CHAPTER ES EXECUTIVE SUMMARY

ES.1 INTRODUCTION

This document is a joint Environmental Impact Statement/Environmental Impact Report (EIS/EIR) intended to comply with both the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). This EIS/EIR has been prepared by the Federal Transit Administration (FTA), Region 9, as Federal lead agency under NEPA and the San Bernardino Associated Governments (SANBAG), as lead agency under CEQA. This EIS/EIR has been prepared as a "project" EIS/EIR to evaluate the environmental impacts or effects associated with implementing the Redlands Passenger Rail Project (RPRP or Project).

ES.2 PURPOSE AND NEED

SANBAG, acting in its role as the San Bernardino County Transportation Commission, is proposing the RPRP to address the transportation needs of the Redlands Corridor as identified in SANBAG's Measure I Strategic Plan and the Southern California Association of Governments' (SCAG) Regional Transportation Plan (RTP) (2012). The Project is needed to address existing and future traffic congestion within the Cities of San Bernardino and Redlands. The overall purpose of the Project is to provide a cost-effective, alternative travel option for communities situated along the Redlands Corridor in a way that improves transit mobility, travel times, and corridor safety while minimizing adverse environmental effects. Additionally, the RPRP represents a strategic project for both SCAG and SANBAG in their efforts to meet the air pollution and greenhouse gas emission reduction targets mandated under Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006, and Senate Bill (SB) 375, California's Sustainable Communities and Climate Protection Act of 2008.

ES.3 PROJECT OBJECTIVES

The Project objectives are integral to SANBAG's selection and consideration of alternatives. SANBAG's objectives for the Project are outlined below.

- Implement new transit service consistent with the Measure I Strategic Plan and the RTP (2012) to reduce travel time between residential areas, employment centers, and major activity centers;
- Develop necessary rail infrastructure to facilitate passenger service between the Cities of San Bernardino and Redlands and maximize opportunities to accommodate track built-out in the future;
- Implement a transit project capable of helping to achieve regional and state goals to reduce greenhouse gases while supporting opportunities for future compact development as required under AB 32 and SB 375;
- Maximize opportunities for revitalization of the Redlands Corridor by linking transit service along the railroad corridor to intermodal hubs, such as the Omnitrans Bus Facility in the City of San Bernardino and Transit Villages planned by the City of Redlands and University of Redlands;
- Implement safety improvements that will benefit both existing freight and proposed passenger operations per Federal Railroad Administration (FRA) safety guidelines and

SANBAG's purchase agreement with Burlington Northern and Santa Fe Railway (BNSF); and

- Utilize the existing railroad corridor and right of way to the extent feasible, thereby minimizing potential impacts to sensitive resources as well as minimizing potential adverse effects to the surrounding communities.

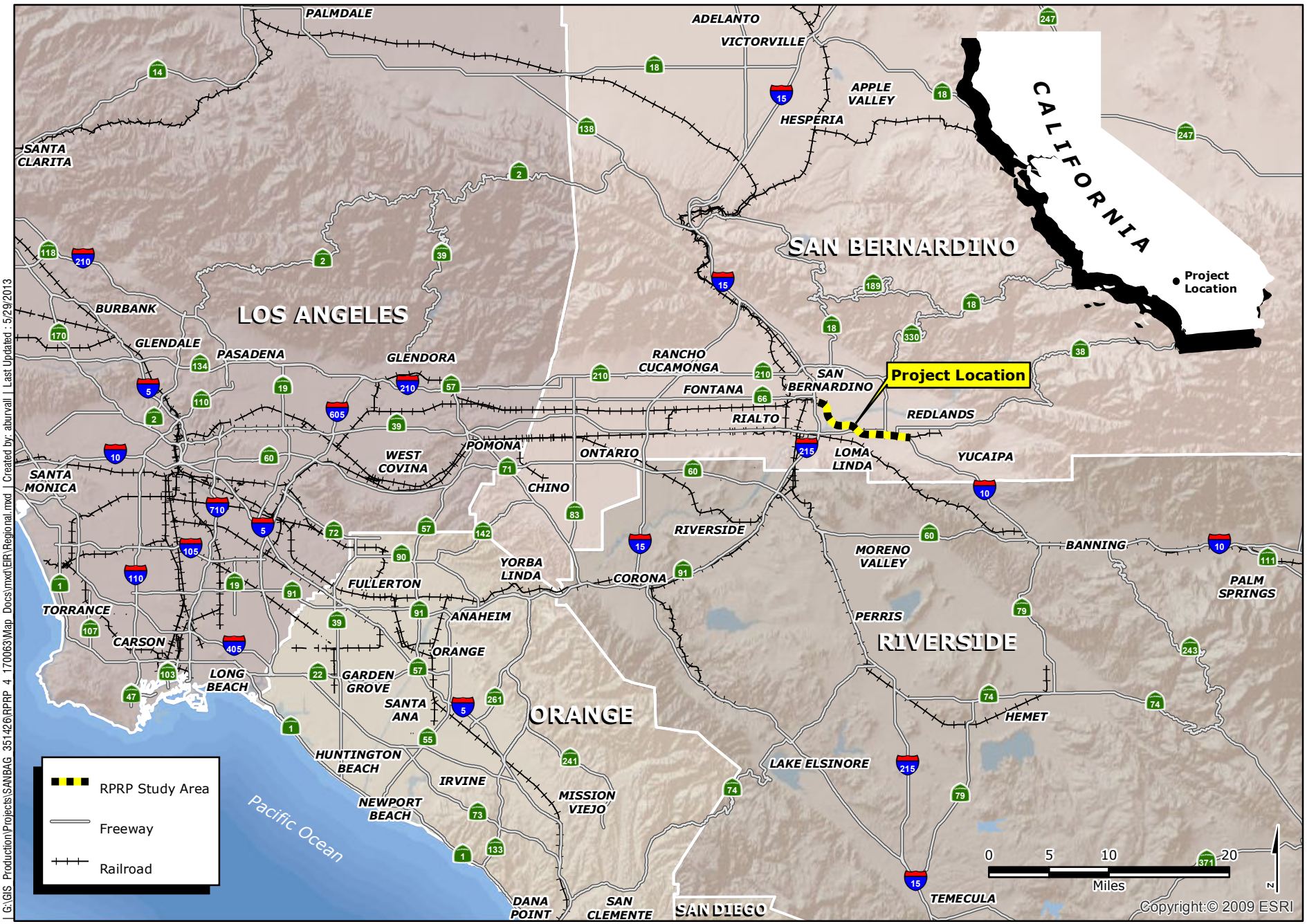
Overview of the Project

The RPRP encompasses an approximately nine-mile corridor extending east from the City of San Bernardino to the City of Redlands within the southwestern corner of County of San Bernardino, California (see Figure ES-1). Figure ES-2 provides an overview map of the Study Area considered in this EIS/EIR. The Project extends along an existing railroad right-of-way (ROW) owned by SANBAG and commonly referred to as the Redlands Corridor.

The Project proposes the operation of passenger rail service between E Street in the City of San Bernardino and the University of Redlands, in the City of Redlands. Passenger rail service would be facilitated via five station stops. Four new station stops would be constructed in conjunction with the Project. These include one station located at Tippecanoe Avenue or Waterman Avenue within the City of San Bernardino and New York Street, Orange Street, and University Street within the City of Redlands. The fifth station would be constructed at E Street and is associated with a different project—the Downtown San Bernardino Passenger Rail Project (DSBPRP). SANBAG also proposes the replacement of the existing railroad tracks and ties, reconstruction or rehabilitation of existing bridge structures, construction of a new train layover facility, and auxiliary improvements such as at-grade roadway crossings and safety improvements, new parking facilities, and improvements to pedestrian access. Construction of these various improvements is planned to start in 2015.

During SANBAG's initial alternatives analysis, multiple transit modes and supporting transit infrastructure were considered. These transit modes included diesel and battery powered locomotives, bus rapid transit (BRT), light rail transit (LRT), and diesel multiple units (DMU). As described in more detail in Chapter 2.0 Alternatives Considered, transit modes that would require the construction of a separate, parallel track system, which would double the size of the Project's physical footprint, were not carried forward in favor of transit modes that could operate on the rehabilitated track infrastructure. Through this screening process, the use of diesel-powered locomotives or a DMU were determined to be vehicle options that would satisfy the requirement to operate on the rehabilitated track infrastructure. This EIS/EIR considers three vehicle options for Project operations: two (2) diesel-powered locomotives, (an MP-36 or F-59), and a DMU. Of the vehicle types under consideration, the vehicle type selected the Project would meet Tier 4 requirements[1]. Functionality would be built into the system to allow for up to two Metrolink express trains during the AM and PM peak periods. Project operations would commence in 2018.

[1] Tier 4 locomotives and locomotive engines are required to meet applicable standards set by the U. S. EPA at the time of original manufacture and each subsequent remanufacture. Emission regulations for locomotive engines are contained in the US Code of Federal Regulations, 40 CFR Parts 85, 89 and 92.



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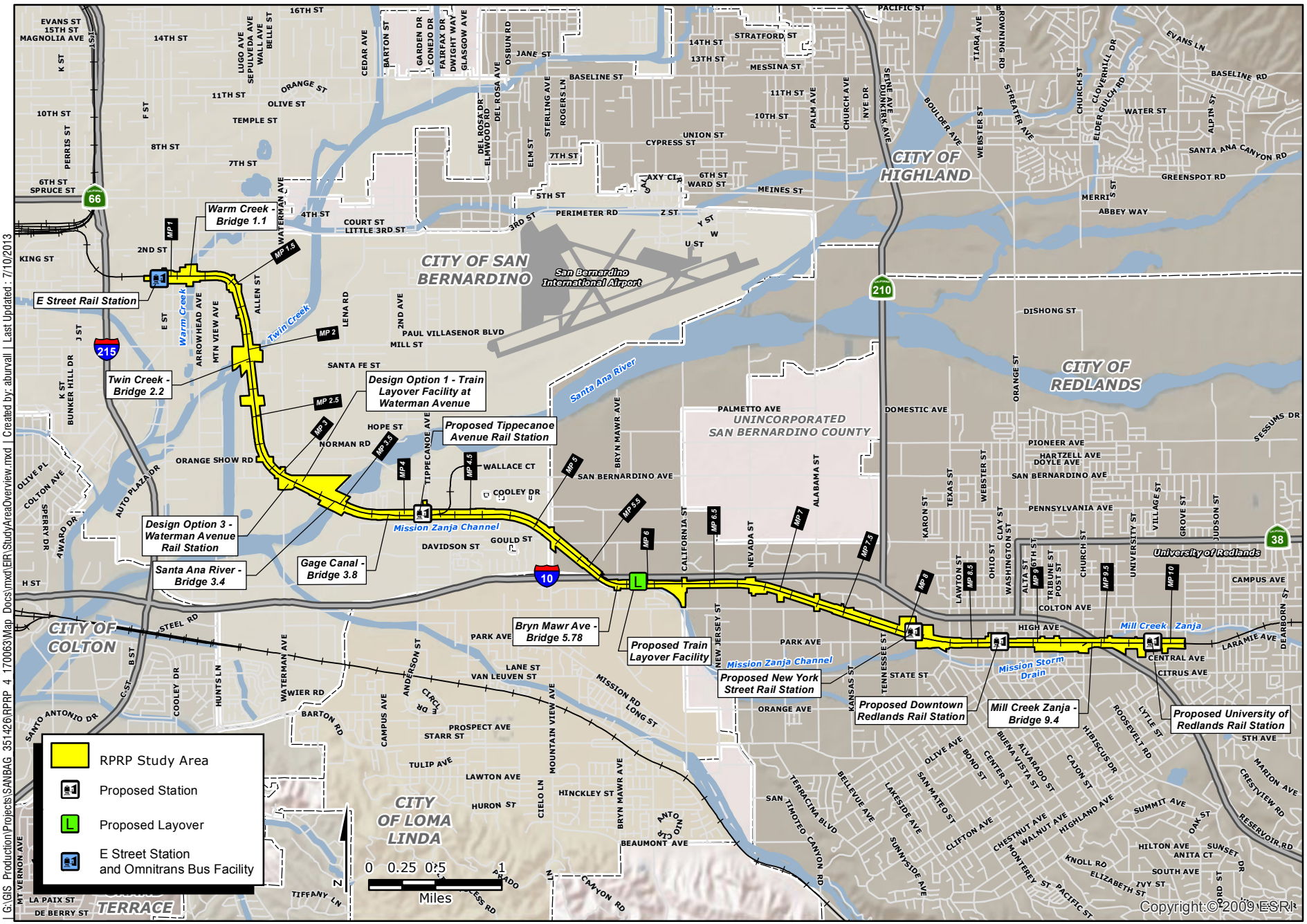
Regional Location Map

Figure ES-1

FTA/SANBAG | Redlands Passenger Rail Project | EIS/EIR



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RPRP Study Area Overview

Figure ES-2

FTA/SANBAG | Redlands Passenger Rail Project | EIS/EIR

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ES.4 ALTERNATIVES CONSIDERED IN THE EIS/EIR

Consistent with the requirements of both NEPA and CEQA, this EIS/EIR considers several alternatives and design options to the Preferred Project, including a No Build Alternative. Improvements associated with these alternatives and design options are outlined below and described in more detail in Chapter 2.0.

Alternative 1, No-Build. Under the No Build Alternative, SANBAG would not implement passenger rail service. Routine maintenance of the existing track alignment and corresponding improvements at existing bridge structures and at-grade roadway crossings would still be necessary to facilitate continued freight service.

Alternative 2, Preferred Project. The Preferred Project would involve the implementation of passenger rail service between E Street in the City of San Bernardino and the University of Redlands in the City of Redlands. Major components included as part of the Preferred Project include: reconstruction of tracking, at-grade roadway crossings, and existing bridge crossings; construction of four new rail stations; various drainage and roadway improvements, and a new train layover facility. Passenger train operations would include local transit service, which would operate on 30-minute headways during peak hours and one-hour headways during non-peak hours during weekdays, and up to two express trains during the AM and PM peak hours.

Alternative 3, Reduced Project Footprint. This alternative would include the development of the Preferred Project within a reduced footprint with the primary objective of minimizing disturbance to biological and historic resources that border and intersect the railroad corridor. Train operations and the remaining track infrastructure under this alternative would be the same as those identified for the Preferred Project. The changes in the Project's footprint under Alternative 3 would occur at the following locations:

- Alternative design for Bridge 3.4 at the Santa Ana River;
- Reduced length of bank improvements along the Mission Zanja Channel;
- Reduced construction limits at the California/I-10 Citrus Grove; and
- Reduced roadway improvements at Sylvan Park.

Design Option 1, Train Layover Facility (Waterman Avenue). Under Design Option 1, the proposed train layover facility would be constructed at an alternate site located in the City of San Bernardino, east of Waterman Avenue and immediately north of the existing railroad ROW. Train operations and the remaining track and station infrastructure under this alternative would be similar as those identified for the Preferred Project.

Design Option 2, Use of Existing Train Layover Facilities. Under Design Option 2, Project-related layover operations would be integrated with existing layover operations at Metrolink's Eastern Maintenance Facility (EMF) and Inland Empire Maintenance Facility (IEMF). Train operations and the remaining track and station infrastructure under this alternative would be similar to those identified for the Preferred Project.

Design Option 3, Waterman Avenue Rail Station. Under Design Option 3, the rail station located at Tippecanoe Avenue would be relocated to a vacant site just east of Waterman Avenue and south of the railroad ROW. The remaining track and station infrastructure under this alternative would be the same as those identified for the Preferred Project. Train operations would be similar to the Preferred Project with train stops occurring at Waterman Avenue instead of Tippecanoe Avenue.

ES.5 ALTERNATIVES REJECTED

The following alternatives were initially considered but rejected from further consideration in the EIS/EIR along with the supporting rationale:

Light Rail Transit (LRT). An LRT mode alternative would not be capable of operating on the same track infrastructure as existing freight traffic. This in turn would increase the ROW requirements thereby substantially increasing the number of full property takes in addition to resulting in greater impacts to historical properties/resources, biological resources, and jurisdictional waters.

Battery Powered Locomotives. No commercially ready vehicles are currently available for procurement. Additionally, battery operated vehicles come with considerable limitations such as reduced travel speed and limited travel distance before requiring DC power.

Bus Rapid Transit (BRT). A BRT mode alternative would not be capable of operating on the same track infrastructure as existing freight traffic. This would result in extensive ROW requirements, which would result in a substantial increase in full property takes and result in greater impacts to historic properties, biological resources, and jurisdictional waters. Additionally, traffic signals, not crossing gates, are used to protect the road crossings for BRT systems; thus, buses would have to slow at each intersection thereby contributing to a substantially longer travel time than any of the rail modes considered.

New Rail Alignment Alternatives. The acquisition of a new ROW required to secure a new rail alignment would result in substantial displacements of existing residential and commercial uses within the Cities of Redlands and San Bernardino and substantially greater physical impacts to local resources (e.g., biological resources).

ES.6 AREAS OF CONTROVERSY KNOWN TO THE LEAD AGENCY

CCR Section 15123 of the State CEQA Guidelines and 40 CFR Section 1502.12 of the NEPA regulations require that a summary of an EIS/EIR identify areas of controversy known to the lead agency, including issues raised by agencies and the public. During the public comment period for the notice of preparation/notice of intent, various comment letters were received regarding the Project. Appendix A of the EIS/EIR includes a summary of the public scoping process as well as summaries of the comments received in writing and at the public meetings held on April 24, May 2, September 25, and September 27, 2012. In general, areas of potential controversy known to the SANBAG and FTA include biological and cultural resources, circulation (traffic and public transit), noise, flooding, safety, environmental justice, and acquisition/displacements of private property. These issues were considered in the preparation of this EIS/EIR and, where appropriate, are addressed in the environmental impact analyses presented in Chapters 3, 4, and 5, and briefly summarized below.

- ***Biological Resources*****.** The Project would include construction activities within the vicinity of the Santa Ana River. The Santa Ana River includes suitable habitat for federally listed species, including least Bell's vireo, and is identified as critical habitat for federally listed species including the San Bernardino kangaroo rat and Santa Ana sucker. SANBAG and FTA are currently in consultation with the U. S. Fish and Wildlife Service (USFWS) and attempting to avoid or minimize potential adverse effects to listed species.

- ***Cultural Resources*.** Multiple cultural resources are located within the Area of Potential Effect (APE) for the Project. These resources include, but are not limited to, the Redlands Santa Fe Depot, Second Baptist Church, and Redlands Chinatown. SANBAG and FTA are currently in consultation with the California State Historic Preservation Officer (SHPO) and attempting to avoid or minimize potential adverse effects to local cultural and historic resources.
- ***Transit Service Funding*.** Omnitrans submitted comment letters to SANBAG and FTA dated May 10, 2012 and October 10, 2012 identifying concerns relating to the Project's potential to impact funding sources currently allocated for local bus service in San Bernardino County. In response to this concern, SANBAG worked collaboratively with Omnitrans to complete a Comprehensive Operating Analysis (COA), which identified an operating deficit and a capital surplus through Fiscal Year 2020. The Omnitrans Board of Directors addressed this funding gap by reorganizing the management structure, changing the insurance and liability management policy, and implementing fare increases earlier than previously planned. These decisions were memorialized by the Omnitrans Board of Directors via the Fiscal Year 2015 Budget and Fiscal Year 2015-2020 Short Range Transit Plan, approved in May and June 2014, respectively.

  Funding to operate RPRP will come from Measure I Metrolink/Passenger Rail Program funds; a portion of the local sale tax measure specifically designated for rail use, which cannot be transferred to Omnitrans to offset operational expenses. Based on the fact that Omnitrans has a capital surplus and the funds used for the Project operations are statutorily exempt from use by Omnitrans, no decrease in future bus service is anticipated as a result of the Project. For more information, see Section 2.6, page 2-60.
- ***Road Closures*.** SANBAG is proposing the closure of up to four at-grade crossings as part of the Project. The effects to traffic circulation as a result of these roadway closures are considered in this EIS/EIR.
- ***Noise*.** The Project would increase ambient noise levels as a result of passenger train operations along the nine-mile railroad corridor. Multiple forms of noise mitigation are considered and discussed in this EIS/EIR, including the implementation of quiet zones and/or construction of sound barriers. In considering the future implementation of these measures, this EIS/EIR acknowledges that SANBAG may not have complete control over their implementation (e.g., quiet zones) and/or the measures trigger other indirect environmental effects (e.g., sound barriers). Based on these circumstances, this EIS/EIR identifies a full range of noise mitigating measures for the Project.
- ***Flooding*.** The placement of Project facilities including track infrastructure, bridges, new station structures, and layover facilities would be constructed within a delineated 100-year flood hazard area. Although multiple drainage improvements are contemplated by other agencies (e.g., San Bernardino County Flood Control District) that would effectively reduce the threat of flooding throughout the Study Area, the timing of these projects is unknown and their implementation is outside SANBAG's control. Based on this context and the fact that operations would likely start in advance of the completion of the necessary flood control projects, rail operations could be affected by flooding until these improvements are completed.
- ***Improvements Along the Mission Zanja Flood Control Channel*.** The railroad corridor parallels the Mission Zanja Flood Control Channel (Mission Zanja Channel) for

approximately 2.5 miles east of the Santa Ana River. SANBAG's ROW overlaps with the northern section of the Mission Zanja Channel with the remaining portions under the ownership of the San Bernardino County Flood control District (SBCFCD). SBCFCD is responsible for maintenance of the Mission Zanja Channel. Due to the deteriorated condition of the northern bank of the Mission Zanja Channel, stabilization of the bank is contemplated as part of the Project. However, the entity responsible for implementing these improvements remains unresolved and will be determined as part of final design.

- ***Environmental Justice*.** The railroad corridor is bordered by census tracts and census block groups containing both low-income and minority populations. These populations are collectively referred to as environmental justice (EJ) populations. Based on this circumstance, adverse effects associated with the Project along with the corresponding benefits would occur to EJ populations bordering the railroad corridor.
- ***Acquisition of Private Property*.** The Project would require the full or partial acquisition of a limited number of private properties. The full or partial acquisition of these properties would occur in compliance with the Uniform Relocation Assistance and Real Property Acquisition Act and the California Relocation Act.

ES.7 SIGNIFICANT AND UNMITIGABLE IMPACTS

CEQA Guidelines Section 15093 requires the Lead Agency to balance, as applicable, the economic, legal, social, technological, and/or other benefits of the Project against its unavoidable environmental risks when determining whether to approve the Project. Significant and unmitigated impacts have been identified for the Preferred Project. Under both NEPA and CEQA, the following environmental issue areas would remain significant after mitigation:

- Land Use and Planning (Physical division of communities from placement of sound barriers)
- Visual Quality and Aesthetics (Changes to visual character or quality from placement of sound barriers)
- Noise (Permanent increase in ambient noise from passing trains)
- Floodplains and Hydrology (Placement of transportation infrastructure within a 100-year Flood Zone)

If SANBAG approves the Project with significant and unmitigated impacts, SANBAG is required under CEQA to prepare a Statement of Overriding Considerations.

ES.8 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Of the Build Alternatives and Design Options considered in the EIS/EIR, the No Build Alternative would initially avoid construction-related adverse effects. However, given that the No Build Alternative would entail various maintenance activities along the ROW (e.g., bridge replacement), adverse construction-related effects would not be completely avoided. Additionally, although the No Build Alternative would avoid several of the identified significant and unmitigable adverse effects identified for the Build Alternatives and Design Options, this alternative would be inconsistent with SCAG's RTP/SCS (2012). This inconsistency would be a significant and unmitigable adverse effect that would otherwise not occur under the Build Alternatives and Design Options. Additionally, the No Build Alternative would not satisfy

SANBAG's goals and objectives and, therefore, the No Build Alternative is not considered environmentally superior. Table 5-2 in Chapter 5 provides additional comparison amongst the alternatives considered.

Of the Build Alternatives and Design Options considered, Alternative 3, Reduced Project Footprint, would minimize adverse effects to biological resources, including those in the vicinity of the Santa Ana River and the Mission Zanja Flood Control channel. Although Design Option 2 would relocate the Project layover facilities at locations outside the 100-year floodplain, other Project-facilities would continue to remain subject to inundation from flooding (e.g., tracks and rail stations). Additionally, Design Option 2 would not result in the avoidance of any of the significant and unmitigable adverse effects identified for the Preferred Project. For these reasons, Alternative 3, Reduced Project Footprint is considered the environmentally superior alternative for the purposes of CEQA.

ES.9 SECTION 4(F) RESOURCES

This EIS/EIR includes a discussion and analysis of resources within and adjacent to a broader Planning Area for the Project that qualify for consideration per the requirements of Section 4(f) of the Department of Transportation Act of 1966 (Section 4(f)). All potential park and recreational Section 4(f) resources within and adjacent to the Planning Area are identified in Table ES-1. Direct uses, temporary occupancies, or constructive uses as attributable to the Build Alternatives and Design Options were then considered for each resource listed in Table ES-1. Section 3.16 also considers potential direct use, temporary occupancies, and constructive uses for the cultural and historic resources identified and discussed in Section 3.12, Cultural and Historic Resources (see Tables 3.12-3, 3.12-4, and 3.12-5).

With the implementation of the proposed mitigation, no direct use or constructive use would occur to the Redlands Santa Fe Historic District, properties contributing to the District's historic significance, or (including the Redlands Santa Fe Depot, Cope Commercial Company Warehouse, Haight Packing House, Redlands City Transfer, and the brick warehouse at 440 Oriental Avenue), or the Second Baptist Church. Temporary construction easements (TCE) would be required for construction access at Redlands Santa Fe Depot, Cope Commercial Company Warehouse, Haight Packing House, Redlands City Transfer, and the brick warehouse at 440 Oriental Avenue. These temporary occupancies would be minimized through the application of mitigation measures. Three other contributing properties to the Redlands Santa Fe Depot Historic District (Redlands Board of Trade / Redlands Chamber of Commerce; Palace Livery; and Pioneer Transfer are located far from enough away from the project ROW such that the Build Alternatives will not result in a direct use, or constructive use, or temporary occupancy of these properties.

As shown, with the implementation of the proposed mitigation, the Build Alternatives would not result in a constructive use of 4(f) park and recreational resources. If required, the displacement of existing improvements (e.g. fencing) by sound barriers at Victoria Elementary School and Park and Redlands Lawn Bowling Club (at Sylvan Park) would result in a direct use with de minimis impacts. The temporary occupancy of these resource sites, if required for the construction of sound barriers, would be minimized through mitigation proposed by SANBAG.

ES.10 ENVIRONMENTAL JUSTICE

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/or low-income populations. Through a systematic delineation of low-income and minority populations within the Study Area, a high concentration of minority and/or low-income populations were identified along the railroad corridor within the Cities of San Bernardino, Loma Linda, and Redlands.

Section 3.17 of the EIS/EIR provides a discussion of the adverse effects that could be predominately experienced by these populations. Following the application of mitigation measures proposed in Chapter 3 of this EIS/EIR, adverse direct and indirect effects to these populations would remain with regard to noise, division of established communities, and visual resources and aesthetics. Other alignment alternatives beyond SANBAG's ROW were determined to not be practicable because they would require acquisition of new right-of-way in a new corridor, which would result in greater social, environmental, and economic effects than the Build Alternatives and Design Options, which follow the existing railroad corridor.

Table ES-1. Findings of the Section 4(f) Analysis

Resource Name	Section 4(f) Use	Findings and Mitigation Recommendation (if necessary)
Park and Recreation Areas Analyzed for Section 4(f) Use		
Meadowbrook Park	None	No mitigation is required due to these recreational areas being located approximately 0.20 miles and 0.09 miles away from SANBAG's ROW, respectively. Additionally, both sites are buffered by land uses within the existing urban built environment.
Meadowbrook Fields	None	
Franklin Elementary School	None	The large fields at this school are buffered from the Project footprint by a distance of approximately 0.11 miles.
Jennie Davis Park	None	No direct use would result because the project would not require the permanent incorporation of park land. No temporary occupancy of the park property is proposed during construction. Through the implementation of Mitigation Measure TR-1, access to the park would be maintained during construction. With the implementation of Mitigation Measure NV-2, potential construction-related impacts would be minimized. Moreover, no constructive use of the park property would result because train operation would occur at a distance of over 100 feet from the park, at its nearest point. As a result, the protected activities, features, or attributes of the park would not be substantially impaired.
Orangewood High School	None	No direct use would result because the proposed improvements near this park are within SANBAG's ROW. As a result, the project would not require the permanent incorporation of park land. No temporary occupancy of park property is required during construction. Potential construction related impacts are minimized with the implementation of Mitigation Measures TR-1, NV-1 and NV-2. Moreover, no constructive use would result because operational noise impacts would not substantially impair the protected activities,

Table ES-1. Findings of the Section 4(f) Analysis

Resource Name	Section 4(f) Use	Findings and Mitigation Recommendation (if necessary)
		features, or attributes of the park.
Santa Ana River Trail	None	Through the implementation of Mitigation Measure PCS-1, the Project would not result in a use of the SAR Trail under Section 4(f).
Victoria Elementary School and Park	Direct Use (De minimis impact) Temporary Occupancy[1]	The implementation of Mitigation Measure NV-3 would avoid a direct use, temporary occupancy, and constructive use of this park. If Mitigation Measure NV-4 is required, sound barriers would be constructed on park property along its northern border, resulting in a direct use. However, that direct use would have a di minimis impact because it would not adversely affect the protected features, attributes, or activities of the park. Further, if a sound barrier is constructed, a TCE on park property would be required. The TCE would be a temporary occupancy of park property. Potential impacts that could result from the TCE would be minimized through the implementation of Mitigation Measures LU-1, TR-1, NV-1, and NV-2. Moreover, with the implementation of Mitigation Measures NV-3, or, if needed, NV-4 and/or NV-6, and VQA-3, and VQA-4, there would be no constructive use because the project's proximity impacts would not be so severe that the protected activities, features, and attributes of the park would be substantially impaired.
Sylvan Park	Direct Use (De minimis impact) Temporary Occupancy[1]	Roadway iimprovements to Park Avenue at the southwest and southeast corners of the park would require acquisition of a partial fee or an easement that would account for 0.02 percent of the total park area, resulting in a direct use. However, such direct use would be a di minimis impact because the roadway improvements at issue would not adversely affect the protected features, attributes, or activities of the park, and any impacts would be further minimized during final design through the implementation of Mitigation Measures LU-1 and NV-3 (Quiet Zones). If the implementation of Mitigation Measure NV-4 (Sound barriers) is required, sound barriers would be constructed on park property along its southern portion, resulting in a direct use. However, that direct use would have a di minimis impact because it would not adversely affect the protected features, attributes, or activities of the park. Further, if Mitigation Measure NV-4 is needed, a TCE on park property would be required during construction of the sound barriers. The TCE would be a temporary occupancy of park property. Potential impacts from the TCE would be minimized through the implementation of Mitigation Measures LU-1, TR-1, NV-1, and NV-2.

Table ES-1. Findings of the Section 4(f) Analysis

Resource Name	Section 4(f) Use	Findings and Mitigation Recommendation (if necessary)
		With the implementation of LU-1, NV-3 and VQA-1, or, if needed, NV-4, NV-5, and/or NV-6, and VQA-3 and VQA-4 there would be no constructive use of the park because its protected activities, features, or attributes would not be substantially impaired.
Cultural and Historic Resources Analyzed for Section 4(f) Use [2]		
Redlands Santa Fe Depot Historic District	None	The Project would not result in a direct or constructive use of this historic resource. Properties contributing to the District's historic significance are discussed below.
Redlands Santa Fe Depot Station (36-017106) [3]	Temporary Occupancy [1]	With the implementation of Mitigation Measures LU-1, TR-1, CUL-1 and NV-1, the temporary occupancy associated with construction would be minimal. The Project would not result in a direct or constructive use of this historic resource.
Cope Commercial Company Warehouse (36-017477)[3]	Temporary Occupancy [1]	With the implementation of Mitigation Measures LU-1, TR-1, CUL-1 and NV-1, the temporary occupancy associated with construction would be minimal. The Project would not result in a direct or constructive use of this historic resource.
Redlands Board of Trade / Redlands Chamber of Commerce [3]	None	The Project would not result in a direct or constructive use of this historic resource.
Haight Packing House (36-017046)[3]	Temporary Occupancy [1]	With the implementation of Mitigation Measures LU-1, TR-1, CUL-1 and NV-1, the temporary occupancy associated with construction would be minimal. The Project would not result in a direct or constructive use of this historic resource.
Palace Livery[3]	None	The Project would not result in a direct or constructive use of this historic resource.
Pioneer Transfer[3]	None	The Project would not result in a direct or constructive use of this historic resource.
Packard Motor Company Sales Office[3]	None	The Project would not result is a direct or constructive use of this historic resource.
Redlands City Transfer (36-017107)[3]	Temporary Occupancy [1]	With the implementation of Mitigation Measures LU-1, TR-1, CUL-1 and NV-1, the temporary occupancy associated with construction would be minimal. The Project would not result in a direct or constructive use of this historic resource.
Single family residence (620 New York Street)	None	The Project would not result in a direct or constructive use of this historic resource.
Single family residence (337 North Cook Street)	None	The Project would not result in a direct or constructive use of this historic resource.
Brick Warehouse (440 Oriental	Temporary Occupancy [1]	With the implementation of Mitigation Measures LU-1, TR-1, CUL-1 and NV-1, the temporary occupancy associated with

Table ES-1. Findings of the Section 4(f) Analysis

Resource Name	Section 4(f) Use	Findings and Mitigation Recommendation (if necessary)
Avenue)[3]		construction would be minimal. The Project would not result in a direct or constructive use of this historic resource.
Victoria Elementary School	Direct Use (De minimis impact) Temporary Occupancy[1]	The implementation of Mitigation Measure NV-3 would avoid a direct use, temporary occupancy, and constructive use of this property. If Mitigation Measure NV-4 is required, sound barriers would be constructed on school property along its northern border, resulting in a direct use. However, that direct use would have a di minimis impact because the project would have no adverse effect on this historic property. Further, if Mitigation Measure NV-4 is needed, a TCE on school property would be required during construction of the sound barriers. The TCE would be a temporary occupancy of property. Potential impacts from the TCE would be minimized through the implementation of Mitigation Measures LU-1, TR-1, NV-1, and NV-2. Moreover, with the implementation of Mitigation Measures NV-3, or, if needed, NV-4 and/or NV-6, and VQA-3, and VQA-4, there would be no constructive use of this historic resource because the project's proximity impacts would not be so severe that the protected activities, features, and attributes of the school would be substantially impaired.
Van Dorin Motor Company	None	The Project would not result in a direct or constructive use of this historic resource.
Single family residence (510 East Stuart Avenue)	None	The Project would not result in a direct or constructive use of this historic resource.
Single family residence (610 East Stuart Avenue)	None	The Project would not result in a direct or constructive use of this historic resource.
Redlands Lawn Bowling Club (411 North University Street)	Temporary Occupancy [1]	Through the implementation of Mitigation Measure NV-3 (quiet zones), no direct use, temporary occupancy, or constructive use would result. If Mitigation Measure NV-4 (sound barriers) is required, a TCE of the southern edge of the Lawn Bowling Club would be required during construction of the sound barriers. The TCE would be a temporary occupancy of property. Potential impact of the TCE would be minimized through implementation of Mitigation Measures LU-1, TR-1, NV-1, and NV-2. Moreover, with the implementation of Mitigation Measures NV-4, NV-5, and/or NV-6 and LU-1, VQA-3, VQA-4 and CUL-2a, the project would not result in a constructive use because the protected activities, features, or attributes of this historic property would not be substantially impaired.
Second Baptist	Temporary	The implementation of Mitigation Measure NV-3 (Quiet Zones)

Table ES-1. Findings of the Section 4(f) Analysis

Resource Name	Section 4(f) Use	Findings and Mitigation Recommendation (if necessary)
Church (420 East Stuart Avenue).	Occupancy [1]	would avoid a direct use, temporary occupancy, and constructive use of this resource. If Mitigation Measure NV-4 (Sound Barriers) is required, a TCE will be needed during construction of the sound barriers. The TCE would be a temporary occupancy of the property. Potential impact from the TCE would be minimized with the implementation of Mitigation Measures LU-1, TR-1, NV-1 and NV-2. Implementation of Mitigation Measure NV-4 at this location presents three options for sound barrier configurations. All of those options do not permanently incorporate church property into a transportation use; thus, the Project would not result in a direct use. With the implementation of Mitigation Measures NV-1, NV-2, NV-3 and, if needed, NV-4, LU-1, TR-1, CUL-2a and CUL-2b, the project will not result in a constructive use because the protected activities, features, or attributes of this historic resource would not be substantially impaired.

[1] No direct, permanent or constructive use would result.
[2] Cultural resource findings remains subject to written concurrence from SHPO.
[3] Listed as part of the Redlands Santa Fe Depot National Register Historic District.

The Build Alternatives and Design Options would also provide benefits to for minority and low-income populations as discussed in Section 3.17, which include a new and improved regional transit service, as well as air quality improvements and enhanced employment opportunities. These benefits would be the most pronounced for those living closest to the railroad corridor. In view of the anticipated adverse effects, mitigation measures proposed, and the off-setting benefits, the Build Alternatives and Design Options would not result in disproportionately high and adverse effects on low-income or minority populations.

ES.11 PUBLIC PARTICIPATION IN THE CEQA/NEPA REVIEW PROCESS

This EIS/EIR is being distributed to interested agencies, stakeholder organizations, and individuals. This distribution ensures that interested parties have an opportunity to express their views regarding the environmental effects of the Project, and to ensure that information pertinent to permits, authorizations, and approvals is provided to decision makers for the lead agencies and CEQA responsible and trustee agencies. This document is available for review by the public during normal business hours at SANBAG's Office during normal business hours. The document will also be available on SANBAG's website at: http://sanbag.ca.gov/projects/redlands-transit.html.

The draft EIS/EIR is being distributed for a 54-day period that will begin on August 6, 2014 and end on September 29, 2014. Written comments should be sent to the following address:

Mitchell A. Alderman
Director of Transit & Rail Programs
San Bernardino Associated Governments
1170 W. 3rd St., 2nd Floor

San Bernardino, CA 924104

If comments are provided via e-mail, please include the project title in the subject line, attach comments in MS Word format, and include the commenter's U.S. Postal Service mailing address. Email comments should be directed to: RPRP_Public_Comments@sanbag.ca.gov.

A joint public meeting on the draft EIS/EIR will be conducted by SANBAG and FTA on:

1. September 4, 2014, 5:00–7:00 PM, at the ESRI Café, 380 New York Street, Redlands, CA 92373; and
2. September 9, 2014, 5:00–7:00 PM, at the Hotel, 285 East Hospitality Lane, San Bernardino, CA 92408

Once all comments have been assembled and reviewed, responses will be prepared to address significant environmental issues that have been raised in the comments. The responses will be included in a final EIS/EIR.

ES.12 SUMMARY OF ADVERSE EFFECTS AND MITIGATION MEASURES

Table ES-2 summarizes environmental effects, mitigation measures, and level of significance after mitigation associated with RPRP. Detailed analyses of these topics are included within each corresponding section contained within this document.

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Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
Land Use and Planning				
Effect 3.2-1: Physically Divide an Established Community or Physically Disrupt Community Cohesion. The Project would divide established communities and disrupt community cohesion during construction.	Adverse / Significant	**TR-1: Prepare a Traffic Management Plan** **VQA-4: Sound Barrier Screening and Surface Treatments**	Adverse	Significant and Unmitigable
Effect 3.2-2: Create Incompatibility with On-site or Adjacent Land Uses and Zoning. The Project could be incompatible with on-site and adjacent land uses and/or zoning.	Adverse / Significant	**TR-1: Prepare a Traffic Management Plan** **VQA-1: Screening of Construction Staging Areas** **VQA-2: Enhance Exterior Appearance of Structural Facilities** **VQA-3: Tree Replacement** **VQA-4: Sound Barrier Screening and Surface Treatments** **VQA-5: Minimize Exterior Lighting in Adjacent Uses** **NV-1: Employ Noise-Reducing Measures during Construction** **NV-2: Prepare a Community Notification Plan for Project Construction** **NV-3: Establish Quiet Zones** **NV-4: Construct Sound Barriers** **NV-6: Use Ballast Mats, Resiliently Supported Ties, or Measures of Comparable Effectiveness on Portions**	Not Adverse	Less than Significant

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		of the Rail near Sensitive Receivers		
Effect 3.2-3: Result in Conflict or Inconsistency with any Applicable Land Use Plan, Policy, or Regulation of an agency with Jurisdiction over the Project. The Project would be generally consistent with applicable local land use plans, policies, and regulations.	No Adverse Effect / Less than Significant	No mitigation is proposed.	Not Adverse	Less than Significant
Effect 3.2-4: Degrade the Social or Physical Character of the Community or Quality of Life of Nearby Neighborhoods. The Project would result in possible adverse and beneficial effects on the character of a community and the quality of life of nearby neighborhoods.	Adverse / Significant	**TR-1: Prepare a Traffic Management Plan** **VQA-1: Screening of Construction Staging Areas** **NV-2: Prepare a Community Notification Plan for Project Construction** **NV-3: Establish Quiet Zones**	Not Adverse	Less than Significant
Effect 3.2-5: Displacement of Residences and Businesses. The Project would result in the displacement of substantial number of existing structures.	Adverse / Significant	**LU-1: Minimize Project Land Requirements and Comply with Federal and State Relocation Laws.** As part of final design, SANBAG shall maximize opportunities to minimize the Project's land requirements and associated property acquisition. In instances where avoidance is not feasible, SANBAG shall provide just compensation consistent with the requirements of the	Not Adverse	Less than Significant

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		Uniform Relocation Assistance and Real Property Acquisition Policies Act and California Relocation Act. If the acquisition of one or more properties requires relocation of existing residences or businesses, SANBAG shall provide relocation assistance to residential and business tenants prior to the start of construction.		
Transportation				
Effect 3.3-1: Impact Local Traffic Plans, Policies, and Standards. The Project would result in conflicts with applicable ordinances and policies regarding the performance of the circulation system, including, but not limited to, intersections, streets, highways and freeways.	Adverse / Significant	**TR-1: Prepare a Traffic Management Plan.** SANBAG shall prepare a Traffic Management Plan prior to the start of construction, and the provisions of the Traffic Management Plan shall be implemented prior to, and during construction, as appropriate, to address traffic considerations of pedestrian and bicycle access and safety, and vehicular flow. The objective of the Traffic Management Plan will be to reduce construction related effects to traffic, non-motorized forms of transportation (e.g., bicycle and pedestrians), and existing public transit (e.g., buses) and will include the following: • Construction detour plans and designated construction truck access routes for each phase of construction; • Maintain maximum travel lane capacity to the greatest extent possible during construction periods and provide advanced notice to drivers or roadway changes or closures; • Signage indicating the construction limits, access routes, and entrances to individual business sites and community facilities that may be affected by construction activities. In addition, the construction contractor would supply “open for business” signs to encourage normal business activity during	Not Adverse	Less than Significant

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		construction; • Pre-planning, outreach, and signage indicating pedestrian and bicycle routes detours; • Coordination with public transit service providers, as necessary; • Heavy trucks and other construction transport vehicles shall avoid the busiest commute hours to the greatest extent possible (weekdays 7 a.m. to 8 a.m. and 5 p.m. to 6 p.m.); • Early notification to emergency service providers and area drivers of any road closures or detours and the timeframes of the closures or detours. This information will be posted in a local newspaper, via SANBAG's web site and will be updated on a monthly basis; • Coordination with the Cities of San Bernardino, Loma Linda, and Redlands for community events in the area to accommodate crowds and road closures; and • SANBAG shall maximize opportunities for coordinated construction and installation of improvements that occurs outside the SANBAG ROW with the Cities of San Bernardino, Loma Linda, and Redlands to the greatest extent practical. **TR-2: Existing LOS and V/C Year 2018 and 2038 Impact Roadway Improvements.** As part of the Project construction, SANBAG shall coordinate with the appropriate agency in which the intersection improvement is located (Cities of San Bernardino, Loma Linda,		

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		Redlands, or Caltrans) to pay SANBAG's "fair share" of the identified roadway improvements prior to the start of operations of the Project in 2018: • **California Street and I-10 Eastbound Off-Ramp –** SANBAG shall coordinate with Caltrans to fund its fair share of construction for a ramp improvement to include a right-turn pocket. The existing right-turn lane will become a shared right-turn lane to accommodate the high number of right turns. SANBAG shall provide its fair share for the funding of the following improvements prior to the year 2038: • **California Street and I-10 West On-Ramp –** SANBAG shall coordinate with Caltrans to fund its fair share to the construction of a dual southbound right and a dual northbound left turn pocket. • **Alabama Street and Industrial Avenue –** SANBAG shall coordinate with the City of Redlands to stripe an exclusive westbound right turn lane with 50-feet of storage to accommodate a high number of right turns.		
Effect 3.3-2: Conflict with an Applicable Congestion Management Program. The Project would conflict with the County CMP during construction.	Adverse / Significant	**TR-1: Prepare a Traffic Management Plan**	Not Adverse	Less than Significant

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
Effect 3.3-3: Create or Increase Hazards from Project Design Features. The Project could create or increase hazards on local roadways (e.g., sharp curves or dangerous intersections).	Adverse / Significant	**TR-1: Prepare a Traffic Management Plan** **TR-3: Approval from CPUC for Grade Crossings and Safety Measures.** SANBAG shall coordinate with the CPUC prior to the start of construction for re-design and/or closure of all grade crossings to ensure that all grade crossings and safety improvements comply with CPUC standards. SANBAG shall provide verification to the CPUC that all rail safety measures identified in the hazard analysis as part of the "formal application" or "GO 88-B" authorization" from CPUC have been installed. **TR-4: Recommended Pre-Signals for Queuing.** If determined appropriate pending the completion of final engineering, SANBAG shall install safety improvements to reduce effects due to queuing. Prior to the start of operations, pre-signals shall be implemented at the following grade crossing locations and shall be operational prior to the start of 2018: • Eastbound I-10 Ramps and California Street crossing; • Industrial Park Avenue and Alabama Street crossing; and • Redlands Boulevard and Tennessee Street crossing. Prior to 2038 and if warranted based on future intersection operations, pre-signals will be implemented at the following grade crossing locations: • Waterman Avenue and Orange Show Road Crossing (Northbound Approach); • Orange Show Road and Waterman Avenue Crossing (Eastbound Approach;	Not Adverse	Less than Significant

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		• Redlands Boulevard and California Street Crossing; and • Redlands Boulevard and Alabama Street Crossing.		
Effect 3.3-4: Impacts to Emergency Response and Access. The Project could adversely affect emergency access.	Adverse / Significant	**TR-1: Prepare a Traffic Management Plan** **TR-2: Existing LOS and V/C Year 2018 and 2038 Impact Roadway Improvements** **TR-3: Approval from CPUC for Grade Crossings and Safety Measures** **TR-4: Recommended Pre-Signals for Queuing**	Not Adverse	Less than Significant
Effect 3.3-5: Adversely Effect Alternative Forms of Transit, including Non-Motorized Facilities. The Project could conflict with plans or policies related to alternatives forms of transit including public transit, bicycle or pedestrian facilities, and otherwise decrease the performance or safety of non-motorized facilities (e.g., pedestrian walkways).	Adverse / Significant	**TR-1: Prepare a Traffic Management Plan** **TR-5: Transit Operations Realignment.** SANBAG will work with affected transit service providers as part of their service realignment process (or major service change) to maximize transit efficiencies offered by interfacing existing transit service with Project operations. SANBAG shall develop a transit integration plan in coordination with local transit service providers to establish a framework for service integration. The plan shall, at a minimum, include an approach or strategy for coordinating existing transit scheduling with proposed train operations, maximizing route interfaces with the proposed station locations, and optimizing existing transit routes to minimize duplication in service. **PCS-1: Coordinate Trail Planning with Local Jurisdictions.**	Not Adverse	Less than Significant

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
Visual Quality and Aesthetics				
Effect 3.4-1: Changes to Visual Character or Quality. Implementation of the Project could substantially degrade the existing visual character or quality of the Study Area and its surroundings.	Adverse / Significant	**VQA-1: Screening of Construction Staging Areas.** For construction staging areas within 500 feet of a residence, park, or educational facility, the contractor will be required to shield the staging area to the extent feasible. SANBAG shall limit construction to daylight hours to the extent possible. If nighttime lighting or construction is necessary, the SANBAG shall ensure that unshielded lights, reflectors, or spotlights are not located and directed to shine toward or be directly visible from adjacent properties or streets. To the extent possible, SANBAG shall minimize the use of nighttime construction lighting within 500 feet of existing residences. This measure shall be identified on grading plans and in construction contracts. **VQA-2: Enhance Exterior Appearance of Structural Facilities.** The external appearance of the stations and layover facility, including the choice of color and materials, shall seek to reduce the visual impact of these facilities on adjacent land uses. Bright reflective materials and colors shall be avoided. As appropriate, the exterior design of these facilities should follow design guidelines provided in applicable land use plans. Minimum exterior design requirements shall include, but are not limited to, the following: • Painting (with earth-colored tones) of structural façades to blend with surrounding land uses; • Maximize the use of textured or other non-reflective exterior surfaces and non-reflective glass to prevent glare;	Adverse	Significant and Unmitigable

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		• Use of fencing or structural materials, shall be similar to those used by nearby land uses and compatible with surrounding architecture; • Development of a landscaping plan for each station and layover facility site that uses a combination of locally derived native vegetation, earthen features (e.g., boulders), and, if appropriate, topographical separations (e.g., berms) to maximize site appearance and shield the new facilities from nearby sensitive receptors to the extent feasible; and • Clustering of structural facilities to maximize open space buffering. SANBAG shall coordinate final design plans with the Cities of San Bernardino and Redlands prior to final approval. **VQA-3: Tree Replacement.** Prior to construction, SANBAG shall have a registered arborist conduct a tree survey to identify native and ornamental trees requiring removal outside SANBAG's ROW. The arborist will identify measures to avoid and minimize indirect impacts on trees, where feasible, and develop a plan for the replacement of trees that cannot be avoided. The plan will include planting and irrigation design details and a weaning schedule for the establishment period. Trees with a diameter at breast height of 12 inches or greater will be replaced at ratios consistent with City of Redlands and San Bernardino standards. **VQA-4: Sound Barrier Screening and Surface Treatments.** To reduce effects associated with the sound		

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		walls, where SANBAG ROW widths allow, drought tolerant landscaping (i.e., trees, vines, and/or shrubs) shall be provided. If the SANBAG ROW width is insufficient to permit landscaping or if landscaping cannot adequately reduce visual impacts, surface treatments that are compatible with surrounding architecture shall be applied to the outside of the sound walls (residential or school facing side). Architectural detailing such as pilasters, wall caps, interesting block patterns, and offset wall layouts shall be used to add visual interest and reduce apparent height of the walls. SANBAG shall coordinate the final design plans with the Cities of San Bernardino and Redlands, as applicable, prior to final approval.		
Effect 3.4-2: New Sources of Nighttime Lighting and Glare. The Project would create new sources of light and glare, which could adversely affect day or nighttime views in the Study Area.	Adverse / Significant	**VQA-1: Screening of Construction Staging Areas** **VQA-3: Tree Replacement** **VQA-5: Minimize Exterior Lighting in Adjacent Uses.** To prevent unintended spillover of lighting, lighting fixtures constructed or relocated as part of the Project shall be oriented and focused onto the specific on-site location intended for illumination (e.g., parking lots) and shielded away from adjacent sensitive uses (e.g., schools, residential properties) and public rights of way to minimize light spillover onto off-site areas. New driveways shall be located and oriented into parking lots, to the extent feasible, in a manner that will not result in headlights from vehicles entering or exiting the parking areas oriented directly at off-site sensitive uses. SANBAG shall coordinate the final design plans with the Cities of San Bernardino and Redlands, as applicable, prior to final approval.	Not Adverse	Less than Significant

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
Air Quality and Global Climate Change				
Effect 3.5-1: Conflict with an Air Quality Plan. Implementation of the Project would not result in a conflict or obstruction of an applicable air quality plan.	No Adverse Effect / Less than Significant	No mitigation is proposed.	No Adverse Effect	Less than Significant
Effect 3.5-2: Violate Air Quality Standards. Implementation of the Project would not result in a violation of any air quality standard or contribute substantially to an existing or projected air quality violation.	No Adverse Effect / Less than Significant	No mitigation is proposed.	No Adverse Effect	Less than Significant
Effect 3.5-3: Possible Risk to Sensitive Receptors. Implementation of the Project would not expose sensitive receptors to substantial pollutant concentrations.	No Adverse Effect / Less than Significant	No mitigation is proposed.	No Adverse Effect	Less than Significant
Effect 3.5-4: Create Objectionable Odors. Implementation of the Project would not create objectionable odors that would affect a substantial number of people.	No Adverse Effect / Less than Significant	No mitigation is proposed.	No Adverse Effect	Less than Significant

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
Effect 3.5-5: Generate Greenhouse Gas. Implementation of the Project would not generate greenhouse gas emissions, either directly or indirectly, that would have an adverse effect on the environment, or conflict with any greenhouse gas applicable plan, policy, or regulation.	No Adverse Effect / Less than Significant	No mitigation is proposed.	No Adverse Effect	Less than Significant
Noise and Vibration				
Effect 3.6-1: Permanent Increase in Ambient Noise Levels. The Project would result in a permanent increase in ambient noise levels in the Study Area.	Adverse / Significant	**NV-1: Employ Noise-Reducing Measures during Construction.** SANBAG shall require its construction contractors to employ measures to minimize and reduce construction noise. Noise reduction measures that shall be implemented to reduce construction noise to acceptable levels may include but are not limited to the following: • 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.	Adverse	Significant and Unmitigable

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		- 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 when sensitive receivers adjoin or are near the construction Project APE. - 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 decibel 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. **NV-2: Prepare a Community Notification Plan for Project Construction.** The construction contractor shall prepare and maintain a community notification plan to address project construction issues the community may		

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		have during construction. Components of the plan may include construction phasing to minimize the duration of noise or vibration at any one location. Initial information packets shall 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 shall be identified who will be available to respond to questions from the community or other interested groups. **NV-3: Establish Quiet Zones.** At-grade crossings shall be designed and constructed to be compatible with the formation of Quiet Zones. Prior to the operation, SANBAG shall coordinate with the City of San Bernardino, City of Loma Linda, and the City of Redlands, to construct and establish quiet zones at the following grade crossings • South Arrowhead Avenue; • South Sierra Way; • West Central Avenue; • East Orange Show Road; • South Waterman Avenue; • South Tippecanoe Avenue; • South Richardson Street; • Mountain View Avenue; • West Colton Avenue; • Alabama Street • Tennessee Street; • Church Street; and • North University Street **NV-4: Construct Sound Barriers.** SANBAG shall install up to 12-foot in height sound barriers at priority locations along portions of the rail corridor to reduce noise levels at		

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		receivers identified with severe noise impacts following the application of quiet zones. **NV-5: Wayside Rail Lubrication.** SANBAG shall install wayside applicators for all tight-radius curves on the project alignment prior to the start of Project operations. If the wayside applicators are not sufficient to reduce squeal to an acceptable level, additional reduction may be required through customized profiling of the rail to reduce the forces required for trains to negotiate the curve.		
Effect 3.6-2: Create Excessive Groundborne Vibration or Noise. Project-related construction and operation would generate groundborne vibration or noise that would potentially affect sensitive land uses (e.g., residences).	Adverse / Significant	**NV-1: Employ Noise-Reducing Measures during Construction** **NV-2: Prepare a Community Notification Plan for Project Construction** **NV-6: Use Ballast Mats, Resiliently Supported Ties, or Measures of Comparable Effectiveness on Portions of the Rail near Sensitive Receivers.** SANBAG shall install track design specifications as part of project design to include the use of ballast mats or resiliently supported ties on portions of the track near sensitive receivers to minimize project-related ground-borne vibration and wheel rail noise generated when the trains pass sensitive receivers. The actual measures and their corresponding placement will be determined following more detailed vibration testing and analysis during final engineering design. **CUL-1: Structural Evaluations**	No Adverse Effect	Less than Significant

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
Biological and Wetland Resources				
Effect 3.7-1: Loss and Degradation of Habitat for Special-Status Wildlife Species and Potential Direct Take of Individuals. The Project would modify habitats within the Study Area resulting in direct and indirect effects on sensitive or special status wildlife species, including those listed as a candidate, sensitive, or special-status by California Department of Fish and Wildlife (CDFW) and U. S. Fish and Wildlife Service (USFWS).	Adverse / Significant	**BIO-1: Pre-Construction Survey - Conduct Preconstruction Survey for Special Status Plants and Wildlife and, if Found, Implement Avoidance and Compensation Measures.** Prior to construction, a qualified biologist retained by SANBAG shall conduct pre-construction surveys for special status plant species including woolly star, slender-horned spineflower, smooth tarplant, and salt spring checkerbloom. Pre-construction surveys will also be required for special status wildlife species including least Bell's vireo, southwestern willow flycatcher, San Bernardino kangaroo rat, yellow-billed cuckoo, burrowing owl, and western spadefoot toad to verify presence or absence in the Project area. If one or more species are detected, then SANBAG shall consult with the USFWS (or CDFW if appropriate) to develop additional minimization measures prior to project construction (if necessary). These additional measures may include construction timing restrictions and/or construction monitoring. **BIO-2: Least Bells Vireo (LBV).** The following measures will be implemented to minimize direct and indirect impacts to LBV during construction: a. Impacts associated with clearing and grubbing of Southern Cottonwood Willow Riparian Forest (SCWRF) and Southern Willow Scrub (SWS) will be timed to avoid the breeding season of the least Bell's vireo (March 15 to September 15), unless SANBAG provides survey documentation to USFWS that confirms the riparian habitat in not occupied by LBV.	No Adverse Effect	Less than Significant

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		b. Temporary impact areas will be restored to pre-grade contours following bridge construction. Natural recruitment is anticipated to occur rapidly due to the large amount of intact native riparian habitat that will remain as a seed source. Additionally, the riparian habitat being impacted is adapted to frequent disturbance. The individual species making up the community tend to have large quantities of seeds and very rapid growth that promote rapid re-establishment. Container planting and seeding has not been proposed due to potential conflicts with County Flood Control Maintenance requirements, high risk of plant material being washed out during subsequent storm events and potential conflicts with future Santa Ana River Trail construction. For erosion control purposes, temporarily impacted areas outside of the active floodplain will be hydroseeded with native grasses and shrubs. i. The temporarily impacted SCWRF and SWS habitat will be monitored annually for five years, until LBV is documented using the re-established habitat or until habitat attains 80 percent cover including both shrub and overstory stratum. If recruitment of SCWRF and SWS species is not evident within two years of project construction or habitat has not attained 60 percent cover within three years, impacts will be treated as permanent and additional mitigation for areas not meeting success criteria shall be provided through in-lieu fee payment to an appropriate mitigation		

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		bank for enhancement, restoration or establishment of LBV habitat at a ratio of 1:1. ii. Temporary direct impacts to potentially suitable LBV habitat will be mitigated as follows: The temporal loss of occupied LBV habitat resulting from temporary removal of SCWRF associated with the Mission Zanja Channel shall be mitigated through in-lieu fee payment to an appropriate mitigation bank for enhancement, restoration or establishment of LBV habitat at a ratio of 3:1. The temporal loss of suitable unoccupied LBV habitat resulting from temporary removal of SCWRF and SWS shall be mitigated through in-lieu fee payment to an appropriate mitigation bank for enhancement, restoration or establishment of LBV habitat at a ratio of 2:1. c. Permanent direct impacts to occupied LBV habitat (SCWRF) shall be mitigated at a ratio of 3:1 through in-lieu fee payment to an appropriate mitigation bank for enhancement, restoration and/or creation of LBV habitat within the Santa Ana River watershed. d. If active LBV nests are identified during pre-construction surveys and noise levels at the nest exceed 60 dBA Leq, noise attenuation structures will be placed or other noise attenuation measures (e.g., reducing the number of construction vehicles or using different types of construction vehicles) will be implemented to reduce noise levels at the nest to 60 dBA Leq (or ambient noise level if greater than		

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		60 dBA Leq). During construction adjacent to these areas, noise monitoring shall occur during the LBV breeding season and be reported daily to USFWS. Construction activities that create noise in excess of the aforementioned levels will cease operation until effective noise attenuation measures are in place to the extent practicable. **BIO-3: MBTA Covered Species.** Prior to habitat removal during the avian breeding season (February 15-August 31), a qualified biologist shall conduct a pre-construction nest survey (in suitable areas) for migratory birds prior to construction. Should an active nest of any MBTA covered species occur within or adjacent to the project impact area, a 100-foot buffer (300 feet for raptors) shall be established around the nest and no construction shall occur within this area until a qualified biologist determines the nest is no longer active or the young have fledged. **BIO-4: Protection of Sensitive Plants and Habitats.** SANBAG shall require the construction contractor to implement the following measures to protect sensitive plants and habitats during project-related construction. • SANBAG shall designate an approved biologist (project biologist) who will be responsible for overseeing compliance with protective measures for the biological resources during clearing and work activities within and adjacent to areas of native habitat. The project biologist will be familiar with the local habitats, plants, and wildlife and maintain communications with the contractor to ensure that issues relating to biological resources		

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		are appropriately and lawfully managed. The project biologist will review final plans, designate areas that need temporary fencing, and monitor construction. The biologist will monitor activities within designated areas during critical times such as vegetation removal, the installation of Best Management Practices (BMPs) and fencing to protect native species, and ensure that all avoidance and minimization measures are properly constructed and followed. • Project employees and contractors that will be on-site shall complete environmental worker-awareness training conducted by the project biologist. The training will advise workers of potential impacts to the sensitive habitat and listed species and the potential penalties for impacts to such habitat and species. At a minimum, the program will include the following topics: occurrences of the listed species and sensitive vegetation communities in the area, a physical description and their general ecology, sensitivity of the species to human activities, legal protection afforded these species, penalties for violations of Federal and State laws, reporting requirements, and work features designed to reduce the impacts to these species; and to the extent practicable, promote continued successful occupation of areas adjacent to the work footprint. Included in this program will be color photos of the listed species, which will be shown to the employees. Following the education program, the photos will be posted		

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		in the contractor and resident engineer's office, where they will remain through the duration of the work. Photos of the habitat in which sensitive species are found will also be posted on-site. The contractor will be required to provide SANBAG with evidence of the employee training (e.g., sign in sheet or stickers) upon request. Employees and contractors will be instructed to immediately notify the project biologist of any incidents, such as construction vehicles that move outside of the work area boundary. The project biologist will be responsible for notifying the USFWS within 72 hours of any similar incident. • Prior to construction, SANBAG shall delineate the construction area (including staging and laydown areas) between Mile Posts 3.3 and 4.0 and erect exclusionary construction fencing along the perimeter of the identified construction area to protect adjacent sensitive habitats (SWS, SCWRF and Santa Ana wooly star). Limits of the exclusionary fencing shall be confirmed by the project biologist prior to habitat clearing. Exclusionary fencing shall be maintained throughout the duration of construction work from Mile Posts 3.3 to 4.0. Exclusionary fencing can be removed at the conclusion of construction work as approved by the project biologist. All construction-related vehicles and equipment storage shall occur in the construction area and/or previously disturbed areas as approved by the project biologist. Project-related vehicle traffic		

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		shall be restricted to established access roads, construction areas, storage areas, and staging and parking areas. If construction activity extends beyond the exclusionary fencing into sensitive vegetation communities, areas of disturbance shall be quantified and an appropriate restoration approach shall be developed in consultation with USFWS and CDFW. For example, if construction extends beyond the limits of the exclusionary fencing, temporarily disturbed areas shall be restored to the natural (preconstruction) conditions, which may include the following: salvage and stockpiling of topsoil, re-grading of disturbed sites with salvaged topsoil, and re-vegetation with native locally available species. **BIO-5: Burrowing Owl.** SANBAG will conduct take avoidance (pre-construction) surveys for burrowing owl within 30 days prior to initiating ground disturbance activities. These surveys will be completed in no less than 14 days prior to construction. If burrowing owl is identified, the following shall apply: • If burrowing owl is identified during the breeding season (February 1 through August 31) then an appropriate buffer will be established by the biological monitor in accordance with the 2012 Staff Report on Burrowing Owl Mitigation (CDFW 2012). Construction within the buffer will be avoided until a qualified biologist determines that burrowing owl is no longer present or until young		

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		have fledged and a CDFW-approved exclusion plan has been implemented. In addition to avoidance of the occupied habitat, off-site mitigation will be provided as described below: - Replacement of occupied habitat with occupied habitat: 1.5 times 6.5 (9.75) acres per pair or single bird. - Replacement of occupied habitat with habitat contiguous to currently occupied habitat: 2 times 6.5 (13.0) acres per pair or single bird. - Replacement of occupied habitat with suitable unoccupied habitat: 3 times 6.5 (19.5) acres per pair or single bird. • If burrowing owl is identified during the non-breeding season (September 1 through January 31), then a 50 meter buffer will be established by the biological monitor. Construction within the buffer will be avoided until a qualified biologist determines that burrowing owl is no longer present or until a CDFW-approved exclusion plan has been implemented. **HWQ-2: Prepare and Implement a SWPPP** **HWQ-3: Prepare and Implement a Flow Diversion Plan for Construction**		

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
Effect 3.7-2: Loss and Degradation of Habitat for Special-Status Plant Species and Potential Direct Take of Individuals. The Project would modify habitats within the Study Area resulting in direct and indirect effects on sensitive or special status plant species, including those listed as a candidate, sensitive, or special-status by CDFW and USFWS.	Adverse / Significant	**BIO-1: Pre-Construction Survey - Conduct Preconstruction Survey for Special Status Plants and Wildlife and, if Found, Implement Avoidance and Compensation Measures** **BIO-4: Protection of Sensitive Plants and Habitats**	No Adverse Effect	Less than Significant
Effect 3.7-3: Loss and Degradation of Waters of the U.S., including Wetlands, and Waters of the State. Construction of the Project has the potential to result in substantial adverse effects to federally and state-protected wetlands (including, but not limited to, seasonal wetlands) through direct fill or excavation, hydrological interruption, or other indirect impacts.	Adverse / Significant	**BIO-6: Secure Clean Water Act (CWA) Section 404 Permit and Implement All Permit Conditions to Ensure No Net Loss of Functions of Wetlands, Other Waters of the U.S., and Waters of the State).** Before the approval of grading or other ground disturbing activities within 50 feet of jurisdictional areas, SANBAG shall obtain a CWA Section 404 permit, Section 401 water quality certification, and CDFW 1602 Streambed Alteration Agreement. As part of the Section 404 permitting process, if the USACE (and/or CDFW) requires compensatory mitigation, a draft wetland mitigation and monitoring plan (MMP) shall be developed for the selected Build Alternative. The MMP shall be consistent with USACE's and EPA's April 10, 2008 Final Rule for Comp Compensatory Mitigation for Losses of Aquatic Resources (33 CFR Parts 325 and 332 and 40 CFR Part 230).	No Adverse Effect	Less than Significant

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		Potential mitigation for impacts to federal and state jurisdictional areas may occur at the following ratios: • USACE Wetland - Permanent: 3:1 - Temporary: restoration (in-kind) • USACE Waters - Permanent: 1:1 - Temporary: restoration (in-kind) • CDFW Riparian - Permanent: 3:1 (SWS and SCWRF) - Permanent: 1:1 (unvegetated stream bank) - Temporary: restoration (in-kind) **HWQ-2: Prepare and Implement a SWPPP** **HWQ-3: Prepare and Implement a Flow Diversion Plan for Construction**		
Effect 3.7-4: Potential Interference with Wildlife or Fisheries Movement. Construction and operation of the Build Alternatives would not interfere substantially with the movement of native resident or migratory fish or within established native resident or migratory wildlife corridors.	No Adverse Effect / Less than Significant	No mitigation is proposed.	No Adverse Effect	Less than Significant

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
Effect 3.7-5: Loss of Sensitive Natural Communities. Construction and operation of the Project has the potential to have a substantial adverse effect on local riparian and woodland habitats.	Adverse / Significant	**BIO-4: Protection of Sensitive Plants and Habitats** **HWQ-2: Prepare and Implement a SWPPP**	No Adverse Effect	Less than Significant
Effect 3.7-6: Conflict with Local Ordinances and Policies Protecting Biological Resources. The Project would not conflict with the cities of San Bernardino and Redlands tree ordinances.	No Adverse Effect / Less than Significant	No mitigation is proposed.	No Adverse Effect	Less than Significant
Floodplains, Hydrology, and Water Quality				
Effect 3.8-1: Alteration of Drainage Patterns Resulting in Off-Site Flooding. The Project could result in the alteration of existing drainage patterns in a manner that could result in substantial on- or offsite flooding.	Adverse / Significant	**HWQ-1: Prepare Drainage Plan(s) for Structural Facilities.** SANBAG shall prepare a site specific Drainage Plan for all major structural facilities constructed in conjunction with the Project, including stations and parking areas, track improvements, and the proposed layover facility. The Final Drainage Plan shall incorporate measures to maintain on-site runoff during peak conditions to pre-construction discharge levels. Design specifications for the detention and/or infiltration facilities shall provide sufficient temporary storage capacity to attenuate runoff to pre-Project conditions. These improvements will be coordinated with the applicable jurisdictions, including the Cities of Redlands and San Bernardino and the SBCFCD, as appropriate.	No Adverse Effect	Less than Significant

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		HWQ-2: Prepare and Implement a SWPPP. The construction contractor will develop a SWPPP that complies with the requirements of the NPDES General Construction Permit (Order 2009-0009-DWQ as amended by Order No. 2010-0014-DWQ and 2012-0006-DWQ) for Risk Level 2 projects and implement the BMPs described in the SWPPP. The SWPPP shall identify specific actions and BMPs relating to the prevention of stormwater pollution from project-related construction sources by identifying a practical sequence for site restoration, BMP implementation, contingency measures, responsible parties, and agency contacts. The SWPPP shall reflect localized surface hydrological conditions and shall be reviewed and approved by SANBAG prior to commencement of work and shall be made conditions of the contract with the contractor. The SWPPP shall be prepared by a qualified SWPPP developer with BMPs selected to achieve maximum pollutant removal and that represent the best available technology that is economically achievable. Emphasis for BMPs shall be placed on controlling discharges of oxygen-depleting substances, floating material, oil and grease, acidic or caustic substances or compounds, and turbidity. BMPs for soil stabilization and erosion control practices and sediment control practices will also be required. Performance and effectiveness of these BMPs shall be determined either by visual means where applicable (i.e., observation of above-normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination, (inadvertent petroleum release) is required to determine adequacy of the measure.		

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		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 station and parking areas.		
Effect 3.8-2: Exceeding the Capacity of Existing or Planned Drainage Systems. The Project could result in the contribution of runoff water exceeding the capacity of existing or planned stormwater drainage systems.	Adverse / Significant	**HWQ-1: Prepare Drainage Plan(s) for Structural Facilities** **HWQ-2: Prepare and Implement a SWPPP**	No Adverse Effect	Less than Significant
Effect 3.8-3: Placement of Structures or Encroachment within a 100-Year Floodplain. The Project would include the placement of structures within a 100-year flood hazard area, which could result in damage to proposed structures, existing structures downstream, or redirection of flood flows and corresponding inundation depths.	Adverse / Significant	**HWQ-3: Prepare and Implement a Flow Diversion Plan for Construction.** SANBAG or SANBAG's construction contractor shall develop a Flow Diversion Plan(s) for in-channel construction activities proposed within Warm Creek (Historic)(Bridge 1.1); Twin Creek (Bridge 2.2), SAR (Bridge 3.4), Zanja Channel (Bridges 3.9, and 5.8, and bank improvements), and Mill Creek Zanja (Bridge 9.4). SANBAG's contractor shall incorporate measures to minimize changes to flood flow elevation(s) during construction, address accumulation of floating debris, provide measures that minimize sedimentation to surface waters, and include contingency measures in the event of substantial rainfall. **HWQ-4: Prepare a Natural Hazard Management Plan.** SANBAG shall develop a Natural Hazard Management Plan for the Project. The Natural Hazard Management	Adverse	Significant and Unmitigable

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		Plan will include a flood monitoring and evacuation plan for all Project infrastructure located within a delineated 100-year flood zone based on the most recent FEMA mapping. The Plan shall include protocols and procedures for emergency response in the event of a flood, the investigation and repair of track, station, and bridge facilities following inundation, and the provision of interim transit until Project operations resume. **HWQ-5: Flood-Proofing of Critical Infrastructure.** Where feasible, stations and building pads for the proposed train layover facility shall be designed such that the finished floor elevation will be one-foot above the base 100-year flood elevation, where established.		
Effect 3.8-4: Violation of Water Quality Standards. The Project would generate discharges to surface water resources that would potentially violate water quality standards or waste discharge requirements.	Adverse / Significant	**HWQ-1: Prepare Drainage Plan(s) for Structural Facilities** **HWQ-2: Prepare and Implement a SWPPP** **HWQ-3: Prepare and Implement a Flow Diversion Plan for Construction** **HWQ-6: Incorporate Post-Construction Runoff BMPs into Project Drainage Plan, Final WQMP, and Industrial SWPPP.** The Project Drainage Plan, Final WQMP, and the NPDES Industrial SWPPP shall demonstrate treatment, control, and management of the on- and off-site discharge of stormwater to existing drainage systems or drainage features. The final Drainage Plan shall provide both short- and long-term drainage solutions to ensure the proper sequencing of drainage facilities and the final WQMP will ensure sufficient treatment of runoff generated from Project impervious surfaces prior to off-site discharge.	No Adverse Effect	Less than Significant

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		SANBAG shall ensure the provision of sufficient outlet protection through the use of energy dissipaters, vegetated rip-rap, soil protection, and/or other appropriate BMPs to slow runoff velocities and prevent erosion at discharge locations for the station platforms, parking areas, and layover facility. A long-term maintenance plan shall be developed and implemented to support the functionality of drainage control devices. The layover facility layout(s) shall also include sufficient container storage and on-site containment and pollution-control devices for drainage facilities to avoid the off-site release of water quality pollutants, including, but not limited to oil and grease, fertilizers, treatment chemicals, and sediment. These measures shall be reflected in the final Industrial SWPPP and WQMP for applicable facilities. The NPDES Industrial SWPPP shall incorporate required maintenance practices and housekeeping to maximize the long-term effectiveness of post-construction BMPs.		
Effect 3.8-5: Alteration of Drainage Patterns Resulting in Off-Site Erosion and Sedimentation. The Project would result in the alteration of existing drainage patterns, in a manner that would result in substantial erosion or siltation on- or offsite.	Adverse / Significant	**HWQ-2: Prepare and Implement a SWPPP** **HWQ-6: Incorporate Post-Construction Runoff BMPs into Project Drainage Plan, Final WQMP, and Industrial SWPPP**	No Adverse Effect	Less than Significant

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
Effect 3.8-6: Contribute Substantial Sources of Polluted Runoff. The Project would create or contribute to sources of polluted runoff, which would result in the degradation of receiving waters downstream or otherwise substantially degrade water quality.	Adverse / Significant	**HWQ-2: Prepare and Implement a SWPPP** **HWQ-3: Prepare and Implement a Flow Diversion Plan for Construction** **HWQ-6: Incorporate Post-Construction Runoff BMPs into Project Drainage Plan, Final WQMP, and Industrial SWPPP**	No Adverse Effect	Less than Significant
Geology, Soils, and Seismicity				
Effect 3.9-1: Possible Risks to People and Structures Caused by Strong Seismic Ground Shaking and Liquefaction. The Project could result in possible risks to people and structures related to seismic ground shaking and related secondary geologic hazards including liquefaction.	Adverse / Significant	**GEO-1: Prepare Final Geotechnical Report for the Project and Implement Recommended Measures.** Facility design for all Project components shall comply with the site-specific design recommendations as provided by a licensed geotechnical or civil engineer to be retained by SANBAG. The final geotechnical and/or civil engineering report shall address and make recommendations on the following: • Site preparation; • Soil bearing capacity; • Appropriate sources and types of fill; • Liquefaction; • Lateral spreading; • Settlement; • Landslides (with emphasis on improvements that border the Mission Zanja Flood Control Channel); • Hydroconsolidation; • Compressible/Collapsible soils;	No Adverse Effect	Less than Significant

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		• Corrosive soils; • Structural foundations; and • Grading practices. In addition to the recommendations for the conditions listed above, the geotechnical report shall include subsurface testing of soil and groundwater conditions, and shall determine appropriate foundation designs that are consistent with the latest version of the CBC, as applicable at the time building and grading permits are pursued. All recommendations contained in the final geotechnical engineering report shall be implemented by SANBAG.		
Effect 3.9-2: Possible Risks to People and Structures Caused by Landslides. Implementation of the Project would result in possible risks to people and structures from landslides associated with bank failures along the Mission Zanja Flood Control Channel.	Adverse / Significant	**GEO-1: Prepare Final Geotechnical Report for the Project and Implement Recommended Measures**	No Adverse Effect	Less than Significant
Effect 3.9-3: Substantial Soil Erosion or Loss of Topsoil. Project implementation would involve grading and soils movement, which could result in substantial soil erosion or loss of topsoil.	Adverse / Significant	**HWQ-2: Prepare and Implement a SWPPP**	No Adverse Effect	Less than Significant

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
Effect 3.9-4: Unstable Geologic Conditions. The Project is located on a geologic unit or soil that is unstable, or that would become unstable and would result in settlement, lateral spreading, liquefaction, or soil collapse.	Adverse / Significant	**GEO-1: Prepare Final Geotechnical Report for the Project and Implement Recommended Measures**	No Adverse Effect	Less than Significant
Effect 3.9-5: Exposure to Potential Hazards from Problematic Soils. The Project would expose infrastructure and structures to corrosive soils.	Adverse / Significant	**GEO-1: Prepare Final Geotechnical Report for the Project and Implement Recommended Measures**	No Adverse Effect	Less than Significant
Hazardous Waste and Materials				
Effect 3.10-1: Possible Risk to the Environment Through the Routine Transport of Hazardous Materials. The Project Alternatives and Design Options would result in a hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	Adverse / Significant	**HAZ-1: Prepare and Implement a Construction Hazardous Materials Management Plan and Operational Hazardous Materials Business Plan.** Prior to operation, SANBAG shall prepare and implement a Hazardous Materials Management Plan (HMMP) and Hazardous Materials Business Plan (HMBP) for the Project. The HMMP shall provide for safe storage, containment, and disposal of chemicals and hazardous materials related to Project construction, including the proper disposal of waste materials. The HMBP will provide for safe storage, containment, and disposal of chemicals and hazardous materials related to Project operations. The HMMP and HMBP shall include, but shall not be limited to, the following:	No Adverse Effect	Less than Significant

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		• A description of hazardous materials and hazardous wastes used; • A description of handling, transport, treatment, and disposal procedures, as relevant for each hazardous material or hazardous waste; • Preparedness, prevention, contingency, and emergency procedures, including emergency contact information; • A description of personnel training including, but not limited to: (1) recognition of existing or potential hazards resulting from accidental spills or other releases; (2) implementation of evacuation, notification, and other emergency response procedures; (3) management, awareness, and handling of hazardous materials and hazardous wastes, as required by their level of responsibility; • Instructions on keeping Materials Safety and Data Sheets (MSDS) on-site for each on-site hazardous chemical; and • Identification of the locations of hazardous material storage areas, including temporary storage areas, which shall be equipped with secondary containment sufficient in size to contain the volume of the largest container or tank.		

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
Effect 3.10-2: Possible Risk to the Environment Through an Accidental Release. An accidental release of hazardous materials into the environment could result from Project related construction and operational activities.	Adverse / Significant	**HAZ-1: Prepare and Implement a Construction Hazardous Materials Management Plan and Operational Hazardous Materials Business Plan** **HAZ-2: Pre-Demolition Investigation.** Prior to the demolition of any structures within the Project footprint, 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 Department of Environmental Health or City of Redlands Department of Environmental Health, as applicable. If any hazardous building materials are discovered, a plan for there proper removal shall be prepared in accordance with applicable requirements of the California Division of Occupational Safety and Health 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 their subcontractor will be required to possess a California 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.	No Adverse Effect	Less than Significant

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
Effect 3.10-3: Hazardous Emissions Within Close Proximity of a School Site. The Project could result in the emission or use of hazardous or acutely hazardous materials, substances, or waste within a ¼ mile of an existing or proposed school facility.	Adverse / Significant	**HAZ-1: Prepare and Implement a Construction Hazardous Materials Management Plan and Operational Hazardous Materials Business Plan** **HAZ-2: Pre-Demolition Investigation**	No Adverse Effect	Less than Significant
Effect 3.10-4: Disturbance to Known Hazardous Materials Sites. During construction, the Project would create an adverse hazard to the environment as a result of disturbance to identified hazardous materials sites.	Adverse / Significant	**HAZ-3: Prepare Phase I and/or Phase II ESA for Indeterminate or High-Risk Sites.** Prior to grading, further investigation at any of the identified sites of concern with an indeterminate or high risk-ranking shall be conducted, if it is known that ground disturbance at those sites would exceed 18 inches within 50 feet of the site of concern. The additional investigation shall be in the form of a site-specific ASTM-compliant Phase I ESA investigation. The Phase I ESA recommendation would determine if a Phase II Preliminary Site Investigation (drilling and sampling) would be required, as appropriate. Both the Phase I and Phase II ESA investigations would be completed prior to parcel acquisition (therefore, prior to any construction activity). The Project shall comply with recommendations provided in the Phase I ESA and/or Phase II ESA(s). **HAZ-4: Halt Construction Work if Potentially Hazardous Materials are Encountered.** All construction contractors shall immediately stop all subsurface activities in the event that potentially hazardous materials are encountered, an odor is identified, or considerably stained	No Adverse Effect	Less than Significant

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		soil is visible. Contractors shall follow all applicable local, state, and federal regulations regarding discovery, response, disposal, and remediation for hazardous materials encountered during the construction process.		
Effect 3.10-5: Possible Impediment to Emergency Plans. The Project would interfere with an adopted emergency response plan or emergency evacuation plan.	Adverse / Significant	**TR-1: Prepare a Traffic Management Plan**	No Adverse Effect	Less than Significant
Effect 3.10-6: Possible Risk to People of Wildland Fires. The Project is located in an area susceptible to wildland fires that would expose people or structures to a considerable risk of loss, injury, or death.	Adverse / Significant	**HAZ-5: Keep Construction Area Clear of Combustible Materials.** SANBAG shall ensure, through the enforcement of contractual obligations that during construction, staging areas, welding areas, or areas slated for development using spark-producing equipment shall be cleared of dried vegetation or other materials that could serve as fire fuel. The contractor shall keep these areas clear of combustible materials in order to maintain a firebreak. Any construction equipment that normally includes a spark arrester shall be equipped with an arrester in good working order. This includes, but is not limited to, vehicles, heavy equipment, and chainsaws. **HAZ-6: Provide Accessible Fire Suppression Equipment.** Work crews shall be required to have sufficient fire suppression equipment readily available to ensure that any fire resulting from construction activities is immediately extinguished. All off-road equipment using internal combustion engines shall be equipped with spark arrestors.	No Adverse Effect	Less than Significant

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
Energy				
Effect 3.11-1: Conflict with Adopted Energy Conservation Plans, including Executive Order 13514. The Project would not conflict with any adopted energy conservation plan, including Executive Order 13514.	No Adverse Effect / Less than Significant	No mitigation is proposed.	No Adverse Effect	Less than Significant
Effect 3.11-2: Use non-renewable resources in a wasteful and inefficient manner. The Project would not use non-renewable resources in a wasteful and inefficient manner.	No Adverse Effect / Less than Significant	No mitigation is proposed.	No Adverse Effect	Less than Significant
Cultural and Historic Resources				
Effect 3.12-1: Impacts to Historical Resources Listed Under the NRHP. The Project would cause a substantial adverse change in the significance of a historical resource listed on or eligible for the NRHP.	Adverse / Significant	**CUL-1: Structural Evaluations.** In order to determine the structural stability of the Redlands Depot, Cope Commercial Company Warehouse, Haight Packing House, Redlands City Transfer, and the brick warehouse at 440 Oriental Avenue, structural evaluations shall be prepared by a qualified engineer for these four buildings prior to the commencement of construction. The structural evaluations will also address maximum allowable levels of vibration during construction and, if appropriate, will recommend reduced levels of stabilization in conjunction with vibration monitoring. Qualified recommendations within the structural evaluation shall be adhered to, as appropriate. Permanent stabilization will follow the	No Adverse Effect	Less than Significant

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		Secretary of the Interior's guidelines for the treatment of historic properties; if the buildings are temporarily stabilized for the duration of construction activities, when removed, the buildings will be restored to their pre-construction condition when the stabilization measures are removed. **CUL-2a: Minimize Indirect Visual Effects of Potential Sound Barriers.** Visual surface treatments and drought-tolerant landscaping will be implemented as necessary to minimize indirect effects on the setting and feeling of the Redlands Lawn Bowling Club portion of Sylvan Park and the Second Baptist Church from introduction of sound barriers (if constructed). The surface treatments and landscaping for the sound barrier at the Redlands Lawn Bowling Club will be designed and implemented to harmonize the barrier with the surrounding pastoral park landscape. If a sound barrier is necessary at the Second Baptist Church, surface treatments will be designed and implemented to harmonize the barrier with the Spanish Colonial Revival architecture of the church building. Drought tolerant landscaping will be incorporated into the design of the barrier at the church as needed. **CUL-2b: Conduct Potential Noise Insulation Work at Second Baptist Church in Accordance with Secretary of Interior Standards and Guidelines and Applicable Preservation Briefs**. Sound-attenuating insulation may be necessary for the Second Baptist Church building. If sound-attenuating insulation measures are implemented at the church building, the work will be conducted in accordance with the Secretary of the Interior's Standards for Rehabilitation with Guidelines for Applying the		

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		Standards (Hume et al. 1990) and applicable National Park Service preservation briefs, including #3 (Improving Energy Efficiency in Historic Buildings); #22 (The Preservation and Repair of Historic Stucco); #24 (Heating, Ventilating, and Cooling Historic Buildings: Problems and Recommended Approaches); and # 30 (The Preservation and Repair of Historic Clay Tile Roofs). SANBAG will select and implement the recommended insulation measures in coordination with the property owner and SHPO. **NV-1: Minimize construction-related noise;** and **NV-3: Establish Quiet Zones**.		
Effect 3.12-2: Impacts to Historical Resources Listed Under the CRHP. The Project would cause a substantial adverse change in the significance of a historical resource listed on the CRHP.	Adverse Effect / Significant	**CUL-3: Off-Site Replacement of Citrus Trees Removed from California/I-Grove.** SANBAG shall coordinate with the City of Redlands, including the Citrus Preservation Commission, to provide for the planting of citrus trees at properties within the Redlands Historical Preserve of Citrus to compensate for the trees removed from the California/I-10 Grove in association with the Preferred Project Alternative. The number of citrus trees planted will be equal to the number of trees removed from the California/I-10 Grove. The types of trees to be planted will be determined through consultation between SANBAG and the City of Redlands, including the Citrus Preservation Commission.	No Adverse Effect	Less than Significant
Effect 3.12-3: Adverse Effects to Archaeological Resources. The Project could cause a substantial adverse change in the	Adverse / Significant	**CUL-4: Construction Monitoring.** Full-time monitoring for archaeological deposits will be conducted in the Project APE in the vicinity of the Redlands Chinatown site (and a 50-foot buffer on each side of the site boundary) during ground disturbing construction activities.	No Adverse Effect	Less than Significant

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
significance of an archaeological resource.		Monitoring will be conducted in accordance with a Construction Monitoring and Discovery Plan to be prepared for the project. Monitoring will occur under the supervision of an archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards. *Unanticipated Discoveries*. In the event an unanticipated discovery of archaeological resources occurs during construction, the following measures will be implemented immediately following the discovery: • All construction within a 50-foot radius of the resource will be halted until a qualified archaeologist can evaluate the resource. • FTA and SHPO will be notified in the event of an unanticipated discovery. • If the discovery is determined to be significant or potentially significant by the qualified archaeologist, the adverse effects under Section 106 to portions of archeological resources determined to be eligible for the NRHP would be resolved in consultation with SHPO through the following tasks: - Discussion with project engineers to determine if impacts can be avoided/minimized, including consideration of preservation in place - Recovery and analysis of archaeological material and associated data - Preparation of a data recovery report or other reports		

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Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		- Recovered archaeological material shall be provided to an accredited archaeological repository. Archaeological monitor qualification requirements, detailed approaches to archaeological monitoring of various project elements, and the procedures to follow in the event that unanticipated archaeological resources or human remains are discovered will be defined in the Construction Monitoring and Discovery Plan. *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**.**		

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
Effect 3.12-4: Adverse Effects to Buried Human Remains. Ground-disturbing activities associated with the Project could inadvertently disinter and/or destroy buried human skeletal remains.	Adverse / Significant	**CUL-4: Construction Monitoring**	No Adverse Effect	Less than Significant
Parklands, Community Services, and Other Public Facilities				
Effect 3.13-1: Physical Impacts or Alterations to Government Facilities. Implementation of the Project could result in adverse physical impacts or alterations to parklands and government facilities.	Adverse / Significant	**PCS-1: Coordinate Trail Planning with Local Jurisdictions.** SANBAG will implement the following activities to minimize Project-related conflicts with proposed trails: • Santa Ana River Trail - SANBAG shall coordinate final design and construction of Bridge 3.4 with the San Bernardino County Parks and Recreation Department to integrate the trail as contemplated in the SANBAG's Non-Motorized Transportation Plan (2011) (NMTP), so as to maintain it's planned future continuity along the Santa Ana River. If the trail is constructed and operational in advance of the bridge structure, SANBAG will maintain trail access during the course of construction, to the extent feasible. In instances, where trail closures are required the construction contractor will be required to minimize the duration of the closure and support the County with any noticing, outreach, or implementation of temporary detours.	No Adverse Effect	Less than Significant

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Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
		• Orange Blossom Trail - SANBAG shall update the NMTP (2011) as part of it's next cycle update, to include the realignment of the trail segment of the Orange Blossom Trail that is currently shown as being located within the railroad right-of-way, so as to not conflict with the proposed project. SANBAG will coordinate with the City of Redlands and the County Flood Control District to determine available rights-of-way for the placement of the trail and, if necessary, realign the trail to take advantage of connections via existing roadway and other public right-of-ways. **TR-1: Prepare a Traffic Management Plan** **TR-3: Approval from CPUC for Grade Crossings and Safety Measures** **TR-4: Recommended Pre-Signals for Queuing** **VQA-3: Tree Replacement** **VQA-4: Sound Barrier Screening and Surface Treatments** **NV-2: Prepare a Community Notification Plan for Project Construction** **NV-3: Establish Quiet Zones** **NV-4: Construct Sound Barriers** **NV-5: Wayside Rail Lubrication** **NV-6: Use Ballast Mats, Resiliently Supported Ties, or Measures of Comparable Effectiveness on Portions of the Rail near Sensitive Receivers**		

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
Effect 3.13-2: Impact to Service Ratios, Response Times, or Other Performance Objectives. Implementation of the Project could result in potential adverse effects to service ratios and response times for local agencies.	Adverse / Significant	**TR-1: Prepare a Traffic Management Plan**	No Adverse Effect	Less than Significant
Economic and Fiscal Impacts				
Effect 3.14-1: Employment, Income, and Tax Revenues. The Project could result in changes to the Planning Area's employment, income, and tax revenues.	Beneficial / N/A	No mitigation is proposed.	Beneficial	N/A
Safety and Security				
Effect 3.15-1: Increased Pedestrian and/or Bicycle Safety Risks. The Project would result in the potential for increased pedestrian and/or bicycle safety risks.	Adverse / Significant	**SS-1: Develop Safety and Security Management Plan.** Prior to construction, SANBAG shall coordinate and consult with local safety and crime prevention authorities to develop a Safety and Security Management Plan (SSMP) for the track alignment, bridges, parking facilities, and station areas. If a non-FRA compliant DMU vehicle type is selected for the Project, the SSMP shall include a plan element that includes appropriate levels of safety as may be necessary to facilitate a shared-use operation. **TR-1: Prepare a Traffic Management Plan** **TR-3: Approval from CPUC for Grade Crossings and Safety Measures**	No Adverse Effect	Less than Significant

Table ES-2. Summary of Preferred Alternative Effects and Proposed Mitigation Measures

Potential Environmental Impacts	Effect/Significance Determination Prior to Mitigation NEPA/CEQA	Proposed Mitigation Measures	NEPA Effect After Mitigation	CEQA Impact Level After Mitigation
Effect 3.15-2: Substantial Adverse Safety Conditions Related to Accidents. Implementation of the Project could result in a potential for adverse safety conditions, including station accidents, boarding and disembarking accidents, right-of-way accidents, collisions, fires, and major structural failures.	Adverse / Significant	**SS-1: Develop Safety and Security Management Plan** **TR-1: Prepare a Traffic Management Plan** **TR-3: Approval from CPUC for Grade Crossings and Safety Measures** **GEO-1: Prepare Final Geotechnical Report for the Project and Implement Recommended Measures.**	No Adverse Effect	Less than Significant
Effect 3.15-3: Potential for Adverse Security Conditions. Implementation of the Project could result in the potential for adverse security conditions, including incidents, offenses, and crimes.	Adverse / Significant	**SS-1: Develop Safety and Security Management Plan** **SS-2: Fencing.** SANBAG's contractor shall erect temporary fencing and visual screening for staging areas and provide security personnel during construction to minimize trespassing and vandalism throughout the duration of construction.	No Adverse Effect	Less than Significant