanized portions of the City of San Bernardino, which reduces the potential for environmental impacts.
3.19 National Forests shall remain permanently preserved and used as open space. SCAG shall support policies and actions that preserve open space areas identified in local, state, and federal plans.	Not applicable. The proposed Project is not located within a National Forest.
3.20 Support the protection of vital resources such as wetlands, groundwater recharge areas, woodlands, production lands, and land containing unique and endangered plants and animals.	Consistent. The proposed Project is located in an existing urban center and would generally avoid adverse impacts on any wetlands, groundwater recharge areas, woodlands, production lands, and lands containing unique and endangered plants and animals.

RCPG Policy	Consistency
3.21 Encourage the implementation of measures aimed at the preservation and protection of recorded and unrecorded cultural resources and archaeological sites.	Consistent. If archaeological and cultural resources are encountered during excavation and grading activities, the project would be conditioned to treat any discovery of such resources in accordance with state and federal guidelines for disclosure, recovery, and preservation, as appropriate.
3.22 Discourage development, or encourage the use of special design requirements, in areas with steep slopes, high fire, flood, and seismic hazards.	Consistent. The proposed Project would be conditioned to incorporate geotechnical design recommendations for structural facilities to minimize the risks associated with seismic hazards.
3.23 Encourage mitigation measures that reduce noise in certain locations, measures aimed at preservation of biological and ecological resources, measures that would reduce exposure to seismic hazards, minimize earthquake damage, and to develop emergency response and recovery plans.	Consistent. The proposed Project design would be conditioned to incorporate mitigation requirements of applicable agencies.

Source: Appendix H.
Note: To reflect project changes, ICF made revisions to the tables in Appendix H.

The proposed Project would be consistent with the goals, policies, and objectives of regional and local land use plans, including applicable *City of San Bernardino General Plan* elements and municipal zoning codes, the RTP, and SCAG's RCPG, with approval of a General Plan Amendment to the City's Circulation Map of the 2005 General Plan Update Circulation Element. Therefore, no inconsistencies with applicable plans and policies would occur and no significant impacts would result.

3.9.5 Mitigation Measures

No mitigation is required.

3.9.6 Cumulative Impacts

It is anticipated that future development in the City would result in changes to the existing land use environment through the conversion of vacant land to developed uses, or through conversions of existing land uses (e.g., from residential to commercial). Future development adjacent to the rail corridor would be reviewed for consistency with adopted land use plans and policies by the City of San Bernardino, in compliance with the requirements of the California Zoning and Planning Law, the California Subdivision Map Act, and CEQA, all of which require a plan and policy consistency analysis prior to approval of entitlements and commencement of construction. It should be noted that future projects could include General Plan amendments and/or zone changes. However, any proposed amendment or zone change would require specific consistency analysis and, upon adoption, would not conflict with the *City of San Bernardino General Pla*n or Municipal Code. As such, the cumulative effect associated with inconsistencies or conflicts from future development with adopted plans and policies would not be significant.

Also, the Project proposes the extension of Metrolink service 1 mile east from the Depot to downtown San Bernardino, construction of a bus facility, and proposed rail infrastructure improvements that would be compatible with surrounding land uses. The proposed use would

not conflict with applicable plans or policies and no zone change or general plan amendment would be required. It should be noted that the proposed Project would be consistent with the goals and policies that aim to encourage additional transit opportunities to provide for a better quality of life and a better, cleaner environment. Therefore, no cumulative adverse impacts on land use and zoning would occur with implementation of the proposed Project.

The overall growth of San Bernardino County and individual communities is driven by market forces, employment, the cost of housing, and availability of land. The location, types, and amounts of development are directed and shaped by local jurisdictions through their land use powers. Proposed improvements to rail and bus infrastructure are contemplated in the *City of San Bernardino General Plan*, as well as the County's general plan to improve transportation opportunities and reduce the reliance on personal automobiles. The extension of commuter rail service and provision of a bus facility may have an influence on the types and timing of development, allowing local jurisdictions to develop more transit-oriented development as part of specific development projects and area plans. The proposed Project is expected to accommodate existing transportation demand that exists within the rail corridor and adjacent to downtown San Bernardino. Therefore, the proposed Project would not directly generate any new development but may facilitate the intensification of development adjacent to the rail corridor, as realized in the City's general plan, the RTP, and SCAG's RCPG. No significant impacts would result.

3.10 NOISE AND VIBRATION

This section evaluates the impacts of the proposed Project on noise and vibration. The technical information within this section is based on the Noise and Vibration Technical Memorandum report (Appendix I) that was prepared for the proposed Project in February 2012.

3.10.1 Environmental Setting

Residential and commercial land uses exist in the western portion of the Project Study Area between the Depot and the undercrossing at Interstate 215 (I-215) as well as between the Depot and the BNSF Short Way. A motel exists on the southeast corner of West Rialto Avenue and South E Street. Land uses from the I-215 undercrossing to South E Street are commercial/industrial. Residences located in the area north of Rialto Avenue to 3rd Street and between I-215 on the east and K Street on the west are within a general plan land use designation of Industrial Light (IL). Zoning for this area is a mix of Industrial and Residential designations.

The current rail line has occasional/intermittent freight traffic. Approximately 150 freight cars per year travel along the rail line, at a typical rate of zero to two trains per week. The typical configuration of these trains is one or two locomotives and two to five cars.

San Bernardino International Airport (SBD) is approximately 3.5 miles east of the Project Study Area. SBD is the site of the former Norton Air Force Base, which was placed on the Department of Defense's base closure list in 1989. The last of the military facilities closed in 1995. Currently, aircraft operations take place on an irregular basis (the U.S. Customs Service uses the airport on an on-call basis; the U.S. Forest Service uses the airport as a base for planes when fighting forest fires; and several hangars are used by civilian-owned aircraft maintenance companies). In addition, a fixed-base operator operates a private charter terminal at the airport. Although SBD has a renovated passenger terminal and is capable of handling scheduled commercial service, no passenger or cargo operations use the terminal. Given the information above, as well as critical listening/observations during site visits by project staff, the Project Study Area is not affected on a regular basis by aircraft noise from SBD.

3.10.1.1 Noise and Vibration-Sensitive Land Uses

Noise- and vibration-sensitive land uses generally consist of residences, schools, libraries, hospitals/convalescent homes, parks, and recreational areas. Within the Project Study Area, residential land uses in the western portion of the rail corridor and the motel at the eastern end of the Project Study Area are considered noise- and vibration-sensitive. Aside from residential land uses, the nearest identified noise- or vibration-sensitive use is a recording studio, located approximately 2,000 feet from the Project Study Area and, based on a screening analysis, beyond relevant potential impact areas. The first floor of the Depot includes a passenger waiting area and a snack booth. SANBAG offices also occupy a portion of the first and second floors of this historic Depot. The general topography of the regional area is flat. The rail line is at-grade with the surrounding area, with the exception of I-215, which is elevated and above both the local terrain and the rail line.

3.10.1.2 Measurements of Existing Noise/Vibration Conditions

For information describing the characteristics, associated terms, and noise metrics used for transportation related noise and vibration, refer to Appendix I.

3.10.1.3 Noise Measurements

Existing noise conditions were measured at representative noise-sensitive locations during several rounds of measurement surveys. Measurements were conducted over a 2-day period, from Tuesday, June 29, 2010, to Wednesday, June 30, 2010, within the residential neighborhood between the Depot and I-215 and at the motel at the eastern end of the Project Study Area. Weather throughout the measurement period was acceptable for field noise measurements. Temperatures during the measurement period were warm, with light wind and moderate humidity. Noise measurements were also conducted at the Depot on May 19, 2011. Temperatures were mild, with a slight breeze and moderate humidity. An additional round of noise measurements was conducted from Monday, September 19, 2011, to Wednesday, September 21, 2011. Temperatures during the measurement period were warm, with light wind and moderate humidity.

The noise measurements are summarized below.

Appendix I contains a list of the instruments used for noise measurements and field noise measurement data sheets. The noise measurement locations are shown in Figure 3.10-1.

Two types of noise measurements were conducted: short term (ST) and long term (LT). Each of the ST measurements, conducted at seven locations, was approximately 15 minutes in duration. The noise measurements are considered representative of the hourly noise level occurring at the measurement sites.

Four of the ST noise measurements (ST-1 through ST-4) were conducted in or adjacent to exterior residential private spaces (rear yards or side yards) adjacent to the Project Study Area, ST-5 was conducted in a motel room at the eastern terminus of the project alignment, and ST-6 and ST-7 were conducted at the Depot. LT noise data were used as the basis for the impact analysis of the residential land uses. ST noise data (ST-6 and ST-7) were used as the basis for the impact analysis of the Depot. The remaining ST noise data (i.e., ST-1 through ST-5) serve to characterize further the existing noise environment in the Project Study Area.

A “precision” grade (Type 1) sound level meter was used to conduct the ST noise measurements. All of the ST measurements were attended (i.e., performed by persons with training and experience in measuring environmental sound). In addition to operating the sound level meter, the noise specialist actively observed and noted the acoustical, weather, and community activity conditions. The LT noise measurements were unattended. A Type 2 community noise analyzer was deployed at representative noise-sensitive locations along the Project Study Area to collect continuous hour-by-hour sound level data for a minimum period of 24 hours.

The sound measurement instruments meet the requirements of American National Standard S1.4-1983 and International Electrotechnical Commission Publications 804 and 651, and the community noise measurements were conducted using procedures consistent with the standards of the practice.

The ST and LT noise measurement data, including locations, are summarized in Table 3.10-1 and Table 3.10-2.

Table 3.10-1. Short-Term Noise Measurement Data Summary

Site ID	Measurement Location	Measurement Period: Start Date	Start Time	Duration (minutes: seconds)	Noise Sources	Measurement Results, dBA: L_{eq}	L_{max}	L_{min}	L_{90}	L_{50}	L^{10}
ST-1	Residential land use at 118 N. I St.	6/29/2010	11:33	15:00	Distant rail, distant traffic, children playing, construction	57	68	52	54	56	59
ST-2	Residential land use at 907 W. Rialto Ave.	6/29/2010	14:25	15:00	Traffic, distant construction, birds	63	76	54	57	60	65
ST-3	Residential land use at 961 2nd St.	6/29/2010	12:28	15:00	Traffic, distant construction	59	79	56	53	56	67
ST-3A			14:51	15:00	Traffic, distant construction	57	73	48	50	54	60
ST-4	Residential land use at 907 W 2nd St.	6/29/2010	13:08	15:00	Traffic, distant construction, dog, distant rail	59	80	49	50	53	57
ST-5	Transient Residential land use (motel) at 111 S. E St.– Room 117 (interior noise measurement)	6/29/2010	13:40	15:00	Traffic	40	63	35	36	39	44
ST-6	Santa Fe Depot – exterior measurement on station platform overlooking rail yard	5/19/11	9:05	15:00	Rail activities (freight handling)	61	76	54	56	58	64
ST-6A			9:20	15:00		64	75	51	55	60	68
ST-7	Santa Fe Depot – interior measurement inside SANBAG lobby area	5/19/11	9:30	15:00	Faintly audible rail activities outside	41	47	40	40	41	42

Table 3.10-2. Long-Term Noise Measurement Data Summary

Site ID	Location	Measurement Period: Start Date	Start Time	Duration (hours)	Measurement Results (dBA): 24-hour L_{eq}	L_{dn}	L_{90}	L_{50}	L_{10}
LT-1	126 N. I St.	6/29/2010	12:00	24	57	61	58	61	65
LT-2	907 W. Rialto Ave.	9/20/2011	12:00	24	64	69	56	60	67
LT-3	210 N. Grape Ct.	9/21/2011	13	24	65	66	46	53	69

Figure 3.10-1
Rail Noise Impact Areas
Downtown San Bernardino Passenger Rail Project

For the measurements conducted within the residential and commercial land uses (ST-1 through ST-5), noises associated with typical urban/residential land use activities dominate the noise environment in the Project Study Area (e.g., local and distant traffic, children playing, distant construction activities). The exterior ambient 15-minute noise levels ranged from 57 A-weighted decibels (dBA) equivalent sound level (L_{eq}) at locations ST-1 and ST-3 to 63 dBA L_{eq} at ST-2. The interior noise level at ST-5 was 40 dBA L_{eq}. For noise measurements ST-6 and ST-7 (conducted at the Depot), the dominant noise source was freight handling (i.e., moving rail cars, loading and unloading containers) within the rail yard immediately north of the Depot. The measured noise levels during two exterior noise measurements conducted on the existing station platform area varied from 61 to 64 dBA L_{eq}. The interior noise measurement conducted in the SANBAG first-floor lobby area was 41 dBA L_{eq}.

LT-1 was conducted at 126 North I Street in San Bernardino. The measured data at this location are considered to be representative of noise levels at locations not directly adjacent to the arterial roadways in the Project Study Area. The day-night average sound level (L_{dn}) at location LT-1 was 61 dBA. The LT data plot presented in Appendix C shows the diurnal noise levels from hour to hour for LT-1. The quietest hours of the 24-hour period occurred between 2 a.m. and 4 a.m. The lowest 1-hour L_{eq} measured was 51 dBA, occurring between 2 a.m. and 3 a.m. and again between 3 a.m. and 4 a.m. The loudest hourly noise level (62 dBA L_{eq}) occurred between 11 a.m. and 12 p.m.

LT-2 was conducted at 907 West Rialto Avenue in San Bernardino. The measured data at this location are considered to be representative of noise levels at locations adjacent to the arterial roadways in the Project Study Area. The L_{dn} at location LT-2 was 69 dBA. The LT data plot presented in Appendix C shows the diurnal noise levels from hour to hour for LT-2. The quietest hours of the 24-hour period occurred between 1 a.m. and 2 a.m. The lowest 1-hour L_{eq} measured was 55 dBA L_{eq}. The loudest hourly noise level (67 dBA L_{eq}) occurred between 3 p.m. and 4 p.m. and between 7 a.m. and 8 a.m.

LT-3 was conducted at 211 North Grape Court in San Bernardino, adjacent to the portion of the rail alignment between the Depot and the IEMF. The measured data at this location are considered to be representative of noise levels at locations adjacent to the rail line in the western portion of the Project Study Area. The L_{dn} at location LT-3 was 66 dBA. The LT data plot presented in Appendix C shows the diurnal noise levels from hour to hour for LT-3. The quietest hours of the 24-hour period occurred between 2 a.m. and 3 a.m. The lowest 1-hour L_{eq} measured was 46 dBA L_{eq}. The loudest hourly noise level (75 dBA L_{eq}) occurred between 7 a.m. and 8 a.m.

3.10.1.4 Vibration Measurements

Vibration measurements were not conducted at this stage of the Project. Existing vibration sources in the Project Study Area include motor vehicle traffic along local roads and I-215 as well as trains on the existing tracks.

3.10.2 Regulatory Setting

Refer to Section 4.3.6, “Noise and Vibration,” of this document for a detailed discussion regarding the regulatory setting for federal laws and guidelines are relevant to the assessment of ground transportation noise and vibration impacts.

3.10.1.5 State Regulations

Noise

At the state level, the California Noise Control Act was enacted in 1973 (Health and Safety Code Section 46010 et seq.). It provides for the Office of Noise Control in the Department of Health Services to provide assistance to local communities developing local noise control programs, and work with the Office of Planning and Research to provide guidance for the preparation of the required noise elements in city and county general plans, pursuant to Government Code Section 65302(f). In preparing the noise element, a city or county must identify local noise sources and analyze and quantify to the extent practicable current and projected noise levels for various sources, including highways and freeways, passenger and freight railroad operations, ground rapid transit systems, commercial, general, and military aviation and airport operations, and other ground stationary noise sources. Noise level contours must be mapped for these sources, using either the community noise equivalent level (CNEL)[6] or L_{dn},[7] and used as a guide in land use decisions to minimize the exposure of community residents to excessive noise. Airports are subject to the noise requirements set by the Federal Aviation Administration (FAA) and noise standards under the California Code of Regulations (CCR), Title 21, Section 5000.

CEQA (Section 21000 et seq.) is a state statute passed in 1970. CEQA requires state and local agencies to identify the significant environmental impacts of their actions, including potential significant impacts from noise and vibration, and avoid or mitigate those impacts, when feasible.

The State of California has established land use compatibility criteria that provide guidance on the compatibility of different types of land uses based upon the existing community noise level. These guidelines are often adopted by city and county agencies for land use planning purposes. However, the State of California has not adopted specific noise criteria that are applicable to rail projects. Therefore, the noise impact assessment has been based on the guidelines provides by FTA.

Vibration

At the state level, vibrations limits have not been set.

3.10.1.6 Local Regulations

Noise

The proposed Project would be located in the City of San Bernardino. Local noise standards are addressed in the Noise Element of the City's General Plan (Chapter 14). The Noise Element sets forth goals, policies, and implementation guidelines to ensure land use compatibility with respect to noise. Among the objectives is the desire to ensure that excessive noise levels do not significantly affect citizens of the City. The policies address the siting of new noise-sensitive projects, suggesting that they are to be located where noise from mobile noise sources (i.e. motor vehicle, rail, or aircraft) will not exceed an existing or projected future exterior noise level of 65 dBA L_{dn} or an interior noise level of 45 dBA L_{dn} (Goal 14.1).

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[6] CNEL adds a 5-dBA "penalty" for the evening hours between 7:00 p.m. and 10:00 p.m. in addition to a 10-dBA penalty between the hours of 10:00 p.m. and 7:00 a.m. CNEL is generally only used in California.

[7] L_{dn} is a 24-hour day and night A-weighed noise exposure level that accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night ("penalizing" nighttime noises). Noise between 10:00 p.m. and 7:00 a.m. is weighted (penalized) by adding 10 dB to take into account the greater annoyance of nighttime noises. Consistent with FTA requirements, the noise impact analysis considers noise impacts in terms of L_{dn}.

The Noise Element also promotes the reduction of noise from transportation-related sources, including rail (Goal 14.2). Although the City's Noise Element acknowledges that the regulation of noise from the operation of railroad trains is preempted by state and federal law from local noise regulation while operating within dedicated rights-of-way, the following policies address rail operations within the City:

- Policy 14.2.15: "Work with all railroad operators in the City to properly maintain lines and establish operational restrictions during the early morning and late evening hours to reduce impacts in residential areas and other noise sensitive areas."
- Policy 14.2.16: "Work with all railroad operators to install noise mitigation features where operations impact existing adjacent residential or other noise-sensitive uses."
- The City regulates noise sources (such as construction noise) that are not pre-empted from local noise control. The following policies pertain to construction noise:
- Policy 14.3.1: "Require that construction activities adjacent to residential units be limited as necessary to prevent adverse noise impacts."
- Policy 14.3.2: "Require that construction activities employ feasible and practical techniques that minimize the noise impacts on adjacent uses."
- Additionally, the City's Municipal Code Noise Ordinance (Chapter 8.54, Noise Control) prohibits disturbance from construction noise except between the hours of 7 a.m. and 8 p.m. (Section 8.54.070) with certain exceptions. Exceptions (contained in Section 8.54.060, Exemptions) include the following:
- "H. Construction, operation, maintenance, and repairs of equipment, apparatus, or facilities of park and recreation departments, public work projects, or essential public services and facilities…"
- "I. Construction, repair, or excavation work performed pursuant to a valid written agreement with the City, or any of its political subdivisions, which provides for noise mitigation measures."
- "J. Any activity to the extent that regulation thereof has been pre-empted by state or federal law."

Vibration

The City of San Bernardino does not have vibration standards or thresholds in its municipal code or other ordinances. Vibration from transportation systems is exempt from local regulations.

3.10.3 Thresholds of Significance

For the purposes of the analysis in this EIR, in accordance with Appendix G of the State *CEQA Guidelines*, the proposed Project would have a significant environmental impact under CEQA related to noise if it would:

- Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies.
- Expose persons to or generate excessive groundborne vibration or groundborne noise levels.
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

- Be located within an airport land use plan area, or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels.
- Result in a substantial temporary or periodic increase in ambient noise levels in the project area above levels existing without the project.

3.10.4 Project Impacts

Impact NOI-1: Result in noise levels in excess of established standards

Construction of the proposed Project would result in temporary but relatively high levels of noise along the rail corridor (see Appendix I for a summary of the construction noise impact data). During the noisiest periods of construction, noise impacts are predicted to occur at Category 2 (i.e., residential) land uses along the project rail corridor at distances of up to approximately 240 feet under daytime impact criteria and approximately 410 feet under nighttime impact criteria. Although it is anticipated that most construction work would take place during daytime hours, some work may occur during nighttime hours (e.g., work at major street crossings). This would be considered a potentially significant impact. Implementation of Mitigation Measures NOI-1 (Employ Noise-Reducing Measures during Construction) and NOI-2 (Prepare a Community Awareness Program for Project Construction) would reduce this impact to less-than-significant levels.

Impact NOI-2: Result in excessive groundborne vibration or groundborne noise levels

Construction of the proposed Project would result in temporary vibration along the rail corridor from use of heavy equipment and machinery (see Appendix I for the construction vibration data summary). FTA construction vibration damage thresholds would not be exceeded at any of the representative receiver locations, indicating that the potential for damage to any of the structures along the rail corridor is low. FTA construction annoyance criteria would be exceeded at representative receivers as far as 120 feet from the rail corridor during operation of construction equipment, with relatively high levels of vibration from equipment such as vibratory rollers. The construction vibration (annoyance) impact is considered significant. Implementation of Mitigation Measure NOI-2 (Prepare a Community Awareness Program for Project Construction) would reduce this impact to less-than-significant levels.

Operation of the proposed Project would result in groundborne vibration along the rail corridor. Impacts are predicted to occur at residential land uses within the area near the rail corridor located east of the Depot and west of I-215 (represented by Receivers 11 and 15) and within the area near the rail corridor located west of the Depot and north of the IEMF (Receiver Site 35) (see Appendix I for a summary regarding these locations).

The groundborne vibration impact would be considered potentially significant. Implementation of Mitigation Measure NOI-3 (Use Ballast Mats, Resiliently Supported Ties, or Measures of Comparable Effectiveness on Portions of the Rail near Sensitive Receptors) would reduce this impact to less-than-significant levels. No groundborne noise impacts are anticipated from implementation of the proposed Project.

Impact NOI-3: Result in permanent increases in ambient noise levels in the project area

Rail

The results of the rail noise impact assessment are summarized in Appendix I. Increased rail noise would result in moderate and severe impacts at residential land uses along the rail corridor. Moderate impacts from project-related rail noise are predicted to occur at residential land uses near the rail corridor located east of the Depot and west of I-215 (represented by Receivers 6, 7, 14, 16, 24, 26, 27, 31, 32) and within the area near the rail corridor located west of the Depot and north of the IEMF (Receiver 37).

Significant impacts from project-related rail noise are predicted to occur at residential land uses within the area near the rail corridor located east of the Depot and west of I-215 (represented by Receivers 11, 15, 17, 18, 19, 22, 25, 28, 29) and within the area near the project alignment located west of the Depot and north of the IEMF (Receivers 35 and 36). In summary, the impact would be considered moderate at a total of 10 receivers, representing 28 residential land uses, and significant at a total of 11 receivers, representing 30 residential land uses.

Quiet Zones

The establishment of a “quiet zone” would require implementation of a number of Supplemental Safety Measures (SSMs), such as four-quadrant gate systems, temporary closures at crossings, etc., which would allow the rail operator to not sound the horn on the locomotives as otherwise proscribed by the safety rules of the FRA. Implementation of Mitigation Measure NOI-4 (Establish Quiet Zones) would reduce the number of affected receivers. With implementation of Quiet Zones for the at-grade crossings at 2nd Street, Rialto Avenue/I Street, and G Street, moderate impacts from project-related rail noise are predicted to occur at residential land uses within the area near the Project Study Area located east of the Depot and west of I-215 (represented by Receivers 11, 17 18, 19, 22, 25, 28, 29) and within the area near the Project Study Area located west of the Depot and north of the IEMF (Receiver 37). Significant impacts from project-related rail noise are predicted to occur at residential land uses within the area near the Project Study Area located east of the Depot and west of I-215 (represented by Receiver 15) and within the area near the Project Study Area located west of the Depot and north of the IEMF (Receivers 35 and 36). In summary, with implementation of Quiet Zones, the impact would be considered moderate at a total of nine receivers, representing 19 residential land uses, and significant at a total of three receivers, representing 14 residential land uses.

Sound barriers in the form of solid walls were considered for areas in which residual impacts would still occur following implementation of Quiet Zones. The sound walls shown in Table 8-2 of the technical report (Appendix I) would be able to reduce all but two of the noise impacts to “No Impact” levels.

However, there are other factors that should be considered regarding the construction of sound barriers before they are proposed as mitigation along the rail alignment. The physical scale of the sound barriers at these locations would make them an unusual feature relative to the existing land uses surrounding the rail corridor. Construction of sound barriers and the installation of hundreds of feet of tall (10- to 12-foot) walls would create a distinct and significant aesthetic change to the community character of the area and may result in a significant and adverse impact on adjacent land uses, including the division of an established community.

It should also be noted that land uses from the I-215 undercrossing westward to South E Street are predominantly commercial/industrial. Residences located north of Rialto Avenue to 3rd Street and between I-215 on the east and K Street on the west are within a general plan land use designation of "IL," and zoning for this area is a mix of Industrial and Residential designations. In this context, this analysis considers the most conservative land use category (i.e., residential uses) within the Project Study Area even though it contains a vertical mix of land uses, with residential uses being only one of the many types of uses observed along the rail corridor.

Building Noise Insulation

There are three residential structures (represented by Receivers 11 and 15) in the Project Study Area where sound barriers would not be effective as noise reduction, as detailed in Appendix I. The mitigation measure determined to be most effective and feasible for Receivers 11 and 15 was building noise insulation (NOI-5: Provide Building Noise Insulation to Severe- and Moderate-Impact Residences Where Sound Barriers Are Infeasible). Existing windows, doors, and seals facing the alignment would be replaced with acoustically rated items, and any gaps would be sealed and caulked. Additionally, air conditioning would be provided to ensure that the windows could remain closed. The FTA manual estimates that the cost for retrofit of a typical single-family home is $25,000 to $50,000. Thus, the estimated cost for the retrofit of the two residences, represented by Receiver 11, is $50,000 to $100,000. With implementation of the noise insulation, impacts at Receivers 11 and 15 would be reduced to a level of no impact.

Rail Lubrication

Wheel squeal on tight-radius curves can be a particularly annoying community noise. It is usually possible to reduce wheel squeal substantially with wayside applicators that apply a friction control material to the top of the rail and/or a lubricant to the gage face of the rail.

Installation of wayside applicators (Mitigation Measure NOI-6: Lubricate Wayside Rail) is recommended for all major curves on the project alignment. If the wayside applicators are not able to reduce squeal to an acceptable level, additional reductions may be possible through customized profiling of the rail to reduce the forces required for trains to negotiate the curves.

Depot – Category 3 Land Use

Depot rail noise is addressed separately because it is a Category 3 land use and uses the L_{eq} noise metric rather than the L_{dn} noise metric. There would be no impact at offices/meeting rooms within the Deport resulting from the Project (see Appendix I for a summary of Depot rail noise data). No mitigation is required.

Traffic

Given the data included in Appendix I, none of the representative modeled receivers would experience an increase in traffic noise equating to either a moderate or severe impact. Therefore, no impact would occur, and no mitigation is required.

Omnitrans Bus Facility and Rail Platform Parking Lot

Noise from the proposed Omnitrans Bus Facility and the Project's proposed parking lot adjacent to the rail platform near Rialto Avenue and E Street was evaluated. The FTA's screening procedure calculations found that the nearest noise-sensitive land use is outside the adjusted

screening distance for the bus facility and parking lot. Therefore, there would be no impact from the proposed parking lot. No mitigation is required.

Impact NOI-4: Result in substantial temporary or periodic increases in ambient noise levels in the Project Study Area.

See discussion under Impact NOI-1. Construction of the proposed Project would result in temporary but relatively high levels of noise along the rail corridor (see Appendix I for a summary of the construction noise data). Noise impacts are predicted to occur at Category 2 land uses along the rail corridor at distances of up to approximately 240 feet under daytime impact criteria and approximately 410 feet under nighttime impact criteria. Although it is anticipated that most construction work would take place during daytime hours, some work may require nighttime work (e.g., work at major street crossings). This would be considered a potentially significant impact. Implementation of Mitigation Measures NOI-1 (Employ Noise-Reducing Measures during Construction) and NOI-2 (Prepare a Community Awareness Program for Project Construction) would reduce this impact to less-than-significant levels.

Impact NOI-5: Be located within an airport land use plan area, or, where such a plan has not been adopted, within two miles of a public airport, public use airport or private airstrip.

The rail corridor is not located within 2 miles of an airport or private airstrip. Ontario International Airport is located approximately 25 miles southwest of the City, and Riverside Municipal Airport is located approximately 12 miles south. The Rialto Airport is located approximately 8 miles northwest of the western portion of the rail corridor, and the San Bernardino International Airport is located approximately 2.5 miles east of the proposed bus facility site. The Redlands Municipal Airport is also located east of I-215. As the proposed Project is not within 2 miles of an airport, no significant impact would result.

3.10.5 Mitigation Measures

NOI-1: Employ Noise-Reducing Measures during Construction. The project sponsor will require its construction contractors to employ measures to minimize and reduce construction noise. Measures that will be implemented to reduce construction noise to acceptable levels include the following:

- Comply with local noise regulations and limit construction hours to the extent practicable (i.e., between the hours of 7:00 a.m. and 8:00 p.m.).
- Use available noise suppression devices and techniques, including:
  - Equipping all internal combustion engine-driven equipment with mufflers, air-inlet silencers, and any other shrouds, shields, or other noise-reducing features that are in good operating condition and appropriate for the equipment (5 to 10 dB reduction possible).
  - Using “quiet” models of air compressors and other stationary noise sources where such technology exists.
  - Using electrically powered equipment instead of pneumatic or internal combustion-powered equipment, where feasible.

- Using noise-producing signals, including horns, whistles, alarms, and bells, for safety-warning purposes only.
- Locating stationary noise-generating equipment, construction parking, and maintenance areas as far as reasonable from sensitive receivers adjoining or near the Project Study Area.
- Prohibiting unnecessary idling of internal combustion engines (i.e., in excess of 5 minutes).
- Placing temporary soundwalls or enclosures around stationary noise-generating equipment when located near noise-sensitive areas (5 to 15 dB reduction possible).
- Ensuring that project-related public address or music systems are not audible at any adjacent receiver.
- Notifying adjacent residents in advance of construction work.

NOI-2: Prepare a Community Awareness Program for Project Construction. In consultation with the representatives of the neighboring cities, the construction contractor will prepare and maintain a program to enhance community awareness of project construction issues, including noise, vibration, nighttime noise, nighttime lighting, and roadway closures. Initial information packets will be prepared and mailed to all residences within a 500-foot radius of project construction, with updates prepared as necessary to indicate new scheduling or processes. A project liaison will be identified who will be available to respond to community concerns regarding noise, vibration, and light.

NOI-3: Use Ballast Mats, Resiliently Supported Ties, or Measures of Comparable Effectiveness on Portions of the Rail near Sensitive Receivers. The project sponsor's design team will ensure the track design specifications include the use of ballast mats or resiliently supported ties (under-tie pads) on portions of the track near sensitive receivers to minimize project-related groundborne vibration generated when the trains pass sensitive receivers.

NOI-4: Establish Quiet Zones. SANBAG will support the establishment of quiet zones by constructing certain supplemental safety measures (SSMs) that, when implemented at an existing grade crossing, allow the governing agency or railroad to designate a quiet zone. Under FRA and CPUC guidelines, SSMs allowed in California include the installation of raised medians, placement of exit gates with vehicle-presence detection systems, and permanent closure. SSMs will be established at the following grade crossings within the Project Study Area: 2nd Street, Rialto Avenue/I Street, and G Street.

NOI-5: Provide Building Noise Insulation to Severe- and Moderate-Impact Residences Where Sound Barriers Are Infeasible. For the three residential structures represented by Receivers 11 and 15, the project sponsor will provide sound insulation. Effective treatments include caulking and sealing gaps in the building façade and installing new doors and windows that are specially designed to meet acoustical transmission-loss requirements. Exterior doors facing the noise source will be replaced with well-gasketed solid-core wood doors and well-gasketed storm doors. Acoustical windows are usually made of multiple layers of glass with air spaces between to provide noise reduction. Acoustical performance ratings are published in terms of Sound Transmission Class (STC) for these special windows. A minimum STC rating of 39 will be used on any window exposed to the noise source. Additional building sound insulation, if needed, will be provided by sealing vents and ventilation openings and relocating them to a side of the building and away from the noise source. Particularly in the case of

Receiver 15, it may be necessary to increase the mass of the building façade of wood-frame houses by adding a layer of sheathing to the exterior walls.

To ensure that the windows and doors can be kept closed while still maintaining habitable conditions, a central heating, ventilation, and air-conditioning (HVAC) system will also be provided.

NOI-6: Lubricate Wayside Rail. Wayside applicators will be installed for all tight-radius curves on the project alignment. If the wayside applicators are not able to reduce squeal to an acceptable level, additional reductions may be possible through customized profiling of the rail to reduce the forces required for trains to negotiate the curve.

3.10.6 Level of Significance after Mitigation

Mitigation Measures NOI-1 through NOI-6 would reduce noise and vibration impacts during construction, and impacts would be less-than-significant after mitigation. However, operational rail noise would remain significant with implementation of mitigation measures. Therefore, the Project would result in a significant impact from rail noise during operation.

3.10.7 Cumulative Impacts

The noise and vibration analysis contained herein represents a cumulative impact analysis, looking at the impacts of the proposed Project and the growth in traffic and other noise-generating sources anticipated in the region. Considerable construction noise impacts could occur if other projects are constructed concurrently with and in the general vicinity of the proposed Project. However, with implementation of mitigation measures, construction-related effects would not result in a significant cumulative impact. Additionally, adverse impacts on rail noise during operations would represent a cumulative impact. Mitigation is provided to reduce significant impacts to less-than-significant levels where feasible and reasonable; however, significant noise impacts would remain during operations. Therefore, the Project would contribute to a significant cumulative impact.

3.11 TRANSPORTATION AND TRAFFIC

This section evaluates the impacts of the proposed Project on transportation and traffic. The technical information within this section is based on the following reports (Appendix J) that were prepared as part of the technical analysis for the proposed Project:

- Downtown San Bernardino Passenger Rail Project (With 3rd Street Closure) Draft Traffic Impact Analysis (Iteris, Inc. April 10, 2012).
- Redlands Rail Metrolink First Mile Extension Project Draft Construction Phasing Traffic Analysis Report (Iteris, Inc. April 14, 2011).

3.11.1 Environmental Setting

The transportation network in the vicinity of the rail corridor accommodates a variety of transportation modes, including vehicular, rail, bus, and nonmotorized travel.

3.11.1.1 Vehicular Traffic

The study area for the analysis of transportation impacts is shown in Figure 3.11-1. Located in downtown San Bernardino, south and east of an existing freight yard, the study area, which is bisected by I-215, includes the entire Project Study Area. It should be noted that an I-215 widening project is currently under construction within the study area. Existing intersection geometrics (e.g., the number of through and turn lanes) and volumes are shown in Figure 3.11-2.[8] Existing peak-hour traffic volumes are provided in Figure 3.11-3.

Level of service (LOS) is a measure of the quality of operational conditions within a traffic stream. It is generally expressed in terms of speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Levels range from A to F, with LOS A being a free-flow condition and LOS F representing extreme congestion. In addition to the LOS definition, a volume-to-capacity (V/C) ratio is used to provide a more quantified description of traffic conditions at intersections. The V/C ratio is the ratio of the existing or projected traffic volumes to the intersection's design capacity. The higher the V/C ratio, the more congested the intersection will be. Table 3.11-1 provides definitions for six levels of service.

Within the traffic study area, freeway ramp intersections fall under the jurisdiction of Caltrans. The remaining study intersections fall under the jurisdiction of the City of San Bernardino. Both of these jurisdictions have an LOS standard of D. Intersections operating at LOS E or F are considered unsatisfactory. Table 3.11-2 summarizes the existing LOS at the traffic study intersections. All traffic study intersections currently operate at a satisfactory LOS.

[8] For this analysis, 2009 data were used to represent the "existing" condition. The I-215 improvements project, currently under construction in the vicinity of the proposed Project, has resulted in atypical traffic conditions in the area during recent time periods (2010 to 2011). Therefore, 2009 data were substituted to present a more typical condition. For locations where 2009 traffic counts were not available, new counts were conducted in April 2010, February 2011, and April 2011.

Figure 3.11-1
Study Intersections
Downtown San Bernardino Passenger Rail Project

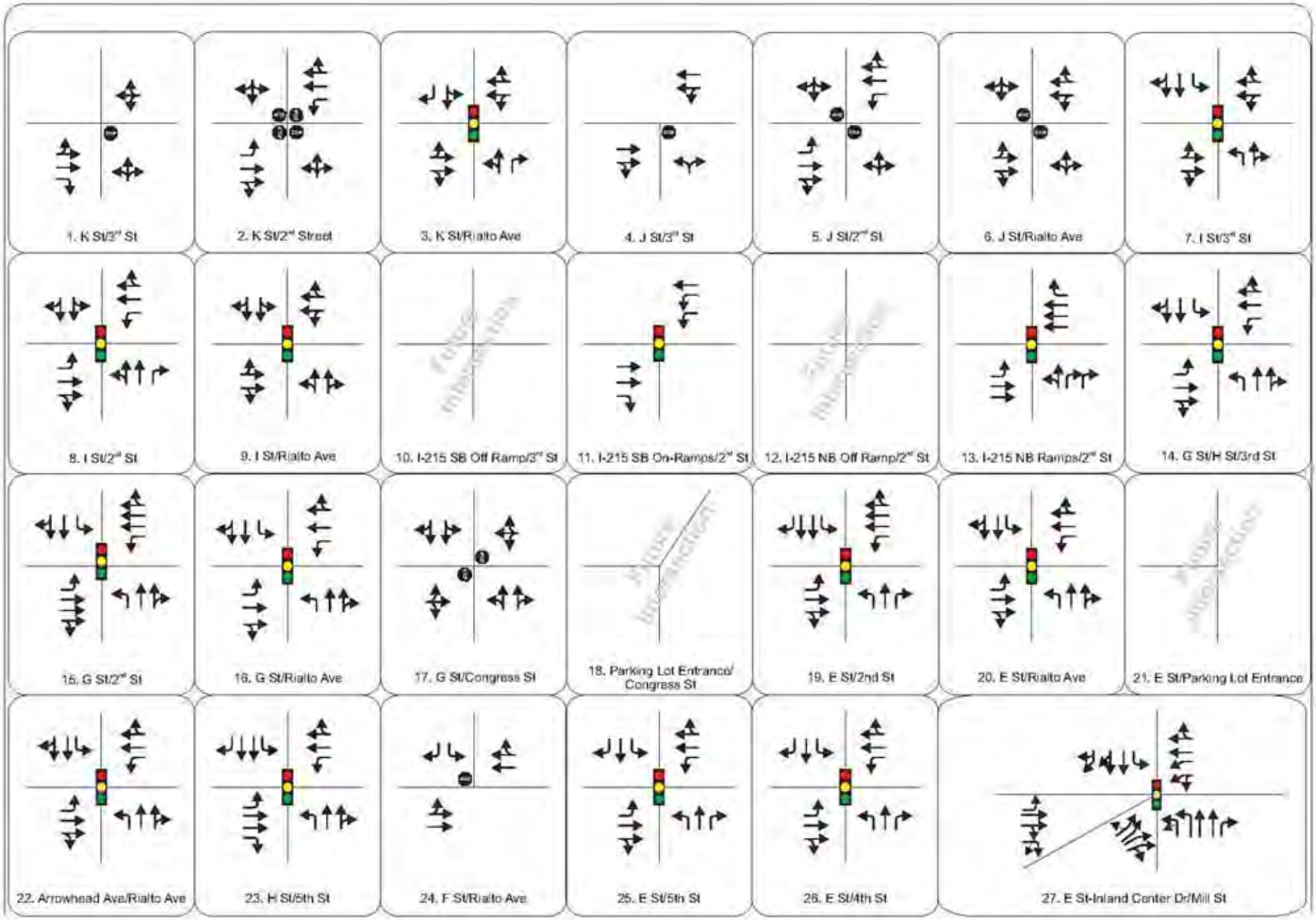
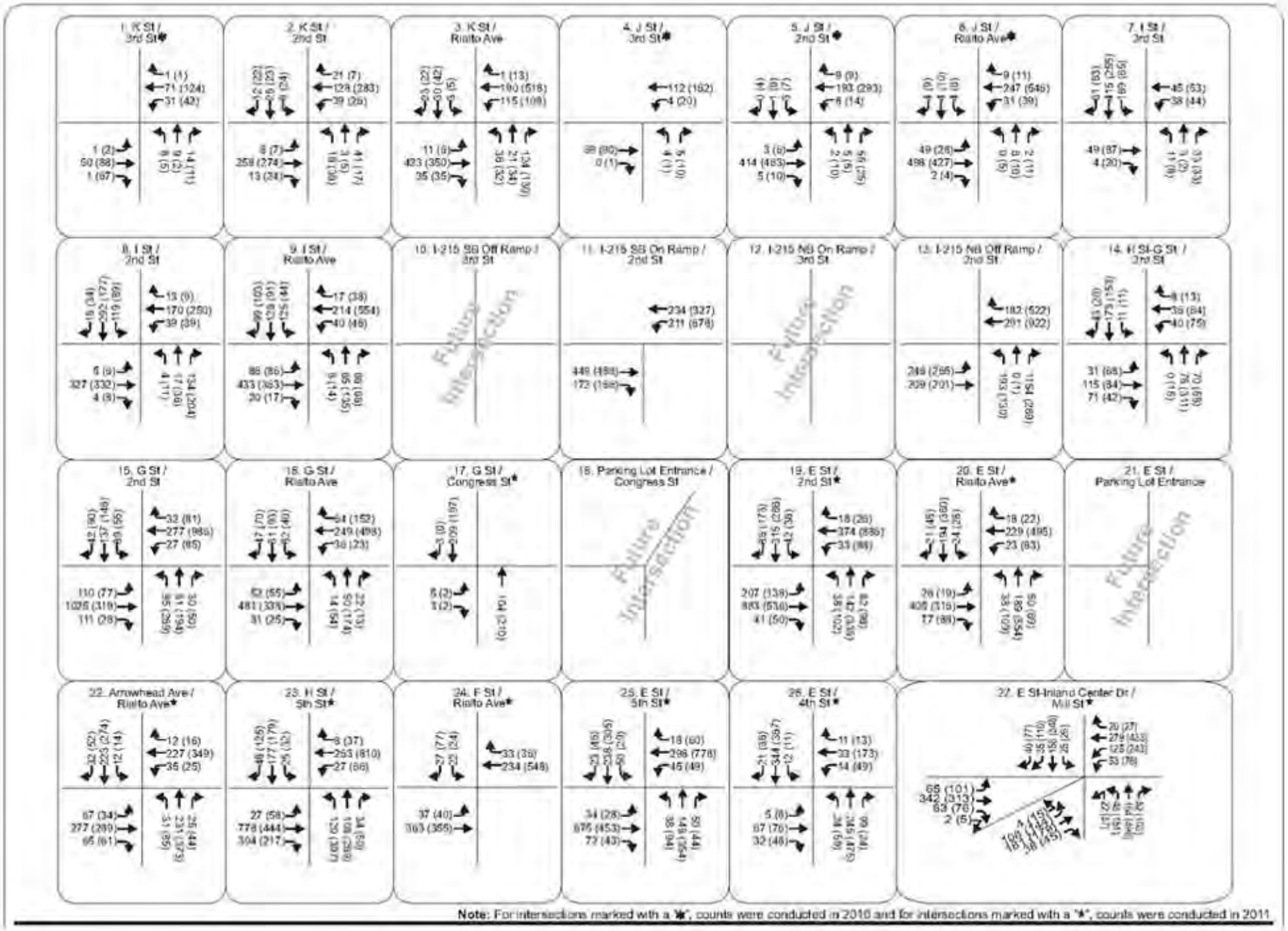


Figure 3.11-2
Existing Lane Geometry
Downtown San Bernardino Passenger Rail Project



Note: For intersections marked with a ✱, counts were conducted in 2010 and for intersections marked with a '*', counts were conducted in 2011.

Figure 3.11-3
Existing (2009/2010/2011) Peak-Hour Volumes
Downtown San Bernardino Passenger Rail Project

Table 3.11-1. Descriptions of Levels of Service

LOS	V/C Ratio[1]	Description[1]	Delay – Signalized Intersection (seconds per vehicle)[2]	Delay – Unsignalized Intersection (seconds per vehicle)[2]
A	0.0 – 0.60	There are no cycles that are fully loaded; few are even close to loaded. No approach phase is fully utilized by traffic, and no vehicle waits longer than one red signal indication. Typically, the approach appears quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	< 10	< 10
B	0.61 – 0.70	Represents stable operation. An occasional approach phase is fully utilized, and a substantial number are approaching full use. Many drivers begin to feel somewhat restricted within platoons of vehicles.	> 10 and < 20	> 10 and < 15
C	0.71 – 0.80	Stable operation continues. Full signal cycle loading is still intermittent but more frequent. Occasionally, drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles.	> 20 and < 35	> 15 and < 25
D	0.81 – 0.90	Encompasses a zone of increasing restriction, approaching instability. Delays to approaching vehicles may be substantial during short peaks within the peak period, but enough cycles with lower demand occur to permit periodic clearance of developing queues, thereby preventing excessive backups	> 35 and < 55	> 25 and < 35
E	0.91 – 1.00	Represents the most vehicles that any particular intersection approach can accommodate. At capacity (V/C = 1.00), there may be long queues of vehicles waiting upstream of the intersection, and delays may be great (up to several signal cycles).	> 55 and < 80	> 35 and < 50
F	> 1.00	Represents jammed conditions. Backups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the approach under consideration; hence, volumes carried are not predictable. V/C values are highly variable because full utilization of the approach may be prevented by outside conditions.	> 80	> 50

[1] Source: City of San Bernardino 2005a.
[2] Source: Appendix J

Table 3.11-2. Existing (2009/2010/2011) Peak-Hour Levels of Service

			AM Peak Hour			PM Peak Hour		
	Intersection Name	Control	LOS	Delay (seconds)	V/C	LOS	Delay (seconds)	V/C
1	K Street and 3rd Street	Two-way stop	A	2.9	N/A	A	1.6	N/A
2	K Street and 2nd Street	All-way stop	A	8.5	0.20	A	9.3	0.24
3	K Street and Rialto Avenue	Signal	B	18.7	0.25	C	20.9	0.31
4	J Street and 3rd Street	Two-way stop	A	0.6	N/A	A	0.9	N/A
5	J Street and 2nd Street	Two-way stop	A	1.1	N/A	A	1.1	N/A
6	J Street and Rialto Avenue	Two-way stop	A	1.3	N/A	A	1.5	N/A
7	I Street and 3rd Street	Signal	B	10.9	0.18	B	11.5	0.14
8	I Street and 2nd Street	Signal	B	14.1	0.25	B	14.2	0.20
9	I Street and Rialto Avenue	Signal	C	21.2	0.29	C	20.3	0.26
10	1-215 southbound off-ramp and 3rd Street		Intersection does not exist					
11	1-215 southbound on-ramp and 2rd Street	Signal	A	8.3	0.22	B	10.3	0.42
12	1-215 northbound on-ramp and 3rd Street		Intersection does not exist					
13	1-215 northbound ramps and 2rd Street	Signal	C	20.1	0.41	C	21.1	0.47
14	G Street and 3rd Street	Signal	C	26.6	0.17	B	19.9	0.21
15	G Street and 2nd Street	Signal	C	25.2	0.41	C	27.6	0.48
16	G Street and Rialto Avenue	Signal	B	13.1	0.27	B	12.2	0.28
17	G Street and Congress Street	Two-way stop	A	0.2	N/A	A	0.1	N/A
18	Parking lot entrance and Congress Street		Intersection does not exist					
19	E Street and 2nd Street	Signal	C	23.4	0.55	C	28.5	0.68
20	E Street and Rialto Avenue	Signal	C	22.4	0.30	B	19.3	0.41
21	E Street and parking lot entrance		Intersection does not exist					
22	Arrowhead Avenue and Rialto Avenue	Signal	B	13.0	0.21	B	14.1	0.30
23	H Street and 5th Street	Signal	C	20.6	0.48	C	25.9	0.70
24	F Street and Rialto Avenue	One-way stop	A	1.3	N/A	A	1.6	N/A
25	E Street and 5th Street	Signal	B	11.3	0.46	B	11.5	0.55
26	E Street and 4th Street	Signal	C	26.0	0.40	C	26.4	0.50
27	E Street-Inland Center Drive and Mill Street	Signal	D	35.7	0.45	D	39.2	0.59

Source: Appendix J.

3.11.1.2 Rail Operations

Passenger train operations at the Depot consist of Metrolink commuter trains and Amtrak long-distance trains, which in many cases share infrastructure with BNSF freight trains. Platforms at the Depot serve Metrolink and Amtrak passengers. Platform A is on the north side of the tracks and serves both operations, while Platform B is on the south side and serves only Metrolink operations. There are two tracks for regular passenger service, with additional storage tracks also located at the Depot (HDR Engineering, Inc. 2011a).

The Depot also facilitates connections to other transit providers, including Omnitrans, Mountain Area Regional Transit Authority (MARTA), and the Victor Valley Transit Authority (VVTA) (Southern California Regional Rail Authority 2011).

Metrolink

Currently, Metrolink's San Bernardino line has eight trainsets daily. Originating at the Depot, San Bernardino line trains make multiple round trips between San Bernardino and Los Angeles Union Station (via Fontana), with each trainset returning to San Bernardino at the end of the day. Metrolink's Inland Empire-Orange County (IEOC) line has three trainsets between San Bernardino and Oceanside. After multiple round trips (via Cajon Pass [CP] Rana), the trains return to San Bernardino at night. Metrolink operations are scheduled to provide maximum frequency during the morning and evening commuter peaks, with reduced midday frequency. Trip frequency is reduced on weekends (HDR Engineering, Inc. 2011a).

Amtrak

Amtrak's Southwest Chief also makes daily stops at the Depot (one train in each direction). Typical dwell times for Amtrak trains are between 5 and 10 minutes (HDR Engineering, Inc. 2011a). The Southwest Chief connects San Bernardino to Los Angeles on the west and many cities and states to the east. Amtrak motor coaches also operate out of the Depot, providing connections to the Central Valley, Sacramento, and the Bay Area (City of San Bernardino 2005a).

3.11.1.3 Bus Facilities and Operations

Omnitrans operates 24 bus routes in the San Bernardino Valley, 14 of which provide service to the Cities of San Bernardino and Loma Linda within the E Street Corridor (Parsons 2009a). The transit routes for the E Street corridor area are arranged in a radial orientation, with downtown San Bernardino as the hub. The primary transfer area in this corridor exists along 4th Street in downtown San Bernardino. Three primary Omnitrans bus routes serve the E Street Corridor. The bus route with the heaviest north-south transit ridership in the Omnitrans system is Route 2, which has approximately 4,000 daily passenger boardings. Route 2 connects with and supports many other Omnitrans routes, bus routes operated by other agencies, and other modes of public transit (Parsons 2009a).

Existing bus routes in the vicinity of the bus facility site include Route 1, Route 2, Route 3, Route 4, Route 5, Route 7, Route 8, Route 9, Route 10, Route 11, Route 14, Route 15, Route 215, VVTA, MARTA, and sbX E Street bus routes. All the bus routes and schedules used in this study are included in Appendix J.

3.11.1.4 Pedestrian Facilities

Currently, passengers access Metrolink platforms from two main passageways. Under the proposed Project, a central passageway, located just west of the Depot, would connect to Platforms A and B from a proposed pedestrian egress facility. The central passageway is connected to an overnight parking lot and general use parking lots from a path that runs parallel to the tracks. A second passageway is at the arcade on the north and east sides of the Depot. The arcade abuts a parking area east of the Depot. This parking area is for Depot staff, including SANBAG staff. Under existing conditions, passengers who wish to access trains on BNSF Main Track 3 must cross the tracks at grade. There are no pedestrian facilities at the proposed Rialto Avenue/E Street rail platform and bus facility sites.

3.11.1.5 Parking

As part of the Depot facilities, approximately 777 parking spaces have been provided for passengers' vehicles. That number includes a 352-space parking structure (Southern California Regional Rail Authority 2011). Currently, there are no parking facilities at the proposed Rialto Avenue/E Street rail platform and bus facility sites.

3.11.2 Regulatory Setting

Refer to Section 4.2.3.1 of this document for a detailed discussion of the federal regulatory setting.

3.11.2.1 State, Regional, and Local Regulations

CEQA requires agencies within the state to document and consider the environmental consequences of discretionary actions prior to approving or implementing such actions.

Southern California Association of Governments

SCAG is the nation's largest metropolitan planning organization, representing six counties, 191 cities, and more than 18 million residents. SCAG undertakes a variety of planning and policy initiatives to encourage a more sustainable southern California now and in the future.

Federal Transportation Improvement Program

Under federal and state mandates, the Regional Council of SCAG is tasked with developing a Federal Transportation Improvement Program (FTIP) every 4 years. Improvements to the Rialto Avenue/E Street rail platforms and tracks are listed as project number 200809. (SCAG 2011a.) Although the proposed Project is also listed in the SCAG 2011 FTIP under project number 20061012, the proposed Project is listed only as a part of the larger Redlands Passenger Rail Project. As such, the SCAG 2011 FTIP will be amended to reflect the DSBPRP as currently proposed—separate from the Redlands Passenger Rail Project.

Regional Transportation Plan

In May 2008, the Regional Council of SCAG adopted the 2008 Regional Transportation Plan: Making the Connections. SCAG is the federally designated regional transportation planning agency responsible for the RTP. The 2008 RTP is a $531.5 billion plan (nominal, or year-of-expenditure, dollars) that emphasizes the importance of system management, goods movement, and innovative transportation financing. It strives to provide a regional investment framework to address the region's transportation and related challenges, and it looks to

strategies that preserve and enhance the existing transportation system and integrate land use into transportation planning (SCAG 2008).

SCAG has been committed to integrated transportation and land use planning. With Senate Bill 375, SCAG is creating a Sustainable Communities Strategy as part of the 2012 RTP, which is currently being updated. The Sustainable Communities Strategy integrates transportation, land use, housing, and environmental planning with the goal of reducing regional GHG emissions. The 2012 RTP will update the 2008 RTP, and a Program EIR is currently in preparation for the 2012 RTP, with final adoption scheduled for April 2012. (SCAG 2011a.)

Regional Transportation Improvement Plan

The Regional Transportation Improvement Program (RTIP) is a capital listing of all transportation projects proposed over a 6-year period for the SCAG region. The projects include highway improvements; transit, rail, and bus facilities; high-occupancy vehicle lanes; signal synchronization; intersection improvements; freeway ramps; etc. In the SCAG region, a biennial RTIP update is produced on an even-year cycle. The RTIP is prepared to implement projects and programs listed in the RTP and developed in compliance with state and federal requirements. County transportation commissions have the responsibility under state law of proposing county projects, using the current RTP's policies, programs, and projects as a guide, from among submittals by cities and local agencies. The locally prioritized lists of projects are forwarded to SCAG for review. From this list, SCAG develops the RTIP based on consistency with the current RTP, inter-county connectivity, financial constraint, and conformity satisfaction. The Project is listed as "Metrolink Commuter Rail" for rail service expansion in San Bernardino as project number 4CR04 (SCAG 2011b).

City of San Bernardino General Plan

Each city and county in California is required to prepare and adopt a comprehensive, long-term general plan for the physical development of the community and any land outside the community's boundaries that may have an impact on the community's ability to plan for its future growth (California Government Code Section 65300). The general plan is the essential planning document, representing the "charter" or "constitution" for all future development within a community. A general plan has seven mandatory elements (i.e., land use, circulation, conservation, open space, noise, safety, and housing).

The San Bernardino General Plan was adopted in 2005. Chapter 6 of the general plan is the required Circulation Element. The purpose of the Circulation Element is to design, as well as improve, the circulation system so that it meets the current and future needs of the residents of the City (City of San Bernardino 2005a). The following goals and policies in the City's General Plan are applicable to the Project:

- Goal 6.1: Provide a well-maintained street system.
    - Policy 6.1.1: Maintain and rehabilitate all components of the circulation system, including roadways, sidewalks, bicycle facilities, and pedestrian facilities.
    - Policy 6.1.3: Coordinate maintenance or enhancement of transportation facilities with related infrastructure improvements.

- Goal 6.2: Maintain efficient traffic operations on City streets.
  - Policy 6.2.1: Maintain a peak-hour level of service (LOS) of D or better at street intersections.
  - Policy 6.2.5: Design roadways, monitor traffic flow, and employ traffic control measures (e.g., signalization, access control, exclusive right- and left-turn lanes, lane striping, signage) to ensure City streets and roads continue to function safely within our LOS standards.
  - Policy 6.2.7: Install new signals as warranted.
- Goal 6.3: Provide a safe circulation system.
  - Policy 6.3.1: Promote the principle that streets have multiple uses and users, and protect the safety of all users.
- Goal 6.6: Promote a network of multimodal transportation facilities that are safe, efficient, and connected to various points of the City and the region.
  - Policy 6.6.4: Ensure accessibility to public transportation for seniors and persons with disabilities.
- Goal 6.7: Work with the railroads and other public agencies to develop and maintain railway facilities that minimize impacts on adjacent land uses.
  - Policy 6.7.1: Accommodate railroad services that allow for the movement of people and goods while minimizing their impact on adjacent land uses.
  - Policy 6.7.2: Coordinate with SANBAG, SCAG, the county, and other regional, state, and federal agencies and the railroads regarding plans for the provision of passenger, commuter, and high-speed rail service.
- Goal 6.9: Achieve a balance between parking supply and demand.
  - Policy 6.9.3: Continue to expand the supply of public parking in off-street parking facilities in downtown San Bernardino.

Additional transportation-related goals and policies from the 2005 General Plan Update are discussed in Section 3.9, “Land Use and Planning.”

The City’s circulation system is composed of a wide range of transportation facilities that serve the mobility needs of the City, including roadways, railways, public transit, bikeways, trails, pedestrian facilities, and aviation. Included within the 2005 General Plan Update Circulation Element is the City’s future Circulation Map shown as Figure C-2. Based on the analysis at the theoretical buildout of the general plan and the deficiencies and mitigation identified, the Circulation map was developed to meet the City’s future needs. Figure C-2 designates the following streets within the Project Study Area as follows:

Freeways	215
Major Arterials	E Street, 2nd Street, and Mt. Vernon Avenue
Secondary Arterials	Rialto Avenue, I Street, and G Street
Collector Streets	3rd Street and K Street

3.11.3 Thresholds of Significance

For the purposes of the analysis in this EIR, in accordance with Appendix G of the State *CEQA Guidelines*, the proposed Project would have a significant environmental impact under CEQA related to transportation and traffic if it would:

- Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
- Conflict with an applicable congestion management program, including, but not limited to, level-of-service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways.
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
- Result in inadequate emergency access.
- Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

3.11.4 Project Impacts

This section evaluates the potential impacts of the proposed Project related to transportation and traffic. The analysis is based on technical reports prepared for the proposed Project. Additional detail and analysis can be found in Appendix J, including all table and figures within the traffic impact report, which presents the analysis of LOS, trip generation, traffic volumes, and lane geometry.

Impact T-1: Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system

Construction of the proposed Project would require several temporary street closures and detours where the rail line intersects with roads in the rail corridor. Construction of rail improvements would progress from west to east, with no two streets being closed at the same time. F Street would be extended to the south of Rialto Avenue to create a four-way signalized intersection (see Figure 2-3 in Chapter 2.0, “Alternatives”). During construction, traffic detours would occur on 3rd Street between J Street and I Street as well as G Street just south of Rialto Avenue. Other detours, such as at the 2nd Street crossing, Rialto Avenue crossing, and E Street crossing, would occur only on weekends. Any other traffic detour in the Project Study Area would be short-term and would not have a significant impact. Weekend-only traffic detours are anticipated to have less-than-significant impact to no impact on traffic.

Construction of the bus facility would likely result in temporary detours along E Street and Rialto Avenue, which would not affect both streets simultaneously. Two of the bus bays would be constructed along the southern portion of Rialto Avenue adjacent to and north of the bus facility. The assignment of new bus trips at each of the study intersections during the weekday AM and PM peak

hours is provided in Appendix J. The total of 72 buses would operate in the AM peak hour, and 73 would operate in the PM peak hour.

The proposed 12,000 square feet of office uses associated with the bus facility would also generate additional traffic. A total of 19 AM peak hour and 18 PM peak hour trips would be generated.

Implementation of Mitigation Measure T-1 (Prepare and Implement a Traffic Management Plan), would improve the functionality of these roadways and other nearby roadways by allowing adequate vehicular access during each phase of construction, and no significant impact would result.

The Project would result in temporary and permanent use of the existing parking lot areas located east and south of the San Manuel Stadium. Mitigation Measure T-2 (Prepare and Implement a Stadium Parking Plan) would require SANBAG or its construction contractor to develop a stadium parking plan for review and approval by the City of San Bernardino for use of the parking lot areas as temporary staging locations and one future detention basin. SANBAG will work with the City to ensure that adequate parking and access are provided in the area during scheduled events at the San Manuel Stadium. No significant impacts would result with mitigation incorporated.

The analysis of construction-year (2013) conditions with closure of 3rd Street and G Street shows that all study intersections would operate at a satisfactory LOS (see Appendix J). Therefore, construction related impacts on LOS would be less than significant. Caltrans and the City of San Bernardino have defined satisfactory intersection performance as LOS D. Table 3.11-3 shows the future LOS under the proposed Project in 2014 (Figure 3.11-4) and Table 3.11-4 shows the future LOS under the proposed Project in 2035 (Figure 3.11-5). The proposed Project would result in one intersection having an unsatisfactory LOS (worse than LOS D) during the 2014 analysis year and two intersections having an unsatisfactory LOS in the 2035 analysis year.

Table 3.11-3. 2014 Proposed Project Peak-Hour Levels of Service

			AM Peak Hour			PM Peak Hour		
	Intersection Name	Control	LOS	Delay (seconds)	V/C	LOS	Delay (seconds)	V/C
1	K Street and 3rd Street	Two-way stop	A	3.8	N/A	A	6.3	N/A
2	K Street and 2nd Street	All-way stop	B	11.3	0.39	C	15.4	0.56
3	K Street and Rialto Avenue	Signal	B	19.9	0.35	B	19.0	0.44
4	J Street and 3rd Street	Two-way stop	A	4.5	N/A	A	4.7	N/A
5	J Street and 2nd Street	Two-way stop	A	4.7	N/A	A	6.3	N/A
6	J Street and Rialto Avenue	Two-way stop	C	90.4	N/A	F	49.1	N/A
7	I Street and 3rd Street	Intersection will not exist (because of I-215 project)						
8	I Street and 2nd Street	Signal	A	9.1	0.27	A	8.5	0.28
9	I Street and Rialto Avenue	One-way stop	A	1.4	N/A	A	1.3	N/A
10	1-215 southbound off-ramp and 3rd Street	Signal	C	33.9	0.39	C	25.7	0.24
11	1-215 southbound on-ramp and 2rd Street	Signal	B	17.1	0.31	B	18.7	0.49
12	1-215 northbound on-ramp and 3rd Street	Signal	C	23.4	0.22	C	29.8	0.40
13	1-215 northbound ramps and 2rd Street	Signal	B	19.9	0.48	B	18.2	0.35

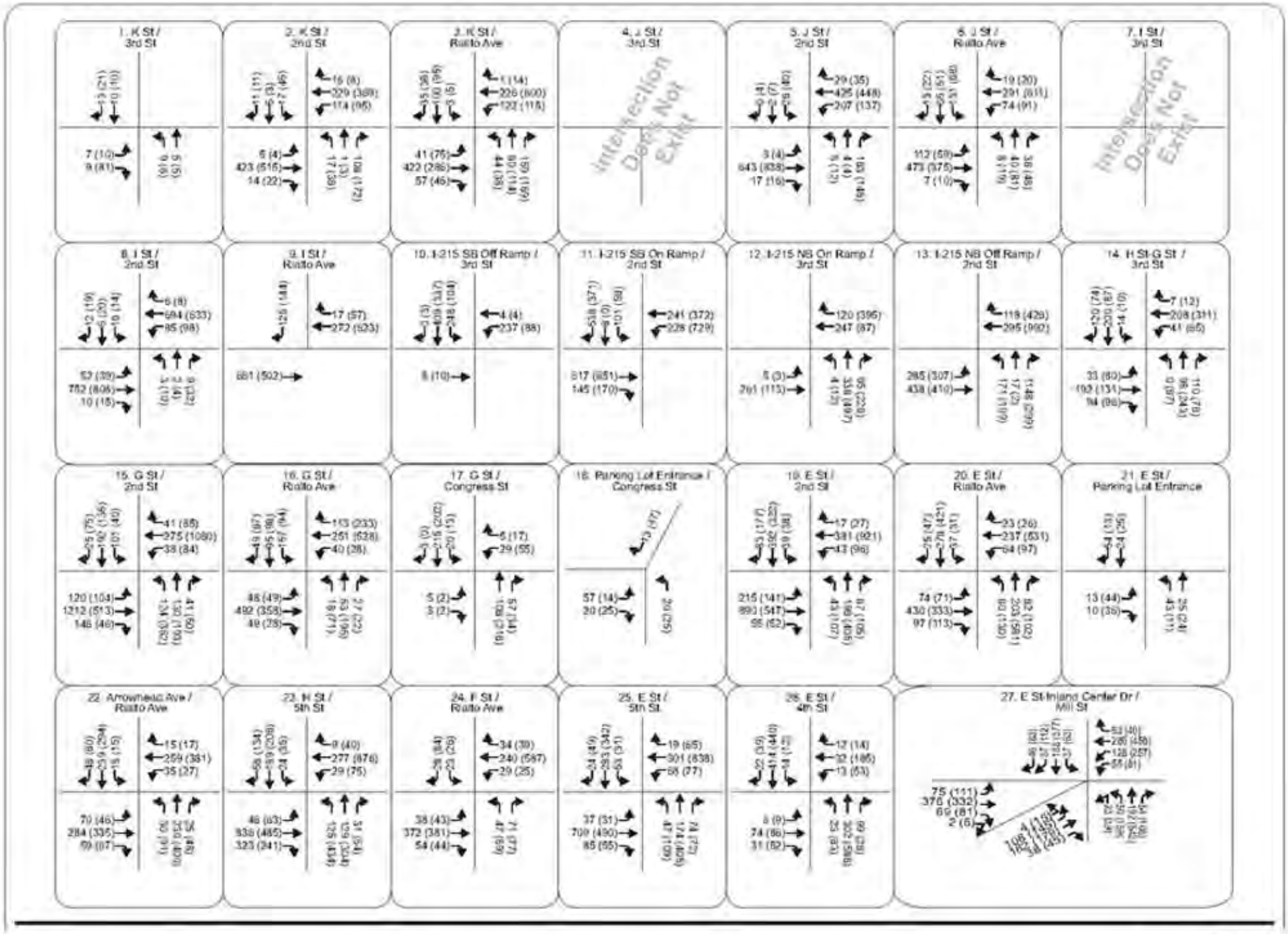


Figure 3.11-4
2014 With-Project Peak-Hour Volumes
Downtown San Bernardino Passenger Rail Project

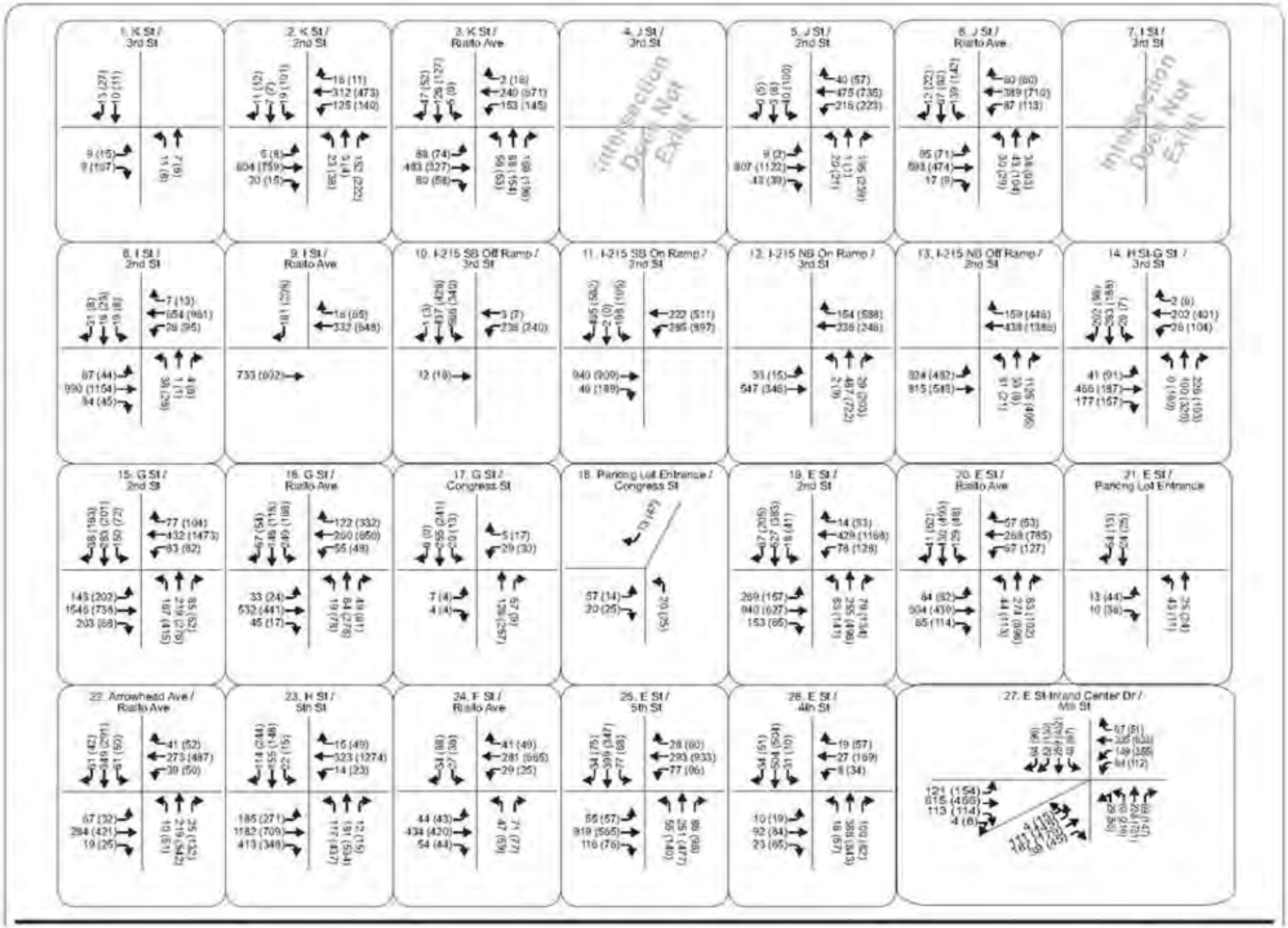


Figure 3.11-5
2035 With-Project Peak-Hour Volumes
Downtown San Bernardino Passenger Rail Project

	Intersection Name	Control	AM Peak Hour LOS	AM Peak Hour Delay (seconds)	AM Peak Hour V/C	PM Peak Hour LOS	PM Peak Hour Delay (seconds)	PM Peak Hour V/C
14	G Street and 3rd Street	Signal	C	20.1	0.22	C	21.0	0.26
15	G Street and 2nd Street	Signal	C	24.2	0.53	C	29.4	0.61
16	G Street and Rialto Avenue	Signal	A	9.3	0.34	A	8.6	0.32
17	G Street and Congress Street	Two-way stop	A	1.4	N/A	A	1.8	N/A
18	Parking lot entrance and Congress Street	One-way stop	A	7.6	N/A	A	7.1	N/A
19	E Street and 2nd Street	Signal	C	28.4	0.72	C	32.5	0.77
20	E Street and Rialto Avenue	Signal	C	21.7	0.63	C	22.7	0.71
21	E Street and parking lot entrance	One-way stop	A	0.9	N/A	A	1.2	N/A
22	Arrowhead Avenue and Rialto Avenue	Signal	B	11.1	0.21	C	12.1	0.33
23	H Street and 5th Street	Signal	C	21.5	0.47	C	25.7	0.78
24	F Street and Rialto Avenue	Signal	B	11.7	0.29	B	10.4	0.48
25	E Street and 5th Street	Signal	C	20.1	0.50	B	19.2	0.64
26	E Street and 4th Street	Signal	B	18.8	0.45	B	17.0	0.50
27	E Street-Inland Center Drive and Mill Street	Signal	C	31.5	0.58	D	39.2	0.81

Source: Appendix J. NOTE: The analysis presented in this table includes the analysis of all project improvements, with the exception of the bus facility operations.

Table 3.11-4. 2035 Proposed Project Peak Hour-Levels of Service

	Intersection Name	Control	AM Peak Hour LOS	AM Peak Hour Delay (seconds)	AM Peak Hour V/C	PM Peak Hour LOS	PM Peak Hour Delay (seconds)	PM Peak Hour V/C
1	K Street and 3rd Street	Two-way stop	A	4.0	N/A	A	6.6	N/A
2	K Street and 2nd Street	All-way stop	C	15.4	0.61	D	34.9	0.93
3	K Street and Rialto Avenue	Signal	C	20.8	0.39	C	20.1	0.50
4	J Street and 3rd Street	Two-way stop	A	3.7	N/A	A	3.2	N/A
5	J Street and 2nd Street	Two-way stop	B	13.2	N/A	**F**	**261.1**	N/A
6	J Street and Rialto Avenue	Two-way stop	**F**	**238.7**	N/A	**F**	**OVER-FLOW**	**N/A**
7	I Street and 3rd Street	Intersection will not exist (because of I-215 project)						
8	I Street and 2nd Street	Signal	A	8.6	0.34	A	7.3	0.39
9	I Street and Rialto Avenue	One-way stop	A	1.3	N/A	A	1.9	N/A
10	1-215 southbound off-ramp and 3rd Street	Signal	C	27.1	0.48	C	21.9	0.41
11	1-215 southbound on-	Signal	B	17.1	0.43	C	20.3	0.60

	Intersection Name	Control	AM Peak Hour LOS	AM Peak Hour Delay (seconds)	AM Peak Hour V/C	PM Peak Hour LOS	PM Peak Hour Delay (seconds)	PM Peak Hour V/C
	ramp and 2rd Street							
12	1-215 northbound on-ramp and 3rd Street	Signal	C	23.7	0.32	C	27.4	0.61
13	1-215 northbound ramps and 2rd Street	Signal	C	21.3	0.58	B	19.4	0.45
14	G Street and 3rd Street	Signal	B	20.0	0.34	C	21.4	0.31
15	G Street and 2nd Street	Signal	C	24.6	0.61	C	31.2	0.75
16	G Street and Rialto Avenue	Signal	A	9.5	0.34	A	9.2	0.38
17	G Street and Congress Street	Two-way stop	A	1.3	N/A	A	1.8	N/A
18	Parking lot entrance and Congress Street	One-way stop	A	7.6	N/A	A	7.1	N/A
19	E Street and 2nd Street	Signal	D	38.9	0.81	D	38.6	0.85
20	E Street and Rialto Avenue	Signal	C	20.2	0.73	C	29.1	0.82
21	E Street and parking lot entrance	One-way stop	A	0.8	N/A	A	1.3	N/A
22	Arrowhead Avenue and Rialto Avenue	Signal	B	11.4	0.21	B	11.9	0.36
23	H Street and 5th Street	Signal	C	23.0	0.58	D	37.6	0.90
24	F Street and Rialto Avenue	Signal	B	11.7	0.31	A	9.9	0.49
25	E Street and 5th Street	Signal	C	21.6	0.58	B	15.9	0.66
26	E Street and 4th Street	Signal	B	16.6	0.47	B	17.7	0.54
27	E Street – Inland Center Drive and Mill Street	Signal	C	32.2	0.59	D	45.6	0.90

Shaded cells indicate unsatisfactory LOS.

Source: Appendix J. NOTE: The analysis presented in this table includes the analysis of all project improvements, with the exception of the bus facility operations.

All other intersections in 2035 and all intersections in 2014 would maintain a satisfactory LOS (D or higher).The intersection of J Street and Rialto Avenue would operate at LOS F in both the AM and PM peak hours in the 2014 and 2035 analysis years. Additionally, in the 2035 analysis year, the intersection of J Street and 2nd Street would operate at LOS F in the PM peak hour. This constitutes a significant adverse impact because it would conflict with an applicable policy establishing the threshold effectiveness for intersection performance within the circulation system. Implementation of Mitigation Measures T-3 (Install a Traffic Signal at the J Street/2nd Street Intersection) and T-4 (Install All-Way Stops at the J Street/Rialto Avenue Intersection) would be required to reduce significant impacts to less-than-significant levels. Section 3.11.6, “Level of Service after Mitigation,” indicates that, with these mitigation measures, LOS at unsatisfactory intersections would be restored to LOS C or better and no significant impacts would result.

The proposed Project would improve rail and bus transit facilities and nonmotorized (pedestrian) travel. Therefore, the Project would have a beneficial effect and would not conflict with an

applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the non-vehicular circulation system.

Impact T-2: Conflict with an applicable congestion management program

Caltrans and the City of San Bernardino have defined satisfactory intersection performance as LOS D. See Impact T-1, above, for a discussion of LOS impacts.

The proposed Project would not contribute to traffic congestion and would improve circulation by providing better access to mass transit, thereby resulting in a beneficial effect on travel demand for roads and highways. Implementation of public transit improvement projects, such as the proposed Project, would help remove vehicles from roadways and freeways and convert single-occupancy vehicular commuters to transit commuters, which would result in a decrease in VMT and fuel use. In the long term for future buildout of the Project in 2035, 67,510 fewer VMT would result daily on a regional basis, as compared with what would occur without the proposed Project. This would result in a regional benefit. The proposed Project would also improve rail and bus transit facilities and nonmotorized (pedestrian) travel. Therefore, the Project would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the non-vehicular circulation system.

Impact T-3: Result in changes in air traffic patterns that would result in substantial safety risks

No airports are located within the rail corridor. The nearest airport is the San Bernardino International Airport located approximately 1.5 miles from the eastern most extent of the Project Study Area. Due to the nature of the proposed Project, no changes in air traffic patterns would result and no substantial safety risks would occur. The proposed Project would have no impact regarding changes in air traffic patterns.

Impact T-4: Result in inadequate emergency access

The proposed Project would result in temporary changes to local traffic patterns during construction and may cause temporary traffic delays for emergency service vehicles. This impact, however, would be minimized through implementation of standard construction practices and a Traffic Management Plan as well as preconstruction coordination with emergency service responders. Construction activities would occur in accordance with all applicable state and local requirements and permits. As such, the proposed Project is not anticipated to result in significant impacts related to inadequate emergency access. The proposed Project would have less-than-significant impacts on emergency access with implementation of Mitigation Measure T-1 (Prepare and Implement a Traffic Management Plan).

Impact T-5: Substantially increase hazards because of a design feature

The proposed Project would not result in substantially increased hazards due to design features. The proposed Project would reduce hazards by improving pedestrian access throughout the rail corridor and separating pedestrians from bus and rail traffic. Other project elements that serve to reduce hazards include the installation of at-grade crossings at selected

intersections, and easing the severe curvature of the rail alignment. Therefore, implementation of the proposed Project is anticipated to improve existing safety conditions and would therefore reduce hazards associated with the existing design.

Impact T-6: Conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or decrease the performance or safety of such facilities

The Project would result in improvements to alternative transportation modes, specifically improvements to commuter rail and bus facilities and pedestrian access. The proposed Project would also improve the accessibility of public transportation for seniors and persons with disabilities by proposing the installation of an ADA-compliant pedestrian overcrossing. Therefore, the proposed Project would not conflict with adopted policies regarding public transit and would be consistent with the City of San Bernardino's General Plan policy 6.6.4, which seeks to ensure accessibility to public transportation for seniors and persons with disabilities.

The Project would require street closures and roadway reconfigurations, as described in Section 2.3.1.5, "Street Improvements and Closures," and a General Plan Amendment to the City's Circulation Map of the 2005 General Plan Update Circulation Element would be required. The General Plan Amendment, once approved by the City, would amend the Circulation Plan for the closures of 3rd Street and I Avenue and for other roadway reconfigurations (i.e., E Street, F Street, Rialto Avenue, K Street, etc.). Therefore, no inconsistencies would result and no significant impacts are anticipated as mitigation is also included to minimize performance at studied intersections.

3.11.5 Mitigation Measures

Listed below are proposed mitigation measures related to transportation and traffic.

T-1: Prepare and Implement a Traffic Management Plan. Prior to initiating construction, SANBAG will ensure that the construction contractor prepares a Traffic Management Plan that includes construction detour plans and designates construction truck access routes for each phase of construction. During each phase of construction, the construction contractor will provide signage indicating the construction limits, access routes, detour routes, and entrances to individual business sites. In addition, the construction contractor will supply "open for business" signs to encourage normal business activity during construction.

T-2: Prepare and Implement a Stadium Parking Plan. SANBAG or its construction contractor will prepare a stadium parking plan for review and approval by the City of San Bernardino for use of the parking lot areas west and south of the San Manuel Stadium as temporary staging locations and one future detention basin. SANBAG will consult with the City for approval to ensure that adequate parking is provided in the area during scheduled events and that designated replacement parking is conveniently located near San Manuel Stadium for use by stadium visitors.

T-3: Install a Traffic Signal at the J Street/2nd Street Intersection. To address the unsatisfactory LOS conditions at the J Street/2nd Street intersection in 2035, under the proposed Project only, a traffic signal will be installed at this intersection. In accordance with City standards, SANBAG will contribute its fair share to the funding of this improvement based on the City's impact fees at the time the improvement is required.

T-4: Install All-Way Stops at the J Street/Rialto Avenue Intersection. To address the unsatisfactory LOS conditions at the J Street/Rialto Avenue intersection in 2035 (under any design option), this intersection will be converted to an all-way stop-controlled intersection. In accordance with City standards, SANBAG will contribute its fair share to the funding of this improvement based on the City's impact fees at the time the improvement is required.

3.11.6 Level of Service after Mitigation

Mitigation Measure T-1 (Prepare and Implement a Traffic Management Plan) would improve the functionality of the roadways by allowing adequate vehicular access during each phase of construction. With implementation of Mitigation Measures T-3 (Install a Traffic Signal at the J Street/2nd Street Intersection) and T-4 (Install All-Way Stops at the J Street/Rialto Avenue Intersection), the LOS performance at affected intersections would be satisfactory, as shown on Table 3.11-5. Therefore, impacts would be less than significant after mitigation. Implementation of Mitigation Measures T-1 through T-4 would reduce significant impacts.

Table 3.11-5. Affected Intersections LOS with Mitigation in 2014 and 2035 under the Proposed Project

				AM Peak Hour			PM Peak Hour		
Year		Intersection Name	Control	LOS	Delay (seconds)	V/C	LOS	Delay (seconds)	V/C
2014	6	J Street & Rialto Avenue	All-way stop	C	15.6	0.61	C	16.2	0.66
2035	5	J Street & 2nd Street	Signal	A	6.6	0.60	B	12.4	0.87
2035	6	J Street & Rialto Avenue	All-way stop	C	22.7	0.78	D	33.0	0.93

Source: Appendix J.

NOTE: The analysis presented in this table includes the analysis of all project improvements, with the exception of the bus facility operations.

3.11.7 Cumulative Impacts

The transportation analysis contained herein represents a cumulative impact analysis, looking at the effects of the proposed Project and the growth in traffic that is anticipated in the region. Therefore, significant impacts in traffic at the two intersections previously discussed would represent a significant cumulative impact. Mitigation is provided to reduce these impacts to less than significant levels, and therefore the mitigated Project would not contribute to a significant cumulative impact.

3.12 LESS-THAN-SIGNIFICANT IMPACTS OF THE PROPOSED PROJECT

In the course of this evaluation, certain impacts of the Project were found to be less than significant due to the inability of a project of this scope to create such impacts or the absence of project characteristics producing effects of this type. The effects determined not to be significant are not required to be included in primary analysis sections of the Draft EIR. In accordance with CEQA Guidelines Section 15128, the following section provides a brief description of potential impacts found to be less than significant.

3.12.1 Agriculture and Forest Resources

3.12.1.1 CEQA Thresholds

In determining whether impacts on agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts on forest resources, including timberland, are significant environmental effects, lead agencies may refer to1) information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project, and 2) forest carbon measurement methodology provided in the Forest Protocols adopted by the California Air Resources Board. The proposed Project would have a significant environmental impact under CEQA if it would:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.
- Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract.
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220[g]), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104[g]).
- Result in the loss of forest land or conversion of forest land to non-forest use.
- Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

3.12.1.2 Discussion

The proposed Project and design options would be implemented within the westernmost 1 mile of the existing Redlands Subdivision railway and adjacent parcels included within the rail corridor. The rail corridor is not zoned for agricultural uses, nor is it subject to Williamson Act contracts. Land use designations within the Project Study Area are Urban and Built-Up Land (California Department of Conservation, Division of Land Resource Protection 2009). According to the Farmland Mapping and Monitoring Program, Urban and Built-Up Land is typically occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately six structures to a 10-acre parcel. Common examples include residential, industrial, commercial, and institutional facilities; cemeteries; airports; golf courses; sanitary landfills; sewage treatment facilities; and water control structures (California Department of Conservation, Division of Land

Resource Protection 2009). The proposed Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses. The Project Study Area also does not contain forest resources. Therefore, impacts to agricultural and forest resources were not found to be significant, and no further discussion in an EIR is required.

3.12.2 Mineral Resources

3.12.2.1 CEQA Thresholds

The proposed Project would have a significant environmental impact under CEQA if it would:

- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.
- Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

3.12.2.2 Discussion

A variety of land uses are located adjacent to the rail corridor, including commercial, storage/warehouse, industrial, low density residential, and office uses. According to Figure NRC-3 of the *San Bernardino General Plan*, the Project is within an area with significant mineral deposits or an area with a likelihood of significant mineral deposits (MRZ-2). MRZ-2 areas indicate the potential existence of a construction aggregate deposit that meets certain state criteria for value and marketability based solely on geologic factors. The “existing land uses” used as criteria in its classification of Mineral Resource Zones may often result in the classification of MRZs that are already developed in a variety of uses and intensities, rendering these areas unsuitable for mineral production. (City of San Bernardino 2005a).

Although the Project is designated as being in an area that has the potential for significant mineral deposits being discovered, the properties within and adjacent to the Project Study Area are developed for non-mineral extraction uses. Uses within the rail corridor are designated as Industrial (I) and Commercial General (CG) land uses, and the corridor is zoned as Commercial General (CG-1), Commercial General-2 (CG-2), Industrial Heavy (IG), Industrial Light (IL), and Residential Suburban (RS). The site is not within an Industrial Extractive (IE) zone used for mineral, sand, and gravel extraction with an approved Mineral Reclamation Plan in accordance with the California Surface Mining and Reclamation Act. Therefore, mineral extraction is not allowed in the Project Study Area and would not be consistent with the general plan’s designated land use and zoning for areas affected by the Project.

Additionally, implementation of the proposed Project or design options would not interfere with any current mining activity or prevent access to any areas where mining activities would be allowed. As a result, neither the Project nor the design options would result in the loss of availability of either 1) a known mineral resource that would be of value to the region and the residents of the state or 2) a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Mineral resource impacts were not found to be significant, and no further discussion in an EIR is required.

3.12.3 Population & Housing

3.12.3.1 CEQA Thresholds

The proposed Project would have a significant environmental impact under CEQA if it would:

- Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure).
- Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere.
- Displace a substantial number of people, necessitating the construction of replacement housing elsewhere.

3.12.3.2 Discussion

The proposed Project or design options would not induce a direct substantial population growth, either directly or indirectly. No residential or office/commercial/industrial development is proposed as part of the Project. The proposed Project would improve transportation infrastructure by extending commuter rail service to downtown San Bernardino. The Project is expected to accommodate existing transportation demand within San Bernardino County, but it would not be expected to directly or indirectly induce or alter the population growth within the project area. Operation of either the proposed Project or any of the design options would not create any new impacts related to population and housing beyond existing conditions. Therefore, impacts related to population growth were not found to be significant, and no further discussion in an EIR is required.

The proposed Project would be largely limited to the area within and immediately adjacent to the existing rail right-of-way, with acquisition of some properties directly adjacent to the rail alignment. The proposed Project would result in the displacement of three residential properties inhabited with seven households identified for full acquisition or partial acquisition requiring full tenant relocation because the structures would be permanently removed for construction of the project. These displacements would not result in the need for construction of replacement housing elsewhere because only a small number of units, several of which are currently vacant, would be displaced. These properties include both single-family and multifamily uses. Property owners subject to full or partial acquisition would be compensated at fair market value, as required by the Uniform Relocation Assistance and Real Property Acquisition Policies Act and the California Relocation Act. Therefore, implementation of the either Project or any of the design options would not have a significant impact on population and housing, and no further discussion in an EIR is required.

3.12.4 Public Services

3.12.4.1 CEQA Thresholds

The proposed Project would have a significant environmental impact under CEQA if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

  1. Fire protection.
  2. Police protection.
  3. Schools.
  4. Parks.
  5. Other public facilities.

3.12.4.2 Discussion

The proposed Project involves the expansion of commuter rail service along existing rail lines, a bus facility, and other ancillary uses and does not include residential or commercial development that would permanently increase human presence in the area. As residential units are not proposed as part of the Project, the Project and the design options would not increase the number of school-age children in the area, and no new demand for schools would be generated. The Project would provide an alternate mode of transportation to people currently commuting in the regional area and would not result in additional demand for public services that typically serve additional populations in a new area. Therefore, the proposed Project does not increase demand for additional public facilities such as schools, libraries, community centers, and parks.

In accordance with California Public Utilities Commission requirements, upgrades are proposed to several existing at-grade crossings along the rail alignment to ensure public safety, to improve access for safety vehicles (for fire, police, and other emergency services), and to better facilitate train movements. The Project includes redesign and improvement of three at-grade crossings and associated signals at 2nd Street, Rialto Avenue/I Street, and G Street. The three crossings will be redesigned in accordance with FRA and the California Public Utilities Commission, as well as the latest Southern California Regional Rail Authority Highway Grade Crossing Manual guidelines.

No significant impacts to emergency access at at-grade crossings would occur because crossing gates would only be fully closed for very short durations when commuter trains pass through. Expected wait times are typically less than 1 minute. Therefore, neither the proposed Project nor the design options would create a need for additional public services in the area. Local police and fire departments would be notified of any temporary or permanent closures to ensure that adequate emergency access is maintained throughout the rail corridor.

The City of San Bernardino Police Department provides police protection services for this part of the City. Four San Bernardino Police Department Community Service Offices are located within a 2-mile radius of the rail corridor. These include the following stations:

- Western District Station at 1574 West Baseline Street.
- Northern District Station at 941 West Kendall Drive.
- Central District Station at 334 West Baseline Street.
- Southern District Station at 204 Inland Center Drive.

The San Bernardino Fire Department provides fire and emergency services. Fire Stations 1 and 2 are located within a 2-mile radius of the rail corridor. Fire Station 1 is located at 200 East 3rd Street, and Fire Station 2 is located at 1201 West 9th Street. Since the proposed Project will not add any residences or businesses, police and fire service ratios will not be affected. Additionally, the Project and design options will be subject to all applicable development impact fees, ensuring that development within the rail corridor bears a proportionate share of the cost of capital facility improvements necessary to accommodate such development in order to effectively provide the emergency response service. Because the proposed Project would not increase the demand for fire, police, and other emergency services, no significant impact on these public services is anticipated, and no further discussion in an EIR is required.

3.12.5 Recreation

3.12.5.1 CEQA Thresholds

The proposed Project would have a significant environmental impact under CEQA if it would:

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
- Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

3.12.5.2 Discussion

Neither the proposed Project nor the design options would involve the development of housing; therefore, increased demand on existing neighborhood and regional parks or other recreational facilities is not anticipated to occur. Public parks and recreational facilities in the area would not substantially deteriorate due to implementation of the Project or any of the design options. The proposed Project does not include any elements that would directly increase the use of existing recreational facilities within the City or require the construction or expansion of recreational facilities; therefore, no impact to recreational facilities would occur.

A portion of the San Manuel Stadium is located within the Project Study Area, and Lytle Creek Park is located in the vicinity of the proposed Project. Implementation of the Project or any of the design options would not encroach on existing parks or facilities for use by the general public in the regional area. Even though the San Manuel Stadium is owned by the City of San Bernardino, Economic Development Agency, the site is not designated as a public park, nor is the facility normally open to the general public for use. Additionally, construction of the Project or any of the design options would not prohibit the use of San Manuel Stadium, as proposed improvements would not impede the use of the stadium for paid patrons even if some of the parking would be utilized by the Project or the design options. An adequate parking plan would be required to ensure that a sufficient amount of parking will be available for all scheduled

events at the stadium. Therefore, impacts related to recreation were not found to be significant, and no further discussion in an EIR is required.

3.12.6 Utilities and Service Systems

3.12.6.1 CEQA Thresholds

The proposed Project would have a significant environmental impact under CEQA if it would:

- Exceed wastewater treatment requirements of the applicable RWQCB.
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Have sufficient water supplies available to serve the Project from existing entitlements and resources, or require new or expanded entitlements.
- Result in a determination by the wastewater treatment provider that serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments.
- Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs.
- Comply with federal, state, and local statutes and regulations related to solid waste.

3.12.6.2 Discussion

No new sources of water supply, such as groundwater, are required to meet the Project's water demand. The proposed Project and design options would involve the addition of land uses that could require additional water consumption or generate additional wastewater, specifically in the provision of restrooms and water fountains at rail station locations and the bus facility; however, the additional amount of water and wastewater usage is not anticipated to significantly deplete or require the expansion of capacity for water services. Therefore, no additional demand for water or wastewater facilities or infrastructure would occur. The proposed Project and design options would not substantially contribute to water consumption or wastewater generation and treatment beyond existing conditions, and water serving the Project would be treated by existing extraction and treatment facilities. Additionally, the proposed Project would not create or contribute to any increase in stormwater runoff that would exceed the storm drain system capacity. (See Section 3.8, "Hydrology and Water Quality") Implementation of the proposed Project and design options would require several onsite drainage facility improvements; however, these drainage facilities and detention basins only serve to redirect and control storm water runoff from the area of the Project.

Overall, to manage water quality during and after construction, project design measures, along with implementation of typical BMPs included within Mitigation Measures HYD-1 (Develop and Implement a Stormwater Pollution Prevention Plan) and HYD-2 (Develop and Implement a Water Quality Management Plan), as listed in Section 3.8, would reduce water quality and wastewater impacts. The Project would construct drainage improvements throughout the rail corridor. Since all tracks would have positive drainage (existing track slope is approximately 1%), the slow velocity along the swales would provide adequate time to allow conveyed runoff

to infiltrate as it currently does. These improvements are a part of the project design to improve drainage conditions and to reduce impacts. Therefore, impacts were not found to be significant.

As stated in Chapter 2.0, “Alternatives,” the Project would likely necessitate the relocation of existing subsurface and overhead crossing utilities (i.e., water, sewer, storm drain, power, gas, fiber optic, and telephone lines), following Metrolink’s utility accommodation design criteria and engineering standards. These utilities would be evaluated for conformance with Metrolink Engineering Standards for flammable and nonflammable underground utility crossings. Each subsurface utility located within the proposed railroad right-of-way would be exposed and surveyed during the final design phase of the Project to verify its location, size, and material type. It is anticipated that most of the existing subsurface utilities, including sanitary sewer and water lines, would already adhere to BNSF utility accommodation criteria for minimum utility depth and encasement. However, the addition of a second track within the railroad corridor would likely necessitate utility casing extensions to adhere to Metrolink’s requirements for casing flammable and nonflammable utilities across the entire width of the railroad right-of-way. Existing utilities would be lowered if their depth below the top of the rail is less than Metrolink’s requirements. Likewise, existing utility casings would be extended if their limits are less than the required distance from the track centerlines. Overhead crossing utilities such as power and communication (fiber optic) lines would be raised if found to not adhere to Metrolink’s overhead clearance requirements. Railroad signal houses and street lights would also be relocated to accommodate the second track. With conformance with Metrolink utility design criteria and engineering standards, any impacts to subsurface and overhead crossing utilities would result in a less-than-significant impact.

The Project does not propose land uses that would generate substantial quantities of waste for disposal or any other specialized activities that would affect compliance with applicable federal, state, or local regulations related to solid waste. As a part of the proposed Project, the Project would rehabilitate the existing rail to construct a second track and station improvements at the Depot and rail platforms and a bus facility near Rialto Avenue and E Street. This work would generate limited amounts of solid waste because the railroad ties that would be removed are anticipated to be reused within the proposed rail system and would not be disposed of in a landfill. Additionally, the proposed Project would comply with federal, state, and local statutes and regulations related to solid waste, including City-developed recycling programs. The proposed Project would not create or substantially contribute to any new significant impacts related to solid waste disposal beyond existing conditions during operations, specifically at rail station locations and the bus facility where limited amounts of waste would be generated and trash receptacles would be provided on site. As such, impacts related to solid waste were not found to be significant. No further discussion of utilities and/or service systems in an EIR is required.

3.13 UNAVOIDABLE SIGNIFICANT ENVIRONMENTAL EFFECTS

Section 15126.2(b) of the CEQA Guidelines requires a discussion of any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. In such cases where an impact cannot be mitigated to a less-than-significant level, a Statement of Overriding Considerations must be prepared prior to approval of a project, and in accordance with CEQA Guidelines Sections 15091 and 15093. Development of the proposed Project would result in the following significant and unavoidable project-related and/or cumulative impacts:

3.13.1 Cultural Resources

Implementation of Mitigation Measure CR-1 (Provide Photographic Documentation of Historic Resources and Noise Reduction Measures) would reduce, but not eliminate, the significant impacts of the Project to identified historic resources. The demolition of the following properties would result in a significant adverse change to each of the historic resources that cannot be mitigated to a less-than-significant level: the residential properties located at 203, 221-229, 263 and 271 North K Street, and 961 and 1056-1066 West Second Street; the commercial properties located at 981 West Third Street (Valley Linen Supply and Offices/Allgood Shower Door Company) and 123 South G Street (JG Wholesale Product); and the industrial properties located at 111 South I Street, 131 South I Street (Jenco Productions, Inc.), and 170 South E Street. Nevertheless, Mitigation Measure CR-1 outlined in Section 3.5, “Cultural Resources,” for the documentation of these historic resources is important to assure that information regarding each property’s contribution to the history of the City of San Bernardino is retained.

3.13.2 Noise

Significant noise impacts from rail operations were predicted to occur at four receptor locations including existing residential structures in the vicinity of the project improvements, as outlined in Section 3.10, “Noise and Vibration.” While sound barriers are generally effective in reducing noise impacts, additional factors—such as appropriateness in the context of the project setting (aesthetics), non-conforming land uses within the Project Study Area, and potential for division of established communities—are being taken into consideration for the proposed Project. Based on these considerations, it may not be appropriate for this Project to construct sound barriers in this location. Therefore, impacts related to rail noise experienced by sensitive receptors adjacent to the railway are significant and avoidable.

3.14 ALTERNATIVES EVALUATION IN TERMS OF CEQA

CEQA requires that an EIR describe a range of reasonable alternatives to a project or to the location of the project that could feasibly avoid or lessen any significant environmental impacts while substantially attaining the basic objectives of the project. An EIR should also evaluate the comparative merits of the alternatives. This section describes potential alternatives to the proposed Project that were considered but eliminated from further consideration and the reasons for dismissal, as well as those alternatives that have been carried forward for analysis in comparison to the potential environmental impacts associated with the proposed Project.

Key provisions of the CEQA Guidelines (Section 15126.6) pertaining to the alternatives analysis are summarized below.

- The discussion of alternatives will focus on alternatives to the Project or its location that are capable of avoiding or substantially lessening any significant effects of the Project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.
- The No-Project Alternative will be evaluated along with its impact. The no-project analysis will discuss existing conditions (2011), as well as what would be reasonably expected to occur in the foreseeable future if the Project were not approved based on current plans and consistent with available infrastructure and community services.
- The range of alternatives required in an EIR is governed by a “rule of reason”; therefore, the EIR must evaluate only those alternatives necessary to permit a reasoned choice. The alternatives will be limited to ones that would avoid or substantially lessen any of the significant effects of the Project.
- An EIR need not consider an alternative with effects that cannot be reasonably ascertained, when implementation is remote and speculative, and if its selection would not achieve the basic project objectives.

The range of feasible alternatives is selected and discussed in a manner to foster meaningful public participation and informed decision-making. Among the factors that may be taken into account when addressing the feasibility of alternatives, as described in CEQA Guidelines Section 15126.6(f)(1), are environmental impacts, site suitability, economic viability, availability of infrastructure, general plan consistency, regulatory limitations, jurisdictional boundaries, and whether the proponent could reasonably acquire, control, or otherwise have access to the alternative site.

As presented in Section 1.4, “Statement of Project Objectives,” the objectives of the proposed Project are as follows:

1. Construct a second track and associated railroad improvements to extend regional Metrolink passenger rail service between the existing Depot and downtown San Bernardino.
2. Encourage the integration of current and future passenger rail operations with other forms of transit in the region by providing a Metrolink passenger rail connection to downtown San Bernardino.
3. Accommodate forecasted ridership between the Depot and downtown San Bernardino by providing a convenient and efficient transit alternative to automobile travel.

4. Improve the mobility opportunities for transit-dependent populations in the City to employment centers in Los Angeles and Orange Counties and support local and regional planning goals of SANBAG for the development of transit corridors in the Inland Empire.
5. Improve safety and accessibility at the existing Depot by constructing a pedestrian bridge that will connect the station's two reconstructed platforms, thereby eliminating existing at-grade pedestrian crossings.
6. Facilitate intermodal transit opportunities by constructing the Omnitrans Bus Facility close to Metrolink passenger rail service.

3.14.1 Alternatives Considered

Refer to Chapter 2.0, "Alternatives," for a discussion of the proposed Project, the No-Build/No-Project Alternative, and each of the design options.

3.14.2 Environmentally Superior Alternative

The environmentally superior alternative would be the No-Build/No-Project Alternative because it would result in no direct environmental impacts. However, as discussed previously, the No-Build/No-Project/ Alternative would not fulfill any of the project objectives. Under the No-Build/No-Project Alternative, proposed improvements to approximately 1 mile of track included as part of the Project would not be implemented. Specifically, passenger rail service would not be extended east to downtown San Bernardino. Additionally, the No-Build/No-Project Alternative would not include: 1) improvements to or reconstruction of rail infrastructure to accommodate passenger rail service, 2) grade crossing improvements, 3) railroad signalization, 4) roadway closures, 5) rail platform or station facilities, or 6) an Omnitrans bus facility. Metrolink service would continue to originate and/or terminate at the Depot. The pedestrian overcrossing proposed to improve pedestrian safety would not be constructed. Existing conditions within the rail corridor would remain unchanged, and the rail line east of the Depot would continue to be used for low-speed, local freight service.

According to the CEQA Guidelines, if the environmentally superior alternative is the No Project Alternative, the EIR shall identify an environmentally superior alternative among the other alternatives. The analysis presented above and summarized in Table 3.14-1 indicates that the 3rd Street Open Design Option 3 would be the environmentally superior alternative. More specifically, the 3rd Street Open Design Option 3 would have reduced impacts, specifically because of the reduced size of the 3rd Street Open Design Option 3 Study Area in comparison to the Project Study Area. This alternative would result in reduced impacts on air quality, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, and transportation, and impacts similar to those for the proposed Project with regards to land use and planning. In addition, the 3rd Street Open Design Option 3 would have fewer impacts on aesthetics and biological resources due to the retention of trees. Accordingly, the 3rd Street Open Design Option 3 is considered the environmentally superior alternative.

Table 3.14-1. Comparison of Proposed Project, Design Options, and No-Build/No-Project Alternative

	Alternatives				
Environmental Topic	Proposed Project	Pedestrian Overpass Design Options 1A and 1B	Pedestrian Underpass Design Option 2	3rd Street Open Design Option 3	No-Build/No-Project Alternative
Aesthetics	Less-Than-Significant Impact.	Less-Than-Significant Impact: Impacts similar to those for the proposed Project.	Less-Than-Significant Impact: Impacts similar to those for the proposed Project.	Less-Than-Significant Impact: Fewer impacts than the proposed Project because of the reduced 3rd Street Open Design Option 3 Study Area.	Less-Than-Significant Impact.
Air Quality and Global Climate Change	Less-Than-Significant Impact.	Less-Than-Significant Impact: Impacts similar to those for the proposed Project.	Less-Than-Significant Impact: Impacts similar to those for the proposed Project.	Less-Than-Significant Impact: Fewer impacts than the proposed Project because of the reduced 3rd Street Open Design Option 3 Study Area.	Less-Than-Significant Impact.
Biological Resources	Less-Than-Significant with Mitigation: Mitigation Measures BR-1 through BR-3.	Less-Than-Significant Impact with Mitigation: Impacts similar to those for the proposed Project.	Less-Than-Significant Impact with Mitigation: Impacts similar to those for the proposed Project.	Less-Than-Significant Impact with Mitigation: However, fewer impacts than the proposed Project because of the reduced 3rd Street Open Design Option 3 Study Area.	No Impact.

Environmental Topic	Alternatives				No-Build/No-Project Alternative
	Proposed Project	Pedestrian Overpass Design Options 1A and 1B	Pedestrian Underpass Design Option 2	3rd Street Open Design Option 3	
Cultural Resources	Potentially Significant Impact with Mitigation: Mitigation Measure CR-1 through CR-5.	Potentially Significant Impact with Mitigation: Impacts similar to those for the proposed Project.	Potentially Significant Impact with Mitigation: Impacts similar to those for the proposed Project.	Potentially Significant Impact with Mitigation: However, fewer impacts than the proposed Project due to fewer CEQA eligible historic resources impacted within the reduced 3rd Street Open Design Option 3 Study Area.	No Impact.
Geology and Soils	Less-Than-Significant Impact with Mitigation: Mitigation Measure G-1.	Less-Than-Significant Impact with Mitigation: Impacts similar to those for the proposed Project.	Less-Than-Significant Impact with Mitigation: Impacts similar to those for the proposed Project.	Less-Than-Significant Impact with Mitigation: However, fewer impacts than the proposed Project because of the reduced 3rd Street Open Design Option 3 Study Area.	No Impact.
Hazards and Hazardous Materials	Less-Than-Significant Impact with Mitigation: Mitigation Measures HM-1 and HM-2.	Less-Than-Significant Impact with Mitigation: Impacts similar to those for the proposed Project.	Less-Than-Significant Impact with Mitigation: Impacts similar to those for the proposed Project.	Less-Than-Significant Impact with Mitigation: However, fewer impacts than the proposed Project because of the reduced 3rd Street Open Design Option 3 Study Area.	No Impact.

Environmental Topic	Alternatives				No-Build/No-Project Alternative
	Proposed Project	Pedestrian Overpass Design Options 1A and 1B	Pedestrian Underpass Design Option 2	3rd Street Open Design Option 3	
Hydrology and Water Quality	Less-Than-Significant Impact with Mitigation: Mitigation Measures HYD-1 and HYD-2.	Less-Than-Significant Impact with Mitigation: Impacts similar to those for the proposed Project.	Less-Than-Significant Impact with Mitigation: Impacts similar to those for the proposed Project.	Less-Than-Significant Impact with Mitigation: However, fewer impacts than the proposed Project because of the reduced 3rd Street Open Design Option 3 Study Area.	No Impact.
Land Use and Planning	Less-Than-Significant Impact.	Less-Than-Significant Impact: Impacts similar to those for the proposed Project.	Less-Than-Significant Impact: Impacts similar to those for the proposed Project.	Less-Than-Significant Impact: Impacts similar to those for the proposed Project.	No Impact.
Noise	Potentially Significant Impact with Mitigation: Mitigation Measures NOI-1 through N01-6.	Potentially Significant Impact with Mitigation: Impacts similar to those for the proposed Project.	Potentially Significant Impact with Mitigation: Impacts similar to those for the proposed Project.	Potentially Significant Impact with Mitigation: However, fewer impacts than the proposed Project because of the reduced 3rd Street Open Design Option 3 Study Area.	No Impact.
Transportation and Traffic	Less-Than-Significant Impact with Mitigation: (1 intersection for 2014): (2 intersections for 2035): Mitigation Measures T-1 through T-4.	Less-Than-Significant Impact with Mitigation: Impacts similar to those for the proposed Project.	Less-Than-Significant Impact with Mitigation: Impacts similar to those for the proposed Project.	Less-Than-Significant Impact with Mitigation: (1 intersection for 2035): Fewer impacts than the proposed Project (fewer intersections in 2035 requiring mitigation): Mitigation Measures T-1 and T-4.	Less-Than-Significant Impact.

3.15 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Section 15126.2(c) of the State CEQA Guidelines requires an EIR to consider any significant irreversible environmental changes that would be caused by a proposed project should it be implemented. Specifically, Section 15126.2(c) states that:

> Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as a highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

The construction and implementation of the proposed Project would entail the irreversible and irretrievable commitment of some land and energy and human resources, including labor required for the planning, design, construction, and operation of the proposed Project. These resources include the following:

- Commitment of land within the Project Study Area as a result of the construction of rail and bus infrastructure to accommodate existing passenger rail and bus service, including proposed rail, station, bus facility, and roadway improvements;
- Commitment of natural resources during construction activities associated with the proposed Project, including the consumption of fossil fuels and the use of construction materials; and
- Consumption of nonrenewable energy resources as a result of operation and maintenance of the proposed transportation improvements.

The rail right-of-way within the Project Study Area is an existing feature in the community and is located in an area where railroad facilities have existed as a part of the local community setting since the 1800s. The rail corridor is owned by SANBAG with easements provided to AT&SF, predecessor to the BNSF. BNSF continues to operate freight service on the line and retains a perpetual easement for freight service. The rail corridor consists of more than just the existing track and includes subsurface infrastructure (drainages, utility lines, easements, etc.).

In terms of the Project's commitment to land, the Project would commit a majority of the land to its continued use for rail facilities. Conversion of the land within the Project Study Area to additional rail right-of-way (area not previously included as current right-of-way) represents a short-term action that would have a long-term effect on the land's productivity. Over the long term, the productivity of the land would not be available to other uses. However, it could have a long-term beneficial effect on the productivity of the rail operations through added safety, time saving for travelers, and reduction of operations and maintenance costs incurred by SANBAG. Additionally, implementation of the proposed Project is not an irreversible commitment of the site to rail facility uses because the site is largely designated as existing rail right-of-way. However, properties located adjacent to the rail right-of-way proposed for full acquisition would be irreversibly committed to the Project, and any fully affected property owners would be relocated in accordance with federal law or compensated at fair market value for the amount of property acquired. Impacts would be less than significant.

In terms of the Project's commitment to resources, the proposed Project would result in a short term increase in the use of energy to manufacture, deliver, and construct the proposed

improvements. The Project would utilize natural resources such as steel, sand, gravel, and concrete to construct the improvements to or reconstruction of rail and bus infrastructure to accommodate existing passenger rail and bus service within the Project Study Area, including rail, station, bus facility, and roadway improvements. The Project would also commit human resources in the form of workplace labor to design and engineer the construction plans, construct the improvements during the 18- to 24-month construction period, or operate the Project. However, human resources are considered a renewable resource and are not considered irreversible/irretrievable commitments of these resources. Should the proposed rail, bus, and station facilities no longer be needed, these facilities could be demolished and the steel, concrete, and other materials could be recycled for other uses.

In the long term, this Project would not significantly increase the use of energy for rail or bus transport of people or goods. The proposed improvements are likely to improve the reliability and efficiency of passenger and freight train and bus transportation and would accommodate the demand for ridership of these alternative forms of transportation. The use of non-renewable energy sources during project operations, such as petroleum products and possibly natural gas and/or coal is in small part, is considered an irreversible, irretrievable commitment of these natural resources. However, this commitment is based on the minimal amount of these resources that would be consumed in relation to the energy resources available, and is considered a less-than-significant impact.

Additionally, implementation of public transit improvement projects, such as the proposed Project, would help to remove vehicles from roadways and freeways and convert single-occupancy vehicular commuters to transit commuters, which would result in a decrease in VMT and fuel use. In the long term for future buildout of the Project in 2035, 67,510 fewer VMT would result daily on a regional basis and less energy would be consumed for transportation as compared with what would occur without the proposed Project. This would result in a beneficial energy impact.

Development of any of the design options would represent a similar short-term and long-term commitment of land and resources in the area of the proposed Project, with the exception of the 3rd Street Open Design Option 3, which would involve a reduced APE, and would have reduced impacts. Overall, impacts would be less than significant.

Implementation of the No-Build/No-Project Alternative would not result in any short-term or long-term commitment of land and resources or involve any improvements to the rail corridor. Under this alternative, the track would remain in its existing condition and no impacts would occur.

3.16 GROWTH-INDUCING IMPACTS

CEQA Guidelines Section 15126.2(d) requires a discussion of the potential growth-inducing impacts of a project. This discussion addresses how implementation of the proposed Project and design options would foster economic or population growth, or the construction of additional housing, either directly or indirectly upon the surrounding environment.

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

Relevant to the proposed Project is the SCAG-initiated visioning process, known as the Compass Blueprint Program, which identifies a regional strategy to accommodate projected growth in southern California. The program seeks to accommodate growth through the development of demonstration projects that capitalize on the collaboration of regional planning agencies, local communities, and jurisdictions. As part of this visioning program, SANBAG completed the *Redlands Rail Feasibility Study* and the *Redlands Passenger Rail Station Area Plans*. These studies explored the feasibility of establishing passenger rail service between the cities of San Bernardino and Redlands, while identifying transportation alternatives, potential station locations, and multi-modal transit development opportunities. A number of studies and reports have been conducted to date that identify a locally preferred alternative consisting of extending Metrolink passenger rail service approximately 1 mile east to downtown San Bernardino. This locally preferred alternative is the basis of the Project analyzed in this document.

Under federal and state mandates, SCAG is tasked with developing an RTP, an FTIP every 4 years, and a biennial RTIP updated on an even-year cycle. The improvements to the Rialto and E Street rail platforms and track improvements are listed in the SCAG 2011 FTIP as project number 200809. The proposed Project is also listed in the SCAG 2011 FTIP under project number 20061012 as a part of the larger Redlands Passenger Rail Project. (SCAG 2011a.) The Project is also listed in the RTIP as “Metrolink Commuter Rail” for rail service expansion in San Bernardino as project number 4CR04 (SCAG 2011b).

Projects outlined in the RTP would contribute to new growth or the intensity of development within the SCAG region. The SCAG region is expected to grow in population by 28 percent (or 5.2 million persons) between 2010 and 2035 (SCAG 2011c). Likewise, employment in the region is expected to grow by 32 percent during the same time period. The proposed Project, however, is a transportation enhancement project aimed at improving the efficiency and safety of an existing transit system and creating a new rail stop in downtown San Bernardino; it is not a significant new land use development project. Also, the proposed Project would involve short-term construction activities and is not anticipated to create a significant number of permanent jobs. The proposed Project would, therefore, not spur new regional growth in terms of population or employment and would not result in significant growth-inducing impacts. The proposed Project would not provide rail or surface traffic system improvements greater than that contained in regional planning documents, such as relevant transportation improvement, air

quality reduction plans, and local growth forecasts. It also does not include infrastructure designed to support more intensive land uses.

The proposed Project would extend Metrolink commuter service into downtown San Bernardino, thereby providing an alternative mode of transportation for individuals currently reliant on passenger vehicles and long commutes to Riverside and Los Angeles counties. The proposed Project proposes the construction of new infrastructure to facilitate the extension of Metrolink services 1 mile east from its current termini at the Depot to downtown San Bernardino where a demand for transit service currently exists. The proposed Project would also incorporate a centralized bus facility that would be integrated with existing bus service offered by Omnitrans, thereby providing a local linkage to Metrolink passenger rail service. The proposed Project would not result in the development of new land uses or the provision of infrastructure in an isolated, undeveloped area. Because the proposed Project and associated facilities envisioned by this Project do not extend service to new uses or areas not already served by existing rail and surface transport system, there is no potential to cause or contribute to accelerated development within the regional area of potential impact. All circulation system components already exist within established alignments, and none of the proposed components would extend into new areas that could be considered to contribute to new development. Even though the Project proposes roadway closures, grade crossings, and other street improvements, the impacts to local access is not considered significant (refer to Section 3.11.4, “Transportation and Traffic”).

The Project’s purpose is to enhance the efficiency of train and bus operations while improving safety for transit uses by upgrading existing infrastructure within an existing rail corridor. It would not introduce new access to an area that is currently vacant or undeveloped, or remove access barriers that serve regional populations. Additionally, land adjacent to the rail corridor and within the Project Study Area is already developed with urban land uses and improvements proposed by the Project would be constructed within or adjacent to an existing rail right-of-way. Thus, implementation of the proposed Project would not cause or contribute to growth inducement.

The proposed Project is contemplated as an extension of existing transit services to serve populations already present in San Bernardino County to accommodate the existing demand for transit services. Although the proposed Project is intended to reduce congestion on highways and improve air quality, this benefit does not remove an access barrier to growth. Accordingly, the Project does not directly induce growth through the provision of housing or expansion of water infrastructure. To the contrary, the Project is merely intended to partially address existing demand that would occur even without the proposed Project. As such, the proposed Project would have a less-than-significant impact on growth.

The design options (Pedestrian Overpass Design Options 1A and 1B, Pedestrian Underpass Design Option 2, and 3rd Street Open Design Option 3) would result in similar impacts to the proposed Project (preferred alternative), in that they would not induce or facilitate growth. In most cases, under the remaining design options, the environmental impacts would either be the same as or similar to those for the proposed Project.

Implementation of the No-Build/No-Project Alternative would not induce or facilitate any growth or result in improvements to the rail corridor. Under this alternative, the track would remain in its existing condition, and no impacts would occur.

4.0 NEPA ENVIRONMENTAL ASSESSMENT EVALUATION

4.1 ENVIRONMENTAL ASSESSMENT INTRODUCTION

For SANBAG to be eligible for federal funds for this project, NEPA requires evaluation of impacts on the human and natural environment that would result from development of the proposed Project. Additionally, NEPA requires that the Build Alternative be compared with a No-Build Alternative, meaning that the proposed Project would not be constructed in San Bernardino. This EA provides the results of the evaluation.

This chapter presents the EA for the No-Build/No-Action Alternative, the proposed Project, and the design options associated with the proposed Project (Pedestrian Overpass Design Options 1A and 1B, the Pedestrian Underpass Design Option 2, and the 3rd Street Open Design Option 3). The EA includes an assessment of cumulative effects for each resource area considered as part of this analysis. Environmental consequences related to the human, physical, and/or biological environment that require no further investigation and, therefore, are not discussed in the EA include: agriculture resources, wild and scenic rivers, coastal zone, mineral resources, population growth and housing, public health and hazards, and recreation. Section 4.1.1, "Environmental Impact Assessment Criteria," presents the federal context applied in this EA and the criteria and terminology used in determining the significance for resource-specific impacts. The local and regional setting was provided previously in Section 3.1.1, "Regional and Local Environmental Setting."

4.1.1 Environmental Impact Assessment Criteria

This EA has been prepared in accordance with the Council on Environmental Quality (CEQ) Regulations (40 CFR 1500), *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA)*, and the joint Federal Highway Administration (FHWA)/ Federal Transit Administration (FTA) regulations (23 CFR 771), *Environmental Impact and Related Procedures,* and FHWA/FTA Section 4(f) regulations (2008) 23 CFR Section 774. The EA discussion below describes the affected environment, potential environmental effects, and cumulative impacts related to each topic area for the No-Build/No-Action Alternative, the proposed Project, and the project design options (Pedestrian Overpass Design Options 1A and 1B, the Pedestrian Underpass Design Option 2, and the 3rd Street Open Design Option 3). In instances where multiple project designs would result in the same or similar effects, the discussion of effects is combined to streamline the analysis. Where potential effects are identified, mitigation measures are provided to minimize or avoid environmental harm.

This EA uses specific terminology in determining the area involved in the assessment of the proposed Project, the No-Build/No-Action Alternative, and project design options, as defined in Table 4.1-1.

Table 4.1-1. Area Definitions and Distinctions

Area Title	Area Location	Description
regional area	Regional area extending outside of the Project Study Area to include surrounding areas outside of the Project.	Area generally depicted in Figure 1-1 (Regional Location) in Section 1.1.
Project	Area within the established Project Study Area map for the proposed Project, Pedestrian Overpass Design Options1A and 1B, and the Pedestrian Underpass Design Option 2.	Area depicted in Figure 1-2 (Project Location) in Section 1.1.
Project Study Area	Same as the Project.	Same as the Project. See Figure 2-1 in Section 2.3.
bus facility	Area including the Omnitrans Bus Facility and extension of F Street and all other ancillary improvements to the southwest corner of Rialto Avenue and E Street.	Area depicted in Figure 2-1 in Section 2.3 as the "Omnitrans Bus Facility," including areas west of E Street, east of F Street, south of 2nd Street (for street improvements to E and F Streets), and north of the rail right-of-way.
3rd Street Open Design Option 3 Study Area	Area within a Study Area map prepared specifically for consideration of the 3rd Street Open Design Option 3.	Includes a smaller area than the Project Study Area, specifically by eliminating the area east of K Street between 2nd and 3rd Streets from consideration. See Figure 2-11 in Section 2.4.
rail corridor	Existing rail right-of-way within the Project Study Area.	The rail alignment depicted as Figure 1-2 in Section 1.1.
survey area	500-foot buffer survey area that extends from the rail corridor.	Only relevant in terms of the biological resources evaluation. Depicted in Figure 3.4-2.
traffic study area	Area within downtown San Bernardino, including the entire Project Study Area and areas south and east of an existing freight yard, and bisected by I-215 freeway.	Only relevant in terms of the transportation evaluation. Depicted in Figure 3.11-1.
APE	Area delineated by complete parcel boundaries of properties affected within the Project Study Area. Includes areas potentially having permanent and temporary effects.	Only relevant in terms of the cultural resources evaluation. Defined by the SHPO guidance requiring that all parcels that are affected be included within an evaluated APE. Depicted in Figure 3.5-1.
EJ study area	Regional area extending outside of the Project Study Area within the City of San Bernardino and extending into areas within adjacent cities.	Area includes surrounding minority and low-income census blocks groups. Depicted in Figure 4.5-1.

This terminology will be used throughout this chapter.

4.1.2 Cumulative Impact Assessment

This chapter evaluates the potential cumulative impacts of the proposed Project, that is, the impacts of the proposed Project or alternatives/design options when added to the impacts of other past, present, and reasonably foreseeable future projects and actions.

The combined, incremental effects of human activity, referred to as cumulative impacts, pose a serious threat to the environment. While they may be insignificant on their own, cumulative impacts accumulate over time, from one or more sources, and can result in the degradation of important resources. The assessment of cumulative impacts in NEPA documents is required by Council on Environmental Quality (CEQ) regulations (CEQ 1987). CEQ regulations that implement the NEPA define a cumulative impact as “the impact on the environment which results from the incremental consequences of an action when added to the past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions” (40 CFR 1508.7). Cumulative effects can result from individually minor, but collectively significant actions that take place over a period of time (40 CFR 1508.7). Section 15355 of the CEQA guidelines (2005) defines cumulative impacts as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

The individual effects may be changes resulting from a single project or a number of separate projects, whereas the cumulative impact is the change in the environment from the incremental impact of a project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor, but collectively significant, projects taking place over a period of time. An adequate discussion of adverse cumulative impacts involves analyzing either (1) a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or (2) a summary of projections contained in an adopted planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. This cumulative impact analysis applies a combination of the methods described above. For example, as described in the traffic impact analysis, traffic volume forecasts are based on the results of a 5% increase in traffic demand. The model was prepared and refined specifically for use in the traffic, air quality, and noise evaluations. The remaining environmental resource areas evaluated in this EA were analyzed in relation to past, present, and foreseeable future development projects, as listed in Table 4.1-2.

Table 4.1-2. Past, Present and Potentially Foreseeable Future Projects

Title	Schedule	Location	Project Description
Freight Service	Existing service.	Redlands rail corridor along BNSF Railroad.	Freight service to three customers per month along the rail line.
Local Omnitrans Bus Service	Existing service.	Throughout San Bernardino.	Existing bus services include 12 local bus routes (1, 2, 3/4, 5, 7, 8, 9, 10, 11, 14, 15, and 215).
Amtrak Long-Distance Passenger Rail Service	Existing service.	Existing rail right-of-way.	Existing Amtrak train service routes #3 (westward) and #4 (eastward), the Southwest Chief, operate daily on BNSF Main Track 3 through the Project Study Area, stopping at the Depot.

Title	Schedule	Location	Project Description
Metrolink Commuter Passenger Rail Service	Existing service.	Existing rail right-of-way.	Existing commuter service includes 11 existing Metrolink trains—eight San Bernardino to Los Angeles Union Station trains via the Metrolink San Bernardino line and three trains to Oceanside via the Metrolink IEOC line.
Widening of the I-215 Freeway	Construction in 2009–2013.	I-215 between I-10 and SR-210 in San Bernardino.	Widening of I-215, and addition of a carpool lane in both directions between I-10 and SR-210, connector ramps, and auxiliary lanes along the corridor.
Eastern Maintenance Facility	Construction in 2011–2012. Operational in 2012.	1945 Bordell Avenue, with W. Mill Street to the north, E. Laurel Street to the south, and Bordell Avenue to the east in the City of Colton.	A layover and maintenance facility for Metrolink passenger train service would be developed from the Inland Empire to Orange and Los Angeles Counties.
Mount Vernon Avenue Overhead Replacement Project Bridge	Unknown, likely to be constructed in 2012. Operational in 2012.	Mount Vernon Avenue between 2nd and 5th Street in San Bernardino.	Bridge No. 54C-0066 to propose replacement of a length of 1,000 feet or more to accommodate four lanes of traffic at Mount Vernon Avenue.
Omnitrans sbX Bus Rapid Transit Project	Construction in 2012–2013. Operational in 2013.	E Street corridor right-of-way in San Bernardino.	The future planned sbX service/ E Street Corridor Project with 16 station locations designed to provide rapid bus transit, with platform-level boarding, landscaped stations, public art, and 60-foot-long coaches.
San Bernardino Transit Center	Construction in 2012–2013. Operational in 2013.	North of E Street platforms at corner of Rialto Avenue and E Street in San Bernardino.	The transit center would be designed to serve Metrolink commuter rail, Omnitrans sbX bus rapid transit, and Redlands corridor rail transit passengers. Would include 22 bus bays.
National Orange Show Industrial Project	Unknown, likely to be constructed in 2012 or 2013. Operational in 2013.	Bounded by Arrowhead Avenue, Esperanza Street, and Central Avenue in San Bernardino.	Construction of four industrial buildings and 752,770 square feet of building area.
Transit-Oriented Development - Land Use Intensity Increases	Beginning 2012.	Cities of San Bernardino, Loma Linda, and Redlands adjacent to the Redlands rail corridor.	Increase in land use densities and development of updated land use plans and development regulations to advance transit-oriented development within 0.5 mile of proposed transit stations in the Redlands corridor.

Title	Schedule	Location	Project Description
Redlands Passenger Rail Project	Construction in 2013–2016. Operational in 2016.	From downtown San Bernardino to the vicinity of the University of Redlands along the 9-mile Redlands rail corridor.	Light rail passenger service with five stations located at the Rialto Avenue and San Bernardino Transit Center, Tippecanoe Avenue, New York Street, Downtown Redlands, and the University of Redlands.
Midnight & Pick-A-Part Auto Recycling Center Project	Unknown. Likely to be constructed in 2013 and operational in 2013.	701 North Waterman Avenue; east side of Waterman Avenue between 6th and 9th Streets in San Bernardino.	Modifications to existing facility, including construction of 17 new canopies, addition of 1,118 square feet, and various on-site improvements for expansion of the existing auto recycling business.
California High-Speed Train Project, San Bernardino option of the Los Angeles to San Diego (via the Inland Empire)	Unknown. Likely to be constructed after 2015 and operational in 2020.	Various locations within the Inland Empire, including through San Bernardino.	The option of the high-speed train project would operate adjacent to the existing San Bernardino Metrolink line and would include a platform(s) adjacent to the rail platforms proposed as part of the proposed Project.
I-215 Bi-County HOV Lane Gap Closure Project	Adoption of mitigated negative declaration in 2011. Construction in 2012–13.	Portions of I-215 from south of the I-215/ SR-60/SR-91 interchange to north of I-215/I-10 interchange.	Project includes a new high-occupancy vehicle lane in each direction on I-215.
Long-Term Maintenance of Flood Control and Transportation Facilities Located throughout San Bernardino County	Notice of preparation issued in October 2010. Draft EIR planned for late 2011.	Drainage facilities (March 2010) throughout Zone 2, which includes the City of San Bernardino.	The project includes maintenance of various flood control channels, basins, earthen streams and dams, bridges, and road culvert crossings throughout San Bernardino County. The purpose of the project is flood protection and road safety.
Palm/Industrial Distribution Center	Construction starts in late 2011 and ends in 2013.	Located on a 38.4-acre site adjacent (south) to I-215 at the northeast corner of the intersection of Palm Avenue and Industrial Parkway.	The project includes the construction of a 678,275-square foot warehouse/distribution facility on 38.4 acres.

Source: HDR Engineering, Inc. 2010b, 2011a.

ICF, SANBAG, City of San Bernardino, sbX, San Bernardino County, Caltrans, and Omnitrans websites, accessed September 2011.

4.2 HUMAN ENVIRONMENT

4.2.1 Land Use and Land Use Planning

This section evaluates the effects of the proposed Project, No-Build/No-Project Alternative, and design options on land use and land use planning. Land use information presented in this section is summarized from the land use technical memorandum (Appendix H) prepared in September 2011 for the proposed Project by Gruen Associates.

4.2.1.1 Regulatory Environment

The proposed Project is subject to the requirements and policies of the following federal plan.

Surface Transportation Board – Preemption of Railroad Rights-of-Way

The Surface Transportation Board (STB) was created by the Interstate Commerce Commission Termination Act (ICCTA) in 1995 and is the successor agency to the Interstate Commerce Commission. The STB is an economic regulatory agency that Congress charged with resolving railroad rate and service disputes and reviewing proposed railroad mergers. The STB is an independent decision-making body, although it is administratively affiliated with the Department of Transportation. The STB retains jurisdiction over railroad rate and service issues and rail restructuring transactions, including mergers, line sales, line construction, and line abandonments.

Section 10501(b) of the ICCTA gives STB exclusive jurisdiction over “transportation by rail carriers” and expressly preempts any state law remedies with respect to rail transportation with the term “transportation” broadly defined to include all of the related facilities and activities that are part of rail transportation (Section 10102(9)). The purpose of Section 10501(b) is to prevent a patchwork of local regulation from unreasonably interfering with interstate commerce. Section 10501(b) categorically preempts any form of state and local preclearance or permitting that, by its nature, could be used to deny or defeat the railroad’s ability to conduct its operations (City of Auburn v. United States, 154 F.3d 1025; Green Mountain R.R. v. State of Vermont, 404 F.3d 638 (2d Cir. 2005).

A discussion of SCAG’s RTP and RCPG plans is provided in Section 3.9, “Land Use and Planning.”

4.2.1.2 Affected Environment

Existing Land Uses

A variety of land uses are located adjacent to the approximately 1-mile-long rail corridor. These include commercial, storage/warehouse, industrial, low-density residential, and office uses. The residential uses are concentrated near the western portion of the rail corridor. Other existing residences are located along the rail corridor but are considered nonconforming uses because of their commercial or industrial zoning. I-215 bisects the corridor in the central portion of the Project Study Area. Approximately 57% of the properties along the rail corridor are vacant, and approximately 16% are warehouse uses (see Appendix H).

The western portion of the rail corridor, between the Depot and I-215, includes commercial uses to the south and the Depot to the north. The Depot currently serves one Amtrak and three Metrolink lines. Land uses in the immediate vicinity of the Depot include the existing station,

vacant properties, and neighborhood commercial uses. South of the Depot is the new 2nd Street Shopping Center, which is anchored by Superior Grocers. Beginning at the Depot, the rail corridor is surrounded largely by industrial uses, with a few vacant lots and some single-family residential uses. Scattered commercial uses are also located along the rail corridor near I-215. Industrial uses are the primary use between J Street and I Street, north and south of 3rd Street. Single-family residential uses occur south of these industrial uses. Then, between 2nd Street and Rialto Avenue, industrial uses are found along the railroad tracks, surrounded by single-family residential and neighborhood commercial uses.

The eastern portion of the rail corridor, from I-215 to Arrowhead Avenue, consists mostly of commercial, office, and industrial uses. The commercial uses include a grocery store (Food 4 Less), Carousel Mall, and San Manuel Stadium, a privately operated minor league ballpark owned by the City of San Bernardino**.** Between I-215 and G Street, a substantial amount of industrial development surrounds the rail corridor. Many vacant properties are located at the northwest corner of G Street and Rialto Avenue. East of G Street, the character changes to a mix of neighborhood retail, office, and civic uses. Offices and civic uses, including a lawyer's office and the Department of Homeland Security, are located between G Street and F Street south of Rialto Avenue.

The proposed rail platforms and bus facility would be located on the west side of E Street south of Rialto Avenue in the eastern portion of the rail corridor. Land uses at E Street north of Rialto Avenue are primarily commercial, including automobile dealers and vehicle repair shops, small-scale retail development, and restaurants. South of Rialto Avenue, the land uses at E Street are primarily commercial and commercial recreational uses. The commercial uses include small-scale retail uses, automobile-related uses (e.g., sales and repair), warehouses, restaurants, medical offices, and a motel. Commercial recreational uses in this segment include San Manuel Stadium, a minor league baseball stadium, and parking lot areas south and west of the stadium. Many industrial uses are located in the southeast quadrant of the rail corridor.

For additional discussion of the affected environment, see Section 3.9, "Land Use and Planning."

4.2.1.3 Environmental Consequences

Conflict with existing land uses

No-Build/No-Project Alternative

Construction Impacts

This alternative assumes that the proposed Project would not be implemented and existing conditions of the rail corridor would remain. No construction activities would occur, and no land use changes are proposed under this alternative. Therefore, no adverse construction effects related to land use compatibility would occur.

Operational Impacts

The proposed improvements to approximately 1 mile of track included as part of the proposed Project would not be implemented under this alternative. Additionally, the No-Build/No-Project Alternative would not include improvements to or reconstruction of rail and bus infrastructure to accommodate existing passenger rail and bus service under the proposed Project. Existing

conditions of the rail corridor would remain under this alternative and no land use changes would occur. No adverse operational effects would occur. It should be noted that regardless of whether a second track is built, as proposed under the Project, both freight and passenger rail operations could continue through the rail corridor without implementation of the proposed safety improvements.

Proposed Project

Construction Impacts

As indicated in Chapter 2, "Alternatives," the rail corridor consists of the existing, westernmost mile of the Redlands Subdivision railway (also known as the Redlands Corridor or Spur.) The existing use of the right-of-way within the rail corridor is transportation (rail). Construction of the proposed passenger rail, bus, and associated facilities including platforms would not present a conflict with existing land uses or zoning in the regional area.

Land uses surrounding the rail corridor include commercial, office, light industrial, warehouse, vacant, and scattered single- and multi-family uses. Existing land uses within the station areas are generally compatible with proposed construction of transit facilities and would support commercial and residential activities along the rail corridor. Therefore, implementation of the proposed Project would not restrict the movement of people and would be compatible with existing land uses.

The proposed Project would require partial and full acquisitions of adjacent properties for right-of-way purposes. Construction impacts would be temporary (temporary construction easements would be established for approximately 18 to 24 months throughout the duration of construction), and any access disruptions to the residential neighborhoods and nearby commercial/office/industrial uses located along the rail corridor would be temporary. Access disruptions resulting from proposed construction activities would not result in substantial adverse effects. Land acquisitions are discussed further in Section 4.2.6, "Land Acquisitions, Displacement, and Relocation."

Operational Impacts

The proposed Project would require partial and full acquisition of adjacent properties for right-of-way purposes. In some instances, proposed acquisitions would result in the loss of commercial uses located along the rail corridor or require the relocation of families for takes on residential properties. The conversion of 3rd Street into a cul-de-sac southeast of the Depot would require acquisition of a vacant building. The partial acquisitions would maintain the minimum setbacks required by the applicable zoning district or an appropriate buffer would be provided. Full acquisitions would be compensated at fair market value as required by the Uniform Relocation Assistance and Real Property Acquisition Policies Act and the California Relocation Act. The proposed Project would include conversion of a few through streets into cul-de-sacs in some locations. These adverse effects would not be substantial.

The proposed loss of commercial uses is not anticipated to result in a change in land use character for the surrounding area. Commercial uses would continue to line portions of the rail corridor. Additionally, a majority of the existing residences that remain are located on commercial or industrially designated land and, therefore, are considered nonconforming uses. Additionally, no change in land use is proposed for the rail corridor because the Project proposes to expand exiting transit service 1 mile east from an existing station and to provide additional rail platforms, associated, and a bus facility on commercially zoned lands. The rail alignment itself is already owned by SANBAG and would continue to be within San Bernardino

jurisdiction, similar to existing conditions. Therefore, overall implementation of the proposed Project would be compatible with surrounding land uses.

Pedestrian Overpass Design Options 1A and 1B and Pedestrian Underpass Design Option 2

Construction Impacts

As with the proposed Project, construction associated with Pedestrian Overpass Design Options 1A and 1B and the Pedestrian Underpass Design Option 2 would not conflict with existing land uses or zoning in the rail corridor. Existing land uses adjacent to the proposed platform areas and bus facility are generally compatible with proposed construction of transit facilities and would support commercial and residential activities in the area. Effects resulting from proposed partial and full acquisition of properties within the Project Study Area would be the same as those anticipated under the proposed Project. Access disruptions resulting from proposed construction activities would be temporary in nature and would not result in substantial adverse effects.

Operational Impacts

The proposed pedestrian egress design options would enhance connectivity and provide safe egress from the platforms to the main areas of the Depot. The placement of this project feature would be compatible with the existing Depot. As with the proposed Project, the proposed loss of commercial uses is not anticipated to result in a change in land use character for the surrounding area. Commercial uses would continue to line portions of the rail corridor and could indirectly benefit from the proposed Project. Additionally, no change in land use is proposed for the rail corridor because the Project proposes to expand existing transit service 1 mile east from an existing station. Therefore, overall implementation of these design options would be compatible with surrounding land uses. No adverse effects would occur.

3rd Street Open Design Option 3

Construction Impacts

As with the proposed Project, construction associated with this design option would not conflict with existing land uses or zoning in the rail corridor. With respect to construction activities, this design option would result in reduced effects compared to the proposed Project. Existing land uses adjacent to the proposed platform areas and bus facility are generally compatible with proposed construction of transit facilities and would support commercial and residential activities in the area. Effects resulting from proposed partial and full acquisition of properties within the 3rd Street Open Design Option 3 Project Study Area would be reduced compared to those anticipated under the proposed Project because properties along K Street between 2nd Street and 3rd Street would be maintained. Additionally, this design option would include the construction of a grade crossing at 3rd Street to provide for safer crossings for pedestrians and vehicles. Access disruptions resulting from proposed construction activities would be temporary in nature and would not result in substantial adverse effects.

Operational Impacts

As with the proposed Project, implementation of this design option would be compatible with surrounding land uses. Operational effects would be similar to those anticipated under the proposed Project, with the exception of the 3rd Street closure and the addition of an at-grade crossing. No substantial adverse effects would occur.

Land use plans and policies

No-Build/No-Project Alternative

Construction Impacts

This alternative assumes that the proposed Project would not be implemented and that existing conditions of the rail corridor would remain. No adverse effects related to consistency with land use plans would occur.

Operational Impacts

The proposed improvements to approximately 1 mile of track included as part of the proposed Project would not be implemented under this alternative. Additionally, the No-Build/No-Project Alternative would not include improvements to or reconstruction of rail and bus infrastructure to accommodate passenger rail and bus service proposed under the proposed Project. Existing conditions of the rail corridor would remain under this alternative. In this context, this alternative could contribute to inconsistencies with applicable regional and local land use plans and policies, especially as they relate to the provision of transit service. In this context, this alternative would be in conflict with one or more applicable policies that are adopted for the purpose avoiding or mitigating significant environmental effects and, more specifically, regional air quality effects and traffic congestion. However, in the context that these inconsistencies are characteristic of existing conditions, these adverse effects are not considered substantial and adverse. Although it should be noted that many of the goals, policies, and strategies identified in the RTP and RCPG support additional transit opportunities that would not be supported by this alternative.

Proposed Project

Construction Impacts

Construction of the proposed Project would not result in inconsistencies with any applicable plans or policies. All construction activities would occur in compliance with all applicable plans and policies related to construction and temporary impacts (soil erosion, vegetation removal, air quality emissions, timing of construction activities, etc.). Therefore, no substantial adverse effects would occur.

Operational Impacts

The proposed Project would involve construction of track improvements along an existing rail corridor to accommodate the proposed extension of existing Metrolink service during Project operations. The proposed Project would also involve other track improvements, the construction of a passenger bridge overcrossing, new rail platforms, and a bus facility at Rialto Avenue and E Street. Street and drainage improvements and grade crossing modifications would also occur under the proposed Project.

The proposed Project would not result in new land uses that would require changes to existing land use plans, policies, and regulations. The proposed Project is anticipated to be consistent with all jurisdictions subject to federal review and their plans for the rail corridor. Similarly, the proposed Project would not conflict with any RTP and RCPG goals or policies (Refer to Tables 3.9-2 and 3.9-3 for further detail regarding Project consistency with the 2008 RTP and RCPG goals). The proposed Project would be consistent with the goals, policies, and objectives of the RTP and RCPG. Hence, no adverse effects are anticipated.

Design Options

Effects related to consistency with plans and policies that would occur under the design options would be similar to those described for the proposed Project. As with the proposed Project, construction and operation of these design options would be consistent with applicable regional plans and policies. No substantial adverse effects would occur.

4.2.1.4 Avoidance, Minimization, and/or Mitigation Measures

No mitigation is required.

4.2.1.5 Cumulative Impacts

It is anticipated that future development in the City would result in changes to the existing land use environment through the conversion of vacant land to developed uses, or through conversions of existing land uses (e.g., from residential to commercial). Therefore, future development adjacent to the rail corridor would be reviewed for consistency with applicable adopted land use plans and policies for local planning compliance. As such, the cumulative effect associated with inconsistencies or conflicts from future development with adopted plans and policies would not be adverse from the perspective of the proposed Project and design options.

Also, the Project and design options propose the extension of Metrolink service 1 mile east from the Depot to downtown San Bernardino, construction of a bus facility and proposed rail and roadway infrastructure improvements that would be compatible with surrounding land uses. The proposed use would not conflict with applicable plans or policies. It should be noted that the proposed Project and design options would be consistent with the goals and policies that aim to encourage additional transit opportunities to provide for a better quality of life and a better, cleaner environment. Therefore, no cumulative adverse effects on land use and planning would occur with implementation of the proposed Project or design options.

The overall growth of San Bernardino County and individual communities is driven by market forces, employment, the cost of housing, and availability of land. The location, types, and amounts of development are directed and shaped by local jurisdictions through their land use powers. Proposed improvements to rail and bus infrastructure are generally contemplated in federally required transportation plans to improve transportation opportunities and reduce reliance on personal automobiles. The extension of commuter rail service and provision of a bus facility may have an influence on the types and timing of development, allowing local jurisdictions to develop more transit-oriented development as part of specific development projects and area plans. The proposed Project and design options are expected to accommodate existing transportation demand that exists within the rail corridor and adjacent to downtown San Bernardino. Therefore, the proposed Project and design options would not directly generate any new development but may facilitate the intensification of development adjacent to the rail corridor, as realized in the RTP and SCAG's RCPG. These indirect effects are not considered adverse and would not be substantial.

4.2.2 Community Impacts

This section evaluates the effects of the proposed Project, No-Build/No-Project Alternative, and design options related to community impacts. The technical information in this section is based on various technical resources, including the land use technical memorandum (Appendix H), prepared in September 2011 by Gruen Associates, and the property acquisitions information prepared for the proposed Project (HDR Engineering, Inc. 2011d).

4.2.2.1 Regulatory Environment

NEPA of 1969, as amended, established that the federal government use all practicable means to ensure that all Americans have safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 USC 4331(b)(2)). The FHWA in its implementation of NEPA (23 USC 109(h)) directs that final decisions regarding projects are to be made in the best overall public interest. This requires taking into account adverse environmental effects, such as the destruction or disruption of human-made resources, community character and cohesion, and the availability of public facilities and services.

The complete description of applicable regional and local plans is provided in Section 4.2.1, “Land Use and Land Use Planning.”

4.2.2.2 Affected Environment

The affected environment is the regional and local setting surrounding the rail corridor, as previously discussed in Section 3.1.1, “Regional and Local Environmental Setting.” The area reviewed for the community impacts analysis encompasses land within approximately 300 feet of the centerline of the railroad tracks and within a 0.25-mile radius of the station and rail platform locations.

Railroad facilities have been part of the local community setting since the 1800s. Therefore, the rail right-of-way is an existing feature in this area. The rail corridor is owned by SANBAG, with easements provided to AT&SF, the predecessor to BNSF, which operates freight service on the line under a perpetual easement. No other surface activities, other than general maintenance, are permitted within the rail right-of-way. The rail corridor also includes subsurface infrastructure (e.g., drainages, utility lines).

A variety of land uses are located adjacent to the approximately 1-mile-long rail corridor (i.e., commercial, storage/warehouse, industrial, and office uses, as well as low-density residential uses). Adjacent residential uses are predominantly located west of I-215, north of Rialto Avenue, and south of the existing railway as well as between the Depot and the BNSF Short Way. South of the bus facility site is the existing rail line to be improved by the Project. Commercial uses are located north of the vacant bus facility site. Office uses are located west of the site, and the Aero Star Motel is located east.

Urban decay is the process whereby a previously functioning city, or part of a city, falls into disrepair. Signs of decay include deindustrialization, depopulation or changing population, economic restructuring, abandoned or vacant buildings, high local unemployment, political disenfranchisement, crime/vandalism, and a desolate, inhospitable city landscape. A characteristic of urban decay is blight, or the visual, psychological, and physical effects of living among vacant lots, buildings, and/or condemned houses. Such desolate properties are socially dangerous to the community because they can attract criminals and street gangs, contributing to the volume of crime, and further decaying the urban landscape. Portions of the rail corridor,

including those residential areas that are considered nonconforming land uses among industrially designated areas, are in danger of resulting in additional decay as additional buildings are left uninhabited due to the current economic recession and joblessness. These considerations will be discussed in greater detail in Section 4.5, "Environmental Justice."

4.2.2.3 Environmental Consequences

Community character and cohesion

No-Build/No-Project Alternative

Construction Impacts

This alternative assumes that the proposed Project would not be built and that existing conditions within the rail corridor will continue. Under this alternative, no construction activities or changes to community character would occur. Therefore, no adverse construction effects related to community character and cohesion would occur.

Operational Impacts

Under this alternative, improvements along the approximately 1-mile-long rail corridor, as proposed under the Project, would not be implemented. The No-Build/No-Project Alternative would not improve or reconstruct rail and bus infrastructure to accommodate passenger rail and bus service, as proposed under the Project. Passenger rail service would not be extended east to downtown San Bernardino, and improvements involving rail infrastructure, grade crossings, railroad signalization, and platform, station, or bus facilities would not be constructed. Therefore, existing conditions within the rail corridor would continue. In this context, existing blighted conditions along the rail corridor would persist under this alternative. Although the No-Build/No-Project Alternative would not be responsible for creating these conditions in of its self, this alternative would inhibit the installation of transit services, which could assist in the alleviation of these conditions. Although, these are considered adverse effects to community character and cohesion, they are not considered significant in the context that they are already representative of existing conditions.

It should be noted that the safety features proposed under the Project would not be implemented, and safety hazards related to pedestrian and vehicular access could continue, because of potential conflicts with rail operations within the rail corridor. Regardless of whether a second track is built, as proposed under the Project, rail operations could continue through the rail corridor without implementation of the proposed safety improvements. Based on these considerations, no adverse effects would occur.

The economy and future fuel prices could dictate the number of trains that would use the rail corridor. If more trains traverse the single-track rail corridor, then additional conflicts may occur (e.g., additional trains left idling so that higher priority trains can pass, scheduling delays, additional risk of rail-to-rail accidents or rail-to-pedestrian/rail-to-vehicle accidents).

Proposed Project

Construction Impacts

Construction of the track improvements associated with the proposed Project would take place primarily within the right-of-way of the existing Redlands branch line. The proposed Project's track improvements would include realignment of the existing track, improvements to the BNSF Short Way, and construction of a parallel second track from the Depot to the proposed rail

platforms and bus facility near Rialto Avenue and E Street. The bus facility with office building is a major component proposed on the eastern extent of the Project Study Area proposed north of the rail platforms at Rialto Avenue and E Street. The proposed Project would also include a new 265-space parking lot to the south of the new rail platforms and additional parking at the Depot. Another component of the proposed Project involves platform, pedestrian access, parking lot, and minor interior and exterior improvements at the Depot.

Construction of the proposed Project is anticipated to require temporary street closures and detours and may result in delays. In addition, construction of the proposed Project may restrict access temporarily to residences and businesses within the rail corridor during construction of the second track, grade crossing upgrades, and street improvements. However, any access disruptions that would affect adjacent residential neighborhoods or commercial/office/industrial uses along the rail corridor would be temporary, occurring only during the anticipated 18- to 24-month construction period. Furthermore, implementation of a construction detour plan and Mitigation Measure T-1 (Prepare and Implement a Traffic Management Plan), as stated in Sections 3.11 “Transportation and Traffic” and 4.2.3, “Transportation,” would help to maintain vehicular access by routing traffic to other local streets during the construction period. Also, any proposed contractor staging or assembly areas constructed to support project construction would be temporary, and thus, their effects on community character and cohesion would be short-lived.

Detour routes and proper signage would help pedestrians and motorists pass through the rail corridor safely. Although alternative routes (detours) would be provided during street closures, it is still expected that access to adjacent land uses may be temporarily affected. However, access disruptions resulting from construction activities, as well as their effects on community character and cohesion, would be short term. Therefore, the proposed Project is not anticipated to result in substantial adverse effects.

Operational Impacts

The proposed Project would operate within an existing rail corridor. Adjacent properties are located in an area where railroad facilities have existed as part of the local community setting for many decades, and communities in the area were originally established in association with the railroad. Although passenger rail service is not currently provided along this part of the corridor, the reintroduction of passenger service would not adversely affect community character and cohesion because of the existing use (i.e., freight service) along the right-of-way.

The addition of a second track within the rail corridor, between the Depot and the proposed rail platforms and bus facility, would necessitate acquisition of additional right-of-way within the Project Study Area primarily adjacent to the rail centerline, south of the Depot (along K Street), and in the vicinity of the proposed rail platforms near Rialto Avenue and E Street. In addition, the proposed Project would require full or partial acquisition of some adjacent properties for right-of-way purposes. As indicated in Section 4.2.6, “Land Acquisitions, Displacement, and Relocation,” the proposed Project may require up to 69 property acquisitions, amounting to approximately 364,713 square feet (8.4 acres) of land. These 69 properties are located adjacent to the rail corridor, within the Project Study Area. The acquisitions would be in the form of full takes, partial takes, permanent easements for public roadways or sidewalks, utility easements for storm drains, emergency vehicle access easements, ingress/egress easements, and street vacations. Four of the properties identified for full acquisition would require full tenant relocation as well to allow each business to remain open during and after construction. Additionally, four residential properties identified for acquisition would require full tenant relocation because the structures would be permanently removed. These properties include both single-family and

multifamily uses, amounting to a total of seven families requiring relocation. Most of the remaining adjacent properties contain warehouse, industrial, office, or commercial uses; some of the properties are vacant.

Acquisitions included under the proposed Project are not anticipated to disrupt cohesion or change the character of the existing residential neighborhoods along the rail corridor. As stated previously, the rail corridor is an existing railroad/transportation route along which communities have developed. Property/business owners subject to full or partial acquisition would be compensated at fair market value, as required by existing law. Improvements involving partial acquisitions would maintain the setback requirements of the applicable zoning district or an appropriate buffer would be provided and no adverse effects are anticipated.

In addition to track improvements within the rail right-of-way, the Project would result in changes at existing grade crossings. In accordance with CPUC requirements, upgrades would need to be made at 2nd Street, Rialto Avenue/I Street, and G Street to improve public safety. The three grade crossings would be redesigned in accordance with the latest SCRRA *Highway Grade Crossing Manual* guidelines, which require raised medians, widened sidewalks, traffic striping, flashing lights, pedestrian gate arms, and swing gates. These public safety improvements may result in changes to the roadway configuration at specific intersections. However, because they are proposed to facilitate safe egress for pedestrians and vehicles traveling in the area of the rail right-of-way, no substantially adverse effects on the physical cohesion of a neighborhood would occur.

In addition to grade-crossing safety measures, the Project also proposes street improvements and closures that may result in effects on neighborhoods and businesses near affected intersections. The intersection of 3rd Street and J Street would be reconfigured as a “dog leg.” Third Street would be closed between J Street and the rail right-of-way. This would result in a new 3rd Street cul-de-sac, the removal of the existing grade crossing, and restriping of the northbound and southbound lanes to include one dedicated left-turn lane and one shared through/right-turn lane. The intersection of K Street and 3rd Street would be reconfigured so that it becomes the west leg of a new T intersection with K Street. I Street at Rialto Avenue would be converted to a cul-de-sac on the south side, with the north leg of the intersection converted to a right-in/right-out configuration. However, access to businesses located along these streets would still be maintained by routing traffic to other local streets. Further, F Street would be extended north of Rialto Avenue to create a four-way intersection, which would be signalized. The proposed Project would upgrade and maintain vehicular and pedestrian crossings within the Project Study Area. The roadways would be configured to maintain safe vehicular circulation, no substantial disruption to permanent access and roadway circulation would occur, and safety would be enhanced with implementation of the proposed Project.

In conjunction with the bus facility and E Street rail platforms, pedestrian access improvements would be constructed to facilitate connections between the E Street rail platforms and the proposed parking lot to the south. Pedestrian circulation would generally occur via a new sidewalk along the west side of E Street and east of the proposed track improvements. Improvements to community cohesion and connectivity through accessibility of additional transit opportunities, improved pedestrian access, and installation of safety features would occur with implementation of the Project.

Additionally, with the provision of transit services from a centralized location as proposed, the proposed Project could provide new incentives for businesses to relocate to the downtown area. These opportunities could also foster future economic development within the downtown area, which could entail desirable benefits in relation to existing blighted conditions, which are noted through the rail corridor. These effects would be beneficial, and are not considered adverse.

As discussed previously, permanent physical modifications within the existing rail corridor may affect adjacent land uses. However, the effects would not result in any new substantial conflicts between rail operations along the rail corridor and existing land uses in the region. The street and grade-crossing upgrades should improve traffic patterns and access. Therefore, no substantial adverse land use effects are anticipated to result from implementation of the proposed Project. Additionally, in accordance with the operating plan prepared for the Project, rail and bus service would not be expanded, and no additional train or bus routes would be required. The proposed Project would involve only existing train and bus service, the addition of one new rail station stop at the E Street rail platforms, and a new bus facility. Therefore, operation of the proposed Project would not substantially affect community character and cohesion.

In summary, although the proposed Project would require permanent grade crossings, street closure/reconfiguration, and permanent property acquisitions, both full and partial, no substantial adverse effects on community character and cohesion are anticipated. This is because alternate routes would be provided to compensate for street closures at the intersections discussed previously, and tenants who would be affected by full acquisition would be compensated under existing law. The proposed Project would not isolate any established community because the majority of the Project would operate within the existing rail right-of-way. Additionally, established neighborhoods and business centers would not be divided, urbanization would not increase, and isolation would not occur within the rail corridor as result of the proposed Project. The Project would also result in benefits to the community by providing additional transit opportunities, improving pedestrian access and the installation of safety features. Based on these considerations, adverse effects on community character and cohesion as attributable to the proposed Project would not be substantial.

Pedestrian Overpass Design Options 1A and 1B and Pedestrian Underpass Design Option 2

Construction Impacts

Construction impacts anticipated to occur under Pedestrian Overpass Design Options 1A and 1B and the Pedestrian Underpass Design Option 2 would be similar to the impacts anticipated to occur under the proposed Project. These design options would be designed to minimize visual effects on the Depot's historic façade. All other railway and station improvements proposed as part of the Project (e.g., maximizing circulation space around the new pedestrian egress structures and maintaining trackside fire truck access at the Depot) would remain the same.

As stated previously, detour routes and proper signage would help pedestrians and motorists pass through the rail corridor safely. Alternative routes (detours) would be provided during temporary street closures. However, access to adjacent land uses may be affected temporarily. Similar to the proposed Project, access disruptions from construction activities, as well as their effects on community character and cohesion, would be short term. Therefore, construction impacts under these design options would not be substantial.

Operational Impacts

Operational impacts under Pedestrian Overpass Design Options 1A and 1B and the Pedestrian Underpass Design Option 2 would be similar to the impacts anticipated to occur under the proposed Project. As described for the Project, operational effects would not be considered substantially adverse.

3rd Street Open Design Option 3

Construction Impacts

Similar to the proposed Project, construction associated with the 3rd Street Open Design Option 3 would not conflict with community cohesion or affect the character of the rail corridor during construction. This design option would not require 3rd Street to be closed and would avoid potential disruptions to vehicular circulation. The 3rd Street Open Design Option 3 would upgrade the at-grade crossing between J Street and I Street. Vehicular and pedestrian traffic along 3rd Street between J Street and North I Street would not be affected. As this design option would result in fewer street closures, it would not affect six properties and 355,253 square feet (8.2 acres) of permanent right-of-way acquisitions and 257,049 square feet (5.9 acres) of temporary construction easements along K Street proposed for removal with the Project due to road widening. The seven family relocations discussed under the proposed Project would also not occur. However, under the 3rd Street Open Design Option 3, construction impacts associated with access disruptions would be similar to the proposed Project, although effects would be slightly reduced. Effects on community character and cohesion would not be adverse.

Operational Impacts

Similar to the proposed Project, implementation of the 3rd Street Open Design Option 3 would not conflict with community cohesion or affect the character of the rail corridor during operations. Operational impacts under this design option would be similar to the effects anticipated to occur under the proposed Project, with the exception of 3rd Street remaining open. Effects resulting from full or partial parcel acquisition and permanent roadway reconfiguration within the 3rd Street Open Design Option 3 Study Area would be reduced compared with those anticipated to occur under the proposed Project because 3rd Street would remain open and the residential properties along K Street between 2nd Street and 3rd Street would be maintained in their current configuration. Therefore, operations associated with the 3rd Street Open Design Option 3 would not result in substantial adverse effects.

4.2.2.4 Avoidance, Minimization, and/or Mitigation Measures

There would be no substantial adverse effects under the proposed Project or the design options. No mitigation measures are required.

4.2.2.5 Cumulative Impacts

The proposed Project or design options, in combination with other projects in the area, would not contribute to an adverse cumulative effect on community character and cohesion because all effects would be specific to the surrounding neighborhood. Effects of the proposed Project or design options in relation to community character and cohesion are not considered substantially adverse and could entail desirable indirect benefits. The inclusion of other projects in the area would not result in a substantially adverse effect for this or other projects, and any potential effects on community character and cohesion would be addressed on a project-specific basis. In this context, implementation of the proposed Project or build design options would not contribute to a significant cumulative effect in terms of community character and cohesion, and therefore, no substantial adverse effects would occur.

The Project or design options propose to improve the existing infrastructure of an existing railway and accommodate existing demand by extending commuter rail service 1 mile to the east. The Project also proposes a centralized bus facility for existing fixed-route and planned rapid bus transit service. However, no additional Metrolink or Omnitrans routes are proposed,

and no new services would be created that would directly induce growth. Although the proposed Project would provide centralized transit service opportunities that could indirectly encourage changes in land use in the downtown area, these changes remain remote and speculative and are contingent upon actions by jurisdictions other than SANBAG and FTA. Additionally, these changes could entail desirable benefits in relation to existing blighted conditions within portions of the downtown area. Based on these considerations, no substantial cumulative adverse effects on community character and cohesion would occur.

4.2.3 Transportation

This section evaluates the effects of the proposed Project, No-Build/No-Project Alternative, and design options related to transportation. The technical information in this section is based on the following reports (Appendix J), which were prepared for the proposed Project:

- Downtown San Bernardino Passenger Rail Project (With 3rd Street Closure) Draft Traffic Impact Analysis (Iteris, Inc. April 10, 2012).
- Redlands Rail Metrolink First Mile Extension Project Draft Construction Phasing Traffic Analysis Report (Iteris, Inc. April 14, 2011).

4.2.3.1 Regulatory Environment

Federal Regulations

NEPA requires federal agencies to examine in detail the likely environmental consequences of certain plans, policies, and other actions that are subject to their approval, and review alternatives to such actions or mitigation measures that would reduce the impact on the environment. Federal actions that require compliance with NEPA include the adoption of policies, plans, or programs; approval of construction projects; or provision of funding for actions by others.

Federal Transit Administration

The FTA provides stewardship of combined formula and discretionary programs to support a variety of locally planned, constructed, and operated public transportation systems throughout the United States. Transportation systems typically include buses, subways, light rail, commuter rail, streetcars, monorail, passenger ferry boats, inclined railways, or people movers. The proposed Project is within Region 9 (IX), an area that oversees Arizona, California, Hawaii, and Nevada, as well as the territories of Guam, American Samoa, and the Northern Mariana Islands. The FTA is the federal lead agency for the proposed Project.

Federal Railroad Administration

FRA, under the umbrella of the DOT, was created by the Department of Transportation Act of 1966 (49 USC 103, Section 3[e][1]). FRA was created primarily to promulgate and enforce rail safety regulations, administer railroad assistance programs, and conduct research in support of improved railroad safety and national rail transportation policy.

State, Regional, and Local Regulations

Refer to Section 3.11.2, “Regulatory Setting,” of this document for a detailed discussion of the state, regional, and local regulatory setting.

4.2.3.2 Affected Environment

The transportation network in the vicinity of the rail corridor accommodates a variety of transportation modes, including vehicular, rail, and nonmotorized travel. Refer to Section 3.11.1, “Environmental Setting,” of this document for a detailed discussion regarding the affected environment. The study area for the analysis of transportation impacts is shown in Figure 3.11-

1. Existing intersection geometrics (e.g., the number of through and turn lanes) and volumes are shown in Figure 3.11-2.[1] Existing peak-hour traffic volumes are provided in Figure 3.11-3.

Level of service (LOS) is a measure of the quality of operational conditions within a traffic stream. It is generally expressed in terms of speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Levels range from A to F, with LOS A being a free-flow condition and LOS F representing extreme congestion. In addition to the LOS definition, a volume-to-capacity (V/C) ratio is used to provide a more quantified description of traffic conditions at intersections. The V/C ratio is the ratio of the existing or projected traffic volumes to the intersection's design capacity. The higher the V/C ratio, the more congested the intersection will be. Table 3.11-1 provides definitions for six levels of service.

4.2.3.3 Environmental Consequences

This section evaluates the potential effects of the proposed Project, No-Build/No-Project Alternative, and design options related to transportation and traffic. The environmental consequences are based on technical reports prepared for the proposed Project. Additional detail and analysis can be found in Appendix J, including all tables and figures within the traffic impact report, which presents the analysis of LOS, trip generation, traffic volumes, and lane geometry.

Increase traffic in relation to existing traffic and exceed a level of service standard

No-Build/No-Project Alternative

Construction Impacts

No construction would occur under the No-Build/No-Project Alternative. Therefore, the alternative would not result in impacts on LOS.

Operational Impacts

Under the No-Build/No-Project Alternative, there would be no changes to the passenger rail and bus network in San Bernardino. Tables 4.2.3-1 and 4.2.3-2 show the future LOS under the No-Build/No-Project Alternative in 2014 and 2035, respectively. As shown in the tables, all study intersections are projected to operate at a satisfactory LOS in both model years. Effects related to LOS would not be adverse.

[1] For this analysis, 2009 data were used to represent the "existing" condition. The I-215 improvements project, currently under construction in the vicinity of the proposed Project, has resulted in atypical traffic conditions in the area during recent time periods (2010 to 2011). Therefore, 2009 data were substituted to present a more typical condition. For locations where 2009 traffic counts were not available, new counts were conducted in April 2010, February 2011, and April 2011.

Table 4.2.3-1. 2014 No-Build/No-Project Alternative Peak-Hour Levels of Service

			AM Peak Hour			PM Peak Hour		
	Intersection Name	Control	LOS	Delay (seconds)	V/C	LOS	Delay (seconds)	V/C
1	K Street and 3rd Street	Two-way stop	A	2.2	N/A	A	1.3	N/A
2	K Street and 2nd Street	All-way stop	A	8.8	0.23	A	9.7	0.27
3	K Street and Rialto Avenue	Signal	B	19.1	0.27	B	17.7	0.33
4	J Street and 3rd Street	Two-way stop	A	0.4	N/A	A	0.8	N/A
5	J Street and 2nd Street	Two-way stop	A	1.4	N/A	A	1.7	N/A
6	J Street and Rialto Avenue	Two-way stop	A	1.5	N/A	A	1.6	N/A
7	I Street and 3rd Street	Intersection will not exist (because of I-215 project)						
8	I Street and 2nd Street	Signal	B	10.8	0.25	B	15.0	0.21
9	I Street and Rialto Avenue	Signal	C	21.5	0.30	C	21.1	0.28
10	1-215 southbound off-ramp and 3rd Street	Signal	C	27.9	0.38	C	21.5	0.24
11	1-215 southbound on-ramp and 2rd Street	Signal	B	18.1	0.26	B	18.0	0.43
12	1-215 northbound on-ramp and 3rd Street	Signal	B	19.2	0.21	C	23.9	0.42
13	1-215 northbound ramps and 2rd Street	Signal	B	17.9	0.46	B	16.5	0.30
14	G Street and 3rd Street	Signal	C	20.3	0.21	C	20.8	0.25
15	G Street and 2nd Street	Signal	C	24.5	0.48	C	28.8	0.59
16	G Street and Rialto Avenue	Signal	B	13.2	0.29	A	8.1	0.31
17	G Street and Congress Street	Two-way stop	A	0.2	N/A	A	0.1	N/A
18	Parking lot entrance and Congress Street	Intersection would not exist						
19	E Street and 2nd Street	Signal	C	26.1	0.71	C	29.6	0.77
20	E Street and Rialto Avenue	Signal	C	24.0	0.42	B	18.6	0.64
21	E Street and parking lot entrance	Intersection would not exist						
22	Arrowhead Avenue and Rialto Avenue	Signal	B	11.6	0.21	B	11.9	0.32
23	H Street and 5th Street	Signal	C	21.3	0.43	C	25.5	0.77
24	F Street and Rialto Avenue	One-way stop	A	1.3	N/A	A	1.6	N/A
25	E Street and 5th Street	Signal	C	20.3	0.48	B	19.0	0.61
26	E Street and 4th Street	Signal	B	18.9	0.39	B	16.3	0.46
27	E Street – Inland Center Drive and Mill Street	Signal	C	30.9	0.56	D	38.5	0.79

Source: Appendix J.

Table 4.2.3-2. 2035 No-Build/No-Project Alternative Peak-Hour Levels of Service

			AM Peak Hour			PM Peak Hour		
	Intersection Name	Control	LOS	Delay (seconds)	V/C	LOS	Delay (seconds)	V/C
1	K Street and 3rd Street	Two-way stop	A	2.3	N/A	A	1.6	N/A
2	K Street and 2nd Street	All-way stop	B	10.0	0.34	B	12.0	0.43
3	K Street and Rialto Avenue	Signal	B	18.2	0.31	B	18.5	0.37
4	J Street and 3rd Street	Two-way stop	A	0.6	N/A	A	1.1	N/A
5	J Street and 2nd Street	Two-way stop	A	2.3	N/A	A	4.8	N/A
6	J Street and Rialto Avenue	Two-way stop	A	2.2	N/A	A	3.3	N/A
7	I Street and 3rd Street	Intersection will not exist (because of I-215 project)						
8	I Street and 2nd Street	Signal	B	12.2	0.23	B	13.2	0.23
9	I Street and Rialto Avenue	Signal	C	20.1	0.30	C	20.2	0.30
10	1-215 southbound off-ramp and 3rd Street	Signal	C	27.9	0.50	C	26.3	0.43
11	1-215 southbound on-ramp and 2rd Street	Signal	B	17.2	0.37	B	18.5	0.52
12	1-215 northbound on-ramp and 3rd Street	Signal	B	19.2	0.32	C	27.8	0.70
13	1-215 northbound ramps and 2rd Street	Signal	C	20.7	0.57	B	17.2	0.35
14	G Street and 3rd Street	Signal	C	20.2	0.33	C	21.2	0.33
15	G Street and 2nd Street	Signal	C	26.5	0.60	C	30.7	0.73
16	G Street and Rialto Avenue	Signal	B	13.0	0.30	A	9.3	0.36
17	G Street and Congress Street	Two-way stop	A	0.3	N/A	A	0.2	N/A
18	Parking lot entrance and Congress Street	Intersection would not exist						
19	E Street and 2nd Street	Signal	C	33.7	0.80	C	33.1	0.81
20	E Street and Rialto Avenue	Signal	C	23.0	0.50	C	24.2	0.78
21	E Street and parking lot entrance	Intersection would not exist						
22	Arrowhead Avenue and Rialto Avenue	Signal	B	11.1	0.21	B	12.0	0.36
23	H Street and 5th Street	Signal	C	22.9	0.57	D	36.9	0.89
24	F Street and Rialto Avenue	One-way stop	A	1.4	N/A	A	1.7	N/A
25	E Street and 5th Street	Signal	C	21.6	0.56	B	15.8	0.63
26	E Street and 4th Street	Signal	B	18.4	0.43	B	16.7	0.50
27	E Street – Inland Center Drive and Mill Street	Signal	C	31.3	0.58	D	44.6	0.84

Source: Appendix J.

Proposed Project

Construction Impacts

Construction of the proposed Project would require several temporary street closures and detours because of construction activity where the rail line intersects with roads in the rail corridor. Construction of rail improvements would progress from west to east, with no two streets being closed at the same time. During construction closures, traffic detours would occur on 3rd Street between J Street and I Street as well as G Street just south of Rialto Avenue. Other detours, such as at the 2nd Street crossing, Rialto Avenue crossing, and E Street crossing, would occur only on weekends. Weekend-only traffic detours would have minimal impact to no traffic impact.

Construction of the bus facility would likely result in temporary closures and/or detours along E Street and Rialto Avenue, which would be temporary and would not affect both streets simultaneously. Implementation of Mitigation Measure T-1 (Prepare and Implement a Traffic Management Plan) would improve the functionality of these roadways and other nearby roadways by allowing adequate vehicular access during each phase of construction, and no adverse effects would result.

The Project would result in the temporary use of existing parking lot areas located east and south of the San Manuel Stadium as staging areas. Mitigation Measure T-2 (Prepare and Implement a Stadium Parking Plan) would require SANBAG or its construction contractor to develop a stadium parking plan for review and approval by the City of San Bernardino for use of the parking lot areas as temporary staging locations and one future detention basin. SANBAG will work with the City to ensure that adequate parking and access is provided in the area during scheduled events at San Manuel Stadium. No adverse effects are anticipated.

The 3rd Street closure would occur early in the construction process (2013). The analysis of 2013 conditions with closure of 3rd Street shows that all study intersections would operate at a satisfactory LOS (Appendix J). The G Street closure would also be expected to occur during 2013. The analysis of 2013 conditions with closure of G Street also shows that all study intersections would operate at a satisfactory LOS. Therefore, LOS-related construction impacts would not be adverse.

Operational Impacts

Under operation of the proposed Project, traffic patterns and volumes in the vicinity of the study area would change. Caltrans and the City of San Bernardino have defined satisfactory intersection performance as LOS D. Table 3.11-3 shows the future LOS under the proposed Project in opening year 2014, and Table 3.11-4 shows the future LOS under the proposed Project in 2035. As discussed in Section 3.11, “Transportation and Traffic,” the proposed Project would result in one intersection having an unsatisfactory LOS (worse than LOS D) during the 2014 analysis year and two intersections having an unsatisfactory LOS in the 2035 analysis year. All other intersections in 2035 and all intersections in 2014 would maintain a satisfactory LOS (D or better). The two unsatisfactory intersections include Intersection 5 (J Street and 2nd Street), which would operate at LOS F in the PM peak hour, and Intersection 6 (J Street and Rialto Avenue), which would operate at LOS F in the AM peak hour. Because of the additional eastbound and westbound through volumes at this intersection, southbound and northbound movements would experience fewer gaps (for exiting the intersection) and more delays. This would result in an unsatisfactory LOS and an adverse effect.

Because of the additional eastbound and westbound through volumes at these intersections, southbound and northbound movements would experience fewer gaps (for exiting the intersections) and more delays. This would constitute a significant adverse effect because it would conflict with an applicable policy establishing the threshold effectiveness for intersection performance within the circulation system. Therefore, Mitigation Measures T-3 (Install a Traffic Signal at the J Street/2nd Street Intersection) and T-4 (Install All-Way Stops at the J Street/Rialto Avenue Intersection) would be required to reduce adverse effects.

The proposed Project would not contribute to traffic congestion and would improve circulation by providing better access to mass transit, thereby resulting in a beneficial effect on travel demand for roads and highways. Implementation of public transit improvement projects, such as the proposed Project, would help remove vehicles from roadways and freeways and convert single-occupancy vehicular commuters to transit commuters, which would result in a decrease in vehicle miles travelled (VMT) and fuel use. In the long term for future build-out of the Project in 2035, 67,510 fewer VMT would result daily on a regional basis, as compared with what would occur without the proposed Project. This would result in a regional benefit. The proposed Project would also improve rail and bus transit facilities and nonmotorized (pedestrian) travel. Therefore, the Project would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the non-vehicular circulation system.

Pedestrian Overpass Design Options 1A and 1B and Pedestrian Underpass Design Option 2

Effects related to LOS during construction and operation for these design options would be the same as the effects under the proposed Project.

3rd Street Open Design Option 3

Construction Impacts

Similar to the proposed Project, construction of this design option would require several temporary street closures and detours because of construction activity where the rail line transects the roadway. The only difference would be the reduced Project Study Area to remove the 3rd Street closure area at K Street. Similar to the proposed Project, street closures and detours would occur only on weekends. Weekend-only diversions would have minimal impact to no traffic impact. Additionally, similar to the proposed Project, LOS-related construction impacts would not be adverse with implementation of Mitigation Measure T-1 (Prepare and Implement a Traffic Management Plan).

Operational Impacts

Under 3rd Street Open Design Option 3, traffic patterns and volumes in the vicinity of the study area would remain at roughly equivalent conditions to those reported for the proposed Project (under which 3rd Street would be closed) in 2014 and 2035 for all intersections (see Tables 3.11-3 and 3.11-4, respectively). Specifically, for both 3rd Street Open Design Option 3 and the proposed Project, all study intersections in buildout year 2014 are projected to operate at a satisfactory LOS. The only two intersections in 2035 with potentially unsatisfactory levels of service are Intersection 5 (J Street and 2nd Street) in the PM peak hour and Intersection 6 (J Street and Rialto Avenue) in the AM peak hour.

Mitigation Measures T-3 (Install a Traffic Signal at the J Street/2nd Street Intersection) and T-4 (Install All-Way Stops at the J Street/Rialto Avenue Intersection) would therefore be required to

reduce any potential adverse effects at these intersections and bring their LOS down to satisfactory levels (as shown in Table 3.11-5).

Inadequate emergency access

No-Build/No-Project Alternative

No construction or operational changes would occur under the No-Build/No-Project Alternative. Therefore, this alternative would not result in impacts related to emergency access.

Proposed Project and Design Options

Implementation of one of the design options, including the proposed Project, would result in temporary changes to local traffic patterns during construction and may cause temporary traffic delays for emergency service vehicles. This effect, however, would be minimized through implementation of standard construction practices and a traffic management plan as well as preconstruction coordination with emergency service responders. Construction activities would occur in accordance with all applicable state and local requirements and permits. Therefore, implementation of the proposed Project and design options would not result in adverse effects related to inadequate emergency access with implementation of Mitigation Measure T-1 (Prepare and Implement a Traffic Management Plan).

Inadequate parking capacity

No-Build/No-Project Alternative

No construction or operational changes would occur under the No-Build/No-Project Alternative. Therefore, this alternative would not result in inadequate parking capacity.

Proposed Project and Design Options

Existing parking facilities at the Depot may be temporarily affected during construction. However, the new parking structure located at the northeast corner of 2nd Street and Mt. Vernon Avenue is operational and would be able to accommodate the temporary loss of available parking spaces at the Depot. Additionally, this reduction in parking capacity would occur temporarily during a portion of the 18- to 24-month construction period, and no substantial adverse effects would result.

The proposed Project and each of the design options would increase the amount of parking capacity at both the Depot and south of the E Street rail platforms and bus facility sites during project operations. Any temporary or permanent impact, including at the San Manuel Stadium, would be mitigated with implementation of Mitigation Measures T-1 (Prepare and Implement a Traffic Management Plan) and T-2 (Prepare and Implement a Stadium Parking Plan). Therefore, the proposed Project and design options would not result in inadequate parking capacity.

Adopted policies, plans, or programs supporting alternative transportation

No-Build/No-Project Alternative

No construction or operational changes would occur under the No-Build/No-Project Alternative. Therefore, this alternative would not conflict with adopted policies, plans, or programs supporting the provision of alternative transportation sources.

Proposed Project and Design Options

The proposed Project and each of the design options would result in improvements to alternative transportation modes, specifically improvements to commuter rail and bus facilities and pedestrian access. The proposed Project would also improve the accessibility of public transportation for seniors and persons with disabilities by proposing the installation of an ADA-compliant pedestrian egress. The proposed Project and design options would not result in adverse effects on other alternative transportation modes and no conflicts with adopted policies regarding public transit are anticipated.

4.2.3.4 Avoidance, Minimization and/or Mitigation Measures

Implementation of avoidance, minimization, and/or mitigation measures related to transportation provided in Section 3.11, “Transportation and Traffic,” would reduce adverse effects. These mitigation measures are listed below and detailed in Section 3.11.5.

- T-1 (Prepare and Implement a Traffic Management Plan)
- T-2 (Prepare and Implement a Stadium Parking Plan)
- T-3 (Install a Traffic Signal at the J Street/2nd Street Intersection)
- T-4 (Install All-Way Stops at the J Street/Rialto Avenue Intersection)

4.2.3.5 Cumulative Impacts

The transportation analysis contained herein represents a cumulative impact analysis, looking at the effects of the proposed Project and design options and the growth in traffic that is anticipated in the region. Therefore, adverse impacts on traffic at the two intersections previously discussed would represent a cumulative impact. Mitigation is provided to reduce these effects to less than adverse. Therefore, the mitigated Project would not contribute to a significant adverse cumulative effect.

4.2.4 Visual Quality and Aesthetics

This section evaluates the effects of the proposed Project, No-Build/No-Project Alternative, and design options relative to visual quality and aesthetics. The technical information within this section is based on field reconnaissance and regulatory setting research conducted for the proposed Project.

4.2.4.1 Regulatory Environment

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 NEPA as it relates to aesthetic impacts. The process used in the Visual Impact Assessment (VIA) generally follows the guidelines outlined in *Visual Impact Assessment for Highway Projects* (Federal Highway Administration 1988), as follows:

- Define the project setting and viewshed.
- Identify key views for visual assessment.
- Assess existing visual resources and viewer response.
- Depict the visual appearance of project alternatives.
- Assess changes to visual resources and predict viewer response to those changes.
- Assess the visual impacts of project alternatives.
- Propose methods to mitigate adverse visual impacts.

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

- 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 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 project features and locations were reviewed to enhance the visual environment for stationary and transient viewers of the DSBPRP.
- Appropriate mitigation measures have been identified.

A number of variables affect the degree of visibility, visual contrast, and the ultimate impact of a project. Such variables include the scale and size of facilities, distances and viewing angles, color and texture, and the influences of adjacent scenery or land uses. Even where visible, viewer response and sensitivity vary depending on viewer attitudes and expectations. Viewer sensitivity is distinguished among adjacent viewers in recreation, residential, and commercial and office/industrial areas, with the first considered to have the highest potential for sensitivity, while the latter two generally possess low levels of sensitivity, in part, because viewer activities can either encourage a viewer to observe the surrounding area more closely (e.g., driving for pleasure) or discourage close observation (e.g., commuting in heavy traffic). All of these viewer elements are considered when evaluating expected viewer response.

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 10 types of issues listed in NEPA as important to consider, three touch upon aesthetics indirectly, including the potential to affect the unique character of the affected resource adversely, the potential for controversy, and the potential to violate laws and regulations (Section 1508.27, CEQ: Regulations for Implementing NEPA, Index and Terminology).

4.2.4.2 Affected Environment

The primary defining geographic features include the San Bernardino Mountains to the north, which on clear air days form a dramatic visual backdrop to the City and Valley, and the Santa Ana River Watershed to the south. The Valley floor slopes downward gently from the San Bernardino Mountains such that much of downtown San Bernardino and the adjoining neighborhoods to the west and south appear to be essentially flat to a casual observer. Both the City of San Bernardino and the Valley are urbanized and characterized by extensive commercial and industrial development that is often adjacent to rail corridors and the freeways serving the region, including the I-10, I-15, and I-215 freeways. Single-family dwellings predominate when residential development is present.

The Project Study Area contains a diverse collection of land-use types including residential, commercial, storage/warehouse, office, and industrial uses. Nonconforming residential land uses are present within the Santa Fe Depot station area. Major activity centers surrounding the Project Study Area include the Santa Fe Depot, City and County administration uses, Carousel Mall, and San Manuel Stadium. Additional detail regarding the affected environment is provided in Section 3.2.1.

Visual Resources within the Rail Corridor

The VIA guidelines provide an evaluative framework that defines the visual setting in terms of landscape units and/or key views. A *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. 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 or railroad 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 within the rail corridor, this assessment uses a key view approach in lieu of the landscape unit approach. A *viewshed* comprises all the surface areas visible from an observer's viewpoint. The limits of a viewshed are defined as the visual limits of the views from the proposed Project and design options. Within the evaluative framework, changes in the quality and character of visual resources in the viewshed are assessed with respect to viewer response, as discussed in the following sections.

Determining Quality and Character of Visual Resources

The *visual character* of a view is described by the topography, land uses, scale, form, and natural resources depicted in the view. *Visual quality* refers to the aesthetics of the view. Determining the quality of a view can be subjective because it is based in part on the viewer's values and notions about what constitutes a quality setting. In an effort to establish an objective framework, this assessment applies the evaluative criteria (i.e., vividness, intactness, and unity) and qualitative rankings (low, medium, and high) presented in the FHWA guidelines.

Views of high quality may 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 the very low visual quality and 7 representing very high visual quality, this is equivalent to visual quality rating numbers 5.5 through 7. Views of medium quality may have interesting but minor landforms, some variety in vegetation and color, and/or moderate scenery (equivalent to visual quality 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).

Assessing 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 or railroad project. *Viewer exposure* is typically assessed by measuring the number of viewers exposed to the resource change, type of viewer activity, duration of their view, speed at which the viewer moves, and position of the viewer. *Viewer sensitivity* is defined both as the viewer's concern for scenic quality and the viewer's response to change in the visual resources that make up the view. Local values and goals may confer visual significance on landscape components and areas that would otherwise appear unexceptional in a visual resource analysis. See Section 3.2, "Aesthetics," for a detailed explanation of viewer exposure and sensitivity.

Viewers in the project viewshed include residential viewers, Depot patrons and existing transit riders, commuting motorists, a small number of workplace viewers (workers in nearby office, retail, commercial, and industrial settings), business patrons, and spectators at San Manuel Stadium events.

Key Views

For purposes of this analysis, a view is considered key if at least one of the following circumstances apply:

- Visual resources are present, regardless of the quality of the view. The sensitivity of the affected viewer group is medium or high, and the duration of the view is long-term.

- The quality of the view is medium or high, regardless of whether visual resources are present. The sensitivity of the viewer group is medium or high, and the duration of the view is long-term.
- The view is distinct, clear, and unobstructed from the highway or railroad to adjacent businesses and is viewed regularly by a large number of commuters. In this case, the viewer sensitivity is medium, and the view is long-term.

The analysis identified 23 specific viewpoints that could be noticeably altered by the proposed Project, as described in Table 3.2-1. The location of and direction of the views are depicted in Figure 3.2-1, and the views are shown in Figures 3.2-2 through 3.2-24 (including one rendering of the proposed pedestrian overcrossing at the Depot). The analysis identified 23 specific viewpoints that could be noticeably altered by the proposed Project, as described in Table 3.2-1. The location of and direction of the views are depicted in Figure 3.2-1, and the views are shown in Figures 3.2-2 through 3.2-24 (including one rendering of the proposed pedestrian overcrossing at the Depot). As shown in Table 4.2.4-1, five of these representative views have been designated as *key observation points* (*KOPs*). These KOPs were chosen for analysis of the rail corridor's visual character and quality because they uniquely convey the visual character and quality of the railroad viewshed at locations where components of the proposed Project are proposed and/or where sensitive viewers are present.

Table 4.2.4-1. Existing Visual Quality at Key Observation Points

	Vividness	Intactness	Unity	Average (V+I+U)/3	Visual Quality
KOP 1	3	2	1	2	Very Low
KOP 2	7	6	5	6	Moderately High
KOP 3	2	3	2	2.33	Very Low
KOP 4	5	4	4	4.33	Moderate
KOP 5	3	2	2	2.33	Very Low

The VIA is intended to ensure that visual resources are adequately considered as part of the NEPA environmental review process. The VIA considers whether the proposed Project could result in character inconsistency and obstruction of views, thus affecting the area's visual character and quality. The definition of visual impact levels is provided in Section 3.2, "Aesthetics."

Overall Assessment of Visual Character and Quality

Visual character within the project viewshed can be described as urban and densely developed. Land uses are somewhat varied, and mixed uses are common. In the western portion of the rail corridor viewshed, along Rialto Avenue west of Mount Vernon Avenue, there are several older commercial vehicle-service uses, adjoined to the north, south, and west in the vicinity of Pico Avenue by older single-family residences on small lots. This is also characteristic of the rail corridor between K and I Streets, where residential and sporadic commercial and industrial development occurs. The Depot building, both a significant historic and visual landmark, is located between these two mixed-residential neighborhoods. Adjacent to the Depot are extensive, related railroad yards that extend far west and east of the building on its north side.

East of the I-215 undercrossing, the rail corridor is bordered by industrial development on large properties. Near E Street, this development transitions to office, general retail, and service

commercial uses that are typical of suburban communities in southern California. A shopping center, bordered by parking lots on the north, extends along the north side of Rialto Avenue between E and F Streets. Across Rialto Avenue, to the south, is a large vacant lot that extends west from E Street to the intersection of F Street. This property is the proposed location of the bus facility.

San Manuel Stadium, a baseball stadium, adjoins the commercial uses at E Street and Rialto Avenue and is located approximately 150 feet south of the railroad alignment. Although the back of the stadium scoreboard structure abuts the west side of E Street, in many instances, sight lines into and from the stadium are obscured by its large expanse of parking lots, topography within the stadium, landscaping, and stadium architectural elements. In addition, the commercial and industrial uses located along the south side of the railroad alignment currently serve to buffer views from the north and northeast.

Horizontal lines dominate most east, south, and west-facing views within the project viewshed, with many of the south and west-facing views terminating at the horizon. In the portion of the project viewshed west of I-215, east-facing views terminate with the freeway's elevated roadway. East of the freeway, a small number of the taller office buildings can be seen in the downtown San Bernardino area, and clusters of mature trees peak above the freeway and provide contrasting vertical line elements. On clear days, the San Bernardino Mountains provide a dramatic backdrop to north-facing views, and the mountain ridgelines provide a significant contrasting curvilinear line pattern to the predominant horizontal line patterns found throughout the viewshed. Scattered clusters of mature evergreen trees provide another important contrasting curvilinear element to the predominant horizontal line patterns, as well as a contrasting color element in a setting in which gray, tan, white, and pale brown predominate within the palette of colors.

4.2.4.3 Environmental Consequences

Scenic vistas

No-Build/No-Project Alternative

Construction Impacts

This alternative assumes that the proposed Project would not be built and that existing conditions within the rail corridor would remain. Under this alternative, no construction activities or changes to scenic vistas would result and no adverse construction effects would occur.

Operational Impacts

Under this alternative, improvements along the approximately 1-mile-long rail corridor, as proposed under the Project, would not be implemented. The No-Build/No-Project Alternative would not improve or reconstruct rail and bus infrastructure to accommodate passenger service, as proposed under the Project. As previously described, no scenic vistas or corridors are present within the project viewshed. The views along the rail corridor are of low or medium quality, and visual resources are limited to sporadic clusters of mature evergreen trees and somewhat seasonal far-off views of the mountains. No adverse effects to scenic vistas would occur.

Proposed Project and Design Options

As previously described, no scenic vistas or corridors are present within the project viewshed. The views along the rail corridor are of low or medium quality and visual resources are limited to

sporadic clusters of mature evergreen trees and the Depot—an architectural/historical landmark. Key views are limited to somewhat seasonal far-off views of the mountains. No adverse effect would occur. Similar to the proposed Project, no adverse effects to scenic vistas would occur under construction and operation of the design options.

Scenic resources, including scenic highways

No-Build/No-Project Alternative

No rock outcroppings were identified within the Project Study Area or its viewshed during the field reconnaissance, or referenced as being present by the San Bernardino General Plan. No scenic resources including scenic highways are located in the project viewshed. The proposed Project would not be implemented under this alternative and existing conditions would remain. No adverse effect is anticipated to occur.

Proposed Project

The Project Study Area is urbanized and essentially flat. All ground surfaces appear to be disturbed, paved, or developed with landscape features or buildings. No thoroughfares in San Bernardino have been locally designated as scenic corridors, and only two are under consideration as eligible scenic highways. These include State Route 30 (south from State Route 330) and State Route 330. Both highways are on the far northeastern boundaries of San Bernardino, and are approximately 7 miles away from the rail corridor, well outside the project viewshed.

No other scenic resources, such as rock outcroppings or significant stands of trees, were identified within the Project Study Area or its viewshed during the field reconnaissance or referenced as being present in local plans. No scenic resources, including scenic highways, are located in the project viewshed. No adverse effect is anticipated to occur.

Design Options

No rock outcroppings were identified within the Project Study Area or its viewshed during the field reconnaissance, or referenced as being present in local plans. No scenic resources, including scenic highways, are located in the project viewshed. Therefore, similar to the proposed Project, no adverse effect would occur under the design options.

Views and visual character of the site and surrounding area

No-Build/No-Project Alternative

Construction activities are not proposed for this alternative. This alternative would not include changes proposed under the proposed Project. Existing conditions within the rail corridor would remain under the No Build/No Project Alternative. No adverse effects to views or the visual character of the site and surrounding area would occur during construction or operation.

Proposed Project

Minor potential visual effects would result from earthmoving activities, limited removal of vegetation in the construction zone, and other construction activities (e.g., staging/stockpiling road-building materials, the presence of construction equipment, and temporary traffic

barricades). Construction activities would include grading work, other routine construction activities, and truck shipments. No nighttime construction activities that would necessitate obtrusive lighting installations or that would result in adverse glare effects are proposed. Although they would be of temporary duration, construction activities would be visible from most of the adjacent commercial/industrial properties as well as from residential properties. With the exception of the Depot environs, existing visual quality in this setting ranges from low to moderate. Commercial, industrial, and disturbed vacant land are not considered sensitive to changes in the visual setting. Residents fronting the railroad right-of-way would have direct sight lines to the proposed site during the construction. However, because of the prevailing low-to-moderate visual quality within the visual setting and the long-standing presence of the railroad, the minor and temporary changes associated with the construction process are not viewed as adverse. Therefore, adverse visual effects under NEPA due to construction activities are not anticipated.

This analysis considers project-related changes at KOPs described in the affected environment. These changes are considered in the context of existing visual quality and character, viewer group and viewer group sensitivity, visual resources, features of the proposed Project, change to visual quality and character, change in views, and resulting visual effect. A more detailed discussion of each of the KOPs, including the existing visual quality, is presented in Section 3.2, "Aesthetics."

KOP 1 (Figure 3.2-4)—View along Pico Avenue North from Rialto Avenue, Looking Northeast across the Railroad Right-of-Way

As shown in Figure 3.2.4, few significant foreground or mid-frame visual resources are present in this portion of the KOP 1 viewshed, and views in this location possess a low degree of vividness, notwithstanding the presence of clusters of mature evergreen trees. The key visual resource is the mature evergreen trees. Also, on clear days, views to the mountain ridgelines, as a distant backdrop element, would be the most significant visual resource. As shown in Table 4.2.4-1, existing visual quality is 2 (very low). The primary viewer groups consist of commuting motorists travelling along Rialto Avenue, neighborhood motorists, and a small group of residents in the adjoining Pico Avenue neighborhood.

Changes in Visual Character and Views

Under the proposed Project, design changes would occur fully within the existing right-of-way. No property acquisitions are proposed, and only partial removal of right-of-way trees is anticipated. Because the proposed improvements would be essentially at ground level and would occur within the current right-of-way, the Project would not strongly contrast with the existing visual character along the rail corridor.

The proposed Project could require removal of some of the existing mature trees; however, it would not alter key views of distant mountain ridgelines at KOP 1.

Effects

As shown in Table 4.2.4-1, visual quality under the proposed Project would not change substantially. It would remain very low because of the very minor nature of the new project features being proposed as well as the improved maintenance that would accompany them. Although there is the potential for some of the existing trees to be removed, appropriate replacement landscaping would address the loss of trees and essentially maintain visual quality as it exists at present (i.e.,-0.0). Thus, these minor changes would not be adverse. Additionally, the area included within KOP 1 is an existing gateway entry into the City and a destination for

transit opportunities via existing Metrolink, Amtrak, and bus service. The incorporation of constructed elements, decorative treatments, wayfinding/signage, and other architectural and landscaped features proposed in this area would result in an aesthetic change to the existing Depot building and surrounding area. These changes would build upon the existing character-defining elements of the Depot rather than detract from them. Therefore, no adverse effects are anticipated.

KOP 2 (Figure 3.2-5)—View of the Depot Building from 3rd Street, Looking Northeast (Railroad Right-of-Way at Rear)

As shown in Figure 3.2-5, the Depot building is the preeminent visual resource in the view and is a visually commanding presence in the neighborhood setting due to its architectural design, large scale, and topographically prominent siting in relation to the properties located to the south. The Depot building possesses a high degree of vividness due to its elaborate architectural design, massing, and scale. Views possess a moderate level of intactness and unity (visual quality ratings 6 and 5, respectively). Although only a small number of mature trees are present in the viewshed, many of those trees are Canary Island Palms. As shown in Table 4.2.4-1, existing visual quality is 6 (high). The primary viewer groups consist of commuting motorists travelling to and from the Depot along 3rd Street, neighborhood motorists, transit patrons, and Superior Market Center shoppers.

Due to the status of the Depot building as a listed nationally-significant architectural and historic property, the proposed design would be sympathetic in terms of height, architectural detail, and placement, and its color palette would be consistent with the Depot's natural tan exterior, light green trim, and orange colored roof. The bridge's design is intended to respect the Depot's design character while offering a contemporary complement to it. Proposed structural bridge elements include precast panels, light gauge protection mesh, stair railings, roofing, glass windows, as well as lighting.

Changes in Visual Character and Views

Under the proposed Project, design changes would occur primarily within the existing Depot property but not exclusively. The most visible design change would be construction of the pedestrian overpass bridge and elevator/stair towers. Due to the plan to design this element in a manner that is sympathetic and complementary to the Depot building, no reduction of visual quality for this feature is anticipated; considered together, it would have the potential to improve the appearance of the back-of-Depot area. These changes would not affect the front of the Depot building.

The removal of right-of-way trees is also anticipated. Some of the proposed improvements would be essentially at ground level and would not dramatically diverge from or strongly contrast with current ground-level features. The proposed improvements also have the potential to slightly enhance visual quality in the setting. However, the removal of trees, if not replenished with commensurate new landscape features, is expected to reduce visual quality slightly.

The proposed Project could require removal of some of the existing mature trees; however, it would not alter occasional key north-facing views of distant mountain ridgelines at KOP 2. Located behind the Depot building, the proposed passenger overpass bridge/towers structure would be screened from most views outside the platform area. Other proposed features, such as window awnings, the flagpole, and monument signage, would neither substantially alter the existing appearance of the building nor affect key views.

Effects

Visual quality under the proposed Project would remain the same because of the cancelling effects of the new design features being proposed, such as the proposed sympathetically designed passenger overpass bridge behind the Depot building, awnings, flagpole, and monument signage, weighed against the slightly adverse changes, such as the removal of some of the existing trees. Replacement landscaping would serve to minimize the effect of these changes, and potentially, could slightly enhance the visual quality of the area.

KOP 3 (Figure 3.2-7)—View Northwestward across 3rd Street east of J Street, along the Railroad Right-of-Way

Figure 3.2-7 shows current conditions at KOP 3. Few significant foreground or mid-frame visual resources are present in this portion of the viewshed, and views in this location possess a low degree of vividness due to expanses of gray-colored, gravel-covered ground and asphalt pavement as well as the visibility of the Depot railroad yard as a mid-frame visual element. The presence of clusters of mature evergreen trees provides one of the few visual resources in the setting, making the vividness rating slightly higher (visual quality rating 2) than it would be otherwise. As shown in Table 4.2.4-1, existing visual quality is 2 (very low). The primary viewer groups consist of commuting motorists travelling along 3rd Street, neighborhood motorists, and residents in the neighborhood located directly to the south.

Changes in Visual Character and Views

Under the proposed Project, design changes would occur fully within the existing street and railroad rights-of-way. With the exception of potential temporary construction easements (proposed on two adjacent vacant lots), no property acquisitions are proposed, and no removal of right-of-way trees is anticipated. Because the proposed improvements would be essentially at ground level and would occur within the current right-of-way, the Project would not strongly contrast with existing visual character along the rail corridor.

The proposed Project would not alter seasonal key north-facing views of distant mountain ridgelines at KOP 3.

Effects

Visual quality under the proposed Project would diminish only slightly but would remain very low due to the reconfiguration and closing of through access on the existing streets and the potential associated utilitarian road closure paving/hardscape features being proposed. These effects would not be adverse.

KOP 4 (Figure 3.2-12)—View West along Rialto Avenue from I Street, Adjoining the Railroad Right-of-Way

As shown in Figure 3.2-12, the foreground and mid-frame views document a modest but well-maintained single-family residential neighborhood comprised of early-twentieth century housing, all with fairly consistent front yard setbacks. Disparate manmade elements consisting of differing building types on the south versus north sides of Rialto Avenue and sporadic commercial and industrial buildings with divergent massing and setback characteristics are present in the view, giving it only a moderate level of intactness and unity (visual quality ratings 4 and 4, respectively). As a distant backdrop element, occasional partially-constrained north-facing views to the mountain ridgelines would be the most significant visual resource. As shown in Table 4.2.4-1, existing visual quality is moderate. The primary viewer groups consist of neighborhood motorists and pedestrians.

Changes in Visual Character and Views

Under the proposed Project, design changes would occur within the existing street and railroad rights-of-way, and full property acquisitions are proposed along the east side of I Street south of the railroad right-of-way. I Street at Rialto Avenue will be converted to a cul-de-sac on the south with the north leg of the intersection converted to a right-in/right-out configuration. An emergency access connection will be constructed between the I Street cul-de-sac and Rialto Avenue that will be controlled by locked gates and utilized by the City Fire Department (see Figure 2-5B in Chapter 2, "Alternatives"). In addition, full acquisition of the properties bordering the railroad right-of-way on the east side of I Street is proposed.

Some limited removal of right-of-way trees may also occur. Because the majority of the proposed improvements would be essentially at ground level and would occur within the current right-of-way, the Project would not strongly contrast with existing visual character along the rail corridor. Potential demolitions of the modest industrial buildings along the east side of I Street may also reduce visual quality slightly.

The proposed Project would not alter seasonal key north-facing views of distant mountain ridgelines at KOP 4.

Effects

Visual quality would diminish only slightly but would remain moderate because of the reconfiguration and closing of through access on I Street and the proposed road closure, paving/hardscape features, and potential demolitions. The effects would not be adverse.

KOP 5 (Figure 3.2-17)—View along E Street South of Rialto Avenue, Looking South across the Railroad Right-of-Way to the Bus Facility

The view shown in Figure 3.2-17 is distinguished by the diverse range of commercial building styles and placements and related pole signs. Other than scattered clusters of trees, no visual resources are present in this portion of the viewshed. Disparate manmade elements are present in the views, giving them a low level of intactness and unity (visual quality ratings 2 and 2, respectively). As a distant backdrop element, seasonal north-facing views of the mountain ridgelines would be the most significant visual resource present. As shown in Table 4.2.4-1, existing visual quality is 2 (very low). The primary viewer groups consist of commuting motorists travelling E Street, neighborhood motorists, employees of neighboring office uses, commercial patrons for businesses along E Street, as well as San Manuel Stadium patrons.

Changes in Visual Character and Views

Approximately 300 feet west of E Street and directly south of the new platforms, a 256-space parking lot is proposed on property bordering San Manuel Stadium on the north. The parking lots located directly south and southwest of the stadium would also accommodate detention basin infrastructure and serve as staging areas during the construction process. Both processes involve temporary changes within the viewshed that would occur during the construction period only. In addition, during the construction period, the vacant lot bordering the station site on the north may be used as a potential staging area for the Project prior to construction of the Omnitrans bus facility. The approximately 14,000-square-foot bus facility would have vehicle ingress/egress from the northwest corner of the property at F Street and Rialto Avenue, up to 22 bus bays and bus turnouts, frontage street access improvements, pedestrian access improvements (e.g., crosswalks) to facilitate movement between the bus facility and adjacent E Street train station, and associated support facilities (e.g., security and lighting). A LEED gold rating is being sought for the development.

The proposed Project would not be constructed fully within the existing right-of-way and would require a combination of partial and full property acquisitions along the south side of the right-of-way. The features would clearly contrast with existing visual character along the rail corridor, but the degree of change proposed would not be incompatible with the current visual setting's features. New lighting features would be proposed as part of the Project at both the station and parking lot; however, light-sensitive viewers are not present in the setting and, in any case, the project lighting would be designed to avoid spill light pollution and glare.

The proposed Project would require removal of some existing mature trees and the demolition of the abutting four-story Bekins Moving and Storage Building, changing views in all directions within this portion of the viewshed. The Project would also result in new building construction, including the approximately 14,000-squarefoot building and other changes involving the Omnitrans bus facility. However, visual quality in this location is low and the proposed Project would not materially diminish key north-facing views of distant mountain ridgelines at KOP 5. Due to the absence at present of other key visual resources in this setting, north-facing views (i.e., views of mountain ridgeline) from San Manuel Stadium would be enhanced rather than adversely affected.

Effects

As shown in Table 4.2.4-1, visual quality under the proposed Project would be reduced slightly but would still retain a visual quality rating of "low." This is because the new design features and improved maintenance that would accompany it would be offset by potential building demolitions, tree removals, installation of rail platforms and a new bus facility, and the establishment of a new surface parking lot. No adverse effects would occur. Additionally, the area included within KOP 5 would become a gateway entry and destination for the provision of transit opportunities and development potential associated with the proposed bus facility and rail station. The incorporation of constructed elements and other architectural and landscaped features proposed in this area would result in an aesthetic change to the site and would increase the visual quality of the area. No adverse effect would result.

Design Options

Construction effects anticipated under the design options would be similar to those anticipated to occur under the proposed Project. Construction activities would include grading work, other routine construction activities, and truck shipments. Similarly, no nighttime construction activities that would necessitate obtrusive lighting installations or that would result in adverse glare effects would be proposed. Due to the prevailing low-to-moderate visual quality within the visual setting, the resulting minor and temporary changes associated with the construction process are not viewed as adverse.

Operational effects expected under the design options would be similar to effects anticipated to occur under the proposed Project in a majority of instances. However, there would be important differences in project effects at the Depot. The Pedestrian Underpass Design Option 2 would further minimize the visual effect of providing pedestrian access to the train platform area adjoining the aesthetically and historically significant Depot building. Pedestrian Overpass Design Options 1A and 1B would heighten the visual contrast with the Depot building due to the design treatment being considered compared to the proposed Project. However, because of the placement of the pedestrian access elements at the rear of the Depot, no major changes to view of the building's iconic 3rd Street façade would result. No change in visual quality would occur as a result of the 3rd Street Open Design Option 3 because the utilitarian road closure infrastructure and tree removal that would have occurred under the proposed Project would not occur.

Elsewhere within the project viewshed, partial and full property acquisitions would also occur under the design options. Similar to the proposed Project, the design options features would clearly contrast with the existing visual character along the rail corridor but the degree of change proposed would not be incompatible with the current visual setting's features. Even though new lighting features would be proposed, similar to the proposed Project, lighting would be designed to avoid spill light pollution and glare. Due to the low to moderate visual quality within the non-Depot portions of the project viewshed, adverse effects are not anticipated to occur.

Adverse effects on lighting

No-Build/No-Project Alternative

The proposed Project would not be implemented under this alternative, and existing conditions would remain. No change in existing lighting would occur. No adverse effects related to lighting are anticipated to occur.

Proposed Project

SCRRA standard recommendations for station platform lighting are an average of 5 foot-candles for platforms and an average of 10 foot-candles at all other areas, including station canopies. A commensurate approach would be taken in designing parking lot lighting (e.g., E Street Station). All such lighting features would be positioned and shielded so as to avoid spillover light pollution and glare. Hence, no adverse effects related to lighting and glare effects are anticipated. Also, no lighting would be installed at other nonstation locations along the rail corridor. Thus, no adverse light or glare-related effects would occur as a result of the proposed Project.

Design Options

Similar to the proposed Project, lighting features would be positioned and shielded so as to avoid spillover light pollution and glare. Hence, no adverse effects due to trespass lighting or glare effects are anticipated. Also, no lighting would be installed at other nonstation locations along the rail corridor. Thus, no adverse light or glare-related effects would occur as a result of the design options.

4.2.4.4 Avoidance, Minimization and/or Mitigation Measures

The proposed Project and the design options would not result in adverse visual effects under NEPA. Although there is some potential for quiet zone mitigation measures to be required along portions of the alignment, further analysis will be needed to determine an approach that best meets the standards of reasonableness and appropriateness for the local community/design context. Therefore, at present, no mitigation measures are called for. SANBAG best management practices (e.g., local design context-appropriate landscape replenishment/enhancement practice along rail corridors) would further ensure that no adverse effects on visual resources would result.

4.2.4.5 Cumulative Effects

A list of related projects includes a combination of railroad operations improvement programs and/or physical construction projects. Of the projects listed in Table 4.1-2, four are railroad operational improvement programs that have had, or would have, no discernible adverse effect on aesthetics (freight service changes along the Redlands corridor, local Omnitrans bus service

improvements, and Metrolink and Amtrak train service changes). Eight other projects call for construction; however, of these eight only three of the projects occur within the project viewshed. These include:

- widening of I-215 in the project viewshed north-south along I Street
- replacement of the Mount Vernon Bridge (north-south and west of the Depot)
- operation of the Omnitrans express bus rapid transit service along E Street (project involves construction of a bus facility only and not service)

The area of effect for cumulative effects to visual resources would consist of a viewshed extending out 1 mile north and south from the rail corridor along the 1-mile length of the rail corridor. Visual quality within the rail corridor viewshed was assessed as low-to-moderate, with visual quality ratings at the five key observation points ranging from 1.66 (very low) to 4.33 (moderate). The ratings were generally highest where significant vegetation, particularly mature trees, was present, property maintenance levels were high, and pleasing but unexceptional architectural elements were also present (e.g., the south side of Rialto Avenue west from I Street).

It is not anticipated that the proposed Project or design options would result in a cumulative effect in relation to the other related projects in the San Bernardino that fall within the project viewshed. No scenic vistas or corridors are present within the project viewshed. The views within the rail corridor are of low or medium quality, and visual resources are limited to sporadic clusters of mature evergreen trees and somewhat seasonal far-off views of the mountains. In instances where trees would be removed for the Project or design options, following best management practice, SANBAG, in cooperation with the City, would identify measures that would be taken to replace existing trees with new landscaping of commensurate quality appropriate to the setting. Finally, the proposed Project or design options would not introduce new structural elements that would substantially block existing significant views of mountain ridgelines because improvements would largely be limited to ground level. Although there is some potential for quiet zone mitigation measures to be required, further analysis will be needed in order to identify the approach that best meets the standards of reasonableness and appropriateness for the local community/design context, and to ensure that no substantial adverse effects on visual resources would occur.

Where project elements would be slightly more prominent in visual terms, as in the case of the rail and bus station improvements proposed at E Street, the low-rise, largely open passenger station platform and bus bay features would constrain north-facing sightlines of the mountain ridgelines only minimally, and most views would continue to be available to viewers at the location, with the exception of those on the interior and along the south side of the Omnitrans building.

At the Depot, the most design-sensitive element, the passenger overpass bridge and stair/elevator towers, would be designed to be sympathetic in terms of height, architectural detail and placement, and color to the Depot. The bridge's design is intended to respect the Depot's design character while offering a contemporary complement to it. Therefore, no adverse effects to visual quality at the Depot location are anticipated.

In summary, adverse operational and construction-related cumulative visual effects under NEPA are not anticipated.

4.2.5 Cultural Resources

This section evaluates the effects of the proposed Project, No-Build/No-Project Alternative, and design options on cultural resources. The technical information within this section is based on the Downtown San Bernardino Passenger Rail Project Cultural Resources Technical Memorandum prepared in February 2012 (Appendix D). This report also contains several figures depicting visual simulations of the proposed Project and the design options. Section 4.2.4, "Visual Quality and Aesthetics," also contains pertinent visual analysis information regarding the proposed Project and design options.

The historic resources study area was identified based on the anticipated direct and indirect effects of the proposed Project on identified historic resources. As discussed in Table 4.1-1 of Section 4.1.1, "Environmental Impact Assessment Criteria," this study area is slightly different from the Project Study Area and is referred to as the APE. The APE consists of 1) Project Study Area along the existing Redlands Subdivision railway from the Depot to the E Street rail platforms and bus facility site 1 mile to the east at Rialto Avenue and E Street, 2) right-of-way acquisition areas and temporary construction areas along the route, and 3) the entirety of the property affected within the Project Study Area. Figure 3.5-1 in Section 3.5, "Cultural Resources," presents an aerial view of the APE used in the analysis of cultural resources.

Cultural resources include prehistoric resources, traditional cultural places (or properties), and historic resources. Prehistoric resources are physical properties resulting from human activities that predate written records and are generally identified as archaeological sites. Historic resources include resources that postdate the advent of written records in a region. Evaluation criteria for assessing impacts to cultural resources are provided in Section 4.2.5.1, below.

4.2.5.1 Regulatory Environment

National Register of Historic Places

Historic properties are significant cultural resources that meet one or more criteria for eligibility for nomination of the resource to the National Register. The NHPA (16 USC 470 et seq.), Section 106, states that agencies of the federal government must take into account the impacts of their actions to historic properties. The regulations to meet this requirement are provided at 36 CFR Part 800. Compliance with Section 106 of the NHPA, known as the "Section 106 process," is intended to support historic preservation and mitigate impacts on significant historical or archaeological properties through the coordination of federal agencies, states, and other affected parties. The National Register lists historic properties of significance to the United States or a particular locale because of their setting or location, contribution to/association with history, or unique craftsmanship or materials. Impacts on listed properties must be accounted for under NEPA. Impacts on National Register–eligible properties must also be accounted for under NEPA. Sites eligible for listing on the National Register must meet one or more of the following criteria (36 CFR 60.4):

- Are associated with events that have made a significant contribution to the broad patterns of our history.
- Are associated with the lives of persons significant in our past.
- Embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; possess high artistic values; or represent a significant and distinguishable entity whose components may lack individual distinction.

- Have yielded, or may be likely to yield, information important in prehistory or history.

Thus, cultural resource impact analyses under NEPA must consider the proposed Project and design options' potential impacts on prehistoric resources as well as to historic properties listed or eligible for listing on the National Register.

In addition to meeting one or more of the above criteria, unless it possesses exceptional significance, the property must be at least 50 years old to be eligible for National Register listing and must have integrity. "Integrity is the ability of a property to convey its significance" (National Park Service 1997:44). According to the *National Register Bulletin*, the National Register recognizes seven aspects or qualities that, in various combinations, define integrity. To retain historic integrity a property will always possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance (National Park Service 1997:44). The seven factors that define integrity are location, design, setting, materials, workmanship, feeling, and association. The following is excerpted from the *National Register Bulletin, How to Apply the National Register Criteria for Evaluation,* which provides guidance on the interpretation and application of these factors:

- Location is the place where the historic property was constructed or the place where the historic event occurred.[2]
- Design is the combination of elements that create the form, plan, space, structure, and style of a property.[3]
- Setting is the physical environment of a historic property.
- Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.[4]
- Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.[5]
- Feeling is a property's expression of the aesthetic or historic sense of a particular period of time.[6]
- Association is the direct link between an important historic event or person and a historic property.[7]

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[2] "The relationship between the property and its location is often important to understanding why the property was created or why something happened. The actual location of a historic property, complemented by its setting is particularly important in recapturing the sense of historic events and persons. Except in rare cases, the relationship between a property and its historic associations is destroyed if the property is moved."

[3] "A property's design reflects historic functions and technologies as well as aesthetics. It includes such considerations as the structural system; massing; arrangement of spaces; pattern of fenestration; textures and colors of surface materials; type, amount, and style of ornamental detailing; and arrangement and type of plantings in a designed landscape."

[4] "The choice and combination of materials reveals the preferences of those who created the property and indicated the availability of particular types of materials and technologies. Indigenous materials are often the focus of regional building traditions and thereby help define an area's sense of time and place."

[5] "Workmanship can apply to the property as a whole or to its individual components. It can be expressed in vernacular methods of construction and plain finishes or in highly sophisticated configurations and ornamental detailing. It can be based on common traditions or innovative period techniques."

[6] "It results from the presence of physical features that, taken together, convey the property's historic character."

[7] "A property retains association if it is the place where the event or activity occurred and is sufficiently intact to convey that relationship to an observer. Like feeling, association requires the presence of physical features that

In assessing a property's integrity, the National Register criteria recognize that properties change over time; therefore, it is not necessary for a property to retain all its historic physical features or characteristics. However, the property must retain the essential physical features that enable it to convey its historic identity (National Park Service 1997:46).

For properties that are considered significant under National Register Criteria A and B, the *National Register Bulletin, How to Apply the National Register Criteria for Evaluation* states that a property that is significant for its historic association is eligible if it retains the essential physical features that made up its character or appearance during the period of its association with the important event, historical pattern, or person(s) (National Park Service 1997:46).

In assessing the integrity of properties that are considered significant under National Register Criterion C, the *National Register Bulletin, How to Apply the National Register Criteria for Evaluation* provides that a property important for illustrating a particular architectural style or construction technique must retain most of the physical features that constitute that style or technique.[8]

Archaeological Resources Protection Act

The Archaeological Resources Protection Act of 1979 regulates the protection of archaeological resources and sites that are on public (federal) lands and Indian lands.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act is a federal law passed in 1990 that provides a process for museums and federal agencies to return certain Native American cultural items—such as human remains, funerary objects, sacred objects, or objects of cultural patrimony—to lineal descendants and culturally affiliated Indian tribes.

4.2.5.2 Affected Environment

Refer to Section 3.5, “Cultural Resources,” of this document for a detailed discussion regarding the affected environment, including prehistory, history, architectural resources, and archaeology.

Historic Resources within the APE

Atchison Topeka & Santa Fe Railroad Depot (Depot)—1170 West Third Street

The Santa Fe Railroad Depot, located at the southern boundary of the former rail yards, is a large Mission Revival style building. Details of the design of this massive building were derived largely from historic California missions. The building includes four domed mission-style bell towers surrounding a larger central domed waiting room. Wings of the building, housing various work and office spaces for the Depot, are similarly designed with reference to mission façades and arcades, shaped “bell walls,” buttress and pilaster wall detailing, and other characteristic features. (Donaldson 1991.)

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convey a property’s historic character. Because feeling and association depend on individual perceptions, their retention alone is never sufficient to support eligibility of a property for the National Register.”

[8] “A property that has lost some historic materials or details can be eligible if it retains the majority of the features that illustrate its style in terms of the massing, spatial relationships, proportion, pattern of windows and doors, texture of materials, and ornamentation. The property is not eligible, however, if it retains some basic features conveying massing but has lost the majority of the features that once characterized its style.”

The building is regarded as unique among the Santa Fe Railroad stations in California. Its architecture contributes to the significance of the property at both state and local levels. It is listed in the National Register (a 1S CHRC status code).

Southern California Gas Company Plant—155 South G Street

This expansive property used as a plant for the Southern California Gas Company contains two large buildings, a one- and two-story North Building and a one-story South Building. The architectural style of both buildings is Streamline Moderne, which was popular during the 1930s and is reflected in the flat roofs with parapets, curved corners facing the street, stucco finish, and broad horizontality of the connected sills and lintels that form belt courses along each façade. At the rear of the North Building is a two-story portion that is utilitarian in design. Fenestration along the primary elevations consists of a band of multiple four-light aluminum frame windows that most likely replaced original steel frame windows. Above the street-facing windows of the North Building are the words "SOUTHERN CALIFORNIA GAS COMPANY" in period lettering. On the South Building, the word "AUDITORIUM" in similar lettering tops the original corner metal and glazed double doors of the main northwest-facing entrance. To the rear of the South Building is a long, low utilitarian shed-like portion capped by a low-pitched gabled roof apparently used for storage and to shelter vehicles. Most likely, it is this portion that building permits indicate was added in 1952. Landscaping consists of narrow lawns fronting both buildings, clipped hedges, and a few mature trees. A prominent metal security fence surrounds the property at the sidewalk. The remainder of the property is paved for surface parking. Alterations include the aforementioned window replacements and the application of a rough-textured stucco finish over the original smooth stucco. Nonetheless, the overall integrity of design, materials, feeling, and workmanship remains moderate to high. In addition, integrity of location, setting, and association is high because the property has been in continuous use as the Southern California Gas Company's plant since it was constructed. A windshield survey of San Bernardino suggests that the Streamline Moderne architectural style is relatively uncommon in the City. As such, the subject property represents a rare example of the style in San Bernardino.

The original building permit was not located; however, a subsequent permit indicates that a storage building was erected in 1952. The 1937 San Bernardino city directory does not include the subject address and, unfortunately, the 1938 and 1939 city directories were not available. By 1940, however, the subject property appears in the city directory as Southern California Gas Company. Given the buildings' Streamline Moderne architectural style, it can be surmised that the property has a circa 1938 construction date.

It appears that the subject property achieves a level of architectural merit necessary for listing in the National Register under Criterion C at the local level of significance (a 3S status code). However, because no known persons or events of local, state, or national significance appear to be associated with the resource, and because its association with the Southern California Gas Company does not appear to be especially noteworthy, the property does not warrant National Register listing under Criteria A or B.

Archaeological Resources

As stated previously in Section 3.5, “Cultural Resources,” the records search included five prehistoric archaeological recorded sites and one multi-component archaeological site (prehistoric and historic).Of these recorded cultural resources, four are located within the APE. The current project route, the former AT&SF Railroad line also known as the “Old Kite Route” is recorded as a historic resource (36-006847). The Depot located at the project route’s west end

is recorded as a historic resource (36-017975), is listed in the National Register (01000025), and is a California Point of Historical Interest (No. 53). There are two other recorded historic period sites within the APE that are associated with the former AT&SF Railroad: a railroad spur of the former Pacific Electric Railway line (36-006101), which crosses the project location, and the site of the former Pacific Electric Substation No. 24 (36-013886), which was demolished sometime between 1991 and 2008 and was located in the APE north of the rail line at E Street and Rialto Avenue. In addition, the record search indicated that 52 surveys have been conducted within a 1-mile radius of the Project and three of these surveys investigated a portion of the project area.

Archaeological surveys identified no new archaeological resources within the APE. None of the previously recorded archaeological resources within the APE are eligible for listing in the National Register or meet the criteria for historic properties.

4.2.5.3 Environmental Consequences

Effects on architectural resources

No-Build/No-Project Alternative

No improvements to the rail corridor would occur under this alternative, and none of the improvements proposed by the Project would be constructed. No construction activities would occur and no operational changes to the rail corridor would be implemented. Therefore, the No-Build/No Project Alternative would not result in adverse effects to historic resources.

Proposed Project

Within the APE, one property, the Depot, is listed in the National Register (a 1S California Historic Resource status code). In addition, one property was identified that appears individually eligible for listing in the National Register, the Southern California Gas Company Plant at 155 South G Street (a 3S California Historic Resource status code). Twenty-two properties in the APE, all architectural, required application of the National Register Criteria for Evaluation. None of these 22 properties were determined eligible for listing in the National Register. For Section 106 purposes, only the Depot and the Southern California Gas Company Plant would be affected by the proposed Project.

Santa Fe Depot

The Depot is listed in the National Register of Historic Places (CHRC 1S) and is considered an important historic property. The distinctive characteristics of the Depot that qualify it for the National Register include its history as an important element of the Santa Fe Railway system and its association with the economic development of San Bernardino and the Inland Empire. In addition, the overall massing and form, fenestration[9], Mission Revival–style parapets, red tiled roof, and domed towers are distinctive physical characteristics that qualify it for the National Register.

The proposed Project would not directly or indirectly alter the Depot's distinctive physical or historical characteristics, nor would it alter the Depot's integrity of location, design, materials, workmanship, feeling, or association. This applies to the proposed interior and exterior improvements for the Depot including: (1) installation of new window awnings, (2) new exterior

[9] The design and placement of windows in a building.

and interior wayfinding signage for bathrooms and SANBAG/SCAG/Whistle Stop Cafe/Museum, (3) a new clock in the lobby, (4) a new sign in the lobby that details the railroad's role in creating time zones, and (5) a new monument sign and flagpole to be placed at the Depot entrance.

Using the Secretary of the Interior's Standards for Rehabilitation, three of the standards directly apply to the proposed improvements:

- **Standard 6.** Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
- **Standard 9.** New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
- **Standard 10.** New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Installation of new awnings. In meeting the Secretary of the Interior's Standards for Rehabilitation as relates to the replacement of missing features such as window awnings, a historic photograph of the interior of the Depot's Harvey House Restaurant was obtained. The photograph confirms the existence of exterior awnings that sheltered the large windows at the east end of the restaurant. The designs appear to be compatible with the historic materials, features, size, scale, and proportion of the original. In addition, the new awnings, if removed in the future, would leave the essential form and integrity of the Depot and its environment unimpaired.

New exterior and interior way finding signage for bathrooms and SANBAG/SCAG/Whistle Stop Cafe/Museum. As relates to size, typeface, or supporting metal hardware (where applicable), the proposed wayfinding signage is not based on specific documentary evidence, which was apparently unavailable following a search for such material, photographic or otherwise. Nonetheless, it appears that the proposed designs are consistent with the Secretary of the Interior's Standards for Rehabilitation in terms of compatibility with historic materials, features, size, scale, and reversibility.

New clock in the lobby. The design of the proposed clock is not based on specific documentary evidence, which was apparently unavailable following a search for relevant historic photographs. Nonetheless, it appears that the proposed clock design is consistent with the Secretary of the Interior's Standards for Rehabilitation in terms of compatibility with historic materials, features, size, scale, and reversibility.

New sign in the lobby that details the railroad's role in creating time zones. Similar to the wayfinding signage, the proposed lobby sign recounting the history of time zones and the railroad is not based on specific documentary evidence. In this case, the information and display is contemporary. It appears that the proposed design and its placement adjacent to the double doors along the east elevation of the main lobby is consistent with the Secretary of the Interior's Standards for Rehabilitation in terms of compatibility with historic materials, features, size, scale, and reversibility.

New monument sign and flagpole to be placed at the Depot entrance. The proposed exterior entrance monument sign is not based on documentary evidence because it appears that such a sign did not originally exist at the Depot. However, the proposed design and its placement at the Depot entrance appears to be consistent with the Secretary of the Interior's Standards for Rehabilitation in terms of compatibility with historic materials, features, size, scale, and reversibility. For similar reasons, the design and placement of the proposed flagpole appears consistent with the standards.

As related to the proposed overpass, because it would not physically touch the Depot, the new construction, if removed in the future, would not impair the essential form and integrity of the historic property and its environment. However, there is the potential that the proposed Project would introduce a visual element (the overpass) that might indirectly diminish the setting of the Depot.

Figure 2-2C in Chapter 2, "Alternatives," shows a southeast view toward the Depot that appears to be from the raised vantage point of the nearby vehicular bridge west of the Depot. From this perspective, the south half of the Depot's west elevation is visible, as are the building's overall massing and form, fenestration, Mission Revival–style parapets, red tiled roof, and domed towers. However, the Depot's north (track-facing) elevation and the north end of the west elevation are obscured from view.

Figure 2-2C in Chapter 2, "Alternatives," also provides an eye-level perspective as seen by a passenger standing on the west end of the north rail platform looking east toward the Depot. From this view, the overpass's south elevator/stair tower would sit prominently three bays wide and three stories tall near the Depot's west elevation. The overpass bridge would cross the south railroad tracks, connecting to a three-story north tower that sits on the north rail platform. From this perspective, the overpass' south tower would block the view of the north half of the Depot's west elevation, including some of its fenestration and parts of the roof and north parapet. In addition, the visual simulations provided in Figure 2-2C within Chapter 2, "Alternatives," suggests that the overpass' south tower would be near the Depot's west elevation, potentially blocking views. The overpass bridge itself would obscure views of the Depot's north elevation, including its domed towers.

The historic setting of the Depot is that of a freestanding building with substantial open space adjacent to its various elevations that affords visibility from all directions. Such visibility is important to appreciating the significance of the property. Indeed, the proposed Project would allow full visibility of the Depot's south, east, and north elevations and the south half of the west elevation when approaching the property from these directions. However, when viewed solely from the perspective of a passenger standing on the west end of the rail platform looking east, the north elevation and portions of the west elevation would be obscured by the proposed overpass and the integrity of the Depot's historic setting would be somewhat diminished. Yet, in applying the criteria associated with 36 CFR Part 800.5(a)(1) and (2), the level of diminished integrity of setting arising from obscured views, as seen by a passenger standing on the west end of the rail platforms looking east toward the Depot, would not rise to a level of significance to qualify as an adverse effect. Therefore, the proposed Project would have no adverse construction or operational effect on the significance of the historic resource.

Southern California Gas Company Plant—155 South G Street

The Southern California Gas Company Plant appears to be eligible for listing in the National Register (CHRC 3S).

The proposed Project would use a very small part of the northern portion of a large property that contains the Southern California Gas Company Plant. The southwest portion of the proposed

E Street rail platform would encroach onto the northern portion of the Southern California Gas Company Plant property. More specifically, the project would require an encroachment of up to 25 feet along the north-northwest perimeter and up to 100 feet along the north-northeast perimeter of the Gas Company Plant property that is currently used for employee parking. The historic Gas Company buildings are located over 100 feet to the south of the proposed encroachment at its further southern extent at the northeast corner of the property's parking lot. Given the scope of the proposed Project, it does not appear that such an encroachment would directly or indirectly alter the Gas Company buildings' distinctive physical or historical characteristics, nor would it alter their integrity of location, design, materials, workmanship, feeling, or association. Therefore, the proposed Project would have no adverse construction or operational effect on the significance of the historic resource.

Pedestrian Overpass Design Options 1A and 1B

Santa Fe Depot

Pedestrian Overpass Design Options 1A and 1B may include open-to-air steel structure variations for a pedestrian overpass. Though not in the style of the Depot, the truss structure and exposed, painted steel would reflect the ingenuity and robustness of rail construction and American rail networks. The design options would have one stair entering and exiting a protected and covered elevated passageway. All other railway and station improvements proposed as part of the Project would remain the same.

The prominent differences between Pedestrian Overpass Design Options 1A and 1B are the railing design and elevator enclosure design, as provided in the visual simulations in Chapter 2, "Alternatives," specifically Figure 2-8 for the Pedestrian Overpass Design Option 1A and Figure 2-9 for the Pedestrian Overpass Design Option 1B. Design Option 1A contains glass railings and translucent glass elevator enclosures. Design Option 1B presents a more industrial aesthetic with metal bar railings and minimized glass elevator enclosure. Both design options would have a security booth at the base of the stair tower on Platform A. Massing would be reduced in comparison with the pedestrian overpass bridge design proposed as part of the Project.

As with the proposed Project, the proposed Pedestrian Overpass Design Options 1A and 1B would not directly or indirectly alter the Depot's distinctive physical or historical characteristics, nor would either design option alter the Depot's integrity of location, design, materials, workmanship, feeling, or association. Further, because the proposed overpass would not physically touch the Depot, the new construction, if removed in the future, would not impair the essential form and integrity of the historic property and its environment. However, there is the potential that these proposed design options would introduce a visual element (the overpass) that might indirectly diminish the setting of the Depot.

In summary, the historic setting of the Depot is that of a freestanding building with substantial open space adjacent to its various elevations that affords visibility from all directions. Such visibility is important to appreciating the significance of the property. Design Options 1A and 1B would allow full visibility of the Depot's south, east, and north elevations and the south half of the west elevation when approaching the property from these directions. However, in comparison with the proposed Project when viewed from the perspective of a passenger standing on the west end of the rail platform looking east, substantially more of the Depot's north and west elevations are visible under Design Option 1A, and more still under Design Option 1B.

In applying the criteria associated with 36 CFR Part 800.5(a)(1) and (2), the loss of integrity under Design Option 1A would be substantially less than with the proposed Project, resulting in no adverse effect. Under Design Option 1B, the loss of integrity is minimized even further than under Design Option 1A with the result of no adverse construction or operational effect.

Southern California Gas Company Plant

Under Pedestrian Overpass Design Options 1A and 1B, the effects associated with the Southern California Gas Company Plant would be the same as those for the proposed Project. Therefore, the proposed Design Options 1A and 1B would have no adverse construction or operational effect on the significance of the historic resource.

Pedestrian Underpass Design Option 2

Santa Fe Depot

This design option would result in less constriction to the train platform at the stair locations. The Pedestrian Underpass Design Option 2 stairs can be minimized to 8 feet wide, or approximately 9 feet with curb. This would leave a larger clearance, as compared to Pedestrian Overpass Design Options 1A and 1B, of 7 feet to the Metrolink platform edge and 10 feet to the platform edge. The Pedestrian Underpass Design Option 2 would have two stairwells entering the passageway at Platform A and a combined stair exiting just west of the Depot, as provided in Figure 2-10 in Chapter 2, “Alternatives.” The Pedestrian Underpass Design Option 2 would have a stand-alone security booth situated along Platform A. All other railway and station improvements proposed as part of the Project would remain the same.

As with the proposed Project and Pedestrian Overpass Design Options 1A and 1B, the proposed Pedestrian Underpass Design Option 2 would not directly or indirectly alter the Depot’s distinctive physical or historical characteristics, nor would it alter the Depot’s integrity of location, design, materials, workmanship, feeling, or association. However, in contrast with the other design options, the Pedestrian Underpass Design Option 2 would not directly or indirectly diminish the setting of the Depot because the introduced visual elements would be small above-ground shelters covering the entrances to the stairwells (one on each end) descending into the underground passageway.

Specifically, the shelter to be constructed just west of the Depot would be approximately 51 feet high with a north-south width of 50 feet and an east-west width of up to 20 feet. Its minimal overall mass would be such that there would be no substantive impediment to viewing the Depot’s distinctive physical characteristics from any direction. As a result, there would be no adverse construction or operational effect on the historic resource.

The proposed shelter/security booth on Platform A would be up to 10 feet high, less than 13 feet long, and less than 4 feet wide. For the same reasons as noted previously, the proposed shelter/security booth would result in no substantive impediment to viewing the Depot’s distinctive physical characteristics from any direction. Similarly, there would be no adverse construction or operational effect on the historic resource.

Southern California Gas Company Plant

Under the Pedestrian Underpass Design Option 2, the effects associated with the Southern California Gas Company Plant would be the same as those for the proposed Project. Therefore, the proposed Pedestrian Underpass Design Option 2 would have no adverse construction or operational effect on the significance of the historic resource.

3rd Street Open Design Option 3

Santa Fe Depot

The 3rd Street Open Design Option 3 would have no effect on the Depot and there would be no change as compared to the proposed Project. Therefore, the proposed 3rd Street Open Design Option 3 would have no adverse construction or operational effect on the significance of the historic resource.

Southern California Gas Company Plant

The 3rd Street Open Design Option 3 would have no effect on the Southern California Gas Company Plant and there would be no change as compared to the proposed Project. Therefore, the proposed 3rd Street Open Design Option 3 would have no adverse construction or operational effect on the significance of the historic resource.

Effects on archaeological resources

No-Build/No-Project Alternative

No improvements to the rail corridor would occur under this alternative, and none of the improvements proposed by the Project would be constructed. No construction activities would occur and no operational changes to the rail corridor would be implemented. Therefore, the No-Build/No-Project Alternative would not result in adverse effects to archaeological resources.

Proposed Project

As stated previously, no new archaeological resources were identified within the APE. None of the previously recorded archaeological resources within the APE are eligible for the National Register. Therefore, the potential for the APE to yield buried prehistoric or historic period archaeological resources is considered to be low. However, the location of the bus facility contains two previously recorded archaeological resources (36-006101, former railroad spur of the Pacific Electric Railway, and 36-013886, former site of the Pacific Electric Substation #24). While these resources are not eligible for the National Register, this area may be more sensitive for buried archaeological deposits than other portions of the APE. The entire APE has some potential to contain buried archaeological resources, and ground disturbance could inadvertently damage or destroy buried archaeological sites not identified using standard archaeological survey methods. Because construction-related ground-disturbing activities for the proposed Project in the location of the bus facility could disturb, damage, or degrade unknown and intact archeological resources, potentially adverse effects could result. If these effects were unmitigated, this could result in an adverse effect. Therefore, Mitigation Measures CR-2 (Conduct Cultural Resources Monitoring) and CR-4 (Stop Work if Unanticipated Human Remains Are Encountered) would be required to reduce adverse effects associated with the proposed Project during construction. No adverse operational effects are anticipated.

Pedestrian Overpass Design Options 1A and 1B

Similar to the proposed Project, construction of these design options would require ground-disturbing activities. Effects related to encountering potentially significant archaeological resources during construction-related ground-disturbing activities for these design options would be the same as the effects under the proposed Project, and implementation of Mitigation Measures CR-2 (Conduct Cultural Resources Monitoring) and CR-4 (Stop Work if Unanticipated

Human Remains Are Encountered) would reduce any potential adverse effects during construction. No adverse operational effects are anticipated.

Pedestrian Underpass Design Option 2

Under the Pedestrian Underpass Design Option 2, there would be a slightly greater potential for an adverse effect on archaeological resources due to a larger amount of excavation activities at the Depot to underground the pedestrian egress. The greater extent of ground disturbance associated with construction of this design option increases the potential for destruction of as yet unknown significant archaeological resources. However, similar to the proposed Project, implementation of Mitigation Measures CR-2 (Conduct Cultural Resources Monitoring) and CR-4 (Stop Work if Unanticipated Human Remains Are Encountered) would reduce any potential adverse effects during construction. No adverse operational effects are anticipated.

3rd Street Open Design Option 3

The 3rd Street Open Design Option 3 has the least potential to have an adverse effect on archaeological resources. The lesser extent of ground disturbance associated with this design option, associated with a smaller area of the APE, decreases the potential for destruction of as yet unknown significant archaeological resources. However, preparation and implementation of Mitigation Measures CR-2 (Conduct Cultural Resources Monitoring) and CR-4 (Stop Work if Unanticipated Human Remains Are Encountered) would be required to mitigate any potential adverse effects during construction. No adverse operational effects are anticipated.

Effects on unknown human remains

No-Build/No-Project Alternative

No improvements to the rail corridor would occur under this alternative, and none of the improvements proposed by the Project would be constructed. No construction activities would occur and no operational changes to the rail corridor would be implemented. Therefore, the No-Build/No-Project Alternative would not result in adverse effects to human remains.

Proposed Project

Ground disturbance associated with construction of the proposed Project, including the Omnitrans Bus Facility, could potentially damage or destroy buried human remains that were not previously identified using standard archaeological inventory methods such as surface surveys. Inadvertent damage to or destruction of human remains would result in a substantial adverse effect. Therefore, Mitigation Measures CR-2 (Conduct Cultural Resources Monitoring) and CR-4 (Stop Work if Unanticipated Human Remains Are Encountered) would be required to reduce any potential adverse effect associated with the proposed Project during construction. No adverse operational effects would are anticipated.

Design Options

Potential adverse effects anticipated to occur under the design options involving the discovery of unknown human remains would be similar to those described for the proposed Project, especially for the Pedestrian Overpass Design Options 1A and 1B, due to the same APE and amount of construction activity anticipated. Similar to the proposed Project, all design options would require ground-breaking and grading activities during construction. However, the potential for adverse effects to occur under the Pedestrian Underpass Design Option 2 would be higher

than that for the other design options because this design option would require a greater amount of ground disturbance. This could result in potentially adverse effects during construction. The 3rd Street Open Design Option 3 has the least potential to have an adverse effect to human remains. The lesser extent of ground disturbance associated with this design option and use of a smaller area of the APE decreases the potential for destruction of as yet unknown remains. Mitigation provided for the proposed Project would reduce potentially adverse effects associated with implementation of the design options. With mitigation, these effects would not be considered adverse.

4.2.5.4 Avoidance, Minimization, and/or Mitigation Measures

Avoidance, minimization, and/or mitigation measures related to the potential for significant direct effects on buried cultural resources provided in Section 3.5, “Cultural Resources,” would reduce adverse effects. These mitigation measures are listed below and detailed in Section 3.5.5.

- CR-2 (Conduct Cultural Resources Monitoring)
- CR-4 (Stop Work if Unanticipated Human Remains Are Encountered)

4.2.5.5 Cumulative Impacts

The proposed Project or design options, in combination with other potential projects in the area, would not contribute to an adverse cumulative effect related to cultural resources, as all impacts are generally site-specific. With mitigation, all project-related impacts would be minimized to reduce adverse effects. Cultural resources have been identified on other development projects in the vicinity of the proposed Project or design options (more may be found as surveys are conducted at the cumulative projects in the region). It is assumed that similar mitigation measures would be applied to related projects in the vicinity of the rail corridor, as appropriate, and compliance with existing state and federal laws would reduce these effects. Therefore, implementation of mitigation measures and compliance with existing regulations would ensure that the proposed Project and design options and the addition of cumulative projects would not contribute to adverse cumulative effects on architectural or archaeological resources. Therefore, the proposed Project and design options would not contribute to a cumulatively adverse effect related to cultural resources.

4.2.6 Land Acquisitions, Displacement, and Relocation

This section evaluates the effects of the proposed Project, No-Build/No-Project Alternative, and design options related to land acquisitions, displacement, and relocation. The technical information within this section is based on property acquisitions data analysis provided in the *Redlands First Mile - R/W Baseline List of Property Acquisitions* (HDR Engineering, Inc. 2011d).

4.2.6.1 Regulatory Environment

Land acquisitions are, at times, needed to ensure compatible land use and minimize the threat of negative effects caused by encroachment. Land acquisitions may be full (if the majority of a property of land needs to be acquired for project development) or partial (if only a portion of a parcel of land is required to accommodate project development). Easements (i.e., land that is used or restricted for stated purposes but not owned) may be implemented in place of land acquisitions. As with land acquisitions, easements may be partial or full. Easements may also be temporary (e.g., if needed only during construction) or permanent (e.g., if needed for operations).

If acquisitions involve land that is currently occupied by residential or business uses, displacement and relocation of tenants or residents may be required. In situations where such displacements are a direct result of a project, NEPA requires compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act) (42 United States Code [USC] 4601). The Uniform Act establishes a policy for the fair and equitable treatment of persons displaced as a result of federal and federally assisted programs and ensures that relocation services and payments will be made available to eligible residents, businesses, and nonprofit organizations displaced as a direct result of a project.[10]

No specific NEPA thresholds for displacement effects exist and the provision of relocation services and benefits is administered without regard to race, color, national origin, or sex in compliance with Title VI of the Civil Rights Act (42 USC 2000d, et seq.).

4.2.6.2 Affected Environment

The affected environment for potential land acquisition, displacement, and relocation effects includes those areas within and directly adjacent to the Project Study Area. These areas include property used for industrial, business, and residential purposes as well as vacant land. Refer to Figure 4.5-3 for the acquisitions and relocations associated with implementation of the proposed Project, Pedestrian Overpass Design Options 1A and 1B, and the Pedestrian Underpass Design Option 2 and Figure 2-11 for the acquisitions and relocations associated with implementation of the 3rd Street Open Design Option 3.

4.2.6.3 Environmental Consequences

Land acquisitions, displacement, and/or relocation

For the proposed Project and design options, acquisition of properties located within the right-of-way is identified as “full” or “fee.” A property is considered a “full” acquisition if the construction impact limits would encroach on a structure, remove all reasonable access, or acquire more than 20% of the property. A property is also considered a full acquisition if more than 50% of the

[10] Federal regulations implementing the Uniform Act are contained in 49 CFR Part 24.

parking area would be affected. Full acquisitions thus consist of a full take of the property through a pre-determined fee. Conversely, “fee” acquisitions consist of a partial take of the property through a pre-determined fee. A property is identified as a “fee” acquisition if the construction impact limits would encroach upon property boundaries but would not meet full acquisition requirements. Both fee and full acquisitions are required to the extent that the property overlaps with the Project’s proposed right-of-way.

Other forms of right-of-way acquisitions in addition to full and fee acquisitions are also proposed under the Project and its design options. These other right-of-way acquisitions include utility easements for storm drains, emergency vehicles access easement, street vacation, and ingress/egress easements (easements for entering or leaving a property).

In addition to right-of-way acquisitions, temporary construction easements are required when a property overlaps with the Project’s proposed construction boundaries. These temporary construction easements require land acquisition only for the duration of construction and do not include land area within the Project’s long-term operational boundaries.

Table 4.2.6-1 provides a summary of the properties that would be affected by the proposed Project and the land area involved for both right-of-way acquisitions and temporary construction easements under each design option. As shown in the table, the proposed Project and all the design options would have similar effects, with the exception of seven family relocations, which would occur only under the proposed Project, Pedestrian Overpass Design Options 1A and 1B, and the Pedestrian Underpass Design Option 2. The 3rd Street Open Design Option 3 would not include these seven family relocations. Figure 4.2.6-1 illustrates the geographic location of properties that would be affected by the proposed Project, Pedestrian Overpass Design Options 1A and 1B, the Pedestrian Underpass Design Option 2, and the 3rd Street Open Design Option 3, while Figure 2-11 illustrates the geographic location of each property that would be affected by the 3rd Street Open Design Option 3. Table 4.2.6-2 provides details regarding the area and property use of each of the affected properties under all design options.

The remainder of this section discusses acquisition, displacement, and relocation effects by design option.

Table 4.2.6-1. Summary of Acquisitions and Relocations by Design Option

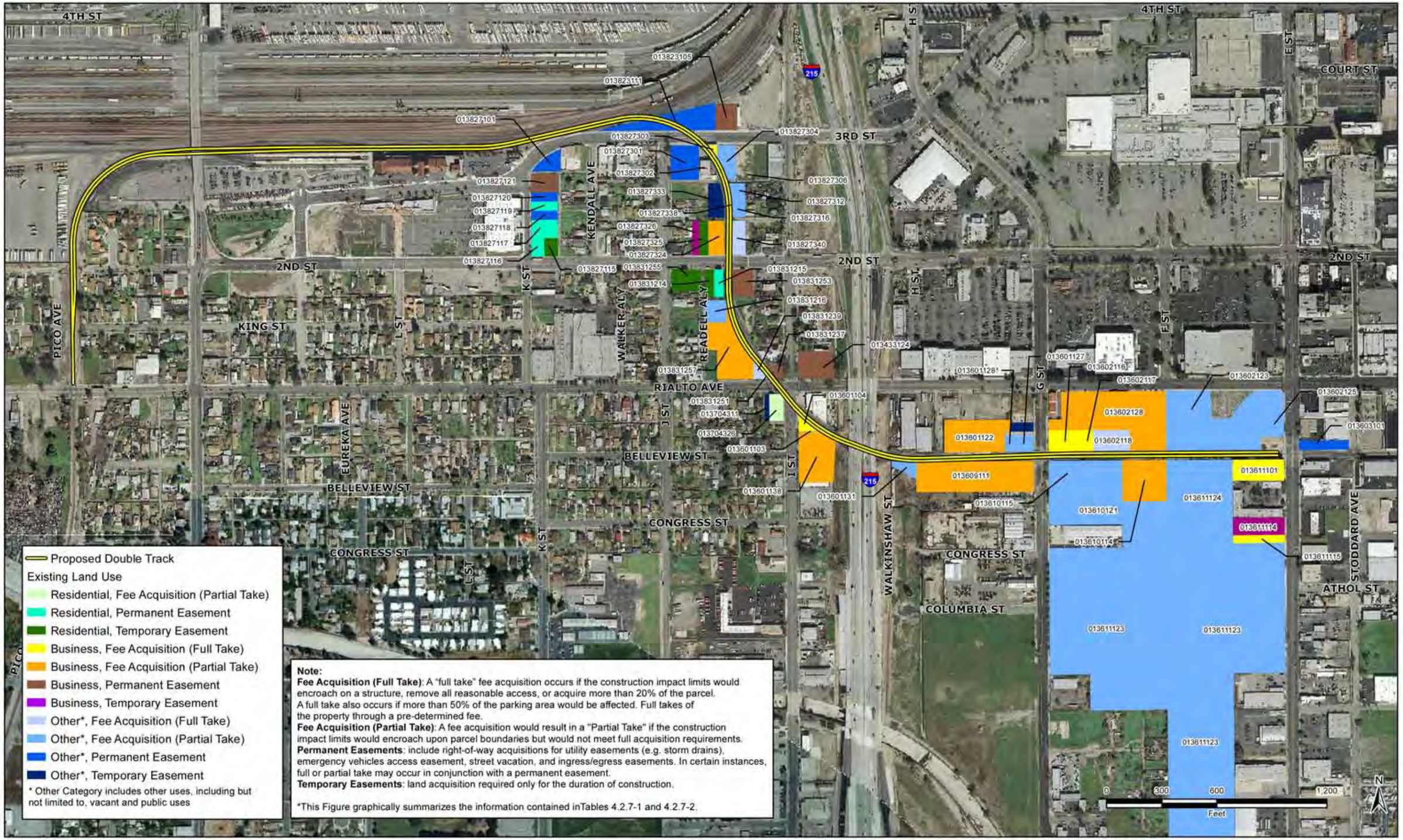
Alternative	Number of Properties Affected	Total Area Requiring Acquisition	Total Area Requiring Temporary Construction Easements	Number of Permanent Relocations Required
No-Build/No-Project Alternative	0	0	0	0
Proposed Project, Pedestrian Overpass Design Options 1A and 1B, and Pedestrian Underpass Design Option 2	69	364,713 square feet (8.4 acres)	272,097 square feet (6.2 acre)	• 4 businesses • 7 families* • 5 personal property-related relocations**

Alternative	Number of Properties Affected	Total Area Requiring Acquisition	Total Area Requiring Temporary Construction Easements	Number of Permanent Relocations Required
3rd Street Open Design Option 3	63	355,253 square feet (8.2 acres)	257,049 square feet (5.9 acre)	• 4 businesses • No families • 5 personal property-related relocations**

* Seven families residing within three residential properties would require relocation.
** Five of the 13 properties requiring personal property relocation are currently occupied.

Table 4.2.6-2. Acquisitions, Property Use, and Relocations for All Affected Properties

Parcel Number	Type of Acquisition Required	ROW Area Under Acquisition (Sq. Ft.)	TCE Area Under Acquisition (Sq. Ft.)	Total Area (Sq. Ft.)	Current Property Use	Type of Relocation Required
0138-231-05	PE	225		15,600	Storage Warehouse	Personal Property
	TCE		696			
0138-231-11	PE	201			Vacant Land	None
0138-273-01	PE	80		27,900	Vacant Land	None
0138-273-03	Full	3,108		3,108	Commercial	Business
3rd Street Vac.	ST VAC	2,062			Commercial	None
3rd Street Vac.	ST VAC	731			Storage Warehouse	None
0138-273-04	Fee	5,892		16,700	Vacant Land	None
	TCE		275			
	PE	225				
Broadway Vac.	ST VAC	506			Vacant Land	None
Broadway Vac.	ST VAC	475				None
0138-273-13/38	Fee	2,927		3,400	Vacant Land	Personal Property
0138-273-16	Fee	2,354		6,700	Vacant Land	Personal Property
Main St. Vac.	ST VAC	412		1,000	Main St. Alley	None
0138-273-12	Fee	2,703		4,900	Vacant Land	Personal Property
0138-273-33	TCE		2,829	13,400	Vacant Land	None
0138-273-24	Fee	353		15,624	Light Industrial	None
	TCE		940			
	PE	58				
0138-273-25	TCE		249	9,300	Residential	None
0138-273-26	TCE		171	6,975	Service Garage	None



Source: HDR Engineering (December, 2011)

Figure 4.2.6-1
Residential and Business Acquisitions and Displacements
Downtown San Bernardino Passenger Rail Project

Parcel Number	Type of Acquisition Required	ROW Area Under Acquisition (Sq. Ft.)	TCE Area Under Acquisition (Sq. Ft.)	Total Area (Sq. Ft.)	Current Property Use	Type of Relocation Required
0138-273-40	Fee	7,528		15,815	Vacant Land	None
	Full	15,815				
Main St. Vac.	ST VAC	1,000		1,000	Main St. Alley	None
0138-312-15	PE	33		7,500	Abandoned Residential	None
	TCE		204			
	UE (SD)	1,709				
Alley Vac.	ST VAC	248		248	Residential	None
Alley Vac.	ST VAC	266		266	Vacant Land	None
0138-312-53	PE	73		15,000	Retail Store	None
0138-312-14	TCE		257	7,500	Residential	None
0138-312-55	TCE		234	18,630	Residential	None
0138-312-16	Fee	1,048		13,800	Vacant Land	Personal Property
	TCE		1,169			
0138-312-57	Fee	13,407		63,597	Storage Warehouse	Personal Property
	TCE		3,126			
Alley Vac.	ST VAC	1,450		1,450	Alley	None
Alley Vac.	ST VAC	1,283		1,283	Alley	None
0138-312-39	Full	4,470		4,470	Vacant Land	None
0138-312-51	Full	840		840	Vacant Land	None
0138-312-37	PE	122		3,700	Light Industrial	None
	TCE		566			
0134-331-24	PE	73		28,640	General Office	None
	TCE		251			
0137-043-26	Fee & TCE	686	501	10,981	Residential	None
	EVA	625				
0137-043-11	TCE		125	3,660	Vacant Land	
0136-011-04	Full	6,810		6,810	Service Garage	Business
	PE	1,398				
0136-011-03	Fee	40		322	Vacant Land	None
	TCE		70			
	PE	9				
0136-011-38	Fee	2,505		53,578	Storage Warehouse	None
	TCE		24,844			
	PE	161				
0136-011-31	Fee	5,032		8,101	Vacant Land	Personal Property

Parcel Number	Type of Acquisition Required	ROW Area Under Acquisition (Sq. Ft.)	TCE Area Under Acquisition (Sq. Ft.)	Total Area (Sq. Ft.)	Current Property Use	Type of Relocation Required
0136-011-22	Fee	957		59,241	Storage Warehouse	Personal Property
	TCE		358			
0136-011-28	Fee	670		4,500	Vacant Land	Personal Property
	TCE		250			
0136-011-27	Fee	5,627		9,496	Vacant Land	None
	TCE		3,869			
	UE (SD)					
	PE	26				
0136-011-26	TCE		73	6,250	Vacant Land	None
0136-091-11	Fee	15,566		99,316	Distribution Warehouse	Personal Property
	PE	58				
0136-021-16	Full	20,700		20,700	Storage Warehouse	Business
0136-021-17	TCE		246	6,900	Storage Warehouse	None
	Full	6,900				
0136-021-18	Fee	21,292		23,000	Vacant Land	None
	Full	23000				
0136-021-28	Fee	4,532		146,797	General Office	None
	TCE		45,842			
	UE (SD)	5,431				
0136-021-23	Fee	5,756		117,267	Vacant Land	None
	UE (SD)	4,901				
0136-021-25	Fee	2,192		57,792	Vacant Land	None
0136-101-14	Fee	17,468		53,143	Light Industrial	Personal Property
	TCE		3,123			
0136-101-15	Fee	3,141		28,000	Vacant Land	Personal Property
	TCE		3,154			
	PE	56				
0136-101-21	Fee	10,130		173,368	Vacant Land	Personal Property
	TCE		2,954			
0136-111-01	Full	32,315		32,315	Storage Warehouse	Business
0136-111-14	TCE		26,976	27,072	Vacant Industrial/ Warehouse	None
0136-111-15	TCE		12,364	12,408	Vacant Retail Store	None

Parcel Number	Type of Acquisition Required	ROW Area Under Acquisition (Sq. Ft.)	TCE Area Under Acquisition (Sq. Ft.)	Total Area (Sq. Ft.)	Current Property Use	Type of Relocation Required
0136-111-24	Fee	53,862		158,122	Vacant Land	None
	TCE		103,507			
	Fee	12,478				
0136-111-23	Fee	1,896			Parking and landscaping	None
	TCE		15,493			
	Fee	1,896				
0136-031-01		1,200			Vacant Land	None
0138-271-15*	TCE		753		Residential	None
0138-271-16*	PE	3,168		7,500	Residential	Residential (1 Family)
	TCE		4,357			
0138-271-17*	PE	2,503		14,775	Residential	Residential (3 Families)
	TCE		4,945			
0138-271-18*	PE	1,263		7,500	Vacant Land	None
	TCE		2,497			
0138-271-19*	PE	1,263		7,500	Residential	Residential (3 Families)
	TCE		2,496			
0138-271-20*	PE	1,263		7,500	Vacant Land	None
0138-271-21	PE	2,944		15,000	Retail Store	None
0138-271-01	PE	3,778		8,850	Vacant Land	None
0136-021-28	IG/EG	6,960		146,797	General Office	None

Key: Full = fee acquisition (full take), Fee = fee acquisition (partial take), PE = permanent easement for public roadway/sidewalk, TCE = temporary construction easement, ROW = right-of-way, (SD) = utility easement (storm drain), EVA = emergency vehicles access easement, ST VAC = street vacation, IG/EG = ingress/egress easement.

* These properties would not be acquired under the 3rd Street Open Design Option 3.

Source: HDR Engineering, Inc. 2011d.

No-Build/No-Project Alternative

The No-Build/No-Project Alternative would result in no land acquisitions, displacement, or relocation of existing uses. Therefore, no construction or operational impacts, either direct or indirect, would occur under the No-Build/No-Project Alternative.

Proposed Project

Table 4.2.6-2 provides a list of all land properties that would be affected under the proposed Project, and Figure 4.2.6-1 indicates the location of each affected property and the type of acquisition required. No neighborhoods, public facilities, nonprofit organizations, or families requiring special relocation considerations would be displaced or relocated as a result of the Project.

Construction Impacts

Approximately 272,097 square feet (6.2 acre) of land would be temporarily affected during construction, and approximately 36 properties may require temporary construction easements. Properties subject to construction easements are indicated in Table 4.2.6-2. These include commercial property, businesses, residences, and vacant land. Project construction is anticipated to occur from west to east, beginning at the intersection of Pico Avenue and Rialto Avenue. Construction activities would follow the existing rail lines at the Depot and then continue to the proposed rail platforms near Rialto Avenue and E Street, including the area at K Street between 3rd Street and 2nd Street. Construction easements would be purchased for the duration of the construction period, and affected property owners would be fairly compensated for the Project's use of the property. Therefore, no adverse effects would result.

Operational Impacts

The addition of a second track within the rail corridor between the Depot and the proposed rail platforms and bus facility would necessitate acquisition of a permanent right-of-way along the corridor. This would be located south of the Depot, along K Street, and in the vicinity of the proposed rail platforms near Rialto Avenue and E Street. To accommodate the need for additional right-of-way, the proposed Project may require a total of 69 acquisitions, amounting to 364,713 square feet (8.4 acres) of land. These property acquisitions may include acquisitions in the form of full takes, partial takes, permanent easements for public roadway or sidewalk, utility easements for storm drains, emergency vehicle access easements, ingress/egress easements, and street vacations. It should be noted that improvements involving partial acquisitions would maintain the setback requirements of the applicable zoning district, or an appropriate buffer would be provided. No adverse effects would occur.

Ten of the acquisitions would involve properties with residential uses. Four of these acquisitions would be full acquisitions that would require relocation of seven families on three of these properties. Their residences are located adjacent to the rail corridor between 3rd Street and 2nd Street and east of K Street.

Four acquisitions would involve properties with active businesses. These would be full property acquisitions and would require relocation of these four businesses. Although additional properties would be partially acquired, no additional business relocations would be required. Thirteen acquisitions would require temporary or permanent personal property acquisitions (eight of the 13 properties are currently vacant and five are currently occupied with one business occupying two properties).

Displacement and relocation from land acquisitions under the proposed Project have the potential to generate direct effects on affected parties. To minimize relocation effects, all relocations resulting from the Project would be in compliance with the Uniform Act and the California Relocation Act, and commensurate compensation would be provided to all affected parties. Thus, no direct adverse effects from land acquisitions, displacement, or relocation would occur. No indirect adverse effects from land acquisitions, displacement, or relocation are anticipated.

Pedestrian Overpass Design Options 1A and 1B and Pedestrian Underpass Design Option 2

Effects related to land acquisitions, displacement, or relocation during construction and operation of these design options would be the same as the effects under the proposed Project.

3rd Street Open Design Option 3

Under the 3rd Street Open Design Option 3, vehicular and pedestrian traffic along 3rd Street between the J Street intersection and North I Street intersection would remain, and the acquisition of six properties east of K Street between 3rd Street and 2nd Street would not occur (these properties are denoted with an asterisk in Table 4.2.6-2). Figure 2-11 indicates the location of all properties that would be affected under the 3rd Street Open Design Option 3.

Construction Impacts

Temporary construction impacts under the 3rd Street Open Design Option 3 would be the same as those under the proposed Project and other design options.

Operational Impacts

Operational impacts under the 3rd Street Open Design Option 3 would include the operational impacts discussed under the proposed Project, with the exception of six properties that would not be located within the project right-of-way under this design option. These six properties total 4,475 square feet (0.1 acre) and represent a mixture of vacant and residential land uses. The 3rd Street Open Design Option 3 would require fewer acquisitions than the proposed Project, amounting to 355,253 square feet (8.2 acres).

Relocations under the 3rd Street Open Design Option 3 would include all relocations associated with the proposed Project, with the exception of the four residential properties, which would require seven family relocations. No family relocations would be required under the 3rd Street Open Design Option 3. Business and personal property relocations under this design option would be the same as those described under the proposed Project. Therefore, effects would be reduced with implementation of the 3rd Street Open Design Option 3 compared with the proposed Project and other design options.

Displacements and relocations from land acquisitions under the 3rd Street Open Design Option 3 have the potential to generate direct effects on affected parties. To minimize relocation effects, all relocations would be in compliance with the Uniform Act and the California Relocation Act, and commensurate compensation would be provided to all affected parties. Therefore, no direct effects from land acquisitions, displacement, or relocation would occur. All displacements and relocations, along with required assistance programs, would be specific to the properties that would be directly acquired and would not adversely affect adjacent properties. Therefore, no indirect effects from land acquisitions, displacement, or relocation are anticipated.

4.2.6.4 Avoidance, Minimization, and/or Mitigation Measures

The proposed Project or design options would not result in an adverse effect related to land acquisitions or displacements because all relocations resulting from the proposed Project and design options would be in compliance with the Uniform Act and the California Relocation Act, and commensurate compensation would be provided to all affected parties. Therefore, avoidance, minimization, and/or mitigation measures would not be required.

4.2.6.5 Cumulative Impacts

The proposed Project or design options, in combination with other potential projects in the regional area, would not contribute to an adverse cumulative effect on land acquisitions, displacement, or relocation because all effects would be specific to the properties that would be directly acquired. The proposed Project or design options would not result in an adverse effect

related to land acquisitions or displacements because all relocations resulting from the proposed Project and design options would be in compliance with the Uniform Act and commensurate compensation would be provided to all affected parties. Any potential effects related to land acquisitions, displacement, or relocation resulting from other projects would be addressed on a project-specific basis. Therefore, implementation of the proposed Project or the design options would not contribute to a significant cumulative effect in terms of land acquisitions, displacement, or relocation, and no substantial adverse effects would occur.

4.2.7 Socioeconomic, Economic, and Fiscal Impacts

This section of the environmental analysis evaluates the effects of the proposed Project, No-Build/No-Project Alternative, and design options related to socioeconomics. The socioeconomic characterization of the area surrounding the Project is based on publicly available information regarding employment, earnings, population, and housing resources within the City, the County, and the larger southern California region. A description of the racial/ethnic composition and age demographics in the vicinity of the Project is also provided in this section, as are potential socioeconomic effects of the proposed Project in the surrounding community.

4.2.7.1 Regulatory Environment

Refer to Section 4.2.1, "Land Use and Land Use Planning," of this document for a detailed discussion regarding the land use plans and policies that apply to the proposed Project.

Federal Transit Administration

According to the FTA, transit projects may have economic impacts that should be included in environmental impact documents. In particular, projects may create direct and indirect taxation changes, cause substantial displacement of businesses and individuals, disrupt business activities, and influence regional construction costs. If a proposed project is small, contained on a single site, does not involve displacements, and is compatible with surrounding land uses, there will probably be few economic impacts and extensive analysis is not needed. If a project is costly, covers a wide area, and will cause extensive displacement of businesses and individuals, there is a greater chance that it will cause economic impacts. In such cases, a detailed economic impact analysis should be included in environmental documentation (FTA 2012).

Southern California Association of Governments

SCAG is the nation's largest metropolitan planning organization, representing six counties (Imperial, Los Angeles, Orange, San Bernardino, Riverside, and Ventura), 191 cities, and more than 18 million residents. SCAG undertakes a variety of planning and policy initiatives that serve to encourage sustainable growth in southern California. The analysis of socioeconomics provided in this section relies on population and growth data obtained from SCAG as well as information from the U.S. Census Bureau, California Board of Equalization, California Employment Development Department, and Los Angeles Economic Development Corporation.

4.2.7.2 Affected Environment

Land uses within the rail corridor are generally characterized by older industrial and commercial areas, which are typical of railway corridors, with some adjacent residential neighborhoods. Major activity centers surrounding the Project include the Depot, City and County administrative uses, Carousel Mall, and San Manuel Stadium. Other commercial uses are located north of Rialto Avenue near E Street.

The SCAG geographic range includes Imperial, Los Angeles, Orange, San Bernardino, Riverside, and Ventura counties. For the purposes of evaluating socioeconomic effects in this EA/DEIR, the project "region" is defined as the subset of SCAG counties to which Metrolink provides service (excluding Imperial County). This section describes the baseline socioeconomic conditions within this region and the attributes of the human and built environment in the EJ study area.

Socioeconomics

The following sections provide information on the socioeconomic and fiscal conditions within the region, which includes the Project Study Area, larger SCAG region, and the County and City of San Bernardino.

Population

Existing Population

Between 1990 and 2010, the population in the region increased by more than 3.3 million residents and at an average annual rate of 1.2%. For the same period, the County and City experienced a population growth of 616,830 and 45,760 residents, respectively, and an average annual rate of 2.17% and 1.4%, respectively, slightly more than the five-county region average. As shown in Table 4.2.7-1, the most rapid growth took place in Riverside and San Bernardino Counties. The largest growth occurred in Riverside County with San Bernardino County ranking second.

Table 4.2.7-1. Population for Counties and Cities in the Region (1990–2010)

	1990 Census	2000 Census	2010 Census	Population Change (1990–2010)	Percent	Average Annual Percent
Southern California (five-county region)	14,531,529	16,373,645	17,877,006	3,345,477	23.02	1.15
Counties						
Los Angeles	8,863,052	9,519,338	9,818,605	955,553	10.78	0.54
Orange	2,410,668	2,846,289	3,010,232	599,564	24.87	1.24
Riverside	1,170,413	1,545,387	2,189,641	1,019,228	87.08	4.35
San Bernardino	1,418,380	1,709,434	2,035,210	616,830	43.49	2.17
Ventura	669,016	753,197	823,318	154,302	23.06	1.15
Incorporated Cities in San Bernardino County						
San Bernardino	164,164	185,401	209,924	45,760	27.87	1.39
Fontana	87,535	128,929	196,069	108,534	123.99	6.20
Rancho Cucamonga	101,409	127,743	165,269	63,860	62.97	3.15
Ontario	133,179	158,007	163,924	30,745	23.09	1.15
Victorville	40,674	64,029	115,903	75,229	184.96	9.25
Rialto	72,388	91,873	99,171	26,783	37.00	1.85
Hesperia	50,418	62,582	90,173	39,755	78.85	3.94
Chino	59,682	67,168	77,983	18,301	30.66	1.53
Chino Hills	27,608	66,787	74,799	47,191	170.93	8.55
Upland	63,374	68,393	73,732	10,358	16.34	0.82

Source: U.S. Census Bureau 1990, 2000, 2011.

Projected Population

Population projections prepared by SCAG forecast a compound rate of growth over the 30-year period between 2005 and 2035 of approximately 1.1% annually for southern California five-county region. The overall region (excluding Imperial County) is projected to add almost

5.8 million residents over this period. The highest growth rates are projected for Riverside County (an increase of 1,665,348 [86.2%]) and San Bernardino County (an increase of 1,162,483 [58.97%]). The population of the City of San Bernardino is projected to increase by 64,366 at an annual average rate of approximately 1.1% (see Table 4.2.7-2).

Table 4.2.7-2. Population Projections for Counties and Cities in the Region (2005–2035)

	2005	2010	2015	2020	2025	2030	2035	Numeric	Percent	Average Annual Percent
Southern California (five-county region)	17,982,655	19,216,079	20,218,791	21,192,904	22,097,476	22,943,062	23,736,844	5,754,189	32.00	1.07
Counties										
Los Angeles	10,206,001	10,615,730	10,971,602	11,329,829	11,678,552	12,015,889	12,338,620	2,132,619	20.90	0.70
Orange	3,059,952	3,314,948	3,451,755	3,533,935	3,586,283	3,629,539	3,653,990	594,038	19.41	0.65
Riverside	1,931,332	2,242,745	2,509,330	2,809,003	3,089,999	3,343,777	3,596,680	1,665,348	86.23	2.87
San Bernardino	1,971,318	2,182,049	2,385,748	2,582,765	2,773,945	2,957,753	3,133,801	1,162,483	58.97	1.97
Ventura	814,052	860,607	900,356	937,372	968,697	996,104	1,013,753	199,701	24.53	0.82
City										
San Bernardino	201,149	213,318	224,924	235,616	245,989	255,959	265,515	64,366	32.00%	1.07
Fontana	162,935	174,719	185,804	195,866	205,630	215,018	224,011	61,076	37.48%	1.25
Rancho Cucamonga	166,348	171,980	172,405	172,409	172,414	172,417	172,420	6,072	3.65%	0.12
Ontario	170,951	187,060	213,839	246,304	277,799	308,088	337,095	166,144	97.19%	3.24
Victorville	90,913	106,649	122,205	138,023	153,376	168,134	182,275	91,362	100.49%	3.35
Rialto	99,334	107,849	115,846	123,080	130,100	136,845	143,308	43,974	44.27%	1.48
Hesperia	78,284	102,895	126,456	148,751	170,384	191,186	211,108	132,824	169.67%	5.66
Chino	77,146	81,998	87,313	93,823	100,142	106,220	112,038	34,892	45.23%	1.51
Chino Hills	77,989	79,298	80,382	81,039	91,678	82,292	82,880	4,891	6.27%	0.21
Upland	73,989	75,951	77,666	78,927	80,146	81,322	82,444	8,455	11.43%	0.38

Source: SCAG 2011a.

Economics

Employment

Between 1990 and 2010, employment in southern California increased at an average annual rate of 0.41%, with more than 500,000 jobs added (see Table 4.2.7-3). The manner in which this growth occurred varied geographically with the Inland Empire experiencing the largest employment growth. The greatest increase in employment over the 20-year period occurred in Riverside County (280,800 jobs), which also saw the largest total percentage increase in employment (56.35% [annual average rate of 2.82%]). San Bernardino County experienced the next greatest increase in employment (133,800 jobs), a total increase of 22.31% (California Employment Development Department 2011).

Table 4.2.7-3. Total Employment by County in the Region (1990–2010)

Year	Los Angeles	Orange	Riverside	San Bernardino	Ventura	SCAG Region
1990	4,259,700	1,306,200	498,300	599,600	345,600	7,009,400
1991	4,101,000	1,247,900	493,800	590,500	338,400	6,771,600
1992	4,006,700	1,241,500	507,600	604,100	339,400	6,699,300
1993	3,908,500	1,236,800	511,600	608,900	341,400	6,607,200
1994	3,898,600	1,257,500	534,000	612,900	350,400	6,653,400
1995	3,938,600	1,245,400	549,900	622,500	351,100	6,707,500
1996	3,967,800	1,280,400	563,100	634,300	349,600	6,795,200
1997	4,117,000	1,328,200	589,600	658,600	353,400	7,046,800
1998	4,246,100	1,385,300	615,900	680,100	364,500	7,291,900
1999	4,309,400	1,422,100	653,600	712,600	375,600	7,473,300
2000	4,424,900	1,429,100	644,200	704,000	374,900	7,577,100
2001	4,483,400	1,453,400	672,000	724,500	380,000	7,713,300
2002	4,447,100	1,456,500	701,800	743,200	384,600	7,733,200
2003	4,427,100	1,482,600	730,700	757,500	388,800	7,786,700
2004	4,454,100	1,508,000	771,600	784,400	391,600	7,909,700
2005	4,516,000	1,529,000	808,100	808,400	396,800	8,058,300
2006	4,578,700	1,547,300	839,000	820,700	402,500	8,188,200
2007	4,626,900	1,547,000	849,400	815,600	403,300	8,242,200
2008	4,563,200	1,532,300	834,700	794,200	402,500	8,126,900
2009	4,336,600	1,446,900	793,600	747,100	387,000	7,711,200
2010	4,262,300	1,428,900	779,100	733,400	384,100	7,587,800
Change 1990–2010						
Number	2,600	122,700	280,800	133,800	38,500	578,400
Percent	0.06	9.39	56.35	22.31	11.14	8.25
Average Annual Percent	0.00	0.47	2.82	1.12	0.56	0.41

Source: California Employment Development Department 2011.

Based on SCAG projections, employment in southern California will continue to expand through 2035, especially in Riverside and San Bernardino Counties (see Table 4.2.7-4). These two counties are anticipated to experience much higher growth rates than Los Angeles, Orange, and Ventura Counties.

Year-over-year, the rise and fall of unemployment rates in southern California generally follow a pattern similar to those experienced throughout California. Unemployment rose steeply in the early 1990s, which was associated with a reduction in military spending (especially in the aerospace industry) at the end of the Cold War. Unemployment rates peaked in 1993 and then fell gradually throughout the rest of the decade as the state economy improved. The rate of unemployment in southern California rose and fell moderately for several years before the sharp increases that began in 2009 (see Table 4.2.7-5). From 2003 to 2009, unemployment rates experienced in San Bernardino County have exceeded California's cumulative unemployment rate, and San Bernardino County is only second to Riverside County in percent increase.

Overall, the total number of jobs in San Bernardino County has increased over the 20-year period between 1990 and 2010 (see Table 4.2.7-6). Growth in the professional and business, education and health, and trade, transportation, and utilities sectors has played a major part in overall growth in the County. However, many of the job losses over this same period have been in well-paying sectors, such as information technology, or within federal agencies (e.g., Department of Defense). Although a significant number of well-paying jobs were added to the regional economy over the same time period (e.g., wholesale trade, transportation and warehousing, local government, and health care jobs), the majority of new jobs were lower paying jobs in the service sector (e.g., office administration, food services) or in the educational sectors of local government.

Between 1990 and 2010, employment in the construction industry registered a decrease of 4,200 jobs (almost 15%). This represents a decrease of 0.7% annually. In 2010, the construction industry represented approximately 4% of the total employment in San Bernardino County (see Table 4.2.7-6).

Income

The median household income in San Bernardino County in 2009, as reported by the U.S. Census Bureau, was just over $52,000, the lowest amount for the southern California five-county region. Riverside and Los Angeles Counties had very similar values, while the values for Orange and Ventura Counties were $71,735 and $71,246, respectively (see Table 4.2.7-7).

Business and Tax Revenue

According to data compiled by the U.S. Census Bureau in the 2007 Economic Census, most businesses, sales, and employees in the five-county region were distributed among wholesale and retail trade, health care and social assistance, accommodation and food service, professional services, real estate, and other service industries (see Table 4.2.7-8). Businesses in the County and City of San Bernardino were similarly distributed (see Table 4.2.7-8).

The California Board of Equalization report on taxable sales for the second quarter of 2010 indicates that total taxable sales for the region were $55,320,055 (California Board of Equalization 2011). For San Bernardino County, total taxable sales were $6,140,566 for the second quarter of 2010, while in the City of San Bernardino, total taxable sales were $516,072 for the second quarter of 2010.

Table 4.2.7-4. Employment Projections by County in the Region (2005–2035)

								Change (2005–2035)		
Area	2005	2010	2015	2020	2025	2030	2035	Numeric	Percent	Average Annual Percent
SCAG Region	7,712,876	8,276,240	8,718,452	9,076,942	9,429,680	9,787,437	10,154,571	2,441,695	31.66	1.06
Counties										
Los Angeles	4,397,025	4,552,398	4,675,875	4,754,731	4,847,436	4,946,420	5,041,172	644,147	14.65	0.49
Orange	1,615,936	1,755,167	1,837,771	1,897, 352	1,933,058	1,960,633	1,981,901	365,965	22.65	0.75
Riverside	650,319	784,998	911,381	1,042,145	1,168,769	1,295,487	1,413,522	763,203	117.36	3.91
San Bernardino	704,239	810,233	897,489	965,778	1,045,480	1,134,960	1,254,749	550,510	78.17	2.61
Ventura	345,357	373,444	395,936	416,936	434,937	449,937	463,227	117,870	34.13	1.14

Source: SCAG 2008.

Table 4.2.7-5. Unemployment Rate in Region (%) by County in California (1990–2010)

	County					
Year	Los Angeles	Orange	Riverside	San Bernardino	Ventura	California
1990	5.80	3.50	7.20	5.60	5.80	5.80
1991	8.00	5.30	10.10	8.30	7.60	7.80
1992	9.90	6.70	11.90	9.70	9.00	9.40
1993	10.00	6.90	12.20	10.00	9.10	9.50
1994	9.30	5.70	10.60	8.70	7.90	8.60
1995	8.00	5.10	9.50	7.90	7.40	7.90
1996	8.30	4.20	8.40	7.40	7.30	7.30
1997	6.90	3.30	7.60	6.50	6.70	6.40
1998	6.60	2.90	6.70	5.70	5.60	6.00
1999	5.90	2.70	5.50	4.90	4.80	5.30
2000	5.40	3.50	5.40	4.80	4.50	4.90
2001	5.70	4.00	5.50	5.10	4.80	5.40
2002	6.80	5.00	6.50	6.00	5.80	6.70
2003	7.00	4.80	6.50	6.30	5.80	6.80
2004	6.50	4.30	6.00	5.80	5.40	6.20
2005	5.40	3.80	5.40	5.20	4.80	5.40
2006	4.80	3.40	5.00	4.80	4.30	4.90
2007	5.10	3.90	6.00	5.60	4.90	5.30
2008	7.50	5.30	8.50	7.90	6.20	7.20
2009	11.50	8.90	13.40	13.00	9.90	11.30
2010	12.60	9.60	14.70	14.30	10.80	12.40

Source: California Employment Development Department 2011.

Table 4.2.7-6. Total Employment for San Bernardino County (1990–2010)

						Change (1990–2010)		
Industry Group	1990	1995	2000	2005	2010	Number	Percent	Average Annual Percent
Total, All Industries	**413,500**	**446,400**	**543,600**	**647,100**	**589,400**	**175,900**	**42.5**	**2.1**
Total Farm	5,000	4,500	4,200	3,300	2,100	-2,900	-58.0	-2.9
Total Nonfarm	408,500	441,900	539,400	643,800	587,300	178,800	43.8	2.2
Natural Resources and Mining	700	900	700	800	600	-100	-14.3	-0.7
Construction	28,100	20,500	31,500	44,900	23,900	-4,200	-14.9	-0.7
Manufacturing	45,100	52,100	67,900	67,700	46,700	1,600	3.5	0.2
Trade, Transportation, and Utilities	90,400	106,700	127,800	159,700	153,100	62,700	69.4	3.5
Information	7,200	6,800	8,500	7,100	5,700	-1,500	-20.8	-1.0
Financial Activities	18,400	17,700	19,600	26,700	21,700	3,300	17.9	0.9
Professional and Business Services	34,500	39,300	54,600	76,100	70,900	36,400	105.5	5.3
Educational and Health Services	43,300	51,400	57,800	66,600	75,200	31,900	73.7	3.7
Leisure and Hospitality	36,500	37,100	45,100	54,700	53,500	17,000	46.6	2.3
Other Services	13,400	14,700	17,900	21,900	19,500	6,100	45.5	2.3
Government	91,000	94,800	108,100	117,700	116,500	25,500	28.0	1.4
Federal Government	15,100	12,400	11,400	12,100	15,000	-100	-0.7	0.0
State and Local Government	9,700	10,300	11,800	12,800	13,300	3,600	37.1	1.9
State Government	66,300	72,100	84,800	92,700	88,200	21,900	33.0	1.7
Local Government	413,500	446,400	543,600	647,100	589,400	175,900	42.5	2.1

Source: California Employment Development Department 2011.

Table 4.2.7-7. Household and Per Capita Income by County (2009)

	County				
	Los Angeles	Orange	Riverside	San Bernardino	Ventura
Median household income ($) in 2009[1]	54,375	71,735	55,151	52,137	71,246
Per capita income ($) in 2009[1]	26,983	33,901	24,642	21,792	32,063

Sources:
[1] U.S. Census Bureau 2011c.

Table 4.2.7-8. Business Establishments for Region, County, and City of San Bernardino

Industry	Number of Establishments	Sales, Shipments, Receipts, or Revenue ($1,000)	Annual Payroll ($1,000)	Number of Employees
SCAG Five-County Region				
Manufacturing[r]	25,131	243,775,552	35,659,953	784,463
Retail Trade	53,274	221,081,813	20,504,323	792,591
Information	12,082	N	21,447,127	283,059
Real Estate	24,662	42,851,563	7,218,147	160,999
Professional/Scientific/Technical Services	53,263	93,668,799	35,245,098	637,995
Administrative/Support/Waste Management/Remediation Services	20,628	30,813,329	23,151,665	603,061
Education Services	3,795	54,329,915	19,951,927	459,967
Health Care and Social Assistance	47,237	87,612,892	32,199,255	379,792
Arts, Entertainment, and Recreation	13,655	23,124,411	7,710,389	156,504
Accommodation and Food Services	34,336	37,554,129	10,380,655	640,012
Other Services (except Public Administration)	27,206	22,633,759	5,383,522	192,020
Total	*315,269*	*857,446,162*	*218,852,061*	*5,090,463*
San Bernardino County				
Manufacturing[r]	2,057	18,907,342	2,540,174	65,702
Retail Trade	5,018	21,717,402	2,018,766	84,312
Information	426	N	561,120	10,529
Real Estate	1,771	2,310,066	354,475	9,935

Industry	Number of Establishments	Sales, Shipments, Receipts, or Revenue ($1,000)	Annual Payroll ($1,000)	Number of Employees
Professional/Scientific/ Technical Services	2,496	2,167,530	767,417	17,607
Administrative/Support/Waste Management/Remediation Services	1,668	2,881,670	1,357,257	60,012
Education Services	243	259,989	96,715	3,495
Health Care and Social Assistance	3,446	8,350,585	3,149,632	71,731
Arts, Entertainment, and Recreation	345	1,212,560	210,005	10,630
Accommodation and Food Services	3,112	2,754,662	745,959	54,839
Other Services (except Public Administration)	2,336	1,592,295	467,000	16,862
Total	*22,918*	*62,154,101*	*12,268,520*	*405,654*
City of San Bernardino				
Manufacturing[r]	131	836,982	115,082	3,008
Retail Trade[r]	592	2,845,057	268,535	10,661
Information	44	N	57,848	1,010
Real Estate	143	112,919	20,088	704
Professional/Scientific/Technical Services	266	338,784	133,627	2,494
Administrative/Support/Waste Management/Remediation Service	154	418,280	237,508	7,985
Educational Services	21	1,367,528	562,209	11,887
Health Care and Social Assistance	448	1,367,528	562,209	673
Arts, Entertainment, and Recreation	31	40,685	11,318	673
Accommodation and Food Services	343	330,476	87,053	6,514
Other Services	254	171,304	46,389	2,124
Total	*2,427*	*7,829,543*	*2,101,866*	*47,733*

Notes:
[r] = Revised; N = Not Available/Comparable.
Source: U.S. Census Bureau 2007, Economic Census.

Housing

Aspects of housing described below include construction trends, characteristics of the existing housing stock, and trends in housing prices.

Housing Construction

Housing construction typically exhibits a cyclical pattern in response to local, regional, and national economic conditions. In the case of southern California, residential construction experienced periods of expansion between 1967 and 1972, 1975 and 1977, 1982 and 1986, and 1995 and 2006, with periods of decline in between. The decline in activity from 1986 through 1995 was in response to the economic dislocation associated with reductions in military defense spending and base closures. The number of units authorized for construction fell to about 5,000 in 1993 from a level of about 20,000 in 1988. By 2004, the number of units authorized for construction had climbed to more than 18,000 but again started to decline, reaching about 14,000 by 2006. Because of the economic housing decline, the number of new housing units in San Bernardino County dropped to 1,858 in 2010 (SCAG 2011b).

Between 2000 and 2010, the housing market experienced new construction at all-time highs and lows. During this period, permits were issued for 623,091 new residential units in southern California, with the majority of these units constructed in Riverside County (33% of the regional total), followed by Los Angeles County (32% of the regional total) and San Bernardino (17% of the regional total).

The contribution made to new housing constructed in southern California by each of the individual counties has changed noticeably over time. Since 1967, Los Angeles County contributed more than 50% of all new residential construction in southern California. Riverside County's share of the overall growth increased from about 5% in 1967 to 33% in 2010; San Bernardino County's contribution rose from approximately 7% to 17% over this same period.

Housing Characteristics in the County and City of San Bernardino

As of 2009, San Bernardino County had a total of 689,077 housing units. The proportion of owner-occupied housing units in the County in 2010 was almost 64% (36% was renter-occupied housing). For the City of San Bernardino, the corresponding shares were equal (50% each).

Housing Price

Between 1998 and 2008, the median home price for existing homes in San Bernardino County changed by an annual rate of 21.6% and the median home price for new homes changed by an annual rate of 9.2% (see Table 4.2.7-9). However, housing prices within the southern California region experienced new lows with the largest decrease occurring between 2007 and 2008 within this time period. San Bernardino County experienced the lowest median housing prices on average compared to other counties in the region.

Table 4.2.7-10 shows the trends for median home prices in the southern California five-county region. The slump in home prices, beginning in the middle of the last decade to 2009, is reflective of the housing market crash experienced throughout the country. Median prices in the region have seen all-time lows in the mid 2000s. The greatest decline took place in San Bernardino County where median home values fell by 37.9% between 2008 and 2009. From 2009 to 2010, home prices registered their first increase in 3 years (a 4.0% increase). In 2010, the median price for a home in San Bernardino County was estimated to be $155,000.

Table 4.2.7-9. Median Home Price (Existing and New Homes) by County in the Region

	County				
Year	Los Angeles	Orange	Riverside	San Bernardino	Ventura
Existing Homes					
1998	168,119	215,731	112,653	97,040	195,600
1999	179,556	228,611	122,473	104,299	209,005
2000	195,134	254,272	138,330	114,065	235,542
2001	216,630	286,680	159,949	130,182	258,594
2002	256,490	339,924	184,603	148,260	309,695
2003	313,469	407,729	230,903	179,316	370,850
2004	391,208	511,132	306,789	236,699	478,281
2005	471,015	583,411	373,549	316,697	556,920
2006	515,717	616,680	401,802	356,670	585,017
2007	537,011	616,424	380,375	345,442	559,687
2008	393,235	454,388	244,221	209,935	402,744
Change (1998–2008)					
Percent	233.90	210.63	216.79	216.34	205.90
Average Annual Percent	23.39	21.06	21.68	21.63	20.59
New Homes					
1998	235,950	298,481	170,380	168,044	293,543
1999	261,862	328,734	194,870	183,042	336,735
2000	283,039	393,883	225,728	205,042	354,752
2001	303,094	447,835	240,306	217,961	375,972
2002	325,262	495,872	261,350	236,718	437,222
2003	393,247	545,765	291,565	263,673	532,349
2004	449,728	649,253	355,761	291,129	651,229
2005	449,374	705,917	411,707	364,224	696,102
2006	447,286	694,797	439,692	395,707	662,290
2007	503,757	600,074	410,557	383,482	612,913
2008	435,033	502,785	332,918	321,952	433,312
Change (1998–2008)					
Percent	84.38	68.45	95.4	91.6	47.61
Average Annual Percent	8.4	6.8	9.5	9.2	4.7

Source: LAEDC 2010.

Table 4.2.7-10. Overall Home Price by County (2000–2010) in Thousands

	County				
Year	Los Angeles	Orange	Riverside	San Bernardino	Ventura
2000	228	289	163	128	262
2001	247	322	186	145	286
2002	292	376	212	165	333
2003	347	442	252	202	394
2004	430	563	330	256	502
2005	511	645	406	336	592
2006	558	689	438	374	613
2007	602	681	413	365	583
2008	459	506	271	240	425
2009	320	415	189	149	356
2010	333	433	200	155	370

Source: SCAG 2011b, 2011d–g.

4.2.7.3 Environmental Consequences

Changes to the existing economic and fiscal condition

Transit projects can result in economic impacts. In such cases, a detailed economic impact analysis should be included in environmental documentation if the projects are large, affecting a large number of persons and businesses to be displaced. However, a detailed economic impact analysis does not appear warranted for this Project, based on the following:

- A minimal amount of displacements and relocations would be required for Project implementation. The Project would affect approximately 69 properties; however, only seven families residing within three residential properties and four businesses would require relocation.
- The Project would involve a fairly narrow area within an existing rail corridor.
- The proposed Project is supported through existing funding sources specifically set aside for transit projects to improve quality of life and reduce traffic delays and vehicle miles travelled on nearby city roadways.
- The fare structure would be consistent with existing SCRRA (Metrolink) rates.
- The Project would be consistent with the land use plans involving improved transit and land use opportunities (FTIP, RTP, SCAG, City of San Bernardino General Plan, etc.).

Therefore, a more detailed economic impact assessment would not be required. In describing and evaluating the economic effects a project could have on the regional economy, a number of methods can be used, such as quantifying net changes in regional employment, output, wages, tax revenue, and value added following project implementation. Attention is focused in this analysis on changes to employment, income, and tax revenues as a result of the project and design options and their associated potential to contribute positively or negatively to existing urban blight conditions.

Project implementation would generate several economic effects both during construction and once operational. Initially, the Project and design options would create a temporary increase in employment and subsequent housing demand in the City and San Bernardino County from construction jobs. Over the longer term, the Project and design options would be expected to support rail and bus transit use by providing these opportunities at a centralized location within downtown San Bernardino. These project elements are discussed in more detail below.

No-Build/No-Project Alternative

Construction Impacts

Under the No-Build/No-Project Alternative, no temporary construction activities or impacts would occur. No construction jobs related to the proposed Project would be generated under this alternative.

Operational Impacts

Population, Housing, and Employment Growth

Under the No-Build/No-Project Alternative, no project-related population or housing changes would occur, and no adverse effect would result. Additionally, this alternative would not result in the creation of jobs.

Local Business, Income, and Tax Revenues

Under the No-Build/No-Project Alternative, passenger rail service would not be expanded eastward to downtown San Bernardino, and no new bus facility would be provided, which would reduce the potential increase in income for the regional economy expected with implementation of the proposed Project due to increased access to alternative forms of transportation. No adverse effect would occur.

Property Value Trends

No changes in property values would occur as a result of the No-Build/No-Project Alternative, and no adverse effect would result.

Urban Blight

Under the No-Build/No-Project Alternative, no changes relative to urban blight would occur. In this context, existing blighted conditions along the rail corridor would persist. Although the No-Build/No-Project Alternative would not be responsible for creating these conditions, this alternative would not provide transit services that could help to alleviate these conditions. Although these are considered adverse socioeconomic effects, they are not considered significant in this context because they represent existing conditions.

Proposed Project

Construction Impacts

The primary catalyst for changes to socioeconomic resources is a change in economic activity, which includes industrial output (the value of goods and services), employment, and income. Changes in employment have the potential to affect population, housing, and environmental quality. This is especially the case when the additional job opportunities created through implementation of a project (during construction) cannot be satisfied by the local workforce.

Such a situation can trigger a movement of workers to the area to fill the new jobs. Such an influx may be temporary, as in the case of short-lived construction activity, or permanent, as in the case where workers move to an area to fill long-term jobs. The movement of workers (and sometimes their accompanying family members) into an area depends mainly on the number of job opportunities made available by a project and the number and skilled mix of workers available in the local labor force.

Project construction is anticipated to occur in three phases over an 18- to 24-month period, beginning no sooner than late 2012. The Project is expected to be fully operational by 2014. The progression of construction activities would generally occur from west (Mt. Vernon Avenue) to east (E Street). It is estimated that the proposed Project would generate up to 100 direct construction jobs during the peak construction period (Phase 2). The number of construction workers employed and working on site would vary over the course of the construction period. Direct construction jobs could result in 240 indirect jobs (based the U.S. Bureau of Economic Analysis figure of 2.4 jobs for every construction job). These secondary increases in employment would be related to purchases from material supply firms and their suppliers and household expenditures by workers, who are referred to, when combined, as “indirect employment.”

For construction projects of this magnitude and duration, the workforce is generally composed of workers that would commute to job sites rather than relocate their households to any significant degree. Generally speaking, many construction workers are highly specialized and move among job sites as dictated by the need for their skills. Also, because of the highly specialized nature of most construction projects, including rail construction, workers are likely to be employed on the job site only for as long as their skills are needed to complete a particular phase of the construction process.

Effects on regional employment associated with construction activity can be assessed by analyzing existing regional employment and the effects of the proposed Project. San Bernardino County has a large pool of construction labor from which to draw (23,900 people were employed in the construction industry in 2010) (see Table 4.2.7-6). Much of the indirect workforce would also likely come from within San Bernardino and Riverside counties. The proposed Project, therefore, is not anticipated to result in either in-migration or a relocation of employees to satisfy the need for temporary construction-related employment. Implementation of the proposed Project would result in direct and indirect job growth. No significant influx of employees into the local communities would occur, and no adverse effects are anticipated.

Operational Impacts

Direct Effects

Population and Employment Growth

The proposed Project would not include the development of new housing that would directly induce population growth. Although the proposed transportation improvements could indirectly lead to an increase in area population, no major shifts in population are expected as a direct result of the proposed Project.

The proposed Project could directly generate jobs when it becomes fully operational in 2014. However, the contribution of these jobs to the overall workforce of approximately 733,400 and a population of approximately 2 million in the region would be negligible. The proposed Project would therefore not be associated with substantial population growth and would not result in population displacement. Thus, substantial adverse effects on population are not anticipated.

Housing

The Project does not propose the construction of housing; however, some residential properties would be affected by the Project. Specifically, approximately 69 full and partial acquisitions of residential and business properties would take place. Three residential properties, identified as partial acquisitions, would require tenant relocation because the structures on the properties would be permanently removed. However, in the context of the overall housing stock in the County totaling 689,077 units (in 2009), the loss of these residential properties constitutes a very small percentage of the housing stock and is not expected to have a substantial effect on housing availability. Because of the large workforce in the region, the job contributions of the proposed Project would not result in substantial adverse effects related to population in-migration and relocation that affect housing. Therefore, the proposed Project would result in negligible changes in demand for additional housing and no substantial adverse effects would result.

Local Business, Income, and Tax Revenues

Active businesses that would be directly affected by the proposed Project include the Allgood Shower Door Corporation, within a property along 3rd Street near J Street; an industrial use within a triangular property at I Street; the Bekins building at E Street south of the proposed bus facility, and the JG Wholesale Product building at G Street north of the railway. Full acquisition of these properties would be required as well as relocation of the four businesses. Additional business/office/commercial uses would be affected by partial property acquisitions. Although a few businesses would be relocated, industry and jobs in the area as a whole would not be adversely affected by the proposed Project.

Indirect Effects

Local Business, Income, and Tax Revenues

On a regional level, the proposed Project would improve passenger rail and bus service in San Bernardino County and the region, which could have a positive effect on the regional economy. No adverse effects would result.

Property Value Trends

Since all of the properties affected by construction and implementation of the Project are located adjacent to the existing railway, a reduction in property values due the continuation of rail uses is not expected to occur. The Redlands branch line extends 10 miles, beginning from the Depot in San Bernardino to the University of Redlands. The Project Study Area includes the westernmost first mile of this existing rail line. Although proximity of the rail right-of-way may have led to lower residential property values historically in adjacent communities compared with areas farther away, residential property values near the rail corridor reveal similar economic conditions to the more regional area in recent years and do not exhibit a substantial amount of depreciated or stagnant numbers. However, the recent housing market slump has led to decreased property values throughout California, a trend mirrored in the rail corridor and nearby communities. It is not anticipated that the proposed Project would change residential property trends in areas immediately adjacent to the rail corridor; however, as part of the larger Santa Fe Depot Strategic Policy Area and the Downtown Strategic Policy Area projects, property values are expected to increase over time, especially with the City's planned economic development activities, as discussed in Section 4.2.1, "Land Use and Land Use Planning." Therefore, no adverse effects are anticipated.

The proposed Project would increase the number of direct, indirect, and induced jobs, as well as income, in the region and result in other economic benefits. Although the economic effects are beneficial, the increase in jobs attributable to the proposed Project would be relatively small compared with current and projected future employment in the larger economic region. Therefore, the proposed Project would not likely contribute substantially to demand for housing and no substantial adverse effect on property values would result.

Urban Blight

Proposed project components would be designed and built to comply with existing municipal building codes and standards. The proposed Project would not result in building code violations, dilapidation or deterioration of the area, defective design or physical construction, faulty or inadequate utilities, or other similar negative conditions. Facilities would be sized to accommodate current standards, market conditions, and existing growth. Additionally, with the proposed provision of transit services from a new centralized location, the Project could provide new incentives for businesses to relocate to the downtown area. These opportunities could foster future economic development in the downtown area, which could be beneficial in the context of existing blighted conditions, which are noted through the rail corridor. These effects would not be considered adverse and may entail desirable benefits.

Design Options

Construction Impacts

Under each of the design options, temporary construction conditions would be similar to those anticipated of the proposed Project. Such conditions are not expected to result in adverse socioeconomic effects.

Operational Impacts

Under Pedestrian Overpass Design Options 1A and 1B and Pedestrian Underpass Alternative Design Option 2, operational conditions would be similar to those expected of the proposed Project. Such conditions are not expected to result in adverse socioeconomic effects.

Under 3rd Street Open Design Option 3, six fewer properties would be acquired, relocations would not be required at three residential properties, and seven family relocations discussed under the proposed Project would not occur. Business and other personal property relocations under 3rd Street Open Design Option 3 would be the same as those described under the proposed Project. Otherwise, operational conditions would be similar to those of the proposed Project and would not be expected to result in adverse socioeconomic effects.

4.2.7.4 Avoidance, Minimization, and/or Mitigation Measures

There would be no substantial adverse effects under the proposed Project or the design options. No mitigation measures are required.

4.2.7.5 Cumulative Impacts

The proposed Project or design options, in combination with other projects in the area, would not contribute to an adverse cumulative effect on socioeconomics because all effects would be specific to the surrounding neighborhood. Therefore, effects of the proposed Project or design options related to socioeconomics are not considered substantially adverse and could entail desirable indirect economic benefits, including the creation of new jobs and improved access to employment and commercial centers. Any potential effects related to socioeconomics resulting

from other projects in the area would be addressed on a project-specific basis. In this context, implementation of the proposed Project or design options would not contribute to a substantial cumulative effect on socioeconomics, and therefore, no substantial adverse effects would occur.

The Project or design options propose to improve the existing infrastructure of an existing railway and accommodate existing demand by extending commuter rail service 1 mile to the east. The Project also proposes a centralized bus facility for existing fixed-route and planned rapid bus transit service. However, no additional Metrolink or Omnitrans routes are proposed, and no new services would be created that would directly induce growth. Although the proposed Project would provide centralized transit service opportunities that could indirectly encourage changes in land use in the downtown area, these changes are remote and speculative and contingent upon actions by jurisdictions other than SANBAG and FTA. Additionally, these changes could entail desirable benefits in relation to existing blighted conditions within portions of the downtown area and potential business development opportunities. Based on these considerations, no substantial cumulative adverse effects related to socioeconomics would occur.

4.2.8 Safety and Security

This section evaluates the effects of the proposed Project, No-Build/No-Project Alternative, and design options on safety and security. The safety issues include station accidents, boarding and disembarking accidents, and right-of-way accidents, as well as visibility obstructions for operators, motorists, and pedestrians. Another aspect of safety is security—particularly as it pertains to station location, design, layout, and parking—which must be evaluated to determine if the safety of transit passengers or surrounding communities is compromised and made more susceptible to criminal activity.

4.2.8.1 Regulatory Environment

NEPA of 1969, as amended, established that the federal government use all practicable means to ensure that all Americans have safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 U.S.C. 4331(b)(2)). The FHWA in its implementation of NEPA (23 U.S.C. 109(h)) directs that final decisions regarding projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts, including whether a project or a design option would result in unacceptable safety or operational problems.

Both federal and state regulatory requirements dictate the safety aspects of the various facilities and systems. Federal requirements include those published by FRA and FTA; state requirements include those contained in state laws administered by CPUC. SCRRA has developed safety criteria and board-adopted policies that will be used in designing project elements. Industry guidelines will also be used in developing the system design features. Local fire and police jurisdictions, as well as general plan policies and ordinances, present additional regulatory frameworks related to transit safety and security.

Transportation Security Administration

The Transportation Security Administration (TSA) was created in the wake of the September 11, 2001, terrorist attacks to strengthen the security of the nation's transportation systems while ensuring the freedom of movement for people and commerce (Department of Homeland Security 2011). TSA employs a risk-based strategy to secure U.S. transportation systems, working closely with stakeholders in aviation, rail, transit, highway, and pipeline sectors as well as partners in the law enforcement and intelligence community. In March 2003, TSA transferred from the Department of Transportation to the Department of Homeland Security.

U.S. Department of Homeland Security

The Homeland Security Act of 2002 was signed into law on November 25, 2002 (Pub. L. 107-296), in response to the September 11, 2001, terrorist attacks (Department of Homeland Security 2011). The act, which brought together approximately 22 separate federal agencies to establish the Department of Homeland Security, sets forth the primary missions of the department. The act has been amended more than 30 times since its original passage. The department's mission is to ensure a homeland that is safe, secure, and resilient against terrorism and other hazards.

Federal Transit Administration

The FTA is an agency within the DOT that provides financial and technical assistance to local public transit systems. As authorized by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users of 2005 (SAFETEA-LU), the FTA provides stewardship of

combined formula and discretionary programs totaling more than $10 billion to support a variety of locally planned, constructed, and operated public transportation systems throughout the United States. Transportation systems typically include buses, subways, light rail, commuter rail, streetcars, monorail, passenger ferry boats, inclined railways, or people movers. The FTA is one of 11 operating administrations within the DOT. The FTA functions through a Washington, D.C., headquarters office and ten regional offices that assist transit agencies in all states, the District of Columbia, and the territories.

The FTA assembled the Safety and Security Program to focus on transit safety and security. The goal of FTA's Safety and Security Program is to achieve the highest practical level of safety and security for all modes of transit. In order to protect passengers, employees, revenues, and property, all transit systems are encouraged to develop and implement a proactive system safety program plan. FTA supports these efforts by developing guidelines and best practices, providing training, and performing system safety analyses and reviews. Two of the most prominent resources are provided below:

- **Transit Safety Management and Performance Measurement, Volume 1: Guidebook (FTA 2011).** This guidebook was prepared with the objective of providing resource information for transit agencies and the FTA regarding the development and implementation of Safety Management Systems and Safety Performance Measurement Systems. Safety Management Systems offer the most promising means of preventing public transportation accidents by integrating safety into all aspects of a transit system's activities, from planning to design to construction to operations to maintenance.
- **Safety and Security Management Plan (FTA 2007).** The FTA issued the Safety and Security Management Plan in 2007. A Safety and Security Management Plan is a required document that must be prepared by applicants and recipients of FTA funds for major capital projects. It is part of the Project Management Plan and is written to describe how the recipient will address safety and security in a major capital project.

Federal Railroad Administration

FRA, under the umbrella of the DOT, was created by the Department of Transportation Act of 1966 (49 USC 103, Section 3[e][1]). FRA was created primarily to promulgate and enforce rail safety regulations, administer railroad assistance programs, and conduct research in support of improved railroad safety and national rail transportation policy.

The FRA Office of Safety promotes and regulates safety throughout the nation's railroad industry. FRA inspectors specialize in five safety disciplines and numerous grade-crossing and trespass-prevention initiatives (e.g., track, signal, and train control; motive power and equipment; operating practices; hazardous materials; and highway rail-crossing safety). The FRA trains and certifies state safety inspectors to enforce federal rail safety regulations. Central to the success of the rail safety effort is the ability to understand the nature of rail-related accidents and analyze trends in railroad safety. To do this, the Office of Safety collects rail accident/incident data from the railroads and converts this information into meaningful statistical tables, charts, and reports.

Public Transportation Safety Act of 2010

The Public Transportation Safety Act of 2010 implemented a comprehensive approach to transportation safety by establishing a national public transit safety plan, improving state and federal oversight, requiring local public transportation agency safety plans, empowering DOT with new enforcement authority, and implementing a system to monitor the safety and condition

of the nation's transit infrastructure and equipment. Details regarding these strategies are provided below.

- **Improve Safety by Establishing a National Public Transportation Safety Plan.** The act establishes a national public transportation safety plan to improve the safety of all public transportation systems that receive federal funding.
- **Focus on Safety by Requiring Public Transportation Agencies to Establish Comprehensive Safety Plans.** A focus on safety at public transportation agencies will encourage a "culture of safety" in which each employee completes a safety training program that includes continuing safety education and training.
- **Improve the Effectiveness of State Safety Oversight Agencies and Increase Federal Funding.** States will submit proposals for state safety oversight programs for rail fixed-guideway public transportation systems to the secretary and, upon approval, receive funding at an 80% federal share.
- **Provide New Enforcement Authority over Public Transportation Safety to the Secretary of Transportation.** In the event that a public transportation agency is in violation of federal safety law, the secretary will have the authority to require more frequent oversight, impose more frequent reporting requirements, impose conditions on grants, withhold grant funds, and impose civil penalties.
- **Establish a System to Monitor and Manage Transit Assets to Improve Overall Safety.** As public transportation systems age, the likelihood of accidents increases. The Secretary of Transportation is required to define the term "state of good repair," including objective standards for measuring the condition of capital assets. Recipients are required to establish and use an asset management system to develop capital asset inventories and condition assessments and to report on the condition of their system as a whole, including a description of the change in overall condition since the last report.

California Public Utilities Commission

CPUC has regulatory and safety oversight pertaining to railroads and rail transit systems in the state. The commission, which coordinates with FRA, is the largest participating state agency in the nation that ensures railroad compliance with federal railroad safety regulations resulting from the 1970 Federal Railroad Safety Act, as codified in Part 49 of the CFR.

CPUC's regulatory and safety oversight responsibility is divided among three branches within the Consumer Protections and Safety Division: Railroad Safety, Highway Rail-Crossing Safety, and Rail Transit Safety. The Railroad Safety branch oversees heavy freight and passenger railroads. The Highway Rail-Crossing Safety branch is responsible for implementing CPUC's Highway Rail-Crossing Program, which oversees safety for all public and private highway rail crossings in California. CPUC authorizes the construction of new at-grade highway rail crossings and the construction of underpasses and overheads. CPUC staff reviews proposals for crossings, investigates deficiencies related to warning devices or other safety features at existing at-grade crossings, and recommends engineering improvements to prevent accidents. Other activities include developing and enforcing uniform safety standards, analyzing data for crossing closures, reviewing grade-crossing warning devices, and analyzing rail accident data for CPUC's *Annual Report of Railroad Accidents Occurring in California*. The Rail Transit Safety branch covers light rail, rapid rail, and cable cars. CPUC's authority over transit agencies is based in state law and delegated by FRA through CFR 49, Part 659. The Rail Transit Safety branch oversees the safety of public transit guideways and ensures that transit agencies have and follow system safety programs that integrate safety in all facets of transit system operations.

California Department of Transportation

Caltrans is responsible for the design, construction, maintenance, and operation of the California State Highway System as well as that portion of the Interstate Highway System within the state's boundaries. Alone and in partnership with Amtrak, Caltrans is also involved in the support of inter-city passenger rail service in California and is a leader in promoting the use of alternative modes of transportation. In 1972, Assembly Bill 69 set down the current framework of Caltrans.

Two Caltrans programs are designed specifically to improve railroad safety: 1) the Caltrans Rail Safety Program and 2) the California Operation Lifesaver Program. The Caltrans Rail Safety Program, which is financed by Caltrans, focuses on vehicular and pedestrian accidents involving passenger trains. The California Operation Lifesaver Program emphasizes education pertaining to safety issues, including highway rail-crossing-related accidents. One of the educational programs offered by the California Operation Lifesaver Program is the "Highways or Dieways" campaign, which alerts the public to the dangers of vehicle and train accidents through television public service announcements, public service radio announcements, and magazine and newspaper advertising. Pedestrian safety is the California Operation Lifesaver Program's primary priority.

4.2.8.2 Affected Environment

The Project Study Area includes the track that begins at Pico Avenue and Rialto Avenue to the west, runs through the Depot property, then extends to the southwest and the site for the proposed rail platforms and bus facility near Rialto Avenue and E Street. The existing, active rail corridor is used primarily for freight service east of the Depot, which serves Metrolink and Amtrak passengers, freight vehicles, and bus operations. Safety and security measures are currently in place at the Depot. The location of the proposed rail platforms and bus facility at E Street is currently vacant and void of any security or safety measures.

Station Design and Operation Standards for Rail

Security cameras and law enforcement personnel are available 24 hours a day, 7 days a week for Metrolink facilities and as needed in specifically targeted areas. Criminal reports and arrests, other than those made by special enforcement officers, are handled by the local law enforcement agency where the activity occurred.

The design of existing Metrolink fixed-rail facilities (e.g., vehicles, stations, parking lots) is intended to provide a safe, secure, and comfortable transit system. Included among these features are station and platform amenities, park-and-ride lots, and security lighting. Security-related design features may include emergency telephones at station platforms, public announcement systems, open sightlines, graffiti-resistant materials, crosswalks, and a contracted security patrol. Station and track design (e.g., access, layout, exits, alarms, evacuation) and operational procedures (e.g., interagency agreement, training, evacuation) are major considerations in maintaining a safe environment to increase the effectiveness and timeliness of emergency response.

The Los Angeles County Sheriff's Department (LASD) Transit Police Services Bureau currently provides security services for Metrolink patrons, employees, and facilities in counties served by Metrolink service. Both special officers and deputies are assigned to Metrolink to provide law enforcement services, including field response at minor incidents involving Metrolink vehicles as well as regular patrols of Metrolink property. LASD also provides special enforcement deputies who work both in uniform and plain clothes, depending on the type of enforcement conducted.

Sheriffs are on duty during system hours of operation, with detective support 10 hours per day, Monday through Friday.

Metrolink's Safety and Security Division is dedicated to ensuring that the railroad system is prepared to manage disasters. In support of Metrolink's goal of achieving safety excellence, the Safety and Security Division is responsible for training and educating first responders. Specifically, the Safety and Security Division trains Metrolink employees and contractors in incident command principles and familiarizes them with its own emergency response plan. The Safety and Security Division develops tabletop exercises, conducts drills, and works with emergency responders as they develop procedures that relate to commuter railroads. In addition, the Safety and Security Division is responsible for the development of an emergency joint response plan with every major freight railroad with tracks that are used by Metrolink trains. These plans are prepared in collaboration with the host railroad. Once the plans are in place, the manager of the Safety and Security Division coordinates training efforts with railroad and responding agency personnel regarding the peculiarities of the railroad.

In addition to the security services provided by LASD for Metrolink patrons, employees, and facilities, law enforcement and crime prevention services within the City are provided by the San Bernardino Police Department (SBPD). Police services include patrol, investigation, traffic enforcement, and forensic services as well as the provision of a school resource officer and community service offices.

Safety and Security Operations for Bus Facilities

According to the sbX E Street Corridor BRT Project Environmental Assessment/Initial Study (Omnitrans 2009), Omnitrans operates System Safety Program Plans (SSPP) in compliance with Omnitrans' policy to promote safety throughout its system. Through its policy, all new projects are designed and constructed in full compliance with FTA requirements for safety and security. The SSPP is a series of documents designed to merge safety with Omnitrans operations. The overall objective of this Safety and Security Management Plan is to define activities, management controls, and monitoring processes that ensure that its patrons and employees are adequately protected and local fire and police jurisdictions have appropriate and unimpeded access to the system in the event of an incident. Safety is also dictated throughout the agency by a formal Injury and Illness Prevention Program, Personnel Policy 802. There are 38 safety procedures that accompany Safety Policy 802.

Omnitrans internal security staff and contract security guard services handle security. Issues that arise with passengers on buses are called into the Omnitrans Dispatch Office and a Field Supervisor is dispatched to the scene. Omnitrans follows the Workplace & Transit System Security Program, Personnel Policy 803. There are 17 security procedures that accompany Security Policy 803. If incidents escalate beyond the control of Omnitrans drivers and staff, then Omnitrans dispatch contacts local law enforcement where the incident is taking place. For the proposed Project, local law enforcement would involve the SBPD.

Rail Accidents

Incidents involving pedestrian or motorist collisions with trains can be divided into two general types. The first type involves collisions that occur along the rail right-of-way, including collisions at crossings and incidents where pedestrians or motorists cross the tracks and intrude on the right-of-way (trespassing). Accident history records reveal that a majority of accidents occur at road crossings. The second type involves collisions that occur at station platforms. Because of the inherent purpose of a station platform, large numbers of people converge near the trains

and cross adjacent tracks before or after riding the trains. The infrequency of past pedestrian or motorist collisions, and the unique circumstances under which they occur, do not allow for a valid quantitative projection of future collisions along the rail corridor; however, some distinct trends are present in the background data. For example, collisions with pedestrians are more likely to occur near stations where large numbers of pedestrians cross the tracks. Inattention to pedestrian warning devices, whether because of distractions or other causes, is a factor in many of these collisions. The low number of pedestrian collisions with commuter trains can be attributed to a safe design, operator training, and public education programs that teach people about potential hazards.

4.2.8.3 Environmental Consequences

Safety conditions; right-of-way; risk of accidents, collisions, or major structural failures

No-Build/No-Project Alternative

Construction Impacts

The No-Build/No-Project Alternative assumes that the proposed Project would not occur and that existing conditions along the rail corridor would remain. No construction activities would occur under this alternative. Therefore, no adverse temporary construction effects on safety and security are anticipated to occur.

Operational Impacts

The proposed extension of approximately 1 mile of track, included as part of the proposed Project, would not be implemented under this alternative. In addition, the No-Build/No-Project Alternative would not include improvements to or reconstruction of rail and bus infrastructure to accommodate passenger rail and bus service proposed by the Project. Existing operational conditions along the rail corridor would remain, and the No-Build/No-Project Alternative would maintain the current terminus for Metrolink regional passenger rail service at the existing Depot. Therefore, there would be no change from existing safety and security conditions within the Project Study Area, and no direct or indirect adverse effects on safety and security would occur. It should be noted that the safety improvements proposed for implementation by the Project (e.g., a pedestrian egress route, grade crossings, other security measures) would not occur under the No-Build/No-Project Alternative.

Proposed Project

Construction Impacts

Construction of the proposed Project could have temporary adverse effects on safety and security within the Project Study Area. This would result from the number and proximity of vehicles and people adjacent to rail and station facility construction and right-of-way improvements. The potential for any adverse safety and security effects would be addressed through compliance with OSHA, California Occupational Safety and Health Administration (Cal/OSHA), Metrolink safety and security guidelines and programs, and Omnitrans' policies which are designed to minimize potential safety concerns during construction. Therefore, the effects of the proposed Project are not considered substantially adverse.

Operational Impacts

In addition to providing a 1-mile extension of Metrolink service, rail platforms, and a new bus facility in proximity to downtown San Bernardino, the proposed Project would be designed to improve safety within the rail corridor for transit patrons. The rail and bus facilities (i.e., stations, parking lots) and vehicles (i.e., train and bus) would be designed to provide a safe, secure, and comfortable transit system. Safety control features proposed as part of the Project include new traffic signals, security lighting, railroad signal equipment (compatible with Metrolink's and BNSF's new positive train control systems), railroad/pedestrian crossing equipment at each at-grade railroad crossing, covered platforms, and adequate lighting. In addition, Metrolink would include security-related design features such as emergency telephones, public address systems, and closed-circuit monitoring systems. Similarly, security-related improvements for the bus facility would be in conformance with Omnitrans' Security Program. With properly maintained and used safety control features in place, potential adverse effects related to safety would be minimized.

The proposed Project would be constructed at grade. Pedestrian safety at designated grade crossings would be a key factor in project design. Each proposed grade crossing site was evaluated for pedestrian safety based on a site visit and review of the preliminary engineering design. The type of treatments and warning devices would vary based on the type of railway, grade crossing geometry, and pedestrian volumes. The proposed Project would require three proposed at-grade railroad crossings and associated signals at 2nd Street, Rialto Avenue/I Street, and G Street to be designed in accordance with FRA, CPUC, and SCRRA standards.

Roadway and intersection improvements are proposed by the Project to improve circulation on affected roadways within the Project Study Area, including improvements to Rialto Avenue, 2nd Street, 3rd Street, K Street, J Street, I Street, G Street, F Street, and E Street. Under the proposed Project, F Street would be extended north of Rialto Avenue to create a four-way signalized intersection.

The latest SCRRA Highway Grade Crossing Manual guidelines require raised medians, widened sidewalks, traffic striping, flashing lights, pedestrian gate arms, and swing gates. In accordance with the CPUC requirements, supplemental safety measures may be required.

Signal phasing at intersections would be changed to accommodate Metrolink train operations.[11] When trains are present, movements that would conflict with the trains would be prohibited. Pedestrians would be permitted to cross the street only when trains are not present. At locations where crossings would not be allowed, pedestrians could still attempt to cross the tracks. Such trespassing is a concern because pedestrian warning devices would not be provided between designated crossings. Proper signage would be required to notify pedestrians of train hazards.

Pedestrian safety would be taken into account predominately at the Depot and the E Street rail platforms and bus facility because of the pedestrian traffic they would generate. The Depot would provide separated pedestrian egress from the tracks, and the E Street rail platforms and

[11] Train detection systems are designed to provide the minimum warning time for a crossing. In general, the system would provide for a minimum of 20 seconds of warning time (FHWA 2007). Typical of at-grade crossings, 30 seconds would be provided prior to the arrival of a train at each crossing. Once commenced, the lights would begin to flash and the bells would begin ringing for a period of 3–5 seconds before the gates come down. The gates would then descend for a period of 12–15 seconds and reach the fully horizontal position anywhere from 15–20 seconds after the lights begin to flash. The gates would remain horizontal for a period of 10–15 seconds prior to the train entering the crossing, and once the train leaves the crossing, the gates would remain down for an additional 5 seconds before ascending to its upright position.

bus facility would include design measures for safe pedestrian movement. Adequate pedestrian queuing and refuge areas would be provided as well as wide crosswalks to facilitate pedestrian mobility. Parking and vehicular circulation within or around the station locations would also be evaluated to determine if any pedestrian/vehicle conflicts would arise. No adverse impacts would result.

The proposed Project could result in an adverse effect on safety for motorists and pedestrians because of the extension of Metrolink train operations, the increased use of the existing rail line, the addition of a new bus facility, and the increased conflicts these could involve. Pedestrian crossings would be located at existing signalized intersections, and pedestrians would cross to the station locations at clearly marked crosswalks or other pedestrian pathways. Supplemental safety measures may be required west of the I-215 freeway at 2nd Street, Rialto Avenue/I Street, and G Street; even though the latter is located in a commercial and industrial area well-removed from current residential land uses.

With implementation of proper design and installation of appropriate safety upgrades, and Mitigation Measures SAFE-1 (Verify the Installation of Rail Safety Measures), SAFE-2 (Develop Rail Facility Safety and Security Plans), and SAFE-3 (Develop a Bus System Safety Program Plan), potentially adverse effects would be further reduced.

The proposed Project would incorporate all necessary crime prevention measures, including City, Metrolink, and Omnitrans crime prevention policies, to deter criminal acts and protect passengers, employees, and the community. The proposed Project would also incorporate fire prevention measures to protect the Project Study Area from incidents of fire. No adverse effects would occur.

Design Options

Construction Impacts

Adverse temporary construction effects on safety and security under Pedestrian Overpass Design Options 1A and 1B, the Pedestrian Underpass Design Option, and the 3rd Street Open Design Option would be similar to those anticipated under the proposed Project. Similar to the proposed Project, with respect to construction activities, the potential for such adverse safety and security effects would be tempered by compliance with OSHA, Cal/OSHA, and Metrolink safety and security guidelines and programs, and Omnitrans' policies, which are designed to reduce potential adverse effects during construction. Therefore, no adverse effects related to implementation of the design options would occur.

Operational Impacts

Pedestrian Overpass Design Options 1A and 1B and Pedestrian Underpass Design Option 2

Pedestrian Overpass Design Options 1A and 1B and the Pedestrian Underpass Design Option 2 would be situated just west of the Depot, similar to the pedestrian overcrossing proposed by the Project. Operational effects on safety and security would be similar to those anticipated to result under the proposed Project. The only difference would be the architectural style of the overpass structure for Pedestrian Overpass Design Options 1A and 1B, with no change in operational effects on safety and security from the proposed Project. The Pedestrian Underpass Design Option 2 proposes a below-ground pedestrian egress route. No change in function or design of the proposed bus facility would be involved in any of these design options in comparison to the proposed Project.

The overpass and underpass options would allow for safe and orderly egress from Platform A in the event of a fire emergency and efficient daily use of the Metrolink and Amtrak train systems. Although each option presents concerns related to function/operation, maintenance, aesthetics, perceptions of safety, and constructability, the overpass options are all similar in terms of safety. However, the underpass option is less desirable because of increased costs, decreased perceptions of passenger safety, susceptibility to the collection of debris, and potential use of a sump pump. The proposed Project, Pedestrian Overpass Design Options 1A and 1B, and the Pedestrian Underpass Design Option 2 would provide a similar level of effectiveness with respect to pedestrian egress where an at-grade crossing currently exists while maintaining safety. Therefore, these design options would involve a benefit to pedestrian egress, similar to the proposed Project, and no adverse effect would occur.

3rd Street Open Design Option 3

The 3rd Street Open Design Option 3 would provide the same pedestrian overpass design as the proposed Project for the provision of safe pedestrian egress at the Depot. Operational effects on safety and security for the remainder of the Project Study Area along the rail line and at the E Street rail platforms/bus facility would be the same as those anticipated to result under the proposed Project with no change in function or design, with the exception of street improvements at 3rd Street.

The proposed Project and the other design options propose three at-grade crossings. The 3rd Street Open Design Option 3 would involve an additional at-grade crossing at 3rd Street for a total of four at-grade crossings. As such, operational effects on safety and security under the 3rd Street Open Design Option 3 could be greater than the effects of the proposed Project. This is because of the increased potential for accidents involving motorists and trains as vehicles continue to use the 3rd Street at-grade crossing. Under the proposed Project, this crossing would be closed, thereby lessening the probability of such collisions. Nonetheless, the crossing would be designed in accordance with all industry, Metrolink, CPUC, and FRA safety standards; therefore, adverse effects are not anticipated under this design option.

4.2.8.4 Avoidance, Minimization, and/or Mitigation Measures

Listed below are avoidance, minimization, and/or mitigation measures related to safety and security.

SAFE-1: Verify the Installation of Rail Safety Measures. Prior to issuance of operating permits, Metrolink will provide verification to CPUC that all rail safety measures identified in the hazard analysis have been installed.

SAFE-2: Develop Rail Facility Safety and Security Plans. Metrolink will coordinate and consult with LASD and SBPD to develop safety and security plans for the alignment, parking facilities, and station areas.

SAFE-3: Develop a Bus System Safety Program Plan. Omnitrans will coordinate and consult with SBPD to develop a system safety program plan for the proposed bus facility.

With implementation of mitigation measures, adverse effects relating to safety and security would be reduced.

4.2.8.5 Cumulative Impacts

The proposed Project or the design options, in combination with other potential projects in the area, would not contribute to an adverse cumulative effect on safety and security because all potential impacts would be specific to the Project Study Area. The proposed Project and design options would contribute to the overall intensity of development. Given the nature of the development (rail and pedestrian improvements), the potential effects to the crime rate along the rail corridor is expected to be negligible. The inclusion of other projects in the area would not result in a substantially adverse effect for this or other projects, and any potentially adverse effect would be mitigated on a project-specific basis with the inclusion of site-specific security measures or the payment of fees to cover the provision of police services. In this context, implementation of the proposed Project or the design options would not contribute to a significant cumulative effect in terms of security measures and/or safety; therefore, no substantial adverse effects would occur.

Safety concerns for motorists and pedestrians would increase locally, particularly if other development and transportation projects are constructed in the vicinity of the rail corridor for the proposed Project and design options. However, it is not expected that this would result in a cumulatively considerable effect. With respect to security, the proposed Project's potential to increase cumulative security effects would not be substantially adverse because the Project and design options propose the incorporation of security measures at each of the affected rail and bus stations. These include the implementation of Omnitrans policies, LASD Transit Police Services Bureau, and Metrolink station design and operation standards in conjunction with coordination with the SBPD. In this context, cumulative effects of the proposed Project and design options would not be considered substantially adverse with mitigation incorporated.

4.3 PHYSICAL ENVIRONMENT

4.3.1 Floodplain and Hydrology

This section evaluates the effects of the proposed Project, No-Build/No-Project Alternative, and design options related to floodplains and hydrology. The technical information in this section is based on the water quality assessment report (Appendix G) that was prepared for the proposed Project.

4.3.1.1 Regulatory Environment

The following federal plans, policies, regulations, and laws related to floodplains and hydrology are relevant to the project, and are described in detail in Section 3.8, "Hydrology and Water Quality:"

- National Pollutant Discharge Elimination System
- Federal Emergency Management Agency and National Flood Insurance Program
- Executive Order 11988

4.3.1.2 Affected Environment

The Project Study Area, which is mostly developed, is located within an urbanized area of the City of San Bernardino. The Project Study Area, including the tributary drainage area evaluated in this analysis, consists of the existing railway, residential areas, commercial and industrial developments, and some vacant land, mostly within the easternmost portion of the Project Study Area. Although some sparse vegetation exists throughout the Project Study Area, the site is characterized as disturbed and void of any natural drainage feature.

The Project Study Area is located in the Santa Ana River watershed, which is divided into hydrologic areas that are subdivided into hydrologic subareas. The Project Study Area lies within the Bunker Hill Hydrologic Subarea of the Upper Santa Ana River Hydrologic Area, as shown in Figure 3.8-2.

According to FEMA FIRM maps, the Project Study Area is not located within a 100-year floodplain.[12] The Project is located in Zone X (areas of 0.2% annual chance flood, areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 1% annual chance flood). The Project is outside the area in which FEMA requires development constraints to be considered, as shown in Figure 3.8-3. Refer to Section 3.8, "Hydrology and Water Quality," of this document for a detailed discussion regarding the affected environment.

[12] The FEMA FIRMs that depict the area within and adjacent to the Project Study Area are 06071C8681H, 06071C8683H, 06071C8584H, 06071C8703H, 06071C8704H, 06071C8712H, and 06071C8716H.

4.3.1.3 Environmental Consequences

Hydrology and drainage

No-Build/No-Project Alternative

The No-Build/No-Project Alternative would not result in temporary construction or operational effects on hydrology and drainage. As stated in Section 2.3.1.9, "Drainage Facility Improvements," in Chapter 2, "Alternatives," the project design would include an extension to a 36-inch drainage culvert, a series of catch basins and drains, detention basins, and drainage improvements at the existing and proposed parking lots. These facilities would improve the way in which stormwater flows are conveyed as well as the quality of water entering the regional storm drain system. Under the No-Build/No-Project Alternative, these drainage improvements would not be constructed; therefore, construction and operational effects associated with the Project would be avoided under this alternative.

Proposed Project

Construction Impacts

The construction-related effects of the proposed Project would be limited to the Project Study Area and temporary staging areas. Construction activities would result in the removal of sparse vegetation. In addition, natural soil resistance to impact erosion from rainfall would be marginally reduced. As a result, temporary construction-related effects could result in environmental consequences related to hydrology. However, implementation of Mitigation Measure HYD-1 (Develop and Implement a Stormwater Pollution Prevention Plan) would reduce the adverse effects.

Operational Impacts

After construction is completed, the Project Study Area would have a slightly larger area with impervious surfaces. This could concentrate and redirect stormwater runoff. This increase in runoff could alter or contribute to downstream hydrology and increase the potential for localized adverse effects. Additionally, post-construction drainage flows could result in localized off-site discharges that exceed the capacity of existing City drainage inlet structures or otherwise affect existing drainage infrastructure.

Figure 3.8-4 provides the general location for potential BMPs, which would be refined in conjunction with final design of the Project. Specifically, drainage facility improvements are proposed for the existing parking lots, which would be reconstructed on the east and south sides of the Depot and a new 265-space parking lot is proposed south of the rail platforms near E Street. The new parking lot would be graded to convey storm runoff into a new retention basin adjacent to the southeast corner of the parking lot near E Street north of San Manuel Stadium. The drainage facilities would then connect to a new 24- or 30-inch drainage pipe that would convey flows in excess of the retention basin's capacity to the south along E Street, terminating before an unnamed street that provides access to the stadium at E Street. The new 24- or 30-inch drainage pipe would be extended to a secondary detention basin located north of San Manuel Stadium.

Two 1.2-acre sites are currently under consideration for the second detention basin, although only one site is required. These include existing parking areas located on the southwest corner

of the unofficial intersection of F Street and an unnamed access road for San Manuel Stadium and the other is located at the southernmost extent of the southeastern parking area.

Although the proposed Project would include drainage improvements and BMPs to offset effects related to additional impervious surfaces and subsequent increases in flow rates, additional engineering design and planning would also be included to ensure that post-construction runoff would be maintained at pre-construction levels. Implementation of Mitigation Measures HYD-1 (Develop and Implement a Stormwater Pollution Prevention Plan) and HYD-2 (Develop and Implement a Water Quality Management Plan) would reduce the potential for adverse effects.

Design Options

Construction Impacts

Pedestrian Overpass Design Options 1A and 1B and Pedestrian Underpass Design Option 2 would require a level of construction activity similar to that of the proposed Project; therefore, temporary construction effects would be the same or similar. Although 3rd Street Open Design Option 3 would require a smaller Study Area and therefore fewer construction activities, the temporary construction effects would still be similar to those anticipated to result from the proposed Project. Implementation of industry-standard stormwater pollution-control BMPs and the preparation of a SWPPP, as specified in Mitigation Measure HYD-1 (Develop and Implement a Stormwater Pollution Prevention Plan), would further reduce any potentially adverse effects related to hydrology and drainage. Therefore, similar to the proposed Project, no substantial adverse effects would occur.

Operational Impacts

For Pedestrian Overpass Design Options 1A and 1B, Pedestrian Underpass Design Option 2, and 3rd Street Open Design Option 3, operational effects related to hydrology and drainage would be similar to those anticipated to occur under the proposed Project. These design options would be constructed to improve drainage facilities during operations. In addition, the implementation of Mitigation Measures HYD-1 (Develop and Implement a Stormwater Pollution Prevention Plan) and HYD-2 (Develop and Implement a Water Quality Management Plan) would reduce the potential for adverse effects. Therefore, no substantial adverse effects would occur.

Flooding

No-Build/No-Project Alternative

The No-Build/No-Project Alternative would result in no temporary construction or operational effects related to flooding. As stated above, the proposed improvements would not occur under this alternative. No adverse effects would occur.

Proposed Project

Construction Impacts

The construction-related effects of the proposed Project would be limited to the Project Study Area and temporary staging areas. According to the FEMA FIRM maps, the Project Study Area is not located within a 100-year floodplain. Furthermore, it is located outside the area that would require FEMA to consider development constraints (Appendix G). No adverse effects would occur.

Operational Impacts

According to the FEMA FIRM maps, the Project Study Area is not located within a 100-year floodplain, and it located outside the area that would require FEMA to consider development constraints (Appendix G). As stated in Section 3.8, "Hydrology and Water Quality," the Project is located in Zone X (areas with a 0.2% annual chance of flooding, areas with a 1% annual chance flooding with average depths of less than 1 foot or with drainage areas of less than 1 square mile, and areas protected by levees from a 1% annual chance of flooding). The proposed Project does not involve construction of housing or structures within the 100-year floodplain, as mapped by FEMA FIRMs. There would be no adverse effect.

Design Options

Construction Impacts

Temporary construction effects would be similar to those anticipated to result from the proposed Project. According to the FEMA FIRM maps, the Project Study Area for all design options is located outside the 100-year floodplain and outside the area that would require FEMA to consider development constraints (Appendix G). The design options are located in Zone X, same as the Project. Therefore, similar to the proposed Project, no substantial adverse effects would occur with implementation of any of the design options.

Operational Impacts

As with the proposed Project, the Project Study Area for all design options is located outside the 100-year floodplain and outside the area that would require FEMA to consider development constraints (Appendix G). No adverse effect is anticipated to occur.

4.3.1.4 Avoidance, Minimization, and/or Mitigation Measures

In addition to the drainage improvements that would be made as part of the proposed Project or design options to offset effects related to additional impervious surface and subsequent increases in flow rates, implementation of avoidance, minimization, and/or mitigation measures provided in Section 3.8, "Hydrology and Water Quality," would reduce adverse effects on hydrology. These mitigation measures are listed below and detailed in Section 3.8.5.

- HYD-1 (Develop and Implement a Stormwater Pollution Prevention Plan)
- HYD-2 (Develop and Implement a Water Quality Management Plan)

4.3.1.5 Cumulative Impacts

The proposed Project or design options, in combination with other potential projects in the area, could contribute to an adverse cumulative effect related to hydrology and flooding by affecting downstream hydrology and/or increasing the potential for flooding. However, the effect would be generally site-specific. With implementation of the drainage improvements proposed by the Project or under the design options, the amount and direction of stormwater flows would not be adverse in combination with other development projects. If implementation of the proposed Project or design options does not occur, no proposed drainage improvements would be constructed. Over time, as growth continues, the circulation and drainage improvements of other development projects would improve hydrology and drainage as well as subsequent downstream flooding conditions. Therefore, it is not anticipated that construction of any of the design options would have cumulative adverse effects on either floodplains or hydrology in combination with other potential projects and with implementation of project design measures and mitigation.

The Bunker Hill Hydrologic Subarea of the Upper Santa Ana River Hydrologic Area in the Santa Ana River watershed is considered a cumulative area for water quality and stormwater runoff because the Project Study Area is considered tributary to this watershed. The Bunker Hill Hydrologic Subarea consists of approximately 124,791 acres, and the Project Study Area represents a very small fraction of the total watershed. Therefore, no cumulative effects on the Bunker Hill Hydrologic Subarea are anticipated to occur.

4.3.2 Water Quality

This section evaluates the effects of the proposed Project, No-Build/No-Project Alternative, and design options on water quality. The technical information in this section is based on the water quality assessment report (Appendix G) that was prepared for the proposed Project.

4.3.2.1 Regulatory Environment

The following federal regulations related water quality are relevant to the project, and are described in detail in Section 3.8, "Hydrology and Water Quality:"

- Clean Water Act
- National Pollutant Discharge Elimination System

4.3.2.2 Affected Environment

Lytle Creek Channel, also referred to as Lytle Cajon Channel as well as the West Branch of the Lytle Creek System, is located immediately southwest of the Project, as shown previously in Figure 3.8-1. Runoff from the Project Study Area is discharged to either the Lytle Creek Channel or the Historic Warm Creek Channel via local City storm drain systems. Historic Warm Creek Channel eventually confluences with Lytle Creek Channel before it discharges into Reach 4 of the Santa Ana River. Reach 4 is defined as the portion of the river from Mission Boulevard in Riverside to the San Jacinto Fault in San Bernardino (Appendix G).

There are no current drinking water reservoirs or recharge facilities within the Project Study Area, and the current groundwater levels for the Project are more than 70 feet below the ground surface elevation (Appendix E).

As stated previously, the Project Study Area is located in the Santa Ana River watershed. The most serious water quality issues in the Santa Ana River watershed are related to nitrogen and total dissolved solids (TDS). Historically, the Santa Ana River and its major tributaries flowed year-round; however, diversion for irrigation has resulted in decreased flow and groundwater recharge. Primary water quality concerns in the Middle Santa Ana River Management Area (which includes the Middle Santa Ana River Hydrologic Area and the Rialto-Colton Hydrologic Area) include TDS, total inorganic nitrogen levels, contaminant plumes in groundwater, bacterial quality of surface waters, and impacts from confined animal feeding operations.

Refer to Section 3.8, "Hydrology and Water Quality," of this document for a detailed discussion regarding the affected environment.

4.3.2.3 Environmental Consequences

Water quality

No-Build/No-Project Alternative

Under the No-Build/No-Project Alternative, neither the proposed Project nor the design options would be constructed; therefore, there would be no associated construction or operational effects on water quality. However, as stated in Section 2.3.1.9, "Drainage Facility Improvements" in Chapter 2, "Alternatives," drainage improvements that would be part of the project design include the extension of a 36-inch drainage culvert, a series of catch basins and drains, detention basins, and drainage improvements to existing and proposed parking lots,

among others. These facilities would improve the conveyance of runoff from the Project Study Area. Implementation of the No-Build/No-Project Alternative would not involve construction of these improvements. As a result, existing conditions would continue. No adverse effects would occur.

Proposed Project

Construction Impacts

Effects associated with constructing the proposed Project would be limited to the construction footprint (Project Study Area) and temporary staging areas. In general, the severity of construction-related water quality effects depends on soil erosion potential; construction practices; the frequency, magnitude, and duration of precipitation events; and the proximity of construction to stream channels or water bodies. Construction activities often expose disturbed and loosened soils to erosion from rainfall, runoff, and wind.

Although sediment from erosion is the pollutant most frequently associated with construction activity, other pollutants of concern include toxic chemicals from heavy equipment or construction-related materials. A typical construction site uses many chemicals or compounds, such as gasoline, oils, grease, solvents, lubricants, and other petroleum products. Concrete, soap, trash, and sanitary wastes are other common sources of potentially harmful materials on construction sites. The effect of toxic construction-related materials on water quality varies depending on the duration and time of activities. Because of low precipitation, construction occurring in the dry season is less likely to cause soil and channel erosion and runoff of toxic chemicals.

Construction of the proposed Project would involve excavation, soil stockpiling, grading, and the installation of structural foundations, new rail, and auxiliary facilities. Pollutants of concern during construction include sediments, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. Each of these pollutants on its own or in combination with other pollutants can have a detrimental effect on water quality. During construction activities, excavated soil would be exposed, and there would be an increased potential for soil erosion and sedimentation compared to existing conditions. In addition, during storm events, erosion and sedimentation could occur at an accelerated rate. During construction, the total disturbed area would be approximately 85 acres. In addition, chemicals, liquid products, and petroleum products (such as paints, solvents, and fuels), concrete-related waste, and other construction debris and waste may be spilled or leaked, with the potential to discharge into receiving waters. This could result in substantial direct and indirect effects on surface water quality during construction.

The Project would be subject to the requirements of the Construction General Permit, which will require the preparation of a SWPPP and implementation of construction BMPs during construction activities to minimize effects on surface waters (see Mitigation Measure HYD-1 [Develop and Implement a Stormwater Pollution Prevention Plan]). Construction BMPs would include erosion and sediment control BMPs designed to minimize erosion and retain sediment on site and good housekeeping BMPs designed to prevent spills, leaks, and discharge of construction debris and waste into receiving waters.

The requirements of the Construction General Permit are based on the risk level of the Project. The overall risk level is based on two factors: receiving water risk and sediment risk. Runoff from the Project Study Area would not discharge to a 303(d)-listed water body impaired for sediment or discharge to a water body with designated beneficial uses; therefore, the receiving water risk is low. Based on the anticipated construction schedule (beginning middle of 2013,

with an 18- to 24-month construction period), the project sediment risk would be low (soil loss would be approximately 5.5 tons/acre). Therefore, according to Appendix G, the Project would be classified as Risk Level 1. Risk Level 1 projects are required to implement good housekeeping, erosion control, and sediment control BMPs and perform quarterly nonstormwater discharge observations and weekly, pre-storm, interim storm, and post-storm inspections as specified in the Construction General Permit.

Construction of the proposed Project would be conducted on relatively flat terrain. Any dewatering from excavation would need to be pumped to an on-site portable settling basin or, if proven to be within Basin Plan water quality standards, discharged to a local creek (i.e., Lytle Creek). When construction BMPs are properly designed, implemented, and maintained to address pollutants of concern, adverse water quality effects can be minimized during construction. Although temporary construction-related activities may have substantial adverse effects on water quality, implementation of Mitigation Measure HYD-1 (Develop and Implement a Stormwater Pollution Prevention Plan) would reduce the severity of the effects.

Operational Impacts

Implementation of the proposed Project would involve a slight increase in the area of impervious surfaces within the Project Study Area, which would serve to concentrate and redirect stormwater runoff. This increase in runoff could carry contaminants to downstream waterways. However, the Project Study Area is generally developed. Therefore, a permanent increase in impervious surfaces would generally be limited to the eastern extent of the Project, including the E Street platforms, the bus facility, and new parking lot area. These components of the Project would increase the impervious surface area by approximately 11 acres compared with existing conditions. A majority of these new surfaces would be associated with the new parking area, rail platforms, and the bus facility. An increase in impervious area would result in a corresponding increase in the volume of runoff generated during storm events and would be capable of transporting pollutants of concern, including sediments, heavy metals, oil and grease, trash and debris, pesticides, and organic compounds, to local receiving waters. Therefore, direct and indirect effects may be considered substantial.

The proposed Project would also involve the relocation and/or abandonment of several monitoring wells near the Depot. Monitoring well relocation and abandonment activities, which would be conducted in accordance with all applicable state and local regulations, are not anticipated to contribute in any way to water quality conditions in the rail corridor. Additionally, the current groundwater levels for the Project are more than 70 feet below the ground surface elevation; therefore, shallow groundwater is not anticipated to be an issue for the proposed Project (Appendix E).

The proposed Project involves low-impact development in an already developed urban area. Proposed site design BMPs include minimizing impervious surface areas by constructing rail track sections using ballast, which is permeable and conducive to infiltration. In addition, runoff from the Project would drain to the adjoining graded ditches and would infiltrate directly into the underlying native soils. Potential source control BMPs would include an education program for property owners, activity restrictions, preparation of spill contingency plans, an employee training and education program, common area catch basin inspection, protection of slopes and channels, storm drain signage, energy dissipaters (in culverts), trash storage areas and litter control, and alternative building materials (concrete instead of wood ties that are treated with creosote and other chemicals). Potential treatment control BMPs would include nonvegetated drainage swales, detention and/or infiltration basins, and/or manufactured/proprietary devices that would treat runoff from the Depot area. Figure 3.8-4 provides the general location of these

potential BMPs, which would be refined in conjunction with final design of the Project. With implementation of Mitigation Measure HYD-2 (Develop and Implement a Water Quality Management Plan), the BMPs would minimize the potential for adverse water quality effects.

As stated in Chapter 2, "Alternatives," drainage improvements that would be part of the Project would include the extension of a 36-inch drainage culvert, a series of catch basins and drains, detention basins, and drainage improvements to existing parking lots, among others. Such improvements would improve the conveyance of stormwater flows and also improve water quality by helping to control contaminants before runoff leaves the site. Additionally, concurrence has been obtained from the City of San Bernardino to consider the use of infiltration basins, consistent with Section XI.E.3 of permit order R8-2010-0036 (Appendix G).

Project operations have the potential to discharge runoff into City drainage systems that contribute flow to water bodies listed as impaired according to the current 303(d) list and could violate Basin Plan standards if not properly controlled. Water quality monitoring of discharges from the City's drainage system is required by the City's NPDES MS4 permit to determine if water quality has been affected from specific uses within the City. Water quality monitoring is subject to the effluent and receiving water quality monitoring requirements in the permit. Typically, MS4 permits require water quality monitoring at certain strategic locations. If runoff from the proposed Project is not located in proximity to an existing sampling location, then SANBAG's construction contractor will work with the Santa Ana RWQCB to determine the best location for sampling, making sure that such sampling is representative of the Project's runoff. Sampling frequency and requirements will be subject to the requirements of the RWQCB permit. In addition, the project WQMP may require water quality monitoring if inspectors determine that the BMPs are not functioning properly. Water quality monitoring will be performed by qualified personnel, as appropriate. As such, implementation of Mitigation Measure HYD-2 (Develop and Implement a Water Quality Management Plan) would reduce these adverse effects.

Any development project involving category and noncategory projects, including significant redevelopment projects that create additional impervious surfaces, must prepare and implement a WQMP. Therefore, to comply with this requirement, a WQMP will be prepared by SANBAG or its contractor for the proposed Project, in conjunction with Mitigation Measure HYD-2 (Develop and Implement a Water Quality Management Plan), that specifies the BMPs to be implemented to address stormwater discharges during operation.

Design Options

Construction Impacts

In comparison with the proposed Project, Pedestrian Overpass Design Options 1A and 1B and Pedestrian Underpass Design Option 2 would require a similar level of construction activity, and temporary construction effects would be the same or similar. In addition, 3rd Street Open Design Option 3 would result in a smaller Study Area and, therefore, would result in a smaller construction footprint. However, temporary construction effects would still be similar to those anticipated to result under the proposed Project.

Implementation of industry-standard stormwater pollution-control BMPs in conjunction with the preparation of a SWPPP, as specified in Mitigation Measure HYD-1 (Develop and Implement a Stormwater Pollution Prevention Plan), would further reduce any potentially adverse effects on water quality. Therefore, similar to the proposed Project, no substantial adverse effects would occur.

Operational Impacts

For Pedestrian Overpass Design Options 1A and 1B, Pedestrian Underpass Design Option 2, and 3rd Street Open Design Option 3, operational effects on water quality would be similar to those anticipated to occur under the proposed Project. These design options would be constructed to improve drainage facilities during operations. Therefore, no substantial adverse effects would occur.

Project operations have the potential to violate Basin Plan standards or contribute to the 303(d) list of impaired water bodies. Implementation of Mitigation Measure HYD-2 (Develop and Implement a Water Quality Management Plan) would reduce these adverse effects.

Groundwater

No-Build/No-Project Alternative

Under the No-Build/No-Project Alternative, neither the proposed Project nor the design options would be constructed; therefore, there would be no associated construction or operational effects on groundwater. No adverse effects would occur.

Proposed Project

Construction Impacts

Effects associated with constructing the proposed Project would be limited to the construction footprint (Project Study Area) and temporary staging areas. In general, the severity of construction-related groundwater effects depends on depth to groundwater. As previously stated, depth to groundwater is greater than 70 feet.

Construction of the proposed Project would be conducted on relatively flat terrain. Construction-related dewatering is unlikely. Any water from excavation dewatering would need to be pumped to an on-site portable settling basin or, if proven to be within Basin Plan water quality standards, discharged to a nearby local creek. No substantial adverse effect would occur during construction.

Operational Impacts

The proposed Project would involve the relocation and/or abandonment of several monitoring wells near the Depot. Monitoring well relocation and abandonment activities would be conducted in accordance with all applicable state and local regulations and are not anticipated to contribute in any way to groundwater conditions in the rail corridor. Additionally, the current groundwater levels for the Project are more than 70 feet below the ground surface elevation; therefore, shallow groundwater is not anticipated to be an issue for the proposed Project (Appendix E). No substantial adverse effect would occur.

Design Options

Construction Impacts

Compared with the proposed Project, Pedestrian Overpass Design Options 1A and 1B and Pedestrian Underpass Design Option 2 would require a similar level of construction activity, and temporary construction effects would be the same or similar. In addition, 3rd Street Open Design Option 3 would result in a smaller Study Area and, therefore, would result in a smaller

construction footprint. However, temporary construction effects would still be similar to those anticipated to result under the proposed Project. No substantial adverse effect would occur during construction.

Operational Impacts

For Pedestrian Overpass Design Options 1A and 1B, Pedestrian Underpass Design Option 2, and 3rd Street Open Design Option 3, operational effects on groundwater would be similar to those anticipated to occur under the proposed Project. The current groundwater levels are more than 70 feet below the ground surface elevation; therefore, shallow groundwater is not anticipated to be an issue for the build design options. Therefore, no substantial adverse effects would occur.

4.3.2.4 Avoidance, Minimization, and/or Mitigation Measures

Implementation of avoidance, minimization, and/or mitigation measures provided in Section 3.8, "Hydrology and Water Quality," would reduce substantial adverse effects on water quality. These mitigation measures are listed below and detailed in Section 3.8.5.

- HYD-1 (Develop and Implement a Stormwater Pollution Prevention Plan)
- HYD-2 (Develop and Implement a Water Quality Management Plan)

In accordance with these measures, the construction contractor would prepare a SWPPP, implement BMPs, and identify specifications for erosion control in the final construction plans to prevent water quality effects. Likewise, a WQMP would be prepared that would include appropriate BMPs to minimize post-construction runoff and related nonpoint-source water quality effects.

4.3.2.5 Cumulative Impacts

The proposed Project or design options, in combination with other potential projects in the area, could contribute to an adverse cumulative effect on water quality. However, effects are generally site-specific. With implementation of the drainage improvements proposed by the Project or design options, the amount and direction of stormwater flows would not be adverse in combination with other development projects. If implementation of the proposed Project or design options does not occur, no proposed drainage improvements would be constructed.

Over time, as growth continues, the circulation improvements and subsequent drainage improvements involved with other development projects could improve hydrology, drainage, and stormwater flows and improve the quality of the water exiting the site through implementation of adequate infrastructure improvements within already highly urbanized areas. Additionally, all development projects in Santa Ana RWQCB Region 8 are required to meet the current stormwater permit requirements. These permit requirements include BMP provisions that ensure no cumulative water quality effects. Therefore, it is not anticipated that construction or operation of any of the design options would have a cumulative adverse effect on water quality when combined with other potential future projects and with implementation of project design measures and mitigation.

4.3.3 Geology, Soils, and Seismicity

This section evaluates the effects of the proposed Project, No-Build/No-Project Alternative, and design options on geology, soils, and seismicity. The technical information within this section is based on the geotechnical investigation report (Appendix E) that was prepared for the proposed Project.

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are a prime consideration in the design and retrofit of structures. Standard policy is to use the anticipated Maximum Credible Earthquake (MCE) from young faults in and near California in assessing seismic hazards. The MCE is defined as the largest earthquake that can be expected to occur on a fault over a particular period of time.

4.3.3.1 Regulatory Environment

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects “outstanding examples of major geological features.” Section 3.6, “Geology and Soils,” of this document provides a description of the act and a discussion of applicable state regulations.

4.3.3.2 Affected Environment

The Greater San Bernardino area is located near two major physiographic provinces in California: 1) the Transverse Ranges Geomorphic Province to the north, composed of numerous mountain ranges that extend from the Little San Bernardino Mountains and Pinto Mountains west across the southern end of California into the Pacific Ocean west of Ventura, and 2) the Peninsular Ranges Province to the south, a series of northwest-trending small mountain ranges that extend from the foothills of the San Gabriel and San Bernardino Mountains south into the Baja Peninsula. The City is at the southern base of the San Bernardino Mountains in the upper Santa Ana River Valley and the Santa Ana River Basin. The valley is surrounded by the San Bernardino Mountains to the northeast and east, Blue Mountain and Box Springs Mountain to the south, and the San Gabriel Mountains and the Jurupa Hills to the northwest and southwest, respectively. The City lies on a gently sloping lowland located at the southwest margin of the San Bernardino Mountains.

Refer to Section 3.6, “Geology and Soils,” of this document for a detailed discussion of the affected environment.

4.3.3.3 Environmental Consequences

Seismicity

Seismicity is defined as the frequency or magnitude of earthquake activity in a given area. An earthquake is a sudden release of energy in the earth's crust or upper mantle, usually caused by movement along a fault plane or by volcanic activity and resulting in the generation of seismic waves.

No-Build/No-Project Alternative

Construction Impacts

The No-Build/No-Project Alternative assumes that the proposed Project would not occur and that existing conditions along the rail corridor would remain. No construction activities would occur under this alternative. Therefore, no temporary adverse effects related to seismicity are anticipated to occur during construction.

Operational Impacts

The improvements proposed for approximately 1 mile of track, included as part of the proposed Project, would not be implemented under this alternative. Additionally, the No-Build/No-Project Alternative would not include improvements to or reconstruction of rail and bus infrastructure to accommodate the passenger rail and bus service proposed by the Project. Existing operational conditions within the Project Study Area would remain under this alternative. No adverse operational effects would occur.

Proposed Project

Construction Impacts

Analysis of the geotechnical investigation indicates that the San Jacinto Fault and the San Andreas Fault (San Bernardino sections) do not impose a surface rupture hazard for the proposed Project. The new Holocene-aged faults, located approximately 1.9 miles north of the Depot, would not have an effect on the proposed Project because of their distance. Therefore, substantial adverse effects related to fault surface rupture would not occur during construction of the proposed Project (see Appendix E).

Implementation of the proposed Project would require various site grading and construction activities, including station and platform improvements at the Depot and the bus facility at E Street, construction of a second track along the alignment, the addition of parking facilities, and the construction of concrete foundations, retaining walls, and underground utilities to facilitate the additional mile of rail service. The potential exists for the Project Study Area to experience strong ground shaking from nearby faults during an earthquake.

In general, for constructed facilities, potential geologic and seismic hazards associated with ground shaking during construction would be mitigated by employing required standard engineering practices, including CBC standards, in the design and construction of the proposed Project. The proposed bus facility would be designed to meet all applicable design and building engineering practices. Furthermore, the proposed Project would integrate the geotechnical recommendations for the Project, which would further reduce potential effects on constructed facilities. In this context, local hazards related to fault rupture and seismically generated ground shaking would be unlikely to affect the Project adversely.

Operational Impacts

As indicated above, there is the potential for the Project Study Area to experience strong ground shaking from nearby faults during an earthquake. The San Jacinto fault and the San Andreas Fault (San Bernardino section) do not impose a surface rupture hazard for the proposed Project because of their relative distance from the Project Study Area. Similarly, the new Holocene-aged faults, located approximately 1.9 miles north of the Depot, would not have an effect on the proposed Project because of their distance. Therefore, no direct adverse effects related to fault surface rupture are anticipated to occur during operation of the proposed Project. As described

above, with Mitigation Measure G-1 (Comply with Geotechnical Recommendations) and the geotechnical recommendations for the Project, hazards resulting from fault rupture, seismically generated ground shaking, and related indirect effects would be unlikely to affect the Project adversely.

Design Options

Construction Impacts

Compared with the temporary construction effects on and seismicity hazards anticipated under the proposed Project, effects for Pedestrian Overpass Design Options 1A and 1B would be similar, effects for Pedestrian Underpass Design Option 2 would be similar or slightly greater, and effects for 3rd Street Open Design Option 3 would be similar or fewer.

Similar to the proposed Project, with respect to construction activities, geologic and seismic hazards could be mitigated by employing required standard engineering practices in the design and construction of the Project per the geotechnical recommendations. Mitigation Measure G-1 (Comply with Geotechnical Recommendations) would serve to reduce potential effects associated with strong seismic ground shaking. Related direct and indirect effects would be unlikely to affect the design options adversely.

Operational Impacts

Compared with the operational effects related to seismicity hazards anticipated under the proposed Project, effects for Pedestrian Overpass Design Options 1A and 1B and Pedestrian Underpass Design Option 2 would be similar; effects for the 3rd Street Open Design Option 3 would be similar or fewer in number because of the reduced Project Study Area. Pedestrian Underpass Design Option 2 would be likely to result in less constriction of the train platform but would require increased shoring and aboveground protection of the train tracks; existing utilities would be rerouted/relocated underground. However, the effects would be similar to those of the proposed Project. Therefore, substantial adverse effects related to fault surface rupture or seismically related ground motion are not anticipated to result from operation of the design options.

Soil erosion

Soil erosion is a naturally occurring process on all land, generally caused by water and wind. Soil erosion can be a slow process that continues relatively unnoticed, or it may occur at an alarming rate, causing serious loss of topsoil. The rate and magnitude of soil erosion by water is controlled by the following factors: rainfall intensity and runoff, soil erodibility, slope gradient and length, and vegetation cover (City of San Bernardino 2005b).

No-Build/No-Project Alternative

Construction Impacts

This alternative assumes that the proposed Project would not occur and that existing conditions along the rail corridor would remain. No construction activities would occur under this alternative. Therefore, no temporary adverse effects related to soil erosion are anticipated to occur during construction.

Operational Impacts

This alternative assumes that the proposed Project would not occur and that existing conditions along the rail corridor would remain. Therefore, no adverse operational effects related to soil erosion are anticipated.

Proposed Project

Construction Impacts

The proposed Project would involve track improvements along an existing rail corridor, from the Depot to E Street, 1 mile to the east. Rail platform improvements would be included at each end, and a new bus facility would be provided at E Street. The Project Study Area is located in an urban area that is generally level and largely developed; therefore, substantial soil erosion is not anticipated during construction. Although grading and excavation activities during construction would expose on-site soils to wind and water erosion, the construction contractor would be responsible for the preparation of a SWPPP to comply with the NPDES General Construction Permit. Erosion control measures are a required component of the SWPPP.

Preparation and implementation of a SWPPP would further reduce potential adverse soil erosion and other water quality effects that could occur during construction. The erosion control measures that would be implemented as part of the BMPs would include using proper grading techniques; using proper soil stabilization, sediment control, runoff control, and erosion control practices on the construction site; and covering or stabilizing topsoil stockpiles, as previously provided in Section 3.6, “Geology and Soils.” Industry-standard stormwater BMPs can be found in the *California Stormwater Best Management Practices Handbook* (Construction). Additionally, the geotechnical recommendations for track subgrade grading, provided in Mitigation Measure G-1 (Comply with Geotechnical Recommendations), as well as Mitigation Measures HYD-1 (Develop and Implement a Stormwater Pollution Prevention Plan) and HYD-2 (Develop and Implement a Water Quality Management Plan) provided in Section 3.8, “Hydrology and Water Quality.” would serve to reduce any potentially adverse soil erosion and stability effects. Therefore, no substantial adverse effects would occur.

Operational Impacts

As indicated above, the area is generally level and mostly developed. Once constructed, the Project would consist of generally hardscape surfaces. A minimal amount of exposed surfaces, which could be subjected to accelerated soil erosion during operations, would be present. Therefore, substantial soil erosion is not anticipated to occur during operation of the proposed Project, and no adverse effects are anticipated to occur.

Design Options

Construction Impacts

Compared with the proposed Project, Pedestrian Overpass Design Options 1A and 1B and Pedestrian Underpass Design Option 2 would require similar levels of construction activity; therefore, the temporary construction effects would be the same or similar. Although 3rd Street Open Design Option 3 would have a reduced Project Study Area and, therefore, would require fewer construction activities, the temporary construction effects would still be similar to those anticipated to occur under the proposed Project.

Implementation of industry-standard stormwater pollution-control BMPs in conjunction with the preparation of a SWPPP would reduce soil erosion effects. Additionally, geotechnical

recommendations for track subgrade grading, provided in Mitigation Measure G-1 (Comply with Geotechnical Recommendations), as well as Mitigation Measure HYD-1 (Develop and Implement a Stormwater Pollution Prevention Plan) would further reduce any potentially adverse soil erosion effects. Therefore, no substantial adverse effects would occur.

Operational Impacts

For Pedestrian Overpass Design Options 1A and 1B, Pedestrian Underpass Design Option 2, and 3rd Street Open Design Option 3, operational effects on soil erosion would be similar to those anticipated to occur under the proposed Project. These design options would be constructed so that soil erosion during operations would be minimized. Therefore, no substantial adverse effects related to soil erosion would occur.

Landslides, liquefaction, collapse, or expansive soils

Liquefaction involves a sudden loss of strength in saturated, cohesionless soil (predominantly sand) caused by the buildup of pore water pressure during cyclic loading, such as that produced by an earthquake. Landslides are defined as slope failure or the downward falling or sliding of a mass of soil or rock on or from a steep slope. Expansive soils are defined as any soil which significantly changes its volume in horizontal and vertical planes with changes in moisture content.

No-Build/No-Project Alternative

Construction Impacts

This alternative assumes that the proposed Project would not occur and that existing conditions along the rail corridor would remain. No construction activities would occur under this alternative. Therefore, no temporary substantial adverse effects related to landslides, liquefaction, collapse, or expansive soils would occur during construction.

Operational Impacts

Under this alternative, existing conditions along the rail corridor would remain. Improvements proposed under the Project would not occur. Adverse effects related to landslides, liquefaction, collapse, or expansive soils would not occur during operations.

Proposed Project

Construction Impacts

As stated in the geotechnical investigation report (Appendix E), the Project Study Area is generally level; therefore, the potential for landslides to occur is unlikely. The soils are not known to have expansive qualities. According to the geotechnical investigation report, soils within the Project Study Area exhibit deep cohesionless or stiff clay conditions where the soil depth exceeds 200 feet, and the soil types overlying rock are stable deposits of sands, gravel, or stiff clays. The subsurface soils at this site consist predominantly of medium-dense to dense silty sand interbedded with stiff to very stiff silt, with dynamic settlement estimated at less than 0.5 inch. Given these soil conditions at depth as well as groundwater levels that are more than 70 feet below the current grade, soil liquefaction is not anticipated to occur within the Project Study Area. Additionally, several geotechnical recommendations, implementation of which would be required in conjunction with implementation of Mitigation Measure G-1 (Comply with Geotechnical Recommendations), would be integrated along with each of the proposed components, as applicable, to reduce potential adverse effects related to local

geologic hazards. Implementation of Mitigation Measure G-1 (Comply with Geotechnical Recommendations) specifically requires the provision of firm, uniform support for any structure proposed by the Project to reduce potential total and differential settlement as well as the removal of 5 feet of subsurface soils (below finished grade), as applicable. Therefore, no adverse effects from hazards related to landslides, liquefaction, collapse, or expansive soils would occur during construction (see Appendix E).

Operational Impacts

As stated in the geotechnical investigation report (Appendix E), the Project Study Area is generally level; therefore, the potential for landslides to occur is unlikely. The soils are not known to have expansive qualities. The subsurface soils at this site consist predominantly of medium-dense to dense silty sand interbedded with stiff to very stiff silt, with dynamic settlement estimated at less than 0.5 inch. Given these soil conditions at depth as well as groundwater levels that are more than 70 feet below the current grade, soil liquefaction is not anticipated to occur within the Project Study Area. Additionally, several geotechnical recommendations, implementation of which would be required in conjunction with the implementation of Mitigation Measure G-1 (Comply with Geotechnical Recommendations), would be integrated along with each of the proposed components, as applicable, to reduce potential adverse effects related to local geologic hazards. Therefore, no adverse effects from hazards related to landslides, liquefaction, collapse, or expansive soils would occur during operations (see Appendix E).

Design Options

Construction Impacts

Pedestrian Overpass Design Options 1A and 1B and Pedestrian Underpass Design Option 2 would involve a level of construction activity similar to that of the proposed Project, with the only exception being the pedestrian egress component at the Depot. In addition, 3rd Street Open Design Option 3 would result in a reduced level of construction activity because 3rd Street would remain open. Several geotechnical recommendations, as prescribed in Mitigation Measure G-1 (Comply with Geotechnical Recommendations), related to the structural design of the proposed components have been included to reduce potential adverse effects. Additionally, construction would follow proper grading and shoring techniques, with some additional shoring and protection required for undergrounding the pedestrian egress component of Pedestrian Underpass Design Option 2. Therefore, similar to the proposed Project, no temporary adverse effects related to landslides, liquefaction, collapse, or expansive soils would occur during construction of these design options.

Operational Impacts

The Project Study Area, which is generally level, has a low potential for liquefaction or landslide hazards. Similar to the proposed Project, several geotechnical recommendations, as prescribed in Mitigation Measure G-1 (Comply with Geotechnical Recommendations), would be integrated into the structural design of the proposed components to ensure that no adverse operational effects would occur under Pedestrian Overpass Design Options 1A and 1B, Pedestrian Underpass Design Option 2, or 3rd Street Open Design Option 3.

4.3.3.4 Avoidance, Minimization, and/or Mitigation Measures

Implementation of avoidance, minimization, and/or mitigation measures related to geology provided in Section 3.6, “Geology and Soils,” and hydrology provided in Section 3.8, “Hydrology and Water Quality,” would reduce adverse effects. These mitigation measures are listed below and detailed in Sections 3.6.5 and 3.8.5.

- G-1 (Comply with Geotechnical Recommendations)
- HYD-1 (Develop and Implement a Stormwater Pollution Prevention Plan)
- HYD-2 (Develop and Implement a Water Quality Management Plan)

4.3.3.5 Cumulative Impacts

The proposed Project or design options, in combination with other potential projects in the area, would not contribute to an adverse cumulative effect related to geology, seismicity, and/or soils because all effects would be generally site-specific. The effects of the proposed Project and the design options would not be considered substantially adverse with mitigation incorporated. The inclusion of other projects in the area would not result in a substantially adverse effect for this or other projects, and any potentially adverse effect would be mitigated on a project-specific basis. In this context, implementation of the proposed Project or the design options would not contribute to a significant cumulative effect related to geology, seismicity, or soils. Therefore, no substantial adverse effects would occur.

4.3.4 Hazardous Waste and Materials

This section evaluates the effects of the proposed Project, No-Build/No-Project Alternative, and design options on hazardous wastes and hazardous materials. The technical information within this section is based on the Phase I Environmental Site Assessments (Phase I), a subsequent Phase II, and the associated Technical Memorandum of Additional Findings (Appendix F) that was prepared for the Project. The Phase I identified recognized environmental conditions (RECs) in connection with the Project Study Area and surrounding area.

4.3.4.1 Regulatory Environment

Hazardous materials and hazardous wastes are regulated by many federal laws. These include not only specific statutes governing hazardous waste but also a variety of laws regulating air and water quality, human health, and land use. The following Federal regulations related to hazardous waste and materials are relevant to the project, and are described in detail in Section 3.7, "Hazards and Hazardous Materials:"

- Resource Conservation and Recovery Act of 1976
- Comprehensive Environmental Response, Compensation, and Liability Act of 1980

Other potentially relevant federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

In addition to the acts listed above, Executive Order 12088, Federal Compliance with Pollution Control, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

4.3.4.2 Affected Environment

The Project Study Area is located in an urbanized area of mixed-use development that includes railroad tracks, the Depot, residential development, a variety of repair facilities (auto repair, furniture upholstery, pool table repair), current and former scrap metal recycling facilities, a Southern California Gas Company plant, vacant and occupied commercial and industrial warehouses, and other retail facilities. Within and adjacent to the Project Study Area, 28 sites of concern were identified, as shown in Figure 3.7-1 and Table 3.7-1. Only 10 sites are located within the Project Study Area (one site is listed as a temporary impact within a potential staging/assembly area), and 18 sites are located outside the Project Study Area. Please refer to Section 3.7, "Hazards and Hazardous Materials," of this document for a detailed discussion regarding the affected environment.

4.3.4.3 Environmental Consequences

Disposal of hazardous materials

No-Build/No-Project Alternative

Construction Impacts

The No-Build/No-Project Alternative assumes that the proposed Project would not occur and that existing conditions of the rail corridor would remain. No construction activities would occur under this alternative. Therefore, no temporary construction adverse effects related to the transport, use, or disposal of hazardous materials are anticipated to occur.

Operational Impacts

The proposed improvements to approximately 1 mile of track included as part of the proposed Project would not be implemented under this alternative. Additionally, the No-Build/No-Project Alternative would not include improvements to or reconstruction of rail and bus infrastructure to accommodate the passenger rail and bus service proposed under the Project. Existing conditions of the rail corridor would remain under this alternative. No adverse operational effects related to the transport, use or disposal of hazardous materials would occur.

Proposed Project

Construction Impacts

Building construction and construction equipment fueling and servicing could involve hazardous materials handling, including the use of commercially available hazardous materials such as fuels (gasoline, diesel, etc.), brake fluids, coolants, and paints. These activities would be short-term or one-time events; would be subject to federal health and safety requirements; and would not adversely affect on-site construction workers or the public.

During construction, hazardous materials handling could also involve removal or export of small amounts of contaminated soils from off site. If construction contractors encounter potentially hazardous wastes or identify an odor or substantially stained soil, all applicable regulations regarding discovery and response for hazardous materials would be followed immediately.

As described in Section 3.7.1, “Existing Setting,” several REC or historical REC sites were identified within or surrounding the Project Study Area. Ground disturbance during construction activities proposed near these sites could result in adverse effects related to hazardous wastes. Mitigation Measures HM-1 (Comply with Hazards and Hazardous Materials Recommendations) and HM-2 (Plan and Monitor for Hazardous Materials) would be required to reduce potentially adverse effects that could occur during construction.

Operational Impacts

The proposed Project would involve construction of track improvements along an existing rail corridor to accommodate operation of an extension to existing Metrolink service and a bus facility. Proposed project implementation would be conducted in accordance with all applicable federal requirements intended to manage the use of hazardous materials and prevent the release of hazardous wastes into the environment. No significant long-term adverse effects are anticipated to occur.

Currently, BNSF operates freight service along the rail corridor. The train engines generally operate using oil and diesel fuel. On occasion, freight trains can carry hazardous material for delivery to customers along the rail corridor. The Project proposes a commuter rail service extension, involving the transport of passengers only; hazardous materials would not be transported on commuter trains. The Project does not propose any change that would conflict with freight service. Implementation of the proposed Project would include double-tracking the rail corridor and other safety measures to facilitate train movements.

Routine fueling of commuter trains would not take place within the rail corridor. Any materials handling incidental to operational activities, including routine maintenance or refueling, would occur off site at existing Metrolink-designated maintenance facilities, such as the Colton facility, located south of the Project Study Area, or Taylor Yard, located north of Los Angeles Union Station and west of the Project Study Area. Because only small amounts of hazardous materials are anticipated to be used during operations and maintenance, no adverse effects would occur with implementation of the Project. Additionally, hazardous materials would be stored, used, and disposed of in accordance with existing federal hazardous materials regulations and would not adversely affect on-site construction workers or the public.

Pedestrian Overpass Design Options 1A and 1B and Pedestrian Underpass Design Option 2

Construction Impacts

Pedestrian Overpass Design Options 1A and 1B and Pedestrian Underpass Design Option 2 would require a similar level of construction activity. Therefore, temporary construction effects would be the same or similar to those anticipated to occur under the proposed Project. Ground disturbance during construction activities proposed near several REC or historical REC sites identified within or adjacent to the Project Study Area could result in adverse effects related to hazardous waste and materials handling. However, implementation of Mitigation Measures HM-1 (Comply with Hazards and Hazardous Materials Recommendations) and HM-2 (Plan and Monitor for Hazardous Materials) would reduce substantially adverse effects that could occur during construction.

Operational Impacts

Operational effects related to hazardous waste and materials handling would be similar to those anticipated to occur under the proposed Project. Implementation of the design options would be conducted in accordance with all applicable federal requirements intended to prevent or manage hazards or hazardous waste. Similar to the proposed Project, no significant long-term adverse effects are anticipated to occur.

3rd Street Open Design Option 3

Construction Impacts

Construction activities would be required for 3rd Street Open Design Option 3. However, the construction area would be smaller than that of the proposed Project. Temporary construction effects would be similar to or less than those anticipated to result under the proposed Project. Ground disturbance during construction activities proposed near several REC or historical REC sites identified within or adjacent to the Project Study Area could result in adverse effects related to hazardous materials. Implementation of Mitigation Measures HM-1 (Comply with Hazards and Hazardous Materials Recommendations) and HM-2 (Plan and Monitor for Hazardous Materials) would reduce substantially adverse effects.

Operational Impacts

Similar to the proposed Project, no significant long-term adverse effects are anticipated to occur. Implementation of the design options would be conducted in accordance with all applicable federal requirements intended to prevent or manage hazards or hazardous waste. No mitigation is required.

Hazardous emissions

No-Build/No-Project Alternative

Construction Impacts

The No-Build/No-Project Alternative assumes that the proposed Project would not occur and that existing conditions of the rail corridor would remain. No construction activities would occur under this alternative. Therefore, no temporary construction adverse effects related to hazardous emissions are anticipated to occur.

Operational Impacts

The proposed improvements to approximately 1 mile of track included as part of the proposed Project would not be implemented under this alternative. Additionally, the No-Build/No-Project Alternative would not include improvements to or reconstruction of rail and bus infrastructure to accommodate the passenger rail and bus service proposed under the Project. Existing conditions of the rail corridor would remain under this alternative. No adverse operational effects would occur.

Proposed Project

Construction Impacts

The proposed Project would include track improvements to an existing rail corridor and the development of new rail platforms and a bus facility, which would be located at the corner of Rialto Avenue and E Street. One school, Lytle Creek Elementary, is located approximately 900 feet (0.17 mile) southwest of the nearest portion of the Project Study Area at I Street. Allred Children's Center (0.26 mile), Richardson Preparatory High School (0.26 mile), Conrad Junior High School (0.32 mile), Alessandro Elementary School (0.38 mile), Harding School (0.38 mile), Juanita Blakely Jones Elementary School (0.41 mile), Burbank Elementary School (0.5 mile), Mt. Vernon Elementary School (0.75 mile), and San Bernardino Valley College (1 mile) are also located in the area surrounding the rail corridor, although they are not located within a 0.25 mile radius of the Project Study Area.

The proposed use may involve the release of hazardous emissions during construction. However, Lytle Creek Elementary is separated from the Project Study Area by a few city blocks with other land uses. In addition, emissions releases would occur in the area for only a short period of time (during project construction). Furthermore, construction activities would be conducted in accordance with all applicable federal requirements designed to reduce emissions. No other schools were identified within a 0.25-mile radius of the Project Study Area. Given these considerations, no adverse effects would occur.

The construction-related air emissions discussion provided in Section 4.3.5, "Air Quality and Global Climate Change," includes information regarding substantial adverse effects involving the release of potentially hazardous emissions.

Operational Impacts

The proposed Project may result in the release of hazardous emissions during train operations, a potentially substantial adverse effect. This will be discussed further in Section 4.3.5, "Air Quality and Global Climate Change."

Design Options

Construction Impacts

Similar to the proposed Project, Pedestrian Overpass Design Options 1A and 1B, Pedestrian Underpass Design Option 2, and 3rd Street Open Design Option 3 would require a similar level of construction activity. Temporary construction effects would be similar to those anticipated to occur under the proposed Project. Ground disturbance during construction activities proposed near these sites could result in adverse effects related to hazardous emissions. Section 4.3.5, "Air Quality and Global Climate Change," provides a detailed discussion of construction-related air quality effects.

Operational Impacts

Similar to the proposed Project, the design options may involve the release of hazardous emissions during operations (when a train movement is made) and may result in a substantial adverse effect. This will be discussed further in Section 4.3.5, "Air Quality and Global Climate Change."

Hazardous materials sites

No-Build/No-Project Alternative

Construction Impacts

This alternative assumes that the proposed Project would not occur and that existing conditions of the rail corridor would remain unchanged. No construction activities would occur under this alternative. Therefore, no adverse temporary construction effects related to the disturbance of soils on a recorded hazardous materials site are anticipated to occur.

Operational Impacts

This alternative assumes that the proposed Project would not occur and that existing conditions of the rail corridor would remain unchanged. Therefore, no adverse operational effects related to soil disturbance or hazardous materials sites are anticipated to occur.

Proposed Project

Construction Impacts

As listed in Table 3.7-1 and shown in Figure 3.7-1, 28 sites of concern have been recorded within and adjacent to the Project Study Area. Only 10 sites are located within the Project Study Area (one site is listed as a temporary impact within a potential staging/assembly area), and 18 sites are located outside the Project Study Area. No sites of concern were identified from the site reconnaissance and records review of the Short Way rail line located west of the Project. Additionally, following additional site investigation, a majority of the site locations identified in the Phase I investigations were determined to be free of detectable levels of hazardous substances. The remaining site locations are currently the subject of ongoing negotiations to enable site

access and sampling and appropriately characterize the presence of hazardous substances or lack thereof. To ensure that these remaining sites, as identified in the Phase I investigation, are more fully characterized as known or suspected contamination sites, further investigation is recommended (HDR Engineering, Inc. 2011c). Additionally, although surface sampling has indicated that a majority of the sites are clean at the surface, this determination does not preclude the potential for encountering hazardous materials at depth during construction. Therefore, Mitigation Measures HM-1 (Comply with Hazards and Hazardous Materials Recommendations) and HM-2 (Plan and Monitor for Hazardous Materials) are included to reduce adverse effects.

Operational Impacts

Operation of the proposed Project, including station improvements and operation of a 1-mile extension of Metrolink service, is not anticipated to result in substantially adverse effects related to recorded sites of concern. No significant long-term adverse effects are anticipated to occur, and no mitigation is required.

Design Options

Construction Impacts

Similar to the proposed Project, the design options would require construction activities. Temporary construction effects would be similar to those anticipated to result under the proposed Project. Ground disturbance during construction activities proposed near these sites could result in adverse effects. Implementation of Mitigation Measures HM-1 (Comply with Hazards and Hazardous Materials Recommendations) and HM-2 (Plan and Monitor for Hazardous Materials) would reduce substantially adverse effects related to the hazardous materials sites described previously.

Operational Impacts

Similar to the proposed Project, operation of the design options, including station improvements and the 1-mile extension of Metrolink service, is not anticipated to result in substantially adverse effects related to recorded sites of concern. No substantial long-term adverse effects are anticipated to occur, and no mitigation is required.

4.3.4.4 Avoidance, Minimization, and/or Mitigation Measures

Implementation of avoidance, minimization, and/or mitigation measures related to hazards provided in Section 3.7, “Hazards and Hazardous Materials,” would reduce adverse effects. These mitigation measures are listed below and detailed in Section 3.7.5.

- HM-1 (Comply with Hazards and Hazardous Materials Recommendations)
- HM-2 (Plan and Monitor for Hazardous Materials)

4.3.4.5 Cumulative Impacts

Implementation of the proposed Project or design options, in combination with other potential projects in the area, would not result in a cumulatively adverse effect related to hazardous wastes and/or materials because all would be generally site-specific. The inclusion of other projects in the area would not result in a substantially adverse effect for this or other projects, and any potentially adverse effect would be mitigated on a project-specific basis. No adverse effects would result. All future development projects in the area would be subject to the same federal regulations. These regulations require individual site evaluation and cleanup and

therefore would not contribute to effects cumulatively. As with the proposed Project, environmental review would be required for potential future projects, and compliance with federal regulations would be necessary. Therefore, implementation of the proposed Project or the design options would not contribute to a cumulative adverse effect related to hazardous wastes and materials, and a substantially adverse cumulative effect would not occur.

4.3.5 Air Quality and Global Climate Change

This section evaluates the effects of the proposed Project, No-Build/No-Project Alternative, and design options on air quality and global climate change. The technical information within this section is based on the Air Quality and Greenhouse Gas Technical Memorandum report (Appendix B) that was prepared for the proposed Project in February 2012.

4.3.5.1 Regulatory Environment

Air quality at the federal level is governed by the CAA and administered by the EPA. Refer to Section 3.3, "Air Quality and Global Climate," of this document for a detailed discussion regarding the regulatory setting for California laws and guidelines that are relevant to the assessment of air quality and climate change impacts.

Federal Regulations

Federal Clean Air Act

The CAA, enacted in 1963 and amended several times thereafter (including the 1990 amendments [CAAA 1990], which are the current governing regulations for air quality), establishes the framework for modern air pollution control. The EPA has established national ambient air quality standards (NAAQS) for criteria pollutants. There are six criteria pollutants: CO, NO_2, SO_2, O_3, PM10, PM2.5, and lead. Most standards have been set to protect public health. For some pollutants, standards have been based on values such as protection of crops, protection of materials, or avoidance of nuisance conditions.

Under the 1990 CAAA, the DOT cannot fund, authorize, or approve federal actions to support programs or projects that are not first found to conform to a SIP for achieving the goals of the CAA requirements. Conformity with the CAA takes place on two levels—first, at the regional level and second, at the project level. The proposed Project must conform at both levels to be approved.

Conformity at the project level requires hot-spot analysis if a region is designated nonattainment or maintenance for CO and/or PM. Hot-spot analysis is essentially the same, for technical purposes, as CO or PM analysis performed for NEPA purposes. In general, projects must not cause the CO or PM standards to be violated, and in nonattainment regions the project must not cause any increase in the number and severity of violations. If known CO or PM violations are located in the project vicinity, a project must include measures to reduce or eliminate the existing violations as well.

The proposed Project would be located in an area designated extreme nonattainment for O_3, serious nonattainment for PM10, nonattainment for PM2.5, serious maintenance for CO, and attainment for NO_2, SO_2, and lead. Therefore, conformity applies to the proposed Project.

Federal Hazardous Air Pollutant Regulations

The CAA identified 188 pollutants as being air toxics, which are also known as hazardous air pollutants. From this list, the EPA identified a group of 21 as mobile source air toxics (MSAT) in its final rule, Control of Emissions of Hazardous Air Pollutants from Mobile Sources (66 *Federal Register* 17235) in March 2001. From this list of 21 MSATs, the EPA has identified six MSATs (acrolein, benzene, 1,3-butadiene, diesel particulate matter plus diesel exhaust organic gases (diesel PM), formaldehyde, naphthalene, and polycyclic organic matter) as being priority MSATs. To address emissions of MSATs, the EPA has issued a number of regulations that

have and will continue to dramatically decrease MSATs through cleaner fuels and cleaner engines.

Federal Greenhouse Gas Regulations

Although there is currently no federal overarching law specifically related to climate change or the reduction of GHGs, regulation under the CAA is in development by the EPA that may be adopted in the next 2 years pursuant to the EPA's authority under the CAA. Foremost among recent developments has been the settlement agreements between the EPA, several states, and nongovernmental organizations to address GHG emissions from electric generating units and refineries, the U.S. Supreme Court's decision in *Massachusetts v. EPA,* and the EPA's "Endangerment Finding," "Cause or Contribute Finding," and Mandatory Reporting Rule. Although periodically debated in Congress, no federal legislation concerning GHG limitations is likely until at least 2013, if then.

Twelve U.S. states and cities including California, in conjunction with several environmental organizations, sued to force EPA to regulate GHGs as a pollutant pursuant to the CAA in *Massachusetts, et al. v. Environmental Protection Agency* 549 US 497 (2007). The court ruled that the plaintiffs had standing to sue, GHGs fit within the CAA's definition of a pollutant, and the EPA's reasons for not regulating GHGs were insufficiently grounded in the CAA. Under the Mandatory Reporting Rule, suppliers of fossil fuels, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons (MT) or more per year of GHGs are required to report annual emissions to the EPA. The first annual reports for the largest emitting facilities, covering calendar year 2010, were submitted to the EPA in 2011. The mandatory reporting rule does not limit GHG emissions but establishes a standard framework for emissions reporting and tracking of large emitters.

The EPA, National Highway Traffic Safety Administration (NHTSA), and ARB are currently working together on a joint rulemaking to establish GHG emissions standards for 2017 to 2025 model year passenger vehicles, which require an industry-wide average of 54.5 miles per gallon. The Interim Joint Technical Assessment Report for the standards evaluated four potential future standards ranging from 47 to 62 miles per gallon in 2025. The official proposal was released by both the EPA and NHTSA on December 1, 2011. The public comment period ended on January 30, 2012 (EPA et al. 2011b).

On August 9, 2011, the EPA and the NHTSA announced a new national program to reduce GHG emissions and improve fuel economy for new medium and heavy duty engines and vehicles sold in the U.S. The EPA and NHTSA finalized a joint rule that established a national program consisting of new standards for engines in model years 2014 through 2018. The agencies estimate that the combined standards will reduce CO_2 emissions by about 270 million metric tons and save about 530 million barrels of oil over the life of vehicles built for the 2014 to 2018 model years.

Executive Order 13514 is focused on reducing GHGs internally in federal agency missions, programs, and operations, but also directs federal agencies to participate in the interagency Climate Change Adaptation Task Force, which is engaged in developing a U.S. strategy for adaptation to climate change.

On February 19, 2010, the Council on Environmental Quality (CEQ) issued draft NEPA guidance on the consideration of the effects of climate change and GHG emissions. This guidance advises federal agencies that they should consider opportunities to reduce GHG emissions caused by federal actions, adapt their actions to climate change effects throughout the NEPA process, and address these issues in their agency NEPA procedures. Where

applicable, the scope of the NEPA analysis should cover the GHG emissions effects of a proposed action and alternative actions, as well as the relationship of climate change effects on a proposed action or alternatives. The guidance identified a reference point of 25,000 metric tons per year (mty) for direct CO_2e GHG emissions as an indicator that further NEPA review may be warranted. This reference point, however, is not intended to be used as a threshold for determining a significant impact or effect on the environment due to GHG emissions. The guidance also does not propose a reference point for indirect GHG emissions. The CEQ guidance is still considered draft as of the writing of this document. (Sutley 2010.)

4.3.5.2 Affected Environment

Ambient air quality is affected by climatological conditions, topography, and the types and amounts of pollutants emitted. The area potentially affected by the proposed Project is located within the City of San Bernardino, which is located within the South Coast Air Basin (SCAB). SCAB is an area of approximately 6,745 square miles bounded by the Pacific Ocean to the west and south, and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The SCAB includes all of Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The South Coast Air Quality Management District (SCAQMD) has divided the SCAB into air monitoring areas and maintains a network of air quality monitoring stations located throughout the SCAB.

The southern California region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the SCAB is a function of the area's natural physical characteristics (weather and topography) as well as human-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and dispersion of pollutants throughout the SCAB, making it an area of high pollution potential.

Please refer to Section 3.3, "Air Quality and Greenhouse Gases," of this document for a detailed discussion regarding the affected environment.

4.3.5.3 Environmental Consequences

Included in a conforming RTP and FTIP

Section 40 CFR 93.123 of the transportation conformity rule specifies that CO and PM2.5/PM10 hot-spot analyses (high short-term concentrations) are not required for construction-related activities that last less than 5 years in duration. Therefore, conformity does not apply to construction activities.

No-Build/No-Project Alternative

Construction Impacts

No construction would occur under the No-Build/No-Project Alternative. Therefore, the project would not result in impacts related to inclusion within a conforming RTP and FTIP.

Operational Impacts

Under the No-Build/No-Project Alternative, there would be no changes to the passenger rail and bus network in San Bernardino. As shown in Table 4.3.5-1, daily VMT on the regional roadway network would be higher without implementation of the proposed Project. However, since no project would be implemented, there would be no adverse effected related to inclusion within a conforming RTP and FTIP.

Table 4.3.5-1. Summary of Daily VMT by Scenario and Year

	Daily Vehicle Miles Traveled		
Scenario	2009	2014	2035
No Project	384,772,295	438,753,069	543,608,403
With Project	384,743,674	438,764,600	543,540,893
Source: Appendix B			

Proposed Project

Construction Impacts

Transportation conformity only applies to operational emissions associated with a project. Section 40 CFR 93.123 of the transportation conformity rule specifies that CO and PM2.5/PM10 hot-spot analyses are not required for construction-related activities that are less than 5 years in duration.[13] Therefore, conformity does not apply to construction activities.

Operational Impacts

Under federal and state mandates, the Regional Council of SCAG is tasked with developing a FTIP every 4 years. The improvements to the Rialto and E Street rail platforms and track improvements are listed as Project Number 200809 within SCAG's 2011 FTIP (SCAG 2011a). While the proposed Project is also listed in the SCAG 2011 FTIP under Project Number 20061012, the proposed Project is only listed as a part of the larger Redlands Passenger Rail Project. As such, the SCAG 2011 FTIP will be amended to reflect the DSBPRP as currently proposed, and separate from the Redlands Passenger Rail Project. In addition, SCAG lists the Project in the RTIP as "Metrolink Commuter Rail" for rail service expansion in San Bernardino under Project Number 4CR04 (SCAG 2011b). Similarly, the project is listed in SCAG's 2008 RTP (RTP ID 4TR0101) as part of the 10-mile "San Bernardino-Redlands Extension." The 2008 RTP is currently being updated, and the Draft 2012 RTP and EIR were released and are currently undergoing public review. The Omnitrans portion of the Project is included in the 2008 RTP Amendment #1 and 2008 RTIP Amendment #08-01 Project Listing as Project ID 200625 with the description "E Street Transit Corridor – from San Bernardino to Loma Linda." The amendments

[13] In most urban areas, high short-term concentrations of CO, known as "hot spots," can be a problem in San Bernardino County. Hot spots typically occur in areas of high motor vehicle use, such as in parking lots, at congested intersections, and along highways.

were adopted by SCAG on December 4, 2008. The design concept and scope of the Omnitrans facility have not changed materially from what was analyzed in the adopted amendments to the 2008 RTP and 2008 RTIP. The Omnitrans portion is also listed in the financially constrained Draft 2012 RTP as Project ID 200625.

Air quality modeling conducted by SCAG has shown that emissions associated with the RTP and FTIP are within the allowable air pollutant emission budgets. Consequently, the proposed Project is considered a conforming transportation project.

Because this project conforms with the most recently adopted RTP and FTIP; has not significantly changed in design concept and scope; there has been less than 3 years since the from the last major conformity milestone and a supplemental environmental document for air quality purposes has not been initiated, a new conformity determination is not required. Consequently, no adverse effect is anticipated. No mitigation would be required.

Design Options

Construction Impacts

Similar to the proposed Project, Pedestrian Overpass Design Options 1A and 1B, Pedestrian Underpass Design Option 2, and 3rd Street Open Design Option 3 would require a similar level of construction activity. Transportation conformity only applies to operational emissions associated with a project. Therefore, conformity does not apply to construction activities.

Operational Impacts

The scope of the transportation improvements proposed by the Project, as listed in the FTIP and RTP, would be essentially the same for the design options. Therefore, same as the proposed Project, no adverse effect is anticipated.

Project-level conformity for CO and PM2.5/PM10

No-Build/No-Project Alternative

Construction Impacts

Transportation conformity only applies to operational emissions associated with a project. Section 40 CFR 93.123 of the transportation conformity rule specifies that CO and PM2.5/PM10 hot-spot analyses are not required for construction-related activities that are less than 5 years in duration. Therefore, conformity does not apply to construction activities.

Operational Impacts

Under the No-Build/No-Project Alternative, the Project Study Area would remain in serious nonattainment for PM10 NAAQS, nonattainment for PM2.5 NAAQS, and serious maintenance for CO NAAQS. No change or improvement with respect to localized CO and PM2.5/PM10 emissions within the project corridor would occur. Therefore, the No-Build/No-Project Alternative would not result in an adverse effect related to CO and PM2.5/PM10 hot spots.

Proposed Project

Construction Impacts

Transportation conformity only applies to operational emissions associated with a project. Section 40 CFR 93.123 of the transportation conformity rule specifies that CO and PM2.5/PM10 hot-spot analyses are not required for construction-related activities that are less than 5 years in duration. Therefore, conformity does not apply to construction activities.

Operational Impacts

CO

Project traffic during the operational phase of the Project would have the potential to create congestion at nearby intersections, thereby potentially leading to localized CO hot spots. CO transportation conformity analysis is based on the Transportation Project-Level Carbon Monoxide Protocol, which details a step-by-step procedure to determine whether project-related CO concentrations have a potential to generate new air quality violations, worsen existing violations, or delay attainment of NAAQS and CAAQS for CO. CO hot-spot impacts were evaluated through CO dispersion modeling using EMFAC2007, the CALINE4 model, and traffic data provided by the traffic engineers. As indicated in Table 3.3-8, the Project would not cause or contribute to new air quality violations, worsen existing violations, or delay timely attainment of CO NAAQS. The impact of traffic conditions from the proposed Project on ambient CO levels is considered less than significant and not adverse. No mitigation is required.

PM2.5/PM10

The EPA requires lead agencies to conduct a quantitative hot-spot analysis for projects in PM2.5 and PM10 nonattainment and maintenance areas. The FHWA and EPA guidance identifies examples of projects that are most likely Projects of Air Quality Concern (POAQCs) and details a qualitative step-by-step screening procedure to determine whether project-related particulate emissions have a potential to generate new air quality violations, worsen existing violations, or delay attainment of NAAQS for PM2.5 or PM10. POAQCs are certain highway and transit projects that involve significant levels of diesel traffic or any other project identified in the PM2.5 or PM10 SIP as a localized air quality concern. Transportation projects considered to be a POAQC, or any other project that is identified by the PM2.5 or PM10 SIP as a localized air quality concern, must undergo hot-spot analysis in PM2.5 or PM10 nonattainment and maintenance areas. Because the proposed Project Study Area is located in a serious nonattainment area with regards to the PM10 standard and nonattainment area with regards to the PM2.5 standard, an evaluation must be made to determine whether a PM hot-spot analysis must be performed.

The proposed Project is an extension of regional passenger rail service and involves construction of an Omnitrans bus facility to accommodate existing approved bus service. The Omnitrans facility will result in up to approximately 849 daily bus trips, and would primarily be served by the entirely-CNG Omnitrans fleet. VVTA (which has 1 diesel bus) and MARTA (which has 8 diesel buses) would also serve the facility, but daily trips would be infrequent. The Omnitrans facility is previously approved (by Omnitrans) but has yet to be constructed, and the proposed Project is not expected to change the existing number, routes, and movements of diesel buses beyond the relocation of the bus bays closer to the proposed project terminus. The

facility would not be considered to be a "regionally significant project"[14] under 40 CFR 93.101, nor would it result in a significant number of diesel vehicles that would congregate at a single location. Consequently, the proposed Project is not considered a POAQC for PM10/PM2.5 and the CAA and 40 CFR 93.116 requirements were met without a hot-spot analysis. Confirmation of this determination will be made during interagency consultation with the appropriate local, state, and federal agencies, and the final analysis will be identified in the final environmental document.

Design Options

Construction Impacts

Similar to the proposed Project, Pedestrian Overpass Design Options 1A and 1B, Pedestrian Underpass Design Option 2, and 3rd Street Open Design Option 3 would require a similar level of construction activity. Transportation conformity only applies to operational emissions associated with a project. Therefore, conformity does not apply to construction activities.

Operational Impacts

The number of vehicle trips and amount of PM and CO emissions generated by the proposed Project would be essentially the same for the proposed design options. Consequently, the proposed design options are not considered a POAQC for PM10/PM2.5 and the CAA and 40 CFR 93.116 requirements were met without a hot-spot analysis. Therefore, same as the proposed Project, no adverse effect is anticipated.

Greenhouse gases and climate change

No-Build/No-Project Alternative

Construction Impacts

No construction would occur under the No-Build/No-Project Alternative. Therefore, the No-Build/No-Project Alternative would not result in impacts related to GHGs and climate change.

Operational Impacts

Under the No-Build/No-Project Alternative, there would be no changes to the passenger rail, bus network, or regional roadway network within the Project Study Area. No change or improvement with respect to GHGs and climate change within the project corridor would occur. Therefore, the No-Build/No-Project Alternative would not result in an adverse effect related to GHGs and climate change.

[14] Regionally significant projects are those projects that serve regional transportation needs. Regionally significant projects can include projects that provide access to areas outside region, such as a highway, major activity centers in region, such as a sports complex, major planned developments, such as a new retail mall, and transportation terminals, such as a train depot.

Proposed Project

Construction Impacts

Short-term construction activities would result in GHG emissions from fuel combustion within off- and onroad construction equipment and vehicles. Emissions associated with the approximately 18-to-24-month construction period are summarized in Table 3.3-9. Consistent with SCAQMD draft guidelines, construction emissions are summed and amortized over a 30-year project life, and then added to operational emissions.

Operational Impacts

Implementation of the proposed Project would increase train activity and result in new motor vehicle trips to the park and ride lot. Additionally, availability of the park and ride lot would create new trips and re-distribute others from within the region. Further, the proposed Project would make available mass transit opportunities that would remove a number of single occupancy vehicles within the transportation network, resulting in a decrease in regional VMT. Annual operational emissions were summed and added to the amortized construction totals. Note that motor vehicle emission calculations herein do not account for reductions associated with implementation of national- and state-wide GHG reduction regulations and strategies, including Pavley, LCFS, among others.

GHG emissions would increase with implementation of the proposed Project during 2035 forecast year with-project conditions when compared to no-project conditions. While the proposed Project would reduce regional VMT by approximately 67,510 (0.012% decrease) miles per day and redistribute approximately 13,260 VMT associated with park and ride trips, emissions associated with regional VMT would increase slightly over no-project conditions, as a result of an increase in traffic speeds, causing a slight increase in 2035 emissions over no-project conditions.

As discussed in Section 3.5.4 in Appendix B, significant and adverse impacts with respect to GHG emissions are analyzed only for the cumulative forecast year 2035, as GHG impacts are cumulative in nature. As shown in Table 3.3-10, GHG emissions would increase with implementation of the proposed Project during 2035 forecast year with-project conditions when compared to no-project conditions. While the proposed Project would reduce regional VMT by approximately 67,510 (0.012% decrease) miles per day and redistribute approximately 13,260 VMT associated with park and ride trips, emissions associated with regional VMT would increase slightly over no-project conditions, as a result of increase traffic speeds, resulting in a slight increase in 2035 emissions over no-project conditions. The net change in emissions under full buildout conditions in 2035 are not in excess of the CEQ reference point of 25,000 MTCO2e/yr. Consequently, there would be no adverse effect under NEPA.

Design Options

Construction Impacts

Similar to the proposed Project, Pedestrian Overpass Design Options 1A and 1B, Pedestrian Underpass Design Option 2, and 3rd Street Open Design Option 3 would require a similar level of construction activity. Short-term construction activities would result in GHG emissions from fuel combustion within off and onroad construction equipment and vehicles. Consistent with SCAQMD draft guidelines, construction emissions are summed and amortized over a 30-year project life, and then added to operational emissions.

Operational Impacts

The operational improvements proposed by the Project and increased train activity and new motor vehicle trips would be the same for the design options. Similar to the proposed Project, the design options would make available mass transit opportunities that would remove a number of single occupancy vehicles within the transportation network, resulting in a decrease in regional VMT. The net change in emissions under full buildout conditions in 2035 would not be in excess of the CEQ reference point of 25,000 MTCO2e/yr. Consequently, same as the proposed Project, no adverse effect is anticipated.

4.3.5.4 Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, or mitigation measures are required.

4.3.5.5 Cumulative Impacts

Cumulative impacts on air quality and climate change would not occur. The proposed Project is listed in a conforming RTP and FTIP, and would be consistent with the AQMP and SIP, which are drafted to bring the region into attainment. The regional conformity analysis is cumulative in nature, in that the RTP and FTIP are based on all past, present, and foreseeable transportation projects in the region. The Project and associated design options proposing the same rail and bus transportation sources would not result in any adverse effects with respect to project-level conformity (CO and PM2.5/PM10), as pollutant concentrations would not exceed NAAQS under future year cumulative conditions. Therefore, implementation of the proposed Project or design options would not contribute to a cumulative adverse effect related to air quality and GHGs, and a substantial adverse cumulative effect would not occur.

4.3.6 Noise and Vibration

This section evaluates the effects of the proposed Project, No-Build/No-Project Alternative, and design options related to noise and vibration. The technical information within this section is based on the Noise and Vibration Technical Memorandum report (Appendix I) that was prepared for the proposed Project in February 2012.

4.3.6.1 Regulatory Environment

Federal Regulations

Refer to Section 3.10, "Noise and Vibration," for state and local laws and regulations relevant to this Project. Several federal laws and guidelines are relevant to the assessment of ground transportation noise and vibration impacts:

Noise

NEPA requires the preparation of an EIS for federal or federally supported projects that will affect environmental quality, including projects that cause noise impacts.

The Noise Control Act of 1972 (42 USC 4910) was the first comprehensive statement of national noise policy. It declared that "it is the policy of the U.S. to promote an environment for all Americans free from noise that jeopardizes their health or welfare."

The OSHA Occupational Noise Exposure Hearing Conversation Amendment (Federal Register [FR] 48 (46), 9738–9785) establishes noise exposure limits for the workplace, specifically relevant during construction.

EPA Railroad Noise Emission Standards (40 CFR 201) pertain to noise emissions from railroads.

FRA Railroad Noise Emission Compliance Regulations (49 CFR 210) prescribe minimum compliance regulations for enforcement of the Railroad Noise Emission Standards established by EPA in 40 CFR part 201.

The U.S. Department of Transportation has implemented these mandates and published impact assessment procedures and criteria pertaining to noise. Noise impact criteria have been adopted by the FTA to assess the contribution of noise from conventional rail sources to the existing environment. These guidelines establish methods for analyzing and assessing noise and vibration impacts. The impact criteria are based on the goal of maintaining a noise environment considered acceptable for land uses where noise may have an effect. The noise exposure is measured in terms of the Ldn for residential land uses or in terms of the hourly equivalent sound level (L_{eq}[h]) for other land uses.

In FTA's Transit Noise and Vibration Impact Assessment, noise impact criteria for construction and operation of rail facilities are based on the change in outdoor noise exposure using a sliding scale with three receptor categories and three degrees of impact. These criteria apply to various surface transportation modes, including heavy rail. They respond to heightened community annoyance caused by late-night or early-morning service as well as communities' varying sensitivity to noise from projects during different ambient noise conditions.

For operational rail noise, FTA's three receptor land use categories are as follows:

- Noise Category 1: Tracts of land where quiet is an essential element in their intended purpose, such as outdoor amphitheaters, concert pavilions, and National Historic Landmarks with significant outdoor use.
- Noise Category 2: Residences and buildings where people normally sleep, including homes, hospitals, and hotels.
- Noise Category 3: Institutional land uses (schools, places of worship, libraries) with use typically during the daytime and evening. Other uses in this category can include medical offices, conference rooms, recording studios, concert halls, cemeteries, monuments, museums, historical sites, parks, and recreational facilities.

These corresponding levels of noise impact are then considered in the context of the "whole" project and existing environmental conditions to determine the overall noise effect of the proposed Project under NEPA.

The categories are determined from general land use information about each receptor. No Category 1 receptors are located within 1 mile of the Project's proposed alignment. Outdoor hourly L_{eq} applies to Categories 1 and 3, whereas outdoor L_{dn} applies to Category 2.

Noise impacts on these three categories as a result of a proposed Project are assessed by comparing the existing and future project-related outdoor noise levels. The criterion for each degree of impact is based on a sliding scale that is dependent on the existing noise exposure and the increase in noise exposure due to the Project. These potential noise impacts fall into three types: "No Impact," "Moderate Impact," and "Severe Impact." These terms correlate well with the CEQA impact terminology (i.e., no impact, less than significant impact and potentially significant impact):

- No Impact - The project, on average, will result in an insignificant increase in the number of instances where people are "highly annoyed" by new noise.
- Moderate Impact - The change in cumulative noise is noticeable to most people, but may not be sufficient to cause strong, adverse community reactions.
- Severe Impact - A significant percentage of people would be highly annoyed by the noise, perhaps resulting in vigorous community reaction.

As an example of impact evaluation, consider the FTA's sliding impact criterion for Category 2 receptors. An existing environment of 50 dBA L_{dn} would experience a moderate impact if the rail project created a noise exposure of approximately 53 dBA to 59 dBA L_{dn}. An existing environment of 65 dBA L_{dn} would be classified as a moderate impact if the rail project created a noise exposure of 61 dBA to 66 dBA L_{dn}. Those same "existing" environments (50 or 65 dBA L_{dn}) would be classified as having a severe impact if the rail project created noise exposure levels greater than 59 dBA and 66 dBA L_{dn}, respectively.

Vibration

Vibration impact levels, stated as the maximum root-mean-square (RMS) vibration level, are affected by the receptor land use category and the number of vibration events per day. The impact level also depends on the type of analysis being conducted (i.e., ground-borne vibration or ground-borne noise). FTA provides guidelines to assess human response to different levels of ground-borne noise and vibration. These are shown in Table 4.3.6-1. The Project Study Area does not have any Category 1 land uses within approximately 2,000 feet of the alignment. The majority of vibration-sensitive land uses in the Project Study Area are Category 2 land uses. The

Depot is considered a Category 3 land use because it includes office and conference room uses. The term "frequent events" is defined as more than 70 vibration events per day, while the term "infrequent events" is defined as less than 70 vibration events per day. Ground-borne noise is normally not a consideration when trains are at grade. In these situations, the airborne noise is the major consideration. Ground-borne noise generally becomes an important consideration for subways or other projects in which part of the alignment includes a tunnel.

Table 4.3.6-1. Ground-Borne Vibration and Noise Impact Criteria

	Ground-borne Vibration Impact Levels (VdB re 1 micro inch/sec)		Ground-borne Noise Impact Levels (dB re 20 micro Pascals)	
Land Use Category	Frequent Events[1]	Infrequent Events[2]	Frequent Events[1]	Infrequent Events[2]
Category 1: Buildings where vibration would interfere with interior operations	65 VdB[3]	65 VdB[3]	N/A[4]	N/A[4]
Category 2: Residences and buildings where people normally sleep.	72 VdB	80 VdB	35 dBA	43 dBA
Category 3: Institutional land uses with primarily daytime use.	75 VdB	83 VdB	40 dBA	48 dBA

Notes:
1. The term frequent events is defined as more than 70 vibration events per day.
2. The term infrequent events is defined as fewer than 70 vibration events per day.
3. This criterion limit is based on levels that are acceptable for most moderately sensitive equipment, such as optical microscopes. Vibration-sensitive manufacturing or research will require detailed evaluation to define the acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the heating, ventilation, and air-conditioning systems and stiffened floors.
4. Vibration-sensitive equipment is not sensitive to ground-borne noise.
Source: FTA 2006.

FTA analysis guidelines call for investigation of the potential for vibration-induced damage to "fragile" or "extremely fragile" buildings. Damage to a building is possible (but not necessarily probable) if ground vibration levels exceed the following criteria:

- 0.20-inch-per-second peak particle velocity (PPV) (approximately 100 VdB) for fragile buildings.
- 0.12-inch-per-second PPV (approximately 95 VdB) for extremely fragile buildings. No fragile or extremely fragile buildings are in proximity to the Project. The Depot is a functioning building with frequent daily arrivals and departures of commuter and passenger trains as well as passbys of freight trains.

4.3.6.2 Affected Environment

Within the Project Study Area, residential land uses in the western portion of the rail corridor and the motel at the eastern end of the Project Study Area are considered noise- and vibration-sensitive. Aside from residential land uses, the nearest identified noise- or vibration-sensitive use is a recording studio, located approximately 2,000 feet from the Project Study Area and, based on a screening analysis, beyond relevant potential impact areas. The first floor of the Depot includes a passenger waiting area and a snack booth. SANBAG offices also occupy a portion of the first and second floors of this historic Depot. The general topography of the

regional area is flat. The rail line is at-grade with the surrounding area, with the exception of I-215, which is elevated and above both the local terrain and the rail line. Existing vibration sources in the Project Study Area include motor vehicle traffic along local roads and I-215 as well as trains on the existing tracks. Refer to Section 3.10, "Noise and Vibration," of this document for a detailed discussion regarding the affected environment.

4.3.6.3 Environmental Consequences

This section evaluates the potential effects of the proposed Project, No-Build/No-Project Alternative, and design options related to noise and vibration. The environmental consequences are based on technical reports prepared for the proposed Project. Additional detail and analysis can be found in Appendix I, including all tables and figures within the Noise Technical Memorandum, which presents the analysis of potential adverse noise/vibration impacts.

Increased noise levels during construction and operation

No-Build/No-Project Alternative

Construction Impacts

This alternative assumes that the proposed Project would not occur and that existing conditions along the rail corridor would remain. No construction activities would occur under this alternative. Therefore, no adverse temporary construction effects related to noise are anticipated.

Operational Impacts

This alternative assumes that the proposed Project would not occur and that existing conditions along the rail corridor would remain. Therefore, no adverse operational effects related to noise are anticipated.

Proposed Project

Construction Impacts

Construction of the proposed Project would result in temporary but relatively high levels of noise along the rail corridor (see Appendix I for a summary of the construction noise data). Noise impacts are predicted to occur at Category 2 land uses along the rail corridor at distances of up to approximately 240 feet under daytime impact criteria and approximately 410 feet under nighttime impact criteria. Although it is anticipated that most construction work would take place during daytime hours, some work may require nighttime work (e.g., work at major street crossings).

The construction noise effect is considered adverse. Implementation of Mitigation Measures NOI-1 (Employ Noise-Reducing Measures during Construction) and NOI-2 (Prepare a Community Awareness Program for Project Construction) would minimize this adverse effect.

Operational Impacts

Rail Noise. The results of the rail noise impact assessment are summarized in Appendix I. Increased rail noise would result in adverse effects to residential land uses along portions of the rail corridor. Of the total of approximately 240 residential properties within the screening area used for the rail noise analysis, adverse effects would be considered moderate at a total of 10

receivers, representing 28 residential land uses (represented by Receivers 6, 7, 14, 16, 24, 26, 27, 31, and 32). Adverse effects are considered severe at a total of 11 receivers, representing 30 residential land uses (represented by Receivers 11, 15, 17, 18, 19, 22, 25, 28, 29, 35, and 36). (See Figure 4.3.6-1.) Table 6-1 in Appendix I provides additional detail on the level of effect that would be experienced at each of the receiver locations.

To address these adverse effects, source treatments, such as specifications of quieter vehicles, undercar absorption, and wheel skirts, were considered by SANBAG but were rejected as not feasible because of the need to have interchangeability of rolling stock. Path treatments (e.g. sound barriers) are widely used to mitigate noise impacts in a variety of settings. While sound barriers are generally effective in reducing noise impacts, additional factors, such as appropriateness in the context of the project setting and existing land use designations for the Project Study Area, need to be taken into consideration for the proposed Project.

For example, the physical scale of the sound barriers at the locations depicted in Figure 4.3.6-2 would make them an unusual feature relative to the existing land uses surrounding the rail corridor. Construction of sound barriers and the installation of hundreds of feet of very tall (10- to 12-foot) block walls would create a distinct and significant aesthetic change to the community character of the area and may result in a significant and adverse impact on adjacent land uses. In particular, the sound barriers with a north-south orientation could obstruct afternoon or morning sunlight to adjacent residences. In the same context, the Project Study Area is frequently subject to vandalism (graffiti); therefore, sound barriers would pose a likely target for vandalism that could further contribute to existing urban blight conditions within the Project Study Area.

It is also important to consider the context of existing and planned land uses along the rail corridor. For example, land uses from the I-215 undercrossing, westward to South E Street are predominantly commercial/industrial. Residences located north of Rialto Avenue to 3rd Street and between I-215 on the east and K Street on the west are within a General Plan land use designation of “IL,” and zoning for this area is a mix of Industrial and Residential designations. In this context, the noise impact analysis as presented in Appendix I considers the most conservative land use category (i.e., residential uses) within the Project Study Area even though it contains a vertical mix of land uses. Additionally, in most instances, these residential uses are considered non-conforming uses in relation to the City’s General Plan land use designations and associated zoning. If considered in the context of existing zoning, all but one of the severely affected receptors would be considered Category 3 uses and no severe impacts would be identified associated with project implementation.

Based on these land use, aesthetic, and procedural considerations, it may not be appropriate for this Project to construct sound barriers. Although sound barriers in the form of solid walls were considered in the Noise Impact Assessment, the direct and indirect effects of constructing a sound barrier could outweigh benefits in terms of noise reductions. For this reason, other mitigation strategies, including the establishment of quiet zones, incorporation of building insulation, and rail lubrication were considered and are discussed further below. However, sound barriers are provided as Mitigation Measure NOI-7 (Construct Sound Barriers) to reduce noise levels at receivers with severe or moderate noise impacts.

Quiet Zones. The establishment of a quiet zone would require implementation of a number of Supplemental Safety Measures, such as four-quadrant gate systems and temporary closures at crossings, which would allow the rail operator to not sound the horn on the locomotives as otherwise proscribed by the safety rules of the FRA. Implementation of Mitigation Measure NOI-4 (Establish Quiet Zones) would reduce the number of affected receivers. With implementation

Figure 4.3.6-1
Rail Noise Impact Areas
Downtown San Bernardino Passenger Rail Project

Figure 4.3.6-2
Evaluated Soundwall and Building Noise Insulation Locations
Downtown San Bernardino Passenger Rail Project

of quiet zones for the at-grade crossings at 2nd Street, Rialto Avenue/I Street, and G Street, adverse effects from project-related rail noise would be reduced in terms of scale and intensity. Adverse effects would be minimized to moderate levels at nine receivers, representing 19 residential land uses, and to severe levels at three receivers, representing 14 residential land uses. For additional context, the establishment of quiet zones would minimize adverse noise effects to the extent that 7.3% of the Category 2 uses within the project screening area would be adversely affected by rail noise.

Building Noise Insulation. There are three residential structures (represented by Receivers 11 and 15) in the Project Study Area where sound barriers would not be effective as noise reduction, as detailed in Appendix I. The mitigation measure (NOI-5 [Provide Building Noise Insulation to Severe- and Moderate-Impact Residences Where Sound Barriers Are Infeasible]) determined to be most effective and feasible for Receivers 11 and 15 was building noise insulation. Existing windows, doors, and seals facing the alignment would be replaced with acoustically rated items, and any gaps would be sealed and caulked. Additionally, air conditioning would be provided to ensure that the windows could remain closed. With implementation of the noise insulation, adverse noise effects at Receivers 11 and 15 would be minimized.

Rail Lubrication. Wheel squeal on tight-radius curves can be a particularly annoying community noise. It is usually possible to reduce wheel squeal substantially with wayside applicators that apply a friction control material to the top of the rail and/or a lubricant to the gage face of the rail.

Installation of wayside applicators (Mitigation Measure NOI-6 [Lubricate Wayside Rail]) is recommended for all major curves on the project alignment. If the wayside applicators are not able to reduce squeal to an acceptable level, additional reductions may be possible through customized profiling of the rail to reduce the forces required for trains to negotiate the curves.

Traffic Noise. Given the data included in Appendix I, none of the representative modeled receivers would experience an increase in traffic noise equating to an adverse effect. Therefore, no adverse effect would occur, and no mitigation is required.

Omnitrans Bus Facility and Rail Platform Parking Lot. Noise from the proposed Omnitrans Bus Facility and the Project's proposed parking lot adjacent to the rail platform near Rialto Avenue and E Street was evaluated. The FTA's screening procedure calculations found that the nearest noise-sensitive land use is outside the adjusted screening distance for the bus facility and parking lot. Therefore, there would be no adverse effect from the proposed parking lot. No mitigation is required.

Increased vibration levels during construction and operation

No-Build/No-Project Alternative

Construction Impacts

This alternative assumes that the proposed Project would not occur and that existing conditions along the rail corridor would remain. No construction activities would occur under this alternative. Therefore, no adverse temporary construction effects related to vibration are anticipated.

Operational Impacts

This alternative assumes that the proposed Project would not occur and that existing conditions along the rail corridor would remain. Therefore, no adverse operational effects related to vibration are anticipated.

Proposed Project

Construction Impacts

Construction of the proposed Project would result in temporary vibration along the rail corridor from use of heavy equipment and machinery (see Appendix I for the construction vibration data summary). FTA construction vibration damage thresholds would not be exceeded at any of the representative receiver locations, indicating that the potential for damage to any of the structures along the rail corridor is low. FTA construction annoyance criteria would be exceeded at representative receivers as far as 120 feet from the rail corridor during operation of construction equipment, with relatively high levels of vibration from equipment such as vibratory rollers. The construction vibration (annoyance) levels are considered an adverse effect. Implementation of Mitigation Measure NOI-2 (Prepare a Community Awareness Program for Project Construction) would minimize this effect.

Operational Impacts

Operation of the proposed Project would result in ground-borne vibration along the rail corridor. Adverse effects are predicted to occur at residential land uses within the area near the rail corridor located east of the Depot and west of I-215 (represented by Receivers 11 and 15) and within the area near the rail corridor located west of the Depot and north of the IEMF (Receiver 35) (see Appendix I for a summary regarding these locations),

The ground-borne vibration levels would be considered an adverse effect. Implementation of Mitigation Measure NOI-3 (Use Ballast Mats, Resiliently Supported Ties, or Measures of Comparable Effectiveness on Portions of the Rail near Sensitive Receptors) would minimize this effect. With mitigation, no adverse ground-borne noise effects are anticipated from implementation of the proposed Project.

Design Options

Construction Impacts

The design options include the same Project Study Area (except for 3rd Street Open Design Option 3, which includes the reduced 3rd Street Open Design Option 3 Study Area) and essentially the same or similar project components, with the differentiation involving pedestrian egress at the Depot or the configuration of 3rd Street. Therefore, effects from construction-related vibration would be the same as those of the proposed Project discussed above for Pedestrian Overpass Design Options 1A and 1B, Pedestrian Underpass Design Option 2, and 3rd Street Open Design Option 3.

Operational Impacts

The design options include the same Project Study Area (except for 3rd Street Open Design Option 3, which includes the reduced 3rd Street Open Design Option 3 Study Area) and essentially the same or similar project components, with the differentiation involving pedestrian egress at the Depot or the configuration of 3rd Street. Therefore, effects from operation-related vibration would be the same or similar to those of the proposed Project discussed above for

Pedestrian Overpass Design Options 1A and 1B, Pedestrian Underpass Design Option 2, and 3rd Street Open Design Option 3.

4.3.6.4 Avoidance, Minimization, and/or Mitigation Measures

Implementation of avoidance, minimization, and/or mitigation measures related to noise provided in Section 3.10, "Noise and Vibration," would reduce adverse effects. These mitigation measures are listed below and detailed in Section 3.10.5.

- NOI-1 (Employ Noise-Reducing Measures during Construction)
- NOI-2 (Prepare a Community Awareness Program for Project Construction)
- NOI-3 (Use Ballast Mats, Resiliently Supported Ties, or Measures of Comparable Effectiveness on Portions of the Rail near Sensitive Receivers)
- NOI-4 (Establish Quiet Zones)
- NOI-5 (Provide Building Noise Insulation to Severe- and Moderate-Impact Residences Where Sound Barriers Are Infeasible)
- NOI-6 (Lubricate Wayside Rail)

Additionally, the use of sound barriers is identified as Mitigation Measure NOI-7 in the NEPA analysis to reduce severe to moderate noise impacts.

NOI-7: Construct Sound Barriers. Sound barriers will be constructed along portions of the rail alignment to reduce noise levels at receivers with severe or moderate noise impacts. Barrier locations and details are contained in Table 8-2 of Appendix I and are shown in Figure 4.3.6-2.

4.3.6.5 Cumulative Impacts

The noise and vibration analysis contained herein represents a cumulative impact analysis, looking at the effects of the proposed Project and design options and the growth in traffic and other noise-generating sources anticipated in the region. Construction of the proposed Project would result in temporary but relatively high levels of noise along the railway. The construction noise effect is considered severe. Implementation of Mitigation Measures NOI-1 (Employ Noise-Reducing Measures during Construction) and NOI-2 (Prepare a Community Awareness Program) would minimize this adverse effect. Adverse impacts (annoyance) would also occur as a result of construction vibration. Implementation of Mitigation Measure NOI-3 (Use Ballast Mats, Resiliently Supported Ties, or Measures of Comparable Effectiveness on Portions of the Rail near Sensitive Receivers) would minimize this effect. As described in the project-level analysis, adverse effects would occur from project-related rail noise. Implementation of Mitigation Measures NOI-4 (Establish Quiet Zones), NOI-5 (Provide Building Noise Insulation to Severe- and Moderate-Impact Residences Where Sound Barriers Are Infeasible), NOI-6 (Lubricate Wayside Rail), and/or NOI-7 (Construct Sound Barriers) would minimize these effects.

Considerable construction noise effects could occur if other projects are constructed concurrently with and in the general vicinity of the proposed Project or the design options. However, with implementation of mitigation measures, construction-related effects would not result in a cumulative adverse effect.

Without mitigation, adverse effects from rail noise during operations would represent a cumulative impact. However, through the implementation of one or more of the mitigation measures identified for rail noise, these adverse effects could be minimized or avoided for the

vast majority of the Category 2 land uses (e.g. greater than 92%) within the Project Study Area. With implementation of all mitigation measures, these adverse effects would be avoided for the all of the Category 2 land uses within the Project Study Area. Therefore, with mitigation the Project would not contribute to a substantial cumulative adverse effect.

4.3.7 Energy, Utilities, and Public Services

This section evaluates the effects of the proposed Project, No-Build/No-Project Alternative, and design options on impacts related to energy. See Section 3.12, "Less-than-Significant Effects of the Proposed Project" for a discussion regarding public services and utilities.

4.3.7.1 Regulatory Environment

CEQ regulations implementing NEPA state that proper consideration must be given to the energy requirements and conservation potential of various alternatives of a proposed project as well as mitigation measures. NEPA (42 USC Part 4332) requires the identification of all potentially significant impacts on the environment, including energy impacts.

EPA

EPA regulates energy use to protect human health and the environment. The following is a listing of the agency's key energy-related regulations by topic (EPA 2012).

- **Transportation.** Regulations for air pollution from motor vehicles, engines, and the fuels used to operate them.
- **Stationary Sources.** Regulations for non-moving sources such as fixed-site producers of pollution such as power plants, chemical plants, oil refineries, manufacturing facilities, and other industrial facilities.
- **Clean Air Markets.** Various market-based regulatory programs designed to improve air quality by reducing outdoor concentrations of fine particles, sulfur dioxide, nitrogen oxides, and mercury.
- **Nuclear Power Radiation Protection Standards.** Radiation protection standards to safeguard human health and the environment.
- **Underground Injection Control.** Regulations for the construction, operation, permitting, and closure of injection wells that place fluids underground for storage or disposal.

California Energy Commission

The CEC is the state's primary energy policy and planning agency. Created by the Legislature in 1974 and located in Sacramento, the CEC's responsibilities include:

- Forecasting future energy needs and keeping historical energy data.
- Licensing thermal power plants 50 megawatts or larger.
- Promoting energy efficiency by setting the state's appliance and building efficiency standards and working with local government to enforce those standards.
- Supporting public interest energy research that advances energy science and technology through research, development, and demonstration programs.
- Supporting renewable energy by providing market support to existing, new, and emerging renewable technologies; providing incentives for small wind and fuel cell electricity systems; and providing incentives for solar electricity systems in new home construction.
- Developing and implementing the state Alternative and Renewable Fuel and Vehicle Technology Program to reduce the state's petroleum dependency and help attain the state climate change policies.

- Administering more than $300 million in American Reinvestment and Recovery Act funding through the state energy program, the energy efficiency conservation and block grant program, the energy efficiency appliance rebate program, and the energy assurance and emergency program.
- Planning for and directing state response to energy emergencies (CEC 2011).

California Public Utilities Commission

The CPUC regulates privately-owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies. The CPUC serves the public interest by protecting consumers and ensuring the provision of safe, reliable utility service and infrastructure at reasonable rates, with a commitment to environmental enhancement and a healthy California economy.

4.3.7.2 Affected Environment

State Energy Use and Resources

Petroleum and natural gas are the two main fuel sources for California's energy system. In addition to these fuel sources, a small portion of the City of San Bernardino's energy also comes from geothermal sources. In 2007, Californians consumed an estimated 20 billion gallons of gasoline and diesel fuel on the state's roadways, an increase of nearly 50 percent over the last 20 years. The nearly 26 million registered vehicles operating in California produce about 40 percent of the state's GHG emissions annually (CEC 2010).

Natural gas is California's preferred fuel because of its clean-burning capabilities. One use for natural gas is to generate electricity. However, the production of electricity requires the consumption of other energy resources, including water, wind, oil, gas, coal, solar, geothermal, and nuclear. Most of these resources are used as heat sources for steam turbines that drive electric generators. The electricity generated is distributed via a network of transmission and distribution lines, commonly known as a power grid.

Fuel for automobiles is a large portion of oil consumption. The CEC has projected that by 2020, 45.5 million Californians will have 31.5 million registered vehicles, consuming 23.8 billion gallons of gasoline and diesel fuel annually. The CEC's base-case forecast projects on-road gasoline demand to increase from 14.2 billion gallons in 2000 to 17.2 billion gallons in 2010 and 19.6 billion gallons by 2020. Jet fuel demand is projected to increase from 5.1 billion gallons in 2000 to 7.3 billion gallons in 2010 and 9.2 billion gallons by 2020. Diesel demand is projected to increase from 2.6 billion gallons in 2000 to 3.6 billion gallons in 2010 and 4.2 billion gallons by 2020. These forecasts translate to an average increase of about 1.6 percent per year for gasoline, 3.4 percent per year for jet fuel, and about 2.4 percent per year for diesel.

Local Energy Use and Resources

According to the San Bernardino General Plan (City of San Bernardino 2005a), energy resources consumed by the City are generally imported. There are no local wells producing oil or natural gas, coal deposits, refineries and processing facilities, or electrical generating stations within the City. Natural gas is imported by the Southern California Gas Company, and electrical energy is provided by the Southern California Edison Company.

Geothermal energy is the earth's internal heat. For a geothermal resource, the most important features are the maximum temperature, aerial extent, depth, volume, and water quality for it to

be used as a potential energy resource. Geothermal activity is known to occur in the southern portion of the City (City of San Bernardino Municipal Water Department n.d.). Geothermal springs in the City come from a depth of 15,000 feet due to fractures of the San Andreas Fault Zone. These deep subterranean faults and cracks allow rainwater and snowmelt to seep underground where the water is heated by the inner earth and circulates back up to the surface, to appear as hot springs or thermal vents. Geothermal activity is a unique geologic resource inextricably connected to the hydrology and tectonic activity within the basin. Geothermal resources beneath the City are connected to the Bunker Hill-San Timoteo Basin (aquifer). While hot water created from geothermal activity from the San Andreas Fault Zone is contained in separate perched aquifers above the fresh water aquifer, these two hydrologic resources can affect one another (California Department of Mines and Geology 1981).

According to the San Bernardino Municipal Water Department (SBMWD), there are approximately 90–100 geothermal wells and springs in operation, which are concentrated in the Commerce Center, Central City, and Tri-City areas, and the former Norton Air Force Base. This renewable resource is currently utilized for space heating in over 35 businesses, including the Civic Center, Convention Center, and National Orange Show via San Bernardino's access to geothermal wells and springs in the City. The SBMWD Geothermal Heating District operates and maintains two geothermal production wells and a distribution system that serves the central portion of the City. Eighteen miles of insulated distribution lines transport this resource throughout the downtown hub and surrounding areas. Twin 200 horsepower turbines provide power for pumping capacity, which is capable of producing approximately 4,200 gallons per minute (City of San Bernardino Municipal Water Department 2011).

A portion of the Project Study Area is within the City's geothermal resource area at the eastern end of the Project Study Area south of Rialto Avenue and west of E Street (City of San Bernardino Municipal Water Department 2011). The closest geothermal well to the Project Study Area is located at Mill Street and E Street south of the Project Study Area. Existing geothermal distribution lines are also located near the proposed Project at Arrowhead Avenue and Rialto Avenue, approximately 1,200 feet from the Project Study Area, and at E Street and 4th Street, approximately 2,000 feet from the Project Study Area.

4.3.7.3 Environmental Consequences

Energy consumption

No-Build/No-Project Alternative

Construction Impacts

The No-Build/No-Project Alternative assumes that the proposed Project would not occur and that existing conditions of the rail corridor would remain. No construction activities would occur under this alternative. Therefore, no temporary construction adverse effects related to energy resources are anticipated to occur.

Operational Impacts

The proposed improvements to approximately 1 mile of track included as part of the proposed Project would not be implemented under this alternative. Additionally, the No-Build/No-Project Alternative would not include improvements to or reconstruction of rail infrastructure to accommodate passenger rail service proposed under the proposed Project. Existing conditions

of the rail corridor would remain under this alternative. Adverse impacts to energy would not occur.

Proposed Project

Construction Impacts

During construction, short-term energy consumption would result primarily from the manufacture of construction materials, use of petroleum fuels by construction equipment, construction workers' motor vehicles traveling to and from the site, and trucks delivering materials or removing debris. Thus, construction energy consumption would be finite and limited, having an incremental impact on area energy supplies. Because construction impacts would be temporary, adverse effects on energy resources are not anticipated to occur.

Operational Impacts

The proposed Project would require use of energy to electrify station improvements and facilitate their use. Station improvements requiring the use of energy include building lighting, platform and parking lot lighting, elevator use, ticket-vending and ticket-validating machines, passenger information phones, and electronic signage. The proposed Project would also involve the use of diesel fuel to run the trains to and from the two project stations and natural gas (and potentially other fuel sources, including diesel,) for buses accessing the Omnitrans bus facility. The amount of fuel use would not be substantial since the proposed Project would not involve a substantial increase in the Metrolink schedule or Omnitrans bus schedules. The proposed Project would involve the addition of an additional station (E Street rail platforms/Omnitrans bus facility) for use by existing rail and bus service and would not involve an operational increase in service by adding additional routes to the system. Therefore, energy use required by the proposed Project would not result in a substantial adverse environmental effect.

According to Iteris, Inc. (Appendix J), implementation of the proposed Project would reduce VMT within a 50-mile radius of the Depot for the year 2035 by 67,510 VMT daily, a regional change of 0.02%. Opening year of the Project would also result in a reduction of 11,531 VMT daily, or a 0.03% change in 2014 with the proposed Project. This reduction in miles traveled would amount to a cumulative reduction in the use of fuel in the region.

The proposed Project would accommodate current and anticipated future increases in rail and bus transit demand in the region. The proposed Project would have an indirect beneficial impact on energy resources, as improved transit service would encourage more individuals to use public transit services and, as such, reduce the number of personal vehicles on the roads requiring gasoline and fuel consumption, and reducing VMT regionally. This would be considered a beneficial energy impact, and no adverse effects would occur.

Implementation of the proposed Project would not result in adverse effects related to geothermal resource extraction or preclude the development of this resource, since development of the Project would not affect accessibility of geothermal infrastructure, such as wells or distribution lines, as these resources are located in excess of 1,200 feet from the Project Study Area. No adverse effects are anticipated.

Design Options

Temporary construction impacts anticipated under the design options would be similar to those expected to occur under the proposed Project. Similar to the proposed Project, the design options would require fuel consumption during construction activities. However, this would be

temporary and would not result in adverse effects. Operational impacts would be similar to those anticipated to occur under the proposed Project.

4.3.7.4 Avoidance, Minimization, and/or Mitigation Measures

No mitigation is required.

4.3.7.5 Cumulative Impacts

The proposed Project and design options would extend Metrolink rail service 1 mile east and improve bus access and availability in the City. This would accommodate forecasted ridership from the Depot and downtown San Bernardino to other regional locations beyond San Bernardino by providing an energy-efficient transit alternative to automobile travel. By supporting and helping to improve public rail transit operation, the proposed Project is expected to have a beneficial impact when compared to existing conditions with regards to energy resources, and no adverse cumulative effects would occur.

4.4 BIOLOGICAL ENVIRONMENT

4.4.1 Biological Resources

This section evaluates the impacts of the proposed Project, No-Build/No-Project Alternative, and design options on biological resources, wetlands and other waters, and threatened and endangered species. The technical information in this section is based on the biological technical memorandum (Appendix C) that was prepared for the proposed Project.

4.4.1.1 Regulatory Environment

The following federal plans, policies, regulations, and laws related to biological resources are relevant to the project and are described in detail in Section 3.4, "Biological Resources:"

- Section 404 of the Clean Water Act
- Section 401 Water Quality Certification

4.4.1.2 Affected Environment

Regional Setting

The survey area is in the San Bernardino Basin in the northern Peninsular Ranges geomorphic province. It extends north to the foothills of the San Bernardino and Santa Monica Mountains and south to the 28th parallel in Baja California, Mexico.

Local Setting

The Project Study Area, which includes the existing track and right-of-way, begins at the Depot just west of North Mt. Vernon Avenue and runs east and south through residential and commercial areas. It terminates at Rialto Avenue and E Street. The Project Study Area includes the Omnitrans bus facility site.

The site's general topographic character is flat to gently sloping. Elevations in the survey area range from 1,080 to 1,100 feet above mean sea level. The survey area includes all land within 500 feet of either side of the centerline of the proposed double track alignment and is approximately 1 mile long. It encompasses approximately 281.56 acres (see Figure 3.4-1).

The survey area was mapped and evaluated for potential direct and indirect effects on biological resources that could result from project implementation. The Project Study Area is defined as the limit of effects associated with full buildout of the proposed Project. The Project Study Area includes approximately 85 acres of the total 281.56 acres; however, the larger survey area is used when determining the affected environment and effects.

Vegetation Communities

The survey area, totaling 281.56 acres, supports three vegetation communities: urban/developed land, disturbed habitat, and nonnative grassland (see Figure 4.4-1.)

- The survey area consists primarily of urban development (259.6 acres), which has no biological function or value. Development in this area consists generally of the existing railroad track, roads, existing parking areas, landscaped vegetation, and residential and commercial development.

Figure 4.4-1
Impacts on Vegetation Communities
Downtown San Bernardino Passenger Rail Project

- Approximately 21 acres of disturbed habitat occurs throughout the survey area, primarily as disturbed right-of-way and vacant land. In general, the disturbed habitat is vegetated by weedy species, planted ornamentals, and mature eucalyptus and palm trees.
- Two small areas of nonnative grasslands (1.13 acres) occur in this area adjacent to residential/commercial land uses and within vacant lots.

Wildlife Movement Corridors

Wildlife movement corridors, also called dispersal corridors or landscape linkages, are linear features that connect at least two habitat areas. Their viability and quality depend on site-specific factors, such as topography and vegetative cover. A quality corridor provides cover for both predator and prey species and directs animals to areas of contiguous open space or resources and away from humans and development. Wildlife movement corridors are important features in the landscape and, therefore, should be buffered from human encroachment and other disturbances (e.g., light, loud noises, domestic animals). The survey area consists largely of urban development and disturbed habitat in an area surrounded by urban development. As a result, the survey area does not function as a wildlife movement corridor.

Habitat Conservation Plans

The survey area is not within or adjacent to any adopted or approved HCP area; therefore, threatened or endangered species, as designated by USFWS or CDFG, are not covered. The nearest HCP area, which is located several miles to the east in the cities of Highland and Redlands, is part of the Upper Santa Ana River Wash Land Management and Habitat Conservation Plan. This 4,365-acre HCP area begins at the mouth of Santa Ana Canyon at Greenspot Road, 1 mile downstream from Seven Oaks Dam, and extends westward for approximately 6 miles to Alabama Street.

4.4.1.3 Environmental Consequences

Riparian habitat or other sensitive natural community

No-Build/No-Project Alternative

Construction Impacts

The No-Build/No-Project Alternative assumes that the proposed Project would not occur and that existing conditions of the rail corridor would remain. No construction activities would occur under this alternative. Additionally, as described in Section 4.4.1.2, “Affected Environment,” none of the existing vegetation communities in the survey area are considered sensitive. Therefore, no temporary adverse effects related to riparian habitat or other sensitive natural communities would occur.

Operational Impacts

Improvements to approximately 1 mile of track, as proposed under the Project, would not be implemented under the No-Build/No-Project Alternative. Additionally, this alternative would not include improvements to or reconstruction of rail and bus infrastructure to accommodate the passenger rail and bus service proposed by the Project. Existing conditions of the rail corridor would remain under this alternative. No operational adverse effects related to riparian habitat or other sensitive natural communities would occur.

Proposed Project

Construction Impacts

As described previously, the survey area supports three vegetation communities: nonnative grassland, disturbed habitat, and urban/developed areas. Natural riparian vegetation or other riparian habitat is absent from the survey area. None of the existing vegetation communities in the survey area are considered sensitive.

Construction of the proposed Project, which would occur primarily within the railroad right-of-way, would affect existing vegetation communities, as shown in Table 4.4-1. However, none of these communities are considered sensitive. Therefore, adverse effects on sensitive communities would not occur during construction of the proposed Project. No mitigation is proposed.

Table 4.4-1. Impacts on Vegetation Communities in the Survey Area

Vegetation Communities	Survey Area Acreage	Temporary Impacts (acres)	Permanent Impacts (acres)	Total Impacts (acres)
Disturbed Habitat	20.83	0.60	10.83	11.43
Nonnative Grassland	1.13	0.00	1.13	1.13
Urban/Developed	259.6	12.37	60.02	72.4
Total	**281.56**	**12.97**	**71.98**	**84.95**

Operational Impacts

Sensitive vegetation communities do not occur in the survey area, as shown in Table 4.4-1. Therefore, no direct or indirect effects (i.e., future modification of an adjacent land use or type) on sensitive vegetation communities would occur as a result of project implementation and operation.

Design Options

Construction Impacts

Pedestrian Overpass Design Options 1A and 1B and Pedestrian Underpass Design Option 2 would involve the same survey area and Project Study Area as the proposed Project and therefore would affect the same area as the proposed Project (see Table 4.4.1). However, 3rd Street Open Design Option 3 would have a smaller footprint and Project Study Area and therefore would affect a smaller area than the proposed Project. In addition, the existing vegetation communities in the survey area are not considered sensitive. Therefore, similar to the proposed Project, adverse effects on riparian habitat or other sensitive natural communities would not occur during construction. No mitigation is proposed.

Operational Impacts

Pedestrian Overpass Design Options 1A and 1B and Pedestrian Underpass Design Option 2 would affect the same Project Study Area as the proposed Project. However, 3rd Street Open Design Option 3 would affect the reduced 3rd Street Open Design Option 3 Study Area than the proposed Project. In addition, sensitive vegetation communities do not occur in the survey area. Therefore, similar to the proposed Project, no direct or indirect effects (i.e., future modification of an adjacent land use or type) on sensitive vegetation communities would occur as a result of implementation and operation of Pedestrian Overpass Design Options 1A and 1B, Pedestrian Underpass Design Option 2, or 3rd Street Open Design Option 3.

Movement of any native resident migratory fish or wildlife species

No-Build/No-Project Alternative

Construction Impacts

No wildlife corridors exist within or near the survey area. The No-Build/No-Project Alternative assumes that the proposed Project would not occur and that existing conditions of the rail corridor would remain. No construction activities would occur under this alternative. No temporary construction adverse effects related to the movement of migratory fish or wildlife species would occur.

Operational Impacts

Improvements to approximately 1 mile of track, as proposed under the Project, would not be implemented under the No-Build/No-Project Alternative. Additionally, this alternative would not include improvements to or reconstruction of rail and bus infrastructure to accommodate the passenger rail and bus service proposed by the Project. Existing conditions of the rail corridor would remain under this alternative. No operational adverse effects related to the movement of migratory fish or wildlife species would occur.

Proposed Project

Construction Impacts

No wildlife corridors exist within or near the survey area, and the survey area does not function as a wildlife corridor. No temporary construction adverse effects related to the movement of migratory fish or wildlife species would occur during construction of the proposed Project. Refer to Section 4.4.3, “Threatened and Endangered Species,” for a discussion of migratory birds.

Operational Impacts

As described previously, the survey area consists largely of urban development and disturbed habitat in an area surrounded by urban development. Therefore, wildlife corridors do not exist in or near the survey area, and effects related to the movement of native wildlife species within a corridor would not occur.

Design Options

Construction Impacts

No wildlife corridors exist in or near the survey area. No temporary construction adverse effects related to the movement of migratory fish or wildlife species would occur.

Operational Impacts

Because wildlife corridors do not exist within or near the survey area, similar to the proposed Project, adverse effects related to the movement of native wildlife species within a corridor are not anticipated to occur as a result of implementation and operation of Pedestrian Overpass Design Options 1A and 1B, Pedestrian Underpass Design Option 2, or 3rd Street Open Design Option 3.

Habitat conservation plan or policies protecting biological resources

No-Build/No-Project Alternative

Construction Impacts

The No-Build/No-Project Alternative would not include construction activities. This alternative assumes that the proposed Project would not occur and that existing conditions along the rail corridor would remain. No trees would be removed under this alternative. As stated previously, the survey area is not within or adjacent to an adopted HCP; therefore, no potential conflicts would occur. Conflicts with a policy to protect biological resources or an adopted HCP would not occur.

Operational Impacts

No trees would be removed or affected during rail operations under this alternative because the No-Build/No-Project Alternative assumes existing conditions. Additionally, the survey area is not in or adjacent to an adopted HCP area. Conflicts with a policy to protect biological resources or an adopted HCP would not occur.

Proposed Project

Construction Impacts

The survey area contains ornamental trees, mature eucalyptus trees, and palm trees that are proposed for removal with implementation of the proposed Project. The proposed Project would require removal of approximately 20 trees in the survey area. As described previously, the survey area is not within or adjacent to an adopted or approved HCP area; therefore, threatened or endangered species, as designated by USFWS or CDFG, are not covered. No adverse effects would occur during construction.

Operational Impacts

During rail and bus operations, no trees would be affected by the proposed Project. Therefore, no conflicts with the City's existing tree protection ordinance or an approved HCP are anticipated, and no adverse effects would occur.

Design Options

Construction Impacts

The survey area contains ornamental trees, mature eucalyptus trees, and palm trees that are proposed for removal during construction activities. Similar to the proposed Project, Pedestrian Overpass Design Options 1A and 1B and Pedestrian Underpass Design Option 2 would require the removal of approximately 20 trees in the survey area. Under 3rd Street Open Design Option 3, the survey area would be reduced compared with that of the proposed Project, fewer trees would require removal, and any effects related to tree removal would be reduced. However, as described previously, the survey area is not in or adjacent to an adopted or approved HCP area; therefore, threatened or endangered species, as designated by USFWS or CDFG, are not covered. No adverse effects would occur during construction.

Operational Impacts

Similar to the proposed Project, the survey area is not within an approved or adopted HCP area. During rail operations, no trees would be affected by the design options. Therefore, no conflicts with an approved HCP are anticipated, and no adverse effects would occur.

4.4.1.4 Avoidance, Minimization, and/or Mitigation Measures

No mitigation is required.

4.4.1.5 Cumulative Impacts

The proposed Project or design options, in combination with other potential projects in the area, would not contribute to an adverse cumulative adverse effect on biological resources. No adverse effects on riparian habitat or other sensitive natural communities would occur during construction or operations, and no conflicts with established HCPs or known wildlife corridors would occur. Therefore, implementation of the proposed Project or the design options would not contribute to a cumulatively adverse effect on biological resources, and a substantially adverse effect would not occur.

4.4.2 Wetlands and Other Waters

This section evaluates the impacts of the proposed Project, No-Build/No-Project Alternative, and design options on wetlands and other waters. The technical information in this section is based on the biological technical memorandum (Appendix C) that was prepared for the proposed Project.

4.4.2.1 Regulatory Environment

Refer to Section 4.4.1.1, "Regulatory Environment," for a discussion of the regulatory environment related to wetlands and waters.

4.4.2.2 Affected Environment

Jurisdictional Areas

No indicators of potential jurisdictional areas or riparian habitat were identified in the survey area; however, two potential jurisdictional areas were identified off site at the southern and eastern terminus of the survey area.

- Lytle Creek is located adjacent to the southernmost survey area boundary. This creek is entirely concrete lined and has vertical concrete banks; no riparian habitat is associated with this portion of the creek.
- A small unnamed drainage was identified adjacent to the easternmost survey area boundary. The channel is concrete lined and has vertically incised banks. It supports a low flow of water. Natural riparian vegetation is not associated with this portion of the drainage.

Refer to Section 3.4, "Biological Resources," for an additional discussion of the regional and local setting related to wetlands and waters.

4.4.2.3 Environmental Consequences

Federally protected wetlands and riparian habitat

No-Build/No-Project Alternative

Construction Impacts

The No-Build/No-Project Alternative would not involve construction activities. This alternative assumes that the proposed Project would not occur and that existing conditions along the rail corridor would remain. No temporary adverse effects related to wetlands or riparian habitat would occur.

Operational Impacts

Improvements to approximately 1 mile of track, as proposed under the Project, would not be implemented under the No-Build/No-Project Alternative. Additionally, this alternative would not include improvements to or reconstruction of rail and bus infrastructure to accommodate the passenger rail and bus service proposed by the Project. Existing conditions of the rail corridor would remain under this alternative. No operational adverse effects related to wetlands or riparian habitat would occur.

Proposed Project

Construction Impacts

No indicators of potential jurisdictional areas were identified in the survey area. The closest off-site potential jurisdictional areas are Lytle Creek (to the south) and a small unnamed drainage (to the east), both of which are entirely concrete lined, have vertical concrete banks, and lack any natural riparian vegetation. Therefore, adverse effects on federally protected wetlands would not occur.

As described previously, the survey area supports three vegetation communities: nonnative grassland, disturbed habitat, and urban/developed areas. Natural riparian vegetation or other riparian habitat is absent from the survey area. None of the existing vegetation communities in the survey area are considered sensitive. Therefore, with implementation of the proposed Project, direct and indirect (i.e., future modification of an adjacent land use or type) impacts on sensitive communities would not occur. No mitigation is proposed.

Operational Impacts

As stated previously, no indicators of potential jurisdictional areas or riparian habitat were identified in the survey area. The closest off-site potential jurisdictional areas are Lytle Creek and a small unnamed drainage. Project-related rail operations would not involve any change to these off-site drainage facilities. Therefore, adverse effects on federally protected wetlands or riparian habitat would not occur.

Design Options

Construction Impacts

Similar to the proposed Project, no indicators of potential jurisdictional areas or riparian habitat were identified in the survey area. The closest off-site potential jurisdictional areas are Lytle Creek and a small unnamed drainage, both of which are entirely concrete lined, have vertical concrete banks, and lack any natural riparian vegetation. Therefore, adverse effects on federally protected wetlands or riparian habitat would not occur during construction activities.

Operational Impacts

No indicators of potential jurisdictional areas or riparian habitat were identified in the survey area. Operation of the design options would not involve any change to any off-site drainage facility. Therefore, adverse effects on federally protected wetlands or riparian habitat would not occur during operational activities.

4.4.2.4 Avoidance, Minimization, and/or Mitigation Measures

No mitigation is required.

4.4.2.5 Cumulative Impacts

The proposed Project or design options, in combination with other potential projects in the area, would not contribute to an adverse cumulative adverse effect on wetlands and/or waters of the United States. No indicators of potential jurisdictional areas or riparian habitat were identified in the survey area. Therefore, implementation of the proposed Project or the design options would not contribute to a cumulatively adverse effect on riparian habitat, wetlands, and/or waters of the United States, and a substantially adverse effect would not occur.

4.4.3 Threatened and Endangered Species

This section evaluates the impacts of the proposed Project, No-Build/No-Project Alternative, and design options on threatened and endangered species. The technical information in this section is based on the biological technical memorandum (Appendix C) that was prepared for the proposed Project.

4.4.3.1 Regulatory Environment

The following federal plans, policies, regulations, and laws related to threatened and endangered species are relevant to the project and are described in detail in Section 3.4, "Biological Resources:"

- Federal Endangered Species Act
- Migratory Bird Treaty Act

4.4.3.2 Affected Environment

Sensitive Plant Species

Sensitive plant species include species listed by USFWS and CDFG, candidates for listing by USFWS and CDFG, and/or species considered sensitive by CDFG and/or the CNPS. A search of California Natural Diversity Database CNDDB records uncovered 43 occurrences of rare or sensitive plant species within the nine quadrangles surrounding the survey area. However, the survey area supports suitable habitat for only one sensitive plant species, smooth tarplant (*Centromadia pungens* ssp*. laevis*). Smooth tarplant is a sensitive species that is known to occur in dry, open, and sometimes disturbed habitat.

Sensitive Wildlife Species

Sensitive animals are species or subspecies listed as threatened, endangered, or being evaluated (proposed) for listing by USFWS or CDFG and/or considered sensitive by CDFG. A search of CNDDB records uncovered 56 occurrences of rare or sensitive botanical species within the nine quadrangles surrounding the survey area. Species that are not considered sensitive under federal or state criteria were eliminated from consideration, as described in the biological technical memorandum (Appendix C).

A habitat assessment was conducted within the survey area for western burrowing owl (BUOW) (*Athene cunicularia hypugaea*) and San Bernardino kangaroo rat (SBKR) (*Dipodomys merriami parvus*), as summarized below.

Western Burrowing Owl

BUOW is a federal Species of Concern and California Species of Special Concern. The survey area is within the historic range of BUOW. Although there are no records for the survey area, the CNDDB contains two records from the surrounding area, as follows:

- Four individuals were observed in 1998 northeast of the intersection of Wildrose Avenue and Wood Pine Avenue, north of I-10, in West Colton (approximately 3.5 miles southwest of the survey area).
- In 1983, an undetermined number of owls used a burrow site at the east end of the main runway at Norton Air Force Base (approximately 4.5 miles east of the survey area).

No BUOW or their sign were observed in the survey area or adjoining areas. No potential nesting sites for BUOW were observed in the survey area.

San Bernardino Kangaroo Rat

The historical range for SBKR extends from the San Bernardino Valley in San Bernardino County to the Menifee Valley in Riverside County. The survey area is within the outline of the historical range of SBKR. The USFWS designation of critical habitat for SBKR includes Lytle Creek/Cajon Wash, areas that are known or expected to be occupied by this species. However, the SBKR critical habitat in Lytle Creek/Cajon Wash occurs only north of I-210, which is outside of the survey area for the proposed Project.

There are no SBKR records for the survey area, but the CNDDB and the Mammal Networked Information System (MaNIS) contain several records from the vicinity. These include:

- Specimens were collected on April 1, 1917, by L. M. Huey of UCLA at a location east of the south end of the Lytle Creek wash, about 3 miles north of Colton. This locality is approximately 1 mile north-northwest of the Depot.
- In 1909, specimens were collected at Herron's Ranch in Reche Canyon, 4 miles southeast of Colton. This location is about 3 miles south-southwest of the Depot.

The SBKR records nearest to the survey area are from the early 20th century, when the Santa Ana River and Lytle Creek/Cajon Wash areas experienced far fewer effects from surrounding development.

Other Species of Concern—Bats

According to the CNDDB search, the survey area contains suitable habitat for western yellow bat (*Lasiurus xanthinus*). This species has a moderate potential to occur on site (i.e., in palm trees), but it was not observed during the general biological survey. In general, western yellow bat, which is thought to be noncolonial, roosts individually. Should the species occur in the survey area, it is anticipated that it would be in low numbers given the limited available habitat and preferred roosting densities. The survey area does not support suitable habitat for any other sensitive bat species. Therefore, focused bat surveys were not conducted.

Migratory Birds

Several migratory bird species were observed in the survey area. These include house finch, northern mockingbird, and American crow. Suitable habitat that would support nesting, roosting, and foraging by migratory birds occurs throughout the survey area, both on and off site. This includes mature trees (> 24-inch diameter), ornamental vegetation, utility poles, and building rafters and eaves. An inactive songbird nest was observed under the eaves of the Depot during the May 24, 2010, survey.

4.4.3.3 Environmental Consequences

Sensitive or special-status species

No-Build/No-Project Alternative

Construction Impacts

The No-Build/No-Project Alternative assumes that the proposed Project would not occur and that existing conditions of the rail corridor would remain. No construction activities would occur under this alternative. Therefore, no temporary adverse effects related to any sensitive or special-status species would occur.

Operational Impacts

Improvements to approximately 1 mile of track, as proposed under the Project, would not be implemented under the No-Build/No-Project Alternative. Additionally, this alternative would not include improvements to or reconstruction of rail and bus infrastructure to accommodate the passenger rail and bus service proposed by the Project. Existing conditions of the rail corridor would remain under this alternative. No operational adverse effects related to any sensitive or special-status species would occur.

Proposed Project

Construction Impacts

Sensitive Plant Species

As described previously, one sensitive plant species, smooth tarplant, has the potential to occur in the survey area. However, it was not observed when surveys were conducted during the blooming season for the species. Therefore, the site is not expected to support a significant population of smooth tarplant, if at all, and construction effects on smooth tarplant would not be adverse.

Sensitive Wildlife Species

As discussed above, the only sensitive species with a moderate potential to occur in the survey area is the western yellow bat. Although highly urbanized, the survey area contains suitable habitat (e.g., palm trees, buildings) that could support roosts, including maternal roosts, for this species. The proposed Project would result in the removal of individual trees that may be periodically used for roosting. However, potential effects would not be adverse because of the small amount of habitat that would be removed relative to the species' range and available habitat, and few, if any, individuals would be disturbed during construction.

BUOW were not observed within or adjacent to the survey area, and evidence of their presence or potential nesting sites was not found. Although BUOW can persist in fragmented habitats, the small disturbed habitat patches in the survey area occur within a largely urbanized area and do not provide sufficient foraging habitat to sustain BUOW. Therefore, the survey area does not contain suitable habitat for BUOW, and no adverse effects would occur.

The survey area is largely urbanized and separated from Lytle Creek floodplain habitats where SBKR previously occurred. The survey area lacks suitable habitat for SBKR. Therefore, the Project would not result in adverse effects on this species.

Migratory Birds

Suitable nesting, roosting, and/or foraging habitat for avian species protected under the MBTA was observed in the survey area. Should construction activities occur during the avian breeding season (February 15–August 31), the proposed Project would result in adverse effects related to suitable nesting, roosting, and/or foraging habitat (e.g., mature eucalyptus, palm, and ornamental trees) for these species. As a result, it is recommended that construction activities occur outside of the nesting season to avoid effects. However, should construction occur during the avian nesting season, implementation of Mitigation Measures BR-1 (Conduct Preconstruction Nest Survey for Migratory Birds), BR-2 (Establish Buffer Area for Migratory Bird Nests), and BR-3 (Restrict Uses within Project Study Area Boundaries) would be required to reduce adverse effects related to migratory birds.

Operational Impacts

Sensitive Plant Species

As described previously, one sensitive plant species, smooth tarplant, has the potential to occur in the survey area. However, it was not observed when surveys were conducted during the blooming season for the species. Therefore, the site is not expected to support a significant population of smooth tarplant, if at all, and potential direct effects on smooth tarplant would not be substantially adverse as a result of project implementation and rail and bus operations.

Sensitive Wildlife Species

As discussed previously, only one sensitive species, western yellow bat, has a moderate potential to occur in the survey area. Although the survey area is highly urbanized, suitable habitat (e.g., palm trees, buildings) that could support roosts, including maternal roosts, for this species occurs in the survey area. However, potential effects would not be adverse because of the small amount of habitat that would be removed relative to the species' range and available habitat, and few, if any, individuals would be disturbed. Because the potential for sensitive wildlife species to occur on site is minimal, adverse effects on sensitive wildlife species would not occur during rail and bus operations.

Migratory Birds

Suitable nesting, roosting, and/or foraging habitat for avian species protected under the MBTA occurs in the survey area. However, potential effects would not be adverse because of the small amount of habitat used by avian species. Because the potential for suitable habitat to occur on site is minimal, adverse effects on avian species would not occur during rail and bus operations.

Design Options

Construction Impacts

Pedestrian Overpass Design Options 1A and 1B and Pedestrian Underpass Design Option 2 would involve the same survey area and Project Study Area as the proposed Project and therefore would affect the same area as the proposed Project. Construction effects would be similar to those anticipated to occur under the proposed Project. In comparison, the survey area for the 3rd Street Open Design Option 3 would be reduced compared with that of the proposed Project. However, temporary construction effects would be similar to those anticipated to occur under the proposed Project.

Construction effects associated with these design options would include potentially adverse effects related to tree removal and migratory birds. It is recommended that construction activities occur outside of the nesting season to avoid adverse effects. However, should construction occur during the avian nesting season, implementation of Mitigation Measures BR-1 (Conduct Preconstruction Nest Survey for Migratory Birds), BR-2 (Establish Buffer Area for Migratory Bird Nests), and BR-3 (Restrict Uses within Project Study Area Boundaries) would be required to reduce adverse effects related to migratory birds. Potential adverse effects involving sensitive plant and wildlife species would not be adverse because of the small amount of habitat that would be removed during construction relative to the species' range and available habitat.

Operational Impacts

Direct and indirect operational effects anticipated to occur under Pedestrian Overpass Design Options 1A and 1B and Pedestrian Underpass Design Option 2 would be similar to those expected to occur under the proposed Project. Direct and indirect operational effects anticipated to occur under 3rd Street Open Design Option 3 would be similar to or slightly less than those expected to occur under the proposed Project because of the reduced 3rd Street Open Design Option 3 Study Area. Therefore, potential direct effects on smooth tarplant would not be substantially adverse under these design options. Additionally, the design options would result in the removal of individual trees that may be periodically used for roosting. However, the potential effects would not be adverse because of the small amount of habitat that would be removed relative to the species' range and available habitat. As previously described, land in and adjacent to the survey area is developed and/or disturbed and would not support sensitive botanical species. Implementation of the design options would not result in adverse direct and indirect effects (i.e., future modification of an adjacent land use or type) on any sensitive or special-status species.

4.4.3.4 Avoidance, Minimization, and/or Mitigation Measures

Implementation of avoidance, minimization, and/or mitigation measures related to migratory birds provided in Section 3.4, "Biological Resources," would reduce adverse effects. These mitigation measures are listed below and detailed in Section 3.4.5.

BR-1 (Conduct Preconstruction Nest Survey for Migratory Birds)

BR-2 (Establish Buffer Area for Migratory Bird Nests)

BR-3 (Restrict Uses within Project Study Area Boundaries)

4.4.3.5 Cumulative Impacts

The proposed Project or design options, in combination with other potential projects in the area, would not contribute to an adverse cumulative adverse effect on biological resources (threatened and endangered species) after mitigation. Tree removal in the survey area could result in effects on migratory birds and their active nests. Construction activities as a result of the proposed Project or design options and other projects in the area could result in an adverse effect on migratory birds. As described previously, mitigation measures have been identified to ensure that adverse effects on nesting birds would be reduced. Therefore, implementation of the proposed Project or the design options would not contribute to a cumulatively adverse effect on nesting birds or their habitat, and a substantially adverse effect would not occur.

4.5 ENVIRONMENTAL JUSTICE

This section evaluates the effects of the proposed Project, No-Build/No-Project Alternative, and the design options related to environmental justice.

4.5.1 Regulatory Setting

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, directs federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of agency programs, policies, and activities on minority populations and low-income populations. The fundamental environmental justice principles are threefold:

- To avoid, minimize or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and/or low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority populations and/or low-income populations.

The communities of particular concern to the assessment of environmental justice (EJ) are those identified as minority or low-income communities. These EJ communities are defined in accordance with Executive Order 12898 as identifiable groups of people, typically living in geographic proximity. The low-income and minority populations are defined as follows:

Low-income population is any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed U.S. Department of Transportation (DOT) program, policy, or activity.

Minority population is any readily identifiable group of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed DOT program, policy, or activity.

DOT Order 5610.2 to *Address Environmental Justice in Minority Populations and Low-Income Populations* requires the following:

- Consideration of mitigation and enhancement measures to benefit the affected minority and/or low-income population and all off-setting benefits to the affected populations, as well as design, comparative impacts, and the relevant number of similar existing system elements in non-minority and non-low-income areas.
- Evaluation of whether alternatives or mitigation measures are practical.
- Documentation of the findings, determination, and/or demonstration made in accordance with the order in the environmental document prepared for the program, policy, or activity.

This analysis was developed in accordance with DOT Order 5610.2 and the Council on Environmental Quality (CEQ) *Environmental Justice –Guidance Under the National*

Environmental Policy Act. Race and income are socioeconomic characteristics critical to the consideration of a project's impacts on minority and low-income populations referred to as EJ populations. CEQ guidance defines a minority person as any individual who is a member of any of the following population groups: American Indian, Alaska Native, Asian, Pacific Islander, Black, or Hispanic. A low-income person is defined as any individual whose household income is at or below the U.S. Census Bureau's annual statistical poverty thresholds, which are based on the Department of Health and Human Services poverty guidelines.

The methodology for analyzing the effects of the proposed Project on EJ populations (any identifiable population group meeting the requirements for minority or low income) consists of the following steps:

- Define the project area boundary and identify census block groups in the EJ study area (as shown in Figure 4.5-1).
- Determine thresholds for minority and low-income populations to identify potential.
- Identify locations of EJ populations based on thresholds and additional information.
- Analyze the location and severity of impacts associated with the alternatives.
- Determine disproportionately high adverse impacts (if any).

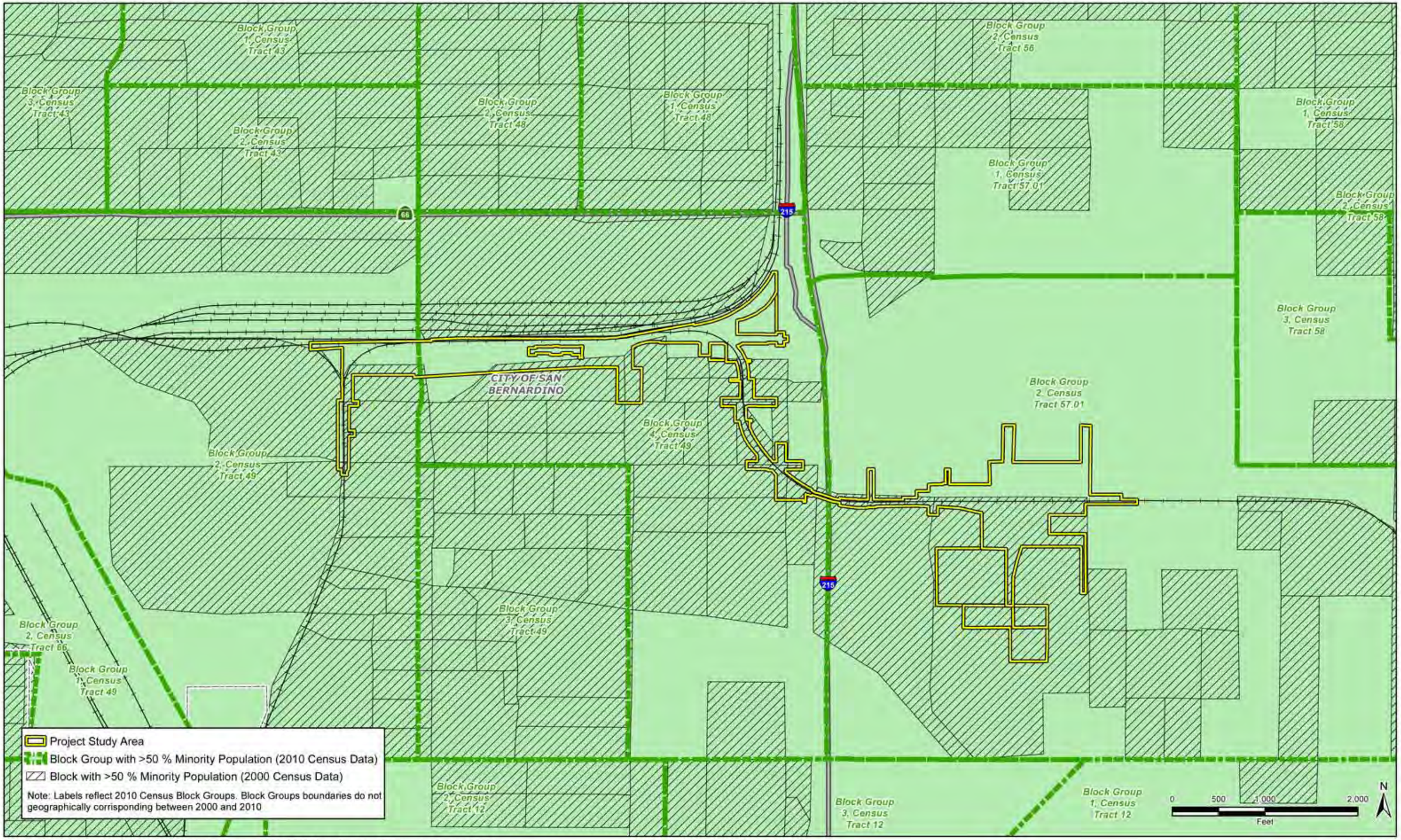
4.5.1.1 Civil Rights Act

Title VI of the 1964 Civil Rights Act states “No person shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.” Title VI prohibits recipients of federal funds from actions that reflect “intentional discrimination” or that exhibit “adverse disparate impact discrimination” on the basis of race, ethnicity, or national origin.

The Civil Rights Restoration Act of 1987 amended Title VI so that recipients of federal aid must comply with the non-discriminatory requirements in all their activities, not just the programs and activities that directly receive federal support. That is, government agencies that receive any federal funds must avoid discriminatory impacts not only when setting policy for federally funded programs, but also for programs that are entirely state or locally funded.

4.5.1.2 Department of Health and Human Services Poverty Guidelines

Following the Office of Management and Budget's *Statistical Policy Directive 14*, the U.S. Census Bureau uses a set of income thresholds that vary by family size and composition to determine poverty status. If a family's total income is less than the family's threshold, then that family and every individual in it is considered in poverty. Each person or family is assigned one out of 48 possible poverty thresholds. The official poverty thresholds do not vary geographically, but they are updated for inflation using the Consumer Price Index. Low income populations are also defined by the Department of Health and Human Services (HHS) poverty guidelines. The poverty guidelines, sometimes referred to as the “federal poverty level,” are issued each year in the Federal Register by the HHS and are a simplification of the poverty thresholds for use for administrative purposes (e.g., for determining financial eligibility for certain federal programs). Many government aid programs use a different poverty measure, including the HHS poverty guidelines; however, the U.S. Census does not (U.S. Census Bureau 2011a). The HHS poverty guidelines, shown in Table 4.5-1 for 2012, are not the figures the U.S. Census Bureau uses to calculate the number of persons in poverty (U.S, Department of Health and Human Services 2012).



Source: HDR Engineering (December, 2011), U.S Census 2000, 2010 (from American Community Survey, 2012)

Figure 4.5-1
Minority Populations
Downtown San Bernardino Passenger Rail Project

Table 4.5-1. 2012 Poverty Guidelines for the 48 Contiguous States

Persons in Family/Household	Poverty Guideline ($)
1	11,170
2	15,130
3	19,090
4	23,050
5	27,010
6	30,970
7	34,930
8	38,890
For families/households with more than 8 persons, add $3,960 for each additional person. Source: U.S. Department of Health and Human Services 2012.	

4.5.2 Affected Environment

A disproportionately high and adverse effect on minority and low-income populations is defined as an effect that is predominately borne by or would be suffered by an EJ population or that is appreciably more severe or greater in magnitude than adverse effects suffered by a non-EJ population. In general, the determination of disproportionately impacted EJ populations is done by analyzing the pattern of overall environmental and human health impacts in relation to identified areas of EJ populations. Adverse effects are the totality of significant individual or cumulative human health or environmental effects.

Ultimately, EJ determinations are made based on effects, not population size (FHWA 2012). However, in order to ensure thorough EJ consideration throughout the review process, it is important to determine where identifiable EJ communities may be present within a geographic area potentially affected by a proposed action. Therefore, the EJ study area is delineated to provide full disclosure of information pertaining to all potentially affected populations including EJ communities surrounding the project alignment. The area to be analyzed includes census blocks surrounding the rail corridor from west of the Depot at Pico Avenue and Rialto Avenue at the western extent of the Project Study Area to new rail platforms and the bus facility site located at the eastern end of the Project Study Area at the intersection at Rialto Avenue and E Street. This area is located within current Census (2010) Tracts 49 and 57.01. These census tracts include the following census block groups (2010), which are close to the Project Study Area: Block Groups 2 and 4, Tract 49 and Block Group 2, Tract 57.01[15].

At the time of this analysis, demographic data provided by the U.S. Census Bureau (2010) was limited to the block group level, and detailed block-level data was not available. For this reason, the best available spatial information from the 2000 census block data was used to determine if any readily identifiable populations, groups, or clusters of minority persons reside within the rail corridor, as shown on Figure 4.5-1.[16] To confirm whether use of 2000 census block data was

[15] Note that in the 2010 Census, the EJ study area is composed of census track numbers 49 and 57. These tract numbers were modified since the 2000 Census, which identifies census track numbers 49, 57, and 59 for the EJ study area.

[16] The U.S. Census counts every resident in the United States. It is mandated by Article I, Section 2 of the Constitution and takes place every 10 years. The data collected by the decennial census determine the number of seats each state has in the U.S. House of Representatives and is also used to distribute federal funds to local communities (U.S. Census Bureau 2010).

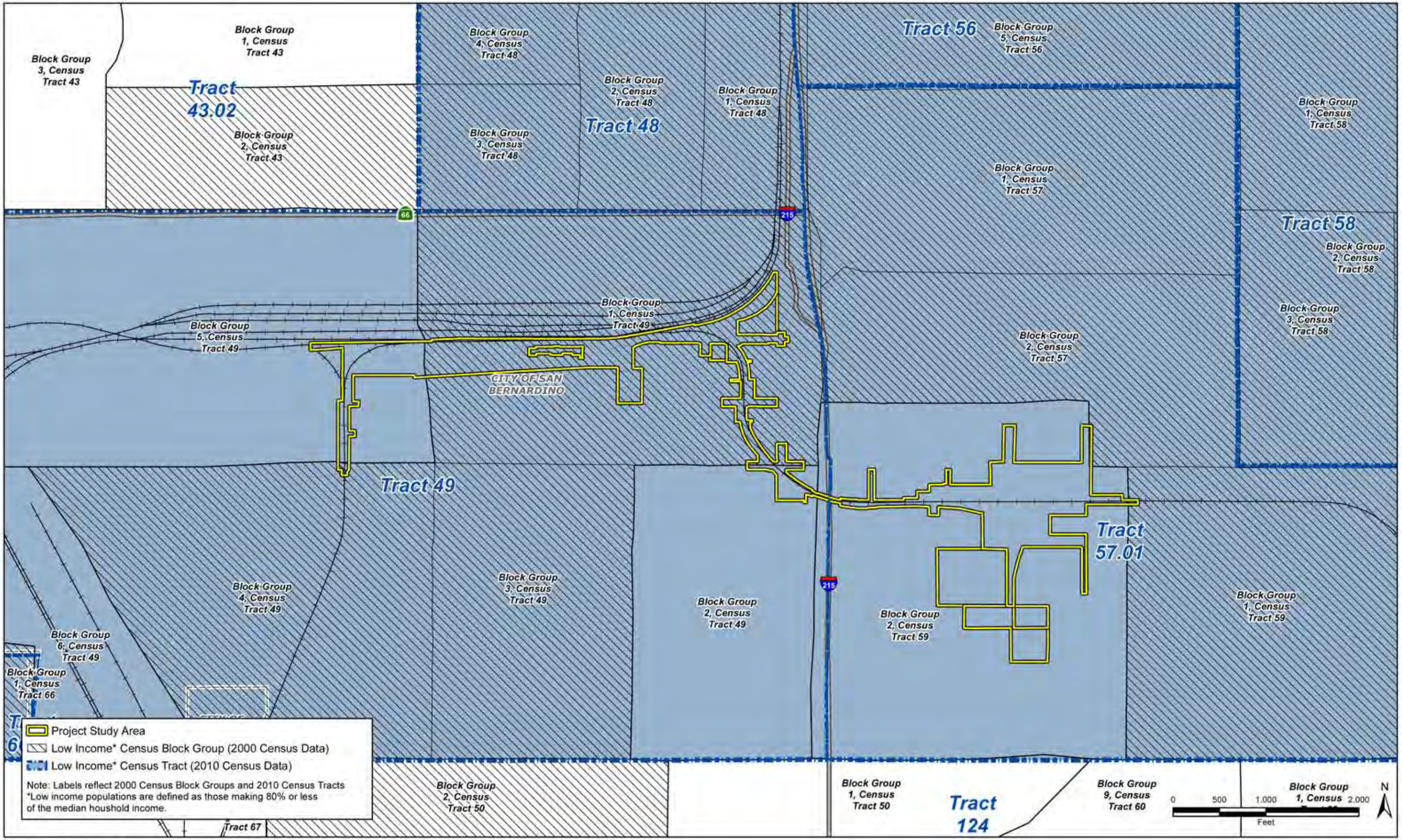
appropriate for this analysis, 2010 census block group data was overlaid to verify consistency between the two data sets with respect to minority populations greater than 50% (see Figure 4.5-2). As shown in Figure 4.5-1, the 2010 census data would suggest that the entire EJ study area is composed of minority populations, whereas the additional resolution provided by the census block data (2000) indicates that these minority populations are generally concentrated to the south of the Project Study Area and west of I-215.

To identify low-income populations within the vicinity of the Project Study Area, household income figures were analyzed to determine the concentration or percentage of households making 80% of the median household income for the City of San Bernardino, $42,234 (U.S. Census Bureau 2012). This approach allows for the capturing of low-income populations beyond those simply below the poverty level, yet making substantially less than the median household income for the City of San Bernardino. Table 4.5-3 includes median and mean income levels for census tracts within the EJ study area. Census Tract 49 located west of the I-215 freeway shows a higher mean and median income than Census Tract 57.01 located on the eastern end of the Project Study Area. Both census tract areas are lower than the median income for the City based on American Community Survey (U.S. Census Bureau 2012) data ($42,234) with $14,521 median income level for Census Tract 57.01 and $28,636 for Census Tract 49.

Figure 4.5-2 depicts the low-income census block groups adjacent to the rail corridor. At the time of this analysis, the best available income data for 2010 is provided at the tract level. For this reason, 2000 census group block data was overlaid with the 2010 census tract figures (for Group Blocks 49.02, 49.04, and 57.01.02) to provide an additional level of resolution for this analysis. As shown in Figure 4.5-2, the 2010 census tract data would suggest that the entire EJ study area is composed of low-income populations, whereas the 2000 group block data shows these low-income areas concentrated to the north and south of the Project Study Area, west of I-215, and north and east of the Project Study Area, east of I-215.

4.5.2.1 County and City Census Tracts (2010)

In 2010, Whites and Hispanics made up the two largest populations within the rail corridor, from results taken from the census block groups, with results similar to the City of San Bernardino, San Bernardino County, and state values. People of Hispanic origin made up 80.4% of the EJ study area's population in 2010 (U.S. Census Bureau 2011b), which was 20.4% and 32.2% more than the Hispanic populations in the City of San Bernardino and San Bernardino County, respectively (see Tables 4.5-2 and 4.5-3). Based on 2010 census tract data, the percentage of individuals and families below the poverty level adjacent to the rail corridor—40.2% and 34.4%, respectively—was slightly higher than the City of San Bernardino, San Bernardino County, and state values (U.S. Census Bureau 2010) (see Tables 4.5-2 and 4.5-3).



Source: HDR Engineering (December, 2011), U.S Census 2000, 2010 (from American Community Survey, 2012)

Figure 4.5-2
Low-Income Populations
Downtown San Bernardino Passenger Rail Project

Table 4.5-2. Minority and Low-Income Populations by Census Tract/City/County/State, 2010

	Census Tracts 49 and 57.01 (%) (2010)	San Bernardino City (%) (2010)	San Bernardino County (%) (2010)	California (%) (2010)
Race				
White	50.5	45.6	56.7	57.6
Black or African American	6.7	15.0	8.9	6.2
American Indian and Alaska Native	1.3	1.3	1.1	1.0
Asian	2.3	4.0	6.3	13.0
Native Hawaiian, other Pacific Islander	0.0	0.4	0.3	0.4
Some other race	35.0	28.5	21.6	17.0
Two or more races	4.1	5.1	5.0	4.9
Origin				
Hispanic	80.4	60.0	49.2	37.6
Not Hispanic (One Race)	19.6	40.0	50.8	62.4
Minority				
Non-White	47.3	54.4	43.3	42.4
Non-White (Not Hispanic)	48.3	47.6	65.5	64.4
Poverty				
Individuals below poverty level	40.2	27.4	14.8	13.7
Families below poverty level	34.4	21.9	11.7	10.2

Note: At this time, income data for low-income populations is only available at the census tract level. Demographic data for delineating minority communities is available at the group block level.
Source: U.S. Census Bureau 2010.

Table 4.5-3. Minority Populations and Income by Census Block Group and Tract/County, 2010

	Block Group 2, Census Tract 57.01 (2010)	Block Group 2, Census Tract 49 (2010)	Block Group 4, Census Tract 49 (2010)	Census Tract 57.01 ($) (2010)	Census Tract 49 ($) (2010)
Minority					
White	174	102	115		
Minority	893	1,807	1,619		
Total	*1,067*	*1,909*	*1,734*		
Percentage Minority	*83%*	*95%*	*93%*		
Income					
Median				14,521	22,912
Mean				28,636	33,965

Source: U.S. Census Bureau 2010.

As shown in Table 4.5-2, the 2010 census tracts within the rail corridor include a higher percentage of minority populations (persons of Hispanic origins) when compared to the City of San Bernardino. However, it is important to note that in applying the 50% or greater criteria, the City as a whole would also be classified as a minority community (or population). As reflected in Table 4.5-3, the 2010 census tracts exhibit a higher percentage of residents living below the poverty line and lower median household incomes when compared to the City of San Bernardino as a whole, San Bernardino County, and California. Table 4.5-3 provides the income and demographic data for individual block groups and tracts within the EJ study area. According to this data, Block Group 2, Census Tract 57.01, and Block Groups 2 and 4, Census Tract 49, would be classified as minority populations accordingly to the 2010 Census. Similarly and as reflected in Table 4.5-3, Census Tracts 57.01 and 49 would be classified as low-income populations.

4.5.3 Environmental Consequences

Disproportionate effects on low-income and/or minority residents

No-Build/No-Project Alternative

Construction Impacts

The No-Build/No-Project Alternative assumes that the proposed Project would not occur and that existing conditions of the rail corridor would remain. No construction activities would occur under this alternative. Therefore, no temporary construction adverse effects related to environmental justice would occur.

Operational Impacts

The proposed improvements to approximately 1 mile of track included as part of the proposed Project would not be implemented under this alternative. Additionally, the No-Build/No-Project Alternative would not include improvements to or reconstruction of rail and bus infrastructure to accommodate passenger rail and bus service proposed by the Project. Existing operational conditions along the rail corridor would remain under this alternative. No adverse effects related to environmental justice would occur.

Proposed Project

Construction Impacts

Construction activities associated with development of the proposed Project would generate air pollutant emissions; however, these emissions would not exceed significance thresholds established by the SCAQMD, and sensitive receptors would not be exposed to substantial pollutant concentrations. Also, noise and vibration effects would not result in substantial adverse effects during construction, and no exceedance of thresholds would occur, as stated in Section 4.3.6, “Noise and Vibration.” No additional biological or cultural resources effects would occur during construction and no adverse effect would result with implementation of mitigation measures. Construction would likely result in temporary closures and/or detours during construction, and mitigation proposed in Section 4.2.3, “Transportation,” would reduce potential adverse effects.

As stated previously, populations located within or adjacent to the Project Study Area are identified as both minority and low income and would experience temporary air, noise, and traffic effects from construction activities. However, the construction activities would be

temporary and any associated adverse effects would be reduced through implementation of Mitigation Measures BR-1 (Conduct Preconstruction Nest Survey for Migratory Birds), BR-2 (Establish Buffer Area for Migratory Bird Nests), and BR-3 (Restrict Uses within Project Study Area) to address biological resources in Section 4.4.1, HM-1 (Comply with Hazards and Hazardous Materials Recommendations) and HM-2 (Plan and Monitor for Hazardous Materials) in Section 4.3.4 to address hazardous materials; NOI-1 (Employ Noise-Reducing Measures during Construction) and NOI-2 (Prepare a Community Awareness Program for Project Construction) in Section 4.3.6 to address increased noise from construction; and T-1 (Prepare and Implement a Traffic Management Plan) and T-2 (Prepare and Implement a Stadium Parking Plan) in Section 4.2.3 to address construction-related traffic. The effects of the proposed Project would not be appreciably more severe or greater in magnitude on minority or low-income populations when compared to the general population for the City, which resembles similar demographic characteristics. Therefore, mitigation measures would be equally effective for all groups and no disproportionate, adverse effects on minority and low-income populations are anticipated during construction.

Operational Impacts

Proposed project operations may result in adverse effects related to traffic circulation; noise and vibration; air quality; cultural resources; hazards; water quality; land acquisitions, displacements, and relocation; and biological resources. However, these adverse effects would be mitigated through implementation of Mitigation Measures HYD-2 (Develop and Implement a Water Quality Management Plan) in Section 4.3.2 to address water quality; NOI-3 (Use Ballast Mats, Resiliently Supported Ties, or Measures of Comparable Effectiveness on Portions of the Rail near Sensitive Receivers), NOI-4 (Establish Quiet Zones), NOI-5 (Provide Building Noise Insulation to Severe- and Moderate-Impact Residences Where Sound Barriers Are Infeasible), NOI-6 (Lubricate Wayside Rail), and NOI-7 (Construct Sound Barriers) in Section 4.3.6 to address community noise levels; and T-3 (Install a Traffic Signal at the J Street/2nd Street Intersection) and T-4 (Install All-Way Stops at the J Street/Rialto Avenue Intersection) in Section 4.2.3 to address traffic. These effects and their associated mitigations are analyzed in this chapter. Adverse effects of the Project would be minimized through mitigation measures proposed in this document.

Construction of a second track within the Project Study Area would require the acquisition of new right-of-way adjacent to the existing rail corridor from the Depot to the proposed rail platforms near Rialto Avenue and E Street, and along K Street between 3rd Street and 2nd Street. As stated in Section 4.2.6, “Land Acquisitions, Displacement, and Relocation,” the proposed Project would require 69 property acquisitions or easements, amounting to approximately 364,713 square feet (8.4 acres) of land. The acquisitions would be in the form of full takes, partial takes, permanent easements for public roadways or sidewalks, utility easements for storm drains, emergency vehicle access easements, ingress/egress easements, and street vacations. Figure 4.5-3 depicts all properties subject to potential acquisition, including partial and full acquisitions and active businesses subject to relocation. As depicted in Figure 4.5-3, of the 69 property acquisitions or easements, acquisition and relocation of three residential properties containing seven families and four business properties with active businesses would be required. The project acquisition requirements would result in the relocation of four businesses and seven families to comparable or improved areas. As shown in Figure 4.5-3, all other acquisition effects would be limited to permanent or temporary easements that would not require relocations. See Tables 4.2.6-1 and 4.2.6-2 in Section 4.2.6 for more information regarding acquisitions and displacements.

The Project would directly affect a number of properties through full and partial acquisitions, thereby eliminating or reducing the ability of property owners to use their properties. Some residents in the area would be relocated, resulting in a direct and permanent effect to those individuals and families. As the Project Study Area is located entirely within and adjacent to areas with predominately low-income and minority populations (see Figures 4.5-1 and 4.5-2), all affected property owners (seven families and four businesses) would have low-income status. However, these affected property owners would be fully compensated for the amount of property acquired, and residents and businesses would be relocated to similar or improved locations within the regional area per the Uniform Relocation Assistance and Real Property Acquisition Policies Act and the California Relocation Act.

The effects of the proposed Project would not be appreciably more severe or greater in magnitude on minority or low-income populations compared to the effects on nonminority or non-low-income populations as the area within the rail corridor presents a mix of minority (persons of Hispanic origins) and low-income populations that would be similar to that of the City as a whole. Therefore, these populations occur throughout the City and cannot be reasonably avoided. Additionally, the Project proposes the addition of a second rail line adjacent to an active single rail line. The choice in project location was not based on the demographics or income status of the site; the location was chosen based on other factors, such as the need for additional transit opportunities near downtown San Bernardino and the existence of an active rail line. Furthermore, all mitigation measures described above are expected to be equally effective for all groups, and no adverse effects are anticipated.

Additional train movements and other operational activities would occur with implementation of the proposed Project. This increase in train activity may result in indirect adverse effects to the residents located near the active rail corridor, specifically related to aesthetics, air quality, noise, and vibration. However, the rail corridor is an active railway currently used by freight trains and is an historic rail line (see Section 4.2.5, “Cultural Resources”) that preceded the occupancy of a majority of the uses adjacent to the rail corridor, and existing residents and business owners located within the rail corridor commonly experience the existence and frequency of rail activity. Therefore, the extension of the Metrolink commuter rail, including the installation of safety measures and grade crossings proposed by the Project, would occur within an existing rail line and would not result in a substantial change to train activity in an area where train activity never existed. In this context, no disproportionate, adverse effects would occur to low-income or minority populations. Additional detail on these environmental effects is provided in the corresponding sections of this chapter.

Beneficial Effects

The proposed Project would provide improved pedestrian safety and egress improvements within the rail corridor in addition to providing additional transit opportunities. Downtown San Bernardino is home to City and county government buildings, as well as the City's central business district. Efforts are underway to revitalize the downtown and provide more cultural and entertainment opportunities. The project would provide improved access to California Theatre of Performing Arts, California Theatre, Carousel Mall, San Manuel Stadium, and others. The proposed Metrolink extension is intended to help bolster economic development opportunities in San Bernardino’s central business district and maximize transit-oriented development opportunities in downtown San Bernardino and the region by providing a logical and convenient passenger rail connection between the Depot and downtown San Bernardino. An objective of the Project is to improve mobility opportunities for transit-dependent populations in the City to employment centers in Los Angeles, Riverside, and Orange Counties and to support local and regional planning goals of SANBAG for the development of transit corridors in the Inland

Source: HDR Engineering (December, 2011)

Figure 4.5-3
Residential and Business Acquisitions and Displacements
Downtown San Bernardino Passenger Rail Project

Empire. Therefore, the proposed Project would result in beneficial effects related to the provision of transit and pedestrian egress opportunities, and no adverse effects would occur.

The proposed Project also supports California AB 32, the Global Warming Solutions Act of 2006, which requires ARB to monitor and reduce greenhouse gas emissions. In addition, the proposed Project helps achieve the objectives of SB 375, which also requires a reduction in greenhouse gas emissions. The main objective of these two bills is to develop more efficient communities by reducing sprawl and providing residents with alternatives to using single-occupant vehicles. Implementation of the proposed Project would provide local municipalities with an opportunity to better comply with these mandatory laws.

Pedestrian Overpass Design Options 1A and 1B and Pedestrian Underpass Design Option 2

Construction Impacts

Pedestrian Overpass Design Options 1A and 1B and the Pedestrian Underpass Design Option 2 would involve a similar level of construction activity as is currently proposed by the Project; the only difference is the design and structural requirements of the pedestrian egress at the Depot. The Project Study Area would be the same, and the analysis related to environmental justice would be the same as the proposed Project. As such, effects related to environmental justice are not anticipated during construction.

Operational Impacts

The Pedestrian Overpass Design Options 1A and 1B and the Pedestrian Underpass Design Option 2 would involve a similar level of property acquisition, rail improvements, pedestrian connectivity, reductions of GHG emissions, and additional train movements as are currently proposed by the Project; the only difference is the design and structural requirements of the pedestrian egress at the Depot. The Project Study Area would be the same as the proposed Project, and the analysis related to environmental justice for all design options would be similar to that of the proposed Project. Therefore, no disproportionate, adverse effects would occur.

3rd Street Open Design Option 3

Construction Impacts

The 3rd Street Open Design Option 3 would involve a reduced Project Study Area and would affect fewer residential properties; the effects would be less than the proposed Project and the other design options. Therefore, disproportionate, adverse effects regarding environmental justice would not occur.

Operational Impacts

The 3rd Street Open Design Option 3 would result in upgrades to the existing at-grade crossing between J Street and I Street. Vehicular and pedestrian traffic along 3rd Street between the J Street intersection and North I Street intersection would remain and the acquisitions of residential units east of K Street between 3rd Street and 2nd Street would not occur in comparison to the proposed Project and the design options. Figure 2-11 depicts the Project Study Area associated with the 3rd Street Open Design Option 3. As shown, 3rd Street would not be closed and K Street would not be widened as proposed by the other design options. Therefore, the 3rd Street Open Design Option 3 Project Study Area would involve fewer residential property takes, allowing six additional properties along K Street between 3rd Street and 2nd Street to remain in their current condition. The six property takes that would be avoided

under this design option include the full acquisition of three residential properties containing seven families, and these families would not be relocated under this design option but would be under the proposed Project. Therefore, the 3rd Street Open Design Option 3 and its effects related to environmental justice would be reduced under this design option as compared to the other design options. Therefore, no disproportionate, adverse effects would occur.

4.5.3.2 Environmental Justice Findings Summary

Consideration of Potential Adverse Impacts and Mitigation Measures

Business and Residential Relocations

The proposed Project would result in the relocation of four active businesses and seven families (located on three residential properties). These relocations would be conducted in compliance with the Uniform Act and the California Relocation Act, and commensurate compensation would be provided to all affected parties.

Transportation

Traffic—All intersections in the EJ study area would operate at an overall acceptable level of service after implementation of Mitigation Measures T-1 (Prepare and Implement a Traffic Management Plan), T-2 (Prepare and Implement a Stadium Parking Plan), T-3 (Install a Traffic Signal at the J Street/2nd Street Intersection), and T-4 (Install All-Way Stops at the J Street/Rialto Avenue Intersection).

Transit—Region-wide transit service would be improved overall from the new transit development opportunities, and there would be improvements to pedestrian safety.

Noise and Vibration

With implementation of Mitigation Measures NOI-1 (Employ Noise-Reducing Measures during Construction), NOI-2 (Prepare a Community Awareness Program for Project Construction), NOI-3 (Use Ballast Mats, Resiliently Supported Ties or Measures of Comparable Effectiveness on Portions of the Rail near Sensitive Receivers), NOI-4 (Establish Quiet Zones), NOI-5 (Provide Building Noise Insulation to Severe- and Moderate-Impact Residences Where Sound Barriers Are Infeasible), NOI-6 (Lubricate Wayside Rail), and NOI-7 (Construct Sound Barriers), noise impacts resulting from both construction and operation of the proposed Project would not be adverse.

Community Facilities/Parklands

The proposed Project would have no adverse effects on community facilities or parklands.

Construction

Short-term, temporary impacts related to air quality, noise, traffic, and general community disruption would result from project construction. These impacts would be temporary and construction-related mitigation measures would be implemented, including Mitigation Measures BR-1(Conduct Preconstruction Nest Survey for Migratory Birds), BR-2 (Establish Buffer Area for Migratory Bird Nests), and BR-3 (Restrict Uses within Project Study Area Boundaries) to address biological resources; CR-2 (Conduct Cultural Resources Monitoring) and CR-4 (Stop Work if Unanticipated Human Remains Are Encountered) to address potential cultural resources; HM-1 (Comply with Hazards and Hazardous Materials Recommendations) and HM-2 (Plan and Monitor for Hazardous Materials) to address hazardous materials; NOI-1 (Employ Noise-Reducing Measures during Construction) and NOI-2 (Prepare a Community Awareness

Program for Project Construction) to address increased noise from construction; and T-1 (Prepare and Implement a Traffic Management Plan) and T-2 (Prepare and Implement a Stadium Parking Plan) to address construction-related traffic. Construction impacts are anticipated to be similar at all locations along the rail corridor and are not anticipated to effect low-income or minority communities substantially more than the general population.

Public Outreach and Community Involvement

In accordance with CEQA guidelines, a Notice of Preparation (NOP) was prepared on June 8, 2011, and distributed to responsible and trustee agencies, private organizations, and individual that may have an interest in the proposed Project. A 30-day public comment period for the NOP began on May 10, 2011, and ended on June 8, 2011. The meeting notice was placed in three newspapers covering English and Spanish audiences, including The *San Bernardino Sun,* Inland Empire Community Newspapers (including four publications: The *IE Weekly*, *Rialto Record*, *Colton Courier*, and *El Chicano*), and *La Prensa.*

A scoping and informational meeting regarding the Project took place May 17, 2011, at the Santa Fe Depot in the City of San Bernardino with English and Spanish speakers available to take comments and explain the project. The meeting included an audio/visual presentation, project team members to assist the public with questions or concerns about the Project, and a certified court reporter to transcribe verbal comments. Approximately 35–40 members of the public attended the scoping meeting, and 33 individuals provided signatures on the sign-in sheets. Comments received during the scoping meeting were provided verbally and on comment cards. Five comment cards were submitted, and a certified court reporter transcribed the comments of two individuals present at the scoping meeting (see Appendix A). Overall, public comments were positive and supportive of the proposed Project.

Other forms of notification were provided to the local community, including local television announcements and website, email, and hand-delivered notifications:

- Approximately 5,500 fliers were delivered to nearby properties within the Project area.
- Links to fliers and meeting information were posted on the City of San Bernardino and SANBAG website homepages.
- Channel 3 informational slides were produced and included on the City's public access television station rotation.
- Downtown San Bernardino Constant Contact newsletter (San BernarDEALios) provided notification to their database of nearly 400 local business leaders, residents, elected officials, etc.).

Comment topics provided by the local community that were relevant to the scope of the environmental analysis included the following:

- Protection from train/pedestrian conflicts.
- Traffic circulation and access to parking facilities.
- Closures/access during construction.
- Noise and vibration impacts on buildings.
- Air pollution close to the rail system.
- Use and capacity of rail yards affecting adjacent land uses.
- Property value impacts.

- Recommendation for undergrounding pedestrian egress to minimize visual and historic impacts on the historic Depot.

A total of five agency comment letters were received during the scoping period related to rail crossing safety, consultation with the California Native American Heritage Commission, preparation of appropriate hazardous materials documentation, and the proposed Omnitrans Bus Facility.

SANBAG and the project development team have made, and will continue to make, every effort to engage the public; including low-income, minority, and other disadvantaged communities, to participate and provide their comments on the proposed Project. This includes direct coordination with property owners that would be affected by project-related right-of-way acquisition. Business and residences that would require relocation were notified as early as late-2010 with coordination ongoing, as detailed in Chapter 6, "Agency and Community Participation."

4.5.4 Avoidance, Minimization and/or Mitigation Measures

Proposed improvements of the Project or design options may result in adverse effects on traffic and transportation; noise and vibration; air quality; cultural resources; hazards; geology; water quality; land acquisitions, displacements, and relocation; and biological resources. These effects are analyzed in more detail in this chapter. Adverse effects of the Project and design options would be minimized by the following mitigation measures.

- T-1 (Prepare and Implement a Traffic Management Plan), T-2 (Prepare and Implement a Stadium Parking Plan), T-3 (Install a Traffic Signal at the J Street/2nd Street Intersection), and T-4 (Install All-Way Stops at the J Street/Rialto Avenue Intersection) proposed in Section 4.2.3, "Transportation."
- CR-2 (Conduct Cultural Resources Monitoring) and CR-4 (Stop Work if Unanticipated Human Remains Are Encountered) proposed in Section 4.2.5, "Cultural Resources."
- HYD-1 (Develop and Implement a Stormwater Pollution Prevention Plan) and HYD-2 (Develop and Implement a Water Quality Management Plan) proposed in Section 4.3.1, "Floodplain and Hydrology."
- G-1 (Comply with Geotechnical Recommendations) proposed in Section 4.3.3, "Geology, Soils, and Seismicity."
- HM-1 (Comply with Hazards and Hazardous Materials Recommendations) and HM-2 (Plan and Monitor for Hazardous Materials) proposed in Section 4.3.4, "Hazardous Wastes and Materials."
- NOI-1 (Employ Noise-Reducing Measures during Construction), NOI-2 (Prepare a Community Awareness Program for Project Construction), NOI-3 (Use Ballast Mats, Resiliently Supported Ties, or Measures of Comparable Effectiveness on Portions of the Rail near Sensitive Receivers), NOI-4 (Establish Quiet Zones), NOI-5 (Provide Building Noise Insulation to Severe- and Moderate-Impact Residences Where Sound Barriers Are Infeasible), NOI-6 (Lubricate Wayside Rail), and NOI-7 (Construct Sound Barriers) proposed in Section 4.3.6, "Noise and Vibration."
- BR-1 (Conduct Preconstruction Nest Survey for Migratory Birds), BR-2 (Establish Buffer Area for Migratory Bird Nests), and BR-3 (Restrict Uses within Project Study Area Boundaries) proposed in Section 4.4.1 "Biological Resources."

The proposed Project or design options would not result in an adverse effect related to environmental justice; therefore, avoidance, minimization, and/or mitigation measures specific to environmental justice issues would not be required.

4.5.4.1 Cumulative Impacts

The proposed Project or design options, in combination with other potential projects in the regional area, would not result in a disproportionate and adverse cumulative effect on minority and low-income populations because all effects would be specific to the immediately surrounding neighborhood. Proposed improvements may result in adverse effects to traffic and transportation; noise and vibration; air quality; visual quality and aesthetics; water quality; land acquisitions, displacements, and relocation; and biological resources, and Section 4.5.3 identifies the mitigation measures that would avoid, minimize, or mitigate these effects. Although the Project Study Area is composed of predominantly minority or low-income populations, as detailed in Table 4.5-3 and Figures 4.5-1 and 4.5-2, these populations are distributed throughout the City; therefore, project-related and cumulative effects to these populations would not be disproportionate when compared to the City's overall demographics.

Further, railroad facilities have historically been part of the local community setting since the 1800s, and the railway is an existing feature in this area. The railway is active and currently operates freight service. The proposed Project or design options would provide improved pedestrian access and safety features that would not likely occur under existing conditions. Increased efficiency and ridership of public transit with the addition of an additional transit station near downtown San Bernardino would improve regional transit connectivity, which may result in cumulatively beneficial effects on pedestrian and commuter access for all people in the rail corridor, including minority or low-income populations. Therefore, the effects of the proposed Project and design options and the inclusion of other projects in the regional area would not result in adverse cumulative effects.

4.6 SECTION 4(F)

4.6.1 Introduction

4.6.1.1 Application of Section 4(f)

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

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

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

The proposed Project and design options are considered a transportation project that would receive federal funding and/or discretionary approvals through the DOT (i.e., through the FTA); therefore, documentation of compliance with Section 4(f) is required.

This section has been prepared in accordance with the FHWA/FTA Section 4(f) regulations (2008) 23 CFR 774. Additional guidance has been obtained from FHWA Technical Advisory T 6640.8A (1987) and the revised FHWA Section 4(f) Policy Paper (2005).

4.6.1.2 Section 4(f) "Use"

As defined in 23 CFR Section 774, the "use" of a protected Section 4(f) resource occurs when any of the following conditions are met:

- Land is permanently incorporated into a transportation facility through partial or full acquisition (i.e., "direct use").
- There is a temporary occupancy of land that is adverse in terms of the preservationist purposes of Section 4(f).
- There is no permanent incorporation of land, but the proximity of a transportation facility results in impacts so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired (i.e., "constructive use").

These definitions are further defined below.

Direct Use

Direct use of a Section 4(f) resource takes place when property is permanently incorporated into a proposed transportation project (23 CFR Section 774). This may occur as a result of partial or full acquisition of a fee simple interest, permanent easements, or temporary easements that exceed established regulatory limits (23 CFR Section 774).

Temporary Occupancy

Under FHWA/FTA regulations (23 CFR Section 774), temporary occupancy of a property does not constitute use of a Section 4(f) resource when the following conditions are satisfied:

- The occupancy must be of temporary duration (i.e., shorter than the period of construction) and not involve a change in ownership of the property.
- The scope of work must be minor, with only minimal changes to the protected resource.
- There are no permanent adverse physical effects on the protected resource, and there would be no temporary or permanent interference with activities or purpose of the resource.
- The property being used must be fully restored to a condition that is at least as good as that which existed prior to the proposed project.
- There must be documented agreement of the appropriate officials having jurisdiction over the resource regarding the foregoing requirements.

Constructive Use

Constructive use of a Section 4(f) resource occurs when a transportation project does not permanently incorporate land from the resource, but the proximity of the project results in impacts (i.e., noise, vibration, visual, access, and/or ecological impacts) so severe that the protected activities, features, or attributes that qualify the resource for protection under Section 4(f) are substantially impaired (23 CFR Section 774). Substantial impairment occurs only if the protected activities, features, or attributes of the resource are substantially diminished. This determination is made through the following practices:

- Identification of the current activities, features, or attributes of the resource that may be sensitive to proximity impacts.
- Analysis of the potential proximity impacts on the resource.
- Consultation with the appropriate officials having jurisdiction over the resource (23 CFR Section 774).

Nationwide Programmatic Section 4(f) Evaluations

The DOT and FHWA have determined that certain transportation projects may comply with the requirements of Section 4(f) under a nationwide programmatic evaluation rather than an individual evaluation. Five nationwide programmatic Section 4(f) evaluations are available:

- Projects that use historic bridges.
- Projects that use minor amounts of land from parks, recreational areas, and wildlife and waterfowl refuges.
- Projects that use minor amounts of land from parks.
- Bikeway projects.
- Projects that result in a net benefit to a Section 4(f) property.

As detailed below in Section 4.6, the proposed Project appears to meet the applicability criteria of Programmatic Section 4(f) Evaluation for Projects with minor involvements from parks, recreational areas, and wildlife and waterfowl refuges.

4.6.2 Project Purpose and Need

As discussed in Section 1.3, "Statement of Purpose and Need," the purpose of the Project is to provide an extension of Metrolink regional passenger rail service, provide a centralized bus facility for existing fixed-route and planned rapid bus transit service, promote strategies for the revitalization and redevelopment of downtown San Bernardino, provide new commuter rail service and intermodal opportunities to the downtown area, help bolster economic development opportunities in San Bernardino's Central Business District (CBD), maximize transit-oriented development opportunities in downtown San Bernardino and the region, reduce greenhouse gas emissions, and develop more efficient communities by reducing sprawl and providing commuters with alternatives to using single-occupant vehicles.

4.6.2.1 Need for the Project

The project need is multi-faceted and it is proposed in response to current population and employment forecasts that suggest significant growth in San Bernardino County through 2035. Over the past 30 years, population growth has been robust in San Bernardino County, contributing to increased travel demand and a decline in transportation system performance. Increasing roadway congestion has led to corresponding increases in commute times for work or recreational purposes, hours of lost productivity, increased fuel use contributing to air pollution, interference with emergency response vehicles, and spillover effects to secondary and alternative routes.

The Riverside-San Bernardino metropolitan area is ranked 14th in population nationally (according to 2009 estimates by the U.S. Census Bureau), but it ranks 32nd among large metropolitan areas in the *Texas Transportation Institute's Travel Time Index* (Texas Transportation Institute 2010). This index is a measure of congestion based on the ratio of travel time for trips made in the peak period as compared to travel times under free-flowing conditions. The 2008 RTP prepared by SCAG does not identify any major improvement or capacity expansion projects for I-10 beyond routine maintenance. With no major capacity improvements planned or programmed for the region, roadway productivity losses are anticipated to contribute to increased congestion and less than desirable levels of service on local highways and arterials.

The proposed Project would extend Metrolink commuter service into downtown San Bernardino, thereby providing an alternative mode of transportation for motorists experiencing long commutes to Riverside and Los Angeles Counties. The proposed Project would also incorporate a centralized bus facility that would be integrated with existing bus service offered by Omnitrans, thereby providing a local transit linkage to Metrolink passenger rail service. The combination of these transit options is expected to contribute to a reduction of 67,510 VMT on local roadways in future buildout year 2035, which would not otherwise occur under the No-Build/No-Project Alternative. This reduction in vehicle trips would also result in corresponding reductions in the generation of criteria air pollutants within the local air basin, which is designated as a nonattainment zone.

4.6.2.2 Project Objectives

As stated in Section 1.4, "Statement of Project Objectives," the objectives of the Project are identified as follows:

1. Construct a second track and associated railroad improvements to extend regional Metrolink passenger rail service between the existing Depot and downtown San Bernardino.

2. Encourage the integration of current and future passenger rail operations with other forms of transit in the region by providing a Metrolink passenger rail connection to downtown San Bernardino.
3. Accommodate forecasted ridership between the Depot and downtown San Bernardino by providing a convenient and efficient transit alternative to automobile travel.
4. Improve the mobility opportunities for transit-dependent populations in the City to employment centers in Los Angeles and Orange Counties and support local and regional planning goals of SANBAG for the development of transit corridors in the Inland Empire.
5. Improve safety and accessibility at the existing Depot by constructing a pedestrian bridge that will connect the station's two reconstructed platforms, thereby eliminating existing at-grade pedestrian crossings.
6. Facilitate intermodal transit opportunities by constructing the Omnitrans Bus Facility in close proximity to Metrolink passenger rail service.

4.6.3 Description of Proposed Project and Design Options

As stated in Chapter 2, "Alternatives," SANBAG is proposing to extend Metrolink regional passenger rail service approximately 1 mile east from its current terminus at the existing Depot located at 1170 West 3rd Street to new Metrolink commuter rail platforms proposed near the intersection of Rialto Avenue and E Street in the City (see Figure 2-1). The primary features of the DSBPRP include: construction of a second track; rail platforms; parking lots; a pedestrian overpass at the Depot, an Omnitrans Bus Facility; grade crossing improvements; railroad signalization; and roadway closures. The proposed Project's secondary features include: construction of drainage improvements, utility accommodation, and implementation of safety controls.

Chapter 2, "Alternatives," provides more detail on the proposed design options, which were developed to meet the identified need by accomplishing the defined purpose while avoiding or minimizing environmental impacts. The proposed Project includes three design options: Pedestrian Overpass Design Options 1A and 1B, Pedestrian Underpass Design Option 2, and 3rd Street Open Design Option 3. The Pedestrian Overpass Design Options 1A and 1B and the Pedestrian Underpass Design Option 2 would be designed to minimize visual effects on the Depot's historic façade. All other railway and station improvements proposed as part of the Project (e.g., maximizing circulation space around the new pedestrian egress structures and maintaining trackside fire truck access at the Depot) would remain the same. The 3rd Street Open Design Option 3 would not require 3rd Street to be closed and would instead upgrade the at-grade crossing between J Street and I Street. All other railway and station improvements proposed as part of the Project would remain the same. In addition, a No-Build/No-Project Alternative, which is described in Section 2.2, was also considered.

4.6.4 Description of Section 4(f) Resources

As noted above, resources subject to Section 4(f) consideration include publicly owned lands consisting of a public park/recreational area; public wildlife and waterfowl refuges of national, state, or local significance; or historic sites of national, state, or local significance, whether publicly or privately owned. Any parcel to be affected by the proposed Project or design options as a result of partial or full acquisition of a fee simple interest, permanent easements, or temporary easements within the Project Study Area are included. As described in more detail below, the potential Section 4(f) resources in the vicinity of the proposed Project may include the City-owned San Manuel Stadium and two National Register-eligible significant historic sites (Santa Fe Railroad Depot and the Southern California Gas Company Plant), as shown on Figure 4.6-1.

4.6.4.1 Public Park and Recreational Resources

Properties within the Project Study Area were evaluated to determine if public parks or other recreation resources would be affected by either construction or operation of the proposed Project. Based on a review of aerial photography of the rail corridor, the *San Bernardino General Plan*, and reliable internet sources (sources included where applicable), one potential recreational use, the San Manuel Stadium, was identified within the Project Study Area. Table 4.6-1 provides a summary listing of that resource, and Photo 4.6-1 shows the front façade of the stadium. A detailed description of the resource is provided below.

Table 4.6-1. Section 4(f) Properties—Public Parks and Recreational Areas

Name	Location	Size	Ownership
San Manuel Stadium (Arrowhead Credit Union Park)	280 South E Street San Bernardino, CA 92401	25.001 acres	City of San Bernardino (previously the Redevelopment Agency, San Bernardino Economic Dev Corp)
Source: City of San Bernardino Economic Development Agency 2011; HDR Engineering, Inc. 2011d; and San Bernardino County Assessor 2011.			

Photo 4.6-1. San Manuel Stadium*

***NOTE:** Photograph was taken prior to installation of new signage to denote the name change to “San Manuel Stadium.”

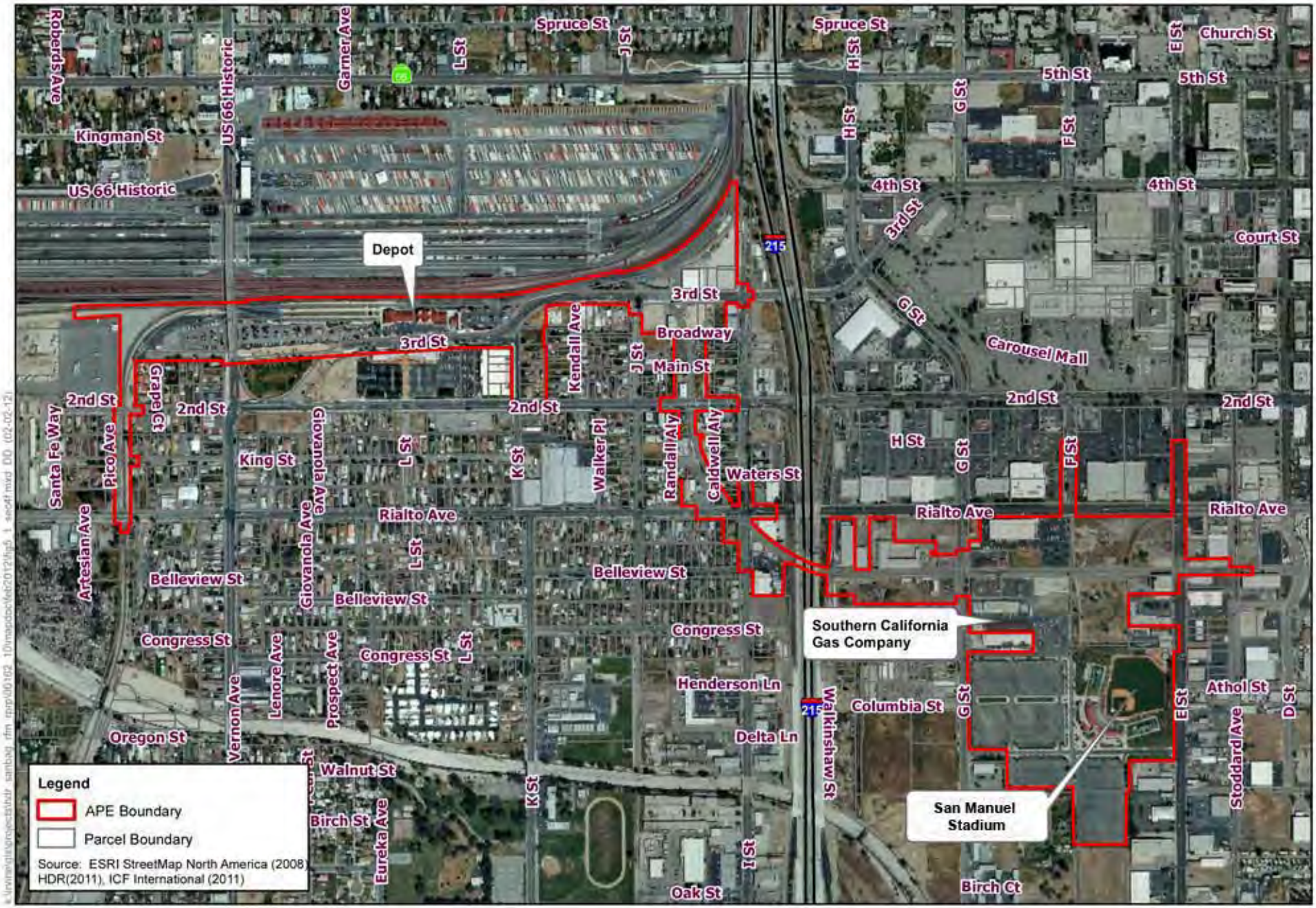


Figure 4.6-1

Properties Evaluated for Compliance with Section 4(f)

Downtown San Bernardino Passenger Rail Project

San Manuel Stadium

Location/Size

San Manuel Stadium (previously known as Arrowhead Credit Union Park), a minor league baseball stadium, is owned by the City of San Bernardino and is located within a highly urbanized area in the City at 280 South E Street. The stadium is located south of the rail corridor, between South E Street and South G Street. The City-owned parcel sits on approximately 25 acres, of which approximately 9 acres comprise the actual stadium and the remaining 16 acres comprise adjacent parking lots to the south and west of the stadium. Photo 4.6-2 shows the northwest corner of the stadium's landscaped area.

Photo 4.6-2. Fenced Landscaped Area of San Manuel Stadium within the Project Study Area

Access

San Manuel Stadium is accessible from the I-215 freeway at the 3rd Street and Mill Street exits and I-210 freeway at the State Street exit. Major surrounding streets include South E Street, Rialto Avenue, South G Street, and Mill Street. Sidewalks surrounding the San Manuel Stadium are available to pedestrians surrounding the facility, specifically to the west, south, and east. Parking lots are located west and south of the facility. The access points along G Street into and out of San Manuel Stadium are closed off when the facility is not in use. The main access driveway to the parking facilities, off of E Street, is generally open at all times; however, access into the stadium is generally closed off when the facility is not in use (see Photo 4.6-3).

Photo 4.6-3. Closed Access to the Affected Area within the Project Study Area

Use

The San Manuel Stadium is home to the Inland Empire 66ers of San Bernardino, a single-A minor league baseball team in the California League for the Los Angeles Angels of Anaheim. Prior to the 2002 season, the 66ers and the City of San Bernardino signed a 10-year stadium naming rights deal with Arrowhead Credit Union. In doing so, the 66ers became the first team in the California League's history to secure a stadium naming rights deal (Minor League Baseball 2011). Then in 2012, the stadium was renamed to San Manuel Stadium to honor the longstanding partnership with the San Manuel Band of Mission Indians (SBSun.com 2012).

Construction of the stadium was completed in August 1996. The facility seats 5,000 people with grass seating that can accommodate an additional 5,000 people. Within the fenced area of the facility are two large outdoor picnic areas that overlook the playing field.

In addition to being used for minor league games during the regular season, the stadium is also used for outdoor concerts, exhibit areas, family and trade shows, conferences, and other sports uses (City of San Bernardino Economic Development Agency 2011). The facility is not open to the general public and is generally closed off when not in use for these scheduled events. Admittance to the facility for scheduled home games or other events is provided through purchased tickets. The facility is not considered a public park by the City of San Bernardino.

Ownership/Jurisdiction

The San Manuel Stadium site is owned by the City of San Bernardino and is maintained by the City's Park and Recreation Department. The property is considered a stadium and a commercial use by the San Bernardino County Assessor (San Bernardino County Assessor 2011).

According to the *San Bernardino General Plan* (City of San Bernardino 2005a), open space provides a multitude of functions that are beneficial to the community, including park and recreation areas, recreational trails, conservation of natural and significant resources, buffers between land uses, and the preservation of scenic views. Active recreation areas typically include facilities such as tailored playing surfaces, buildings, parking areas, and similar

modifications to a natural site. Passive recreation areas accommodate less structured recreational pursuits and typically include minor modifications such as trails, service vehicle access improvements, enhanced landscape materials, and similar non-intrusive changes to the site. San Manuel Stadium is not open to the general public and is generally closed off when not in use via fences and gates. Entrance for scheduled Inland Empire 66ers home games or other scheduled events on the site typically requires a ticket for admission.

The City has 52 developed parks and recreational facilities, encompassing 539.98 acres. According to the *San Bernardino General Plan* (City of San Bernardino 2005a), San Manuel Stadium is not designated as a Public Park or a Recreation Facility. The San Manuel Stadium site is instead designated Commercial General, specifically Central City South-1 (CCS-1) with a 1.0 floor area ratio (FAR), a designation typically used for local- and regional-serving retail and service uses.[17] Commercial designations, as designated by the City, typically accommodate a variety of retail, service, professional, office, and entertainment uses and a range of intensities. However, other uses such as parks, childcare facilities, and public/institutional uses that are determined to be compatible with and oriented toward the needs of commercial uses may also be allowed.

As stated in the *San Bernardino General Plan* (City of San Bernardino 2005a), Arrowhead Credit Union Park, now known as San Manuel Stadium, is located immediately south of the Downtown Strategic Policy Area. It provides an amenity to residents and attracts a regional audience, which directly correlates with and enhances the Downtown Strategic Policy Area. However, San Manuel Stadium is not physically connected to its surroundings. Efforts to develop the area surrounding the stadium with complimentary retail services, including sports-related uses to appeal to San Manuel Stadium audience, are underway. These efforts include increased landscaping and street furniture treatments to enhance the visual appeal and pedestrian-friendly atmosphere. The *San Bernardino Revitalization Plan* encompasses the majority of the Downtown Strategic Policy Area. Critical to the area is the development of a design theme that ties the entire downtown together.

4.6.4.2 Public Wildlife and Waterfowl Refuges Resources

There are no wildlife and waterfowl refuges within or adjacent to the Project Study Area. In addition, the proposed Project would not involve land purchased or improved with funds under the Land and Water Conservation Fund Aid in Wildlife Act, or otherwise encumbered with a federal interest. This topic will not be further analyzed in this chapter.

4.6.4.3 Historic Sites

As part of the process to evaluate potential impacts of the proposed Project on historic resources, an APE was established in accordance with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended. The APE consists of all properties affected by the proposed Project (as shown as Figure 3.5-1). The APE map includes entire parcels proposed for acquisition by the Project, even if only a portion of an affected parcel will be affected by the Project. Archaeological resources evaluated within the APE encompass all permanent areas of disturbance and any potential staging and assembly areas to be affected temporarily during construction.

[17] Each of the non-residential designations indicates a maximum level of development intensity. The building intensity is measured by FAR, or the ratio of total net floor area of a building to the total lot area. An FAR describes the intensity of the use on a site and not the building height or site coverage.

As discussed in "Affected Environment" in Section 4.2.5, "Cultural Resources," there are two previously identified historic structures located within the APE. Both sites are eligible for or are currently listed as National Register properties. These include the Santa Fe Railroad Depot and the Southern California Gas Company Plant. Table 4.6-2 provides a summary listing of these resources, and a detailed description of each resource is provided below.

Table 4.6-2. Section 4(f) Properties—Historic Sites

Name	Location	Ownership	Status of National Register of Historic Places and California Register of Historic Resources Listing
Santa Fe Railroad Depot	1170 West 3rd Street San Bernardino, CA 92410	San Bernardino Associated Governments	1S. National Register and California Register listed.
Southern California Gas Company Plant	155 South G Street San Bernardino, CA 92401	Southern California Gas Company	3S. Appears eligible for National Register 5S3. Listed as local historic resource.
Source: Appendix D and HDR Engineering, Inc. 2011d.			

Atchison Topeka & Santa Fe Railroad Depot (36-017975)

The Santa Fe Railroad Depot, or Depot, located at the southern boundary of the former rail yard, is a large Mission Revival style building at 1170 West 3rd Street. Details of the design of this massive building were derived largely from historic California missions. The building includes four domed mission-style bell towers surrounding a larger central domed waiting room. Wings of the building, housing various work and office spaces for the Depot, are similarly designed with reference to mission facades and arcades, shaped "bell walls," buttress and pilaster wall detailing, and other characteristic features (see Photo 4.6-4 for a photo of the front façade of the Depot).

This building, recorded and evaluated in 1999 (Miller and Starzak), is listed in the National Register and is a California Point of Historical Interest. According to the site record, the Depot was constructed between 1916 and 1918. It is the sole surviving building associated with AT&SF Railway's Los Angeles Division headquarters. Prior to Santa Fe's purchase of the California Southern Railroad (CSRR) in 1884, operational headquarters for the CSRR were located in National City. Once the Santa Fe Railway connected with the former CSRR by completing the 81 miles of track between Barstow and San Bernardino, the Santa Fe Railroad elected to move its regional headquarters to a more centralized location. Since the Harvey House expansion between 1921 and 1922, no other major alterations have been made at the Depot other than some windows and doors on the upper floor that were in-filled during the 1960s as part of a facility remodel (Miller and Starzak 1999). The Depot was restored in 2002–2004 and the building was repainted in 2010–2011 (SANBAG 2010).

The building is regarded as unique among the Santa Fe Railroad stations in California, and it is listed in the National Register (a 1S status code). Photo 4.6-5 contains the parcel boundary for National Register listing. Its architecture contributes to the significance of the property at the federal, state, and local levels.

Photo 4.6-4. Front Façade of the Depot

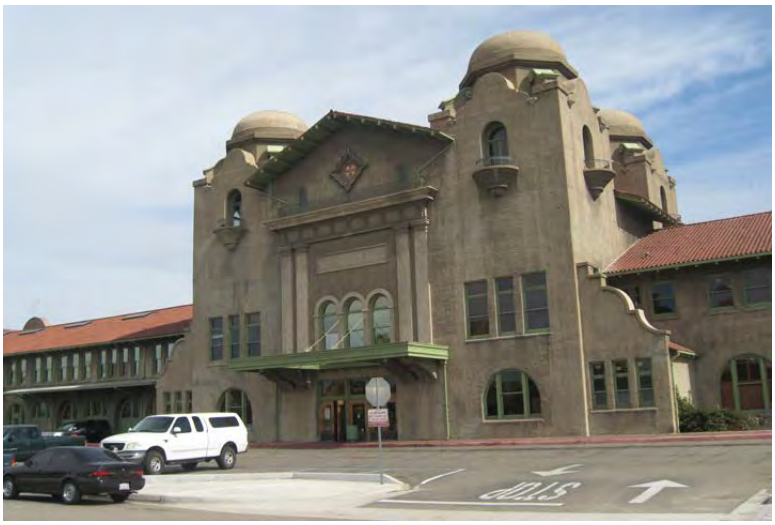


Photo 4.6-5. National Register Depot Parcel Boundary

Southern California Gas Company Plant

The expansive property utilized as a plant for the Southern California Gas Company contains two large buildings, a one-and-two story North Building and a one-story South Building at 155 South G Street. The architectural style of both buildings is Streamline Moderne, which is reflected in the flat roofs with parapets, curved corners facing the street, stucco finish, and broad horizontality of the connected sills and lintels that form belt courses along each façade. At the rear of the North Building is a two-story portion that is utilitarian in design (see Photo 4.6-6). Fenestration along the primary elevations consists of a band of multiple four-light aluminum frame windows that most likely replaced original steel frame windows. Above the street-facing

windows of the North Building are the words "SOUTHERN CALIFORNIA GAS COMPANY" in period lettering. On the South Building, the word "AUDITORIUM" in similar lettering tops the original corner metal and glazed double doors of the main northwest-facing entrance. Alterations include the window replacements and the application of a rough-textured stucco finish over the original smooth stucco. Overall, the buildings exhibit a moderate to high level of integrity.

The property's North and South Buildings are highly representative of the Streamline Moderne architectural style that was popular during the 1930s. Alterations to the characteristic style include the original steel frame windows that have been replaced with aluminum-framed windows, the smooth stucco finish resurfaced with rough-textured stucco, and a storage area added to the rear of the South Building (but not visible from the street). Nonetheless, the overall integrity of design, materials, feeling, and workmanship remains relatively high. In addition, integrity of location, setting, and association is high because the property has been in continuous use as the Southern California Gas Company's plant since it was constructed. A windshield survey of San Bernardino suggests that the Streamline Moderne architectural style is relatively uncommon in the City. As such, the subject property represents a rare example of the style in San Bernardino, and it appears to achieve a level of architectural merit necessary for listing in the National Register under Criterion C at the local level of significance (a 3S status code). However, because no known persons or events of local, state, or national significance appear to be associated with the resource, and because its association with the Southern California Gas Company does not appear to be especially noteworthy, the property does not warrant National Register listing under Criteria A or B. Refer to Photo 4.6-7 for the parcel boundary eligible for National Register listing.

Photo 4.6-6. Southern California Gas Company North Building

Photo 4.6-7. National Register-Eligible Boundary of the Southern California Gas Company Plant

4.6.4.4 Archaeological Resources

As discussed in Section 4.2.5, “Cultural Resources,” no additional archaeological resources, beyond previously recorded sites, were identified within the APE during field surveys for the Project. None of the previously recorded archaeological resources within the Project Study Area are eligible for the National Register. The potential to yield buried prehistoric or historic period archaeological resources is considered to be low. Therefore, archaeological resources are a Section 4(f) resource that will not be affected by the Project.

4.6.5 Section 4(f) Impacts

As noted above, resources subject to Section 4(f) consideration include publicly owned lands consisting of public parks/recreational areas; public wildlife and waterfowl refuges of national, state, or local significance; or historic sites of national, state, or local significance, whether publicly or privately owned. As described previously, the potential Section 4(f) resources within the Project Study Area include publicly owned parks and recreational areas and significant historic sites, as shown on Figure 4.6-1. There are no wildlife and waterfowl refuges within or adjacent to the Project Study Area.

4.6.5.1 Public Park and Recreational Resources

The significance of a public park/recreation area under Section 4(f) is to be determined by the officials having jurisdiction over the park/recreation area. In the absence of such a determination, the park/recreation area will be presumed to be significant. “Significance” means that, in comparing the availability and function of a park/recreation area with the

park/recreational objectives of the local community, the land in question plays an important role in meeting those objectives. In addition, the significance determination must consider the significance of the entire site rather than just the portion of the site that may be affected by the proposed Project (See 23 CFR 774; FHWA Section 4(f) Policy Paper, pp 9-10).

Direct Use

San Manuel Stadium

For purposes of this Section 4(f) documentation and FHWA regulations (See 23 CFR 774), the agency with jurisdiction over San Manuel Stadium is the City of San Bernardino Economic Development Agency. However, SANBAG has been in communication with the City regarding use of this property, and the City did not express any concerns. The permanent use of this parcel for the Project would not in any way restrict the use of the stadium because proposed improvements would occur within landscaped areas or in existing parking areas. The Project would affect less than 20,000 square feet (0.46 acre) of the 9-acre stadium area, amounting to less than 5% of the total parcel area, not including the adjacent City-owned parking areas to the south and west. This affected area is within a landscape buffer and spectator grounds of the stadium. Proposed improvements in this area may include construction of a driveway, pedestrian walkway, drainage pipe, and detention basins. No adverse effects to San Manuel Stadium would occur. Two adjacent City-owned parking lots directly to the west and south of the stadium area would be temporarily used for contractor staging and relocated parking for the duration of the construction period. This may result in temporary impacts on parking (see “Temporary Use” below), and long-term accessibility impacts are not anticipated.

Two more City-owned lots on the same parcel (but farther south and west) are also being considered as potential locations for the creation of a detention basin. These two optional sites are located south of the stadium; one is at the southwest corner of the unofficial intersection of F Street and an unnamed access road for access into San Manuel Stadium, and the other is located at the southernmost extent of the southeastern parking area (see Figure 2-1). Only one optional site will be developed as a detention basin as part of the Project. If the existing parking area located at the southwest corner of the intersection of F Street and the stadium access road is selected as the site for the detention basin, parking opportunities during peak parking times would be reduced; however, the remaining parking lots and street parking in the area should more than accommodate demand. General accessibility is in fact likely to improve, as the proposed Project involves the creation of additional parking opportunities and pedestrian improvements along the Rialto Street and adjacent to the stadium, as well as improved bus access.

As stated previously, San Manuel Stadium is not open to the general public and is generally closed off when not in use via fences and gates. Entrance for scheduled Inland Empire 66ers home games or other scheduled events on the site typically requires a ticket for admission. San Manuel Stadium is not included among the 52 developed parks and recreational facilities designated by the City. Even though the stadium is publicly owned, it is not designated as a public park or a recreational area and is instead considered a commercial use. As the City refers to San Manuel Stadium as an entertainment attraction rather than a public park or recreational facility, it is not protected by Section 4(f) and no Section 4(f) impacts would occur.

No impacts on public parks or recreational resources would occur with the direct use of the land for the proposed Project or the design options. Therefore, direct use of Section 4(f) resources would not occur under the proposed Project or design options.

Temporary Use

The proposed Project would require the temporary use of San Manuel Stadium and adjacent parking areas as staging areas during construction. Construction of the Project or design options could result in temporary air quality emissions, noise, visual, and access effects to the site. Parking lots directly to the south and west of the stadium may be used for contractor staging and relocated parking during this time. Construction activities would most likely occur during the weekday hours when the Inland Empire 66ers baseball games would likely not occur. Additionally, construction activities would occur outside of the stadium area of the ball field and spectator viewing and would not require the temporary use of these areas to implement the Project. SANBAG and the City will coordinate to determine where replacement parking would be located in the vicinity of the Project during construction (see Mitigation Measure T-2 [Prepare and Implement a Stadium Parking Plan] in Section 3.11, "Transportation and Traffic"), and no adverse effects would occur.

Construction of the proposed Project or design options would be temporary. The extent of effects to the site is considered minor in terms of the size of the area affected and its existing use as landscaped areas. Additionally, there would be no interference with activities or the purpose of San Manuel Stadium as a baseball field. Construction would not substantially impair the features and attributes of the San Manuel Stadium as improvements are proposed within a landscaped area outside of the fenced area of the use. It should be noted that the lead agency and the property owner are both in agreement with the use of the property within the Project Study Area for access and drainage facilities.

Additionally, the temporary impacts of construction activities would be further minimized by mitigation measures proposed in the following sections of this document:

- Section 4.2.3, "Transportation"
- Section 4.2.5, "Cultural Resources"
- Section 4.3.1, "Floodplain and Hydrology"
- Section 4.3.2, "Water Quality"
- Section 4.3.3, "Geology, Soils, and Seismicity"
- Section 4.3.4, "Hazardous Waste and Materials"
- Section 4.3.6, "Noise and Vibration"
- Section 4.4, "Biological Environment"

None of the permanent detention basin locations or temporary staging areas required for project construction would affect San Manuel Stadium. No adverse effects would occur.

Constructive Use

As stated previously, the constructive use of a Section 4(f) resource occurs when a transportation project does not permanently incorporate land from the resource, but the proximity of the project results in impacts (i.e., noise, vibration, soils, drainage, access, and/or ecological impacts) so severe that the protected activities, features, or attributes that qualify the resource for protection under Section 4(f) are substantially impaired.

Project-related improvements to the San Manuel Stadium site would not result in significant adverse effects on traffic and transportation, noise and vibration, air quality, visual quality and aesthetics, water quality, land acquisitions, displacements and relocation, and biological

resources. These impacts are analyzed in the applicable sections of this chapter. With the incorporation of mitigation measures proposed in each of the EA sections below, no significant adverse constructive use effects would occur under the Project or the design options under consideration:

- Section 4.2.3, “Transportation”
- Section 4.3.1, “Floodplain and Hydrology”
- Section 4.3.2, “Water Quality”
- Section 4.3.3, “Geology, Soils, and Seismicity”
- Section 4.3.4, “Hazardous Waste and Materials”
- Section 4.3.6, “Noise and Vibration”

No adverse effects would occur.

Findings

The proposed Project is not anticipated to result in adverse effects to Section 4(f) resources resulting from the direct use, temporary occupancy, or constructive use of publicly-owned land designated as a public park or recreation area because:

- The total size of the San Manuel Stadium parcel is 1,089,000 square feet. The proposed Project could use up to 20,000 square feet of the parcel, which is less than 2 percent of the total area of the site, not including adjacent parcels also owned by the City of San Bernardino used for parking, which could affect an additional 1.2 acres. Enough parking is available on or near the site to accommodate the use of the existing parking area for a detention basin**.**
- The proposed Project would utilize land within a landscaped area outside the stadium area of San Manuel Stadium and would not affect the use of the stadium.
- San Manuel Stadium is not designated as a public park, nor is it open to the general public for use as a park or other recreational facility.
- SANBAG and the City of San Bernardino are in agreement regarding the use of the San Manuel Stadium for access and drainage improvements.
- The proposed Project would not involve land purchased or improved with funds under the Land and Water Conservation Fund Aid in Wildlife Act, or otherwise encumbered with a federal interest.

4.6.5.2 Historic Sites

Significance

As discussed in Section 4.2.5, “Cultural Resources,” two previously identified historic structures are located within the APE. Both sites are eligible for or are currently listed as National Register properties. These include the Depot and the Southern California Gas Company Plant.

Direct Use

The proposed Project would not directly or indirectly alter the Depot’s distinctive physical or historical characteristics, nor would it affect the Depot’s integrity of location, design, materials, workmanship, feeling, or association. The proposed pedestrian overpass would not physically

touch the Depot, and the new construction, if removed in the future, would not impair the essential form and integrity of the historic property and its environment. The Project or design options would require the installation of new artwork, signage, and a clock within the lobby of the Depot; a Depot-inspired monument sign and flagpole outside the building; new exterior and interior way-finding signage for SANBAG/SCAG/Whistle Stop Cafe/Museum; new portable Metrolink and Amtrak map and brochure case; new bathroom signage; and historically consistent window awnings. These minor additions would not affect the Depot's integrity or detract from the Depot's historical characteristics due to their size, scale, and design.

The Southern California Gas Company buildings are located south of the proposed encroachment on the northeast corner of the large parcel that contains the plant, and the proposed Project would use a very small part of the north portion of the property's parking lot. The southwest portion of the proposed rail platform would encroach up to 70 feet onto the northeast corner of the plant parcel that is currently used for employee parking and/or storage, and could affect approximately 11 parking spaces within the National Register-eligible boundary (see Photo 4.6-7). However, the majority of parking utilized by the Southern California Gas Company Plant for customers and/or employees is located within adjacent parcels located south and east of the plant.

The proposed Project would not directly or indirectly alter the physical or historical characteristics, nor would it alter the integrity of location, design, materials, workmanship, feeling, or association of the Southern California Gas Company Plant. The Project would involve only a partial take of the property's parking area and would not affect or be located within close proximity to the building's façade; new construction would not physically touch the Southern California Gas Company Plant. Therefore, no effect on the significance of the historic resource would occur, and direct use by the proposed Project would not result in a substantial adverse effect.

Temporary Use

Construction would likely affect the two historic sites identified within the Project Study Area during the temporary construction period of 18 to 24 months. Construction of the Project or design options could result in temporary air quality emissions and noise, visual, and access effects on these sites. As discussed in Section 4.2.5, "Cultural Resources," these impacts would be temporary and would not substantially alter the Depot or the Southern California Gas Company Plant.

Constructive Use

Proposed improvements within the Project Study Area to the Depot and Southern California Gas Company Plant parcels may result in adverse effects on noise and vibration, visual quality and aesthetics, land acquisitions, and transportation (i.e. access). No substantial adverse effects on these historic resources would occur with implementation of the proposed Project and design options.

Findings

The proposed Project is not anticipated to result in adverse effects on Section 4(f) resources resulting from the use of National Register-eligible historic resources. Project improvements would not diminish the historic integrity of the Depot or the Southern California Gas Company Plant buildings; only parking spaces within the National Register-eligible parcel boundaries would be affected with the installation of additional track or the reconfiguration of existing parking spaces. The total size of the partial property take is minimal in comparison to the parcel

boundaries as a whole and the addition of the Project would not affect the occupancy and use of the buildings.

Also, as discussed previously, no additional archaeological resources were identified. However, construction-related ground-disturbing activities for the proposed Project could potentially disturb, damage, or degrade previously unrecorded, intact archaeological resources. As such, Mitigation Measures CR-2 (Conduct Cultural Resources Monitoring), and CR-3 (Conduct Paleontological Monitoring), have been included to reduce any potential adverse effects associated with the proposed Project and design options. Therefore, archaeological resources are a Section 4(f) resource that will not be affected by the Project.

4.6.5.3 Avoidance Alternatives

As the project would not result in adverse effects on Section 4(f) resources, no alternatives were considered to avoid potential Section 4(f) resources. All other alternatives screened during the planning process would result in similar impacts on resources within the APE.

4.6.5.4 Measures to Minimize Harm

As described above, implementation of the proposed Project would not result in substantial adverse effects on Section 4(f) lands. There is potential for impacts resulting from constructive use of areas adjacent to or within the APE; however, these potential impacts are temporary and can be mitigated by the mitigation measures described in Section 4.3.6 “Noise and Vibration.” Therefore, no Section 4(f) impacts would occur, and no additional measures to minimize harm have been identified.

4.6.5.5 Consultation and Coordination

The FTA sent letters to known federally recognized tribes within the Project Study Area on March 16, 2012. The FTA also submitted the Cultural Resources Technical Report (Appendix D) along with a summary of impacts letter for review to the SHPO on March 17, 2012. SANBAG has consulted with the local jurisdiction to ensure participation in the planning process for the proposed Project. SANBAG has been in communication with the City of San Bernardino Economic Development Agency regarding the use of a portion of San Manuel Stadium for pedestrian and vehicular access and drainage facilities. Additionally, the City was consulted regarding potential impacts on the site. Consultation will be initiated by the FTA with SHPO regarding potential cultural resources adverse effects on the Depot and the Southern California Gas Company Plant building and a letter and technical memorandum will be provided to SHPO for review. Refer to Chapter 6, “Agency and Community Participation,” for additional details regarding consultation and coordination occurring as part of the Project.

4.6.5.6 Findings

The proposed Project would not adversely affect National Register-eligible historic resources and no publicly owned recreational resources would be impacted.

5.0 LIST OF PREPARERS

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6.0 AGENCY AND COMMUNITY PARTICIPATION

6.1 EA/DEIR PARTICIPANTS AND PUBLIC REVIEW

The purpose of an EA/DEIR is to provide decision makers, public agencies, and the general public with an objective and informational document that fully discloses the potential environmental effects of the proposed Project. The EA/DEIR process is specially designed to facilitate the objective evaluation of potentially significant direct, indirect, construction, operational, and cumulative impacts of a project and identify potentially feasible mitigation measures and alternatives that reduce or avoid the project's substantial and adverse effects.

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process. It helps planners to determine the necessary scope of environmental documentation as well as the level of analysis required and to evaluate potential impacts and identify appropriate mitigation measures. Agency consultation and public participation for the proposed Project have been accomplished through a variety of formal and informal outreach methods, including project development team meetings, interagency coordination meetings, a public scoping meeting, and SANBAG website notification. This chapter summarizes the results of efforts to identify, address, and resolve project-related issues through early and continuing coordination.

6.1.1 Scoping Meeting and Public Comments Received during Scoping

Although scoping is not formally required for EA preparation under the CEQ NEPA Regulations, it can be a useful tool in the EA process for discovering alternatives, uncovering significant environmental impacts that may have been overlooked and/or developing mitigation measures to reduce adverse effects. Refer to Section 6.1.3.1 for further detail regarding the CEQA public scoping process associated with preparation of the Notice of Preparation (NOP).

As part of the community outreach for the Project, the public outreach team coordinated a scoping meeting in San Bernardino. The 2-hour meeting provided the public an opportunity to comment on the scope of the EA/DEIR to be prepared for the Project. The scoping meeting was held within the project site at the following date, time, and location:

Santa Fe Depot
May 17, 2011
5:00 p.m.–7:00 p.m.
1170 W. 3rd Street, 1st Floor
San Bernardino, CA 92410-1715

The meeting included an audio/visual presentation that provided an overview of the proposed Project. In addition, project team members from environmental, engineering and design, right-of-way, and public outreach were available to assist the public with any questions regarding the Project. A certified court reporter was also available to document public input.

6.1.1.1 Notification of Scoping Meeting

Prior to the scoping meeting, information regarding the opportunity for public comments on the Project was made available through a variety of sources, which included:

- Advertisements. Ads were placed in three newspapers serving English and Spanish audiences:

- The *San Bernardino Sun* published a ¼-page full color ad on Friday, May 13 through Sunday, May 15, 2011 and posted an online banner that had approximately 67,000 viewers on the website www.sbsun.com.
- Inland Empire Community Newspapers published a ¼-page black and white English ad in all four papers (The *IE Weekly*, *Rialto Record*, *Colton Courier*, and *El Chicano*) on Thursday, May 12, 2011.
- *La Prensa* published a ¼-page black and white Spanish ad on Friday, May 13, 2011.

- Certified Mail and Informational Flier Distribution. Certified mail was sent to property owners nearest to the Project to inform them of the scoping meeting. In addition, notices in English and Spanish were hand-delivered to properties closest to the project area. There were 5,500 fliers delivered in the City of San Bernardino.
- Database Notification. Emails were sent to more than 600 contacts:
  - First round notification emails were sent on Friday, May 6, 2011.
  - Reminder emails were sent Wednesday, May 11, 2011, and Monday, May 16, 2011.
  - A link to a flier was posted on the City of San Bernardino and the County of San Bernardino website home pages.
  - Channel 3 informational slides were produced and included in City of San Bernardino public access television station rotation.
  - Downtown San Bernardino constant contact newsletter (*San BernarDEALios*) sent notifications to its database of nearly 400 local business leaders, residents, elected officials, etc.
  - Meeting information was posted on SANBAG and City of San Bernardino home pages.
- VIP/City Council Notification. A list of more than 80 contacts from such agencies as SANBAG, BNSF, Metrolink, congress members, senators, assembly members, and more received personalized emails from SANBAG Public Information Officer Jane Dreher.

6.1.1.2 Agency Comments Received during the Scoping Review Period

Notification of the Project was distributed to 43 state and local agencies and organizations. Appendix A includes the distribution list containing names of organizations and addresses. Formal comments received during the scoping process to be included in the EA/DEIR were submitted in writing by the State of California Office of Planning and Research (State Clearinghouse), the State of California Public Utilities Commission, the State of California Native American Heritage Commission, and the Department of Toxic Substances Control. Table 6-1 includes a summary of the agency comments and where the comment was addressed in the EA/DEIR. These agency comment letters are located in Appendix A.

Table 6-1. Agency Comments and Responses during the Scoping Review Period

No.	Agency	Comment	Response
1	State of California Office of Planning and Research	Courtesy notice regarding NOP.	Comment noted.
2	State of California Public Utilities Commission	Recommendations for crossing safety improvements.	See Section 3.11, "Transportation and Traffic," Section 4.2.3, "Transportation," and Section 4.2.8, "Safety and Security," for crossing safety discussion.
3	State of California Native American Heritage Commission	Need for early consultation. Provide provisions for accidental discovery.	See Section 3.5, "Cultural Resources," and 4.2.5, "Cultural Resources" for information about consultation and mitigation.
4	Department of Toxic Substances Control	Review of databases and preparation of Phase I or II as applicable.	See Section 3.7, "Hazards and Hazardous Materials," for discussion concerning database review and recommendations of Phase I reports.
5	Federal Transit Administration	Recommendation to combine proposed Project with Omnitrans Bus Facility Project.	This document includes analysis of this new component. See Chapter 1, "Introduction," and Chapter 2, "Alternatives." Analysis of the proposed bus facility is provided in Section 3.14, "Alternatives Evaluation in Terms of CEQA," and Chapter 4, "NEPA Environmental Assessment Evaluation," within each of the NEPA sections.

6.1.1.3 Public Comments Received during the Scoping Review Period

Approximately 35-40 members of the public attended the scoping meeting on May 17, 2011, and 33 individuals provided signatures on the sign-in sheets. Comments received during the scoping meeting were provided verbally and on comment cards. Five comment cards were submitted, and two comments were taken by a court reporter. Overall, public comments were positive and supportive of the proposed Project. No other public comments were received during the 30-day scoping review period.

Comment topics that were relevant to the scope of the environmental analysis included the following:

- Protection from train/pedestrian conflicts.
- Traffic circulation and access to parking facilities.
- Closures/access during construction.
- Noise and vibration impacts on buildings.
- Air pollution close to rail system.
- Use and capacity of rail yards affecting adjacent land uses.
- Property value impacts.
- Recommendation for undergrounding pedestrian egress to minimize visual and historic impacts on the historic Depot.

These comments were addressed in Chapters 3 and 4 within each of the CEQA and NEPA sections.

6.1.2 NEPA Environmental Review Process

NEPA requires agency decision makers to make informed decisions. Therefore, the NEPA process must be completed before a lead agency makes a final decision on a proposed action. NEPA does not require the decision maker to select the environmentally preferable alternative or prohibit adverse environmental effects; however, NEPA does require that decision makers be informed of the environmental consequences of their decisions. Federal agency decision makers often have other concerns and policy considerations to take into account in the decision-making process, such as social, economic, technical, or national security interests.

NEPA requires an EA for all actions in which the significance of the environmental impact is not clearly established. The purpose of an EA is to determine the significance of the environmental effects and to look at alternative means to achieve the lead agency's objectives. An EA can either result in a Finding of No Significant Impact (FONSI), requiring no further environmental evaluation, or it can identify potentially significant impacts requiring an EIS.

When preparing an EA, the lead agency has discretion as to the level of public involvement. The CEQ regulations state that the lead agency will involve environmental agencies, applicants, and the public, to the extent practicable, in preparing EAs. Sometimes lead agencies will choose to mirror the scoping and public comment periods that are found in the EIS process, although not required for an EA. In other situations, agencies make the EA and a draft FONSI available to interested members of the public. For this EA, the lead agency has provided opportunities for scoping of the EA, including one meeting during the 30-day review period (see Section 6.1.2.2) to coincide with the CEQA process for the release of the NOP. Additional public information meetings were held by SANBAG (see Section 6.3).

EA and Public Review

The contents of this EA are based on public and agency input. During project scoping, some environmental resource issues such as agriculture resources, wild and scenic rivers, coastal zone, mineral resources, population growth and housing, public health and hazards, and recreation were determined to be unrelated to the Project and, therefore, a detailed analysis of potential effects to these resources has not been included in this EA.

Based on comments received during the scoping public review period, the NEPA analysis focuses on the following environmental topics:

Human Environment	Physical Environment	Biological Environment
• Land use and land use planning	• Floodplain and hydrology	• Biological resources
• Community impacts	• Water quality	• Wetlands and other waters
• Environmental justice	• Geology, soils, and seismicity	• Threatened and endangered species
• Transportation	• Hazardous waste and materials	
• Visual quality and aesthetics	• Air quality and global climate change	
• Cultural resources	• Noise and vibration	
• Land acquisitions, displacement, and relocation	• Energy, utilities, and public services	
• Socioeconomic, economic, and fiscal impacts		
• Safety and security		

This EA will be circulated for public review and comment for 45 days. During this period, comments from the general public, organizations, and agencies regarding environmental issues addressed in the EA as well as the accuracy and completeness of the analysis may be submitted to SANBAG at the following address:

San Bernardino Associated Governments
1170 W. 3rd Street, 2nd Floor
San Bernardino, CA 92410-1715
Contact: Mitchell A. Alderman, Director of Transit and Rail Programs
Phone: (909) 884-8276
Email: dsbprp_public_comments@sanbag.ca.gov

It has been determined, based on the evaluation within Chapter 4 of this document, that the EA provides sufficient evidence and analysis for determining that a FONSI can be made and an EIS would not be required. This EA identifies ways in which the lead agency can revise or mitigate the action to minimize environmental effects, and a FONSI will be prepared for the proposed project.

6.1.2.1 FONSI and Final EA

A FONSI is defined as a:

> document by a Federal agency briefly presenting the reasons why an action, not otherwise excluded (Sec. 1508.4), will not have a significant effect on the human environment and for which an environmental impact statement therefore will not be prepared. It shall include the environmental assessment or a summary of it and shall note any other environmental documents related to it (Sec. 501.7(a)(5)). If the assessment is included, the finding need not repeat any of the discussion in the assessment but may incorporate it by reference (40 CFR 1508.13).

Upon completion of the public review period, a Final EA will be prepared. The Final EA will include the comments received on the EA during the public review period, as well as responses to those comments. In accordance with NEPA, the EA evaluates the potential impacts of the proposed Project and its alternatives on the physical, biological, and human resources in the area. If significant impacts are identified in the EA, a more detailed EIS would be required. If the FTA decides that impacts would not be significant, it would prepare and sign a FONSI. This finding would allow the FTA to proceed with the proposed Project.

A FONSI is usually published in the *Federal Register*, and the notice of availability of the FONSI will include information on how and where to review the FONSI (i.e., posted on the agency's website, published in local newspapers) and how to provide comments. The FONSI, which always includes information from the EA, requires a minimum 30-day public review period.

6.1.3 CEQA Environmental Review Process

CEQA requires the preparation of an EIR when there is substantial evidence that a project may have a significant effect on the environment. In addition, CEQA specifically requires that an EIR identify those impacts that would continue to be significant following the application of mitigation measures.

Scoping for the DEIR was conducted in accordance with CEQA guidelines and recommendations. A discussion of the environmental review process that was undertaken for the proposed Project is provided below.

6.1.3.1 Notice of Preparation

In accordance with Section 15063 of the CEQA Guidelines, an NOP was prepared and distributed to the State Office of Planning and Research, responsible and trustee agencies, as well as private organizations and individuals that may have an interest in the proposed Project. The 30-day public comment period for the NOP began on May 10, 2011, and ended on June 8, 2011. The NOP was posted with the county clerk's office and sent to the State Clearinghouse at the Governor's Office of Planning and Research to officially solicit statewide agency participation in determining the scope of the EA/DEIR.

The purpose of the NOP was to provide notification that SANBAG and FTA, as lead agencies under CEQA and NEPA, respectively, planned to prepare an EA/DEIR for the Project and solicit guidance on the scope and content of the EA/DEIR.

The NOP presented a general description of the proposed Project and an overview of the potential environmental effects. The NOP also included guidance on how to provide comments as well as the date, time, and location of the public scoping meeting. A copy of the NOP is included in Appendix A.

Refer to Section 6.1.1 for further detail regarding the scoping meeting and agency and public comments received during the scoping review period.

6.1.3.2 DEIR and Public Review

The contents of this EA/DEIR are based on public and agency input. During the scoping phase of the CEQA process, some environmental resource issues were determined to be unrelated to the Project and, therefore, a detailed analysis of potential effects to these resources has not been included in this DEIR. These resource topics, which were found to not be important (CEQA Section 15083), include: agriculture and forest resources, mineral resources, population

and housing, public services, recreation, and utilities and service systems, which are discussed in Section 3.12 of the EA/DEIR.

The potentially significant effects of the proposed Project, as identified through the scoping process, evaluated in the CEQA analysis include:

- Aesthetics
- Air quality and greenhouse gases
- Biological resources
- Cultural resources
- Geology and soils
- Hazards and hazardous materials
- Hydrology and water quality
- Land use and planning
- Noise and vibration
- Transportation and traffic

This DEIR will be circulated for public review and comment for 45 days. During this period, comments from the general public, organizations, and agencies regarding environmental issues addressed in the DEIR as well as the accuracy and completeness of the analysis may be submitted to SANBAG at the following address:

San Bernardino Associated Governments
1170 W. 3rd Street, 2nd Floor
San Bernardino, CA 92410-1715
Contact: Mitchell A. Alderman, Director of Transit and Rail Programs
Phone: (909) 884-8276
Email: dsbprp_public_comments@sanbag.ca.gov

6.1.3.3 Final EIR

Upon completion of the public review period, a Final EIR will be prepared. The Final EIR will include the comments received on the DEIR during the formal public review period, as well as responses to those comments. Prior to approval of the proposed Project, CEQA also requires the SANBAG board to adopt findings with respect to each significant environmental effect identified in the Final EIR (PRC Section 21081 and CEQA Guidelines Section 15091).

For each such significant effect, CEQA requires the approving agency to reach one or both of the following findings:

- The project has been altered to avoid or substantially lessen significant impacts identified in the EIR.
- Specific economic, legal, social, technological, or other considerations, including the provision of employment opportunities for highly trained workers, make the mitigation measures or project alternatives identified in the Final EIR infeasible.

In the event that SANBAG, as the lead agency under CEQA, concludes that the proposed Project will result in significant effects that are identified in the Draft EIR but not substantially lessened or avoided by feasible mitigation measures and alternatives, the SANBAG board must adopt a Statement of Overriding Considerations prior to approval of the proposed Project (PRC Section 21081[b] and CEQA Guidelines Section 15093). Such statements are intended, under CEQA, to provide a written means by which the lead agency balances in writing the benefits of the proposed Project and the significant and unavoidable environmental impacts. Where the lead agency concludes that the economic, legal, social, technological, or other

benefits outweigh the unavoidable environmental impacts, the lead agency may find such impacts "acceptable" and approve the Project.

6.1.3.4 Mitigation Monitoring and Reporting Program

Pursuant to PRC Section 21081.6, public agencies, when approving a project, must also adopt a monitoring and reporting program for the changes that were incorporated into the project or made a condition of project approval to mitigate or avoid significant effects on the environment (mitigation measures). The monitoring and reporting program is adopted at the time of project approval and must be designed to ensure compliance during project implementation. If SANBAG, as the lead agency, approves the Project, the SANBAG board will be responsible for implementing the proposed Project and the associated mitigation monitoring and reporting program.

6.2 CULTURAL RESOURCES CONSULTATION

6.2.1 SHPO Consultation

Informal consultation with SHPO was conducted by SANBAG and their consultants on January 19, 2011 to discuss the design of the proposed pedestrian bridge adjacent to the Depot. The FTA will submit a letter and technical memorandum for the Project to SHPO for review in March 2012. Formal consultation will be initiated by the FTA, in conjunction with SANBAG, with SHPO to request concurrence with a finding of "no adverse effect" on the Depot and the Southern California Gas Company Plant. The SHPO consultation will be conducted in compliance with Section 106 of the National Historic Preservation Act and its implementing regulations at 36 CFR Part 800. The FTA also submitted the Cultural Resources Technical Report (Appendix D) along with a summary of impacts letter for review to the SHPO on March 17, 2012.

6.2.2 Native American Consultation

ICF contacted the Native American Heritage Commission (NAHC) and requested a review of the sacred lands files. The NAHC responded on July 29, 2010, stating that a search of their sacred lands database did not yield any sacred lands or traditional cultural properties within the immediate project area. The NAHC provided a list of eleven Native American contacts.

Letters describing the project area and indicating the project location were sent to the following Native American representatives on August 9, 2010:

- Anne Brierty, Policy/Cultural Resources Department, San Manual Band of Mission Indians.
- Michael Contreras, Cultural Heritage Program Manager, Morongo Band of Mission Indians.
- Sam Dunlap, Chairperson, Gabrielino/Tongva Nation.
- Joseph Hamilton, Chairman, Ramona Band of Cahuilla Mission Indians.
- Paul Macarro, Cultural Coordinator, Pechanga Band of Mission Indians.
- Anthony Morales, Chairperson, Gabrielino/Tongva San Gabriel Band of Mission Indians.
- Joseph Ontiveros, Cultural Resources Department, Soboba Band of Luiseno Indians.
- Pauma & Yuima, Attn. EPA, Luiseno Indians.
- James Ramos, Chairperson, San Manual Band of Mission Indians.

- Ernest H. Siva, Tribal Elder, Morongo Band of Mission Indians.
- Goldie Walker, Serrano Nation of Indians.

The FTA also sent letters to known federally recognized tribes within the Project Study Area on March 16, 2012.

As of April 2012, no responses have been received from the above-listed Native American entities.

6.2.3 Other Consultation Regarding Cultural Resources

In accordance with 36 CFR §800.4(a)(3), on July 29, 2010, letters were sent to consulting and interested parties who may have knowledge or concerns with historic properties in the area, and to request information regarding any historic buildings, districts, sites, objects, or archeological sites of significance within the project area. The letters were sent to the following recipients:

- California Historical Society.
- California Preservation Foundation.
- City of San Bernardino Planning Department.
- Orange Empire Railway Museum.
- Riverside Historical Society.
- San Bernardino County Museum.
- San Bernardino History & Railroad Museum.
- San Bernardino Historical and Pioneer Society.
- San Bernardino Railroad Historical Society.

On August 19, 2010, a message was left by Mike Botemo of the San Bernardino Historical Society. A message was left on the organization's voicemail the following day.

On August 31, 2010, a letter from Thomas Jacobson, President and Chief Executive Officer of the Orange Empire Railway Museum, was received (see Appendix B) and stated: "Orange Empire Railway Museum is in receipt of your letter dated July 29, 2010. As you probably have also been advised, there are several historical artifacts in the area outlined by the project site, including a crossing on Rialto Avenue with the former Pacific Electric San Bernardino line and another crossing leading into the former San Bernardino Pacific Electric Station. The Pacific Electric also crossed the line at E Street and adjacent to the line at E Street was the former San Bernardino Valley Traction Company Car House. If you need any further information, please do not hesitate to contact me at (951) 314-4258."

On August 3, 2010, an email from Glen Icanberry, Director of the San Bernardino History and Railroad Museum was received by Elizabeth Hilton of ICF (see Appendix B). The email stated that there are no railroad buildings left along the portion of the right-of-way associated with the proposed Project.

As of April 2012, no other responses from the above-listed interested parties were received.

Additionally, email correspondence was initiated, primarily for historic context research purposes, with the following individuals and entities:

- Mark Landis, Historian.
- Roger Hatheway, Architectural Historian, Hatheway and Associates.

Phone correspondence occurred between consultants and Valerie Ross, planner at the City of San Bernardino the week of June 14, 2010. The City will be provided a copy of Appendix D for review.

6.3 PUBLIC INFORMATION MEETINGS

Two public information meetings were held by SANBAG and its consultant team to provide the public an opportunity to better understand the Project. These meetings were held outside of the NEPA and CEQA process, and were for informational purposes only and no formal comments were responded to. These public information meetings were held within or near the Project site on the following dates and locations:

September 14, 2010
City of San Bernardino Economic Development Agency Business Development Center
201-B North "E" Street
San Bernardino, California 92401

March 27, 2012
Santa Fe Depot
1170 W. 3rd Street, 1st Floor
San Bernardino, CA 92410-1715

Advertisements for each meeting were provided via the following media:

- The *San Bernardino Sun* published a ¼-page full color advertisement.
- The *Redlands Daily Facts* published a ¼-page full color advertisement.
- Inland Empire Community Newspapers published a ¼-page black and white English advertisement in all four papers (The *IE Weekly, Rialto Record, Colton Courier, El Chicano*).
- *La Prensa* published a ¼-page black and white Spanish advertisement.

6.4 CITY OF SAN BERNARDINO PUBLIC HEARINGS

The City of San Bernardino held four public hearings in 2006 and 2007 to support the Redlands Passenger Rail Station Area Plan and transit improvements along the entire 10-mile rail corridor that extends from San Bernardino to Redlands; the proposed Project includes the westernmost first mile of the rail corridor. Four meetings were held in front of the Joint Mayor and Common Council (MCC) and the planning commission (PC). On December 4, 2006, meetings took place in front of the MCC and PC, one PC meeting was held on January 9, 2007, and one MCC meeting was held on January 22, 2007.

6.5 DIRECT COMMUNICATION WITH INVOLVED LAND OWNERS

SANBAG contracted with Epic Land Solutions for right-of-way (ROW) services in conjunction with the DSBPRP. Epic has retained all documentation related to their interactions with each of the land owners within the Project Study Area through the preparation of right-of-way agent logs. This includes property owners within the Project Study Area that would be displaced as a result of the proposed project improvements. These logs contain the name of the property owner, contact information, and a record of activities that occur between the right-of-way agent and land owner (i.e., initial contact, email and phone conversation summaries, and release date of offer packages) and date back to late 2010.

7.0 REFERENCES

Ashby, G.E. and J. W. Winterbourne. 1966. A Study of Primitive Man in Orange County and Some of its Coastal Areas. *Pacific Coast Archaeological Society Quarterly* 2 (1): 3-52.

Bean, L. J. and C. R. Smith. 1978a. Gabrielino. In *California*, edited by Robert F. Heizer, pp. 538-549. Handbook of North American Indians, Vol. 8. Washington D.C.: Smithsonian Institution.

Bean, L. J. and C. R. Smith. 1978b. Serrano. In *California*, edited by Robert F. Heizer, pp. 570-574. Handbook of North American Indians, Vol. 8. Washington D.C.: Smithsonian Institution.

Bean, L. J. and K. S. Saubel. 1972. *Temalpakh: Cahuilla Indian Knowledge and Usage of Plants*. Morongo Indian Reservation. CA: Malki Museum Press.

Bean, L. J. and S. B. Vane. 2002. The Native American Ethnography and Ethnohistory of Joshua Tree National Park: An Overview and Assessment Study: Section IV. The Serrano. Available: http://www.nps.gov/history/history/online_books/jotr/index.htm

Bean, Lowell J. 1978. Cahuilla. In *California*, edited by Robert F. Heizer, pp. 575–587. Handbook of North American Indians, Vol. 8. Washington D.C.: Smithsonian Institution.

Beattie, K. 2009. "The Kite Shaped Track," Highland Area Historical Society. Available: http://www.highlandhistory.org/The%20Kite%20Shaped%20Track.php. Last Updated: November 2009.

Breene, E.N. 1914. "Around the Kite Shaped Track," *The Santa Fe Magazine*, Dec.

California Board of Equalization. 2011. *Taxable Sales in California*. Available: <http://www.boe.ca.gov/news/tsalescont.htm>. Accessed: September 29, 2011.

California Department of Conservation, Division of Land Resource Protection. 2009. Farmland Mapping and Monitoring Program, San Bernardino County Important Farmland 2008, Sheet 2 of 2. September.

California Department of Mines and Geology. 1981. *Resource Investigation of Low- and Moderate-Temperature Geothermal Areas in San Bernardino California.* DMG Open File Report 82-11.

California Department of Water Resources. 2004b. California Groundwater Bulletin 118, Hydrologic Region South Coast Upper Santa Ana Valley Groundwater Basin. Last updated: February 27, 2004. Available: <http://www.water.ca.gov/pubs/groundwater/bulletin_118/basindescriptions/8-2.06.pdf>. Accessed: November 11, 2011.

California Employment Development Department. 2011. *Labor Market Info – Employment by Industry (Not Seasonally Adjusted) in Riverside-San Bernardino-Ontario MSA.* Available: <http://www.labormarketinfo.edd.ca.gov/cgi/databrowsing/localAreaProfileQSMoreResult.asp?menuChoice=localAreaPro&criteria=Current+Employment+Statistics+%28CES%29&categoryType=employment&geogArea=0621040140&more=More>. Accessed: September 28, 2011.

California Energy Commission. 2010. *Fuels and Transportation Division.* Available: <http://www.energy.ca.gov/transportation/index.html>. Accessed: October 11, 2011.

California Energy Commission. 2011. *Welcome to the Website of the California Energy Commission!* Available: <http://www.energy.ca.gov/commission/index.html>. Accessed: October 24, 2011.

California Public Utilities Commission. 2011. *About Us.* Available: <http://www.cpuc.ca.gov/PUC/aboutus>. Accessed: February 7, 2011.

California State Office of Historic Preservation. 2011. *State Historic Preservation Officer.* Available: <http://www.parks.ca.gov/?page_id=21755>. Accessed: February 7, 2011.

California Wetland Information System. 2007. "Summary of Clean Water Act, Section 404." Available: <http://ceres.ca.gov/wetlands/permitting/sec404_descrip.html>. Last modified: July 23, 2007. Accessed: August 18, 2011.

City of San Bernardino Economic Development Agency. 2011. Sixty Sixers Minor League Baseball. Available: <http://www.sbrda.org/v66ers.htm>. Accessed: October 18, 2011

City of San Bernardino Municipal Water Department. 2011. Geothermal. Available: <http://www.ci.san-bernardino.ca.us/water/divisions/water_utility/water_quality/geothermal/default.asp>. Accessed: October 19, 2011.

City of San Bernardino Municipal Water Department. n.d. *Geothermal Energy, Heat from the Earth Power for the Future.* Available: <http://www.ci.san-bernardino.ca.us/civica/filebank/blobdload.asp?BlobID=4208>. Accessed: October 19, 2011.

City of San Bernardino. 2005a. San Bernardino General Plan. November 1. San Bernardino, CA.

City of San Bernardino. 2005b. Draft San Bernardino General Plan Update and Associated Specific Plans Environmental Impact Report. SCH #2004111132. July 25. Prepared by The Planning Center, Costa Mesa, CA.

City of San Bernardino. 2007. City of San Bernardino Zoning. February. Available: <http://www.ci.san-bernardino.ca.us/pdf/maps/Zoning-42x42-MasterPlanUpdate.pdf>. Accessed: November 9, 2011.

City of San Bernardino. 2010. *History of San Bernardino.* Available: <http://www.ci.san-bernardino.ca.us/about/history/history_of_san_bernardino_(short_version).asp>.

City of San Bernardino. 2011. *About the City*. Available: <http://www.ci.san-bernardino.ca.us/about/default.asp>. Accessed: February 7, 2011.

City of San Bernardino. San Bernardino Zoning Ordinance.

City of San Bernardino. San Bernardino Development Code, Title 19: Land Use/Subdivision Regulations, Article II - Land Use Zoning Districts. Available: <http://www.ci.san-bernardino.ca.us/cityhall/community_development/development_code.asp>.

City of San Bernardino. Zoning Map. Available: < http://www.ci.san-bernardino.ca.us/pdf/maps/Zoning-42x42-MasterPlanUpdate.pdf>.

Cottrell, M. and K. Del Chario. 1981. Archaeological Investigations of the Tomato Springs Site. On file. Southern Central Coastal Information Center, Fullerton: California State University.

de Barros, P. 1996. San Joaquin Hills Transportation Corridor: Results of testing and data recovery at CA-ORA-1357. South Central Coastal Information Center, California State University, Fullerton.

Department of Homeland Security. 2011. What is TSA? Available: <http://www.tsa.gov/who_we_are/what_is_tsa.shtm>. Accessed: October 13, 2011

Dixon, E. J. 1968. Cogged Stones and Other Ceremonial Cache Artifacts in Stratigraphic Context at ORA-58, a Site in the Lower Santa Ana River Drainage, Orange County. Pacific Coast Archaeological Society Quarterly 4(3): 57-68.

Donaldson, W. 1991. Historic Resources Reconnaissance Survey San Bernardino, California. Prepared for the City of San Bernardino Department of Planning and Building Services.

Eberhart, H. 1961. The Cogged Stones of Southern California. American Antiquity 26: 361-370.

EPA (U.S. Environmental Protection Agency). 2011. Clean Water Act, Section 401 Certification and Wetlands. Available: <http://water.epa.gov/type/wetlands/outreach/fact24.cfm>. Last updated: June 2011. Accessed: August 18, 2011.

EPA (U.S. Environmental Protection Agency). 2012. Energy Portal, Regulations and Standards. Available: <http://www.epa.gov/energy/regs.htm>. Accessed: January 31, 2012.

Erlandson, J. M. 1991. Early Maritime Adaptations on the Northern Channel Islands, In Hunter-Gatherers of Early Holocene Coastal California, edited by J.M. Erlandson and R. Colten. Perspectives in California Archaeology, Vol. 1. Institute of Archaeology, University of California, Los Angeles.

FEMA (Federal Emergency Management Agency). 2008. Prepared. Responsive. Committed. Brochure FEMA B-653. July. Available: <http://www.fema.gov/pdf/about/brochure.pdf>. Accessed: November 10, 2011.

FHWA (Federal Highway Administration). 1987. *Guidance for Preparing and Processing Environmental and Section 4(f) Documents.* Technical Advisory T 6640.8A. October 30.

FHWA (Federal Highway Administration). 2005. FHWA Section 4(f) Policy Paper. March 1. Office of Planning, Environment, and Realty Project Development and Environmental Review.

FHWA (Federal Highway Administration). 2007. *Railroad-Highway Grade Crossing Handbook - Revised Second Edition.* August. Also available: <http://safety.fhwa.dot.gov/xings/com_roaduser/07010/sec04b.htm>. Accessed: October 24, 2011.

FHWA (Federal Highway Administration). 2012. The Facts - Nondiscrimination: Title VI and Environmental Justice. Available: http://www.fhwa.dot.gov/environment/environmental_justice/facts/. Last revised: February 21, 2012. Accessed: February 2012.

FTA (Federal Transit Administration). 2007. *Frequently Asked Questions, Safety and Security Management Plan (SSMP).* September. Available: <http://transit-safety.fta.dot.gov/publications/security/Safety%20%20Security%20frequent%20questions.pdf>. Accessed: October 11, 2011.

FTA (Federal Transit Administration). 2011. *Transit Safety Management and Performance Measurement, Volume 1: Guidebook.* May. Available: <http://transit-safety.fta.dot.gov/publications/safety/Transit_SMPM_Guidebook/PDF/Transit_SMPM_Guidebook.pdf >. Accessed: October 11, 2011.

FTA (Federal Transit Administration). 2012. *Social and Economic Impacts.* Available: <http://www.fta.dot.gov/12347_2241.html>. Accessed: April, 2012.

Glassow, M. A, L. Wilcoxen, and J. M. Erlandson 1988. Cultural and Environmental Change During the early Period of Santa Barbara Channel Prehistory. In The Archaeology of Prehistoric Coastlines, edited by G. Bailey and J. Parkington, pp. 64--77. Cambridge University Press, Cambridge.

Harrington, J. P. 1942. Culture Element Distributions: XIX, Central California Coast. Anthropological Records 7:1. Berkeley, CA: University of California Press.

HDR Engineering, Inc. 2008. Draft Phase I Environmental Site Assessment, Proposed San Bernardino Transit Center, June 27.

HDR Engineering, Inc. 2010a. Redlands First Mile Project Assessment of Rail Operations. July 27. San Bernardino, CA. Prepared for San Bernardino Association of Governments, San Bernardino, CA

HDR Engineering, Inc. 2010b, Redlands Corridor Alternatives Analysis Final Conceptual Alternatives Analysis, October.

HDR Engineering, Inc. 2010c. Redlands First Mile Project: Santa Fe Depot Passenger Egress Alternatives Report. October. Prepared for San Bernardino Associated Governments.

HDR Engineering, Inc. 2010d. Redlands First Mile Project Draft Final Environmental Site Assessment. June 11.

HDR Engineering, Inc. 2011a. *Downtown San Bernardino Passenger Rail Project, Project Definition Report.* May. San Bernardino, CA. Prepared for San Bernardino Association of Governments, San Bernardino, CA

HDR Engineering, Inc. 2011b. Drainage Report for 30%.

HDR Engineering, Inc. 2011c. Technical Memorandum-Additional Findings Redlands First Mile Environmental Site Assessment. March 23, 2011.

HDR Engineering, Inc. 2011d. *Redlands First Mile - R/W Baseline List of Property Acquisitions.* December 23. Irvine, CA. Prepared for SANBAG, San Bernardino, CA.

Herring, A. 1968. Surface Collections from ORA-83, A Cogged Stone Site at Bolsa Chica, Orange County, California. Pacific Coast Archaeological Society Quarterly 4(3): 3-37.

Iteris, Inc. 2012. Redlands First Mile Change in Vehicle Miles, Vehicle Hours and Average Speed of Travel. January 4, Los Angeles, CA.

Johnson, J.R., T. W. Stafford, Jr., H.O. Ajie, and D. P. Morris. 2002. Arlington Springs Revisited. In *Proceedings of the Fifth California Islands Symposium*. Edited by D.R. Brown, K.C. Mitchell, and H.W. Chaney, pp. 541-545. Santa Barbara Museum of Natural History.

Justia US Laws. 2010. California Fish and Game Code. http://law.justia.com/california/codes/fgc.html. Viewed July 2010.

Koerper, H. C., and C.E. Drover. 1983. Chronology Building for Coastal Orange County: The Case from CA-ORA-119-A. *Pacific Coast Archaeological Society Quarterly* 19(2): 1-34.

Koerper, H. C., R. D. Mason, and M. L. Peterson. 2002. Complexity, Demography, and Change in Late Holocene Orange County. In *Catalysts to Complexity, Late Holocene Societies of the California Coast*. Edited by Jon M. Erlandson and Terry L. Jones, pp. 63-81. Perspectives in California Archaeology Vol. 6. Cotsen Institute of Archaeology, University of California, Los Angeles.

Kowta, M. 1969. The Sayles Complex, A Late Milling Stone Assemblage from the Cajon Pass and the Ecological Implications of its Scraper Planes. *University of California Publications in Anthropology* 6:35-69. Berkeley, California.

Kroeber, A. L. 1908a. *Ethnography of the Cahuilla*. University of California Publications in American Archaeology and Ethnology 8 (2): 29-68.

Kroeber, A. L. 1908b. *A Mission Record of the California Indians.* University of California Publications in American Archaeology and Ethnology 8(1):1-27.

Kroeber, A. L. 1925. *Handbook of the Indians of California.* Bulletin 78, Bureau of American Ethnology, Smithsonian Institution, Government Printing Office, Washing DC, Reprinted 1976 by Dover Publications, New York.

Landis, M. 2008. “Touring the Eastern Loop of the Kite Shaped Track.” May 3. Available: http://www.highlandhistory.org/Kite%20Track%20Tour-Draft.pdf.

Langenwalter, P. E., II, and J. Brock. 1985. Phase II Archaeological Studies of the Prado Basin and the Lower Santa Ana River. Report on file, U.S. Army Corps of Engineers, Los Angeles District.

Los Angeles Economic Development Corporation. 2010. *L.A. Stats*. March. Available: <http://www.laedc.org/reports/LAStats-2010.pdf>. Accessed: September 29, 2011.

Mason, R. D., H. C. Koerper, and P. E. Langenwalter II. 1997. Middle Holocene Adaptations on the Newport Coast of Orange County. In *Archaeology of the California Coast during the Middle Holocene*. Edited by Jon M. Erlandson and Michael A. Glassow, pp. 35-60. UCLA Institute of Archaeology, Los Angeles.

McAlester, V. and L. McAlester. 2003. *A Field Guide to American Houses.* New York, Alfred A. Knopf.

McCawley, W. 1996. *The First Angelinos: The Gabrielino Indians of Los Angeles*. Novato, California: Malki Museum Press, Banning California and Ballena Press.

Miller, Gail and Richard Starzak 1999. *Site Record: Santa Fe Railway Passenger and Freight Depot at San Bernardino (36-017975) Department of Parks and Recreation Primary Record.* On file at the San Bernardino Information Center, San Bernardino County Museum, Redlands.

Minor League Baseball. 2011. *Stadium History.* Available: <http://web.minorleaguebaseball.com/team2/page.jsp?ymd=20100310&content_id=8748902&vkey=team2_t401&fext=.jsp&sid=t401>. Accessed: October 17, 2011.

Mission Tour. n.d. *San Bernardino Asistencia.* Available: <www.missiontour.org/sangabriel/astencia.htm>.

Mithun, M. 2001. *Languages of Native North America*. Second Edition, New York: Cambridge University Press.

Moratto, M. J. 1984. *California Archaeology*. San Diego: Academic Press.

Morton, D. M., and F. K. Miller. 2006. *Geologic map of the San Bernardino and Santa Ana 30'x 60' quadrangles, California, Geology and Description of Map Units, version 1.0.* U.S. Geological Survey, Open File Report 2006-1217 online version 1.0.

Morton, D.M, R.M. Alvarez, and R.H. Campbell. 2003. Soil-Slip Susceptibility Map for the South Half of the San Bernardino 30' x 60' Quadrangle, Southern California. Preliminary Soil-Slip Susceptibility Maps, Southwestern California.

Myra L. Frank & Associates, Inc. 1993. *Historic Architectural Survey Report: RCTC Interstate 215 Improvement Project*. Prepared for the Riverside County Transportation Commission et al. March 19.

O'Neil, S. 2001. *Ethnobotanical Research in the Bolsa Chica Mesa Region.* (The Bolsa Chica Mesa Ethnohistoric Project). Report completed for Scientific Resource Survey, Inc., Temecula, California.

O'Neil, S. 2002. The Acjachemen in the Franciscan Mission System: Demographic Collapse and Social Change. Master's Thesis, Department of Anthropology, California State University, Fullerton.

Omnitrans. 2009. *Environmental Assessment/Initial Study, sbX E Street Corridor Project, Cities of San Bernardino and Loma Linda, San Bernardino County, California.* June. Prepared by Parsons. Also available: <http://www.estreet-sbx.com/docs.php?ogid=1000000047>.

Omnitrans. 2011, *About Omnitrans*. Available: <http://www.omnitrans.org/about/index.shtml>. Accessed: November 2, 2011.

Parsons. 2009a. sbX E Street Corridor BRT Project Environmental Assessment/Initial Study (SCH# 2008091107). June. Prepared for Omnitrans and FTA. Available: <http://www.omnitrans-sbx.com/about/environment-assessment.html>. Accessed: October 14, 2011.

Parsons. 2009b. sbX E Street Corridor BRT Project Finding of No Significant Impact. September. Prepared for FTA. Available: <http://www.omnitrans-sbx.com/about/environment-assessment.html>.

Parsons (Parsons Transportation Group), Hexagon Transportation Consultants, Patti Post & Associates, M.I.G., and Gomez Research. 2009. San Bernardino County Long Range Transit Plan Interim Draft Report. Prepared for: San Bernardino Associated Governments. October. Available: http://www.sanbag.ca.gov/commuter/LRTP/LRTP-draft2009.pdf. Accessed: April 24, 2012.

Parsons. 2010. Final Re-Evaluation/Addendum Environmental Assessment/Initial Study for the sbX E Street Corridor BRT Project. June. Prepared for Omnitrans. Available: <http://www.omnitrans-sbx.com/about/environment-assessment.html>.

Raup, H.F. 1940. *San Bernardino, California: Settlement and Growth of a Pass-Site City*. Berkeley and Los Angeles: University of California Press.

Reinman, F. M. 1964. Maritime Adaptation on San Nicolas Island, California. *University of California Archaeological Survey Annual Report* 1963-1964: 47-80.

Rick, T. C., J. M. Erlandson, and R. Vellanoweth. 2001. Paleocoastal Marine Fishing on the Pacific Coast of the Americas: Perspectives from Daisy Cave, California. *American Antiquity* 66:595-613.

Robertson, D. B. 1986-c1998. Encyclopedia of Western Railroad History, Volume IV: California. Caldwell, Idaho: Caxton Printers.

Robinson, W.W. 1958. *The Story of San Bernardino County*. San Bernardino, CA: Title Trust and Insurance Company.

San Bernardino County Assessor. 2011. *Property Information Management System Internet Site.* Available: <http://nppublic.co.san-bernardino.ca.us/newpims/(S(i1cx54eqqdrd3h553b1m3pus))/PIMSINTERFACE.ASPX>. Accessed: October 2011.

San Bernardino Municipal Valley Water District. 2000. Engineering Investigation of the Bunker Hill Basin 1999-2000.

San Bernardino Municipal Water Department. 2007. Water Facilities Master Plan. August 27. Available: <http://www.ci.san-bernardino.ca.us/water/divisions/water_utility/engineering/water_facilities_master_plan___2007.asp>.

SANBAG (San Bernardino Associated Governments). 2009. *San Bernardino County Long Range Transit Plan Interim Draft Report.* October.

SANBAG (San Bernardino Associated Governments). 2010. San Bernardino Santa Fe Depot Fact Sheet. Available: <http://www.sanbag.ca.gov/about/pdfs/Depot_FactSheet.pdf>. Accessed: July 2011.

Santa Ana RWQCB (Santa Ana Regional Water Quality Control Board). 2005. San Bernardino County WQMP, Model Water Quality Management Plan Guidance, June 9, 2005 accessed November 10, 2011, http://www.swrcb.ca.gov/rwqcb8/water_issues/programs/stormwater/sb_wqmp.shtml).

Sawyer, W. A., and J. Brock. 1999. *Archaeology of Foothill Ranch, El Toro, California.* Report on file, South Central Coastal Information Center, California State University, Fullerton.

SBSun.com. 2012. *It's official, 66ers ball park unveiled as San Manuel Stadium.* May 28, 2012. Available: <http://www.sbsun.com/news/ci_20277302/its-official-66ers-ball-park-unveiled-san-manuel>. Accessed: April 4, 2012.

SCAG (Southern California Association of Governments). *2008 Regional Transportation Plan: Making the Connections.* May. Available: <http://www.scag.ca.gov/rtp2008/final.htm>. Accessed: November 21, 2011.

SCAG (Southern California Association of Governments). 2011a. 2012 Regional Transportation Plan Sustainable Communities Strategy - Home. Available: http://www.scag.ca.gov/rtp2012/index.htm. Accessed: November 21, 2011.

SCAG (Southern California Association of Governments). 2011b. Regional Transportation Improvement Program (RTIP). Available: http://www.scag.ca.gov/RTIP/. Accessed: October 4, 2011.

SCAG (Southern California Association of Governments). 2011c. *SCAG General Fact Sheet*. Available: <http://www.scag.ca.gov/factsheets/pdf/2011/scagGeneral2011.pdf>. Accessed: July 24, 2011.

SCAG (Southern California Association of Governments). 2011d. *Integrated Growth Forecast*. Available: <http://www.scag.ca.gov/forecast/index.htm>.

SCAG (Southern California Association of Governments). 2011e. *Profile of San Bernardino County*. Available: <http://www.scag.ca.gov/resources/pdfs/2011LP/SanBernardinoCounty.pdf>. Accessed: September 29, 2011.

SCAG (Southern California Association of Governments). 2011f. *Profile of Los Angeles County*. Available: <http://www.scag.ca.gov/resources/pdfs/Counties/LosAngelesCounty.pdf>. Accessed: September 29, 2011.

SCAG (Southern California Association of Governments). 2011g. *Profile of Riverside County*. Available: <http://www.scag.ca.gov/resources/pdfs/Counties/RiversideCounty.pdf>. Accessed: September 29, 2011.

SCAG (Southern California Association of Governments). 2011h. *Profile of Orange County*. Available: <http://www.scag.ca.gov/resources/pdfs/Counties/OrangeCounty.pdf>. Accessed: September 29, 2011.

SCAG (Southern California Association of Governments). 2011i. *Profile of Ventura County*. Available: <http://www.scag.ca.gov/resources/pdfs/Counties/VenturaCounty.pdf>. Accessed: September 29, 2011.

Schuiling, W. C. 1984. *San Bernardino County, Land of Contrasts.* Woodland Hills, CA: Windsor Publications.

Schwartz, D. 2005. New Homes Growing near Downtown San Bernardino. *San Bernardino County Sun.* February 26.

Scott, E. and K. Springer. 2003. CEQA and fossil preservation in southern California. *The Environmental Monitor*, Fall 2003, p. 4-10, 17.

Smith, F., C. (Kip) Harper, L. Makeda, J. Dietler and C. Chasteen. 2008. Cultural Resources Technical Report SBX E Street Corridor BRT Project, Cities of San Bernardino and Loma Linda, San Bernardino County, California. On file at the San Bernardino Archaeological Information Center, San Bernardino County Museum, Redlands, CA

Southern California Regional Rail Authority. 2011. Metrolink: Welcome to the San Bernardino Station (webpage). Available: <http://www.metrolinktrains.com/stations/detail.php?id=122&line=sb>. Accessed: October 3, 2011.

State of California Department of Conservation, California Geological Survey. 2011 Alquist-Priolo Earthquake Fault Zoning Act. Available: <http://www.conservation.ca.gov/cgs/rghm /ap/Pages/main.aspx. Accessed: September 27, 2011.

State Water Resources Control Board (SWRCB). 2010. 2010 Integrated Report (Clean Water Act Section 303(d) List/305(b) Report). August 4.

State Water Resources Control Board (SWRCB). 2011. State and Regional Water Quality Control Boards – Who We Are and What We Do. Available: <http://www.waterboards.ca.gov/publications_forms/publications/factsheets/ docs/boardoverview.pdf>. Accessed: November 10, 2011.

Stone, A. 1966. *California Information Almanac*. Garden City, NY: Doubleday.

Sutley, N. H. 2010. *Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions*. Memorandum for Heads of Federal Departments and Agencies. February 18. Available: <http://ceq.hss.doe.gov/nepa/regs/Consideration_of_Effects_of_GHG_Draft_NEPA_Guidance_FINAL _02182010.pdf>.

Sutton, M. Q. 1993. On the Subsistence Ecology of the "Late Inland Millingstone Horizon" in Southern California. *Journal of California and Great Basin Anthropology* 15(1): 134-140.

Texas Transportation Institute. 2010. *Urban Mobility Report*. December. Available: <http://tti.tamu.edu/documents/ums/mobility_report_2010_wappx.pdf>. Accessed: November 21, 2011.

True, Delbert L. 1958. An Early Complex in San Diego County, California. *American Antiquity* 23:255-263.

True, Delbert L. 1993. Bedrock Milling Elements as Indicators of Subsistence and Settlement Patterns in Northern San Diego County, California. *Pacific Coast Archaeological Society Quarterly* 29(2): 1-26.

U.S. Census Bureau. 1990. *American FactFinder*. Available: <http://factfinder.census.gov/>. Accessed: September 28, 2011.

U.S. Census Bureau. 2000. *American FactFinder*. Available: <http://factfinder.census.gov/>. Accessed: September 28, 2011.

U.S. Census Bureau. 2000. Census 2000 Summary File 3 (SF 3). Available: <http://factfinder.census.gov/jsp/saff/SAFFInfo.jsp?_lang=en&_sse=on&_content=sp4_decennial_sf3.html&_title=Summary+File+3+(SF+3)>.

U.S. Census Bureau. 2007. *Economic Census.*

U.S. Census Bureau. 2009. *2005–2009 American FactFinder*. Available: <http://factfinder.census.gov/servlet/STTable?_bm=y&-geo_id=05000US06037&-qr_name=ACS_2009_5YR_G00_S1901&-ds_name=ACS_2009_5YR_G00_&-redoLog=false>. Accessed: September 29, 2011.

U.S. Census Bureau. 2010. *What is the Census?* Available: <http://2010.census.gov/2010census/about/>. Accessed: November 23, 2011.

U.S. Census Bureau. 2011a. How the Census Bureau Measures Poverty. Available: http://www.census.gov/hhes/www/poverty/about/overview/measure.html. Last revised: September 13, 2011. Accessed March 9, 2012.

U.S. Census Bureau. 2011b. *Profile of General Population and Housing Characteristics, California, San Bernardino County, City of San Bernardino and Census Tracts 49 and 57.01: 2010, 2010 Demographic Profile Data*.

U.S. Census Bureau. 2011c. *State and County QuickFacts*. Last Revised: October 27, 2011. Available: <http://quickfacts.census.gov/qfd/states/06/06059.html>. Accessed: September 28, 2011.

U.S. Census Bureau. 2012. *American Community Survey 2012*. Available: <http://www.census.gov/acs/www/>. Accessed: March 2012.

U.S. Department of Health and Human Services. 2012. 2012 HHS Poverty Guidelines. Available: http://aspe.hhs.gov/poverty/12poverty.shtml. Last revised: February 9, 2012. Accessed: March 8, 2012.

U.S. Department of the Interior, National Park Service. 1997. How to Apply the National Register Criteria for Evaluation, *National Register Bulletin*.

U.S. Department of Transportation Federal Highway Administration. 1988. *Visual Impact Assessment for Highway Projects*. Publication No. FHWA-HI-88_054.

USGS (U.S. Geological Survey). 2009. FAQs - Measuring Earthquakes. Available: <http://earthquake.usgs.gov/learn/faq /?categoryID=2&faqID=23. Last Revised: October 27, 2009.

USGS (U.S. Geological Survey). Water Data Reports. 1998–2009.

Wallace, W. J. 1955. A Suggested Chronology for Southern California*. Southwestern Journal of Anthropology* 11(3):215-230.

Wallace, W. J. 1978. Post-Pleistocene Archaeology, 9000 to 2000 B.C. In *California*, edited by Robert F. Heizer, pp. 25-36. Handbook of North American Indians, Vol. 8, William G. Sturtevant, general editor, Smithsonian Institution, Washington D.C.

Warren, C. N. 1967. The San Dieguito Complex: A Review and Hypothesis. *American Antiquity* 32:233–236.

Warren, C. N. 1968. Cultural Tradition and Ecological Adaptation on the Southern California Coast. In *Archaic Prehistory in the Western United States*, edited by C. Irwin-Williams. Eastern New Mexico University Contributions in Anthropology 1(3):1-14, Portales.

Warren, C. N., and D.L. True. 1961. The San Dieguito Complex and its Place in California Prehistory. *Archaeological Survey Annual Report for 1960-1961*. University of California, Los Angeles.

Whitley, D. S. 2000. *The Art of the Shaman: Rock Art in California*. Salt Lake City: University of Utah Press.