RIVERSIDE COUNTY TRANSPORTATION COMMISSION

Riverside-Downtown
STATION IMPROVEMENTS

Riverside-Downtown Station Improvements Project

Draft Environmental Impact Report

December 2021

RIVERSIDE COUNTY TRANSPORTATION COMMISSION

METROLINK

Prepared By:
Riverside County Transportation Commission
4080 Lemon Street, 3rd Floor
Riverside, CA 92501

RIVERSIDE COUNTY TRANSPORTATION COMMISSION

Riverside-Downtown
STATION IMPROVEMENTS

General Information about this Document

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RIVERSIDE COUNTY TRANSPORTATION COMMISSION

Riverside-Downtown
STATION IMPROVEMENTS

SCH No. 2021090008

RIVERSIDE DOWNTOWN STATION IMPROVEMENTS PROJECT

Located at 4066 Vine Street, Riverside, CA 92507
In the City of Riverside
and the County of Riverside

DRAFT ENVIRONMENTAL IMPACT REPORT

Pursuant to

California Environmental Quality Act, PRC 21000 *et seq.;* and the
State of California CEQA Guidelines, California Administrative Code, 15000 *et seq.*

by the

RIVERSIDE COUNTY TRANSPORTATION COMMISSION

December 1, 2021
Date of Approval

Anne Mayer
Executive Director
Riverside County Transportation Commission
California Environmental Quality Act Lead Agency

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

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Riverside, California 92502
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REVIEW PERIOD/SUBMITTING COMMENTS

A 60-day review period of the proposed Draft Environmental Impact Report (EIR) begins December 3, 2021, and ends February 3, 2022. Comments on the Draft EIR are due no later than February 3, 2022. Mailed comments must be postmarked before or on the last day of the review period. Any comments postmarked after the last day of the review period are still recorded, but not noted as received during the period of public circulation. Comments can be mailed or emailed to the following:

Mr. David Lewis
Capital Projects Manager
Riverside County Transportation Commission
4080 Lemon Street, 3rd Floor
Riverside, California, 92501
(951) 787-7141
StationProject@rctc.org or https://bit.ly/RDSComment

PUBLIC HEARING

RCTC will be conducting two public hearings in the following formats:

Public Hearing Virtual Option

Date: Wednesday, December 15, 2021
Time: 5:00 PM to 7:00 PM
Webinar Link: https://us06web.zoom.us/s/89067185996?pwd=TlVXRkhpMlZqejJ3U3EwUHdjSnhDZz09
Webinar ID: 890 6718 5996
Dial in by phone: (669) 900-6833
Dial in by phone (Spanish): (646) 749-3335; Access Code: 676-566-581

Public Hearing In-person Option

Date: Thursday, December 16, 2021
Time: 5:00 PM to 7:00 PM
Location: Cesar Chavez Community Center – 2060 University Avenue, Riverside CA 92507

The public hearing will provide participants with: (1) an overview of the proposed project; (2) a summary of the environmental analysis contained within the Draft EIR; (3) an opportunity to comment on the Draft EIR; and (4) a description of the environmental process and schedule. Staff will accept written comments and public testimony during the public hearing. Comments on the Draft EIR are encouraged during the public circulation period, December 3, 2021 through February 3, 2022. All comments will be included in the appropriate administrative record(s).

AVAILABILITY OF THE DRAFT EIR

Copies of the Draft EIR are available as follows:

- RCTC website: www.rctc.org/projects/riverside-dt-station-improvements/
- Hard copy at the RCTC Office located at 4080 Lemon Street, 3rd Floor, Riverside, CA 92501
- Hard copy at the City of Riverside – Third Floor/Planning at 3900 Main Street, Riverside, CA 92522
- Hard copy at the Cesar Chavez Community Center at 2060 University Avenue, Riverside CA 92507

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RIVERSIDE COUNTY TRANSPORTATION COMMISSION

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Executive Summary

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Prepared By:
Riverside County Transportation Commission
4080 Lemon Street, 3rd Floor,
Riverside, CA 92501

Executive Summary

ES 1.0 Introduction and Background

ES 1.1. Introduction

The Riverside County Transportation Commission (RCTC) and Metrolink in collaboration with the Federal Transit Administration (FTA) propose to improve the Riverside-Downtown Station at 4066 Vine Street in Riverside, California (the Project).

The Project is located in Downtown Riverside, east of the State Route (SR) 91 Freeway and a short distance from SR 60. Figure ES-1. Regional and Project Location Map, illustrates the regional and project location. Proposed improvements include the construction of an additional passenger loading platform and tracks to improve Metrolink service and the extension of the existing pedestrian bridge and additional elevator and stair access. The proposed track would connect to the existing station layover tracks on the east side. The proposed Project would also provide additional parking and improve traffic flow on the east side of the station. These improvements would improve Metrolink train connections and operations without affecting Burlington Northern Railroad and the Atchison, Topeka, and Santa Fe Railway (BNSF) service. The proposed Project would enhance train efficiency and operations to allow more reliable/on-time train service and provide equitable access to regional public transportation for the general public. Other benefits of the proposed Project would include the construction of pedestrian facilities (such as sidewalks), lighting and incorporation of aesthetic elements within the project site. It is anticipated that proposed improvements to the Riverside-Downtown Station would increase train ridership and reduce congestion on freeways and associated vehicle emissions.

The proposed Project is subject to state and federal environmental review requirements because it involves the use of federal funds administered by the FTA; therefore, two environmental documents have been prepared in compliance with the National Environmental Policy Act of 1969 (NEPA) and California Environmental Quality Act (CEQA). RCTC is the lead agency under CEQA, and FTA and RCTC are joint lead agencies under NEPA. The NEPA Environmental Assessment (EA) and CEQA Draft Environmental Impact Report (EIR) are two separate standalone documents and are concurrently being circulated for public review.

ES 1.2. Background

Metrolink has a total of seven commuter lines, and the Riverside-Downtown Station currently provides service to three of these commuter lines: the Riverside Line with connections to Pomona, City of Industry, and Los Angeles; the Inland Empire Orange County Line (IEOC) with service to Santa Ana, Irvine, and Oceanside; and the 91/Perris Valley Line (91/PV Line) that starts in Perris and stops in Riverside before heading to Fullerton and Los Angeles. The station is an origin and destination station for all 12 Riverside Line trains (i.e., four 91/PV Line trains and eight IEOC Line trains). Altogether, there are 12 Riverside Line weekday trains that travel between Riverside and Los Angeles Union Station (LAUS); 13 91/PV Line weekday trains that travel between Perris-South and LAUS; and 16 IEOC Line trains that travel between San Bernardino County and Orange County, for a total of 41 weekday Metrolink passenger trains. Two Amtrak trains currently service and operate through the Riverside-Downtown Station each day.

In addition to passenger train service, Riverside County has three rail mainlines owned by BNSF and Union Pacific Railroad (UPRR), both the BNSF and the UPRR operate freight trains through the Riverside-Downtown Station. On average, approximately 50 to 60 freight trains operate through the Riverside-Downtown Station each day, with this number raising or lowering depending on seasonal variations (RCTC, 2020).

Metrolink's Southern California Rail Expansion (SCORE) Program is a $10 billion initiative to upgrade the regional rail system to meet the current and future needs of the traveling public. The Project was funded from the State's Transit and Intercity Rail Capital Program in April 2018. The Project was also included in RCTC's *Short-Range Transit Plan FY 20/21–24/25* (RCTC, 2020) to increase regional rail service based on ridership trends, growth projects, and RCTC goals.

The Riverside-Downtown Metrolink Station is an integral transportation hub that connects the City of Riverside's Innovation District to the rest of Southern California and beyond. Aside from the LAUS, the Riverside-Downtown Station serves more routes than any station in the Metrolink network. In addition to connecting to business and technology centers across the region, Metrolink service also links the University of California, Riverside with other leading academic institutions such as the University of California, Irvine; University of California, Los Angeles; University of Southern California; California State Polytechnic University; Pomona; and California State University, Fullerton. Before the COVID-19 pandemic, the Riverside-Downtown station served over 1,000 morning boardings. Although ridership has not recovered from pre-pandemic levels, it is anticipated that ridership rebuilding would continue as COVID-19 restrictions ease. Looking forward into the future, this project supports Metrolink's SCORE program with increased frequency goals of having trains serve the station every 15 to 30 minutes throughout the day. With that higher level of service, ridership is expected to grow over the next 10 years. Metrolink anticipates regional mass transit demand to increase and require improvements at the station to address existing and future operational deficiencies and accommodate future projected train service through the construction of additional passenger tracks, platforms and parking.

The Riverside Transit Agency's (RTA) Mobility Hub is in early design phase and would be located across from the Riverside-Downtown Station. Enhancements of local transit service with the completion of RTA's Mobility Hub would result in frequent transit connections to every area of Riverside and provide a link to San Bernardino and Redlands. Because of the proximity of the Riverside-Downtown Station to the future Mobility Hub, all demographics within the service area would have access to equitable regional transportation.

Amtrak also serves the station with the Southwest Chief long distance train to Flagstaff, Albuquerque, Kansas City & Chicago and bus/train connections to the Central Valley, Sacramento, and San Francisco. Planning is also underway to provide multiple daily Amtrak trains from Riverside to the Coachella Valley with stops in Banning, Palm Springs, Indio and eventually Phoenix, Arizona. Other out-of-state service at the Riverside-Downtown Station include daily Megabus connection to Las Vegas.

Metrolink currently has one of the cleanest locomotive fleets in the nation and has committed to pursuing future zero emission options in its recent Climate Action Plan. RCTC shares Metrolink's vision in reducing emissions and sustainable practices in advance planning by working with the City of Riverside to create a plan for an integrated Transit Oriented Community around the station that combines the best of "Car Free," livable, equitable, and walkable residential and employment opportunities that are well connected to transit.

Figure ES-1. Regional and Project Location Map

ES 1.2.1. Future Passenger and Freight Rail

Future Passenger Rail

Based on the *Metrolink Strategic Business Plan* (2021), Metrolink's Service Strategic Actions for the 91/PV Line and IEOC lines would increase train service within the next 5- to 30-year horizon. By 2025, the number of Metrolink passenger trains traveling through the Riverside-Downtown Station would increase to 49 trains or by 69 percent, during the weekday in addition to Amtrak and freight. Successful delivery of capacity, operations and service investments at the station are a crucial element of the Metrolink 2021 Strategic Business Plan; investments would improve reliability and customer experience by doubling capacity (adding new platforms, tracks, and parking) for train service needs due to projected growth. By 2050 additional peak hour and off-peak services could increase to 82 trains or 183 percent for weekday along the 91/PV Line and IEOC Lines.

Future Freight Rail

Consistent with the goals in the 2018 California State Rail Plan, the Project would improve efficiency on the railroad mainlines. California businesses export roughly $162 billion worth of goods to more than 225 foreign countries annually (Caltrans, 2018). By 2040, the state's freight railroad loads will have increased by 38 percent, compared to 2013. Investments to address bottlenecks, improve operations, and increase capacity throughout the network will reduce congestion and delays. In turn, an improved freight rail network will help shift goods movement away from congested roadways, which have a limited ability to expand.

Riverside-Downtown Station Improvements Project Benefits:

- Opportunities and equitable access to public transportation for all users
- Convenient access and regional connectivity to train service within the Eastside Neighborhood and the City of Riverside
- Pedestrian friendly, ADA-compliant sidewalks and crosswalks adjacent to the station with enhanced lighting, trees, and landscape
- Enhanced train efficiency and operations to allow more reliable/on-time train service
- ADA access, additional parking, and drop off areas on the eastside of the station to accommodate and encourage future ridership
- Enhancements to increase ridership, reducing congestion on freeways and associated vehicle emissions

ES 2.0 Purpose and Need

ES 2.1. Project Purpose

The overall purpose of the Project is to expand capacity and improve operations and efficiency, connectivity, and the passenger experience at the Riverside-Downtown Station. The Project is intended to:

- Expand platform capacity to meet passenger train storage needs
- Allow for train meets off the BNSF mainline and minimize impacts to BNSF operations
- Improve train connectivity and passenger accessibility while minimizing impacts on improvement projects near the station that are already designed or in construction
- Facilitate more efficient passenger flow and reduce dwell times
- Enhance safety and access for station users
- Accommodate projected future demand

ES 2.2. Project Need

Beyond the infrastructure capacity need to address existing and future train congestion at the Riverside-Downtown Station, there is an operational deficiency due to the lack of a crossover at the station from west to east which limits train meet options. The proposed Project would address limitations by adding flexibility to operate service between Los Angeles and Perris-South by improving options for 91/PV Line train meets to meet nose to nose, nose to back, or back to back on one of the tracks, while allowing trains to pass through on the other track.

In addition, there is a lack of crossovers from the station to Perris-South which limits train meets and passing options for rail traffic. As such, trains coming from or going to Perris-South and Riverside-Downtown are not able to meet or pass each other. In addition, the San Jacinto Subdivision, extending from Control Point Highgrove to Perris-South, is currently a single track mainline that does not permit trains to meet or pass. This existing limitation in train infrastructure between Riverside-Downtown and Perris-South creates blockages on the BNSF mainline and results in train service and freight train delays. Additional platform tracks on the east side of the station, where trains can meet and hold off at the BNSF mainline, could alleviate congestion and ensure additional passenger service does not impede freight service.

Existing train infrastructure limitations due to lack of crossovers at the Riverside-Downtown Station and from the Riverside-Downtown Station to Perris-South would continue to worsen operational conditions in the next 5 years because Metrolink passenger train service at the Riverside-Downtown Station is anticipated to increase by 69 percent. In addition to the projected increase in freight train traffic, conditions at the station would deteriorate and could affect service times along the Metrolink network (Metrolink, 2021). Without the planned service capacity improvements, the Riverside-Downtown Station would not be able to manage the anticipated train meets, and blockages would continue to deteriorate along the BNSF mainline, causing longer delays and service disruptions. Operational improvements are needed to address these deficiencies.

ES 2.2.1. Access and Parking

The increase in Metrolink train service at the station and future regional growth forecasts are anticipated to increase the demand for on-site parking and easier access to the station. According to Metrolink's *Strategic Business Plan* (Metrolink, 2021), parking at the Riverside-Downtown Station is 93 percent utilized, and station access has been identified as a "high-priority" for improvements. Additional train service and future increase in passenger trips is expected to strain the existing on-site parking supply and impede access to and from the station.

ES 2.3. Alternatives Considered

To comply with CEQA, an EIR shall describe a range of reasonable alternatives to the project, or at the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives that are infeasible. Chapter 2 of the Draft EIR discusses the Build Alternative which was selected because it met the most performance criteria (including the capacity for growth) and would best meet the basic objectives of the Project. Chapter 5 of the Draft EIR includes a comparison of alternatives and provides an analysis of a range of reasonable alternatives that were considered for study in the Draft EIR

To comply with NEPA, the EA should discuss alternatives to the proposed action including the no build alternative and identify any other alternatives considered. The Build Alternative was selected because it met the most performance criteria (including the capacity for growth) and would best meet the purpose and need of the project. The Build Alternative and the No Build Alternative were analyzed in the EA and the Draft EIR. In addition, scoping comments received informed the identification and development of alternatives to the proposed Project. Based on these considerations, the following alternatives have been identified by RCTC and FTA for consideration in the EA and the Draft EIR.

ES 2.3.1. No Build Alternative

Under the No Build Alternative, implementation of improvements at the Riverside-Downtown Station would not be constructed and the current configuration of the Riverside-Downtown Station would remain the same. Although there would be no project-related impacts to environmental resources, the No Build Alternative would not meet the Project objectives or improve operations to accommodate the 91/PV Line or the IEOC Lines. Train capacity and storage would be limited to the existing platforms. The No Build Alternative does provide insight on future conditions with no improvements and serves as a baseline for comparison with the Build Alternative.

ES 2.3.2. Build Alternative

RCTC and Metrolink propose improvements to the following elements of the Riverside-Downtown Station: 1) Station Platform and Tracks; 2) Pedestrian Access; and 3) Parking, Circulation, and Streetscape. The proposed improvements include building an additional passenger loading platform and tracks to the east side of the existing station to improve Metrolink service and extend the existing pedestrian overpass to access the new proposed platform (Figure ES-2).

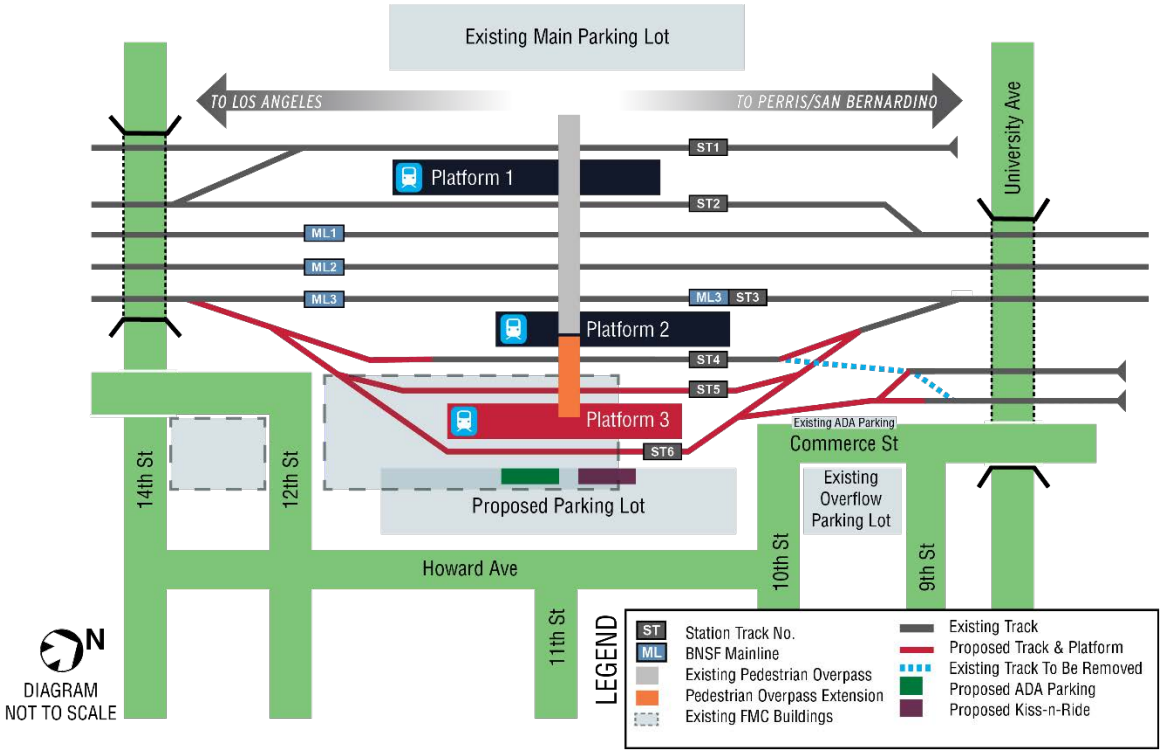

Figure ES-2. Build Alternative

The proposed track would also connect into the existing station layover tracks on the north end of the station and provide additional parking and improve traffic flow on the east side of the station. A summary of the proposed Build Alternative improvements is presented in Table ES-1. Summary of Proposed Build Alternative Improvements.

Table ES-1. Summary of Proposed Build Alternative Improvements

Element	Description
Station Platform and Track Improvements	• Add a new center platform (Platform 3) • Add new tracks (Station Tracks 5 and 6) • Modify the railroad signal system
Pedestrian Access Improvements	• Extend pedestrian overpass access to the new Platform 3 • Provide emergency egress at three locations
Parking, Circulation, and Streetscape Improvements	• Relocate ADA parking • Modify the bus drop-off area • Add sidewalks and trees • Add parking spaces
Utility Relocations	• Gas: SoCal Gas Company • Electric: City of Riverside • Water: City of Riverside • Fiber Optic: AT&T, Spectrum, Frontier and Sprint • Cable TV: CenturyLink • Storm Drain and Sewer: City of Riverside

ADA = Americans with Disabilities Act

ES 2.3.3. Design Options

As part of the Build Alternative, Design Option 1 proposes a longer extension of the pedestrian overpass access from the new proposed platform to the new surface parking lot and is intended to be incorporated with one of the parking design options. Design Options 1A, 1B, 2A, 2B, 3A, and 3B are associated with the new surface parking lot and an option to combine this new parking lot with the existing overflow parking lot on the east side of the station. The combined parking lot design option includes traffic circulation improvements along Howard Avenue, 9th Street, 10th Street, and Commerce Street. If RCTC decides to move forward with the Build Alternative and any one of the six proposed parking design options, Design Option 1 may or may not be selected to be incorporated as part of the selected Build Alternative.

Pedestrian Overpass Access Improvements

Access from the existing station area would be provided by the proposed extension of the pedestrian overpass (Figure ES-3. Build Alternative with Pedestrian Overpass Access Design Option 1). The Build Alternative with Pedestrian Overpass Access Design Option 1 includes a longer extension of the pedestrian overpass to Platform 3 and new surface parking lot (two spans, two towers/elevators).

The new pedestrian overpass elevator tower would be located 14 feet clear of both Track 5 and Track 6 on Platform 3. Emergency egress access would be provided by two 10-foot-wide, at-grade pedestrian crossings at the north and south end of Platform 3 to the proposed surface parking lot.

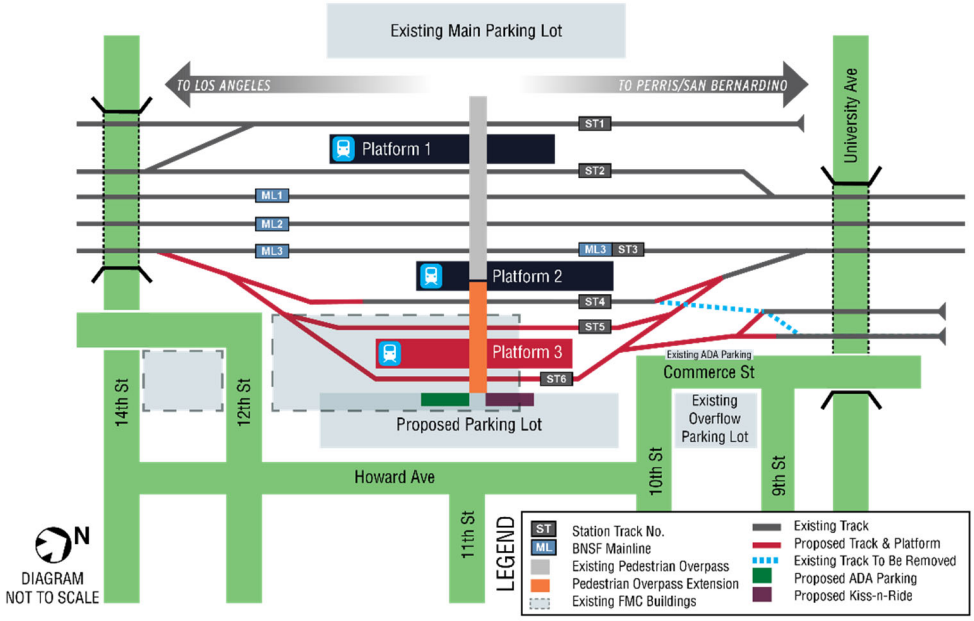

Figure ES-3. Build Alternative with Pedestrian Overpass Access Design Option 1

Parking, Circulation, and Streetscape Improvements

All parking design options would require the acquisition of parcels directly east of the station and demolition of existing structures and other ancillary structures to facilitate construction of the proposed Build Alternative improvements: A summary of proposed parking design options is presented in Table ES-2 and illustrated on Figure ES-4 through Figure ES-9 (see pages ES-30 through ES-35).

Table ES-2. Proposed Parking Design Options

Build + Design Option	Description
Parking, Circulation, and Streetscape Improvements	
Parking Design Option 1A	• New surface parking lot east of station. • Up to approximately 556 parking spaces[1] • *Impacts existing structures and other ancillary structures and residential parcels on the corner of 12th Street and Howard Avenue to facilitate construction of the proposed improvements.*
Parking Design Option 1B	• New surface parking lot east of station. • Up to approximately 500 parking spaces[1] • *Avoids relocation impacts to residential parcels on the corner of 12th Street and Howard Avenue.*
Parking Design Option 2A	• New surface parking lot east of station combined with existing overflow parking lot with the extension of Howard Avenue through to 9th Street. • Up to approximately 560 parking spaces[1] • *Impacts existing structures and other ancillary structures and residential parcels on the corner of 12th Street and Howard and requires acquisition of additional parcels directly east of the existing overflow parking lot.*

Build + Design Option	Description
Parking Design Option 2B	• New surface parking lot east of the station combined with existing overflow parking lot and the extension of Howard Avenue through to 9th Street. • Up to approximately 516 parking spaces[1] • *Avoids relocation impacts to residential parcels on the corner of 12th Street and Howard Avenue.*
Parking Design Option 3A	• New surface parking lot east of the station combined with existing overflow parking lot and the extension of Howard Avenue through to 9th Street. • Up to approximately 470 parking spaces[1] • *Avoids relocation impacts to additional parcels east of the existing overflow parking lot by routing Howard Avenue around the parcels.*
Parking Design Option 3B	• New surface parking lot east of the station combined with existing overflow parking lot and the extension of Howard Avenue through to 9th Street. • Up to approximately 414 parking spaces[1] • *Avoids relocation impacts to additional parcels east of the existing overflow parking lot and residential parcels on the corner of 12th Street and Howard Avenue.*

[1.] Indicates an approximate number of parking stalls. Number of parking stalls provided are the maximum estimate of parking stalls within the preliminary layout for each design option. These options illustrate the potential capacity of each parking lot design option for evaluation and comparison purposes in this EA and EIR. The number of stalls may change due to implementation of proposed avoidance, minimization, and mitigation measures for noise. In addition, the number of stalls may change during the final design phase due to design refinement to accommodate existing site hydrological conditions. These factors may reduce the approximate number of parking stalls under each estimate, but the potential reductions in the number of parking stalls are proportionate with the maximum parking stall estimate under each design option.

ES 2.3.4. Right of Way Requirements

Full acquisition of the existing Prism Aerospace building would be required to construct the Build Alternative. Depending on the design option selected, additional industrial and/or residential parcels would be required. Temporary construction easements (TCE) may be required to accommodate the construction of project features adjacent to the Project. Right of way (ROW) requirements identified in the EA and the Draft EIR are considered preliminary (approximately 15 percent complete) and are subject to refinement as additional information and design plans are further developed. ROW requirements to construct the proposed Project may result in a minor increase or decrease in response to comments or selection of a preferred alternative and/or during subsequent phases of project development or final design; however, the project footprint would remain the same.

ES 2.3.5. Construction Schedule

Project construction activities will occur for an estimated total of 24 months. It is anticipated that construction of the Build Alternative would begin in late 2023 and be completed by late 2025. Project construction would typically take place between the hours of 7:00 a.m. and 7:00 p.m. within the City of Riverside, in accordance with the City of Riverside Municipal Code § 7.35.0120(G). The proposed Project and selected parking design option would be constructed in phases to avoid impacts to commuter and freight train schedules during construction.

ES 2.3.6. Preliminary Cost Estimate

The Project is funded by Measure A proceeds, Southern California Optimized Rail Expansion Program, and an FTA grant. Preliminary cost estimates for the Build Alternative vary by design option from approximately $64.7 million to $80.4 million, as summarized in Table ES-3.

Table ES-3. Preliminary Cost Estimate

Project Cost	Design Option 1[a]	Build Alternative					
		+ Design Option 1A	+ Design Option 1B	+ Design Option 2A	+ Design Option 2B	+ Design Option 3A	+ Design Option 3B
Construction	$4,038,000	$20,449,000	$20,384,000	$20,839,000	$20,774,000	$20,678,000	$20,614,000
Environmental	--	$6,413,000	$6,404,000	$6,421,000	$6,412,000	$6,413,000	$6,404,000
ROW	--	$14,032,000	$11,853,000	$18,060,000	$15,881,000	$14,042,000	$11,863,000
Engineering	$485,000	$8,707,000	$8,706,000	$10,000,000	$9,446,000	$9,444,000	$9,443,000
Support Costs[b]	$485,000	$2,221,000	$2,213,000	$2,268,000	$2,260,000	$2,249,000	$2,241,000
Other Costs[c]	$1,073,000	$15,374,000	$15,125,000	$16,724,000	$16,307,000	$16,083,000	$15,835,000
Total	**$6,081,000**	**$67,196,000**	**$64,685,000**	**$74,312,000**	**$71,080,000**	**$68,909,000**	**$66,400,000**

[a.] RCTC may choose to incorporate Design Option 1 to any of the Design Options (1A through 3B). The cost of Design Option 1 would be added to the cost of the Build Alternative and parking lot design option selected.
[b.] Support costs include project management and construction management.
[c.] Other costs include contingency and inflation.
-- indicates not applicable

ES 2.4. Permits and Approvals

RCTC is seeking federal funding for the Riverside-Downtown Station Improvements Project and is required to comply with federal environmental regulations under NEPA (Code of Federal Regulations (CFR) Title 40, Parts 1500-1508) and its implementing regulations, in accordance with 23 CFR part 771. While FTA and RCTC are joint lead agencies for the proposed Project under NEPA, FTA manages and provides oversight for the development and approval of the NEPA environmental document. Approval of the EA from both agencies is required to proceed to the next phase. Under CEQA, certification of the Final EIR and approval of the Project by RCTC would be required prior to construction and implementation of the Project. The EIR, as defined by § 15161 of the State CEQA Guidelines, serves as an informational document for the general public and the proposed Project's decision-makers. RCTC, as CEQA lead agency, has the responsibility for preparing and circulating the Draft EIR for public review and certifying the Final EIR, pursuant to State CEQA Guidelines § 15089 and 15090, respectively. Implementation of the Project would require discretionary actions and permits from the agencies identified in Table ES-4.

Table ES-4. Anticipated Permits and Approvals

Agency	Action	Timing
CPUC	Approval for pedestrian bridge and at-grade crossings	Final Design Phase
City of Riverside	Approval of street improvements	Final Design Plans and Construction Phase
City of Riverside	Obtain encroachment permit	Final Design Phase
Federal Transit Administration	Approval of NEPA Environmental Document	End of Environmental Phase
Regional Water Quality Control Board	SWPPP and NPDES General Permit	Pre-construction and Construction Phases

Agency	Action	Timing
Riverside County Transportation Commission	Certification of the EIR, adoption of Findings and Statement of Overriding Considerations, adoption of the Mitigation Monitoring and Reporting Program	End of Environmental Phase
SHPO	Concurrence with the HRR historic property eligibility determination, FOE, Section 4(f) Individual Evaluation and MOA	Environmental Phase
SHPO/U.S. Department of Interior	Draft Individual Section 4(f) concurrence from the official with jurisdiction	Environmental Phase

Source: HNTB, 2020

CPUC = California Public Utilities Commission
FOE = Finding of Effect
HRR = Historic Resources Report
MOA = Memorandum of Agreement
NPDES = National Pollutant Discharge Elimination System
SHPO = State Historic Preservation Officer
SWPPP = Stormwater Pollution Prevention Plan

ES 2.5. Summary of Environmental Impacts

This environmental document addresses the potential environmental impacts of the proposed Project and was prepared based on public and agency input. In compliance with NEPA regulations and the State CEQA Guidelines, the EA and Draft EIR evaluated potential environmental consequences associated with construction and operation of the Build Alternative and design options. Various environmental topics were evaluated related to the proposed Project. As part of the scoping and environmental analyses completed for the Project, agriculture and forestry and mineral resources were considered, but no impacts were identified. Consequently, there is no further discussion of these environmental topics in this document. Due to the highly urbanized nature of the project study area, potential environmental impacts pertain primarily to the built environment. As summarized in Table ES-5, the Build Alternative would result in no impacts to public services, wildfire, or safety and security, and most of the evaluated environmental resources (aesthetics, air quality, biological resources, energy, geology and soils, greenhouse gas emissions, hydrology and water quality, population and housing, recreation, transportation, tribal cultural resources, land use planning, and environmental justice would result in less than significant or no adverse effects). Hazards and hazardous materials, utilities and service systems, noise, archaeological and tribal cultural resources would have potentially significant impacts or adverse effects, but could be mitigated to reduce the severity of the impact to less than significant impacts or to no adverse effect.

ES 2.6. Unavoidable Significant Impacts under CEQA and Adverse Effects under NEPA

The Build Alternative and all design options would result in unavoidable significant impacts under CEQA and adverse effects under NEPA after implementation of proposed avoidance, minimization, and mitigation measures for the following environmental resource topics:

- **Cultural/Section 4(f):** Former FMC Plant 1 building. The Build Alternative would require the demolition of the FMC Plant 1 building. Demolition of the historic structures would also cause indirect impacts to the former FMC Plant 2 building's integrity of setting and association.
- **Noise:** If the Build Alternative with Design Option 1B, 2B, or 3B is selected; there would be potentially significant noise impacts to two residences at 3021 12th Street during demolition of the former FMC Plant 1 building (Prism Aerospace building).

ES 2.7. Summary of Environmental Consequences and Mitigation Measures

Table ES-5 provides a summary of all potential environmental impacts of the Build Alternative and all design options. For further and more detailed information about each of the impacts as they pertain to the Build Alternative and all design options, the reader is referred to Chapter 4.0 of the EA and Chapter 3.0, 4.0, and 5.0 of the Draft EIR. Table ES-5 includes a list of proposed avoidance, minimization, and/or mitigation measures to be implemented to address potential project-related permanent and temporary impacts. RCTC and FTA are committed to satisfying all applicable federal, state, and local environmental regulations and applying reasonable and feasible mitigation measures to reduce adverse effects and potentially significant impacts. Should FTA and RCTC approve the Project, in accordance with NEPA regulations, the Environmental Commitments Record, which lists all the committed mitigation measures, would be adopted and included in the NEPA approval document. Similarly, should RCTC approve the Project, in accordance with CEQA regulations, it will also adopt the Mitigation Monitoring and Reporting Program upon approval of the proposed Project, these mitigation measures will become part of the Project, and will be considered binding under CEQA and NEPA.

Table ES-5. Summary of Environmental Impacts

CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
Aesthetics/Visual			
Aesthetics/Visual: ***Temporary Impacts (Construction)*** Temporary construction related impacts, are anticipated due to removal of trees and potential night time work requiring the use of lighting.	Construction-related impacts are similar under all design options.	AES-1: Landscape design will be in accordance with RCTC Station Design Criteria, following RCTC's general landscape requirements and in coordination with the City of Riverside to the greatest extent possible. The new parking lot(s) design will be compatible with landscaped parking lots within the project area with drought tolerant vegetation, trees, and lighting. AES-2: Nighttime construction activities near residential areas will be avoided to the extent feasible. If nighttime work is required, the construction contractor will install temporary lighting in a manner that directs light toward the construction area and will install temporary shields as necessary so that light does not spill over into residential areas. AES-3: During final design, all new or replacement lighting would be designed to be directed away from residential areas. To the greatest extent feasible, new light fixtures will include appropriate shields to direct light away from residential areas. AES-4**:** Noise barrier design will be consistent with RCTC and local jurisdiction standards and an aesthetic design treatment plan will be implemented to soften the noise barrier's structural intrusion, as well as maintain the community character and history. RCTC shall maintain the paint color and aesthetics over time. AES-5: Consultation regarding potential indirect adverse visual effects to historic properties will be conducted with consulting parties in accordance with Section 106 of the National Historic Preservation Act of 1966. BIO-2: See Biological Resources section below for further details on this measure.	**CEQA:** Less Than Significant Impact **NEPA:** No Adverse Effect
Aesthetics/Visual: ***Permanent Impacts (Operations)*** The Build Alternative would remove the Prism Aerospace Building (formerly the FMC) and residential houses (under Design Options 1A, 2A, and 3A), which is an existing obstruction to views of Mount Rubidoux looking west along 12th Street. Removal of this building and construction of the 12-foot noise barrier (located on the eastern edge of the Prism Aerospace building structure as depicted in Figure 4-20 of the EA) would enhance views from this vantage point and result in a beneficial impact. The Build Alternative and all design options would incorporate streetscape improvements such as providing uniform landscape elements along ADA-compliant sidewalks to buffer the station and local roadways. Landscape improvements would incorporate drought-tolerant planting, and to the greatest extent feasible, use recycled water to maintain landscape elements. In addition to landscape elements, street lighting would be incorporated along sidewalks to enhance safety and walkability to and from the station.	Changes to the surrounding existing visual environment include landscaping and lighting, construction of a 12-foot-high noise barrier and removal of the following structures by design option and construction of an 8-foot high wall along Howard Avenue for design options 2A or 2B: • Design Option 1A: FMC Complex and two 12th Street residences • Design Option 1B: FMC Complex • Design Option 2A: FMC Complex two 12th Street residences and two multifamily and one business on 9th Street and 10th Street • Design Option 2B: FMC Complex and two multifamily residences one business on 9th Street and 10th Street • Design Option 3A: FMC Complex and two 12th street residences • Design Option 3B: FMC Complex		

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CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
Air Quality			
Air Quality: ***Temporary Impacts (Construction)*** The Project would result in temporary impacts to air quality from dust and emissions. ***Permanent Impacts (Operations)*** Overall, the Build Alternative and all design options would result in a net decrease in emissions compared to No Build conditions due to the reduction in regional VMT. Moreover, the Build Alternative and all design options would not result in an increase in criteria pollutants in the South Coast Air Basin where it is designated as federal non-attainment for O_3 and $PM_{2.5}$. As such, operation of the Build Alternative would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment.	Temporary and permanent impacts are similar under the Build Alternative and all design options.	AQ-1: In accordance with SCAQMD Rule 403, fugitive dust emissions from the project site shall be controlled by regular watering or other dust preventive measures, as specified in SCAQMD Rule 403: • Minimize land disturbed by clearing, grading, and earth moving, or excavation operations to prevent excessive amounts of dust. • Provide an operational water truck on-site at all times; use watering trucks to minimize dust; watering should be sufficient to confine dust plumes to the project work areas; watering shall occur at least twice daily with complete coverage, preferably in the late morning and after work is done. • Suspend grading and earth moving when wind gusts exceed 25 miles per hour unless the soil is wet enough to prevent dust plumes. • Securely cover trucks when hauling materials on or off-site. • Stabilize the surface of dirt piles if not removed immediately. • Limit vehicular paths, limit speeds to 15 miles per hour on unpaved surfaces, and stabilize any temporary roads. • Minimize unnecessary vehicular and machinery activities. • Sweep paved streets at least once per day where there is evidence of dirt that has been carried on to the roadway. • Revegetate or stabilize disturbed land, including vehicular paths created during construction to avoid future off-road vehicular activities.	**CEQA:** Less Than Significant Impact **NEPA:** No Adverse Effect

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CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
Biological Resources			
Biological Resources: ***Temporary Impacts (Construction)*** There are limited biological resources within and near the Project as the majority of this area is covered with hardscape. Plant species within the biological study area typically consist of non-native and ornamental landscaping. There is a potential for nesting birds and roosting bats to occur on-site during construction.	Potential temporary impacts resulting from the construction of the Build Alternative and all design options are similar.	BIO-1: The following measures will be implemented by the Project to avoid and minimize impacts to special-status and nesting birds during construction. • Where feasible, the contractor will complete tree and shrub removals and structure demolition between September 1 and January 31, which is outside of the nesting season. • During nesting season (February 1 through August 31) pre-construction surveys for active nests (nests with eggs or juvenile birds that are dependent on parental care) will be conducted by a qualified biologist no more than 48 hours prior to starting construction activities. Surveys will cover any potential nesting sites within 500 feet of construction activity, including vegetation removal and structure demolition. • Surveys and avoidance measures for active nests will conform to current USFWS and CDFW protocol and recommendations. • If active nests are observed during pre-construction surveys or during construction, active nest sites will be designated as environmentally sensitive areas and identified with appropriate markers for the duration that eggs or juvenile birds are nest-dependent. • A qualified biologist will develop buffer recommendations for active nests that are site and species-specific, based on current USFWS and CDFW guidance, and at an appropriate distance that will protect normal bird behavior to prevent nesting failure or abandonment. Additional buffer distance will be implemented for raptors. Buffers will be in place for the duration eggs or juvenile birds are nest-dependent. • The qualified biologist will monitor the behavior of the birds (adults and young when present) at the nest site to ensure they are not disturbed by project construction. Nest monitoring will continue during nearby construction, until the biologist has confirmed the young have fully fledged (have completely left the nest site and are no longer dependent on the parents). • A qualified biologist will conduct WEAT for all on-site workers regarding environmental protection measures on the Project, including tree protection measures, stormwater and water quality protection measures, invasive species, and potential special-status species that could occur in or near the Project, including roosting bats, peregrine falcon, and nesting birds. BIO-2: The final design of the Project will avoid or minimize tree removals to the extent feasible. The following measures will be implemented to avoid and minimize tree removal and damage to trees during construction: • The size and species of trees that would require removal will be determined prior to construction. • Trees within the project footprint will be surveyed by a licensed arborist prior to removal and transplant.	**CEQA:** Less Than Significant Impact with Mitigation Incorporated **NEPA:** No Adverse Effect
Biological Resources: ***Permanent Impacts (Operations)*** The Project would require replacement of up to 51 trees within the project footprint.	The Build Alternative design options would require the removal of trees as follows: • Design Option 1/Design Option 1A: up to 36 • Design Option 1B: up to 32 • Design Option 2A: up to 51 • Design Option 2B: up to 47 • Design Option 3A: up to 47 • Design Option 3B: up to 43		

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CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
		• Trees that do not need to be removed will have protection measures implemented, where necessary, to prevent incidental damage during construction. Protection measures will be implemented as specified by the arborist. • Trees that need to be removed will be transplanted within the project footprint to the greatest extent feasible. • Trees within the City ROW that are removed and cannot be transplanted will be replaced as follows: Non-native trees will be replaced at a 1:1 ratio and native trees will be replaced at a 3:1 ratio (replaced:removed) within or near the Project to the greatest extent feasible. Tree replacement and planting will be coordinated through the City of Riverside in accordance with applicable landscaping plans and approved aesthetic concepts. BIO-3: Bats could roost in structures and vegetation within the project footprint. Preconstruction bat surveys will be conducted by a qualified biologist to determine if bats are present prior to removing trees or structures that potentially provide suitable habitat. If bats are discovered in or near active construction, a protective buffer zone will be established by the biologist.	
Cultural Resources			
Cultural Resources: *Historic Resources* *Permanent Impacts (Operations)* The Build Alternative will require removal of the FMC building Plant 1 and depending on design option selected, may require removal of the 12th Street and/or Ninth Street neighborhood residences. Demolition of historic structures may indirectly impact the Eastside Neighborhood's integrity of setting and association.	The Build Alternative design options will require the demolition or removal of the following structures: • Design Option 1A: FMC Complex and 12th Street residences • Design Option 1B: FMC Complex • Design Option 2A: FMC Complex, 12th Street and Ninth Street Neighborhood Conservation Area residences • Design Option 2B: FMC Complex and Ninth Street Neighborhood Conservation Area residences • Design Option 3A: FMC Complex and 12th Street residences • Design Option 3B: FMC Complex	***Historic Resources*** **CUL-1 Historical Resources and Build Alternative with Design Options 1A and 1B** ***Former FMC Plant 1 Building*** • Potential mitigation/minimization measures for the demolition of Plant 1 and associated impacts to Plant 2 would include HABS-like documentation/recordation of both buildings. Additionally, it would be appropriate to salvage building materials (e.g., station signage for the historic site) for reuse at the station and/or donate the materials to a local building salvage company. Additional measures may be identified during public involvement and ongoing consultation with interested parties and with the SHPO. ***12th Street Residences and Worker's Houses*** • To minimize impacts to residences from proposed design options, fences and/or vegetated screening could be placed between the houses on 12th Street, the proposed noise barrier, and the proposed passenger station and parking lot. For the four houses on Howard Avenue, vegetated screening could be placed between the parking lot and Howard Avenue. Streetscape enhancements (street trees and sidewalks) would lessen the overall change to the setting caused by the demolition of Plant 1.	**CEQA:** Potentially Significant Impact **NEPA:** Adverse Effects

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CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
Cultural Resources: Archaeological Resources ***Temporary Impacts (Construction)*** Although no impacts are anticipated, there is a potential for encountering undiscovered archaeological resources in a subsurface context during ground disturbing activities that would result in a less than significant impact to archaeological resources.	Potential temporary construction related impacts resulting from the construction and of the Build Alternative and all design options are similar.	**CUL-2 Historical Resources and Build Alternative with Design Options 2A and 2B** ***Former FMC Plant 1 Building*** • Potential mitigation/minimization measures for the demolition of Plant 1 and associated impacts to Plant 2 would include HABS-like documentation/recordation of both buildings. Additionally, it would be appropriate to salvage building materials (e.g., station signage for the historic site) for reuse at the station and/or donate the materials to a local building salvage company. Additional measures may result as part of the public involvement and ongoing consultation with interested parties and the SHPO. ***12th Street Residences and Ninth Street Neighborhood Conservation Area Residences*** • To minimize potential impacts to residences from proposed design options, fences and/or vegetated screening could be placed between the houses on 12th Street, the proposed noise barrier, the proposed passenger station and parking lot, and Howard Avenue. Impacts can be further minimized through streetscape enhancements (already proposed as part of the Project). • For the 9th Street residences that would be demolished as a result of Design Options 2A and 2B (3006 9th Street and 2994 9th Street), mitigation measures would include HABS-like documentation/recordation of both buildings. **CUL-3 Historical Resource and Build Alternative with Options 3A and 3B** ***Former FMC Plant 1 Building*** • Potential mitigation/minimization measures for the demolition of Plant 1 and associated impacts to Plant 2 would include HABS-like documentation/recordation of both buildings. Additionally, it would be appropriate to salvage building materials (e.g., station signage for the historic site) for reuse at the station and/or donate to a local building salvage company. Additional measures may result as part of the public involvement and ongoing consultation with interested parties and with the SHPO. ***12th Street Residences, Howard Avenue Worker's Houses*** • To minimize impacts to residences from proposed design options, fences and/or vegetated screening could be placed between the houses on 12th Street, the proposed noise barrier, and the proposed passenger station and parking lot. For the four houses on Howard Avenue, vegetated screening could be placed between the parking lot and Howard Avenue. Streetscape enhancements (street trees and sidewalks) will lessen the overall change to the setting caused by the demolition of Plant 1.	**CEQA:** Historic Resources: Potentially Significant Impact Archaeological Resources: Less than Significant with Mitigation Incorporated **NEPA:** Adverse Effects

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CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
		Ninth Street Neighborhood Conservation Area • The Howard Avenue extension will feature new lighting, and planting strips and street trees that would soften the edge between the historic residences in the Ninth Street Neighborhood Conservation Area (9th Street and Howard Avenue) and the new roadway, which would minimize changes to the setting of the residences adjacent to the new roadway. **CUL-4 Archaeological Resources** • All ground-disturbing activities including grading will be monitored by a qualified archaeologist and Native American monitor. If archaeological resources are encountered, the monitor would have the authority to temporarily halt or redirect grading and other ground disturbing activity in the immediate area of the find (50-foot radius). • In the course of monitoring, when ground-disturbing activities have reached a point that the monitors are reasonably certain that no additional cultural material would be encountered, monitoring could be halted after conferring with RCTC staff. **CUL-5 Human Remains** If human remains are discovered, the County Coroner will be contacted. If the remains are determined to be of Native American origin, the Most Likely Descendant, as identified by the NAHC, will be contacted to determine proper treatment and disposition of the remains. All requirements of Health and Safety Code §7050.5 and PRC §5097.98 will be followed. AES-4 and AES-5: See Aesthetics/Visual section above for further details on this measure.	
Cumulative			
Cumulative: ***Temporary Impacts (Construction)*** **Construction-related activities that overlap with adjacent projects may result in temporary cumulative impacts due to noise, dust, and traffic congestion. Construction of the Project and other developments may temporarily reduce on-street parking during overlap periods. The impacts during construction are temporary and indirect.**	If construction activities overlap with adjacent projects, potential, temporary noise impacts resulting from the construction of the Build Alternative with Design Options 1B, 2B, and 3B (if selected) would result in a cumulatively considerable noise impact due to the proximity of construction activities relative to the residences immediately adjacent to the Prism Aerospace building at 3021 12th Street. Design Options 1A, 2A, and 3A would result in less significant or no adverse effects. Permanent impacts resulting from the operations of the Build Alternative and all design options are similar	CUM-1: Coordinate construction activities so construction activities do not overlap with other projects in close proximity as feasible.	**CEQA:** Potentially Significant **NEPA:** Adverse Effect
Cumulative: *Permanent Impacts (Operations)* Potential traffic-related impacts from other projects may cause cumulative impacts to circulation; however, with implementation of project features to improve traffic flow no substantial impacts are anticipated. The Build Alternative will require removal of the FMC Plant 1 building and result in a significant and adverse effect to historic resources. Removal of historic structures may indirectly impact the Eastside Neighborhood's integrity of setting and association.			

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CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
Energy			
Energy: ***Temporary Impacts (Construction)*** Increased energy consumption is anticipated during construction for the operation of construction equipment.	Potential temporary and permanent impacts resulting from the construction and operations of the Build Alternative and all design options are similar.	E-1: Energy efficient lighting, such as LED with a longer lifespan would be used at the station to reduce future maintenance needs.	**CEQA:** Less Than Significant Impact **NEPA:** No Impact
Energy: ***Permanent Impacts (Operations)*** Operation of the Project is expected to lower regional energy demands due to reduction in train idling and regional vehicle miles traveled.			
Geology and Soils			
Geology and Soils: ***Temporary Impacts (Construction)/*** ***Permanent Impacts (Operations)*** The Project is within a region susceptible to earthquakes but is not within an earthquake fault zone. A low to moderate liquefaction potential is present at the project site. Impacts to geology and soils are associated with potential ground shaking and minor on-site soils subsidence. The project site is not located on a geologic unit or soil that is unstable or within an area associated with landslides.	Potential temporary and permanent impacts resulting from the construction and operations of the Build Alternative and all design options are similar.	GEO-1: Prior to grading, the proposed structural improvement areas (i.e. all-structural fill areas, pavement, buildings, etc.) will be cleared of surface and subsurface pipelines and obstructions. Heavy vegetation, roots, and debris will be disposed of off-site. Any on-site wells or septic waste will be removed or abandoned in accordance with the Riverside Country Department of Environmental Health. Voids created by removal of buried/unsuitable materials will be backfilled with properly compacted soil in general accordance with the recommendations of the Geotechnical Exploration Report (HNTB, Inc., 2020). GEO-2: Import soils and/or borrow sites, if needed, will be evaluated prior to import. Import soils will be uncontaminated, granular in nature, free of organic material and have very low expansion potential and a low corrosion impact to the proposed improvements. GEO-3: To support the completion of final design plans, a site-specific investigation and subsurface data liquefaction screening and analysis will be performed to evaluate the potential stability and settlement characteristics for the proposed improvements. Information gathered from the subsurface data will allow structures to be designed to withstand a defined level of ground acceleration and fault offset, where applicable. GEO-4: In the event of unanticipated paleontological resource discoveries during project-related activities, work in the immediate vicinity of the discovery will be halted, until the unanticipated discovery can be evaluated by a qualified paleontologist.	**CEQA:** Less Than Significant Impact **NEPA:** No Adverse Effect

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CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
Climate Change and Greenhouse Gas Emissions			
Climate Change and Greenhouse Gas Emissions: Temporary Impacts (Construction) Temporary construction activities would result in a temporary increase in greenhouse gas emissions. ***Climate Change and Greenhouse Gas Emissions: Permanent Impacts (Operations)*** Permanent impacts associated with train operations and service improvements and potential traffic pattern alterations would not result in an increase in GHGs. It is anticipated that the Build Alternative would result in a net benefit by reducing regional VMT and associated GHG emissions.	Potential temporary and permanent impacts resulting from the construction and operations of the Build Alternative and all design options are similar.	No mitigation is required.	**CEQA:** Less Than Significant Impact **NEPA:** No Impact
Hazards and Hazardous Materials			
Hazards and Hazardous Materials: Temporary Impacts (Construction) Temporary impacts associated with the Project includes the use of construction equipment with the potential for release of construction oils, grease, paint chips, etc. on-site. Additionally, the Prism Aerospace property contains contaminated soils that are considered as hazardous materials. The transport, use, and disposal of on-site contaminated soils may potentially result in temporary exposure to workers and surrounding community. ***Hazards and Hazardous Materials: Permanent Impacts (Operations)*** Permanent Impacts associated with potential release of hazardous materials during operations will be the same as existing. However, the Build Alternative would effectively cover exposed contaminated soils to prevent off-site migration through the construction of a parking lot.	Potential temporary and permanent impacts resulting from the construction and operations of the Build Alternative and all design options are similar.	HAZ-1: Prior to subsurface disturbance activities, an SMP will be prepared to address the possibility of encountering localized areas containing contaminants of potential concern, including VOCs, petroleum hydrocarbons, SVOCs, and metals. The plan will be prepared by a qualified environmental consultant and will be implemented during soil disturbance activities under the oversight of an environmental professional. The plan will address monitoring excavated soil; community and worker health and safety; and soil handling, stockpiling, characterization, on-site reuse, export, and disposal protocols. HAZ-2: For areas with the potential for encountering soil contamination (e.g., near areas of known or suspected contamination), appropriate worker and community health and safety measures (e.g., dust control, air monitoring, and stockpile management) will be implemented by the contractor, under the oversight of a qualified environmental professional. HAZ-3: A hazardous waste management plan will be prepared before disturbing utilities (e.g., cementitious pipelines), electrical/lighting equipment, and hazardous building materials such as ACM, LBP, treated wood, and other materials falling under UWR requirements. The plan will address testing protocols, handling, and disposal requirements, and will be implemented by a California Department of Public Health Certified Lead Inspector/Assessor, California Division of Occupational Safety and Health Certified Asbestos Consultant, and/or professionals appropriately qualified in their field, in accordance with applicable local, state, and federal guidelines and regulations. HAZ-4: An ACM survey will be conducted in accordance with the local SCAQMD Rule 1403 requirements for all buildings planned for demolition. Handling and disposal of lead-containing surfaces that may be present in buildings will be conducted in accordance with 17 CCR and 8 CCR, Division of Occupational Safety and Health Lead in Construction Standard § 1532.1. Clean up handling, and/or disposal of other hazardous materials that may be	**CEQA:** Less Than Significant with Mitigation Incorporated **NEPA:** No Adverse Effects

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CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
		present within structures planned for removal will also be conducted in accordance with UWR, if planned for removal. HAZ-5: Consideration will be given to placement of a high-visibility geomembrane at the base of excavation in areas of impacted soil or soil vapor to advise excavators of potential underlying exposure to chemicals detected below the membrane. HAZ-6: Arsenic levels exceeding DTSC's Southern California Regional Background Arsenic Concentration of 12 mg/kg in soil samples collected in the upper 1 to 2 feet of soil along the former railroad tracks in Area C are considered as hazardous material. Soil within the width of the railroad tracks to a depth of 2 feet will be separately stockpiled for off-site disposal at a licensed facility that will accept soil with elevated arsenic levels. HAZ-7: Soil disturbance activities will not be allowed on the So. Cal Gas property (Area A and C) without approval of the SMP by the DTSC and prior notification. Any soil removal in the property will be managed in accordance with all applicable state and federal provisions. HAZ-8: Activities that may disturb, alter, damage, or destroy groundwater monitoring wells on the So. Cal Gas property (Area A and C) are prohibited unless given authorization by the DTSC and the RWQCB. The use of the property will preserve the integrity and physical accessibility of the groundwater monitoring wells. DTSC will be notified about any damage caused to the groundwater monitoring wells. HAZ-9: Dust control measures to minimize fugitive dust emissions during construction and demolition activities will be implemented. Dirt tracked onto paved roads from unpaved areas will be minimized. Trucks hauling excavated materials to the disposal site will be covered and haul routes to the disposal site will avoid the proposed Eastside Neighborhood school.	
Hydrology and Water Quality			
Hydrology and Water Quality: ***Temporary Impacts (Construction)*** Temporary construction activities, including the use of construction equipment, may result in the release of construction materials, oils, concrete, sediment runoff from exposed soils, and other pollutants into surface and ground water. On-site best management practices will be implemented to prevent potential release of contaminants into surface and ground water. On-site drainage patterns will be minimally impacted.	Potential temporary and permanent impacts resulting from the construction and operations of the Build Alternative and all design options are similar.	WQ-1: Proposed grades will remain similar to existing grades and maintain existing flow paths/patterns. WQ-2: The construction of the paved surface parking lot (under all design options) and implementation of non-infiltration BMPs will be implemented to avoid worsening the existing contamination within the project site. In addition, RCTC will implement the Final Soil Management Plan (as approved by DTSC) to ensure contaminated soils are handled appropriately and avoid potential impacts to groundwater. WQ-3: Design the on-site storm drain system to connect with the existing 42-inch storm drain system to minimize the amount of flow draining to the low point at Howard Ave/11th Street. WQ-4: To the greatest extent feasible, maintain existing grades at the project site to allow the floodplain to utilize its current storage area and avoid altering the footprint of the 100-year floodplain. Reduce barriers to flow in floodplain by demolishing Prism	**CEQA:** Less Than Significant Impact **NEPA:** No Adverse Effect
Hydrology and Water Quality: ***Permanent Impacts (Operations)*** The Build Alternative is expected to increase the volume of downstream flow due to the addition of impervious surface area; however, construction of the proposed parking lot will cap contaminated soils resulting in less contaminant seep into the underlying groundwater. The Build Alternative will be designed to follow the existing ground and drainage patterns.			

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CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
		Aerospace building and placing noise barrier in line with flow direction. Design of station improvements will follow RCTC design standard requirements within floodplains and coordinated with the City of Riverside and County of Riverside Flood Control. Certain items such as underground conduits and the elevator system should be designed to be sealed from infiltration of flood water during the final design phase. The inclusion of flood warning devices may also be required. The City of Riverside is the Flood Plain Coordinator for this site. Therefore, coordination with the City will be required during the final design phase of the project. During design, a hydraulic study showing the proposed improvements and the impacts to the overall BFE will be required. WQ-5: During construction of the station improvements, BMPs such as fiber rolls, inlet protection, etc., will be implemented to comply with CGP requirements. Other construction BMPs, as required by local and regulatory agencies, will be implemented by the construction contractor. As directed by RCTC and/or regulatory agencies, non-infiltration BMPs will be implemented to address additional runoff due to the creation of additional impervious surfaces.	
Land Use and Planning			
Land Use and Planning: ***Temporary Impacts (Construction)*** TCEs from adjacent industrial land uses may be required to construct the proposed Project. Preliminary design plans indicate that approximately 0.04 acre from the Solar Max property may be required to accommodate construction of station improvements under the Build Alternative and all design options. TCEs from nearby transportation land uses within the City of Riverside's ROW along Howard Avenue, Commerce Street, 12th Street, 10th Street, and 9th Street may be required to construct the Project. If TCEs are required, RCTC will request TCEs from the City of Riverside to construct within local roadways and may require intermittent lane closures; however, access to these local roadways, residences and businesses will be maintained throughout the duration of construction.	Potential temporary impacts resulting from the construction of the Build Alternative and all design options are similar.	No mitigation is required to address temporary and permanent impacts.	**CEQA:** Less Than Significant Impact **NEPA:** No Impact
Land Use and Planning: ***Permanent Impacts (Operation)*** The Build Alternative will require the conversion of existing industrial and may require residential land uses to transportation uses. The conversion to transportation uses is consistent with the permitted uses identified in the Riverside Marketplace Specific Plan. In addition to the conversion of industrial uses, existing residential properties would be converted to a public facility (parking lot); two existing residential properties at the intersection of Howard Avenue and 12th Street and two existing	Design Options would require conversion of existing land use to transportation use and incorporated into the Riverside-Downtown Station as follows: • Design Option 1A: – Single-family Residential: 0.37 acre – Industrial: 6.9 acres • Design Option 1B: – Single-family Residential: 0.05 acre – Industrial: 6.9 acres • Design Option 2A:		

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CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
multi-family units located along 9th Street are inconsistent with the City of Riverside's land use plan as these residential properties are located in an area designated for industrial uses. These existing homes were constructed prior to the adoption of the current City of Riverside General Plan and Marketplace Specific Plan and are currently considered as non-conforming land uses.	— Single-family Residential: 0.37 acre — Multi-family Residential: 0.37 acre — Industrial: 7.67 acres — Transportation: 0.77 acre • Design Option 2B: — Single-family Residential: 0.05 acre — Multi-family Residential: 0.37 acre — Industrial: 7.67 acres — Transportation: 0.77 acre • Design Option 3A: — Single-family Residential: 0.37 acre — Industrial: 6.9 acres — Transportation: 0.61 acre — Public Facilities: 0.65 acre • Design Option 3B: — Single-family Residential: 0.05 acre — Industrial: 6.9 acres — Transportation: 0.61 acre — Public Facilities: 0.65 acre		
Noise			
Noise: ***Temporary Impacts (Construction)*** Temporary construction vibration and noise impacts are anticipated due to the operation of on-site construction equipment. Construction noise near noise-sensitive land use, such as residences, would be 67.4 dBA L_{EQ} (8-hour) at 250 feet. Demolition activities within 10 feet of 12th Street residences are anticipated to result in temporary significant impacts. Noise generated by construction equipment is not anticipated to exceed 80 dBA L_{EQ} (8-hour) or 70 dBA L_{EQ} (8-hour) at night.	Design options 1B, 2B and 3B if selected, would result in significant vibration and noise impacts during construction. Mitigation measures are required to reduce vibration and noise impacts. If residents will not accept temporary accommodations (Measure N-4) during construction, vibration and noise impacts during construction and demolition activities would remain significant. Design Options 1A, 2A, 3A would result in less significant or no adverse effects to vibration and noise.	N-1: Under the Build Alternative and all design options, a barrier would be constructed along the eastern edge of the existing warehouse structure with a length of approximately 500 feet. The barrier height for this wall would be at least 12 feet high to reduce severe noise impacts to at least moderate levels. The noise barriers would be required to meet a minimum STC rating of 22 to 23 to adequately ensure noise reduction. It can be constructed of masonry, wood, plastic, fiberglass, plexiglass, steel, or a combination of those materials, if it meets the STC rating described above and there are no cracks or gaps through or below the wall. Any seams or cracks must be filled or caulked. N-2: Under the Build Alternative and for Design Options 2A and 2B only, a noise barrier would be constructed along the entirety of the existing western property wall of 2982 9th Street. The barrier would be at least 8 feet high to reduce severe noise impacts to at least moderate levels. The noise barriers would be required to meet a minimum STC rating of 22 to 23 to adequately ensure noise reduction. It can be constructed of masonry, wood, plastic, fiberglass, plexiglass, steel, or a combination of those materials, if it meets the STC rating described above and there are no cracks or gaps through or below the wall. Any seams or cracks must be filled or caulked. N-3: A construction Noise Management Plan will be prepared by the contractor who describes the measures to be included in the construction plans to ensure compliance with noise and vibration limits and submitted for approval by RCTC. The following measures will be included as feasible to reduce construction noise:	**CEQA:** Design Option: 1A, 2A, 3A Less Than Significant with Mitigation Incorporated Design Option: 1B, 2B, 3B Potentially Significant Impact **NEPA:** No Adverse Effects
Noise: ***Permanent Impacts (Operations)*** The Build Alternative would result in permanent impacts as noise level increases are anticipated at multiple receivers for each design option. Noise levels would increase primarily due to the removal of the existing Prism Aerospace building which provides noise attenuation for multiple residential receivers in the area.	Noise impacts associated with each Design Option include: • Design Option 1A: 15 residential receivers with a moderate impact and 9 residential receivers with a severe impact. • Design Option 1B: 15 residential receivers with a moderate impact and 9 residential receivers with a severe impact. • Design Option 2A: 19 residential receivers with a moderate impact and 11 residential receivers with a severe impact. • Design Option 2B: 19 residential receivers with a moderate impact and 11 residential receivers with a severe impact. • Design Option 3A: 15 residential receivers with a moderate impact and 9 residential receivers with a severe impact. • Design Option 3B: 15 residential receivers with a moderate impact and 9 residential receivers with a severe impact.		

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CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	Design Option		
		• Construction equipment to be properly outfitted and maintained with manufacturer-recommended noise-reduction devices. • Diesel equipment to be operated with closed engine doors and equipped with factory-recommended mufflers. • Mobile or fixed “package” equipment (e.g., arc welders and air compressors) equipped with shrouds and noise control features readily available and specific to the type of equipment being used. • Electrically powered equipment to be used instead of pneumatic or internal-combustion powered equipment, where feasible. • Unnecessary idling of internal combustion engines (e.g., in excess of 5 minutes) to be prohibited. • Material stockpiles and mobile equipment staging, parking, and maintenance areas to be located as far as practicable from noise sensitive receptors. • The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only. • No project-related public address or music system(s) shall be audible at any adjacent sensitive receptor. • Temporary sound barriers or sound blankets shall be installed between construction operations and adjacent noise-sensitive receptors. Due to equipment exhaust pipes being approximately 7 to 8 feet above ground, temporary sound barriers at least 10 feet high above grade may be utilized. To effectively reduce noise levels, the temporary sound barrier shall be constructed of a material with a minimum weight of 2 pounds per square foot with no gaps or perforations and shall remain in place until the conclusion of demolition, grading, and construction activities. • The on-site construction supervisor shall have the responsibility and authority to receive and resolve noise complaints. A clear appeal process for the affected resident shall be established prior to construction commencement to allow for resolution of noise problems that cannot be immediately solved by the site supervisor. • RCTC shall notify residences within 100 feet of the project’s property line in writing within two weeks of any construction activity, such as demolition, asphalt removal, and/or heavy grading operations. The notification to residences shall describe the activities anticipated, provide dates and hours, and provide contact information with a description of a complaint and response procedure. N-4: If Design Option 1B, 2B, or 3B is selected for construction, RCTC will provide temporary but similar housing accommodations within the city of Riverside to the residents of 3021 12th Street during periods of construction where significant noise is generated such as during the demolition work to remove the existing Prism Aerospace building walls or if construction	

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CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
		work exceeds the following thresholds: daytime construction work exceeds 80 dBA L_{EQ} (8-hour) or if nighttime project construction work exceeds 70 dBA L_{EQ} (8-hour) at nearby residences. AES-4: See Aesthetics/Visual section above for further details on this measure.	
Population and Housing			
Population and Housing: ***Temporary Impacts (Construction)*** The Build Alternative would not displace a substantial number of people or existing housing during construction.	***Temporary Impacts:*** Temporary and permanent impacts resulting from the construction and operations of the Build Alternative and all design options are similar.	No mitigation is required to address temporary and permanent impacts.	**CEQA:** Less Than Significant Impact **NEPA:** No Adverse Effects
Population and Housing: ***Permanent Impacts (Operations)*** The Build Alternative will require up to 10 residential unit (single family and multifamily combined) displacements and up to 2 non-residential displacements. Suitable and comparable replacement properties for housing and business relocations are available within a 10-mile radius of the project study area.	The following number of displacements would occur under each design option: • Design Option 1/Design Option 1A: – Residential Unit Displacements: 2 – Non-Residential Displacements: 1 • Design Option 1B: – Residential Unit Displacements: 0 – Non-Residential Displacements: 1 • Design Option 2A: – Residential Unit Displacements: 10 – Non-Residential Displacements: 2 • Design Option 2B: – Residential Unit Displacements: 8 – Non-Residential Displacements: 2 • Design Option 3A: – Residential Unit Displacements: 2 – Non-Residential Displacements: 1 • Design Option 3B: – Residential Unit Displacements: 0 – Non-Residential Displacements: 1		

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CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
Public Services			
Public Services: ***Temporary Impacts (Construction)/Permanent Impacts (Operations)*** The Build Alternative will not result in the acquisition or displacement of any police, fire stations, schools, parks, or other public facilities.	Potential temporary and permanent impacts resulting from the construction and operations of the Build Alternative and all design options are similar.	No mitigation is required to address temporary and permanent impacts.	**CEQA:** No Impact **NEPA:** No Impact
Recreation			
Recreation: ***Temporary Impacts (Construction)*** Construction would result in short-term, temporary impacts to Lincoln Park including increases in noise, dust, visual effects, and traffic. Construction would not result in the loss of access to or use of adjacent parks or recreational resources. ***Recreation:*** ***Permanent Impacts (Operations)*** Permanent impacts are not anticipated; however, noise levels may increase due to the removal of the FMC Complex Plant 1. A 12-foot noise barrier is proposed to reduce noise levels due to the removal of the FMC Complex Plant 1.	Potential temporary and permanent impacts resulting from the construction and operations of the Build Alternative and all design options are similar.	REC-1: Implementation of construction BMPs to minimize dust, odors, and noise would ensure that park activities and amenities would not be substantially affected. In addition, temporary, localized, site-specific disruptions to the local roadways serving Lincoln Park in the project study area may occur during various stages of construction. To avoid access related impacts to Lincoln Park during construction, RCTC must coordinate with the construction contractor and the City of Riverside to maintain access to Lincoln Park.	**CEQA:** Less than Significant Impact **NEPA:** No Impact
Transportation			
Transportation: ***Temporary Impacts (Construction)*** The Build Alternative may temporarily affect local circulation and access due to short-term street or lane closures.	Potential temporary impacts resulting from the construction of the Build Alternative and all design options are similar.	T-1: A TMP would be developed in coordination with the City of Riverside and emergency responders during the final design phase and would be implemented prior to and during construction to ensure traffic safety, minimize construction-related traffic congestion, detour routes, and minimize inconveniences to commuters, local residences, and businesses. At a minimum, the TMP would include appropriate signage, identification of alternate/detour routes, incident management, construction strategies, on- and off-site street circulation, and anticipated temporary traffic lane closures.	**CEQA:** Less Than Significant Impact **NEPA:** No Adverse Effect
Transportation: ***Permanent Impacts (Operations)*** The Project would improve train service and operational efficiencies which would have an overall beneficial impact of reducing freeway congestion and VMT in the region.	Under Design Options 1A and 2A study area intersections would operate at acceptable LOS and maintain the same roadway configuration. Design Options 2A, 2B, 3A, or 3B would vacate Commerce Street and provide a new north-south connection via the proposed Howard Avenue extension. All study area intersections for Opening Year (2025) and Build-out (2045), the LOS for the traffic study area intersections would either remain the same or stay at above acceptable LOS D threshold, as established by the City of Riverside. The Build Alternative and all design options would not increase regional VMT.		

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CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
Tribal and Cultural Resources			
Tribal and Cultural Resources: ***Temporary Impacts (Construction)/Permanent Impacts (Operations)*** Although no impacts are anticipated, there is a potential for encountering undiscovered tribal cultural resources in a subsurface context during development of the Build Alternative.	Potential temporary and permanent impacts resulting from the construction and operations of the Build Alternative and all design options are similar.	TCR-1 Pre-construction Activities: Prior to construction, RCTC will establish the notification protocol with Tribes that have requested consultation as part of the Assembly Bill 52 process. This consultation will address the evaluation of the newly discovered resources and avoidance and/or mitigation measures, as appropriate, and a pre-construction meeting will be held with the construction contractor (for ground-disturbing activities) and include the qualified Native American tribal cultural monitor. TCR-2 Construction Monitoring: Construction related ground-disturbing activities such as grading, and other activity will be monitored during construction by a qualified Native American tribal cultural monitor. TCR-3 Inadvertent Discovery of Tribal Cultural Resources during Construction: In the event that tribal cultural resources are encountered, the Native American tribal cultural monitor would have the authority to temporarily halt or redirect grading and other ground-disturbing activity within a 50-foot radius of the find, and these materials and their context will be avoided, until the archaeological principal investigator and RCTC have been notified and notice has been given to the consulting Tribes. Project personnel will not collect or retain cultural resources. Prehistoric resources include, but are not limited to, flaked stone tools and debitage; projectile points; mortars and pestles; dark, friable soil containing shell and bone; dietary debris; heat-affected rock; or human burials. Pursuant to California PRC § 21083.2(b), avoidance is the preferred method of preservation for archaeological resources. TCR-4 Tribal Cultural Resources that may be Eligible for NRHP or CRHR: If cultural material is encountered that appears to be eligible for CRHR, the monitors will coordinate with RCTC staff to develop and implement appropriate mitigation measures. Anticipated mitigation measures include documentation and collection of cultural material, as well as controlled excavation, if necessary. Cataloging and analysis methods will be agreed upon among the parties but will not delay project construction.	**CEQA:** Less Than Significant Impact with Mitigation Incorporated **NEPA:** No Adverse Effects
Utilities and Service Systems			
Utilities and Service Systems: ***Temporary Impacts (Construction)*** The Build Alternative will require the temporary relocation of gas, water, electric, storm drain, sewer, fiber optic, or cable TV utilities.	***Temporary/Permanent Impacts:*** Potential temporary and permanent impacts resulting from the construction and operations of the Build Alternative and all design options are similar.	UTIL-1: RCTC will protect in place or relocate affected utilities with minimal disruption to services and provide advanced notification. RCTC would develop a plan for public outreach to inform customers of construction schedules and potential short-term disruptions to service systems, as needed. UTIL-2: RCTC would continue coordination with Riverside Public Utilities to provide compensation to rehabilitate an existing well located offsite.	**CEQA:** Less Than Significant with Mitigation Incorporated. **NEPA:** No Adverse Effects
Utilities and Service Systems: ***Permanent Impacts (Operations)*** The Build Alternative will require the permanent relocation of gas, water, electric, storm drain, sewer, fiber optic, or cable TV utilities. A municipal well will be permanently removed from the project site.			

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CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
Wildfire			
Wildfire: ***Temporary Impacts (Construction)/Permanent Impacts (Operations)*** The Build Alternative is not located in a high fire hazard zone and would not exacerbate or increase wildfire risk.	***Temporary/Permanent Impacts:*** N/A.	N/A	**CEQA:** No Impact **NEPA:** N/A
NEPA Only Environmental Topics			
Environmental Justice			
Access and Circulation: ***Temporary Impacts (Construction)*** Existing roadways and intersections may be subject to temporary detours and lane blockages adjacent to the Riverside-Downtown Station at multiple locations throughout the traffic study area. Local roadways may be subject to temporary lane and/or street closures that could be intermittently occupied by construction equipment. ***Access and Circulation:*** ***Permanent Impacts (Operations)*** EJ populations would not experience permanent disproportionately high and adverse effects on access and circulation.	See the CEQA Transportation section of this table for impacts to access and circulation by design option.	Refer to Transportation Measure: T-1	
Noise: ***Temporary Impacts (Construction)*** The use of on-site construction equipment will result in temporarily increased noise levels. ***Noise:*** ***Permanent Impacts (Operations)*** The Build Alternative would remove an existing building that is effectively abating existing noise from the surrounding area. Noise impacts are anticipated at existing residences and at a park. It is anticipated that first row homes near the station would experience severe noise impacts under FTA guidelines.	See the CEQA Noise section of this table for noise impacts by design option.	Refer to Noise Measures N-1 to N-4	**NEPA:** No Adverse Effect
Community Character and Cohesion: ***Temporary/Permanent Impacts*** EJ populations would not experience permanent or temporary disproportionately high and adverse effects on community character and cohesion.	See the CEQA Land Use Planning, CEQA Population, and CEQA Public Services sections of this table for community character and cohesion impacts by design option.	N/A	
Relocations: ***Temporary Impacts (Construction)*** No property in addition to what would be acquired for permanent use may be required for TCEs. ***Relocations:*** ***Permanent Impacts (Operations)*** The Build Alternative and all Design Options would require the displacement and relocation of adjacent properties.	See the CEQA Recreation section of this table for parks and recreation impacts by design option.	N/A	

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CEQA/NEPA Potential Environmental Impacts		Proposed Avoidance, Minimization, Mitigation Measures[1]	CEQA/NEPA Level of Impact
Build Alternative	**Design Option**		
Parks and Recreation: ***Temporary/Permanent Impacts*** EJ populations would not experience permanent or temporary disproportionately high and adverse effects on parks and recreation.	See the CEQA Population and Housing section of this table for relocation impacts by design option.	Refer to Recreation Measure: REC-1	**NEPA:** No Adverse Effect
Utilities and Service Systems: ***Temporary/Permanent Impacts*** EJ populations would not experience permanent or temporary disproportionately high and adverse effects on utilities and public services.	Potential temporary and permanent impacts resulting from the construction and operations of the Build Alternative and all design options are similar.	Refer to Utilities and Service System Measures UTIL-1 and UTIL-2	
Safety and Security	No Impact	No Impact	**NEPA:** No Impact
Section 4f			
Section 4(f): Historic Sites ***Temporary/Permanent Impacts*** The FMC Plant 1 and 2 and Worker's Houses on Howard Avenue are considered historic sites of national, state, or local significance because they are eligible for listing in the National Registry. The Worker's House are a multi-component resource located on a single parcel (4110 through 4140 Howard Avenue) (4). The historic resource comprises four dwellings located on one parcel. Collectively, they represent early iterations of Worker's Houses, two of which take on the form of a Shotgun House.	Potential permanent impacts resulting from the operations of the Build Alternative and all design options are similar. The Project Design Options will require the demolition or removal of the following structures: • Design Option 1A: FMC Complex and 12th Street residences • Design Option 1B: FMC Complex • Design Option 2A: FMC Complex, 12th Street residences, and Ninth Street Neighborhood Conservation Area residences • Design Option 2B: FMC Complex and Ninth Street Neighborhood Conservation Area residences • Design Option 3A: FMC Complex and 12th Street residences • Design Option 3B: FMC Complex	Refer to Cultural Resources CUL-1 to CUL-3	**NEPA**: Use/Adverse Effect
Section 4(f): Public Parks, Recreation Areas, Waterfowl and Wildlife Refuges. Lincoln Park – No Use	Lincoln Park - No Use	Refer to Recreation Measure: REC-1	**NEPA:** No Use

ACM = asbestos containing material
BMP = best management practice
CDFW = California Department of Fish and Wildlife
CRHR = California Register of Historical Resources
dBA = A-weighted decibels
DTSC = Department of Toxic Substances Control
EJ = environmental justice
FMC = Food Machinery Corporation
GHG = greenhouse gas
HABS = Historic American Buildings Survey
LBP = lead-based paint
LEQ = peak hour noise equivalent level
LOS = level of service
NAHC = Native American Heritage Commission
NRHP = National Register of Historic Places
O_3 = ozone
$PM_{2.5}$ = fine particles of 2.5 micrometers or smaller
RWQCB = Regional Water Quality Control Boards
SCAQMD = South Coast Air Quality Management District
STC = Sound Transmission Class
SMP = Site Management Plan
TCE = temporary construction easements
TMP = Traffic Management Plan
URA = Uniform Relocation Assistance and Real Property Acquisition Act
USFWS = United States Fish and Wildlife Service
UWR = Universal Waste Rules
VMT = vehicle miles traveled
WEAT = worker environmental awareness training

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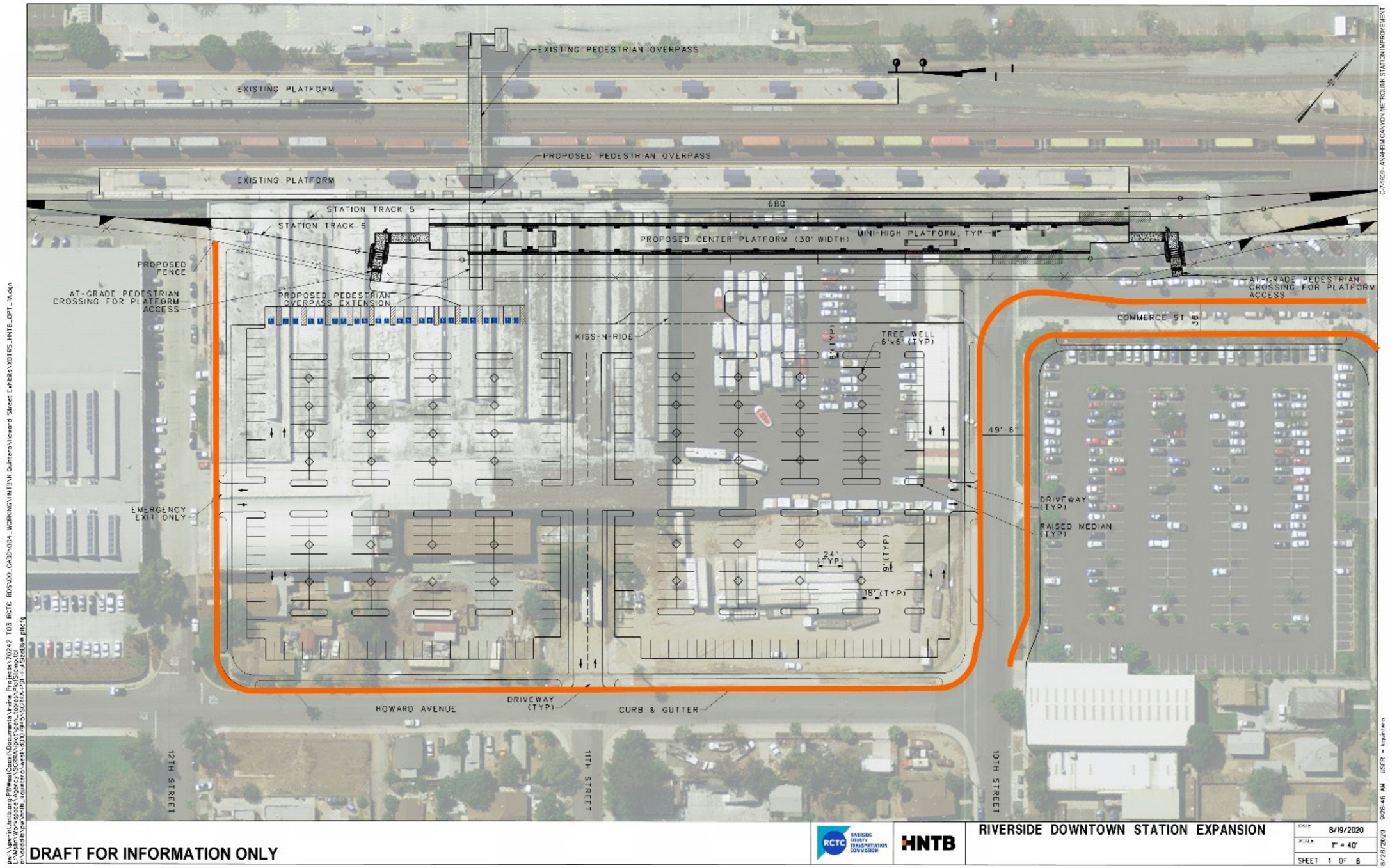

Figure ES-4. Build Alternative with Parking Design Option 1A

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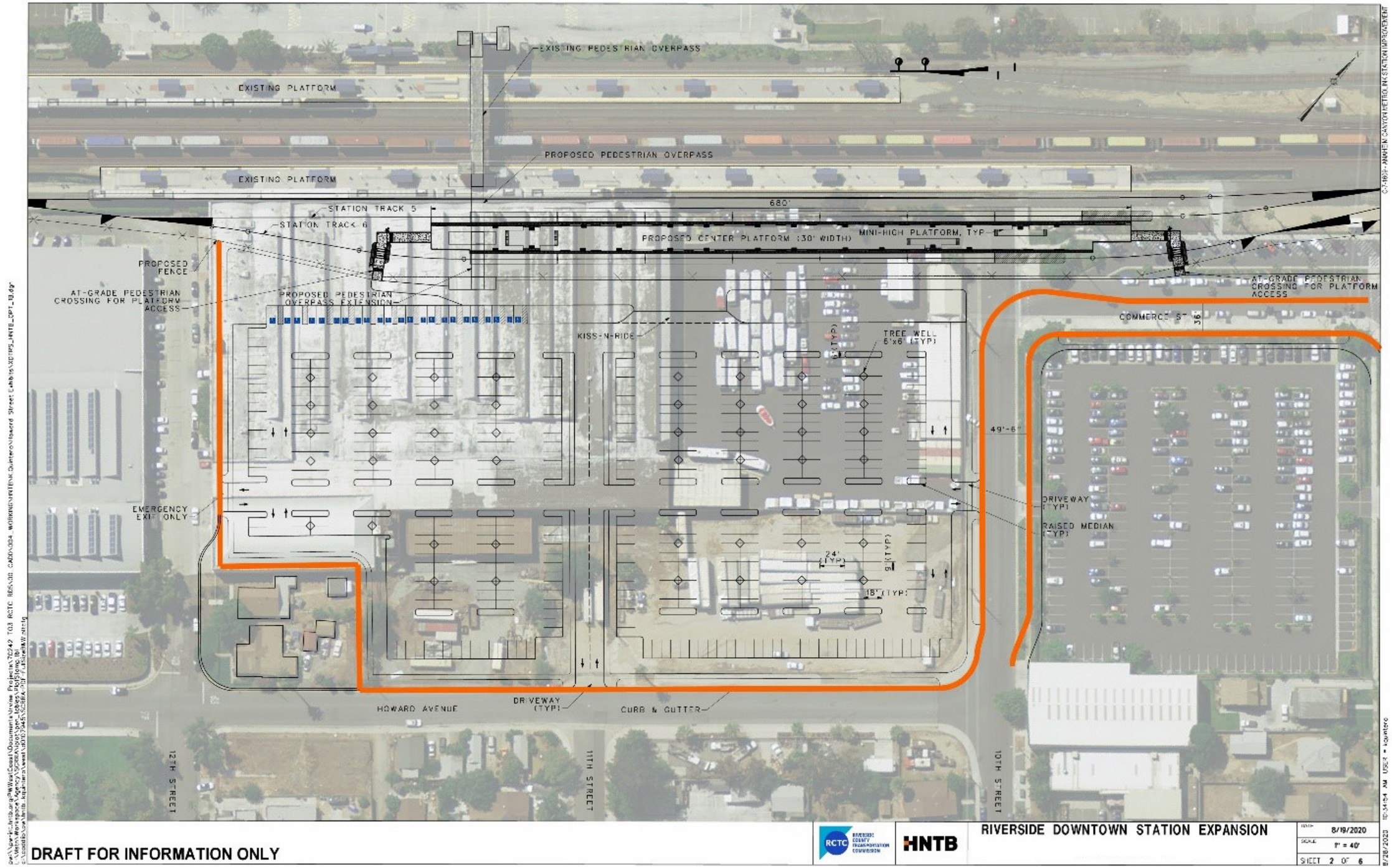

Figure ES-5. Build Alternative with Parking Design Option 1B

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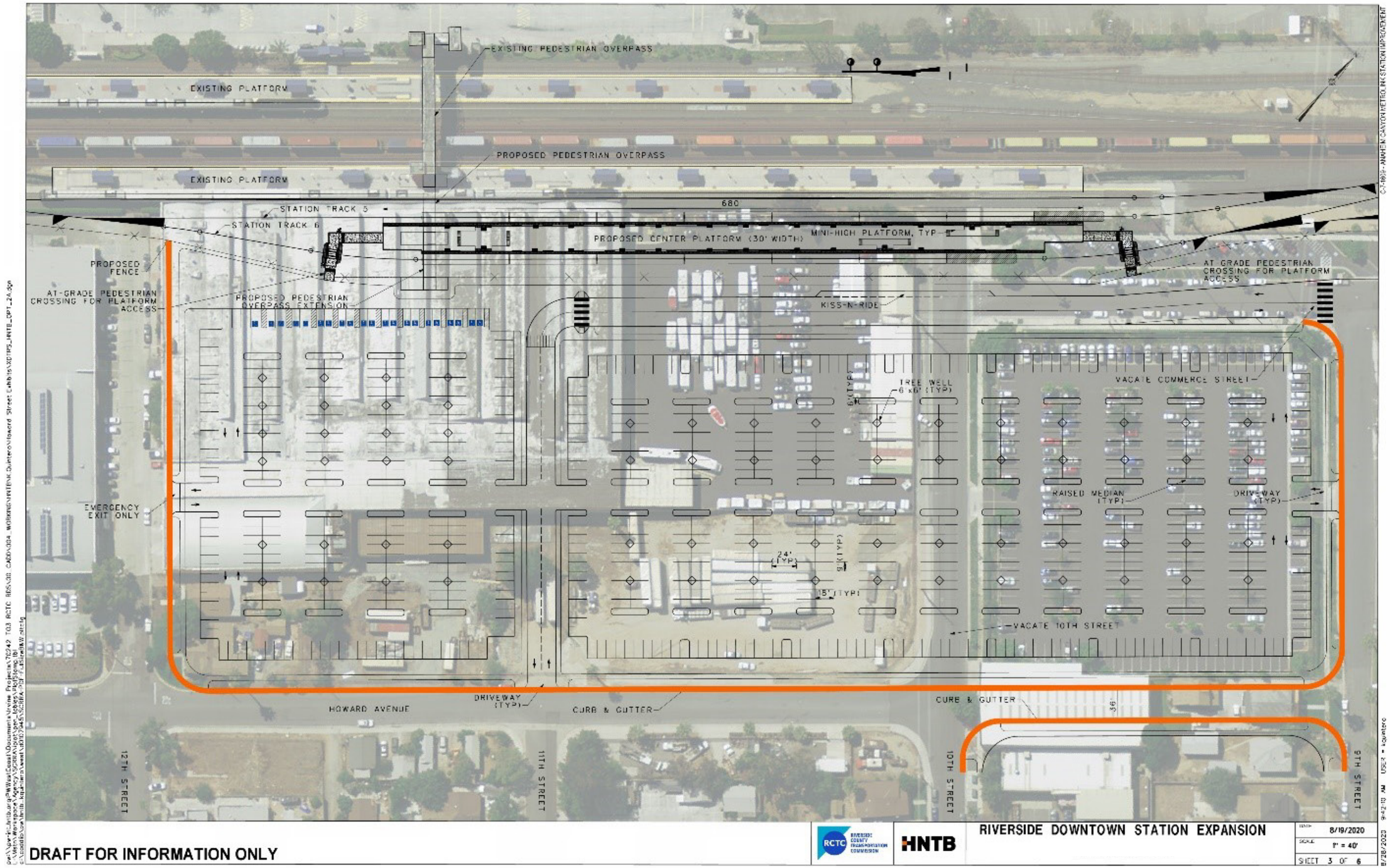

Figure ES-6. Build Alternative with Parking Design Option 2A

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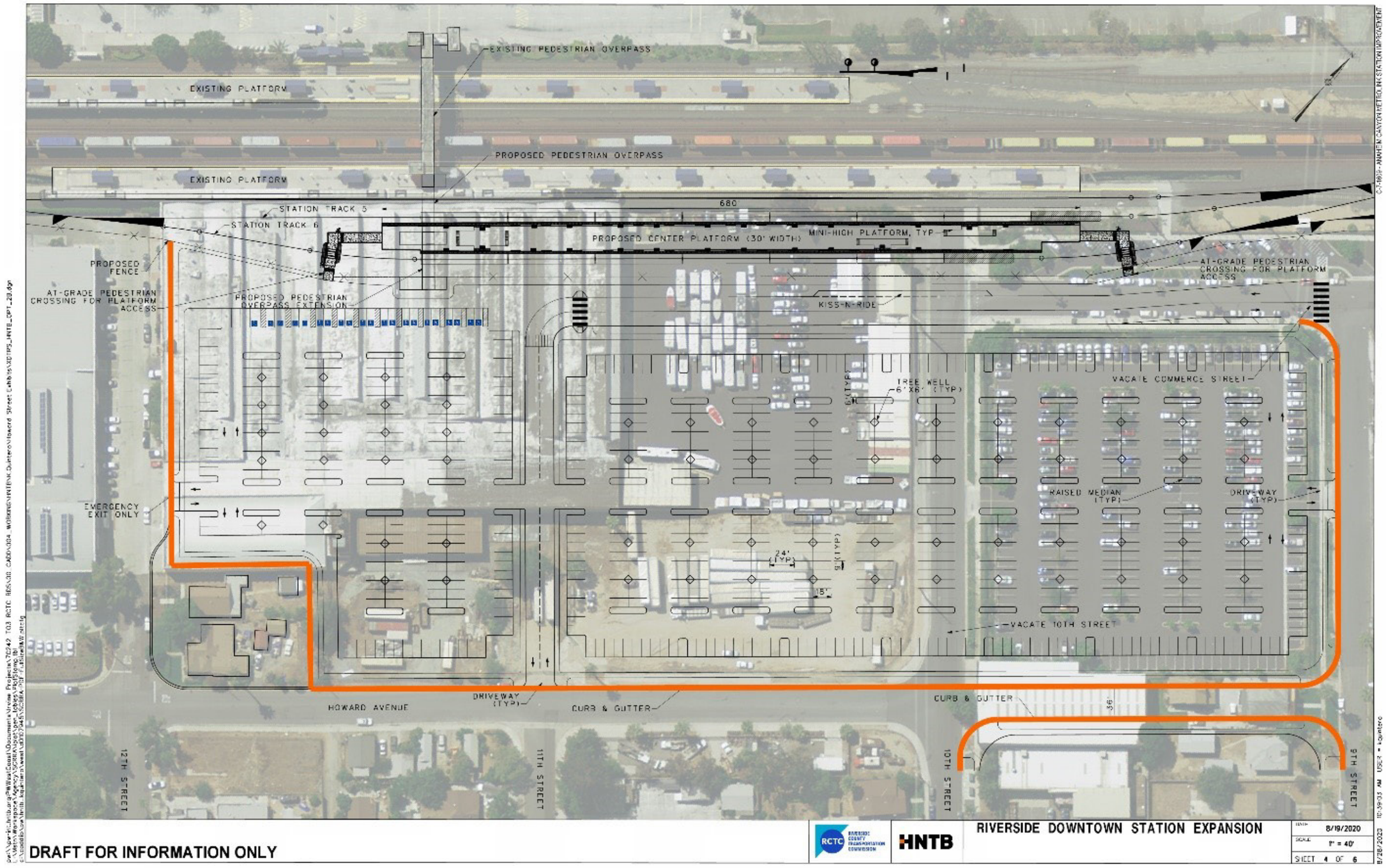

Figure ES-7. Build Alternative with Parking Design Option 2B

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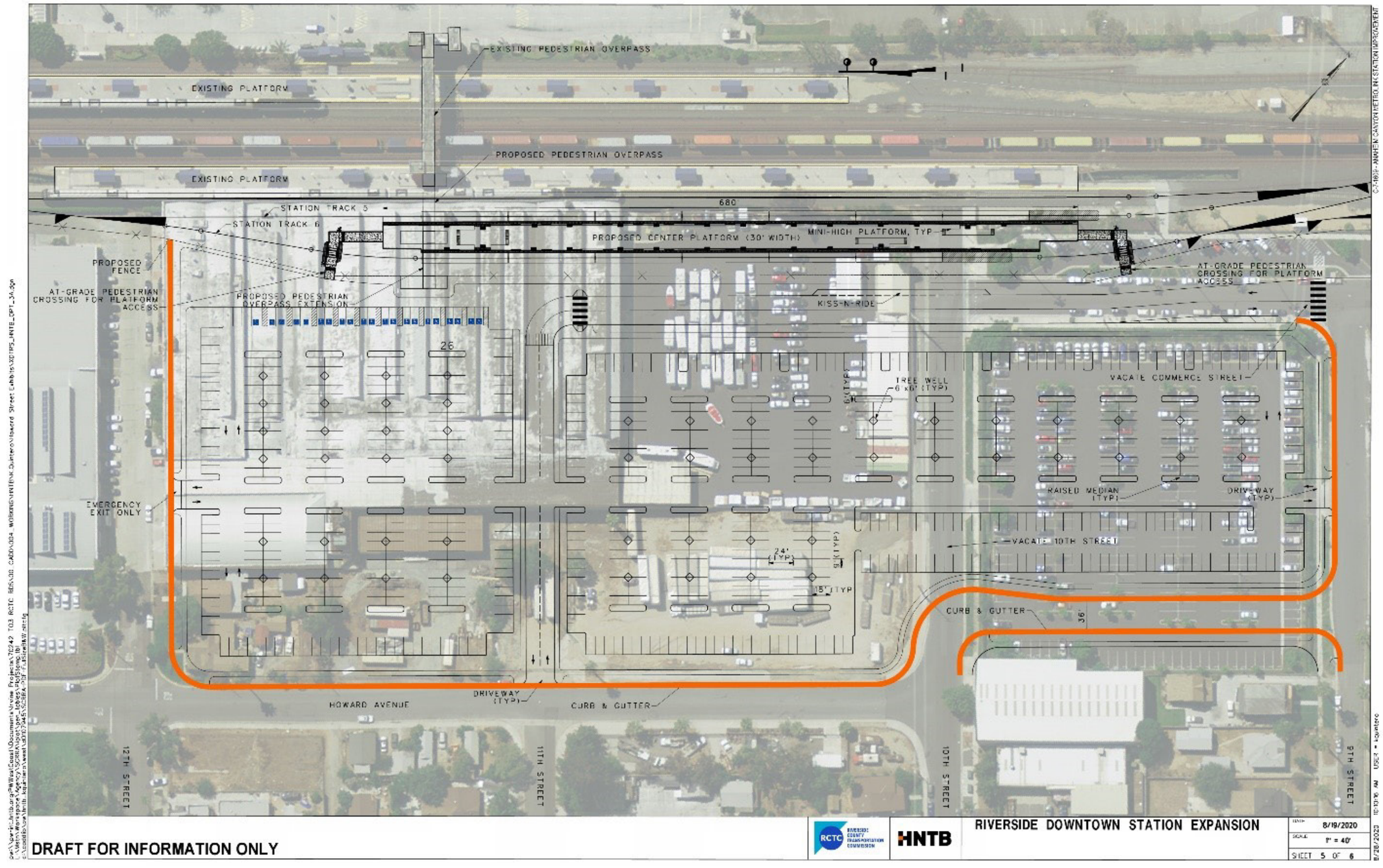

Figure ES-8. Build Alternative with Parking Design Option 3A

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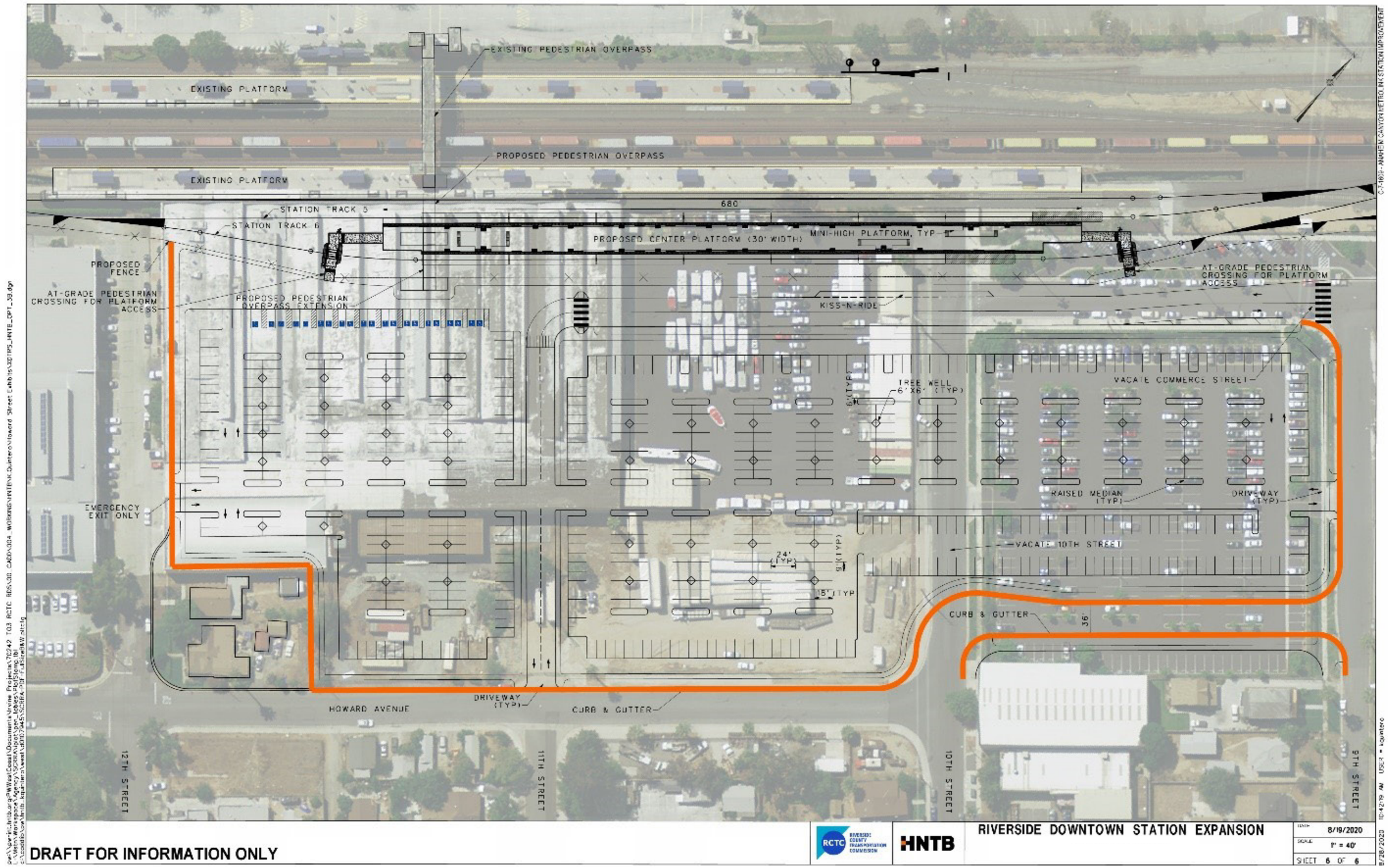

Figure ES-9. Build Alternative with Parking Design Option 3B

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APPENDICES

FIGURES

TABLES

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ACRONYMS AND ABBREVIATIONS

Acronym	Definition
§	Section (used with codes)
µg/m^3	micrograms per cubic meter
91/PV Line	91/Perris Valley Line
AAM	Annual Arithmetic Mean
AB	Assembly Bill
ACBCI	Agua Caliente Band of Cahuilla Indians
ACM	asbestos containing material
ADA	Americans with Disabilities Act
APE	Area of Potential Effects
APN	Assessor's Parcel Number
AQMP	Air Quality Management Plan
AREMA	American Railway Engineering and Maintenance-of-Way Association
ASR	Archaeological Survey Report
ASTM	American Society for Testing and Materials
AUL	activity and use limitations
AVE	area of visual effect
BFE	base flood elevation
bgs	below ground surface
BMP	Best management practice
BNSF	Burlington Northern Railroad and the Atchison, Topeka, and Santa Fe Railway
BSA	biological study area
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Cal Fire	California Department of Forestry and Fire Protection
CARB	California Air Resources Board
CAP	Climate Action Plan
CAS	Climate Adaptation Strategy
CCA	Clean Air Act
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDBG	Community & Economic Development Block Grant

Acronym	Definition
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGP	Construction General Permit
CH_4	Methane, Natural Gas
CHB	Cultural Heritage Board
CHRIS	California Historical Resources Information System
CHRIS-EIC	California Historical Resources Information System-Eastern Information Center
CHWCL	California Hazardous Waste Control Law
CIA	Community Impact Assessment
CIWMB	California Integrated Waste Management Board
CNDDB	California Natural Diversity Database
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COCs	chemicals of concern
Connect SoCal	Southern California Association of Governments 2020-2045 Regional Transportation/Sustainable Communities Strategy
CP	Control Point
CPTHSAA	Carpenter-Presley-Tanner Hazardous Substance Account Act
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CREC	Controlled REC
CUPA	Certified Unified Program Agency
C.U.R.E.	Clean Up Riverside's Environment
CWA	Clean Water Act
dB	decibels
dBA	A-weighted decibels
DEH	Department of Environmental Health
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control

Acronym	Definition
DWR	California Department of Water Resources
EFH	essential fish habitat
EIC	Eastern Information Center
EIR	Environmental Impact Report
EO	Executive Order
ESA	Environmental Site Assessment
ESG	Emergency Solutions Grant
FCAA	Federal Clean Air Act
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FGC	Fish and Game Code
FHSZ	Fire Department Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Maps
FMC	Food Machinery Corporation
FONSI	Finding of No Significant Impact
FRA	Federal Transit Administration
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
FY	fiscal year
GHG	greenhouse gas
H_2S	Hydrogen sulfide
HCP	Habitat Conservation Plan
HABS	Historic American Buildings Survey
HFC	hydrofluorocarbon
HGL	hydrocarbon gas liquids
HIV/AIDS	human immunodeficiency virus/ acquired immunodeficiency syndrome
HMA	hot-mix asphalt
HMBP	Hazardous Materials Business Plan
HOME	Home Investment Partnerships,
HOPWA	Housing Opportunities for Persons with AIDS
HQTA	High-Quality Transit Area
HREC	Historical REC
HRR	Historic Resources Report
HUD	U.S. Housing and Urban Development

Acronym	Definition
IEOC	Inland Empire Orange County
ITE	Institute of Transportation Engineers
km	kilometer
LAUS	Los Angeles Union Station
LBP	lead-based paint
LCFS	Low Carbon Fuel Standard
L_{DN}	day night average sound level
LED	light-emitting diode
L_{EQ}	peak hour noise equivalent level
LID	Low Impact Development
LOD	Limits of Disturbance
LOS	Level of service
LST	Localized Significance Threshold
LUC	land use covenant
LV	vertical vibration velocity level
MBTA	The Migratory Bird Treaty Act
MMBTU	million British thermal units
MMT	million metric tons
mg/kg	milligrams per kilograms
mg/L	milligrams per liter
mg/m^3	milligrams per cubic meter
MP	Milepost
MPOs	Metropolitan Planning Organizations
MS4	municipal separate storm sewer system
MT	metric tons
NO_2	nitrogen dioxide
N_2O	Nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NCHRP	National Cooperative Highway Research Program
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
NHPA	National Historic Preservation Act

Acronym	Definition
NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
NOP	Notice of Preparation
NOx	nitrous oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OCP	organochlorine pesticides
OHP	Office of Historic Preservation
OPR	Office of Planning and Research
OS	open space
OHSA	Occupational Safety and Health Administration
O_3	ozone
PAH	polycyclic aromatic hydrocarbons
Pb	lead
PCB	polychlorinated biphenyl
PCE	Perchloroethylene
PDR	Project Definition Report
PFC	perfluorocarbons
PHF	peak hour factor
$PM_{2.5}$	fine particles of 2.5 micrometers or smaller
PM_{10}	coarse particulate matter of 10 micrometers or smaller
PPE	personal protective equipment
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
Project	Riverside County Transportation Commission Riverside-Downtown Station Improvement Project
PSR	Project Study Report
pVES	preliminary vapor encroachment screen
RACR	Removal Action Completion Report
RECs	recognized environmental conditions (
ROGs	Reactive organic gases
RCFCWCD	Riverside County Flood Control and Water Conservation District
RCHWMP	Riverside County Hazardous Waste Management Plan
RCRA	Resource Conservation and Recovery Act

Acronym	Definition
RCTC	Riverside County Transportation Commission
RMS	root-mean-square
ROW	right of way
RPS	Renewable Portfolio Standard
RSA	resource study area
RTA	Riverside Transit Agency
RTP	Regional Transportation Plan
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RUSD	Riverside Unified School District
RWQCB	Regional Water Quality Control Boards
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SBLI	Soboba Band of Luiseno Indians
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCORE	Southern California Optimized Rail Expansion
SCRRA	Southern California Regional Rail Authority
SCS	Sustainable Communities Strategy
SF_6	sulfur hexafluoride
SF	square foot/feet
SHPO	State Historic Preservation Officers
SIP	State Implementation Plan
SMARA	Surface Mining and Reclamation Act of 1975
SMBMI	San Manuel Band of Indians
SMP	soil management plan
SO_2	sulfur dioxide
SOx	sulfur oxides
Soboba	Soboba Band of Luiseno Indians
SOI Standards	Secretary of Interior's Standards
SR	State Route
SRTP	Secure Real-time Transport Protocol
STC	Sound Transmission Class
SVOC	semivolatile organic compounds

Acronym	Definition
SWPPP	Stormwater Pollution Prevention Plan
SWRRA	Solid Waste Reuse and Recycling Act
SWRCB	State Water Resources Control Board
SWQRCB	State Water Quality Resource Control Board
TAC	Toxic air contaminant
TCE	temporary construction easements
TCE	trichloroethylene
TCM	transportation control measure
TCR	tribal cultural resources
TCP	Tribal Cultural Property
TDM	Transportation Demand Management
TIA	traffic impact analysis
THPO	Tribal Historic Preservation Officer
TMDLs	Total Maximum Daily Loads
TMP	Traffic Management Plan
TOD	transit-oriented development
TIRCP	State's Transit and Intercity Rail Capital Program
TPH	total petroleum hydrocarbons
TSCA	Toxic Substance Control Act of 1976
U.S.	United States
USACE	U.S. Army Corps of Engineers
U.S. EPA	U.S. Environmental Protection Agency
U.S.C.	United States Code
UPRR	Union Pacific Railroad
URA	Uniform Relocation Assistance and Real Property Acquisition Act
USFWS	United States Fish and Wildlife Service
USFWS	United States Fish and Wildlife Service
UWR	Universal Waste Rules
VdB	velocity in decibels
VEC	vapor encroachment condition
VIA	Visual Impact Assessment
VMT	vehicle miles traveled
VOCs	volatile organic compound
WBWG	Western Bat Working Group
WDRs	waste discharge requirements

Acronym	Definition
WEAT	worker environmental awareness training
WOTS	waters of the state
WRCOG	Western Riverside Council of Governments
WRCMSHCP	Western Riverside County Multiple Species Habitat Conservation Plan
WSA	water supply assessment

1.0 Introduction

The Riverside County Transportation Commission (RCTC) and Metrolink, in collaboration with the Federal Transit Administration (FTA), propose to improve the Riverside-Downtown Station at 4066 Vine Street in Riverside, California (the Project). The proposed Project is subject to state and federal environmental review requirements because it involves the use of federal funds administered by the FTA; therefore, two environmental documents have been prepared in compliance with the National Environmental Policy Act of 1969 (NEPA) and California Environmental Quality Act (CEQA). RCTC is the lead agency under CEQA, and FTA and RCTC are joint lead agencies under NEPA. The NEPA Environmental Assessment (EA) and CEQA Draft Environmental Impact Report (Draft EIR) are two separate standalone documents and are concurrently circulated for public review.

The Riverside-Downtown Station is located in the heart of Downtown Riverside, east of the State Route 91 (SR 91) Freeway and a short distance from SR 60. Figure 1.1-1 illustrates the regional and Project location. Proposed improvements include the construction of an additional passenger loading platform and tracks to improve Metrolink service and the extension of the existing pedestrian bridge and additional elevator and stair access. The proposed track would connect to the existing station layover tracks on the south side. The proposed Project would also provide additional parking and improve traffic flow on the south side of the station. These improvements would improve Metrolink train connections and operations without affecting Burlington Northern Railroad and the Atchison, Topeka, and Santa Fe Railway (BNSF) service.

1.1. Environmental Impact Report Intended Uses

This Draft EIR has been prepared in compliance with CEQA Public Resources Code, Section (§) 21000 et seq. and the CEQA Guidelines (§ 15000 et seq.), as promulgated by the California Resources Agency and the Governor's Office of Planning and Research. The purpose of this environmental document is to disclose the potential environmental impacts associated with the Riverside-Downtown Station Improvement Project.

All discretionary projects in the state of California are required to comply with CEQA if implementation of the proposed Project has the potential to result in either a direct physical change to the environment or a reasonably foreseeable indirect physical change to the environment. More specifically, a project requires environmental review if it incorporates a discretionary action undertaken by a public agency. Discretionary actions are activities that are supported in whole, or in part, through public agency contracts, grants, subsidies, etc.; or activities requiring a public agency to issue a lease, permit, license, certificate, or other entitlement. If the Project may have a "significant" impact on any environmental resource, an EIR must be prepared. In accordance with § 15121(a) of the CEQA Guidelines (California Administrative Code, Title 14, Division 6, Chapter 3), the purpose of an EIR is as follows: *An EIR is an informational document, which will inform public agency decision makers and the public generally of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.* Pursuant to § 15378(d) of the CEQA Guidelines, RCTC, acting as the CEQA lead agency, has identified a CEQA-proposed Project in this EIR to provide an accurate, stable, and finite description of the "development proposal for the purpose of environmental analysis." Identification of the proposed Project is intended to facilitate public comment at the local and state level. RCTC is preparing this project-level EIR to provide information to public agencies, the general public, and decision-makers, regarding the project-specific and cumulative environmental impacts of the proposed Project. This EIR also identifies required mitigation measures that would avoid or reduce significant impacts resulting from implementation of the proposed Project. This EIR will be used by RCTC to make decisions regarding project approval and implementation. It also may be used by CEQA responsible and trustee agencies (i.e., local jurisdictions and state agencies) in the event that permits or discretionary approvals from these agencies are required for the Project.

Figure 1.1-1. Regional and Project Location Map

1.2. CEQA Responsible and Trustee Agencies

The information in this EIR may also be used by other agencies involved with the Project that have a responsibility under CEQA, including but not limited to, the following:

- Metrolink
- City of Riverside
- County of Riverside
- Riverside Public Utilities
- Riverside Transit Agency

The California Department of Fish and Wildlife (CDFW) is a CEQA trustee agency (§ 15386[a] of the CEQA Guidelines) and must be notified if the proposed Project involves fish and wildlife of the state's rare and endangered native plants, wildlife areas, and ecological reserves.

1.3. Document Organization

The content and format of this EIR meet the current requirements of CEQA and the CEQA Guidelines. This EIR is organized into the following sections, and supporting technical studies are provided as Appendices G through T to the EIR, so the reader can easily obtain information about the proposed Project and its specific issues:

Executive Summary: This section provides a summary of the potential impacts of the Build Alternative and various options of the proposed Project, impact conclusions, and mitigation measures. Areas of controversy and issues to be resolved are also summarized in this section.

Section 1 – Introduction: This section describes the purpose, use, and organization of the EIR and provides a description of the NOP and scoping process and a list of environmental topics addressed in the EIR.

Section 2 – Project Description: This section provides a detailed description of the proposed Project, project components, and discretionary actions, as well as identifies the overall objectives for the proposed Project.

Section 3 – Affected Environment and Environmental Consequences: This section presents the regulatory environment methods and assumptions used in the impact analysis, thresholds for determining significance, existing environmental setting and conditions before project implementation, impacts that would result from the Project, mitigation measures that would eliminate or reduce significant impacts, and the level of significance of each project impact after implementation of mitigation for each environmental factor.

Section 4 – Cumulative Impacts: This section identifies the incremental impact of the proposed Project when added to other closely related past, present, and reasonably foreseeable probable future projects and other known projects within the project study area for each environmental topic.

Section 5 – Comparison of Alternatives: This section provides a comparison of the alternatives analyzed in the EIR, including the proposed design options. A summary of the impacts resulting from the alternatives for each environmental resource presented in the EIR are compared to determine which alternative meets the Project's objectives and determines the environmentally superior alternative.

Section 6 – Comments and Coordination: This section provides a summary of comments received about the project during the public scoping process and other public outreach efforts conducted by the lead agency prior to and during the preparation of this EIR. This section includes correspondence from interested parties, regulatory agencies, and local agencies.

Section 7 – Other CEQA Topics: This section discusses the areas of known controversy and issues to be resolved in relation to the proposed Project.

Section 8 – Mandatory Findings of Significance: This section identifies growth-inducing impacts, significant irreversible environmental changes, impacts found not to be significant, and significant and unavoidable environmental impacts.

Appendix A – References, Organizations, and Persons Consulted: This appendix identifies the documents (printed references), individuals (personal communications), and organizations consulted in preparing this EIR.

Appendix B – List of Preparers: This appendix identifies the individuals involved in preparing this EIR.

Appendix C – Correspondence: This appendix provides letters of correspondence.

Appendix D – Environmental Assessment Figures: This appendix provides tables identified and referenced in the EA.

Appendix E – Environmental Commitments Record: This appendix provides a compilation of measures identified in the EIR to avoidance, minimize and/or mitigate potential impacts resulting from the implementation of the Project.

Appendix F – CEQA Checklist: This appendix provides the CEQA Checklist from *Appendix G* of the *2021 CEQA Guidelines*, which identifies physical, biological, social, and economic factors, and a corresponding significance assessment resulting from the implementation of the Project.

Appendices G through T: Appendices G through T are a compilation of the various technical studies that present data supporting the analysis or contents in this EIR. In addition, copies of the individual reports are posted on RCTC's website (www.rctc.org), available on file at RCTC's office (4080 Lemon Street, 3rd Floor, Riverside, CA 92501) during normal business hours, and available at the Cesar Chavez Community Center at 2060 University Avenue, Riverside, CA 92507.

Appendices U – Distribution List: This appendix provides a list of local, regional/county, state and federal agencies, elected officials, and other stakeholders.

Appendix V – Metrolink 2021 Strategic Business Plan

Appendix W - Project Definition Report

1.4. Notice of Preparation and Scoping Meeting

RCTC began the environmental review process pursuant to CEQA by posting a Notice of Preparation (NOP) (Appendix A). The NOP was first distributed locally to interested local public agencies and the general public. The CEQA-required 30-day NOP review period began with the filing of the NOP at the Riverside County Clerk and public notification on January 17, 2020 and concluded on February 20, 2020 (Figure 1.4-1). The NOP identified that RCTC intended to prepare an EIR for the proposed Project. The NOP served as an opportunity for interested local public agencies and the general public to comment on the proposed Project, scope, and content of environmental issues to be examined in the EIR.

The NOP was distributed to the public through mailers, advertisements, email, and social media. The NOP was also published in local newspaper publications in *The Press Enterprise* (English) and *La Prensa* (Spanish). These are the predominant newspapers circulated in the neighborhoods around the Riverside-Downtown Station and cover the main languages spoken in these areas. Direct mailers were sent to residents within a 0.5 mile radius from the Riverside-Downtown Station. In addition, RCTC held a public scoping meeting for the Project to further determine the scope of environmental issues to be evaluated in the EIR. The scoping meeting was held February 6, 2020, from 5:00 PM to 7:30 PM at Abraham Lincoln High School (4341 Victoria Avenue, Riverside, CA 92507).

At the scoping meeting, members of the public were invited to ask questions regarding the proposed Project and the environmental review process and to comment both verbally and in writing on the scope and content of the EIR. A subsequent NOP was submitted to the State Clearinghouse on September 1, 2021, for distribution to state responsible and trustee agencies. Pursuant to CEQA, the NOP review period is 30 days; therefore, the comment period closed on September 30, 2021. Written comments received during the 30-day NOP review period, as well as during the public scoping meeting, are summarized in Chapter 6.0 of this EIR.

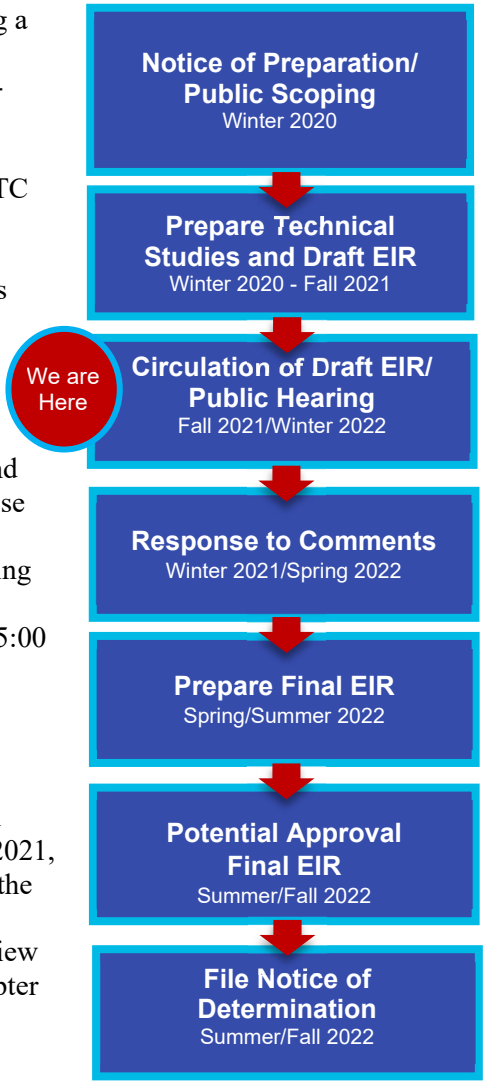

Figure 1.4-1. EIR Process

1.5. Environmental Topics Addressed

This EIR addresses the potential environmental impacts of the proposed Project and was prepared based on public and agency input, as previously mentioned. The following environmental topics are analyzed in this EIR:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire
- Mandatory Findings of Significance

Pursuant to CEQA requirements, an Environmental Checklist Form has been prepared and is included in Appendix F.

1.6. EIR Process

This Draft EIR is being distributed to interested agencies, stakeholder organizations, and individuals. The distribution ensures that interested parties have an opportunity to express their views regarding the environmental impacts of the Project and that information pertinent to permits, authorizations, and discretionary approvals is provided to decision-makers, lead agencies, and CEQA-responsible and trustee agencies. This document is available for public review at RCTC's office during normal business hours. The document is also available on RCTC's website.

After comments are received from the public and reviewing agencies, RCTC may: 1) give environmental approval to the Project, 2) conduct additional environmental studies, or 3) abandon the Project. If the Project is given environmental approval, RCTC could proceed to design and build the proposed Project. The EIR process is depicted in Figure 1.4-1.

1.7. Comments Requested

This Draft EIR is being distributed for a 60-day period that will begin December 3, 2021, and end February 3, 2022. Written comments should be sent to the following address:

Mr. David Lewis
Capital Projects Manager
Riverside County Transportation Commission
4080 Lemon Street, 3rd Floor
Riverside, California 92501

Comments may be provided via the online comment form at https://bit.ly/RDSComment or by email. Please include the project title in the subject line. Email comments should be directed to stationproject@rctc.org.

RCTC will respond to these comments in the Final EIR. All public comments must be postmarked or received no later than February 3, 2022, by 5:00 PM to ensure incorporation into the Final EIR.

Public Hearing: RCTC will hold two public hearings to explain the Project and the Draft EIR analysis. Comments from the public may be submitted at the public hearings via comment card and verbally to a court reporter. Information regarding the public hearings is provided as follows:

Public Hearing Virtual Option

Date: Wednesday, December 15, 2021
Time: 5:00 PM to 7:00 PM
Webinar Link: https://us06web.zoom.us/s/89067185996?pwd=TlVXRkhpMlZqejJ3U3EwUHdjSnhDZz09

Webinar ID: 890 6718 5996
Dial in by phone: (669) 900-6833
Dial in by phone (Spanish): (646) 749-3335; Access Code: 676-566-581

Public Hearing In-person Option

Date: Thursday, December 16, 2021
Time: 5:00 PM to 7:00 PM
Location: Cesar Chavez Community Center – 2060 University Avenue, Riverside CA 92507

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 the Final EIR.

1.8. Existing Conditions at Metrolink Riverside-Downtown Station

Metrolink is a commuter rail system that provides service to the Counties of Los Angeles, Orange, Riverside, San Bernardino, and Ventura and to Oceanside in San Diego County (Figure 1.8-1). The system was founded in 1991 as the Southern California Regional Rail Authority (SCRRA) and adopted the name Metrolink, which started operations in 1992. Metrolink provides an alternative to freeway travel in busy transit corridors. There are seven lines and 62 stations operating on 534 miles of rail network and services passengers who travel approximately 406 million passenger miles per year. The Metrolink Commuter Rail System is illustrated in Figure 1.8-1.

Figure 1.8-1. Metrolink Commuter Rail System

Source: Metrolink, 2019

The Riverside-Downtown Station is a hub for the Metrolink commuter rail and currently provides service to three out of seven of the Metrolink lines, the Riverside Line, the 91/Perris Valley Line (91/PV Line), and the Inland Empire-Orange County (IEOC) Line and Amtrak's Southwest Chief. This station is an origin and destination station for all Riverside Line trains, three PV Line trains, and eight IEOC Line trains. In addition, there are eight IEOC line trains that operate through the station daily, traveling between San Bernardino County and Orange County, and two Amtrak trains operate through the station daily, with a total of 39 weekday passenger trains.

Most of the Metrolink 91 service was extended to Perris-South and rebranded as the 91/PV Line. With the PV Line opening in 2016, vehicle trips on the Interstate (I)-215), SR 60, I-15, and SR 91 have decreased. The 91/PV Line trains operate Mondays through Fridays from four new stations, Perris-South, Downtown Perris, Moreno Valley/March Field, and Riverside Hunter Park/UCR (University of California, Riverside). Service begins as early as 4:37 AM from the Perris-South Station to Los Angeles Union Station. Evening trains return as late as 7:50 PM to the Perris-South Station. Four of the 91/PV Line morning trains originate from the Perris-South Station, and four of the afternoon or evening trains terminate at the station. Upon reaching the Riverside-Downtown Station, other than remaining on the 91/PV Line to Los Angeles through Fullerton, these passengers have the option to transfer to the IEOC Line or the Riverside Line.

The Joseph Tavaglione Riverside-Downtown Station was opened for business in 1993 and is owned and maintained by RCTC. It is one of the inland empire hubs for regional transportation in Southern California and provides direct linkages for the Metrolink rail system commuter trains, Amtrak intercity and long-distance trains, and RCTC and municipal bus systems. The station as it is currently constructed consists of two center platforms. Station Platform 1 (located on the west side of the BNSF tracks) serves Station Tracks 1 and 2. Station Platform 2 (located on the east side of the BNSF tracks) serves Station Tracks 3 and 4. Station Track 1 (serving the west side of Platform 1) is connected to the rail system at the south end by a Metrolink station spur track and is not directly accessible from the north end. Station Track 2 (serving the east side of Platform 1) is connected to the rail system by a station siding (Figure 1.8-2).

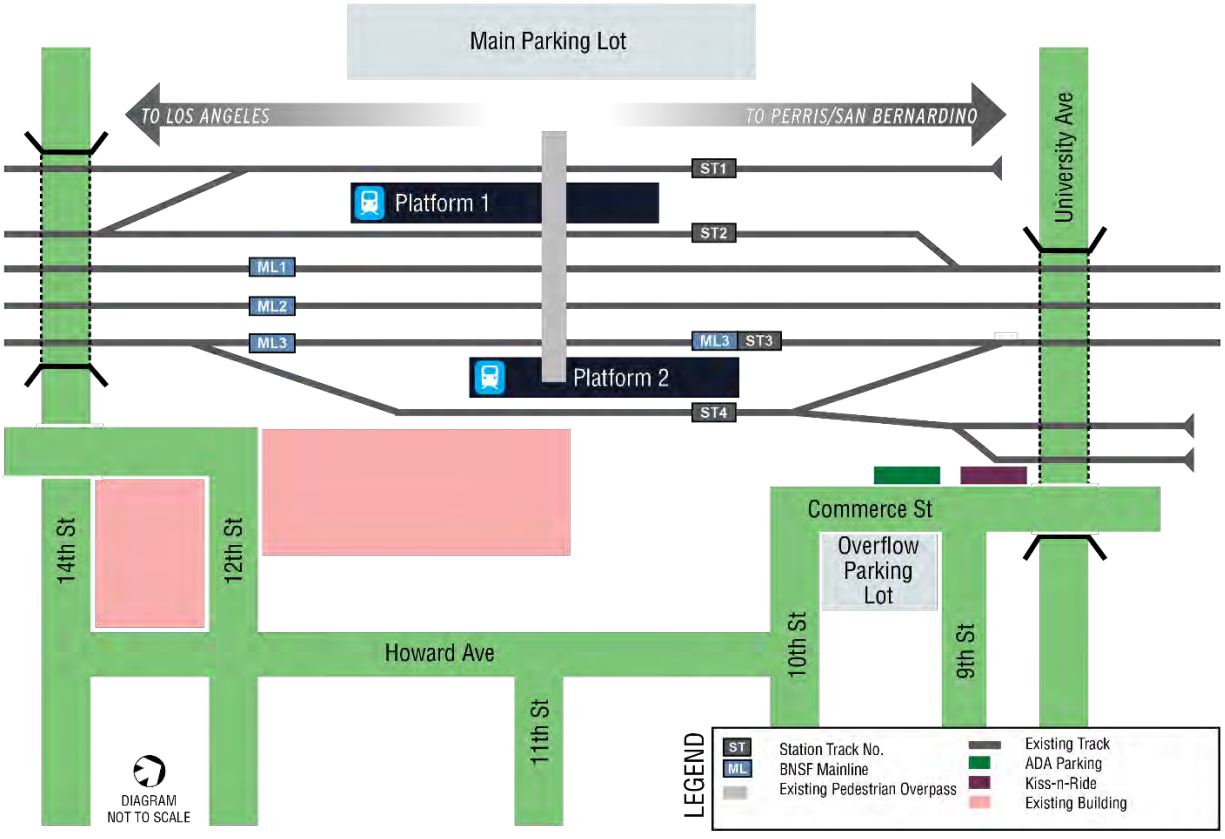

Figure 1.8-2. Existing Conditions

1.8.1. Limitations of the Existing Metrolink Riverside-Downtown Station

In addition to passenger rail, both the BNSF and the Union Pacific Railroad (UPRR) operate freight trains through the Riverside-Downtown Station. While BNSF holds the right of way (ROW), UPRR has agreement rights to operate trains between West Riverside, where the UPRR Los Angeles Subdivision joins the BNSF San Bernardino Subdivision, and West Colton, where UPRR trains branch off onto the UPRR Yuma Subdivision. On average, approximately 50 to 60 freight trains operate through the station each day, with this number increasing or decreasing based on seasonal variations.

The infrastructure north of the Riverside-Downtown Station to Control Point (CP) Highgrove, where the line to Perris branches off of the BNSF San Bernardino Subdivision, does not provide for any crossover movements. The San Jacinto Subdivision, extending from CP Highgrove to Perris-South, is a single track mainline. Currently, passenger trains coming from or going to Perris or the Riverside-Downtown Station, park on BNSF Mainline Track 3/Station Track 3 (Figure 1.8-2).

This limitation in infrastructure between Riverside-Downtown Station and Perris-South Station creates a need for additional platform tracks on the east side of the Riverside-Downtown Station where trains can meet off the BNSF mainline tracks. This would help ensure that additional passenger service would not impede the through BNSF freight service. Improvements would include cross-platform transfers to facilitate more efficient passenger flow and, thereby, allow for reduced dwell times for trains, and allow for more capacity for passenger traffic at the station. Beyond the infrastructure capacity need, operationally, the ability to meet trains operating between Perris-South and Riverside-Downtown with trains operating between Los Angeles and Riverside-Downtown (instead of needing to operate through service between Los Angeles and Perris-South) will permit more flexibility in scheduling crews, allowing for shorter crew days and longer periods of rest. This, in turn, can help reduce operating costs by minimizing crew overtime.

The proposed station improvements will provide the capability to support and accommodate the potential addition of any new local service between the Riverside-Downtown and Perris-South stations in the future. This future new local service will terminate in Riverside-Downtown, providing more convenient connections from these trains to other trains in the Metrolink system, encouraging ridership, creating more transfers and passenger traffic at the Riverside-Downtown Station; this is in addition to the approximately 7,000 trips that currently originate there each weekday.

The 91/PV Line is part of the Southern California Association of Government's (SCAG) 2012-2035 Regional Transportation Plan and Sustainable Communities Strategy, which is the long-range plan that improves regional mobility and greenhouse gas emission reduction standards required in AB 32 and SB 375. It is also consistent with and supported by the City of Riverside General Plan 2025 (City of Riverside, 2019), which focuses on incorporating "smart growth" principles into planning and development decisions and focusing development in already urbanized parts of the city rather than spreading growth to the urban fringes.

The station improvements are designed to address existing operational deficiencies and train congestion. The proposed Project is not proposing to increase the number of trains arriving or departing at the station, but it would allow the station to handle twice the amount of existing passenger rail service capacity at the station which would accommodate projected growth and travel demand in Riverside County and would allow the additional train traffic from the 91/PV Line to connect with additional Metrolink Lines without impacting BNSF operations.

1.9. Transit

The Riverside Transit Agency (RTA) provides free connecting transit service to Metrolink passengers at the station, including the agency's CommuterLink Express bus system, providing connections to Temecula, Banning and Hemet. RTA is planning to develop a mobility hub along Vine Street across from the Riverside-Downtown Station because of its proximity to major employment centers, government offices, schools, the Riverside Convention Center, venues, and housing complexes within the downtown core. RTA's Vine Street Mobility Hub will function as a multimodal transportation hub supporting connectivity to these destinations and expanding transportation within Riverside. The Vine Street Mobility Hub is currently in the early stages of the project development process and is expected to be constructed prior to the completion of the Riverside-Downtown Station Improvement Project. Both transit projects are independent of each other.

Transit service at or near the Riverside-Downtown Station includes RTA bus routes: 1, 10, 12, 13, 14, 15, 16, 29, 41, 49, 200, and 208 In addition to RTA buses, there are Omnitrans buses, the Amtrak, and Megabus available at the station.

1.10. Funding

On November 8, 1988 and November 5, 2002, respectively, the voters of Riverside County approved the adoption, and subsequently the extension of Measure A, authorizing the collection of a 0.5 percent tax on retail transactions, which allows the taxes to be used to fund transportation programs and improvements within the County of Riverside. Measure A provided the first sales tax funding for the commuter rail in Southern California. The Project is funded by Measure A proceeds, Southern California Optimized Rail Expansion Program (SCORE), and an FTA grant.

RCTC is an active participant in a number of multimodal efforts and initiatives in the region. RCTC has made significant investments in the transit and rail infrastructure, property, and use rights to enable and expand services in the region. In addition to supporting passenger rail, RCTC owns and operates nine rail stations in Riverside County and owns the San Jacinto Branch Line property from Riverside to San Jacinto. This responsibility requires RCTC to be involved in the security and maintenance of these facilities, as well as to oversee the daily operations and uses. RCTC is also involved in supporting intercity rail through Riverside and is planning for the development of a new 144-mile-long intercity rail route from Los Angeles to the Coachella Valley.

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2.0 Project Description

This section discusses the project objectives and purpose and alternatives considered by RCTC. Additionally, it provides a detailed description of the project-related operational enhancements and infrastructure improvements and presents construction process and project implementation.

2.1. Project Objectives and Purpose

The purpose of the proposed Project is to expand capacity, improve operations and efficiency, connectivity, and the passenger experience at the Riverside-Downtown Station. The basic project objectives supporting the purpose of the Project are as follows:

- Expand platform capacity to meet passenger train storage needs
- Allow for train meets off the BNSF mainline and minimize impacts to BNSF operations
- Improve train connectivity and operations while minimizing impacts on improvement projects near the station that are already designed or in construction
- Facilitate more efficient passenger flow and reduce dwell times
- Enhance safety and access for station users
- Accommodate projected future demand

2.2. Project Need

2.2.1. Riverside-Downtown Station

Metrolink has a total of seven commuter lines, and the Riverside-Downtown Station currently provides service to three of these commuter lines, the Riverside Line, 91/PV Line, and the IEOC Line and Amtrak's Southwest Chief. The station is an origin and destination station for all 12 Riverside Line trains (i.e., four 91/PV Line trains and eight IEOC Line trains). Altogether, there are 12 Riverside Line weekday trains that travel between Riverside and Los Angeles Union Station (LAUS); thirteen 91/PVL Line weekday trains that travel between Perris-South and LAUS; and 16 IEOC Line trains that travel between San Bernardino County and Orange County, for a total of 41 weekday Metrolink passenger trains. Two Amtrak trains currently service and operate through the Riverside-Downtown Station each day.

In addition to passenger train service, Riverside County has three rail mainlines owned by BNSF and UPRR, both the BNSF and the UPRR operate freight trains through the Riverside-Downtown Station. While BNSF is the ROW owner, UPRR has agreement rights to operate trains between CP West Riverside (where the UPRR Los Angeles Subdivision joins the BNSF San Bernardino Subdivision) and CP West Colton (where UPRR trains branch off onto the UPRR Yuma Subdivision). On average, approximately 50 to 60 freight trains operate through the Riverside-Downtown Station each day, with this number raising or lowering depending on seasonal variations (RCTC, 2020). Table 2.2-1 summarizes weekday passenger and freight train moves through the Riverside-Downtown Station.

Table 2.2-1. Weekday Train Moves through Riverside- Downtown Station

Weekday Passenger Trains	Number of Trains
Metrolink Riverside Line	12
Metrolink 91/PV Line	13
Metrolink IEOC Line	16
Amtrak	2
Total Passenger Trains	**43**
Weekday Freight Trains	**50 to 60**
Total Weekday Passenger and Freight Train moves	**93 to 103**

Sources: Metrolink Strategic Business Plan (January, 2021); Short Range Transit Plan FY 20/21-24/25 (RCTC, 2020)

Based on the *Metrolink Strategic Business Plan* (2021), Metrolink's Service Strategic Actions for the 91/PV Line and IEOC lines would increase train service within the next 5- to 30-year horizon as shown on Figure 2.2-1 (Metrolink, 2021). Metrolink weekday service for the 91/PV Line and IEOC Lines are projected to increase from the existing 29 weekday trains to 49 weekday trains by 2025. In addition to the increase in weekday Metrolink service along the 91/PV and IEOC lines, the Riverside Line is expected to increase weekday train service from 12 to 16 trains per day by 2025 (RCTC, 2020). By 2025, the number of Metrolink passenger trains traveling through the Riverside-Downtown Station would more than double, during the weekday in addition to Amtrak and freight usage.

Successful delivery of capacity, operation, and service investments at the Riverside-Downtown Station is a crucial element of the Metrolink 2021 Strategic Business Plan; investments would improve reliability and customer experience by doubling capacity (adding new platforms, tracks, and parking) for train service needs due to projected growth. As shown on Figure 2.2-1, by 2050 additional peak hour and off-peak services could increase to up to 82 trains per weekday along the 91/PV Line and IEOC Lines.

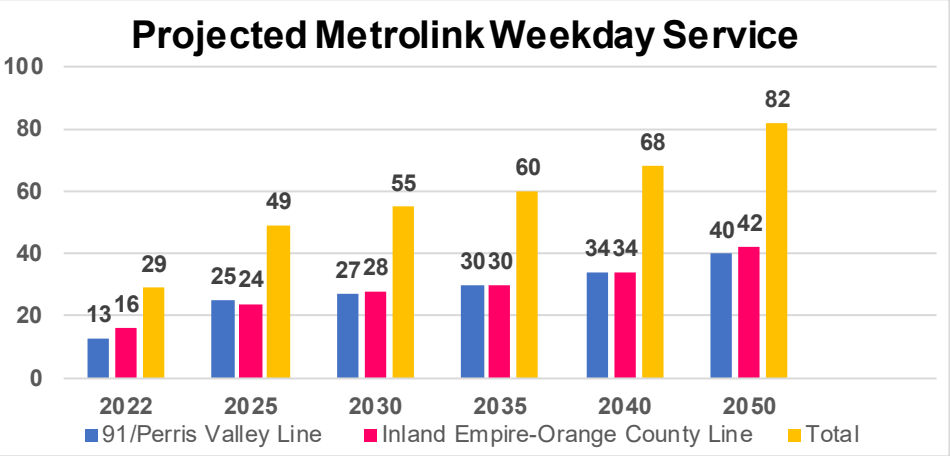

Figure 2.2-1. Projected Metrolink 91/PV Line and IEOC Line Weekday Service

Sources: Metrolink Strategic Business Plan, January 2021; Short Range Transit Plan FY 20/21- 24/25, RCTC, 2020.

2.2.2. Future Freight Service

According to the 2018 California State Rail Plan – Integrated Passenger and Importance of Freight, the proposed Project will improve fluidity of traffic conditions on the railroad mainlines. California businesses export roughly $162 billion worth of goods to more than 225 foreign countries annually[1]. The state's extensive rail network supports California's economy, while minimizing impacts on air quality compared to other modes. Rail is an efficient, safe, and cost-effective way to move goods because energy consumption and Greenhouse Gas emissions per ton carried are far lower than with diesel trucks. The ability of the state's freight railroads to deliver these benefits depends on fluid traffic conditions on the railroads' mainlines.

By 2040, the state's freight railroad loads will have increased by 38 percent, compared to 2013. Investments to address bottlenecks, improve operations, and increase capacity throughout the network will reduce congestion and delays. In turn, an improved freight rail network will help shift goods movement away from congested roadways, which have a limited ability to expand. BNSF's 2016 capital plan called for $4.3 billion in improvements systemwide, of which $180 million would be allocated to California. Similarly, UPRR's projected capital plan of $3.75 billion system-wide included $121.6 million of track improvements, signal system enhancements, and bridge infrastructure in California.

2.2.3. Operational Needs

Beyond the infrastructure capacity need, there is an operational deficiency due to the lack of a crossover at the Riverside-Downtown Station from west to east which limits train meet options. The ability to meet trains operating between Perris-South and Riverside-Downtown with trains operating between Los Angeles and Riverside-Downtown is limited. The proposed Project would address these limitations by adding flexibility to operate service between

[1] California State Rail Plan, Caltrans, 2018

Los Angeles and Perris-South by improving options for 91/PV Line train meets. For example, with proposed project improvements, the 91/PV Line trains would be able to meet nose to nose, nose to back, and back to back on one of the new tracks, allowing trains to pass through on the other new track. This also allows more flexibility to schedule crews, allowing for shorter crew days and longer periods of rest. This, in turn, would help reduce operating costs by minimizing crew overtime.

In addition, there is a lack of crossovers from the Riverside-Downtown Station to Perris Valley South; the lack of crossovers limits train meets and passing options in terms of rail traffic. The train infrastructure east of the Riverside-Downtown Station to CP Highgrove, where the line to Perris branches off of the BNSF San Bernardino Subdivision, does not provide for any crossover movements. As such, trains coming from or going to Perris-South and Riverside-Downtown are not able to meet or pass each other. In addition, the San Jacinto Subdivision, extending from CP Highgrove to Perris South, is currently a single track mainline that does not permit trains to meet or pass. This existing limitation in train infrastructure between Riverside-Downtown and Perris-South creates blockages on the BNSF mainline and results in train service and freight train delays. Additional platform tracks on the east side of the station, where trains can meet and hold off at the BNSF mainline, could alleviate congestion and ensure that the additional passenger service does not impede the through freight service.

Existing train infrastructure limitations due to lack of crossovers at the Riverside-Downtown Station and from the Riverside-Downtown Station to Perris South would continue to deteriorate operational conditions in the next 5 years because Metrolink passenger train service at the Riverside-Downtown Station is anticipated to increase by 69 percent[2]. Without the planned service capacity improvements, the Riverside-Downtown Station would not be able to manage the anticipated train meets, and blockages would continue along the BNSF mainline, causing longer delays and service disruptions.

2.2.4. Access and Parking

The increase in Metrolink train service at the Riverside-Downtown Station and future regional growth forecasts are anticipated to increase the demand for ancillary station amenities such as on-site parking and easier access to the station.

According to Metrolink's *Strategic Business Plan* (2021), parking at the Riverside-Downtown Station is 93 percent utilized, and station access has been identified as a "high-priority" for improvements. Additional train service and future increase in passenger trips is expected to strain the existing on-site parking supply and impede access to and from the station.

2.3. Alternatives Considered

CEQA Guidelines § 15126.6(f) notes that the range of alternatives required in an EIR is governed by a rule of reason and must include only those alternatives that are necessary to permit a reasoned choice. The alternatives should avoid or substantially lessen the Project's significant effects. Furthermore, only the alternatives that the lead agency determines could feasibly attain most of the basic objectives of the Project should be analyzed in detail. In November 2016, RCTC completed a Project Definition Report (PDR) for the project. A PDR is a preliminary report that defines the major project components, describes the project issues, recommends a preferred design approach, and establishes a conceptual cost estimate. Six potential alternatives were considered in the PDR and evaluated against the evaluation criteria. One of the major factors evaluated in the initial screening of alternatives considered environmental impacts of each alternative, including property acquisitions and avoiding impacts to historic properties, such as the former Food Machinery Corporation (FMC) Complex, Plant 1 and Plant 2. In addition to the alternatives considered in the PDR, seven additional avoidance alternatives and two adaptive reuse alternatives were developed to avoid and minimize impacts to the former FMC Plant 1 building. Scoping comments received for this Draft EIR were considered for the development and identification of alternatives to the proposed Project. Further information about the alternatives considered but eliminated from consideration are discussed in Chapter 5.0 of this Draft EIR.

The PDR alternatives, avoidance alternatives, and adaptive reuse alternatives were initially screened and eliminated from consideration because they did not meet major factors established by RCTC, resulted in fatal flaws, were determined infeasible to construct, failed to meet basic project objectives, and/or because of the inability to avoid significant environmental impacts. Following a comprehensive process reviewing the alternative concepts, only one

[2] Based on Metrolink Business Strategic Plan (2021) future service strategic actions for the 91 PV Line and IEOC Line.

of the PDR alternatives was identified as the Build Alternative for the expansion of the Riverside-Downtown Station because it met the most criteria, including the capacity for additional growth, and it was moved forward for consideration in this Draft EIR. The Build Alternative is determined to be the only feasible alternative that could attain most of the basic project objectives. Hence, a No Project Alternative and a Build Alternative have been identified by RCTC and Metrolink for consideration in this Draft EIR.

2.3.1. No Project Alternative

State CEQA Guidelines § 15126.6(e) requires that, among the project alternatives, an EIR include a "no project" alternative. State CEQA Guidelines § 15126.6(e)(2) requires that the no project alternative analysis "discuss the existing conditions…as well as what would be reasonably expected to occur in the foreseeable future if the Project were not approved, based on current plans and policies and consistent with the available infrastructure and community services."

Under the No Project Alternative, implementation of improvements at the Riverside-Downtown Station would not be constructed and the current configuration of the Riverside-Downtown Station would remain the same. Although there would be no project-related impacts to environmental resources, the No Project Alternative would not meet the Project objectives or improve operations to accommodate the 91/PV Line or the IEOC Lines. Train capacity and storage would be limited to the existing platforms. The No Project Alternative does provide insight on future conditions with no improvements and serves as a baseline for comparison with the Build Alternative.

2.3.2. Build Alternative

RCTC and Metrolink propose improvements to the following elements of the Riverside-Downtown Station: 1) Station Platform and Tracks; 2) Pedestrian Access; and 3) Parking, Circulation, and Streetscape. The proposed improvements include building an additional passenger loading platform and tracks to the east side of the existing station to improve Metrolink service and extend the existing pedestrian overpass to access the new proposed platform (Figure 2.3-1).

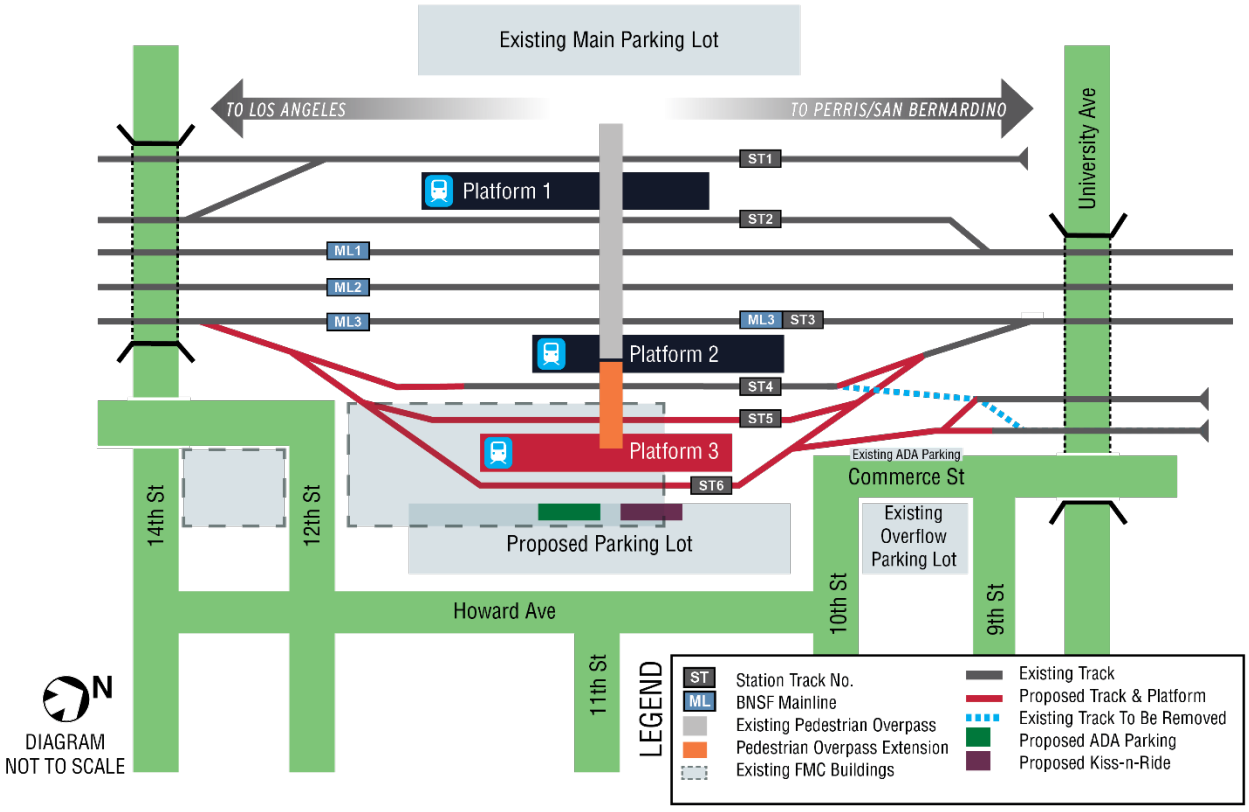

Figure 2.3-1. Build Alternative

The proposed track would also connect into the existing station layover tracks on the north end of the station and provide additional parking and improve traffic flow on the east side of the station. A summary of the proposed Build Alternative improvements is presented in Table 2.3-1.

Table 2.3-1. Summary of Proposed Build Alternative Improvements

Element	Description
Station Platform and Track Improvements	• Add a new center platform (Platform 3) • Add new tracks (Station Tracks 5 and 6) • Modify the railroad signal system
Pedestrian Access Improvements	• Extend pedestrian overpass access to the new Platform 3 • Provide emergency egress at three locations
Parking, Circulation, and Streetscape Improvements	• Relocate ADA parking • Modify the bus drop-off area • Add sidewalks and trees • Add parking spaces

ADA = Americans with Disabilities

The proposed improvements would enhance Metrolink train connections without affecting BNSF service. The improvements would be designed in accordance with the most recent applicable codes, SCRRA, BNSF, ADA, American Railway Engineering and Maintenance-of-Way Association (AREMA), Federal Rail Administration (FRA), and California Public Utilities Commission (CPUC), standards, and guidelines.

2.3.3. Build Alternative Project Features

Station Platform and Track Improvements

The Build Alternative, includes the following station platform and track improvements as part of the proposed Project (Figure 2.3-1):

- Addition of a new center platform (Platform 3) that is approximately 680 feet long and 30 feet wide with direct access from the new parking area to the east via an at-grade crossing and access from the west using the extended pedestrian overpass from Platform 2
- Addition of new tracks (Station Tracks 5 and 6) and other track improvements
- Modification of the railroad signal system

Platform 3 would be located between Station Tracks 5 and 6. Platform 3 would be able to service seven 85-foot passenger cars. The centerline to centerline spacing of the parallel tracks at the platform would be approximately 40 feet. Demolition of existing structures and other ancillary improvements would be required to facilitate construction of the station platform and track improvements.

Pedestrian Access Improvements

The Build Alternative includes the following pedestrian access improvements as part of the proposed Project:

- Extend the existing pedestrian overpass access from Platform 2 to Platform 3 (Figure 2.3-1).
- Add pedestrian at-grade access from the proposed surface parking lot on the east side of proposed station improvements to Platform 3, and safety enhancements such as proper channelization and automated gates and flashers would be included where appropriate.
- Provide emergency egress at three locations from Platform 3:
  - Construct new north end pedestrian at-grade crossing to proposed surface parking lot
  - Construct new pedestrian access from proposed surface parking lot via Pedestrian Overcrossing (Design Option 1)
  - Construct new south end pedestrian at-grade crossing to proposed surface parking lot

Parking, Circulation, and Streetscape

The Build Alternative includes the following parking, circulation, and streetscape improvements as part of the proposed Project:

- Relocate ADA parking
- Modify the bus drop-off area
- Add sidewalks and trees
- Add up to 560 additional parking spaces (proposed surface parking lot) at the east side of the station

Utility Relocations

The Build Alternative would require the relocation of the following utilities:

- Gas: SoCal Gas Company
- Electric: City of Riverside
- Water: City of Riverside
- Fiber Optic: AT&T, Spectrum, Frontier and Sprint
- Cable TV: CenturyLink
- Storm Drain and Sewer: City of Riverside

2.3.4. Design Options

One of the project features of the Build Alternative includes the construction of a new parking lot. RCTC has developed six parking lot design options under the Build Alternative. All project elements described in Section 2.3.3 would be implemented under each parking lot design option. The Build Alternative requires acquisition of an adjacent private property (Prism Aerospace building located at 3087 12th Street) east of the existing station to accommodate the construction of the new passenger platform and additional tracks. The remaining area of the acquired property will be incorporated as part of the expanded Riverside-Downtown Station as a new surface parking lot, which will increase available parking to the east of the station. RCTC currently owns and operates the overflow parking lot to the northeast of the station and may select to combine the existing overflow parking lot with the proposed new parking lot. Six parking lot design options are evaluated in this Draft EIR to determine the best configuration of the expanded parking lot to enhance the station's amenities and serve the needs of the general public. Under all parking lot design options, the area proposed to be converted to a parking lot is contained within the same parcels evaluated in this Draft EIR, with minor variations in size and number of parking stalls, but generally within the same construction footprint. As such, Build Alternative project features (refer to Section 2.3.3), such as the new passenger platform and additional tracks, would be the same under all design options, while the six parking lot configurations presented in this Draft EIR are considered as a variation of the same project feature. The parking lot design variations are identified as "design options" because the variation may lessen or avoid a specific impact to an evaluated environmental resource but would not substantially alter the overall environmental effects of the proposed Project. In contrast, an "alternative" will have a greater potential to either significantly increase or lessen the environmental effects of a project when compared to a design option.

As part of the Build Alternative, Design Option 1 proposes a longer extension of the pedestrian overpass access from the new proposed platform to the new surface parking lot and is intended to be used with one of the parking design options. Design Options 1A, 1B, 2A, 2B, 3A, and 3B are associated with the new expanded surface parking lot and combining this new parking lot with the existing overflow parking lot on the east side of the station. This parking design option includes traffic circulation improvements along Howard Avenue, 9th Street, 10th Street, and Commerce Street. If RCTC decides to move forward with the Build Alternative and any one of the six proposed parking design options, Design Option 1 may or may not be selected to be incorporated as part of the selected Build Alternative. A summary of the proposed design options is presented in Table 2.3-2.

Table 2.3-2. Summary of Proposed Build Alternative with Design Options

Build + Design Option	Description	Key Features
Pedestrian Overpass Access Improvements		
Design Option 1	Pedestrian overpass access extended from the new Platform 3 to the new surface parking lot	Connects to new surface parking lot Must be used in conjunction with Design Options 1A, 1B, 2A, 2B, 3A, or 3B
Parking, Circulation, and Streetscape Improvements		
Design Option 1A	New surface parking lot east of station	Up to approximately 556 parking spaces[1] Impacts existing structures and other ancillary structures and residential parcels on the corner of 12th Street and Howard Avenue to facilitate construction of the proposed improvements
Design Option 1B	New surface parking lot east of station	Up to approximately 500 parking spaces[1] Avoids relocation impacts to residential parcels on the corner of 12th Street and Howard Avenue
Design Option 2A	New surface parking lot east of station combined with existing overflow parking lot with the extension of Howard Avenue through to 9th Street	Up to approximately 560 parking spaces[1] Impacts existing structures and residential parcels on the corner of 12th Street and Howard and requires acquisition of additional parcels directly east of the existing overflow parking lot and vacation of 10th and Commerce Streets
Design Option 2B	New surface parking lot east of the station combined with existing overflow parking lot and the extension of Howard Avenue through to 9th Street	Up to approximately 516 parking spaces[1] Avoids relocation impacts to residential parcels on the corner of 12th Street and Howard Avenue
Design Option 3A	New surface parking lot east of the station combined with existing overflow parking lot and the extension of Howard Avenue through to 9th Street	Up to approximately 470 parking spaces[1] Avoids impacts to additional parcels east of the existing overflow parking lot by routing Howard Avenue around the parcels
Design Option 3B	New surface parking lot east of the station combined with existing overflow parking lot and the extension of Howard Avenue through to 9th Street	Up to approximately 414 parking spaces[1] Avoids relocation impacts to additional parcels east of the existing overflow parking lot and residential parcels on the corner of 12th Street and Howard Avenue

[1] Indicates an approximate number of parking stalls. Number of parking stalls provided are the maximum estimate of parking stalls within the preliminary layout for each design option. These options illustrate the potential capacity of each parking lot design option for evaluation and comparison purposes in this EIR. The number of stalls may change due to implementation of proposed avoidance, minimization, and mitigation measures for noise. In addition, the number of stalls may change during the final design phase due to design refinement to accommodate existing site hydrological conditions. These factors may reduce the approximate number parking stalls under each estimate, but the potential reductions in the number of parking stalls are proportionate with the maximum parking stall estimate under each design option.

Pedestrian Overpass Access Improvements

Access from the existing station area would be provided by the proposed extension of the pedestrian overpass (Figure 2.3-2, Build Alternative with Pedestrian Overpass Access Design Option 1). The Build Alternative with Pedestrian Overpass Access Design Option 1 includes a longer extension of the pedestrian overpass to Platform 3 and new surface parking lot (two spans, two towers/elevators).

The new pedestrian overpass elevator tower would be located 14 feet clear of both Track 5 and Track 6 on Platform 3. Emergency egress access would be provided by two 10-foot-wide, at-grade pedestrian crossings at the north and south end of Platform 3 to the proposed surface parking lot.

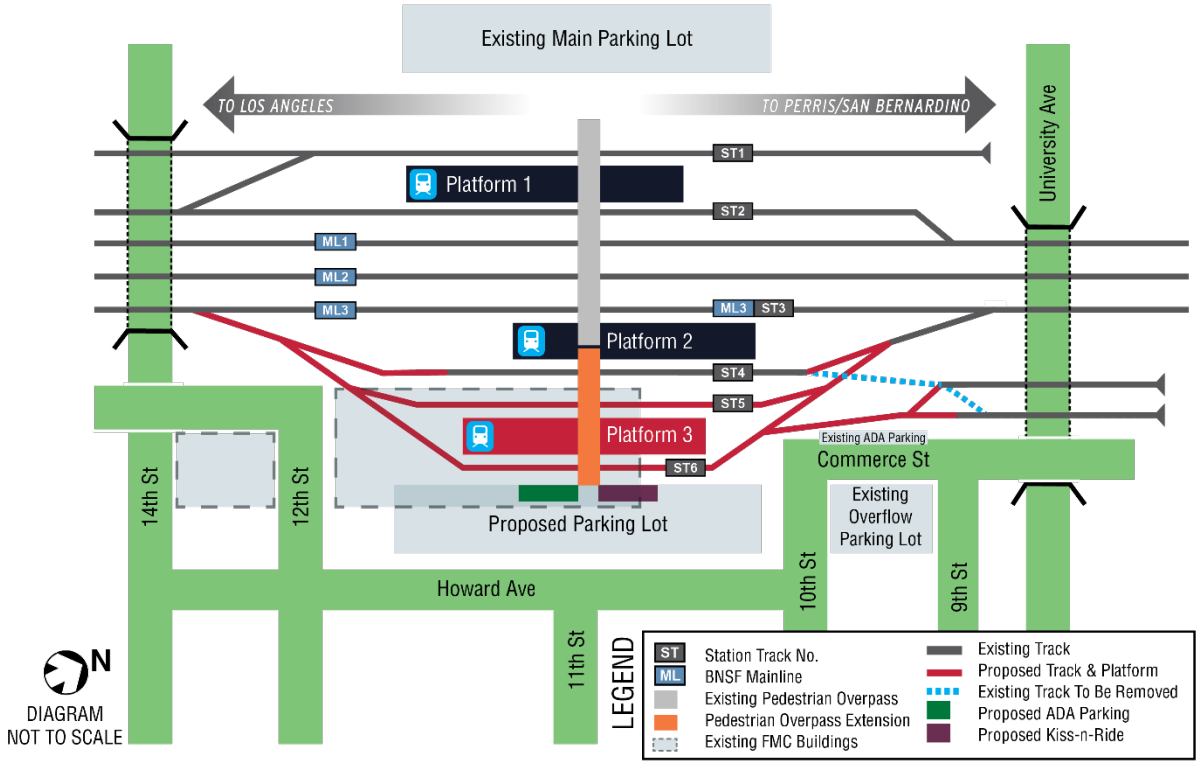

Figure 2.3-2. Build Alternative with Pedestrian Overpass Access Design Option 1

Parking, Circulation, and Streetscape Improvements

All parking design options would require the acquisition of parcels directly east of the station and demolition of existing structures and other ancillary structures to facilitate construction of the proposed Build Alternative improvements:

- Parking Design Option 1A and 1B adds a new surface parking lot and maintains separation (10th Street) from the existing overflow parking lot on the eastside of the station (Figure 2.5-1[3], Build Alternative with Parking Design Option 1A and Figure 2.5-2, Build Alternative with Parking Design Option 1B).
  - Parking Design Option 1A – Acquisition and demolition of residential parcels on the corner of 12th Street and Howard Avenue would be required (Figure 2.5-1, Build Alternative with Parking Design Option 1A).
  - Parking Design Option 1B – Avoids impacts to residential parcels at the corner of 12th Street and Howard Avenue (Figure 2.5-2, Build Alternative with Parking Design Option 1B).

[3] Figure 2.5-1 through Figure 2.5-6 are located at the end of this chapter.

- Parking Design Options 2A and 2B proposes a new surface parking lot directly east of the station combined with the existing overflow parking lot.
  - Parking Design Option 2A – Acquisition and demolition of residential parcels on the corner of 12th Street and Howard Avenue would be required. This option would also include extending Howard Avenue through to 9th Street and would require additional acquisition of parcels directly east of the existing overflow parking lot as well as partial street vacations for 10th Street and Commerce Street (Figure 2.5-3, Build Alternative with Parking Design Option 2A).
  - Parking Design Option 2B – Avoids impacts to residential parcels at the corner of 12th Street and Howard Avenue. This option would also include extending Howard Avenue through to 9th Street and would require additional acquisition of parcels directly east of the existing overflow parking lot as well as partial street vacations for 10th Street and Commerce Street (Figure 2.5-4, Build Alternative with Parking Design Option 2B).
- Parking Design Options 3A and 3B propose a new surface parking lot directly east of the station combined with the existing overflow parking lot and extension of Howard Avenue through to 9th Street.
  - Parking Design Option 3A – Acquisition and demolition of residential parcels on the corner of 12th Street and Howard Avenue would be required. This option would also include extending Howard Avenue through to 9th Street, as well as partial street vacations for 10th Street and Commerce Street, while avoiding additional acquisition of parcels directly east of the existing overflow parking lot (Figure 2.5-5, Build Alternative with Parking Design Option 3A).
  - Parking Design Option 3B – Avoids impacts to residential parcels at the corner of 12th Street and Howard Avenue. This option would also include extending Howard Avenue through to 9th Street as well as partial street vacations for 10th Street and Commerce Street, while avoiding additional acquisition of parcels directly east of the existing overflow parking lot (Figure 2.5-6, Build Alternative with Parking Design Option 3B).

2.3.5. Right of Way Requirements

Full acquisition of the existing Prism Aerospace building located at 3087 12th Street would be required to construct the proposed Project. Temporary construction easements (TCE) may be required to accommodate the construction of project features adjacent to the Project. ROW requirements identified in this Draft EIR are considered preliminary and subject to change as additional information and design plans are further developed. ROW requirements to construct the proposed Project may result in a minor increase or decrease in response to comments or selection of a preferred alternative and/or during subsequent phases of project development or final design; however, the project footprint would remain the same.

2.3.6. Construction Schedule

Project construction activities will occur for an estimated total of 24 months. It is anticipated that construction of the Build Alternative would begin late 2023 and be completed by late 2025. Project construction would typically take place between the hours of 7:00 a.m. and 7:00 p.m., in accordance with the City of Riverside Municipal Code § 7.35.0120(G). The proposed Project and selected all parking design option would be constructed in phases to avoid impacts to commuter and freight train schedules.

2.3.7. Preliminary Cost Estimate

The Project is funded by Measure A proceeds, SCORE, and a FTA grant. Preliminary cost estimates for the Build Alternative vary by the design option(s) selected from approximately $64.7 million to $80.4 million, as summarized in Table 2.3-3.

Table 2.3-3. Preliminary Cost Estimate

Project Cost	Design Option 1[a]	Build Alternative					
		+ Design Option 1A	+ Design Option 1B	+ Design Option 2A	+ Design Option 2B	+ Design Option 3A	+ Design Option 3B
Construction	$4,038,000	$20,449,000	$20,384,000	$20,839,000	$20,774,000	$20,678,000	$20,614,000
Environmental	--	$6,413,000	$6,404,000	$6,421,000	$6,412,000	$6,413,000	$6,404,000
ROW	--	$14,032,000	$11,853,000	$18,060,000	$15,881,000	$14,042,000	$11,863,000
Engineering	$485,000	$8,707,000	$8,706,000	$10,000,000	$9,446,000	$9,444,000	$9,443,000
Support Costs[b]	$485,000	$2,221,000	$2,213,000	$2,268,000	$2,260,000	$2,249,000	$2,241,000
Other Costs[c]	$1,073,000	$15,374,000	$15,125,000	$16,724,000	$16,307,000	$16,083,000	$15,835,000
Total	**$6,081,000**	**$67,196,000**	**$64,685,000**	**$74,312,000**	**$71,080,000**	**$68,909,000**	**$66,400,000**

[a.] RCTC may choose to incorporate Design Option 1 to any of the Design Options (1A through 3B). The cost of Design Option 1 would be added to the cost of the Build Alternative and parking lot design option selected.
[b.] Support costs include project management and construction management.
[c.] Other costs include contingency and inflation.
-- indicates not applicable

2.4. Alternatives Considered But Eliminated from Further Evaluation

Pursuant to § 15126.6(c) of the CEQA Guidelines, a range of potential alternatives to the proposed Project should include those that could feasibly accomplish most of the basic objectives of the Project and could avoid or substantially lessen one or more of the significant effects. CEQA Guidelines also require EIRs to identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process; the reasons underlying the lead agency's determination should be briefly explained. These factors are discussed in Chapter 5.0 Comparison of Alternatives; however, each alternative that was evaluated and eliminated is summarized below.

Project Definition Report

In November 2016, RCTC completed a PDR for the project. A PDR is a preliminary report that defines the major project components, describes the project issues, recommends a preferred design approach, and establishes a conceptual cost estimate. Six Alternatives were considered in the PDR and evaluated against the evaluation criteria listed in Table 2.4-1. One of the major factors evaluated in the initial screening of alternatives considered environmental impacts of each alternative, including property acquisitions and avoiding impacts to historic properties, such as the former FMC Complex (Plant 1 and 2). Preliminary layouts of the alternatives are provided in Appendix D. The six alternatives that were considered in the PDR were:

Alternative 1 focused on adding additional platform capacity on the east side of the station with the new platform adjacent to, but slightly north of, the existing platform. This alternative provided the capacity required while minimizing impact to BNSF but presented impacts to passenger accessibility and convenience. Locating the station platform further north required two pedestrian crossings between platforms, thus lengthening the time it would take to transfer between services. The location of the station platform would not achieve the project's basic objective of facilitating efficient passenger flow. Impacts to the former FMC Plant 1 building, would occur as a result of the additional tracks leading into the new platform.

Alternative 2 shifted the platform further south, providing improved passenger accessibility by allowing for the existing pedestrian bridge to potentially be extended. This alternative also limited impacts to BNSF but required multiple property acquisitions, including both the Prism Aerospace building (former FMC Plant 1 building) and the Solar Max building (former FMC Plant 2 building) just south of the station. This was identified as an unacceptable impact in the initial alternatives development and eliminated from further consideration because this alternative would result in significant environmental impacts and the most property acquisitions and displacements This alternative would also result in the greatest impacts to historic properties because the former FMC Complex (Plant 1 and Plant 2), would be removed.

Alternative 3 provided convenient passenger access and minimized any impacts to adjacent businesses by constructing the additional tracks and platform on RCTC owned property on the west side of the station. Although this alternative would avoid the removal of historic buildings, Alternative 3 would not allow the 91/PV Line and IEOC trains to use the west side platform because there are no existing crossovers between the Riverside-Downtown Station and the 91/PV Line connection, and BNSF will not allow new crossovers to be added/constructed and it would require removal of station improvements that are planned or in construction. It would also require reconfiguration of bus access into the main station parking lot and reduce existing parking capacity. In addition to failing to meet most of the project objectives, this alternative was determined infeasible and it was eliminated from further consideration.

Alternative 4 looked at minimizing the need for property acquisition by shifting the track usage of the BNSF mainline to the west. This alternative increased the off-mainline capacity of the existing platform by shifting the BNSF mainline using a series of reversing curves. To replace the lost platform capacity on the west side of the station, a platform track with a side platform would require less property to construct at 16 feet (versus 26-30 feet for a center platform) and it would repurpose the existing layover tracks to mainline tracks and require a new at grade crossing across Mission Inn Avenue. While this alternative reduced the need for property acquisitions and avoided impacts to historic buildings, Alternative 4 does not allow the 91/PV Line and IEOC trains to use the west side platform because there are no existing crossovers between the Riverside-Downtown Station and the 91/PV Line connection, and BNSF will not allow new crossovers to be added/constructed. It would also require a new crossover track on the BNSF Mainline 1 between the Riverside-Downtown Station and CP Highgrove, and a new railroad bridge over 14th Street. The elimination of two existing layover tracks on the west side of the station would also preclude construction of a future planned third layover track at this location. The removal of the existing layover tracks directly adjacent to the Riverside-Downtown Station would result in commuter trains being serviced and parked at a remote facility in Colton, which would add operational logistics and costs to accommodate the loss of the layover tracks at the Riverside-Downtown Station. The remote facility would need to be checked for adequate space to service and park the trains. Agreements with BNSF would also need to be confirmed for adequate permission to move trains between the remote facility and the Riverside-Downtown Station. The remote facility would also require additional train movements on the BNSF system, which would be above the current limits in the Shared Use Agreement between BNSF and RCTC. Therefore, renegotiation of the Shared Use Agreement would be required. Efforts to renegotiate the existing Shared Use Agreement have been ongoing for the last 20 years, and BNSF may object to the additional train movements. It would also require reconfiguration of bus access into the main station parking lot and reduce existing parking capacity.

In addition to failing to meet most of the project objectives, this alternative was considered infeasible and eliminated from further consideration.

Alternative 5 intended to split the difference, providing additional capacity on both the west and east sides of the station. Though this minimized impacts to adjacent properties and BNSF while maintaining passenger accessibility, it still required removing the existing RCTC station features on the west side of the station and the construction of a new pedestrian bridge over the tracks because the proposed new platform would be located where the west elevators and security tower are located. This alternative would result in the removal of the historic, former FMC Plant 1 building, and potentially the removal (or a portion thereof) of the adjacent former FMC Plant 2 building. Alternative 5 was eliminated from further consideration because of the removal of existing station elements and it was determined infeasible because of impacts to BNSF.

Alternative 6 extended the station's footprint to the south and required a partial or complete property acquisition of the former FMC Plant 1 building (currently Prism Aerospace). While modifications or removal of the building is required, this alternative preserved the solar panel manufacturing business (Solar Max) to the south and required only minimal property acquisition, adjacent to this business. Passenger and layover capacity would be maintained and expanded to the north of the station.

In summary, following a comprehensive process reviewing six alternative concepts in partnership with Metrolink during preparation of the PDR, Alternative 6 (the Build Alternative) was identified as the alternative for the expansion of the Riverside-Downtown Station because it met the most criteria, including the capacity for additional growth and was moved forward for analysis of this Draft EIR. Table 2.4-1 shows the proposed alternatives, evaluation criteria, and whether the evaluation criteria was met (indicated by an "X"). In addition to low evaluation criteria results, Alternatives 1 through 5 were eliminated from further consideration because the five alternative concepts resulted in fatal flaws, were determined infeasible to construct, failed to meet basic project objectives, and/or because of the inability to avoid significant environmental impacts.

Table 2.4-1. 2016 Project Definition Report Alternatives Evaluation and Criteria

Evaluation Criteria	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6
Layover Capacity	X	X	X	X	X	X
Connectivity	N/A	X	X	X	X	X
Safe Access	X	X	X	X	X	X
No Property Needs	N/A	N/A	X	X	N/A	N/A
Environmental	X	X	X	X	X	X
No Impact to Businesses	N/A	N/A	X	X	N/A	N/A
Meets service plan needs	X	X	N/A	N/A	X	X
Capacity for Growth beyond Plan	N/A	N/A	N/A	N/A	X	X
No BNSF impact	X	X	N/A	N/A	N/A	X
Criteria Met	5	6	6	6	6	7

N/A = not applicable

Historic Resources Avoidance and Adaptive Reuse Alternatives

In addition to the alternatives considered in the PDR, seven additional avoidance alternatives and two adaptive reuse alternatives were developed to avoid and minimize impacts to the former FMC Plant 1 building, which is a historic resource. The historic resources avoidance and adaptive use alternatives are discussed in detail in Chapter 5.0, Comparison of Alternatives, and are summarized below.:

Historic Resources Avoidance Alternatives

- Avoidance Alternative 1: New Platform and Tracks on the West Wide of the Existing Station
- Avoidance Alternative 1A: New Platform and Tracks on the West Side of the Existing Station (avoids crossing the 14th Street Railroad Bridge)
- Avoidance Alternative 2: New Platform and Tracks on the East Side of the Existing Station
- Avoidance Alternative 2A: New Platform and Tracks on the East Side of the Existing Station (avoids existing layover tracks)
- Avoidance Alternative 2B: New Platform and Tracks on the East Side of the Existing Station (avoids existing layover tracks and Mission Inn Avenue)
- Avoidance Alternative 2C: New Platform and Tracks on the East Side of the Existing Station (not stub ended)
- Avoidance Alternative 3: New Platform and Tracks on the East Side of 14th Street

Avoidance Alternatives 1, 1A, 2, 2A, 2B, 2C, and 3 avoid impacts to the historic, former FMC Complex; however, they do not meet the performance criteria established in the PDR, the Purpose and Need of the proposed Project and/or are infeasible to construct.

Historic Resources Adaptive Reuse Alternatives

- **Adaptive Reuse** proposed a complete retrofit/reuse of the former FMC Plant 1 building by incorporating the building into the Project.
- **Partial Reuse** would deconstruct FMC Plant 1 building so that only a canopy remained, covering a portion of the proposed track and platform, reducing the structure's size to a much smaller one than the existing size of Plant 1.

The historic resources avoidance alternatives and adaptive reuse alternatives were considered but eliminated from further review. Section 3.4, Cultural Resources provides detailed information regarding the historic resources avoidance alternatives and the evaluation of why these alternatives were eliminated. Additional discussion related to avoidance alternatives pertaining to the former FMC Complex is also provided in Appendix Q, Individual Section 4(f) Evaluation (in Chapter 5.0).

2.5. Permits and Approvals

Certification of the EIR and approval of the Project by RCTC would be required prior to commencement of construction and implementation. This EIR, as defined by § 15161 of the State CEQA Guidelines, serves as an informational document for the general public and the proposed Project's decision-makers. RCTC, as CEQA lead agency, has the responsibility for preparing and circulating the Draft EIR for public review and certifying the Final EIR, pursuant to State CEQA Guidelines § 15089 and 15090, respectively. Implementation of the Project would require discretionary actions and permits from the agencies identified in Table 2.5-1.

Table 2.5-1. Anticipated Permits and Approvals

Agency	Action	Timing
California Public Utilities Commission	Approval for pedestrian bridge and at-grade crossings	Final Design Phase
City of Riverside	Approval of street improvements.	Final Design Plans and Construction Phase
City of Riverside	Obtain encroachment permit	Final Design Phase
Federal Transit Administration	Approval of NEPA Environmental Document	End of Environmental Phase
Regional Water Quality Control Board	Stormwater Pollution Prevention Plan and National Pollutant Discharge Elimination System General Permit	Pre-construction and Construction Phases
Riverside County Transportation Commission	Certification of the EIR, adoption of Findings and Statement of Overriding Considerations, adoption of the Mitigation Monitoring and Reporting Program	End of Environmental Phase
SHPO	Concurrence with the HRR historic property eligibility determination, FOE, and MOA	SHPO concurrence on the HRR was received on September 16, 2021. SHPO FOE concurrence and approval of MOA is expected after circulation of the Draft EIR/EA.
SHPO/U.S. Department of Interior	Draft Individual Section 4(f) concurrence from the official with jurisdiction	Consultation with the official with jurisdiction was initiated on March 30, 2021 for the Draft Individual Section 4(f) Evaluation. A letter of concurrence was received from the Department of Interior on May 14, 2021 acknowledging the findings of the Individual Section 4(f) Evaluation.

Source: HNTB, 2020

FOE = Finding of Effect
HRR = Historic Resources Report
MOA = Memorandum of Agreement

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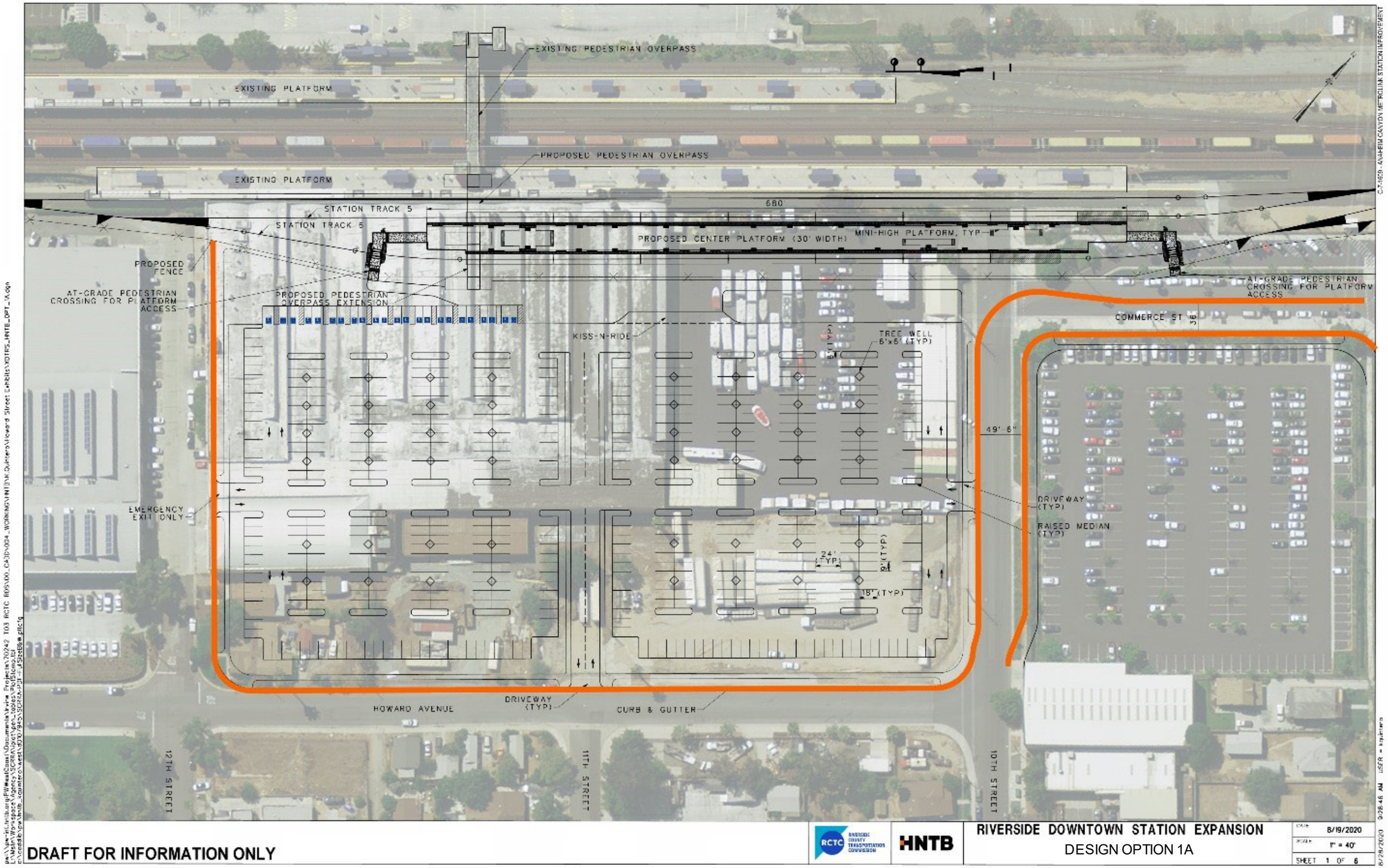

Figure 2.5-1. Build Alternative with Parking Design Option 1A

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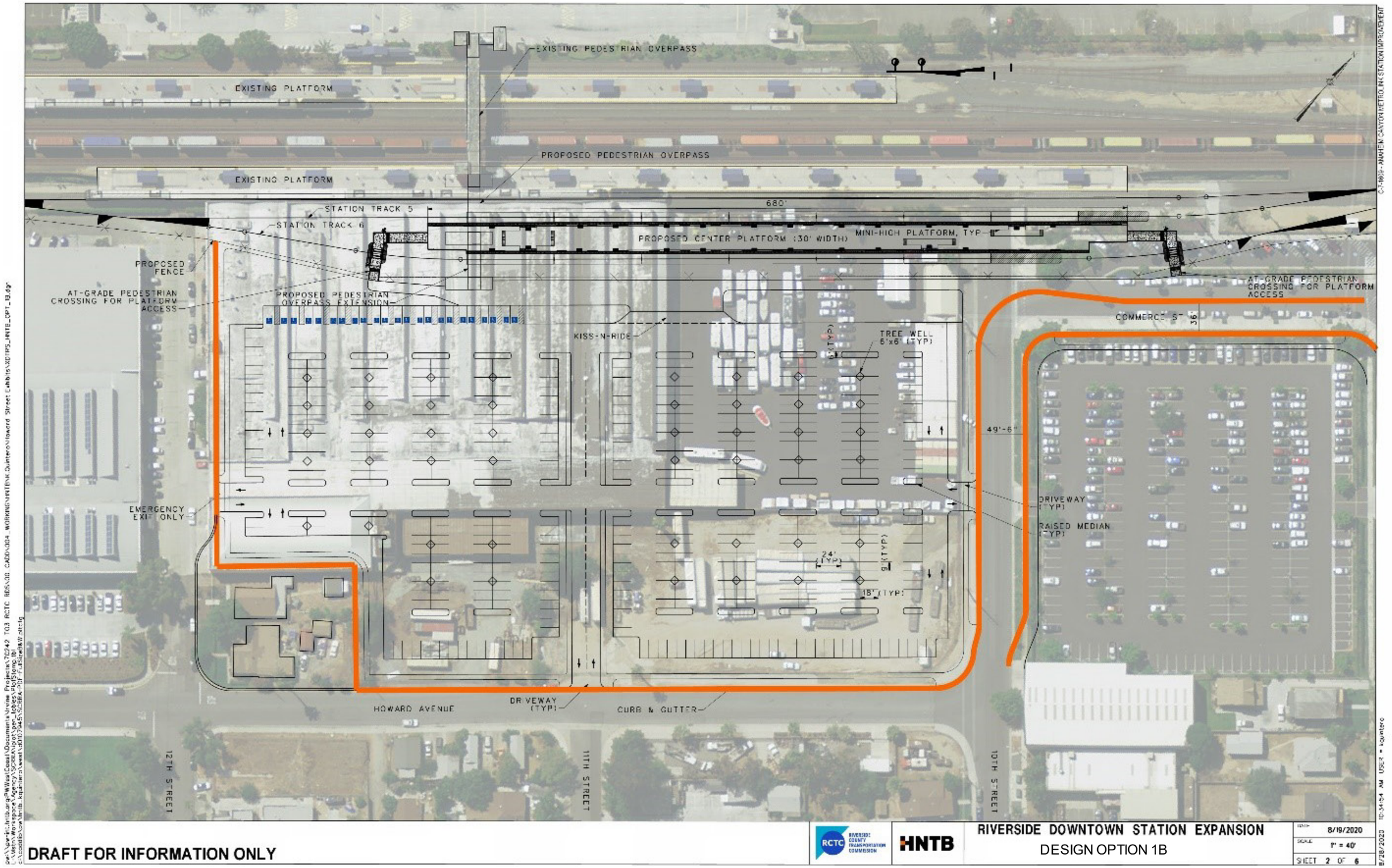

Figure 2.5-2. Build Alternative with Parking Design Option 1B

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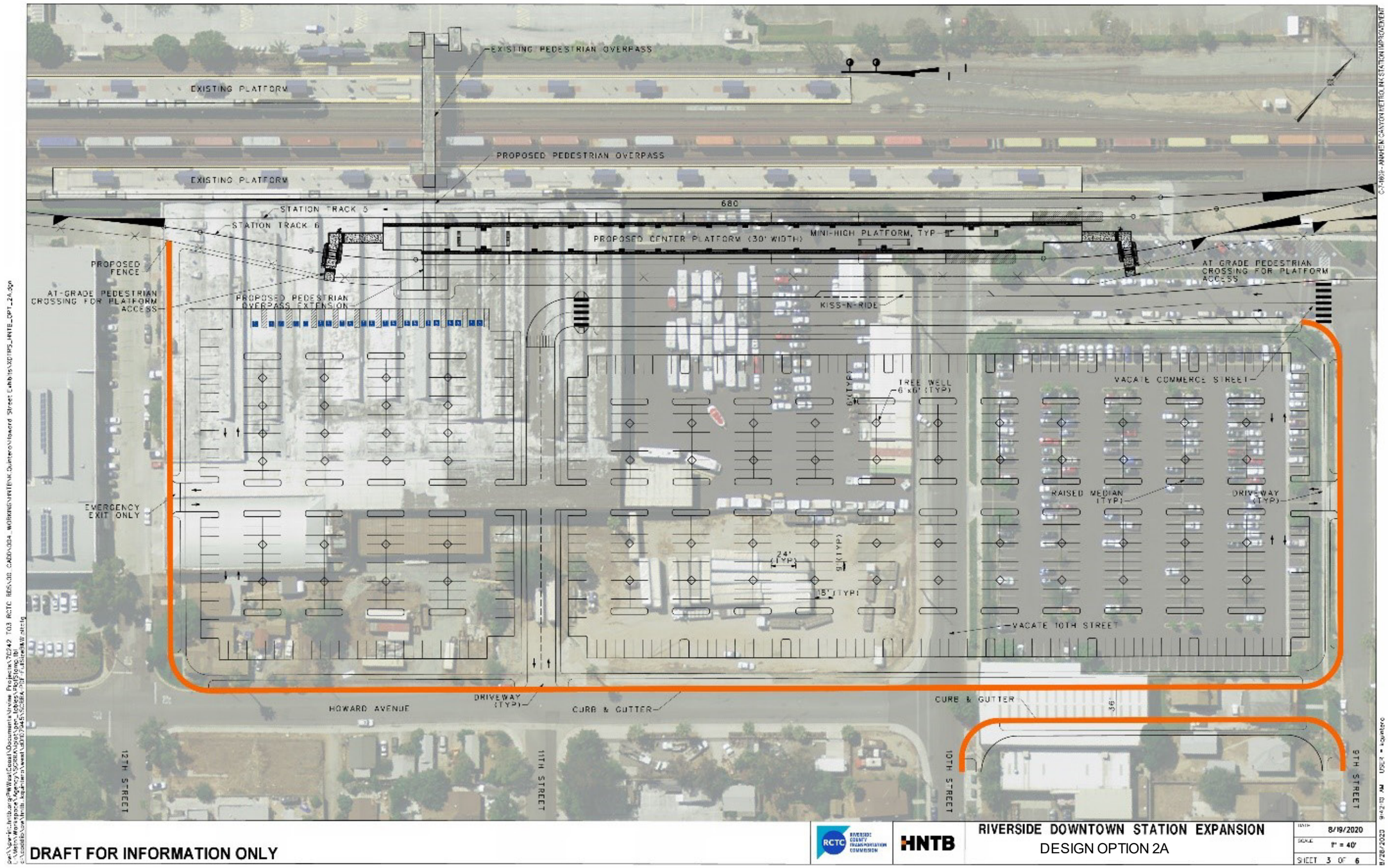

Figure 2.5-3. Build Alternative with Parking Design Option 2A

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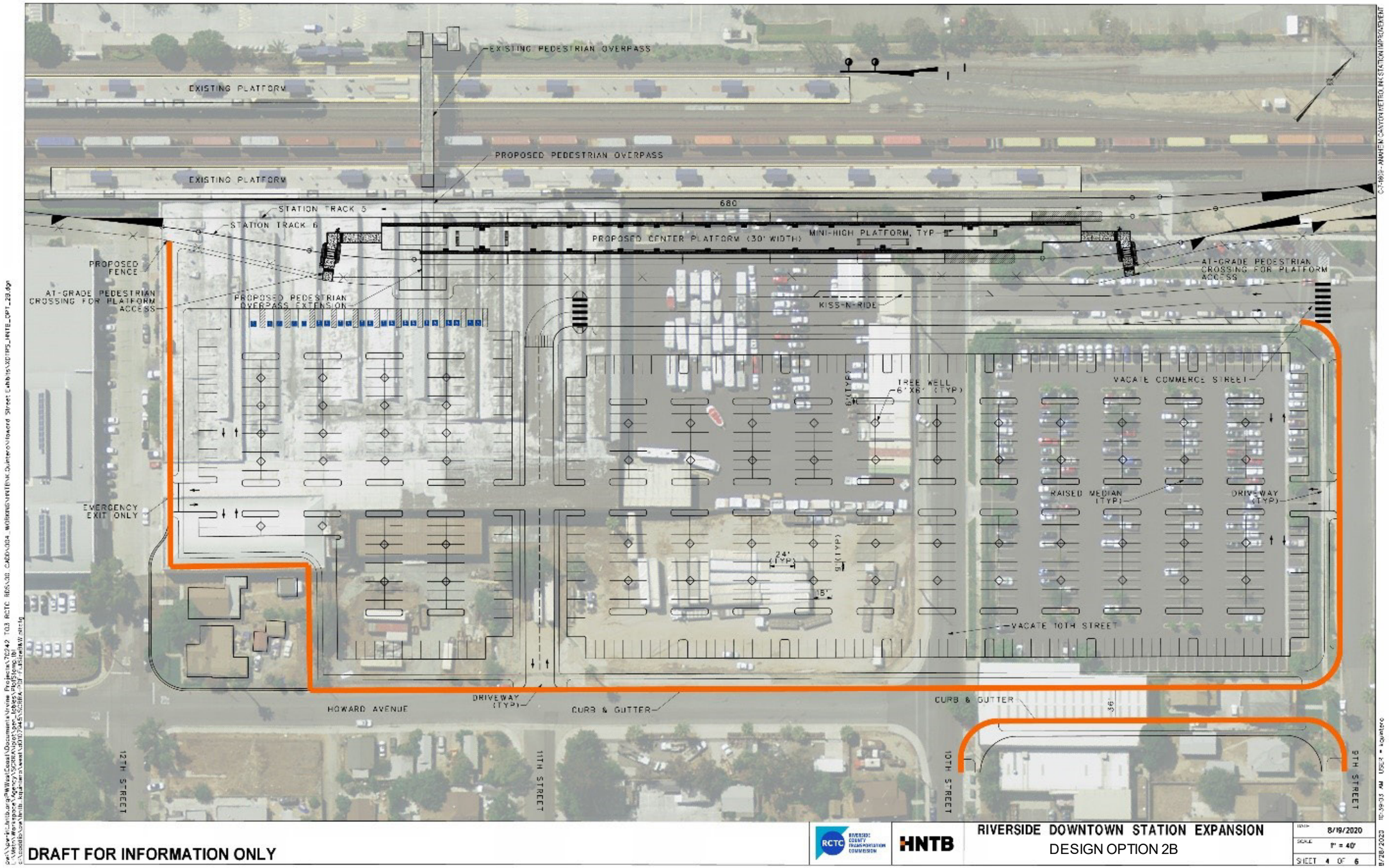

Figure 2.5-4. Build Alternative with Parking Design Option 2B

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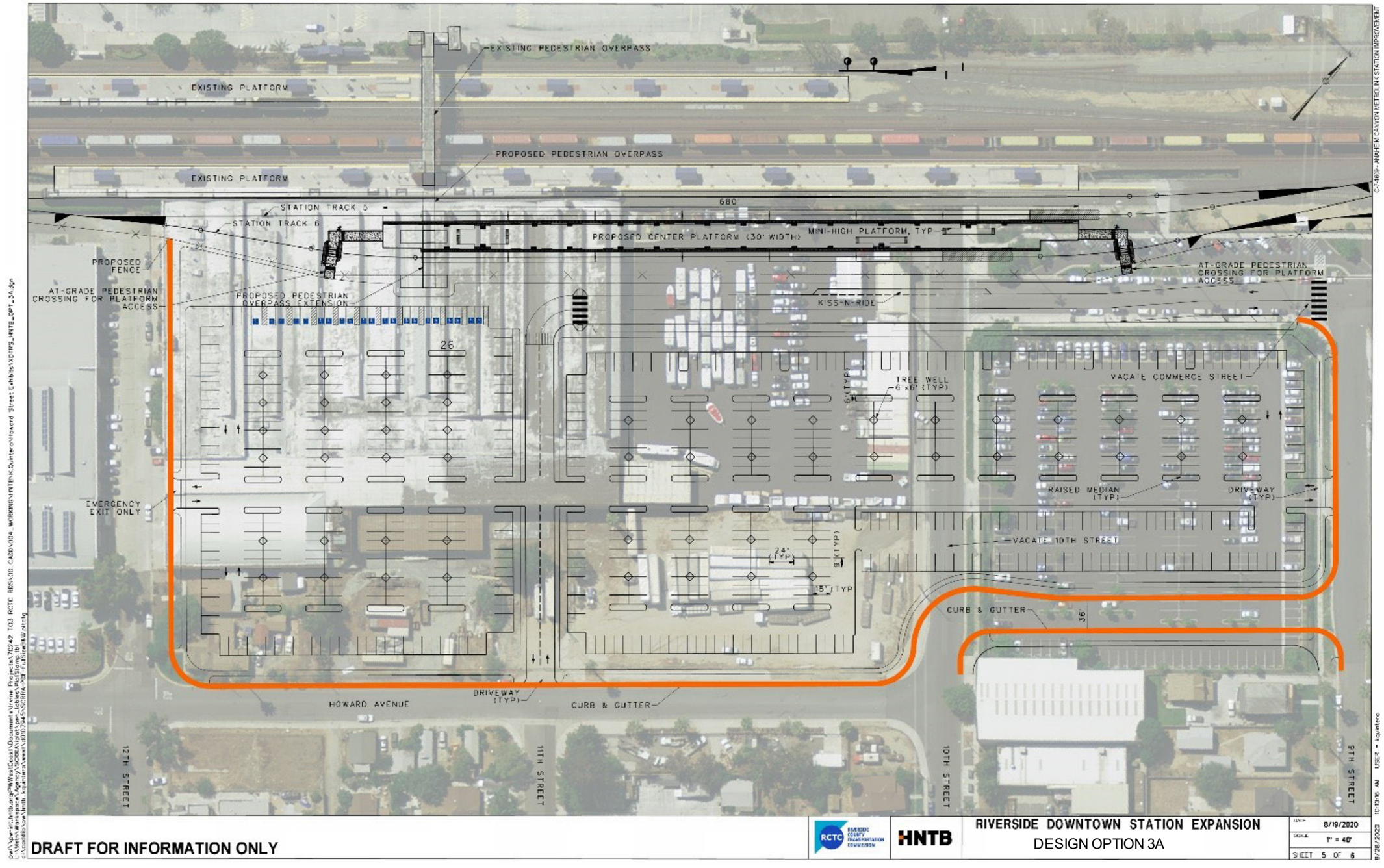

Figure 2.5-5. Build Alternative with Parking Design Option 3A

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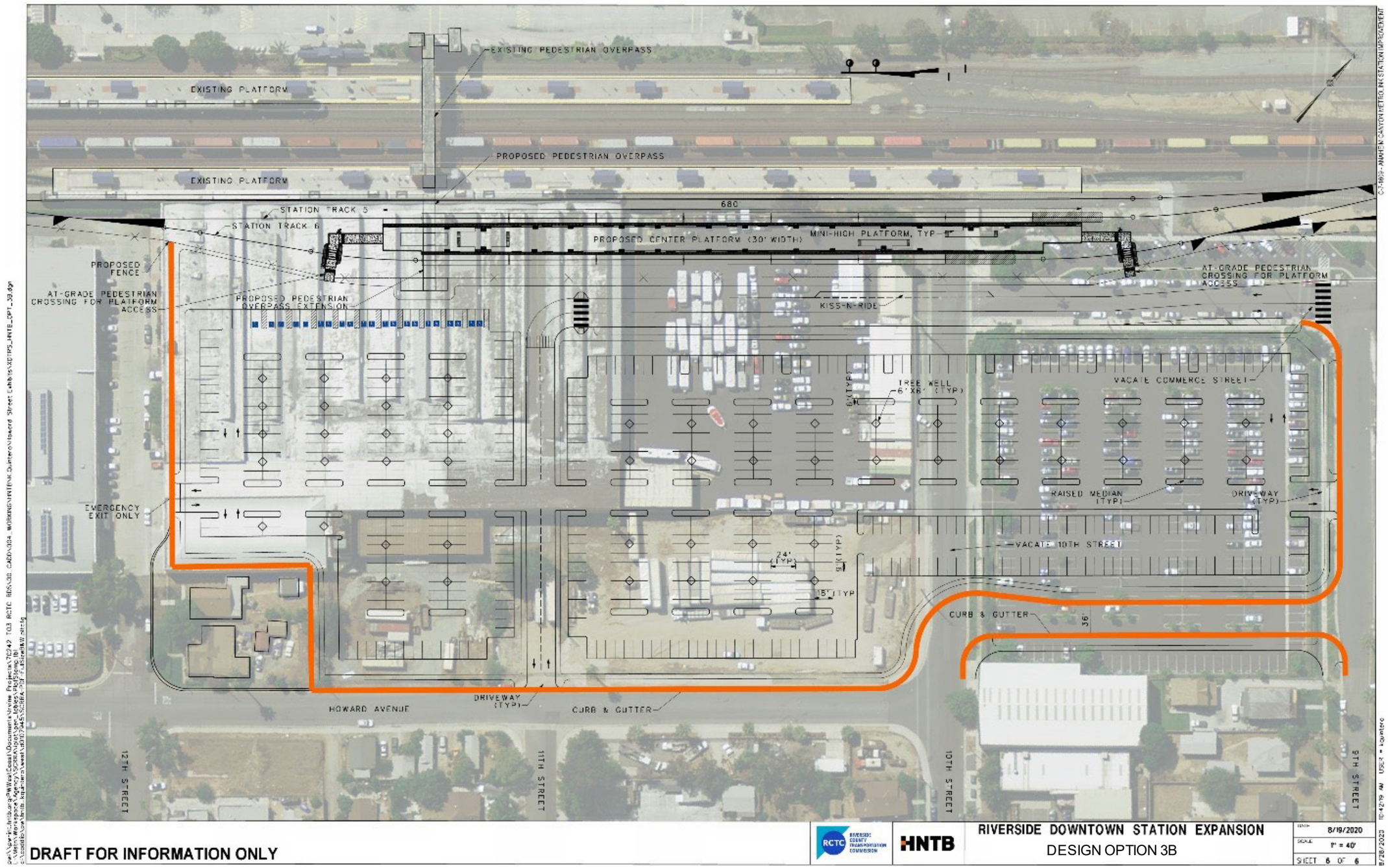

Figure 2.5-6. Build Alternative with Parking Design Option 3B

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3.0 Affected Environment and Environmental Consequences

This chapter analyzes the affected environment and resulting project impacts on human, physical, and biological environments within each environmental resource's respective study area for the Build Alternative. Analysis of each environmental topic includes a discussion of the affected environment (existing environmental conditions), environmental consequences (such as construction impacts, permanent impacts, and indirect impacts), avoidance, minimization, and/or mitigation measures, and the CEQA significance determination.

In accordance with *Appendix G, of the 2021 CEQA Guidelines & Statutes*[1], the following environmental topics and Mandatory Findings of Significance are addressed in Sections 3.1 through 3.18 of this Draft Environmental Impact Report (EIR), and Appendices G through T provide the technical studies that support the environmental analyses:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise and Vibration
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire
- Mandatory Findings of Significance

As part of the scoping and environmental analyses completed for the Project, the following environmental issues were considered, but no impacts were identified. Consequently, there is no further discussion of these environmental topics in this document:

- **Agricultural and Forestry Resources**. The proposed Project is located within an urbanized area in Downtown Riverside. According to the results of the field visit and land use research, there are no existing agricultural and forestry resources in the project area.
- **Mineral Resources**. The project site is located in an urbanized area and not within an area designated by the California Mineral Land Classification/Designation Program (retrieved April 2021) or the California Department of Conservation's California Geological Survey Mineral Resource Program, Surface Mining and Reclamation Act of 1975 (SMARA) Mineral Land Classification Project (August 2020) as a mineral resource zone.

The format of the environmental analysis in Chapter 3.0 of this Draft EIR is as follows:

Regulatory Framework. This section provides the regulatory context of the environmental resource being analyzed and identifies the applicable federal, state, and local regulations that govern the environmental resources described in the affected environment (existing conditions) section, including the relevant sections of the state CEQA guidelines that were used as the basis for determining the significance of the proposed Project's potential impact.

Methodology for Evaluating Environmental Impacts. This discussion describes the project study area boundaries established in the technical analyses includes the project footprint, which covers the extent of all proposed project improvements, ground disturbances activities, staging, and access areas. Project study area boundaries may include areas outside the project footprint depending on resource. This section also describes methods, processes, procedures, and/or assumptions used to characterize existing environmental conditions and evaluate the potential impacts in accordance with the CEQA thresholds.

[1]. Association of Environmental Professionals. 2021. *Appendix G, of the 2021 CEQA Guidelines & Statutes* is included in this Appendix F of this Draft EIR.

Affected Environment. This section describes the existing environmental conditions of each environmental resource in the project study area. In accordance with *Appendix G, of the 2021 CEQA Guidelines & Statutes* (Section [§] 15125[a]), the existing environmental conditions should be described when the NOP for the proposed Project is issued by the lead agency. Existing conditions for the proposed Project are based on the environmental conditions on January 2020, which serves as the baseline for impact analysis evaluated in this Draft EIR.

Environmental Impacts and Consequences. This section describes the thresholds for each resource in the *2021 CEQA Statute & Guidelines, Appendix G, Environmental Checklist Form* and the potential environmental impacts and consequences that would occur due to construction and/or operations of the proposed Build Alternative (Project) and all design options. Environmental impacts are evaluated relative to changes resulting from the implementation of the proposed Project to existing environmental conditions within the project study area. The Build Alternative consists of the construction of a new center platform, new tracks, modification of the railroad signal system, extension of the pedestrian overpass access to the new platform, emergency access, ADA parking, and parking lot and modification to the bus drop off area and streetscape improvements. However, the parking lot configuration is presented as design options and with another option to extend the pedestrian overpass to the new parking lot. Environmental impacts under the Build Alternative are similar for each design option unless stated otherwise. All design options generally encompass the same construction footprint and have minor variations in parking lot design. If an impact is identified for a particular design option, the environmental consequence varies between the proposed design options.

Avoidance, Minimization, and/or Mitigation Measures. This section identifies proposed measures that would avoid, minimize, or mitigate potential project-related impacts on the environmental resource. Avoidance measures are used to avoid potential adverse environmental effects that are otherwise not significant under CEQA. Minimization measures reduce known or anticipated environmental effects that—even without incorporation of the measures—are *not significant*. A "mitigation measure" is a measure designed to minimize a project's ***significant*** environmental impacts (California Code, Public Resources Code [PRC] § 21002.1(a).) When project impacts are found to be significant, mitigation measures are developed to reduce the impacts to the extent possible. Measures identified in this section apply to the Build Alternative and all parking lot design options, unless specifically identified as only being applicable to a certain design option.

CEQA Significance Conclusion. This section provides a significance determination for an environmental resource in accordance with state CEQA guidelines. Significance determinations are made without consideration of avoidance, minimization, and/or mitigation measures. Measures are labeled as "mitigation measures" only if they are to reduce impacts determined to be significant. If measures are included to reduce or avoid impacts that are not significant, they will be labeled as avoidance or minimization measures, not mitigation measures. Finally, the project description must clearly identify project features or "elements of a project" and state that these features or elements have been or will be considered prior to any significance determinations and if applicable, an explanation of how the applied mitigation measure(s) reduces the identified significant impact on the environmental resource. If the impact remains significant, additional discussion is provided to indicate why no mitigation is available or why the applied mitigation is not effective in reducing the significant impact to a level less than significant.

This EIR uses the following significance conclusion to denote the level of environmental impacts resulting from the implementation of the proposed Project:

- **No Impact.** This level of significance indicates that the construction and operation of the Project would not result in direct or indirect impacts on the environment resource. There is no change from existing conditions.
- **Less than Significant Impact.** This level of significance would not result in a significant or potentially significant impact in the existing environment. This impact level identifies that the degree of the impact would not meet or exceed the identified impact thresholds. Mitigation, even if feasible, is not required under CEQA.
- **Less than Significant with Mitigation Incorporated.** This level of significance indicates that the impact would meet or exceed the identified threshold and could result in a significant impact, but would be reduced to a less than significant level through the implementation of mitigation measures. *A significant impact* is defined by CEQA § 21068 as one that would cause "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project." Under CEQA, mitigation measures or alternatives to the Project must be provided, where feasible, to reduce the magnitude of significant impacts.
- **Potentially Significant Impact.** This level of significance indicates that the Project would result in a significant or potentially significant impact on the environment that could not be reduced to a less than significant level even

with the implementation of mitigation measures. Under CEQA, a project with significant and unavoidable impacts could proceed, but the lead agency would be required to prepare a "statement of overriding considerations" in accordance with CEQA Guidelines § 15093, explaining why the lead agency would proceed with the Project even though there is the potential for significant impacts.

Environmental Technical Studies Referenced in this Chapter of the Draft EIR. This Draft EIR includes the consideration of the analysis and findings contained in the technical reports listed below. Other sections of the Draft EIR may also reference the following additional documents, relative to a particular environmental topic being discussed:

- Air Quality Technical Report (HNTB, April 2021)
- Archaeological Survey Report (HNTB, March 2021)
- Biological Resources Report (HNTB, November 2020)
- Community Impact Assessment (HNTB, June 2021)
- Draft Individual Section 4(f)Evaluation (HNTB, March 2021)
- Energy Technical Report (HNTB, April 2021)
- Environmental Site Assessment, Limited Phase II (Ninyo & Moore, September 2019)
- *Geotechnical Exploration Report* (Leighton Consulting, Inc., August 2020)
- Historic Resources Report (HNTB, July 2021)
- Human Health Risk Assessment (Ninyo & Moore, May 2020)
- Hydrology/Hydraulics/Stormwater Quality Technical Memorandum (HNTB, May 2021)
- *Initial Site Assessment, Phase 1*: Ten APNs Adjacent to the Riverside-Downtown Metrolink Station (Ninyo & Moore, April 26, 2018)
- *Initial Site Assessment, Phase 1*: APNs 211-122-001, -002, and -003 (Ninyo & Moore, August 2018)
- Noise and Vibration Study Report (HNTB, July 2021)
- Paleontological Identification Report (HNTB, November 2020)
- Relocation Impact Report (HNTB, March 2021)
- Traffic Impact Analysis (HNTB, November 2020)
- Visual Impact Assessment (HNTB, June 2021)

3.1. Aesthetics

This section discusses the potential impacts resulting from the construction and operations of the proposed Build Alternative and all design options for aesthetics and visual resources. Information provided in this section is based on the results of the technical analysis in the *Visual Impact Assessment* (HNTB, 2021) prepared for the proposed Project.

3.1.1. Regulatory Framework

Applicable polices, laws, and regulations relative to aesthetics are herein:

State Requirements

California Environmental Quality Act. CEQA establishes that it is the policy of the state to take all action necessary to provide the people of the state "with…enjoyment of aesthetic, natural, scenic and historic environmental qualities" (California PRC, § 21001[b]).

Local and Regional Regulations

City of Riverside General Plan 2025 (2019). This plan defines the community vision and establishes a fundamental framework to guide decision-making about development, land use, resource management, public safety, public services, and general community well-being.

Citywide Design Guidelines and Sign Guidelines (adopted November 2007). These guidelines are implementing tools of the General Plan that apply to all properties in the City of Riverside. The zoning code presents development regulations specifically applicable to new projects or substantial improvements to existing projects. The guidelines are intended to improve overall urban design.

Riverside County General Plan (2015). This plan is the result of a comprehensive planning process that is guided by the Vision Statement, which establishes a series of fundamental values shaping the future quality of life for the County of Riverside. The Vision Statement was further refined by a set of General Plan principles, which provided further direction for this comprehensive planning process. The County's policies related to visual and aesthetic resources are provided in Chapter 3.0, Land Use Element of the General Plan. Table 3.1-1 provides a summary of local and regional regulations for aesthetics.

Table 3.1-1. Local and Regional Regulations

Law, Regulation, or Plan	Description
Local – City of Riverside General Plan (2025)	
The City of Riverside's General Plan includes the following policies applicable to aesthetics.	
Land Use and Urban Design Element	Objective LU-27: Enhance, maintain, and grow the City of Riverside's inventory of street trees.
Circulation and Construction Mobility Element	• Policy CCM-2.8: Design street character, livability of residential neighborhoods, and traffic engineering criteria. • Policy CCM-2.9: Design all street improvement projects comprehensively considering street trees, pedestrian walkways, bicycle lanes, equestrian pathways, signing, lighting, noise, and air quality, wherever any of these factors are applicable. • Policy CCM-9.6: Enhance and encourage the provision of attractive and appropriate transit amenities, including shaded bus stops, to facilitate use of public transportation through the development process by incorporating the necessary design. • Policy CCM-9.7: Ensure adequate connections among all alternative modes.
Arts and Culture Element	Policy AC-4.20: Use art in public places in coordination with landscaping, lighting, paving, and signage at the city's regional and local gateways, freeway corridors, and Metrolink stations to strengthen the City of Riverside's identity as a cultural and arts center for regional visitors.

Law, Regulation, or Plan	Description
Local – Riverside Citywide Design Guidelines (2007)	
The Riverside Citywide Design Guidelines includes the following policies that may be applicable to visual impacts:	V. Industrial Design Guidelines A. Site Design 1. Parking and Loading 2. Landscaping 3. Walls and Fencing 4. Screening D. Lighting
County Agencies – Riverside County General Plan (2015)	
The Riverside County Guidelines include the following policies that may be applicable to visual impacts:	
Land Use Element	• LU 18.1: Ensure compliance with Riverside County's water-efficient landscape policies. • LU 18.2: Minimize use of turf. • LU 18.3: Design and field check irrigation plans to reduce run-off.

3.1.2. Methodology for Evaluating Environmental Impacts

The analysis of the proposed Project's potential impacts to aesthetics and visual resources considers potential effects within the study area related to construction and operations of the proposed Project. The following steps were taken to assess the potential visual:

1. Define the Project location and setting
2. Identify visual assessment unit and key views
3. Analyze existing visual resources, resource change, and viewer response
4. Depict the visual appearance of project options
5. Assess the visual impacts of project options
6. Propose measures to offset visual impacts

The Visual Impact Assessment (VIA) documents the area of visual effect (AVE) (i.e., study area), describes existing visual quality or visual resources, characterizes typical viewing experiences from adjacent neighbors or travelers, and qualitatively describes how the visual character of the study area would change as a result of project improvements.

The AVE includes the project footprint and the adjacent properties with a visual connection to the Project. The AVE was studied and inventoried using mapping, and web research. A description of the existing visual context of this Project is provided as a basis for understanding the affected environment. The following information includes specific features of visual quality that comprise the existing environment and are generally described in the VIA.

- **Physical Environment:** Includes all structural and landscape features defined as part of the Project. These are the constructed structural features that would be introduced in the environment as part of the Project. For this Project, the features include both the guideway and other infrastructure modified by the Project. Landscape features may include trees and other vegetation that would be introduced as part of the Project.
- **Natural Environment:** Includes natural features within the surrounding area such as native vegetation, land formations, and rock outcroppings.
- **Cultural Environment:** Includes the buildings, structures, infrastructure, and artifacts that compose the surrounding the project area. These are features that were constructed by people and are not considered natural.

The visual impact of the Build Alternative and design options is determined by assessing the visual resource change resulting from the Project and predicting viewer response to that change. Visual resource change is the total change in visual character and visual quality. The first step in determining visual resource change is to assess the compatibility of the proposed Project with the existing visual character of the landscape. The second step is to compare the visual

quality of the existing resources with the projected visual quality after the Project is constructed. Next, viewer response to the changes is the sum of viewer exposure and viewer sensitivity to the Project. The resulting level of visual impact is determined by combining the severity of resource change with the degree to which people are likely to react to the change.

3.1.3. Affected Environment

Project Location and Setting

The Project is located at the existing Riverside-Downtown Station in the City of Riverside, in Riverside County, California from Milepost (MP) 9.9 (southern limits) to MP 10.2 (northern limits) on the BNSF Railway San Bernardino Subdivision. The project area is situated in the Eastside Neighborhood. The land use of the project area is industrial, and it is surrounded by commercial, industrial, and residential structures, and there is a small neighborhood park (Lincoln Park) adjacent to the project area.

The regional landscape of Riverside County is characterized by mountain peaks, deserts, and valleys. The City of Riverside is predominantly urbanized and surrounded by hills and ridgelines providing scenic vistas to residents of Riverside where they can experience long distance views of natural terrain. Vista points exist throughout the city, and they can be viewed from urban areas toward the hills and from wilderness areas toward Riverside. The most notable scenic vistas in the city include the La Sierra/Norco Hills, Sycamore Canyon Wilderness Park, and Box Springs Mountain Reserve. The peaks of Box Springs Mountain, Mount Rubidoux, Arlington Mountain, Alessandro Heights, and the La Sierra/Norco Hills provide scenic views of the city and the region.

Adjoining ridgelines within the project area can be seen including Mount Rubidoux to the west; Box Springs Mountain Reserve to the east; and San Bernardino Mountains to the southeast. Mount Rubidoux and Box Springs Mountain are larger in scale and darker in color than the ridgelines to the southeast. The horizontal pattern of development parallels the low-lying terrain of the basin and is positioned within the verticality and scale of the surrounding ridgelines. A wide array of habitats is found within the non-developed lands in Western Riverside County, including coastal sage scrub, vernal pools, montane coniferous forest, chaparral, foothill woodland, annual grassland, and desert.

Scenic Vista

A scenic vista is defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. In addition, some scenic vistas are officially designated by public agencies, or informally designated by tourists and tourist guides. A significant impact to such a scenic vista is one that degrades the view from a designated scenic vista. Within the vicinity of the project site and the AVE, most of the existing foreground and middle-ground views consist of the typical urban environment dominated by paved roadways, ornamental landscaping, overhead utility lines and buildings that obstruct background views of the surrounding mountain ranges such as Mount Rubidoux to the west and Box Springs Mountain to the east. The proposed Project is located within an urbanized area, and views of surrounding mountains are mostly obscured by existing development and there is no scenic vista in the AVE.

Area of Visual Effect

The Project AVE is bound by Vine Street to the west, Howard Avenue to the east, 14th Street to the south and University Avenue to the north (Figure 3.1-1) and is relatively flat. Key views have been identified within the AVE. There are no direct or indirect visual impacts beyond these streets. Within the AVE the cultural resources potentially and directly impacted by the Build Alternative and design options include the Prism Aerospace Building; two residences on the northwest corner of Howard Avenue and 12th Street; and two residences on the south side of 9th Street, adjacent to the existing overflow parking lot (east side), which is bound by 10th Street, 9th Street, and Commerce Street. Viewers are residents, employees, neighborhood travelers (drivers, bicyclists, and walkers), and commuters arriving and departing from the station and/or as they pass by the warehouse building at the station. As mentioned previously, the Project is located within the urbanized core of Downtown Riverside where existing residential, commercial, and industrial development surround the project site.

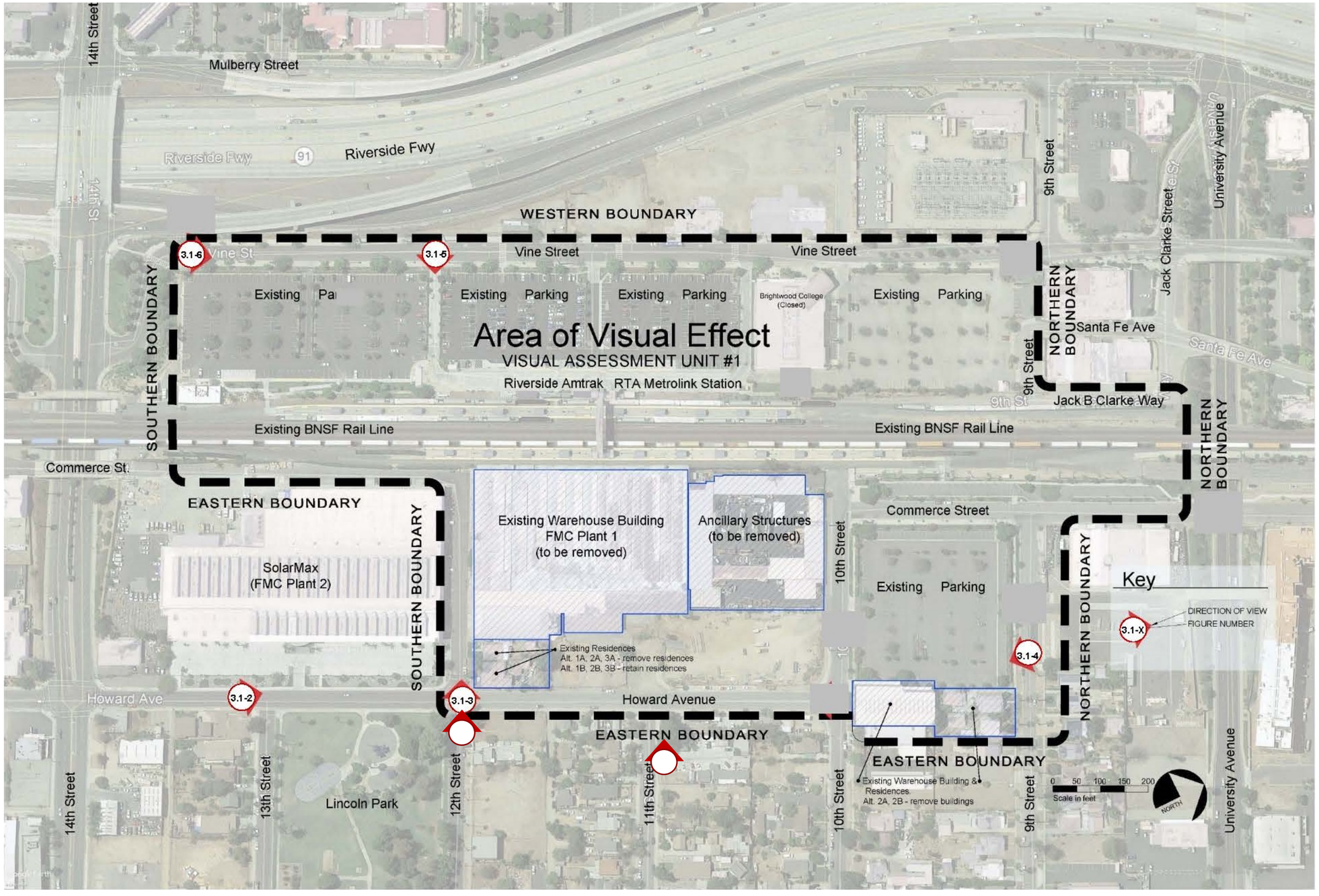

Figure 3.1-1. Existing Conditions/Area of Visual Effect

Source: Google Earth

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Viewers and Viewer Response

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

The following variables determine the extent of visual impacts caused by the construction and operation of the proposed Project:

1. Viewers, or, more specifically, the response viewers have to changes in their visual environment.
2. Changes to visual resources.
3. Results of the rating system. *Note:* The analysis used a rating system consistent with the Federal Highway Administration (FHWA) guidance (high, moderate, or minimal) to qualitatively assess the level of visual contrast that project elements would have on visual resources.

Existing Conditions/Area of Visual Effect

Figure 3.1-1 illustrates the following existing conditions, boundaries of the visual assessment unit (east, north, west, and south), the AVE, and key views for the Project:

Eastern Boundary: Residences and businesses fronting Howard Avenue form the eastern visual boundary. Figure 3.1-2 shows the existing SolarMax and Prism Aerospace buildings, which are major structures west of Howard Avenue, screening much of the area within the Riverside-Downtown Station looking northwest at the eastern boundary vantage point. Looking west from the eastern boundary on 12th Street (Figure 3.1-3), obstructed views of Mount Rubidoux could be seen in the background, which is screened by parked cars and buildings at the foreground and middle-ground views.

Figure 3.1-2. SolarMax Building on Howard Avenue (looking northwest, existing view)

Figure 3.1-3. 12th Street and Howard Avenue (looking west on 12th Street, existing view)

Northern Boundary: 9th Street and University Avenue (depressed) form the northern visual boundary. On 9th Street, between Howard Avenue and Commerce Street, businesses and residences face an existing landscaped surface parking lot. As shown on Figure 3.1-4 looking southeast, the northern boundary is characterized as an urbanized landscape with overhead utilities, buildings and parked automobiles dominating the foreground and middle-ground views.

Figure 3.1-4. 9th Street (looking southeast, existing view)

Western Boundary: Park-and-ride surface parking lots serving the Riverside-Downtown Station and RTA Metrolink Station; Brightwood College, with adjoining surface parking lots (now closed); and "Riverside Naval Growers Association" office and warehouse building (vacant and boarded) are located west of the BNSF Railway tracks from south to north. As shown on Figure 3.1-5, looking east, the Riverside-Downtown Station's pedestrian bridge is a dominant feature within the western boundary, as it towers over other structures in the background including the Prism Aerospace sawtooth rooftop. Foreground and middle-ground views consist of landscaped parking lot, parked vehicles, and the station's platforms and canopies.

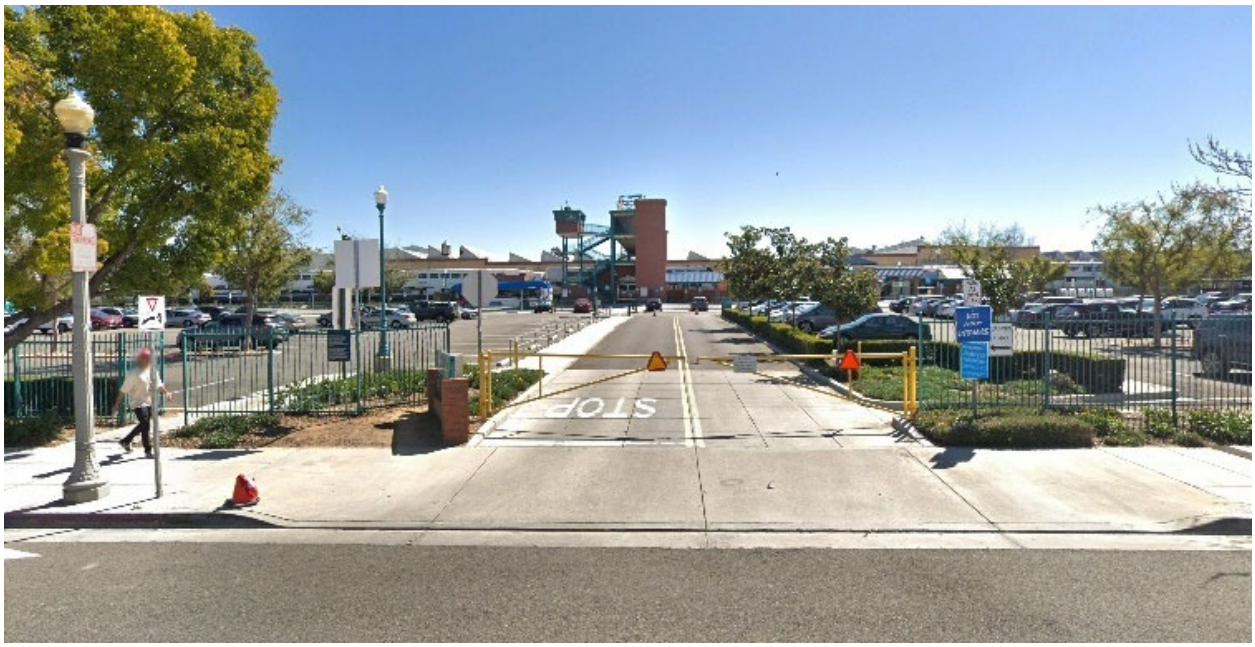

Figure 3.1-5. Vine Street (looking east, existing view)

Source: Google Earth (street view)

Southern Boundary: Vine Street turns from west to south and ramps down to the east to connect to 14th Street. Vine Street is heavily landscaped and restricts views to the project area. The southern edge, east of the BNSF Railway tracks, is the northern side of the SolarMax office/warehouse building. As shown on Figure 3.1-6 looking northeast, the SolarMax building's iconic sawtooth rooftop is visible from this vantage point.

Figure 3.1-6. Vine Street (looking northeast, existing view)

Source: Google Earth (street view)

3.1.4. Environmental Impacts and Consequences

CEQA Thresholds of Significance for Aesthetic Resources

In accordance with the *2021 CEQA Statute & Guidelines, Appendix G, Environmental Checklist Form,* I. Aesthetics (a) through (d), the proposed Project would result in impacts to aesthetics, if the construction or operation of the proposed Project would result in any of the conditions listed in the following table.

The discussion below includes the CEQA checklist for aesthetics, and the narrative below provides the rationale for the following significance determinations:

- No Impact
- Less than Significant Impact
- Less than Significant Impact with Mitigation
- Potentially Significant Impact

Would the Project:

Question	CEQA Determination
(a) Have a substantial adverse effect on a scenic vista?	No Impact
(b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	No Impact
(c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Less than Significant Impact
(d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Less than Significant Impact

(a) Have a substantial adverse effect on a scenic vista?

No Impact. The Build Alternative and design options were considered in evaluating the visual change to the study area. The following physical project elements would change the visual quality in the study area:

- Acquisition of property (minimal) from the solar panel manufacturing building property located southeast of the existing station platforms
- Acquisition and demolition of property from the former tank assembly building, property to the east of the station, between Commerce Street, Howard Avenue, 12th Street, and 9th Street
- Relocation of existing Americans with Disabilities Act (ADA) parking and replacement and/or transplant of palm trees within the project limits
- Modification of the transit drop-off area and relocation of the exit driveway
- Acquisition and demolition of the warehouse building, east of the existing overflow parking, and two multi-residential units on 9th Street (Parking Design Options 2A and 2B only)
- Construction of a new center platform
- Extension of the existing pedestrian overpass
- Construction of new platform tracks
- Construction of a surface parking lot, new sidewalks, and roadway improvements
- Construction of noise barriers

Visual Resources and Resource Change

The analysis used a rating system consistent with FHWA guidance (high, moderate, or minimal/low) to qualitatively assess the level of visual contrast that project elements would have on visual resources. The following definitions summarize each classification:

- **High:** Introduction of new elements that would result in a major visual contrast where elements may obstruct views or substantially alter character
- **Moderate:** Introduction of new elements that would have a noticeable visual contrast where elements may obstruct or alter views or character
- **Minimal/Low:** Introduction of new elements that would have minor visual contrast where elements are like existing features)

The project site is located within an urbanized area, and views of surrounding mountains are obscured by existing development. The proposed Project is not located near or within a scenic corridor. As shown in the existing and post-project conditions comparison on Figure 3.1-7, removing the Prism Aerospace Building and residential houses (under Design Options 1A, 2A, and 3A) would remove an existing obstruction to views of Mount Rubidoux looking west along 12th Street, which would enhance views from this vantage point and potentially result in a beneficial impact.

Noise Barriers: Existing buildings adjacent to the station are effectively shielding receptors from major noise sources adjacent to the project site. As a consequence of the removal of the existing Prism Aerospace building and potential residential structures east of the station under the Build Alternative (Design Options 2A and 2B), moderate to severe noise impacts would occur at nearby residential and outdoor receptors. Noise abatement would be required for the Build Alternative and all design options to reduce noise impacts in the form of a noise barrier. A 12-foot-high noise barrier that is approximately 500 feet in length is proposed within the approximate location of the east wall of the existing Prism Aerospace building. The location of the noise barrier would effectively reduce noise levels. A proposed 8-foot-high masonry wall along the Howard Avenue extension adjacent to multi-family units (Assessor's Parcel Number [APN] 211-191-005) would replace an existing property wall under Design Option 2A and 2B to abate noise due to the removal of the neighboring multi-family structure.

Both the proposed 8-foot and 12-foot masonry walls are not anticipated to obstruct any existing scenic views and result in visual impacts; in certain views, the Build Alternative would result in beneficial change to the visual landscape. As shown in the existing and post-project conditions view comparison Figure 3.1-8) along 11th Street, removal of the taller Prism Aerospace building and the construction of the 12-foot noise barrier would result in partially obstructed views of Mount Rubidoux compared to a completely obstructed view from the eastern vantage point at existing conditions. Because of the absence of scenic views and the degree of the change in views between existing and post-project conditions with the construction of noise barriers, visual impacts are not anticipated.

Figure 3.1-7. 12th Street and Howard Avenue (looking west on 12th Street, existing view/proposed view on the following page) (Parking Design Options 1A, 2A, and 3A)

12th Street and Howard Avenue (looking west on 12th Street, proposed view) (Parking Design Options 1A, 2A, and 3A)

Figure 3.1-8. 11th Street looking west across Howard Avenue (existing view/proposed view on the following page) (Parking Design Options 1A, 2A, and 3A)

11th Street looking west across Howard Avenue (proposed View)
(Parking Design Options 1A, 2A, and 3A)

(b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. The Build Alternative proposes improvements to the Riverside-Downtown Station and is not located near or within a state scenic highway area.

(c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less than Significant Impact. The proposed improvements under the Build Alternative and design options are located within an urbanized area. The project footprint is in an area zoned for commercial and industrial land use and would not conflict with applicable zoning or other regulations governing scenic quality in Downtown Riverside.

Temporary Impacts (Construction)

During construction, the Build Alternative would not conflict with applicable zoning or other regulations governing scenic quality.

Permanent Impacts (Operations)

The Build Alternative would result in the demolition of an existing industrial building and convert the area to transportation uses. The removal of the industrial building structure and the expansion of the station facility would be the most prominent visual change within the project site; however, the visual character of the current industrial use is compatible with the proposed transportation use, as the station improvements are located within an existing urbanized environment. Although a 12-foot noise barrier would be constructed within the general area of the taller industrial building, views to surrounding ridgelines under Design Options 1A, 2A, and 3A (looking west on 12th Street) would be visible from the eastern vantage point as shown in the visual comparison on Figure 3.1-7. Other proposed design options would be similar to the existing views.

The Build Alternative proposes landscaping, pedestrian improvements and lighting that would comply with local and regional applicable zoning and other regulations governing scenic quality. The Build Alternative would comply with RCTC's design criteria for station improvements and the City and County of Riverside zoning and other regulations

governing scenic quality for proposed landscape and transportation related design elements, which would ensure that the design and operation of the proposed Project would not conflict with regulations governing scenic quality. The Build Alternative and all design options would incorporate streetscape improvements such as providing uniform landscape elements along ADA-compliant sidewalks to buffer the station and local roadways. Landscape improvements would incorporate drought-tolerant planting, and to the greatest extent feasible, use recycled water to maintain landscape elements. In addition to landscape elements, street lighting would be incorporated along sidewalks to enhance safety and walkability to and from the station.

(d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less than Significant Impact. Existing lighting and glare in the project study area are characteristic of a typical urban environment that includes multiple sources and types of lighting typically associated along a transportation route and adjacent buildings. Existing sources of light in the project study area include streetlights, headlights, and taillights on cars and other vehicles in the roadway and interior and exterior lighting from adjacent buildings. There are no major sources of glare in the project study area. Performance standards in the City of Riverside's Zoning Code regulates site lighting and provides ways avoid light and glare impacts. The City of Riverside's Zoning Code also contains regulations for lighting within each land use type, including requiring shielding to avoid spillage onto any surrounding properties. Zoning Ordinance 19.590.070 Light and Glare, regulates light issues as in maximum heights of light standards, regulating candle-power of lights, and prohibiting the use of flickering and strobe lights, along with requiring all lighting plans for parking lots be submitted and reviewed by City staff.

Temporary Impacts (Construction)

Nighttime construction activities, including temporary lighting would be used at discrete locations for certain construction activities. As mentioned previously, the existing conditions of the Project site is located within an urban area and does not provide scenic views at any vantage point. In addition, the use of construction lighting during nighttime hours would not change the visual character of the area or degrade the visual quality because lighting would only be temporary and placed in select locations and directed away from residences. Due to the proximity to the construction work zone, some nearby residences along Howard Avenue, 12th Street, 11th Street, 10th Street, and 9th Street may temporarily be exposed to higher levels of lighting during the nighttime throughout project construction. However, the City of Riverside's Zoning Code 19.590.070(G) requires all lights to be directed, oriented and shielded to prevent light from shining onto adjacent properties. Measures are proposed to avoid and minimize construction-related light and glare by requiring the use of lighting to be directed away from residential areas and installation of shields during night-time construction activities; this measure would control light trespass and glare within the construction area and ensure that nearby residences are not exposed to high-levels of lighting. This measure is a standard construction best management practice (BMP) and would be required to be implemented by the construction contractor. Less than significant impacts are anticipated during construction.

Permanent Impacts (Operations)

Proposed station improvements would incorporate additional lighting within the station at the expanded train platforms and parking lot under the Build Alternative and all design options. Installation of additional lighting would enhance safety and security within the station during night-time hours in accordance with the City of Riverside's Policy PS-5.4 which requires that new development provide adequate safety lighting in pedestrian areas and parking lots. Although additional sources of light would be installed, the new sources of light would be located within a developed urban area where there is currently a large amount of lighting from transportation, commercial, and industrial uses. Impacts related to lighting would not be expected to substantially increase within the surrounding area. In addition, the new lighting fixtures would include appropriate shielding to direct light away from residential areas and conformance with lighting ordinances.

The City of Riverside approved in 1996, street light levels for new street lighting systems. These requirements can be found in the ANSI/IESNA RP-8-00 handbook for Roadway Lighting. Lighting that is above the horizontal of the light source does not benefit lighting roadways. The City of Riverside currently uses luminaires, which are equipped with reflectors and/or refractors to direct most of the light down on the roadway. The majority of the luminaires in the City are equipped with semi or full cutoff optics limiting the amount of light above the luminaire to less than 5 percent of the rated lumens. With the implementation of the Zoning Ordinance 19.590.070 and the lighting requirements set in the Roadway Lighting Handbook, impacts are less than significant.

3.1.5. Avoidance, Minimization, and/or Mitigation Measures

This section summarizes avoidance and minimization measures to be conducted by RCTC to ensure less than significant impacts are avoided or minimized.

AES-1: Landscape design will be in accordance with RCTC Station Design Criteria, following RCTC's general landscape requirements and in coordination with City of Riverside to the greatest extent possible. The new parking lot(s) design will be compatible with landscaped parking lots within the project area with drought tolerant vegetation, trees, and lighting.

AES-2: Nighttime construction activities near residential areas will be avoided to the extent feasible. If nighttime work is required, the construction contractor will install temporary lighting in a manner that directs light toward the construction area and will install temporary shields as necessary so that light does not spill over into residential areas.

AES-3: During final design, all new or replacement lighting would be designed to be directed away from residential areas. To the greatest extent feasible, new light fixtures will include appropriate shields to direct light away from residential areas.

AES-4: Noise barrier design will be consistent with RCTC and local jurisdiction standards and an aesthetic design treatment plan will be implemented to soften the noise barrier's structural intrusion, as well as maintain the community character and history. RCTC shall maintain the paint color and aesthetics over time.

AES-5: Consultation regarding potential indirect adverse visual effects to historic properties will be conducted with consulting parties in accordance with Section 106 of the National Historic Preservation Act (NHPA) of 1966.

BIO-2: The final design of the Project will avoid or minimize tree removals to the extent feasible. Trees that need to be removed will be transplanted within the project footprint to the greatest extent feasible. See Biological Resources, Section 3.3.5 for the full measure.

3.1.6. CEQA Significance Conclusion

The Build Alternative, including all design options, would occur within an existing rail station and neighboring industrial development in urbanized Downtown Riverside. There are limited scenic resources within and near the Project that are obstructed by existing structures. The Build Alternative and design options under consideration would not produce major changes to the visual character of the AVE which would result in less than significant impacts.

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3.2. Air Quality

This section discusses the potential impacts resulting from the construction and operations of the proposed Build Alternative and all design options within the air quality study area. Information provided in this section is based on the results of the technical analysis in the *Air Quality and Greenhouse Gas Emissions Technical Report* (HNTB, 2021) prepared for the proposed Project.

3.2.1. Regulatory Framework

Applicable policies, laws, and regulations relative to air quality are provided herein:

Federal Regulations

Federal Clean Air Act (FCAA). FCAA established federal air quality standards defining attainment and non-attainment areas. Non-attainment areas are defined as geographic regions designated as not meeting one or more of the National Ambient Air Quality Standards (NAAQS). Attainment areas are defined areas with levels of criteria pollutants that are below thresholds established by NAAQS. Areas that do not meet the standards set forth by the NAAQS, defined as a non-attainment area, are required to prepare a State Implementation Plan (SIP) and a corresponding maintenance plan for the former non-attainment area once the area has demonstrated compliance with the NAAQS. Geographic regions are designated as attainment, non-attainment, or maintenance by the U.S. Environmental Protection Agency (U.S. EPA).

Transportation criteria pollutants that are linked to potential public health concerns include carbon monoxide (CO), particulate matter (categorized by fine particulate matter with a diameter of 2.5 microns or less [$PM_{2.5}$]) and coarse particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}), nitrogen dioxide (NO_2), ozone (O_3), sulfur dioxide (SO_2), and reactive organic gases (ROGs) (also known as volatile organic compounds [VOCs]).

State Requirements

California Clean Air Act (CCAA). CCAA establishes statewide air quality standards by designating planning agencies as the lead regulatory authority for air quality standards for their geographic region. The geographic region overseen by planning agencies are referred to as air districts. CCAA requires air districts to prepare air quality plans, gives authority to the air districts to implement transportation control measures (TCM), and allows air districts to regulate indirect sources of air pollution.

CCAA establishes attainment criteria in accordance with California Ambient Air Quality Standards (CAAQS). Transportation criteria pollutants that are linked to potential public health concerns and are considered criteria pollutants under the CAAQS include CO, NO_2, O_3, PM_{10}, $PM_{2.5}$, SO_2, and lead (Pb). CAAQS includes additional standards for airborne sulfates, vinyl chloride, visibility-reducing particles, and hydrogen sulfide (H_2S). In general, CAAQS includes lower pollution thresholds resulting in more stringent criteria to meet attainment status.

Local and Regional Regulations

South Coast Air Quality Management District (SCAQMD). The City of Riverside lies within the South Coast Air Basin (SCAB) which is within the jurisdiction of SCAQMD. On March 3, 2017, SCAQMD adopted the 2016 Air Quality Management Plan (AQMP), which is a regional and multi-agency effort (SCAQMD, California Air Resources Board [CARB], Southern California Association of Governments [SCAG], and U.S. EPA). The 2016 AQMP represents a comprehensive analysis of emissions, meteorology, atmospheric chemistry, regional growth projections, and the impact of existing control measures. The plan seeks to achieve multiple goals in partnership with other entities promoting reductions in criteria pollutant, greenhouse gases, and toxic risk, as well as efficiencies in energy use, transportation, and goods movement. Preparation of the 2022 AQMP is ongoing.

- **Rule 402: Nuisance.** Rule 402 prohibits discharge of air contaminants or other materials that meet the following criteria:
  - Endanger the comfort, repose, health, or safety of any such persons or the public
  - Cause or have a natural tendency to cause injury or damage to businesses or property
  - Cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public
- **Rule 403: Fugitive Dust.** This rule prohibits fugitive dust emissions from any open storage pile, active operation, or disturbed surface remaining visible beyond the property line where the emission source is located.

City of Riverside General Plan (2025). The City of Riverside General Plan identifies goals and policies for the implementation of air quality improvement strategies in accordance with federal, state, and local air quality plans. The plan outlines policies and mitigation measures, both short-term and long-term, that will substantially lessen air quality impacts in the region.

3.2.2. Methodology for Evaluating Environmental Impacts

The analysis of the proposed Project's potential impacts to air quality considers potential project effects within the study area related to construction and operation.

Findings and conclusions contained in this analysis are based on project-level modeling (California Emissions Estimator Model® [CalEEMod]). Impacts associated with the Project were evaluated based on-site conditions and the potential increase in criteria pollutant emissions as a result of the Project. An impact to air quality caused by the proposed Project was determined based on the significance thresholds provided in the CEQA Guidelines. In conducting the impact analysis for air quality, three principal factors were taken into consideration: transportation conformity to the SIP and regional air quality plans, maintaining ambient criteria pollutant concentrations below SCAQMD thresholds during and after construction, and potential exposure of criteria pollutant emissions to sensitive receptors. A significant impact would occur if the proposed Project would result in any conditions listed in the *2021 CEQA Statute & Guidelines, Appendix G, Environmental Checklist Form*, thresholds (a) to (d). If a significant impact is identified, mitigation measures would be applied to reduce the effect to less than significant levels. If mitigation measures are not feasible to implement or do not reduce the proposed Project's effect, then a potentially significant impact would occur.

Impacts can be direct or indirect and occur during project construction (temporary impacts), during operation of the Project (permanent impacts), or cumulatively in combination with other projects.

Direct impacts would occur when ambient criteria pollutant concentrations are temporarily elevated during project construction due to the operation of construction equipment. Direct impacts would be considered permanent if they would occur during project operation, such as maintaining ambient criteria pollutant concentrations above SCAQMD thresholds following construction.

Indirect impacts are typically further in time or at a different location and may occur as a result of increased vehicular traffic to and from the Riverside-Downtown Station. These can occur permanently, for example increased vehicular traffic could result in long-term changes to ambient criteria pollutant concentrations in the area. Indirect impacts can also occur temporarily during construction, for example from elevated levels of particulate matter emissions due to ground disturbing activities. Indirect impacts can occur off-site, for example to downwind sites that receive increased ambient criteria pollutant concentrations emitted during construction or operation.

3.2.3. Affected Environment

The Project is located in the County of Riverside within SCAB, which consists of all or part of four counties: Los Angeles, San Bernardino, Riverside, and Orange. The distinctive climate of the SCAB is determined by its terrain and geographic location. SCAB is a coastal plain with connecting broad valleys and low hills. It is bound by the Pacific Ocean to the southwest and high mountains around the rest of its perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light, average wind speeds. Air quality in the non-desert portion of the County of Riverside is regulated by SCAQMD.

Criteria Pollutants

Criteria pollutants are defined by state and federal law as a risk to the health and welfare of the general public. In general, air pollutants include the following compounds:

- O_3
- VOCs
- CO
- NO_2
- PM_{10} and $PM_{2.5}$
- SO_2
- Pb

Specific descriptions of health effects for each of the air pollutants potentially associated with project construction and operation are based on information provided by CARB[2] and U.S. EPA[3]. Air quality is defined by ambient air concentrations of specific pollutants identified by U.S. EPA to be of concern with respect to health and welfare of the general public. U.S. EPA is responsible for enforcing FCAA of 1970 and its 1977 and 1990 amendments. FCAA required U.S. EPA to establish NAAQS, which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. In response, U.S. EPA established both primary and secondary standards for several criteria pollutants. Table 3.2-1 shows the federal and state ambient air quality standards for these pollutants.

FCAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. CARB has established the more stringent CAAQS for the six criteria pollutants through CCAA, and also has established CAAQS for additional pollutants, including airborne sulfates, vinyl chloride, visibility-reducing particles, and H_2S. Areas that do not meet NAAQS or CAAQS for a particular pollutant are considered to be "non-attainment areas" for that pollutant.

Table 3.2-1. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	Federal Standards	
			Primary[1]	Secondary[2]
O_3	1 Hour	0.09 ppm (180 µg/m³)	–	–
	8 Hour	0.070 ppm (137 µg/m³)	0.070 ppm (137 µg/m³)	Same as Primary
PM_{10}	24 Hour	50 µg/m³	150 µg/m³	Same as Primary
	AAM	20 µg/m³	–	Same as Primary
$PM_{2.5}$	24 Hour	–	35 µg/m³	Same as Primary
	AAM	12 µg/m³	12.0 µg/m³	15.0 µg/m³
CO	1 Hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	–
	8 Hour	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	–
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)	–	–
NO_2	1 Hour	0.18 ppm (339 µg/m³)	0.100 ppm (188 µg/m³)	–
	AAM	0.030 ppm (57 µg/m³)	0.053 ppm (100 µg/m³)	Same as Primary
SO_2	1 Hour	0.25 ppm (655 µg/m³)	0.075 ppm (196 µg/m³)	–
	3 Hour	–	–	0.5 ppm (1,300 µg/m³)
	24 Hour	0.04 ppm (105 µg/m³)	–	–

[2] CARB, 2021. Common Air Pollutants.
[3] U.S. EPA, 2020. Criteria Air Pollutants. Last updated November 17.

– = No Standard

Pollutant	Averaging Time	California Standards	Federal Standards	
			Primary[1]	Secondary[2]
Pb	30-day Average	1.5 µg/m³	–	–
	Calendar Quarter	–	1.5 µg/m³	Same as Primary
	Rolling 3 month Average	–	0.15 µg/m³	
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per km – visibility ≥ 10 miles (0.07 per km – ≥ 30 miles for Lake Tahoe)	**No Federal Standards**	
Sulfates	24 Hour	25 µg/m³		
H_2S	1 Hour	0.03 ppm (42 µg/m³)		
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m³)		

Source: CARB, 2016

Notes:

1. National Primary Standards: The levels of air quality necessary, within an adequate margin of safety, to protect the public health.
2. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

≥ = greater than or equal to
ppm = parts per million
µg/m³ = micrograms per cubic meter
AAM = Annual Arithmetic Mean
mg/m³ = milligrams per cubic meter
km = kilometer
– = No Standard

SCAQMD is responsible for reducing emissions from stationary (area and point), mobile, and indirect sources. It has responded to this requirement by preparing an AQMP. AQMP, in combination with those from all other California non-attainment areas with serious (or worse) air quality problems, is submitted to CARB, which develops the SIP. The SIP relies on the same information from SCAG to develop emission inventories and emission reduction strategies that are included in the attainment demonstration for the air basin. The current federal and state attainment status for SCAB is presented in Table 3.2-2.

Table 3.2-2. South Coast Air Basin Attainment Status

Criteria Pollutant	Federal Designation	State Designation
O_3 (1-hour)	(No federal standard)	Non-attainment
O_3 (8-hour)	Extreme Non-attainment	Non-attainment
CO	Attainment (Maintenance)	Attainment
PM_{10}	Attainment (Maintenance)	Non-attainment
$PM_{2.5}$	Serious Non-attainment	Non-attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment

Criteria Pollutant	Federal Designation	State Designation
Pb	Attainment	Attainment
Sulfates	(No federal standard)	Attainment
H_2S	(No federal standard)	Attainment
Visibility	(No federal standard)	Attainment

Source: SCAQMD, 2016

Toxic Air Contaminants

Toxic air contaminants (TACs) are a diverse group of air pollutants that may cause or contribute to an increase in deaths or in serious illness or that may pose a present or potential hazard to human health. TACs include both organic and inorganic chemical substances that may be emitted from a variety of common sources, including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities. TACs are different than the criteria pollutants because ambient air quality standards are not established for TACs. TACs occurring at extremely low levels may still cause health effects, and it is typically difficult to identify levels of exposure that do not produce adverse health effects. TAC impacts are described by carcinogenic risk and by chronic (i.e., of long duration) and acute (i.e., severe but of short duration) adverse effects on human health.

Monitored Air Quality

SCAQMD maintains monitoring stations to measure ambient concentrations of pollutants in the SCAB. The nearest monitoring station to the project study area is the Riverside-Rubidoux air quality monitoring station, which is located approximately 3 miles northwest of the project site. The Riverside-Rubidoux station monitors O_3, PM_{10}, $PM_{2.5}$, and NO_2. Table 3.2-3 presents a summary of the ambient pollutant concentrations monitored at the Riverside-Rubidoux monitoring station during the last 3 years (2017 through 2019) for which SCAQMD has reported data. The 1- and 8-hour ozone standards were exceeded numerous times in each of the sample years. The state PM_{10} standard and the federal $PM_{2.5}$ standard were also exceeded several times in each of the sample years.

Table 3.2-3. Air Quality Monitoring Data

Pollutant Standards	2017	2018	2019
O_3			
Maximum concentration 1-hour period (ppm)	0.145	0.123	0.123
Maximum concentration 8-hour period (ppm)	0.118	0.101	0.096
Days above 1-hour state standard (>0.09 ppm)	47	22	24
Days above 8-hour state/federal standard (>0.070 ppm)	81	53	59
NO_2			
Maximum 1-hour concentration (ppm)	0.0630	0.0554	0.0560
Days above state 1-hour standard (0.18 ppm)	0	0	0
Days above federal 1-hour standard (0.100 ppm)	0	0	0
Suspended Particulates (PM_{10})			
Maximum 24-hour concentration ($\mu g/m^3$)	137.6	126.0	182.4
Days above state standard (>50 $\mu g/m^3$)	98	127	110
Days above federal standard (>150 $\mu g/m^3$)	0	0	0
Suspended Particulates ($PM_{2.5}$)			
Maximum 24-hour concentration ($\mu g/m^3$)	50.3	68.3	57.6

Pollutant Standards	2017	2018	2019
Days above federal standard (>35 μg/m^3)	7	3	5

Source: CARB, 2020

Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. CARB has identified the following typical groups who are most likely to be affected by air pollution: children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. According to SCAQMD, sensitive receptors include residences, schools, playgrounds, child-care centers, athletic facilities, long-term health-care facilities, rehabilitation centers, convalescent centers, and retirement homes. The closest off-site sensitive receptors to the Project are the residences located between 9th Street and 10th Street that would be directly adjacent to the Project's construction activities under Design Option 2A, 2B, 3A, and 3B. Other receptors near the project site include Lincoln Park and the community center located at this park.

3.2.4. Environmental Impacts and Consequences

CEQA Thresholds of Significance for Air Quality

In accordance with the *2021 CEQA Statute & Guidelines, Appendix G, Environmental Checklist Form,* III. Air Quality (a), (b), (d), and (e), the proposed Project would result in impacts to air quality if the construction or operations of the proposed Project would result in any of the conditions listed in the following table.

The discussion below includes the CEQA checklist for air quality and the discussion that follows provides the rationale for the following significance determinations:

- No Impact
- Less than Significant Impact
- Less than Significant Impact with Mitigation
- Potentially Significant Impact

Would the project:

Question	CEQA Determination
(a) Conflict with or obstruct implementation of the applicable air quality plan?	Less Than Significant Impact
(b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	Less Than Significant Impact
(d) Expose sensitive receptors to substantial pollutant concentrations?	Less Than Significant Impact
(e) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less Than Significant Impact

Appendix G of the 2021 CEQA Statute & Guidelines states that the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the above determinations. SCAQMD has established significance thresholds to assess the regional and localized impacts of project-related air pollutant emissions. The significance thresholds are updated, as needed, to appropriately represent the most current technical information and attainment status in SCAB. Table 3.2-4 presents the most current significance thresholds, including regional daily thresholds for short-term construction and long-term operational emissions; maximum incremental cancer risk and hazard indices for TACs; and maximum ambient concentrations for exposure of sensitive receptors to localized pollutants. If the Project's criteria pollutant and precursor emissions are below SCAQMD daily regional thresholds, the Project would not result in a cumulatively considerable net increase of any criteria pollutant, contribute substantially to a project air quality violation, or have an adverse effect on human health. If the Project's emissions of criteria pollutants, precursors, and TACs result in localized concentrations and/or risk values below SCAQMD thresholds, the Project's impacts to sensitive receptors would be less than significant.

Table 3.2-4. SCAQMD Air Quality Significance Thresholds

Maximum Daily Thresholds (pounds per day)		
Pollutant	**Construction**	**Operation**
VOC	75	55
NO_X	100	55
CO	550	550
PM_{10}	150	150
$PM_{2.5}$	55	55
SO_X	150	150
Pb	3	3
Toxic Air Contaminants		
TACs	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic and Acute Hazard Index ≥ 1.0 (project increment)	
Ambient Air Quality for Criteria Pollutants		
NO_2	1-hour average ≥ 0.18 ppm Annual average ≥ 0.03 ppm	
CO	1-hour average ≥ 20.0 ppm (state) 8-hour average ≥ 9.0 ppm (state/federal)	
PM_{10}	24-hour average ≥ 10.4 µg/m^3 (construction) 24-hour average ≥ 2.5 µg/m^3 (operation) Annual average ≥ 1.0 µg/m^3	
$PM_{2.5}$	24-hour average ≥ 10.4 µg/m^3 (construction) 24-hour average ≥ 2.5 µg/m^3 (operation)	
SO_2	1-hour average ≥ 0.075 ppm 24-hour average ≥ 0.04 ppm	

Source: SCAQMD, 2015

> = greater than
NOX = nitrous oxides
SOX = sulfur oxides

(a) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. SCAG is the regional planning agency for the County of Riverside and addresses regional issues relating to transportation, economy, community development, and environment. With regard to air quality planning, the SCAG Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS), a long-range transportation plan that uses growth forecasts to project trends over a 20-year period is prepared to identify regional transportation strategies to address mobility needs. These growth forecasts form the basis for the land use and transportation control portions of the AQMP. These documents are utilized in the preparation of the air quality forecasts and consistency analysis included in the AQMP. Both the RTP/SCS and AQMP are based, in part, on

projections originating with the County of Riverside and the City of Riverside General Plans.[4]

The two principal criteria for determining conformance to the AQMP are:

1. Whether the Project would result in an increase in the frequency or severity of existing air quality violations; cause or contribute to new violations; or delay timely attainment of air quality standards; and
2. Whether the Project would result in population or employment growth that exceeds the assumptions in the AQMP.

The Build Alternative is included in the SCAG RTP/SCS and would not conflict with or obstruct implementation of the AQMP.

Temporary Impacts (Construction)

Project construction would result in temporary increases in air pollutant emissions. These emissions would be generated in the form of fugitive dust emissions (PM_{10} and $PM_{2.5}$) and ozone precursor emissions (NO_X and VOCs). Operation of heavy equipment and vehicles during the construction phase would generate exhaust emissions from fuel combustion. Fugitive dust emissions would be generated from earth disturbance during site grading, as well as from construction vehicles operating on dirt roadways within or adjacent to construction sites.

Construction of the proposed project is planned to commence in 2023 and is anticipated to be completed in 2025. The duration of construction for the Build Alternative and all design options would be approximately 2 years. The Project's emissions associated with construction of Design Option 1A and Design Option 2A were estimated using CalEEMod. These two design options are anticipated to require the most construction activity and thus generate the highest level of pollutant emissions of the proposed design options; therefore, if emissions associated with Design Option 1A and Design Option 2A are below significance thresholds, it is assumed that emissions associated with the other proposed design options would be below significance thresholds.

Table 3.2-5 and Table 3.2-6 present the results of the emissions calculations for construction of the Build Alternative with Design Option 1A and Design Option 2A, respectively. The data are presented as the maximum anticipated daily emissions for comparison with the thresholds previously identified in Table 3.2-4.

Table 3.2-5. Design Option 1A Maximum Daily Construction Emissions

Construction Phase	Pollutant Emissions (pounds per day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Demolition	2	25	20	<0.5	4	1
Site Preparation	2	24	22	<0.5	4	3
Grading	5	42	37	<0.5	4	2
Paving	2	15	16	<0.5	1	1
Track Construction	2	22	16	<0.5	2	1
Bridge/Platform Construction	3	29	32	<0.5	4	2
Architectural Coating	12	1	3	<0.5	<0.5	<0.5
Maximum Daily Emissions	**12**	**42**	**37**	**<0.5**	**4**	**3**
Significance Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Significant Impact?	***No***	***No***	***No***	***No***	***No***	***No***

Source: CalEEMod (output data is provided in Appendix G).

[4] SCAG serves as the federally designated metropolitan planning organization for the Southern California region.

Table 3.2-6. Design Option 2A Maximum Daily Construction Emissions

Construction Phase	Pollutant Emissions (pounds per day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Demolition	3	28	22	<0.5	4	2
Site Preparation	2	24	22	<0.5	4	3
Grading	5	42	37	<0.5	4	2
Paving	2	15	16	<0.5	1	1
Track Construction	2	22	16	<0.5	2	1
Bridge/Platform Construction	3	29	32	<0.5	4	2
Architectural Coating	13	1	3	<0.5	<0.5	<0.5
Maximum Daily Emissions	**13**	**42**	**37**	**<0.5**	**4**	**3**
Significance Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Significant Impact?	***No***	***No***	***No***	***No***	***No***	***No***

Source: CalEEMod (output data is provided in Appendix G).

Potential temporary impacts resulting from construction activities are evaluated based on the Project's contribution to the increase in pollutants for which SCAB is listed as non-attainment for CAAQS and NAAQS. SCAB has been designated as a federal non-attainment area for ozone and $PM_{2.5}$, and a state non-attainment area for O_3, PM_{10}, and $PM_{2.5}$. As shown in Table 3.2-5 and Table 3.2-6, emissions from project construction would not exceed SCAQMD maximum daily thresholds. Therefore, construction of the Build Alternative and all design options would not result in a significant impact to non-attainment criteria pollutants ($PM_{2.5}$, PM_{10}), or exceed quantitative thresholds for O_3 precursors (i.e., NO_X and VOCs) or contribute substantially to a projected air quality violation. The proposed Project would not generate short-term emissions that could potentially cause an increase in the frequency or severity of existing air quality violations; cause or contribute to new violations; or delay timely attainment of air quality standards. Air quality impacts associated with an increase in criteria pollutants during project construction would be less than significant.

Permanent Impacts (Operations)

The Build Alternative and all design options would not conflict with or obstruct the implementation of the AQMP. Operation of the proposed Project would result in criteria pollutant emissions from mobile (vehicular) sources and area sources. Mobile sources would be associated with the increased number of vehicle trips to and from the Riverside-Downtown Station due to planned increased train ridership and would primarily result in emissions of NO_X and CO. Area sources would be associated with reapplications of architectural coatings on building and parking surfaces and would result in emissions of ROGs during periodic station maintenance activities.

Overall, however, the Project would result in a net decrease in emissions compared to existing conditions. The purpose of the Project is to provide station improvements to enhance Metrolink service and increase ridership. Increased ridership would result in a reduction in regional vehicle miles traveled (VMT) and associated criteria pollutant emissions. The Project is not anticipated to result in an increase in the number of train trips or associated emissions. Proposed station improvements, such as track improvements and additional platform, would serve to reduce idling trains, enhance trip reliability, and accommodate future increase in train traffic resulting from existing and future transportation demand. While the Project would result in increased vehicle trips to and from the Riverside-Downtown Station, these trips would generally be of short distances and the VMT for these trips would be offset by the use of trains. Therefore, the Build Alternative and all design options would not generate operational emissions that could potentially cause an increase in the frequency or severity of existing air quality violations; cause or contribute to new violations; or delay timely attainment of air quality standards.

The Build Alternative and all design options are not anticipated to cause or result in population growth. The Project is proposing to build an additional passenger loading platform, track improvements and expansion of the parking lot to encourage ridership and enhance train service; these attributes are not anticipated to induce population or employment growth. Jobs associated with construction and operation of the Project would likely be filled by the local labor pool and the Project would not create conditions for employment growth that exceeds growth estimates for the area. According to the *Riverside-Downtown Station Community Impact Assessment* (HNTB, 2021) prepared for the Project, population within the general area of the project site (and the Eastside community) has declined since 2010. While growth in the city has shown population increases within the last decade, it has been outpaced by the regional growth rate experienced in the larger context of the County of Riverside.

In addition to the decline in population in the area, unemployment has sharply increased in the County of Riverside. In mid-March of 2020, the state of California was forced to impose significant restrictions on several public and commercial activities in response to the COVID-19 pandemic. As travel and commercial restrictions continue, the pandemic is likely to lead to a significant increase in unemployment due to the loss of thousands of service-related jobs. Employment statistics demonstrate the impact of the COVID-19 pandemic – the County of Riverside's unemployment rate in April 2020 jumped to 15.3 percent compared to a rate of only 3.7 percent in April 2019.[5] As travel restrictions ease with the decline on the rate of infection, there is uncertainty as to when travel demand would return to pre-COVID pandemic levels.

Based on project elements and demographic trends, the Project would not exceed the population and employment growth projections of the RTP/SCS and AQMP. Therefore, the Project would not obstruct implementation of the AQMP, and the impact would be less than significant.

(b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less Than Significant Impact. The Build Alternative would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under FCAA or CCAA ambient air quality standards. Therefore, a net increase of any criteria pollutant within the project region would result in a less than significant impact.

Temporary Impacts (Construction)

Short-term degradation of air quality may occur due to the release of particulate emissions generated by excavation, grading, hauling, and various other construction-related activities. These emissions would be generated in the form of fugitive dust emissions (PM_{10} and $PM_{2.5}$) and O_3 precursor emissions (NO_X and VOCs). In analyzing cumulative impacts from a project, the analysis must specifically evaluate a project's contribution to the cumulative increase in pollutants for which the SCAB is listed as federal non-attainment for O_3, $PM_{2.5}$, and a state non-attainment area for O_3, PM_{10}, and $PM_{2.5}$.

To determine whether the Project's emissions would result a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment, contribute substantially to a projected air quality violation, or have an adverse effect on human health, the Project's emissions were evaluated based on the quantitative emission thresholds established by SCAQMD (Table 3.2-4). The Project's emissions associated with the worst-case construction scenarios of Design Option 1A and Design Option 2A were estimated. As shown in Table 3.2-5 and Table 3.2-6, the maximum daily emissions calculations for construction of the Build Alternative with Design Option 1A and Design Option 2A are compared with SCAQMD's air quality thresholds. Emissions from project construction would not exceed SCAQMD daily thresholds; therefore, construction of the Project would not result in a cumulatively considerable increase of $PM_{2.5}$, PM_{10}, or exceed quantitative thresholds for O3 precursors (i.e., NO_X and VOCs), contribute substantially to a projected air quality violation, or have an adverse effect on human health. Impacts associated with a cumulatively considerable increase in criteria pollutants during project construction would be less than significant.

Permanent Impacts (Operations)

Operation of the proposed Project would result in criteria pollutant emissions from mobile (vehicular) sources and area sources. Mobile sources would be associated with the increased number of vehicle trips to and from the Riverside-Downtown Station due to projected increase in train ridership and would primarily result in emissions of

[5] Fiscal Year Ended June 30, 2020, *Comprehensive Annual Financial Report*, RCTC, October 30, 2020.

NO_X and CO. However, these trips would generally be of short distances and the VMT for these trips would be offset by the use of trains. Area sources, such as ROGs emissions, would be associated with the reapplication of architectural coatings on building and parking surfaces, which would occur occasionally as part of the station's operational maintenance activities.

The Project would result in a net decrease in emissions compared to existing conditions due to the reduction in regional VMT. As such, operation of the Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment. Impacts would be less than significant.

Transportation Conformity

Transportation conformity is required by FCAA § 176(c) (42 U.S. Code § 7506[c]) to ensure that federal funding and approval are given to highway and train projects that are consistent with ("conform to") the air quality goals established by the SIP. Conformity, to the purpose of the SIP, means that transportation activities will not cause new air quality violations, worsen existing violations, or delay timely attainment of the NAAQS. As described previously, the FTA will be providing federal financial assistance; therefore, a determination must be made as to whether the Project conforms to the SIP.

The Project was included in SCAG's conforming 2019 Federal Transportation Improvement Program (FTIP) as Project ID RIV141203 (SCAG 2018, Appendix B). The Project's design concept and scope have not changed significantly from what was included in SCAG's regional emission analysis. This analysis found that the plan, which takes into account regionally significant projects and financial constraint, will conform to the SIP for attaining and maintaining the NAAQS as provided in § 176(c) of FCAA. The FHWA determined that the FTIP conforms to the SIP on December 17, 2018.

Furthermore, as detailed in the 2019 FTIP project list, RIV141203 was found to be exempt from all project-level conformity requirements per Title 40, Code of Federal Regulations (CFR) § 93.126. Therefore, all air quality conformity requirements have been met.

(d) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. The Build Alternative would have less than significant impacts to sensitive receptors within the project study area as construction or operation of the project will not result in exposure of sensitive receptors to substantial pollutant concentrations.

Temporary Impacts (Construction)

The localized effects from the on-site portion of daily construction emissions were evaluated at sensitive receptor locations potentially impacted by the Project according to SCAQMD's Localized Significance Threshold (LST) method. Consistent with the LST guidelines, when quantifying mass emissions for localized analysis, only emissions that occur on-site are considered. Emissions related to off-site delivery/haul truck activity and construction worker trips are not considered in the evaluation of construction-related localized impacts, as these do not contribute to emissions generated on a project site. The LSTs being applied to the Project are based on source receptor area (SRA) 23, the County of Riverside metropolitan area, receptors located within 25 meters, and a disturbed area of 1 acre. Table 3.2-7 and Table 3.2-8 present the results of the localized emissions calculations for Design Option 1A and Design Option 2A, respectively.

The greatest potential for TACs emissions during construction would be related to diesel particulate matter (DPM) associated with heavy equipment operations during earth-moving activities. SCAQMD does not consider diesel-related cancer risks from construction equipment to be an issue due to the short-term nature of construction activities. Construction activities associated with the proposed Project would be sporadic, transitory, and short-term in nature (approximately 2 years). The assessment of cancer risk is typically based on a 30-year exposure duration. Because exposure to diesel exhaust would be well below 30 years, construction of the proposed Project is not anticipated to result in an elevated cancer risk to exposed persons due to the short-term nature of construction. As such, project-related TAC emission impacts during construction would be less than significant.

Permanent Impacts (Operations)

The Project would result in a net decrease in emissions compared to existing conditions due to increased ridership resulting in a reduction of regional VMT and associated criteria pollutant emissions. Operation of the Project would result in an increase in on-road vehicle trips to the Riverside-Downtown Station which would result in minor emissions of DPM. However, the Project would not result in increased regular use of heavy or medium diesel-

powered trucks. While some passenger vehicles traveling to and from the project site may be diesel-powered and emit DPM, most vehicles would be light-duty autos and trucks that are gasoline-powered and do not emit DPM. The Project would therefore not result in significant localized concentrations of DPM from on-road vehicles. Further, the Project would not directly result in an increase in rail traffic and would therefore not generate an increase in DPM associated with diesel-powered trains. As a train station improvements project, the Project is not anticipated to generate other long-term operational TACs. Therefore, operation of the Build Alternative and all design options would not expose sensitive receptors to substantial pollutant concentrations. Impacts would be less than significant.

Table 3.2-7. Design Option 1A Maximum Daily Localized Construction Emissions

Construction Phase	Pollutant Emissions (pounds per day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Demolition	20	19	3	1
Site Preparation	23	21	4	2
Grading	42	36	3	2
Paving	11	15	1	1
Track Construction	21	15	1	1
Bridge/Platform Construction	23	25	1	1
Architectural Coating	1	2	<0.5	<0.5
Maximum Daily Emissions	**42**	**36**	**4***	**2**
Significance Thresholds	*118*	*602*	*4*	*3*
Significant Impact?	***No***	***No***	***No***	***No***

Source: CalEEMod (output data is provided in Appendix G).

* The total presented is the rounded value. The unrounded value of 3.7 pounds per day is below the LST of 4 pounds per day.

Table 3.2-8. Design Option 2A Maximum Daily Localized Construction Emissions

Construction Phase	Pollutant Emissions (pounds per day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Demolition	23	21	4	1
Site Preparation	23	21	4	2
Grading	42	36	3	2
Paving	11	15	1	1
Track Construction	21	15	1	1
Bridge/Platform Construction	21	25	1	1
Architectural Coating	1	2	<0.5	<0.5
Maximum Daily Emissions	**42**	**36**	**4***	**2**
Significance Thresholds	*118*	*602*	*4*	*3*
Significant Impact?	***No***	***No***	***No***	***No***

Source: CalEEMod (output data is provided in Appendix G).

*The total presented is the rounded value. The unrounded value of 3.7 pounds per day is below the LST of 4 pounds per day.

(e) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less Than Significant Impact. The Build Alternative would not adversely affect a substantial number of people due to exposure to other emissions (such as those leading to odors) generated from project construction or operation. Therefore, exposure to project emissions would result in a less than significant impact.

Temporary Impacts (Construction)

The Air Quality Section of the *Riverside County General Plan Update Environmental Impact Report*[6] provides guidance for defining objectionable odors and "substantial numbers of people." For construction activities, the EIR determined that a substantial number of people would not be impacted, as construction odors are limited to the number of people living and working near the source. There are residential properties located adjacent to the project site across Howard Avenue at which odors associated with asphalt and diesel emissions could be detectable; however, the number of residential properties that could be potentially affected is limited to the area near the approximate 17-acre construction site. In addition, odors would likely only be detectable at these properties when construction activities are occurring within the portion of the project site immediately adjacent to the residential properties, as odorous emissions disperse rapidly with distance from their source. As such, based on the limited number of residential properties in proximity to the site and the limited duration of exposure, project construction would not emit odors in a manner that would affect a substantial number of people. Odor impacts from construction would be less than significant.

Permanent Impacts (Operations)

Common sources of operational odor complaints include sewage treatment plants, landfills, recycling facilities, and agricultural uses. The proposed Project, which involves improvements to an existing train station, does not include these sources or other sources capable of generating substantial odors. Solid waste associated with operation of the Project would be collected by a contracted waste hauler, ensuring that any odors resulting from on-site waste would be managed and collected in a manner to prevent the proliferation of odors. Operational odor impacts would be less than significant.

3.2.5. Avoidance, Minimization, and/or Mitigation Measures

Measures provided in this section summarizes avoidance and minimization measures to be conducted by RCTC to ensure less than significant impacts are avoided or minimized.

AQ-1: In accordance with SCAQMD Rule 403, fugitive dust emissions from the project site shall be controlled by regular watering or other dust preventive measures, as specified in SCAQMD Rule 403:

- Minimize land disturbed by clearing, grading, and earth moving, or excavation operations to prevent excessive amounts of dust.
- Provide an operational water truck on-site at all times; use watering trucks to minimize dust; watering should be sufficient to confine dust plumes to the project work areas; watering shall occur at least twice daily with complete coverage, preferably in the late morning and after work is done.
- Suspend grading and earth moving when wind gusts exceed 25 miles per hour unless the soil is wet enough to prevent dust plumes.
- Securely cover trucks when hauling materials on or off-site.
- Stabilize the surface of dirt piles if not removed immediately.
- Limit vehicular paths and limit speeds to 15 miles per hour on unpaved surfaces and stabilize any temporary roads.
- Minimize unnecessary vehicular and machinery activities.
- Sweep paved streets at least once per day where there is evidence of dirt that has been carried on to the roadway.
- Revegetate or stabilize disturbed land, including vehicular paths created during construction to avoid future off-road vehicular activities.

[6] Riverside, County of. 2019. Climate Action Plan Update. November. 2015. *Riverside County General Plan Update Project Environmental Impact Report* No. 521 (SCH No. 2009041065).

These control techniques shall be included in project specifications and shall be implemented by the construction contractor.

3.2.6. CEQA Significance Conclusion

The Build Alternative, including all design options, would occur within an existing rail station and neighboring industrial development in urbanized downtown Riverside. Implementation of the Project will allow for increased access to alternative modes of transportation; therefore, there are limited air quality concerns within and near the Project The Project will have a less than significant impact on air quality.

3.3. Biological Resources

This section discusses the potential impacts resulting from the construction and operations of the proposed Build Alternative and all design options on biological resources within the biological study area (BSA). Information provided in this section is based on the results of the technical analysis in the Biological Resources Report (HNTB, 2020) prepared for the proposed Project.

3.3.1. Regulatory Framework

Applicable, laws, regulations and conservation plans relative to biological resources are provided below:

Federal Regulations

Federal Endangered Species Act. Administered by the United States Fish and Wildlife Service (USFWS) and National Oceanographic and Atmospheric Administration National Marine Fisheries Service (NMFS), the Federal Endangered Species Act (FESA), 16 United States Code (U.S.C.) § 1531, provides the legal framework for the listing and protection of species (and their habitats) that are identified as being endangered or threatened with extinction. Pursuant to FESA (16 U.S.C. 1531 et seq.), USFWS and NMFS have regulatory authority over species listed as endangered or threatened, as well as habitat of such species that has been designated as critical (i.e., critical habitat).

Migratory Bird Treaty Act. The Migratory Bird Treaty Act (MBTA), 16 U.S.C. 703 through 712, domestically implements a series of international treaties with Canada, Mexico, and Japan that provide for migratory bird protection. The MBTA authorizes the Secretary of the Interior to regulate the taking of migratory birds. The act provides that it is "unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, […] any migratory bird, or any part, nest, or egg of any such bird." Most native birds in Riverside County are protected under the MBTA.

Clean Water Act. The Clean Water Act (CWA), 33 U.S.C. 1251 states the principal law that serves to protect the nation's waters is the 1948 Federal Water Pollution Control Act. This legislation, more commonly referred to as the CWA, underwent significant revision when Congress, in response to the public's growing concern of widespread water pollution, passed the Federal Water Pollution Control Act Amendments of 1972. The purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of all waters of the U.S. (WOTUS) for the conservation of the Nation's potable water sources. Under the current regulatory definition, WOTUS include navigable waters, territorial seas, interstate waters, all other waters where the use or degradation or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries (33 CFR 328.3(a)). Under the CWA, U.S. EPA has implemented pollution control programs and has developed national water quality criteria recommendations for pollutants in surface waters.

State Requirements

California Endangered Species Act (CESA). CESA Fish and Game Code (FGC) § 2050 et seq., provides a process by which plants and animals can be recognized as being endangered or threatened with extinction. Pursuant to the CESA, a permit from the California Department of Fish and Wildlife (CDFW) is required for projects that could result in the taking of a plant or animal species that is state listed as threatened or endangered FGC § 2050 et seq.). Under CESA, "take" means hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.

California Migratory Bird Protection Act. This act modifies § 3514 of the FGC to specify that "It is unlawful to take or possess any migratory nongame bird as designated in the federal Migratory Bird Treaty Act (16 U.S.C. Sec. 703 et seq.) before January 1, 2017."

Protection of Migratory Birds. FGC § 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird The Fish & Game Code defines "take" to mean "to hunt, pursue, catch, capture, kill, or attempt to hunt, pursue, catch, capture, or kill." (FGC § 86) California courts have held that take includes incidental take and is not limited to hunting, fishing and other activities that are specifically intended to kill protected fish and wildlife.

Protection of Bats. Bats and other nongame mammals are protected in California under FGC § 2000, 2002, 2014 and 4150, which state that all nongame mammals or parts thereof may not be taken or possessed, except as otherwise provided in the code or in accordance with regulations adopted by the commission. Thus, destruction of an occupied, nonbreeding bat roost, resulting in the death of bats, or disturbance that causes the loss of a maternity colony of bats (resulting in the death of young), is prohibited.

Fully Protected Species under FGC. Protection of fully protected species is described in FGC § 3511, 4700, 5050, and 5515. These statutes prohibit take or possession of fully protected species. Incidental take of fully protected species may be authorized under an approved Natural Community Conservation Plan (NCCP).

Porter-Cologne Water Quality Control Act (1969). California's Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a "Report of Waste Discharge" for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the Clean Water Act (CWA) and regulates discharges to waters of the state (WOTS). WOTS includes all surface waters (including isolated waters) and groundwater, which are not considered WOTUS. Additionally, it prohibits discharges of "waste" as defined, and this definition is broader than the CWA definition of "pollutant." Discharges under the Porter-Cologne Act are permitted by waste discharge requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

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

Local and Regional Regulations

City of Riverside General Plan 2025 (2019). The City of Riverside's General Plan is a long-range policy-planning document that defines the framework by which the City's physical and economic resources are to be managed over time (City of Riverside, 2012). The open space (OS) and conservation element is intended to provide guidance in developing and implementing activities that ensure the protection of Riverside's OS areas, scenic resources, and hillsides. The following are relevant goals, objectives, and policies contained within the OS and conservation element:

- Policy OS-1.1: Protect and preserve OS and natural habitat wherever possible.
- Objective OS-5: Protect biotic communities and critical habitats for endangered species throughout the general plan area.
- Policy OS-5.4: Protect native plant communities in the general plan area, including sage scrub, riparian areas, and vernal pools, consistent with the Western Riverside County Multiple Species Habitat Conservation Plan (WRCMSHCP).
- Objective OS-6: Preserve and maintain wildlife movement corridors.

Local Tree Ordinances. In Riverside County, native oak trees with diameters greater than 2 inches in diameter at breast height are protected. The Riverside County Planning Department provides project design and impact avoidance guidelines to address the treatment of oak woodlands and help reduce project impacts on native oak trees.

The County of Riverside Tree Removal Ordinance No. 559 (as amended through 559.7 and as provided for in Ordinance No. 725) regulates the removal of trees (County of Riverside, 2000). This ordinance states that, "No person shall remove any living native tree on any parcel or property greater than 0.5 acre in size, located in an area above 5,000 feet in elevation and within the unincorporated area of the County of Riverside, without first obtaining a permit to do so, unless exempted by the provisions of Section 4 of this ordinance."

The City of Riverside's Urban Forestry Policy (2015) provides guidelines for the planting, pruning, preservation and removal of all trees in ROW. The Policy specifies guidelines for protecting trees on city property during construction projects. A tree removal permit is required for construction projects that remove trees.

Western Riverside County Multiple Species Habitat Conservation Plan (2003-2004). The WRCMSHCP area includes the jurisdictional areas of the City of Riverside and the proposed Project. The WRCMSHCP contains policies on the preservation of natural communities and wildlife movement corridors within the project study area. The WRCMSHCP is a comprehensive, multi-jurisdictional Habitat Conservation Plan and NCCP focusing on the conservation of species and their associated habitats in Western Riverside County. It is a large, multi-jurisdictional

habitat planning effort with the overall goal of maintaining biological and ecological diversity within a region undergoing rapid urban development.

The WRCMSHCP enables Riverside County and its cities to better control local land use decisions and maintain a strong economic climate in the region while addressing the requirements of CESA and FESA.

3.3.2. Methodology for Evaluating Environmental Impact

The analysis of the proposed Project's potential impacts to biological resources considers potential project effects within the study area related to construction and operations of the Riverside-Downtown Station Improvements Project (Project). Findings and conclusions contained in this analysis are based on records search, database inquiries, and aerial imagery for biological resources. Impacts associated with the Project were evaluated based on site conditions and the evaluation of potential presence of sensitive biological resources.

Database and Literature Search

Databases and existing literature were searched to determine if any special-status species have the potential to occur within the BSA. Special-status species are those that are legally protected under federal or state laws. The following databases were used to obtain information on special-status animal or plant species, and sensitive natural communities within the study area that may be affected by the Project: USFWS Species List, NMFS Species List, California Natural Diversity Database (CNDDB) and California Native Plant Society was obtained on September 25, 2020, and Inaturalist was searched on February 21, 2020, for research-grade records of common and special-status species.

Biological Study Area

The project footprint includes all the areas that will be directly impacted by the construction of the Project, either permanently (for example the areas with new tracks, platforms, and parking lots) or temporarily (areas used during construction, such as for staging). The BSA includes the project footprint and areas that may be indirectly affected by the Project. The BSA is the extent shown on Figure 3.3-1 and is approximately 500 feet surrounding the project footprint.

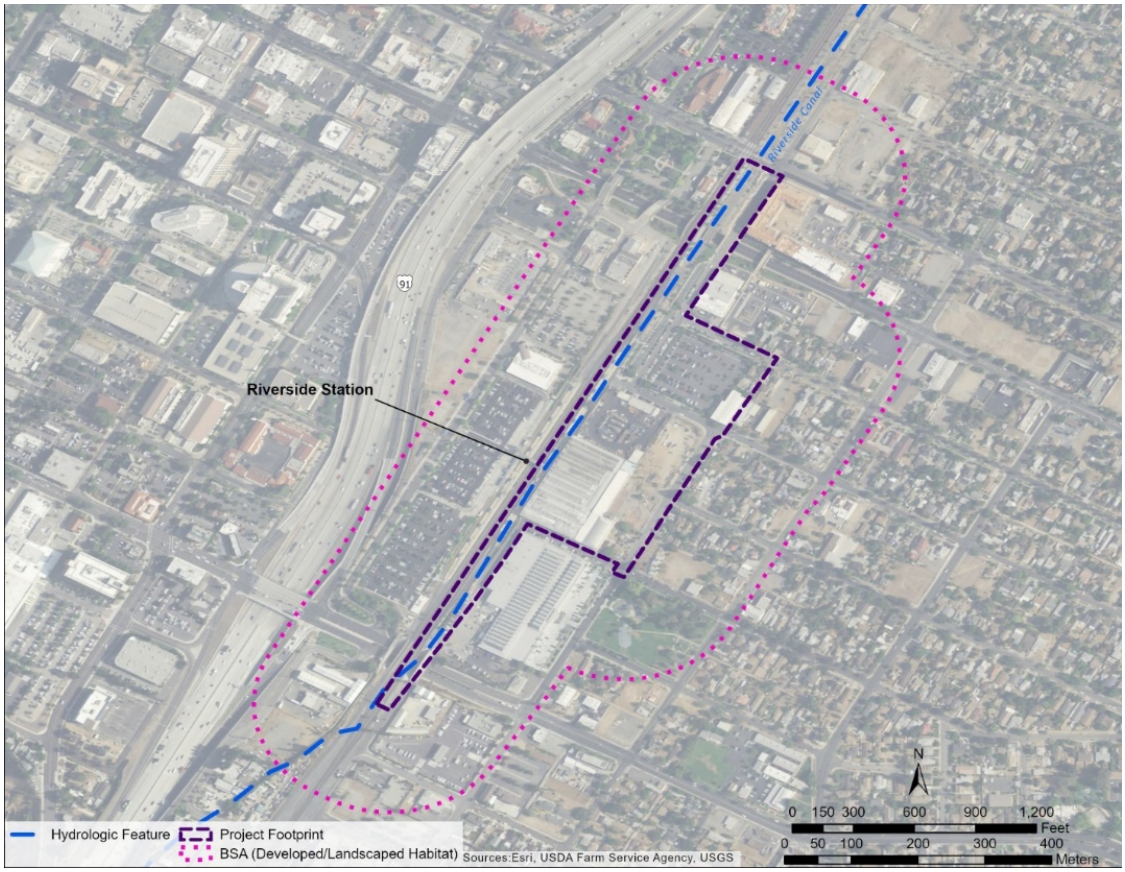

Figure 3.3-1. Project Footprint and BSA, City of Riverside

Source: HNTB, 2020

3.3.3. Affected Environment

Project Location and Setting

The project site is located within an urbanized environment characterized by existing residential, commercial, and industrial development. The project site is generally bounded by Vine Street to the north, Howard Avenue to the south, 12th Street to the west, and 10th Street to the east.

The Project is located in the City of Riverside, in the relatively flat, lowlands area (the Perris Plain) between the Santa Ana Mountains to the south and west, and the San Bernardino Mountains to the north and east. The San Bernardino Mountains are part of the transverse ranges that trend east to west. The Santa Ana Mountains are part of the Peninsular Mountain Ranges that trend north to south. The Perris Plain is punctuated by low hills and rocky outcrops. The Project itself is relatively flat and is at 880 feet in elevation. Mount Rubidoux and the Santa Ana River are 1.3 and 1.8 miles to the west of the Project, respectively, and Sugarloaf Mountain, Box Springs Mountain, and Sycamore Canyon are to the east of the Project.

The Project is within the Santa Ana River watershed. Tequesquite Arroyo Creek is located approximately 0.7 mile to the south and runs beneath State Route 91 (SR 91). Riverside Canal is located west of the project footprint. It is culverted underground to the north of 14th Street and is daylighted south of 14th Street, approximately 70 feet to the west of the footprint. Lake Evans is 1.25 miles to the northwest of the BSA.

Biological Conditions

The BSA is located within an entirely urbanized area that consists of existing development and landscaped areas. The majority of this area is covered with hardscape. Plant species within the BSA typically consist of non-native and ornamental landscaping. Ruderal and weedy species are commonly found at the margins of hardscape areas, where they can grow in small patches of disturbed soil areas.

There are no natural communities within or adjacent to the project footprint and due to the lack of suitable habitat within the BSA, there is no potential for federally listed species to occur within the BSA. No critical habitat or essential fish habitat (EFH) was identified within the BSA. There are no waters or wetlands within the project footprint. The Riverside Canal runs along the western edge of the project footprint. The canal is in an underground culvert for the majority of the length of the project area, with a short open segment in an engineered channel, parallel to the southernmost part of the footprint. There is no riparian vegetation associated with the canal, as it is a constructed watercourse. Other urban animal species that commonly occur in urban areas are bats, squirrels, rats, possums, skunks, racoons lizards, snakes, and a variety of native and non-native bird species such as house sparrow, hummingbirds, hawks, crows, pigeons, warblers, finches, and ravens starlings (rock doves and a variety of gull species).

Special-Status Species

Potential for special-status species to occur was based on the known distribution of the species and the presence of suitable habitat and habitat features within or near the BSA. Seven special-status species with the potential to occur within the BSA are described herein.

Cooper's Hawks and Other Falconiformes (Raptors)

Multiple species of raptors have been observed within the urbanized City of Riverside, including Cooper's hawks, red-tailed hawks, and red-shouldered hawks. All hawks are protected under Section 3503.5 of the FCG for nesting Falconiformes (including vultures, hawks, and falcons) and the MBTA. These raptors nest in structures or trees in urban areas. These species therefore have a moderate potential to occur in the BSA. The trees and structures within and near the BSA are low-quality nesting habitat because of the high levels of human activity and low concentration of trees and vegetation. Although this species is known to nest and hunt in urban areas and may use landscaped trees within or near the BSA, these species have a low potential to nest within or near the BSA.

Peregrine Falcon

The peregrine falcon is one of the most widely distributed raptors. In California, breeding habitats include a variety of locations from cliffs in uninhabited areas to tall buildings or bridges within the urban landscape. Peregrines do not build nests like most other birds, instead they lay their eggs in a "scrape," or shallow indentations high on a cliff side, or in a human-made structure, such as a building or bridge. Occasionally they will use old nests of other birds, such as ravens. The breeding season for peregrine falcons in California generally starts around late-February and early-March and concludes after the young leave the nest between May and June. The nearest CNDDB observation, from 2015,

was 23 miles away. There are observations of peregrine falcons within urbanized Riverside and because of the presence of suitable urban habitat, they have a moderate potential to nest and hunt within the BSA.

Migratory Birds

All of the bird species within the BSA are protected by the MBTA and the FGC. Other common, non-listed (not designated under FESA or CESA) bird species that may be found nesting or foraging within or near the project footprint would be protected under the MBTA and the FGC. The MBTA does not protect nonnative birds, including house sparrows (*Passer domesticus*), European starlings (*Sturnus vulgaris*), and rock pigeon (*Columba livia*).

Pallid Bat

Pallid bats are a species of special concern in California. They range throughout western North America at low elevation rocky arid deserts and canyonlands, shrub-steppe grasslands, karst formations, and higher elevation coniferous forests. Pallid bats roost alone or in small or large groups. Day and night roosts include crevices in rocky outcrops and cliffs, caves, mines, trees, and various human structures such as bridges (especially wooden and concrete girder designs), barns, porches, bat boxes, and human-occupied as well as vacant buildings. Roosts generally have unobstructed entrances and exits, and are high above the ground, warm, and inaccessible to terrestrial predators. However, this species has also been found roosting on or near the ground under burlap sacks, stone piles, rags, and baseboards. Pallid bats' tendency to roost in groups and their relative sensitivity to disturbance makes them vulnerable to mass displacement. Where man-made structures are occupied, roosts can be damaged or destroyed by demolition, modification, chemical treatments, or intentional eradication and exclusion. Maternity colonies are especially susceptible to disturbance. In coastal California, urbanization has reduced roosting and foraging habitat. Pallid bats could roost in trees, buildings, or structures within the project footprint. Based on the results of the CNDDB records search, the nearest recorded occurrence of pallid bat was 11 miles away in Riverside in 1928. Therefore, pallid bats have a low potential to roost within the BSA.

Pocketed Free-Tailed Bat

The pocketed free-tailed bat is a species of special concern in California. Its distribution is in western North America, from Southern California, central Arizona, southern New Mexico, and western Texas, south into Mexico including Baja California. The pocketed free-tailed bat is colonial and roosts primarily in crevices of rugged cliffs, high rocky outcrops, and slopes. It has been found in a variety of plant associations, including desert shrub and pine-oak forests. The species may also roost in buildings, caves, and under roof tiles. Breeding populations have recently been identified in Southern California. The species forms maternity colonies, and females bear a single offspring in late June or July. This bat forages mainly on large moths, but its diet includes small moths and beetles, with small amounts of a variety of other insects. Threats to pocketed free-tailed bat include those generalized to bat species, impacts to foraging areas from grazing, riparian management, the use of pesticides, and disturbance to roost sites. Pocketed free-tailed bats have a low potential to roost in structures within the BSA.

Western Mastiff Bat

The western mastiff bat is a species of special concern in California. They range from central Mexico across the southwestern United States. Mastiff bats are found in a variety of habitats, from desert scrub to chaparral to oak woodland and into the ponderosa pine belt and high elevation meadows of mixed conifer forests. They have also been found in similar crevices in large boulders and buildings. In California, mastiff bats have been detected at all seasons, although they may change roost sites. Mastiff bats in particular, are threatened by urban expansion. When colonies are within or in close proximity to human dwellings, they are vulnerable to disturbance, vandalism, and removal by pest control operators and public health departments. The nearest CNDDB record is approximately 5 miles west of the Project. Given some suitable habitat within the BSA and occurrences nearby but not within the BSA, western mastiff bats have a low to moderate potential to occur within the BSA.

Western Yellow Bat

Western yellow bats are distributed across northern Mexico, western Arizona, Southern California, southern Nevada, and southwestern New Mexico. They are known to occur in a number of palm oases but are also believed to be expanding their range with the increased usage of ornamental palms in landscaping. Individuals usually roost in trees, hanging from the underside of a leaf. This species likely suffers from general threats to North American bat species: the loss of clean, open water; modification or destruction of roosting and foraging habitat; and, for hibernating species, disturbance or destruction of hibernation spaces used by the species. Chemicals in the environment that affect bats or their prey are also a threat. Because of low fertility, high juvenile mortality, and long generational turnover,

many bat populations may be vulnerable to human-induced pressures. There are CNDDB occurrences from the 1990s within the urbanized City of Riverside and western yellow bats are known to roost in palm trees. The urbanized habitat and palm trees within the BSA are therefore suitable habitat for this species. Given the suitable habitat within the BSA and occurrences nearby but not within the BSA, western yellow bats have a low to moderate potential to occur within the BSA.

Yuma Myotis (Bat)

The Yuma myotis, identified as sensitive by the Bureau of Land Management (BLM) and as a low to moderate conservation priority by the Western Bat Working Group, ranges across the western third of North America from British Columbia, Canada, to Baja California and southern Mexico. The Yuma myotis occurs in a variety of habitats including riparian, arid scrublands and deserts, and forests. The species roosts in bridges, buildings, cliff crevices, caves, mines, and trees. Yuma myotis may be affected by closure of abandoned mines without adequate surveys, some forest management practices, and disturbance of maternity roosts in caves and buildings. Since this species frequently occurs in human-made structures, it is vulnerable to destructive pest control activities The nearest CNDDB records is 10 miles to the southwest; therefore, Yuma myotis have a low potential to occur in the project footprint.

Protected Bats

In addition to the pallid bat, western mastiff bat, and yuma myotis, other native species have the potential to be found in structures and vegetation in or near the project footprint. Native species that do not otherwise have a special-status, such as the Mexican free-tailed bat (*Tadarida brasilensis*), have the potential to roost in structures and buildings. In general, the long-term persistence of North American bat species is threatened by the loss of clean, open water; modification or destruction of roosting and foraging habitat; and, for hibernating species, disturbance or destruction of hibernation spaces used by bat species. All native bats are protected under the FGC.

Trees

There are 51 trees that may be removed by the Project. Most of these trees were planted by the Riverside County Transportation Commission (RCTC) in the overflow parking lot as well as palm trees along the railroad ROW. Street trees in the City of Riverside include Mexican fan palm (*Washingtonia robusta*), California fan palm (*W. filifera*), crape myrtle (*Lagerstroemia indica*), shamel ash (*Fraxinus udei*), and holly oak (*Quercus ilex*) and may occur within the footprint.

Habitat Connectivity and Wildlife Movement

Habitat elements that can provide connectivity for wildlife include riparian areas, creeks, parks, natural areas, channels and watercourses, and culverts. Within the BSA, there are no habitat features that provide connectivity for wildlife populations. Highway 215 and SR 91, which act as barriers to wildlife movement, as well as extensive urbanization within 1 mile of the Project, makes the existing condition of the BSA unsuitable for supporting wildlife movement and does not currently contribute to habitat connectivity.

3.3.4. Environmental Impacts and Consequences

CEQA Thresholds of Significance for Biological Resources

In accordance with the *2021 CEQA Statute & Guidelines, Appendix G, Environmental Checklist Form*, IV. Biological Resources: (a) through (f), the proposed Project would result in impacts to biological resources, if the construction or operations of the proposed Project would result in any of the conditions listed in the following table.

The discussion below includes the CEQA checklist for biological resources, and the discussion that follows provides the rationale for the following significance determinations:

- No Impact
- Less than Significant Impact
- Less than Significant Impact with Mitigation
- Potentially Significant Impact

Would the project:

Question	CEQA Determination
(a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by California Department of Fish and Game or U.S. Fish and Wildlife Service?	Less Than Significant Impact
(b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	No Impact
(c) Have a substantial adverse effect on state or federally protected wetlands (e.g., marshes, vernal pools, coastal wetlands) through direct removal, filling, hydrological interruption, or other means?	No Impact
(d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impedance of the use of native wildlife nursery sites?	No Impact
(e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Less Than Significant Impact
(f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan?	No Impact

(a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less Than Significant Impact. The Build Alternative would not have a significant impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by California Department of Fish and Wildlife or U.S. Fish and Wildlife Service as described below.

Temporary Impacts (Construction)

Nesting Birds

Construction activity for the Build Alternative and all design options would be similar and require the removal of trees and demolition of structures that could potentially impact nesting birds. All of the bird species within the BSA are protected by the MBTA and the FGC. Other common, non-listed (not designated under FESA or CESA) bird species that may be found nesting or foraging within or near the project footprint would be protected under the MBTA and the FGC. Construction activities have the potential to impact nesting birds, directly and indirectly. Nests can be directly disturbed by tree relocation or removals, tree trimming, clearing, grubbing, and demolition of structures. Increased noise and activity resulting from construction activities could cause nest abandonment and death of young or loss of reproductive potential at active nests located near construction activities. Birds could potentially occupy areas within the project site or adjacent to the construction area and could be directly and indirectly affected during construction. Impacts to nesting birds would occur if active nests are disturbed during construction; however, impacts to active nests would be avoided through the implementation of BIO-1, which would schedule vegetation clearing and grubbing outside the bird nesting season or conduct pre-construction surveys for active nests prior to starting construction activities. Surveys will cover any potential nesting sites within 500 feet of construction activity, including vegetation removal and structure demolition.

There is no risk of construction taking non-nesting birds, including special-status avian species such as Cooper's hawks, red-tailed hawks, red-shouldered hawks and peregrine falcon, as they can fly away from construction activities if necessary.

Special Status Species

Special-status species include Pallid Bat, Pocketed Free-Tailed Bat, Yuma Myotis, Western Mastiff Bat, Western Yellow Bat. Other native bat species are also protected under the FGC. Bats are generally known to roost in trees, buildings, or structures and could occur within the project footprint. Impacts to bats may occur if an occupied roosting habitat is disturbed or destroyed during construction of the Build Alternative. To ensure impacts to bats are avoided, pre-construction bat surveys will be conducted by a qualified biologist to determine if bats are present prior to the removal of trees or structures that could potentially provide suitable habitat. If bats are discovered in or near active construction, a protective buffer zone will be established by a qualified biologist through implementation of BIO-3.

For the Build Alternative and all design options, avoidance and minimization measures were developed, to avoid impacts to nesting birds protected by the MBTA and FGC. Pre-construction worker environmental awareness training (WEAT) will review nesting bird protections. The proposed Project would have a less than significant impact on special-status and migratory birds. Parking Design Option 2A may have greater potential effects based on the expected number of tree and structure removals; however, a less than significant impact is anticipated during construction.

Permanent Impacts (Operations)

According to the Biological Resource Study (HNTB, 2020), project operations could result in additional noise and visual disturbance. This additional disturbance would not affect special-status birds, result in nest failure, or lower habitat quality because there is no high-quality nesting habitat near the footprint. Any birds that currently nest in the vicinity of the Downtown-Riverside Station are acclimated to a high level of human disturbance and noise from the existing rail and station use. The proposed Project, including the new station facilities and/or operations, would not foreseeably result in take of individual or nesting birds, including special-status birds. Additional bird strikes as a result of increases in number of trains is not expected, as the trains do not pass through areas with high concentrations of birds. Impacts would not vary by pedestrian overpass access or parking design options. The Project would not have a substantial adverse effect on, either directly or through habitat modifications, any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.

(b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

No Impact.

Temporary/Permanent Impacts

Due to the lack of riparian habitat or other sensitive natural communities within the BSA, the proposed Project would have no impact on any riparian habitat or other sensitive natural community identified in local or regional plan, policies, regulations, or by the CDFW or USFWS during construction and operations of the Project.

(c) Have a substantial adverse effect on state or federally protected wetlands (e.g., marshes, vernal pools, coastal wetlands) through direct removal, filling, hydrological interruption, or other means?

No Impact.

Temporary/Permanent Impacts

The proposed Project would have no temporary or permanent impact, on state or federally protected waters or wetlands through direct removal, filling, hydrological interruption, or other means. There are no wetlands within the project footprint and no work in water is proposed. There is no work proposed within the culverted or open section of the Riverside Canal.

(d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impedance of the use of native wildlife nursery sites?

No Impact. The project site is located within an urbanized area in Downtown Riverside and there are no established wildlife corridors in the project area. Existing site conditions do not support native wildlife species and wildlife movements to and from habitat core areas. There are no waterways to support fish population within the project site.

Temporary/Permanent Impacts

Habitat elements that can provide connectivity for wildlife include riparian areas, creeks, parks, natural areas, channels and watercourses, and culverts. The WRCMSHCP identifies the Santa Ana River as the nearest core habitat area (a block of habitat of appropriate size, configuration, and vegetation characteristics to generally support the life history requirements of one or more species in the WRCMSHCP), which is approximately 2 miles away from the project site. The nearest linkage (connection between core areas) to the Project is to the southeast, between Sycamore Canyon Park, Box Springs Reserve, and Sugarloaf Mountain, which is approximately 3 miles away from the project site. Existing urban development between the project site and core habitat and linkages make it unlikely for native wildlife movement beyond the conservation areas. Within the proposed BSA, there are no habitat features that provide connectivity for wildlife populations. Highway 215 and SR 91 act as barriers to wildlife movement, as well as extensive urbanization within 1 mile of the Project, makes the existing condition of the BSA unsuitable for supporting wildlife movement. There are no core habitat areas or critical linkages identified in the WRCMSHCP in or near the BSA. The BSA, therefore, does not currently contribute to habitat connectivity. Therefore, the Build Alternative would not have temporary or permanent impacts to movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impedance of the use of native wildlife nursery sites.

(e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than Significant Impact. Trees within the project footprint contribute to the natural and visual character of the project footprint and surrounding area, including providing habitat to urban species such as birds and bats. Both the City and County of Riverside have policies and ordinances that protect trees.

Temporary Impacts (Construction)

The proposed Project would impact up to 51 trees within the project footprint, some of which may be native species. The majority of these trees are within RCTC or private property. There are 11 trees within the City of Riverside ROW that may be impacted. The number of tree removals would depend on the design option (Table 3.3-1).

Table 3.3-1. Impacted Trees by Design Option

Build + Design Option	Number of Impacted Trees (Private and RCTC Property)	Number of Impacted Trees (City ROW)	Total Impacted Trees
Pedestrian Overpass Access Improvements			
Pedestrian Overpass Access Design Option 1	27	9	36
Parking, Circulation, and Streetscape Improvements			
Parking Design Option 1A	27	9	36
Parking Design Option 1B	24	8	32
Parking Design Option 2A	40	11	51
Parking Design Option 2B	37	10	47
Parking Design Option 3A	38	9	47
Parking Design Option 3B	35	8	43

The City of Riverside's General Plan prioritizes protection of native plants, habitat, and communities and protection of the natural and visual character of the community. According to the City of Riverside's General Plan Land Use and Urban Design Element, the City has an objective to enhance, maintain and grow Riverside's inventory of street trees (LU-27), which includes provisions on providing landscaped parkways, maintenance, conservation, and protection of street trees (LU-27.1 through LU-27.4). The proposed Project will comply with local policies or ordinances protecting biological resources, including tree preservation policies and ordinances and minimize tree removals and protect existing trees from damage during construction. In compliance with the City's objectives, all existing trees removed to construct the Build Alternative will be replaced by the proposed Project.

Permanent Impacts (Operations)

The proposed Project would transplant trees within the project footprint to the greatest extent feasible pursuant to the City of Riverside's General Plan Land Use and Urban Design Element objective LU-27 and policies LU-27.1 through LU-27.4 regarding the maintaining and conservation of street trees. Trees removed to accommodate the implementation of the Build Alternative would be replaced, thus complying with the City's objective and polices. For trees within the City ROW that are removed but cannot be transplanted, non-native trees will be replaced at a 1:1 ratio (replaced:removed) and native trees will be replaced at a 3:1 ratio within or near the Project to the extent feasible. All tree removals, transplantations, and replacements within the City ROW will be done in compliance with Riverside, California's - Code of Ordinances Title 13 - Streets, Sidewalks, Trails, and Trees as well as the City of Riverside Urban Forestry Policy Manual (2015). Replacement tree species will be coordinated with the Public Works Department based on site conditions and tree planting guidelines. A tree removal permit would be acquired from the City of Riverside in accordance with the City of Riverside's Urban Forestry Policy. Riverside County Ordinance 559 does not apply to the Project because the Project is below 5,000 feet of elevation and within the incorporated City of Riverside. Therefore, a tree removal permit from the County is not required. The Project will comply with city and county policies and ordinances with regards to protection of biological resources including tree preservation; therefore, the Project would have a less than significant impact and would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

(f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan?

No Impact.

The WRCMSHCP is a comprehensive, multi-jurisdictional Habitat Conservation Plan (HCP) focusing on conservation of species and their associated habitats in Western Riverside County. The WRCMSHCP Plan Area encompasses approximately 1.26 million acres (1,966 square miles); it includes all unincorporated Riverside County land west of the crest of the San Jacinto Mountains to the Orange County line, as well as the jurisdictional areas of several cities within Riverside. It covers multiple species and multiple habitats within a diverse landscape, from urban centers to undeveloped foothills and montane forests, all under multiple jurisdictions.

The proposed Project is located within the downtown core of the City of Riverside. The nearest WRCMSHCP conservation area from the project site is within the Riverside/Norco Area Plan, which is located approximately 1.5 miles to the west of the project site. The BSA is not within the WRCMSHCP and would not result in impacts to any adopted habitat conservation plan, natural community conservation plan or other approved local, regional, or state habitat conservation plan.

Temporary/Permanent Impacts

The BSA is not within the WRCMSHCP. The BSA does not contain or adjoin any core habitat areas, linkages, constrained linkages, noncontiguous habitat blocks, or criteria areas identified in the WRCMSHCP. Therefore, construction or operation of the Project would have no impact on any of the covered species included in the WRCMSHCP. The BSA does not contain riparian/riverine areas or vernal pools, there are no narrow endemic plant species, and it is not within the urban/wildlands interface guidelines. The Project would have no impact or conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCPs.

3.3.5. Avoidance, Minimization, and/or Mitigation Measures

Measures provided in this section summarizes avoidance and minimization measures to be conducted by RCTC to ensure less than significant impacts are avoided or minimized.

BIO-1: The following measures will be implemented by the Project to avoid and minimize impacts to special-status and nesting birds during construction.

- Where feasible, the contractor will complete tree and shrub removals and structure demolition between September 1 and January 31, which is outside of the nesting season.
- During nesting season (February 1 through August 31) pre-construction surveys for active nests (nests with eggs or juvenile birds that are dependent on parental care) will be conducted by a qualified biologist no more than 48 hours prior to starting construction activities. Surveys will cover any potential nesting sites within 500 feet of construction activity, including vegetation removal and structure demolition.
- Surveys and avoidance measures for active nests will conform to current USFWS and CDFW protocol and recommendations.
- If active nests are observed during pre-construction surveys or during construction, active nest sites will be designated as environmentally sensitive areas and identified with appropriate markers for the duration that eggs or juvenile birds are nest-dependent.
- A qualified biologist will develop buffer recommendations for active nests that are site and species-specific, based on current USFWS and CDFW guidance, and at an appropriate distance that will protect normal bird behavior to prevent nesting failure or abandonment. Additional buffer distance will be implemented for raptors. Buffers will be in place for the duration eggs or juvenile birds are nest-dependent.
- The qualified biologist will monitor the behavior of the birds (adults and young when present) at the nest site to ensure they are not disturbed by project construction. Nest monitoring will continue during nearby construction, until the biologist has confirmed the young have fully fledged (have completely left the nest site and are no longer dependent on the parents).
- A qualified biologist will conduct WEAT for all on-site workers regarding environmental protection measures on the Project, including tree protection measures, stormwater and water quality protection measures, invasive species, and potential special-status species that could occur in or near the Project, including roosting bats, peregrine falcon, and nesting birds.

BIO-2: The final design of the Project will avoid or minimize tree removals to the extent feasible. The following measures will be implemented to avoid and minimize tree removal and damage to trees during construction:

- The size and species of trees that would require removal will be determined prior to construction.
- Trees within the project footprint will be surveyed by a licensed arborist prior to removal and transplant.
- Trees that do not need to be removed will have protection measures implemented, where necessary, to prevent incidental damage during construction. Protection measures will be as specified by the arborist.
- Trees that need to be removed will be transplanted within the project footprint to the greatest extent feasible.
- Trees within the City ROW that are removed and cannot be transplanted will be replaced as follows: Non-native trees will be replaced at a 1:1 ratio and native trees will be replaced at a 3:1 ratio (replaced:removed) within or near the Project to the greatest extent feasible. Tree replacement and planting will be coordinated through the City in accordance with applicable landscaping plans and approved aesthetic concepts.

BIO-3: Bats could roost in structures and vegetation within the project footprint. Preconstruction bat surveys will be conducted by a qualified biologist to determine if bats are present prior to the removal of trees or structures that potentially provide suitable habitat. If bats are discovered in or near active construction, a protective buffer zone will be established by the biologist.

3.3.6. CEQA Significance Conclusion

The Build Alternative, including all design options, would occur within an existing rail station and neighboring industrial development in urbanized downtown Riverside. There are limited biological resources within and near the Project resulting in less than significant impact with mitigation incorporated.

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3.4. Cultural Resources

This section describes potential impacts to historic resources resulting from the construction and operation of the proposed Build Alternative and all design options. Impacts to cultural, historical, and archaeological resources are considered and mitigation measures are proposed if significant impacts are identified. Information provided in this section summarizes the results of the technical analyses in the *Historic Resources Report* (HRR) (HNTB, 2021) and *Archaeological Survey Report* (ASR) (HNTB, 2021) prepared for the proposed Project.

3.4.1 Regulatory Framework

RCTC is the lead agency for CEQA compliance, per CEQA Guidelines § 15064.5 and California PRC § 21084. Applicable policies, laws, and regulations relative to cultural resources are provided as follows:

36 CFR 44716: The Secretary of Interior's Standards

The Secretary of Interior's Standards (SOI Standards) and Guidelines for Archaeology and Historical Preservation, effective as of 1983, provide technical guidance for archaeological and historic preservation practices. Their purpose is 1) to organize the information gathered about preservation activities; 2) to describe results to be achieved by federal agencies, states, and others when planning for the identification, evaluation, registration, and treatment of historic properties; and 3) to integrate the diverse efforts of many entities performing historic preservation into a systematic effort to preserve the nation's culture heritage.

In addition, the SOI Standards for Rehabilitation and for Treatment of Historic Properties provide guidelines for preserving, rehabilitating, restoring, and reconstructing historic buildings. The standards for the treatment of historic properties is referenced in Section 106 of the National Historic Preservation Act (NHPA) in the context of determining the effect a project would have on historic properties. If the Project's impacts to individual historic properties are inconsistent with the SOI Standards, then the Project's effect is considered an adverse effect.

State Regulations

CEQA requires the consideration of cultural resources that are historical resources and "unique" archaeological resources. California PRC § 5024.1 established the California Register of Historical Resources (CRHR) and outlines the necessary criteria for a cultural resource to be considered eligible for listing in the CRHR and, therefore, considered a historical resource. Historical resources are defined in PRC § 5020.1(j).

Local and Regional Regulations

Title 20 of the City of Riverside Municipal Code (RMC) addresses the designation and preservation of cultural resources, districts, and neighborhood conservation areas. In 1969, the city adopted Title 20 into the RMC, creating both a city historic preservation ordinance and a Cultural Heritage Board (CHB). According to § 20.10.010 of the RMC, a historical or cultural resource can be "improvements, buildings, structures, signs, features, sites, scenic areas, views and vistas, places, areas, landscapes, trees, or other objects, which are of scientific, aesthetic, educational, cultural, architectural, social, political, military, historical, or archaeological significance to the citizens of the city, the state of California, the Southern California region, or the nation, which may be determined eligible for designation or designated and determined to be appropriate for preservation by the CHB, or by the City Council on appeal, pursuant to the provisions of this Title, or which may be eligible for listing or designation on any current or future state or federal register."

A cultural resource may be designated by the Riverside City Council on recommendation of the CHB as a landmark pursuant to this title if it meets one or more of the following criteria:

a. Exemplifies or reflects special elements of the city's cultural, social, economic, political, aesthetic, engineering, architectural, or natural history.
b. Is identified with persons or events significant in local, state, or national history.
c. Embodies distinctive characteristics of a style, type, period, or method of craftsmanship.
d. Represents the work of a notable builder, designer, or architect.
e. Contributes to the significance of a historic area, being a geographically definable area possessing a concentration of historic or scenic properties, or thematically related grouping of properties that contribute to each other and are unified aesthetically by plan or physical development.

f. Has a unique location or singular physical characteristics or is a view or vista representing an established and familiar visual feature of a neighborhood community or of the city.
g. Embodies elements of architectural design, detail, materials, or craftsmanship that represent a significant structural or architectural achievement or innovation.
h. Is similar to other distinctive properties, sites, areas, or objects based on a historic, cultural, or architectural motif.
i. Reflects significant geographical patterns, including those associated with different eras of settlement and growth, particular transportation modes, or distinctive examples of park or community planning.
j. Is one of the few remaining examples in the city, region, state, or nation possessing distinguishing characteristics of an architectural or historical type or specimen.

3.4.2 Methodology for Evaluating Environmental Impacts

The analysis of the proposed Project's potential impacts to cultural resources considers potential project effects within the project study area relative to the construction and operations of the Project. This chapter follows the procedural steps outlined in Section 106 of the NHPA, CEQA, and PRC § 5024.1 and § 5020.1[j], including identification of historical resources, an evaluation of the integrity and significance of historical resources as well as an evaluation of the impacts caused by the proposed alternatives. An evaluation of the impacts to these resources is summarized in Section 3.4.6 and proposed mitigation is presented in Section 3.4.7.

Results of Records Searches and Field Surveys

A search was conducted at the California Historical Resources Information System-Eastern Information Center (CHRIS-EIC) on December 17, 2019. In addition, the Native American Heritage Commission (NAHC) was contacted on December 11, 2019, for a Sacred Lands File search and list of Native American contacts; a list of contacts was received on December 19, 2019.

The records search results included all previously-recorded cultural resources within 0.5 mile of the Project and included their locations and citations for previous cultural resources studies performed within the records search area. While 536 cultural resources were identified within the 0.5-mile radius, only 12 were within the Area of Potential Effects (APE). All but two of the 536 cultural resources are built environment resources. The historic resources included residences, commercial and industrial properties, historic infrastructure (including railroad lines), and a few historic archaeological sites associated with these built environment resources. The historic resources range in age from the 1880s to the late 20th century.

Following the records search, a pedestrian survey of the APE was conducted on March 9, 2020. The area immediately adjacent to the railroad tracks could not be accessed, and some private yards were fenced and not accessible. For the most part, the project study area has been previously developed with railroad tracks, paved roads, concrete sidewalks, buildings, and grass or landscaped grounds, leaving a small amount of ground visible for inspection.

Area of Potential Effects

The APE was established in accordance with 36 CFR § 800.16(d), and the methodology was presented in a memorandum to the State Historic Preservation Officer (SHPO) (HNTB, 2020). The SHPO concurred with the APE definition on June 4, 2020. As the project description and elements that have the potential to affect historic properties became further refined, an updated project description was sent to the California SHPO on January 5, 2021, to ensure that the APE (as previously defined) remained valid. SHPO responded to the updated APE project description on March 17, 2021. Based on the documentation submitted to them, the SHPO determined that the APE as originally delineated remains valid.

The APE is established early in project development to determine the presence or absence of historic and archaeological sites, objects, structures, buildings, districts, and landmarks in the project study area that must be considered during project planning. The APE is defined in consultation with the SHPO, Native American Tribes with connections to the area, and the federal agency or agencies having jurisdiction over the Project. The APE for this undertaking is defined as the area of land encompassed by the BNSF to the west, 9th Street (generally) to the north, Howard Avenue to the east, and 14th Street to the south. The Limits of Disturbance (LOD) is within this area (yellow shaded area on Figure 3.4-1), and the maximum depth of disturbance across the LOD is 10 feet. The vertical limit of the APE is 35 feet high to accommodate any visual effects caused by the extension of the pedestrian overpass.

The APE encompasses two elements. The first element is the LOD. This is the zone where there may be ground disturbance from project construction (often referred to as the Direct APE). The LOD includes both the horizontal and vertical areas associated with ground-disturbing and physical construction activities. Surrounding the LOD, the second element includes a buffer zone where there may be additional effects on surrounding parcels from noise, vibration, or visual intrusions associated with construction and post-construction project operations. This buffer zone is often referred to as the APE for the historic built environment.

Figure 3.4-1. Area of Potential Effects

3.4.3 Information from the Public and Interested Parties

Public outreach is conducted as part of the environmental process and development of the EIR and for compliance with the NHPA, which was initiated by the NOP of an EIR and a public scoping meeting to solicit input. As a part of this outreach, in December 2020, RCTC gave a presentation to the City of Riverside's CHB in a virtual format. The presentation provided the CHB with an overview of the Project, efforts to identify historic and culturally significant resources within the APE and invited the CHB to participate as an Interested Party. Shortly after, a formal letter inviting them to participate in the Project was mailed on January 11, 2021 to the City's Historic Preservation Officer. Additionally, letters were sent to local, state, and national organizations (potential stakeholders) listed herein:

- American Association for State and Local History
- California Citrus State Historic Park
- The California Historical Society
- California Preservation Foundation
- City of Riverside
- Japanese American Citizens League, Riverside Chapter
- Lincoln Park Neighborhood Group
- Museum of Riverside
- National Trust for Historic Preservation

- Old Riverside Foundation
- Orange Valley Masonic Lodge No. 13
- Riverside African-American Historic Society
- Riverside County Mexican American Historical Society
- Riverside Historical Society
- Riverside Neighborhood Partnership
- Riverside Preservation Group (now defunct)
- The Mission Inn Foundation

A summary of responses to the invitation to participate is contained in Table 3.4-1.

Table 3.4-1. Interested Party Responses

Date	Interested Party	Comment/Response
January 12, 2021	Riverside Historic Society	Responded they did not have any concerns with the Project with regard to historic structures and the like.
January 25, 2021	Museum of Riverside	Provided additional information about the significance of Lincoln Park (Number [No.] 31 in the APE) and stated that there are significant resources in the general vicinity, but outside the APE. The Museum recommended that a historical archaeologist assess sites and any houses to be acquired or demolished prior to grading near the lodge (outside the APE).
January 27, 2021	American Association for State and Local History	Responded they do not participate in local preservation or improvement projects.
February 2, 2021	City of Riverside	Provided comments regarding the historic status of the Mission Inn Historic District (not NRHP-eligible) and the Seventh Street Historic District (NRHP-eligible).
February 17, 2021	Old Riverside Foundation	Provided comments regarding the historic significance of the former FMC Complex (Plant 1 and Plant 2) to Riverside's history, including 3080 10th Street, which is also a part of the former FMC Complex. They stated that there are historic residences in the APE, beyond the LOD, on Howard Avenue and 12th Street, and informed the project team about the historic lodges in the Eastside neighborhood.
February 25, 2021	Riverside County Mexican American Historical Society	Responded that the organization did not have any historic sites to identify related to the Project.

FMC = Food Machinery Corporation
NRHP = National Register of Historic Places

3.4.4 Affected Environment

This section analyzes the affected environment and resulting project impacts on human, physical, and biological environments within each environmental resource's respective project study area defined for the Build Alternative and the No Project Alternative.

Project Location and Setting

The cultural and historic context summarized here is based on the HRR and ASR chapters that provide context for the types of cultural resources and sensitive sites that could be found within the APE. This context briefly describes the time periods and peoples who utilized local resources and settled in the area in and around the City and County of Riverside.

Prehistoric Background

The most widely recognized timeline for the prehistory of Southern California divides the region's prehistory into four main periods, or "horizons:" Early (9,000 years ago), Milling Stone (Archaic Period) 7,000 to 8,600 to 1,300-3,000 years ago, Intermediate (2000 BC to 500 AD), and Late horizons.

In Riverside County, the Early Period is characterized by big game hunting and use of scrapers, choppers, large blades, and projectile points. During the Archaic Period, there was a change from hunting to collection of seeds, foods, and use of food grinding tools. During the Intermediate Horizon, hunting and increased use of mortar and pestle is seen as well as a more sedentary lifestyle as seen in the presence of seasonal campsites. Late Horizons in Southern California is characterized by Uto-Aztecan speaking people and use of pottery and bow and arrow for hunting instead of an atlatl and dart.

The Native American population is seen in the region toward the end of the Late Prehistoric Period after 1600 AD. The Project is located in an area that appears to have been used and/or occupied by various Native peoples, especially after European contact, when many Native people were forced from their traditional lands or moved at least seasonally to take work on ranches and in other enterprises. The NAHC identified Cahuilla, Luiseño, Gabrieleño (Kizh Nation), Gabrieliño/Tongva, Serrano, and Tataviam/Kitanemuk/Vanyume Tribes, and individuals as potentially affiliated with the area.

Spanish Period

The first documented Spanish contact in what is now Riverside County was by Spanish military captain Juan Bautista de Anza who led expeditions in 1774 and 1775 from Sonora to Monterey. Although Riverside County proved to be too far inland to include any missions within its limits, Missions San Juan Capistrano and San Luis Rey de Francia, established in 1776 and 1798 respectively, claimed a large part of southwestern Riverside County.

In the 1810s, ranchos and mission outposts called *asistencias* were established, increasing the amount of Spanish contact in the region. An *asistencia* was established in Pala in 1818 and in San Bernardino in 1819. Additionally, Rancho San Jacinto was established for cattle grazing in the San Jacinto Valley. In 1820, Father Payeras, a senior mission official, promoted the idea that the San Bernardino and Pala *asistencias* be developed into full missions to establish an inland mission system. However, Mexico won its independence from Spain in 1821 bringing an end to the Spanish Period in California.

Mexican Period

Although Mexico gained its independence from Spain in 1821, Spanish patterns of culture and influence remained for a time. The missions continued to operate as they had in the past, and laws governing the distribution of land were also retained in the 1820s. Following secularization of the missions in 1834, large ranchos were granted to prominent and well-connected individuals, ushering in the Rancho Era, with society making a transition from one dominated by the church and the military to a more civilian population, with people living on ranchos or in pueblos. Much of the City of Riverside is within the former Rancho Jurupa, granted by the Mexican governor of California, Juan Alvarado, to Juan Bandini in 1838. During the Mexican period, the Native American people were increasingly influenced by Mexican culture. Some of them acquired Spanish names, learned Spanish, and adopted forms of Spanish subsistence, such as raising cattle, agriculture, and wage labor and seasonal work.

American Period

American governance began in 1848 when Mexico signed the Treaty of Guadalupe Hidalgo, ceding California to the United States (U.S.) at the conclusion of the Mexican-American War. Juan Bandini filed a claim for the major portion of the Rancho Jurupa land grant in 1852, which was confirmed by the U.S. District Court in 1855. He later sold this portion, approximately 33,819 acres, to his son-in-law, Abel Stearns, who received a land patent in 1879. This portion of the land grant is known as Rancho Jurupa (Stearns); the project study area is adjacent to it. Initially Southern California was divided into only two counties: Los Angeles and San Diego. In 1853, San Bernardino County was added placing what is now Riverside County primarily within San Diego County and partially within San Bernardino County. Orange County divided from Los Angeles County in 1889.

Citrus Industry

Shortly after the City of Riverside was founded in 1870, the beginning of a prosperous citrus industry began to take shape in the region. By the early 1870s, two simple canals had been constructed by diverting water from the Santa Ana River to Riverside agriculture land, thus making large-scale crop production possible. This basic irrigation served

as a catalyst for crop experimentation, including the navel orange, as several crops could now thrive in the arid climate. With the agriculture boom provided by the popularity of the navel orange, the City of Riverside grew rapidly during the 1880s. It was at this time that citrus cultivation became the dominant industry and economic engine of the city. While California had over half a million citrus trees planted by 1882, almost half of these trees existed in Riverside. The evolution of the irrigation system of Riverside, along with advancements in railroad car refrigeration, allowed citrus farmers in Riverside to expand their market for the products. In 1881, the City of Riverside produced roughly 4,300 shipping boxes of agricultural products, and by 1898 the number of boxes had grown substantially to 1,569,800 boxes.

Eastside Neighborhood

Eastside has long associations with the citrus industry and the workforce that made the industry so successful in the City of Riverside. Neighborhoods such as Eastside, Casa Blanca, and Arlington Heights were associated early in the city's history with the Mexican and Mexican American community that provided the labor for the citrus packing houses. The Eastside neighborhood illustrates the patterns of development associated with the citrus industry, with packing houses and manufacturing facilities that support the citrus production industry, as well as more permanent worker's housing for citrus industry workers. The Eastside's proximity to transportation (railroads) and the citrus groves resulted in Eastside becoming a leading packing and shipping center for agricultural products. Packinghouses were large, open-plan, wood-constructed buildings with sawtooth-skylight and gabled-roof structures, located along the BNSF and Union Pacific Railroad corridors. By the early 1890s, packinghouses were located on 7th, 8th, 9th, 11th, 12th, 13th, and 14th streets in the Eastside neighborhood. By 1908, the area became known as "Packinghouse Row."

The industry continued to expand into the 1920s and 1930s, bolstering the economy during hard times. As the Latino and African American community became increasingly more permanent and less transient, families settled in the Eastside neighborhood, Casa Blanca, and Arlington Heights. The built environment reflects these settlement patterns, with modest cottages and single-family residences dating from the 1890s to 1950s, renovated and expanded over time. The residential development patterns are closely tied to the citrus industry warehouses, packinghouses, and the former FMC Complex.

3.4.5 CEQA: Historical Resources Identification

CEQA requires the lead agency to consider the impacts of a project on cultural resources. Two categories of cultural resources are specifically identified in the CEQA Guidelines: historical resources (§15064.5[b]), and unique archaeological sites (§ 15064.5[c] and PRC § 21083.2). These two categories sometimes overlap where a "unique archaeological resource" also qualifies as an "historical resource." In such an instance, the more stringent rules for archaeological resources that are historical resources apply, as explained below. CEQA and other California laws also set forth special rules for dealing with human remains that might be encountered during construction.

Under CEQA, cultural resources may be eligible for or listed in the CRHR if they have historical significance and integrity, and if they meet any of the following criteria:

1. Are associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage, or the U.S.
2. Are associated with the lives of persons important in our past
3. Embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or possess high artistic values
4. Yield, or may be likely to yield, information important in prehistory or history

Identification of Archaeological Resources

Two cultural resources were identified within the APE during a records search, and one was identified during the pedestrian field survey (Table 3.4-2).

Table 3.4-2. Identification of Archaeological Resources

Name	Identification Number	Survey results
Upper Riverside Canal	(P-33-004495)	The canal was not observed during the field survey, and access to the area where the canal is mapped was limited.
Southern Pacific Co. Riverside Branch Main Line alignment	(P-33-021086)	The alignment was identified within the APE by the records search. The railroad line was described as a subsurface resource, present beneath currently existing development; but no evidence of it was observed during the pedestrian field survey conducted in March 2020.
Historic sidewalk stamps	N/A	Historic sidewalk stamps dating from the early to mid-20th Century were identified during the field survey at the edge of the LOD. Two of the sidewalk stamps are within the LOD: one marked Pearson & Dickenson, dated 1925, on the south side of 10th Street, east of Howard Avenue; and one marked City Inspector, with no date, on the east side of Howard Avenue, just north of 10th Street. Two others are outside the LOD, on the north side of 12th Street, east of Howard Avenue; one is marked Frank Sloan 1950, the other is a curb incised with WPA 1939.

Source: ASR (HNTB, 2021)

Identification of Historical Resources

Of the 41 parcels within the APE, 29 contain historic-era, built environment resources, totaling 12 previously recorded historic resources, seven newly-recorded resources (Appendix L HRR and Appendix C Department of Parks and Recreation 523 Forms), and the remainder of the parcels are either vacant lots, the current Riverside-Downtown Station, or parking lots.

Most of the 12 previously recorded historic-era, built-environment resources, are considered historical resources per CEQA. They are either individually eligible or contributing to a locally-designated, multi-component resource and identified through survey evaluation. They include the following as listed in Table 3.4-3 through Table 3.4-5.

Table 3.4-3. Food Machinery Corporation Complex

APE No.	Site Address	APN	Property Name (if applicable) and SHPO ID
17 18 19 21 28	3087 12th Street	211201004 211201006 211201007 211201026 211201039	Former FMC Plant 1 Building P-33-09769
33	3080 12th Street	211231024	Former FMC Plant 2 Building P-33-09769

Table 3.4-4. Ninth Street Neighborhood Conservation Area

APE No.	Site Address	APN	Property Name (if applicable) and SHPO ID
4	2995 9th Street	211122019	Ninth Street Neighborhood Conservation Area P-33-027654
5	3005 9th Street	211122020	Ninth Street Neighborhood Conservation Area P-33-011902
6	3015 9th Street	211122021	Ninth Street Neighborhood Conservation Area P-33-027656
7	2994 9th Street	211191004	Ninth Street Neighborhood Conservation Area P-33-027653
8	2982 9th Street	211191005	Ninth Street Neighborhood Conservation Area P-33-027651
11	3006 9th Street	211191028	Ninth Street Neighborhood Conservation Area P-33-027655

Table 3.4-5. 12th Street Residences

APE No.	Site Address	APN	Property Name (if applicable) and SHPO ID
22	3021 12th Street	211201027	Unknown P-33-027705
23	3009 12th Street	211201028	Unknown P-33-021704

Of the previously-recorded properties within the APE, one property was found not eligible for the CRHR - the Royal Citrus Packing House (Table 3.4-6). The Royal Citrus Packing House was evaluated in 2003 for its historic significance and integrity and found to lack the integrity necessary to be considered eligible for the NRHP. In its current configuration, it is rectangular in plan, roughly two stories high, and of load-bearing masonry construction with a vertical standing seam metal façade attached to the exterior of the 10th Street elevation. The building offers no more than mere clues of its 1888 to 1891 roots, and bears little resemblance to its pre-1939, Alfred Lewis-era forerunner or forerunners. In fact, due to the highly visible exterior alterations dating to the 1970s to 1990s, the building does not even retain enough of its historic appearance to recall the 1950s period. Furthermore, much of the building, both exterior and interior, has suffered significant structural damages resulting from recent hazardous material abatement efforts. Therefore, the aspects of integrity of material, workmanship, design, setting, feel, and association have been compromised to the point that it can no longer convey its historic significance. As a result, it is not recommended eligible for local listing, the CRHR, or the NRHP.

Table 3.4-6. 3075 10th Street

APE No.	Site Address	APN	Property Name (if applicable) and SHPO ID
14	3075 10th Street	211119032	Royal Citrus Packing House P-33-13079

Of the five newly-recorded properties within the APE, only one is recommended eligible for the CRHR and NRHP — the multi-component resource located on a single parcel (4110 through 4140 Howard Avenue) (Table 3.4-7). The historic resource comprises four dwellings located on one parcel. Collectively, they represent early iterations of Worker's Houses, two of which take on the form of a Shotgun House. The four dwellings on this property are classified as apartments, but they are a grouping of worker housing dating to the first half of the 20th Century. Two of the four dwellings exhibit characteristics consistent with a shotgun house in plan and configuration. The ensemble appears to be eligible for the CRHR under Criterion 1 and 3 and NRHP-eligible under Criterion A and C because of association with the history and development of the Eastside neighborhood in Riverside (Criterion A) and as intact examples of worker housing; two of which are examples of a shotgun house (Criterion C). Research did not reveal any significance under CRHR Criterion 2 and 4 or NRHP Criterion B or D.

Table 3.4-7. 4110, 4120, 4130, and 4140 Howard Avenue

APE No.	Site Address	APN	Property Name (if applicable) and SHPO ID
30	4110 Howard Avenue 4120 Howard Avenue 4130 Howard Avenue 4140 Howard Avenue	211203009	Worker's Houses

The remaining newly-recorded) resources within the APE are recreational and commercial structures, including Lincoln Park (Appendix L HRR Appendix C Department of Parks and Recreation 523 Forms). The park appears eligible for local listing as a City of Riverside historic landmark under Criterion A and Criterion F. It is primarily significant for its role as a community center of sorts for the Eastside residents. It is also significant for its role in the city's civil rights history, as the existence of the park in this neighborhood is a direct result of the city's defacto segregation policies. Table 3.4-8 and Table 3.4-9 provide a summary of recreational and commercial structures within the APE. The warehouses are recommended eligible as City of Riverside local landmarks only as contributing features to the Citrus Industry Thematic District (should a district be extant). It has, however, lost integrity of its setting and design, as the area has been redeveloped to include multi-family housing and surface parking. The second story addition (3820 Commerce) does not appear to be part of the original design. Given these factors, the property is no longer able to convey its historic significance and is not considered individually eligible for the NRHP under Criterion C or the CRHR under Criterion 3. They are recommended as eligible on the local level as contributing resources to the (potentially eligible) Citrus Thematic Industrial Historic District under City of Riverside's historic preservation Criterion A and Criterion E, and would therefore be considered historical resources under CEQA.

The commercial retail establishment on 14th Street is not recommended eligible for national, state, or local listing According to the Riverside Modernism Historic Context Statement on file with the California Office of Historic Preservation, to meet eligibility standards, a commercial building must exemplify the tenets of the modern movement; display most of the character-defining features of its style; date from the period of significance; exhibit quality of design; and retain the essential factors of integrity. Within this context, this strip commercial building does not appear to meet the registration requirements outlined above because it is not a distinctive example of the style, exhibiting only the low-slung volume, extended canopy, and ribbon windows. The storefront has been replaced, and the exterior has been modified with applied, decorative squares. It is not considered eligible for local listing or for state or federal listing under any of the criteria, primarily Criterion 3/C, because it lacks distinction within Riverside's Modernism context.) (Table 3.4-10).

Table 3.4-8. Lincoln Park

APE No.	Site Address	APN	Property Name (if applicable) and SHPO ID
31	Howard Avenue and 12th Street	211123001	Lincoln Park

Table 3.4-9. 3820 and 3888 Commerce Street

APE No.	Site Address	APN	Property Name (if applicable) and SHPO ID
1	3820 Commerce Street	211122001	Ross Vending
2	3888 Commerce Street	211122002	Unknown

Table 3.4-10. 3021 14th Street

APE No.	Site Address	APN	Property Name (if applicable) and SHPO ID
32	3021 14th Street	211231010	Set Free Thrift Store

East and north of the former FMC Complex and across 10th Street, a variety of early citrus industry buildings that were originally part of the Sunkist Citrus Growing Cooperative are now part of the group of buildings that represent the potential, locally-designated, Citrus Thematic Industrial Historic District. The Citrus Thematic Industrial Historic District is designated by the City of Riverside as a potentially (locally) eligible historic district. Within the project APE, multiple citrus industry-related industrial and warehouse structures, dating from the late 1800s to mid-1900s, contribute to the district. Within the APE, contributing features of the district include: the former FMC Complex, 3820 Commerce Street and 3888 Commerce Street many of which date back to the early years of the 20th Century. They have been adapted for uses such as commercial, office, and restaurant uses. The district is not designated or recorded as a locally eligible historic district.; therefore, the full extent of the district's integrity has not been investigated, but the boundary appears to include the former FMC Complex.

The CEQA historical resources within the APE are described as follows:

Food Machinery Corporation Complex

The former FMC Complex comprises 17, 18, 19, 21, 28, and 33 in the APE. Over time, the FMC facility expanded from one building (Plant 1) to become a complex of over 10 primary and ancillary buildings. After the FMC facility closed in 1980, the complex began to lose many of the smaller, peripheral structures, such as truck canopies, the tank wash rack, and other small-scale buildings. The main buildings, Plants 1 and 2, remain in use as industrial buildings and have the majority of their primary, character-defining features intact. The sawtooth-roof structures on both plants have been only slightly modified over time. The exterior finish materials have been replaced in kind (west elevation of Plant 1) or have new, compatible materials (Figure 3.4-2). The large expanses of windows (or lack of windows, in the case of Plant 2) remain as they were, and the interior spaces remain open and filled with light from above.

In its current configuration, the former FMC area now comprises a complex of seven buildings and numerous associated sheds and canopies on multiple parcels encompassing almost 15 acres. The complex runs from 14th Street to the south to 10th Street to the north. The complex is bounded on the west by the BNSF and the Riverside-Downtown Station. On the east side of the complex, the neighborhood comprises single-family dwellings, a city park, and older commercial and industrial buildings.

The former FMC Complex meets the definition as a historical resource because it is a City of Riverside-listed historic landmark and it is eligible for listing on the CRHR. The former FMC Complex in its current configuration contains seven extant structures, with the largest being Plants 1 and 2. Plants 1 and 2 are considered individually eligible for the CRHR, as well. The complex retains aspects of integrity of location, setting, feel, and association, with diminished integrity of design, materials, and workmanship.

Figure 3.4-2. Former FMC Plant 1 Building A West Elevation, Looking Northeast (Existing)

The former FMC Complex has been a locally listed City of Riverside Historic Landmark since 1996. The complex meets Landmark Criteria 1, 2, 3, 4, and 6, as listed in Title 20 (RMC § 20.20.010) because of its historical associations with the early citrus processing industry and, later, the food processing industry in general, and also with manufacturing of the Water Buffalo Amphibious Tank, which was pivotal in the World War II (WWII) Pacific Campaign. It also meets Criteria G and J because it is one of the largest and finest remaining examples of pre-WWII era industrial complex design and architecture in the City of Riverside.

Former FMC Plant 1 (Figure 3.4-3) and Plant 2 (Figure 3.4-4) are eligible for listing on the CRHR under Criteria 1, 2, and 3.

Plant 1 (1938 Citrus Machinery Plant) is historically significant under Criterion 1 for its role in the growth of the citrus and other fruit processing and manufacturing industry in Southern California during the first half of the 20th century. The former FMC Plant 1 building is historically significant under CRHR Criterion 2 because of its connection with the influential inventors George Parker, Fred Stebler, and Hale Paxton. These men contributed to the evolution of citrus industry manufacturing during their time in Riverside and held positions at FMC during their careers. George Parker's own machine company once operated at the present-day location of the FMC facilities.

Plant 2 (aka 1942 Water Buffalo Plant) is significant for its contribution to the U.S. effort in WWII, manufacturing "Water Buffalo" LVT-4 tanks into the 1940s. The former FMC Plant 2 building is also CRHR eligible under Criterion 2, as FMC engineer James M. Hait designed the Water Buffalo amphibious fighting vehicle that was produced in Plant 2 of the Riverside former FMC Complex. Hait would go on to become president of the FMC.

Both Plants 1 and 2 are historically significant under CRHR Criterion 3 because they are prototypical examples of large-scale industrial architecture constructed during the first half of the 20th century. Plants 1 and 2 are the largest industrial manufacturing buildings from that era in Riverside. Both plants feature elaborate sawtooth roofs made of wood that are considered notable aesthetic and engineering objects in their own right and are increasingly rare, particularly on a scale of such magnitude. Additional character-defining features of industrial architecture of this era include a lack of ornament; large scale, open and expansive floorplans and multi-light, metal-framed windows. Because the former FMC Complex meets CRHR criteria and is locally recognized as a historic landmark, it is a historical resource pursuant to CEQA guidelines § 15064.5(a)(3).

Figure 3.4-3. Former FMC Plant 1 Building A, Bowstring Truss and Sawtooth Roof Looking West/Southwest (Photo taken in 2019)

Figure 3.4-4. East Elevation, Plant 2 (Existing)

Ninth Street Neighborhood Conservation Area Residences

The Ninth Street Neighborhood Conservation Area is designated by the City of Riverside as a potentially (locally) eligible, historic neighborhood conservation area. The "district" comprises multiple single-family residences dating from the late 1800s to mid-1900s. Within the APEs, there are six historic residences (APE Nos. 4 through 8) that are also within the Ninth Street Neighborhood Conservation Area.

The Conservation Area is on 9th Street in the community of Eastside, between Howard and Kansas avenues. The six houses in the APE are located at the west end of the delineated neighborhood. The neighborhood is associated with the city's African American community, and former residents of the neighborhood included individuals significant in the city's and state's history as property owners and workers in the local agricultural and food manufacturing businesses. The community also produced major league baseball players, an Olympic athlete, a governor of the Virgin Islands, and individuals notable in the entertainment business.

The houses within the APE are contributing features of the district, and they are recognized by the SHPO as having "5D2" status. They were previously recorded in 1978 and 2001.

2982 9th Street

This one-story Folk Victorian cottage is sheathed with contemporary stucco and capped by a hipped roof with boxed eaves (Figure 3.4-5). The primary elevation is divided into three bays with a central entry flanked by two vinyl-clad, divided-light, horizontal sliding windows. A porch with a shed roof supported by four stuccoed columns on a low, stucco-covered enclosing wall spans the width of the bays.

Figure 3.4-5. 2982 9th Street

2994 9th Street

This modest postwar cottage has a square plan and is capped by a low-pitched, hipped roof (Figure 3.4-6). The primary elevation is divided into three bays with a central recessed entry flanked by vinyl-clad horizontal sliding windows. The exterior of this one-story, single-family wood frame-constructed dwelling is covered with stucco.

Figure 3.4-6. 2994 9th Street

2995 9th Street

This one-story, wood-frame-constructed vernacular cottage has been modified over the years (Figure 3.4-7). It is sheathed with stucco and capped by a hipped roof with a front-facing cross gable clad in asphalt composition shingles. The gable end had a double-hung sash window with narrow surrounds when recorded in 2001 by others. The window is a new, vinyl-clad, divided-light, horizontal sliding (or operable) unit. The porch consists of a shed roof supported by metal posts. The main entrance is roughly centered under the shed-roofed porch.

Figure 3.4-7. 2995 9th Street

3005 9th Street

This a one and a half story, wood frame-constructed Tudor cottage features a clipped, side-gabled roof intersecting the taller, one and a half story front-gabled volume (Figure 3.4-8). The roof features overhanging eaves and an under-eave fascia board but has no rafter ends. A shed roof covers the portico and is supported by simple, round columns. The exterior is stucco covered and the roof is a newer asphalt composition shingle roof. The windows are vinyl replacement units in simple wood surrounds and include single-light picture windows and horizontal sliding units on the main street-facing façade.

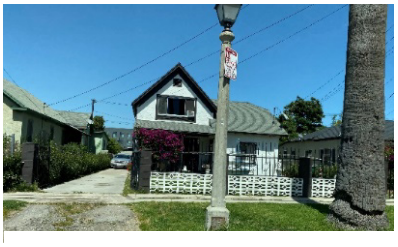

Figure 3.4-8. 3005 9th Street

3006 9th Street

This two-story, multi-family, vernacular dwelling has been extensively altered. It may have been a foursquare duplex at one time (Figure 3.4-9). The first story of the primary elevation consists of a stucco-clad, arcaded portico sheltering two doors and two windows. The second story extends over the arcaded portico and has two vinyl-clad, horizontal-sliding windows. This wood frame-constructed residence is clad in stucco and horizontal wood siding above the arcade and in the gable end.

Figure 3.4-9. 3006 9th Street

3015 9th Street

This simple, one-story, vernacular residence is capped by a front-facing, medium-pitched, gabled roof featuring eave returns (Figure 3.4-9). The exterior is covered with stucco. A projecting hipped-roof bay includes an entrance flanked by multi-light, single-hung, wood-framed windows. The side elevation features a gabled, projecting dormer. A tall, narrow window with simple wood framing appears to be original.

The 9th Street houses are eligible as contributing resources within the Ninth Street Neighborhood Conservation Area, which was designated by the City of Riverside as a potentially eligible historic conservation area. The Ninth Street Neighborhood Conservation Area is therefore considered a historical resource for the purposes of CEQA. They retain sufficient integrity of location, design, setting, feel, and association for the city-designated Ninth Street Neighborhood Conservation Area. The California Office of Historic Preservation recognizes the 9th Street residences as having "5D2" status; they were placed in the CRHR in 1980. As a result, they are considered historical resources for the purposes of CEQA.

Figure 3.4-10. 3015 9th Street

12th Street Residences

The historic residences located at 3009 and 3021 12th Street (APE Nos. 22 and 23) have been recommended eligible as local historic landmarks, meet the definition of a historical resource, and are considered under CEQA. The age of the houses (ca. 1895) and their close proximity to the former FMC Complex suggest a historical association because the complex has been a dominant feature of its immediate setting for nearly 100 years.

Figure 3.4-11. 3021 12th Street

3021 12th Street

This single-family dwelling is rectangular in plan and one story in height (Figure 3.4-11). The exterior is covered with stucco. The house is capped with a medium-pitched, front-gabled roof clad in asphalt composition shingles. A porch, which spans the width of the street-facing façade, features a hipped roof supported by simple wood columns. There are rafter tails above the porch's lintel. The entrance is at the left (west) corner of the porch and is flanked by two vinyl-clad, horizontal-sliding windows. A picketed balustrade railing encloses the porch. A louvred vent just under the ridgeline of the end gable is framed with a simple wood frame and sill. This property was surveyed in 2001 as P-33-027705 and categorized as a 5S3 resource (individually eligible as a local historic landmark).

3009 12th Street

Capped by a double intersecting hipped roof, this one-story bungalow is crossed by a front gable with a pent roof on the primary elevation (Figure 3.4-12). The front entrance is recessed in the center of the front gable and is flanked by pairs of double-hung sash. This single-family residence is mostly rectangular in plan and of wood frame construction covered with stucco siding. The Howard Avenue street-facing elevation features a bay window in addition to double-hung, one-over-one wood sash. A pair of shed-roofed additions on the rear of the house extend to the north end of the parcel and are one story in height and sheathed in stained plywood siding.

Figure 3.4-12. 3009 12th Street

The east elevation (Howard Avenue street-facing elevation) of the addition(s) has aluminum-framed, horizontal-sliding windows and a single entrance door reached by concrete steps and enclosed with a metal security door. This residence was previously documented as P-33-21704, with a 5S3 categorization (individually eligible as a local historic landmark).

Worker's Houses

The houses located at 4110, 4120, 4130, and 4140 Howard Avenue are in close proximity to the former FMC Complex, separated by one city block. Two of the houses are examples of shotgun houses and two are an expression of simple, worker's housing located in Eastside, which was historically home to workers associated with the citrus industry, in general. They are significant on the state and local level, meeting NRHP Criterion C and CRHR Criterion 3, and retain integrity of location, design, setting, feel, and association.

Figure 3.4-13. 4110 Howard Avenue

4110 Howard Avenue

The 4110 Howard Avenue residence is rectangular in plan, one story in height, and of wood-frame construction (Figure 3.4-13). This unadorned example of a shotgun house is clad in wide, wood drop siding and is capped by a low-pitched, front-gabled roof featuring slightly overhanging eaves, a narrow wood fascia/barge board at the front elevation, and exposed wood rafter tails along the side elevations. The roof is clad in asphalt composition shingles. The small front elevation is largely occupied by the front door and a vinyl-clad, horizontal sliding window.

The offset entry door is located toward the northern side of the front elevation and has a metal security door, which is topped by a simple shed-roofed overhang. Within the gable end of the street-facing elevation is a small attic vent framed in wood.

4120 Howard Avenue

This single-family residence is a rectangular plan, wood frame-constructed, single-story building that exhibits the character and scale of a shotgun house (Figure 3.4-14). The building is clad primarily in wide, wood drop siding across its front and side elevations with a vertically-scored, T1-11 apron on the front elevation. The medium-pitched, front-gabled roof is clad in asphalt composition shingles. The gable end features a wide, wood-plank, under-eave board. The front elevation has an offset entry that is at the southern edge of the façade. A wood address plaque is placed above the entry, and a metal security screen protects the entry door. Flanking the doorway is a vinyl-clad, horizontal-sliding window in a wood-framed opening.

Figure 3.4-14. 4120 Howard Avenue

4130 Howard Avenue

This small single-family residence has an L-shaped plan. It is one story in height and wood frame-constructed (Figure 3.4-15). It is a front gable-and-wing arrangement with few distinguishing characteristics. The exterior is clad in vertical board and batten wood siding and features an off-center entry protected by a metal security door. The entry is partially framed in wood surrounds and features an extended lintel with a wood plaque address marker on it. A thin, wood fascia is present upon this gable. The wing component of this residence is clad in wood siding. A vinyl-clad, horizontal-sliding window with simple wood framing is present on this wing.

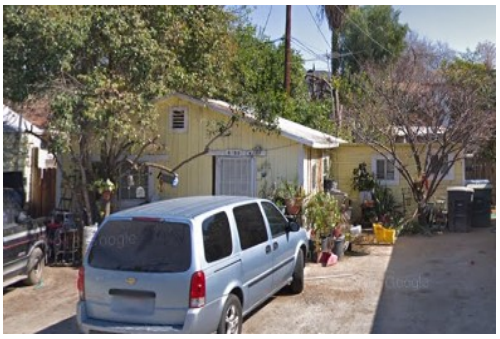

Figure 3.4-15. 4130 Howard Avenue

4140 Howard Avenue

The 4140 Howard Avenue residence is a one-story, wood frame-constructed, rectangular-plan, single-family residence (Figure 3.4-16). The building is clad in wood clapboard siding and has a front-gabled roof topped with asphalt composition shingles. The residence (the southernmost of four on the parcel) is slightly set back on its property and features a small front yard with various shrub and succulent specimens. A small concrete walkway is present in front of the door.

Figure 3.4-16. 4140 Howard Avenue

Lincoln Park

Lincoln Park is in the Eastside neighborhood close to the former FMC Complex (Figure 3.4-17). Its existence is a direct result of a lawsuit brought on the City of Riverside by a local resident who believed the city's policies were discriminatory against people of color. Constructed in 1924 in a neighborhood that was historically home to Latino and African American families, the park had ball fields, a pool, and a community center called the Community Settlement House during the 1930s.

The park appears eligible for local listing as a City of Riverside historic landmark under Criterion A and Criterion F. It is primarily significant for its role as a community center of sorts for the Eastside residents. It is also significant for its role in the city's civil rights history, as the existence of the park in this neighborhood is a direct result of the city's defacto segregation policies.

Figure 3.4-17. Lincoln Park

3820 Commerce Street and 3888 Commerce Street

3820 Commerce Street is the southern-most building of the complex, and comprises a two-story, load-bearing brick façade that features segmentally arched windows and one loading bay. The upper portion of the masonry wall acts as a parapet, with two medium-pitched gable roof buildings behind it. The east-facing elevation features stepped parapets and segmentally-arched loading docks and vehicular entrances. The exterior appears to be painted masonry. The mid-section of the complex is a concrete-constructed, one-story warehouse capped by a low-pitched, gabled roof. The west-facing elevation features a flat parapet, loading docks, and recesses in the wall plane leading to steps and single-door entrances to the buildings.

Figure 3.4-18. 3820 (foreground) and 3888 Commerce Street

3888 Commerce Street is one of three separate but contiguous warehouse buildings on Commerce Street between University Avenue and 9th Street. Located at the north end of the block, this load bearing, brick-and-concrete-constructed warehouse is rectangular in plan, two stories in height, and capped by a flat, built-up roof with a parapet facing Commerce Street. Figure 3.4-18 shows both properties.

The building retains integrity of location, workmanship, feel, and their (thematic) association with similar citrus industry warehouses and plants in the immediate vicinity, including the FMC buildings to the south. They are recommended as eligible on the local level as contributing resources in the (potentially eligible) Citrus Thematic Industrial Historic District under the City of Riverside's historic preservation Criterion A and Criterion E and would therefore be considered historical resources under CEQA.

3021 14th Street

Rectangular in plan and one story in height, this low-slung, concrete masonry unit-constructed strip commercial building features ribbon windows placed high on the street-facing facades and a corner entrance under a deeply overhanging canopy (Figure 3.4-19). The storefront (non-original) comprises double doors flanked by full-length sidelights and has multi-light transoms above. A loading bay is located toward the rear of the building. The ribbon windows are single-light units in metal (presumably aluminum) frames and appear to be original.

Figure 3.4-19. 3021 14th Street

This low-slung, concrete masonry-constructed strip commercial building exhibits a few of the characteristics common in the design of Mid-Century examples of its type, including ribbon windows, overhanging canopy, and unadorned concrete walls. The windows are single light units in narrow metal frames, and the storefront, including its sidelights and transoms, are set in metal frames as well. These appear to be a more recent alteration. Other alterations include placement of glazed black squares in a linear pattern on the walls facing the parking lot.

According to the Riverside Modernism Historic Context Statement on file with the California Office of Historic Preservation, to meet eligibility standards, a commercial building must exemplify the tenets of the modern movement; display most of the character-defining features of its style; date from the period of significance; exhibit quality of design; and retain the essential factors of integrity.

Within this context, this strip commercial building does not appear to meet the registration requirements outlined above because it is not a distinctive example of the style, exhibiting only the low-slung volume, extended canopy, and ribbon windows. The storefront has been replaced, and the exterior has been modified with applied, decorative squares. It is not considered eligible for local listing or for state or federal listing under any of the criteria, primarily Criterion 3/C, because it lacks distinction within Riverside's Modernism context.

3.4.6 Environmental Impacts and Consequences

CEQA Thresholds of Significance for Cultural Resources

In accordance with the *2021 CEQA Statute & Guidelines, Appendix G, Environmental Checklist Form*, V. Cultural Resources: (a), (b), and (c), the proposed Project would result in impacts to cultural resources, if the construction or operations of the proposed Project would result in any of the conditions listed in the following table.

The discussion below includes the CEQA checklist for cultural resources, and the discussion that follows provides the rationale for the following significance determinations:

- No Impact
- Less than Significant Impact
- Less than Significant Impact with Mitigation
- Potentially Significant Impact

Would the project:

Question	CEQA Determination
(a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5.	Potentially Significant Impact
(b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	Less Than Significant with Mitigation Incorporated
(c) Disturb any human remains, including those interred outside of formal cemeteries?	No Impact

(a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5.

Potentially Significant. The Build Alternative, Design Options 1A through 3B would result in a substantial adverse change to character-defining features and a significant impact because the former FMC Plant 1 building would be removed. Although Plant 2 would not be directly impacted, removing Plant 1 would cause a significant adverse change to the setting of Plant 2. Removing the former FMC Plant 1 building would result in a significant impact.

Permanent Impacts (Operations)

Former FMC Complex

Potentially Significant Impact:. The direct project impacts (removal) would result in a substantial adverse change to historic character-defining features (Plant 1) and severely impact the former FMC Complex's ability to convey its significance because half of the complex would be removed.

Plant 2 would also be impacted by the Build Alternative with Design Options 1A through 3B because the associated resources in the immediate setting which also be removed, which would result in substantial adverse changes to Plant 2, specifically, its integrity of setting, feel, and association.

12th Street Residences: 3021 12th Street and 3009 12th Street

Significant Impact: The Build Alternative with Design Options 1A, 2A, and 3A would result in demolition of both historical resources. The Build Alternative with Design Options 1B, 2B, and 3B would also result in impacts, as the immediate setting would be substantially, adversely changed by the demolition of Plant 1, as Plant 1 is a component of the historic setting of the residences. Plant 1, which is adjacent to 3021 12th Street, provides a physical, audible, and visual screen from the active railroad corridor. Removing Plant 1 substantially alters the setting through the introduction of a parking lot as well as anticipated increased noise levels.

Ninth Street Neighborhood Conservation Area

No Impact: The Build Alternative with Design Options 1A and 1B would not result in impacts to the Ninth Street Neighborhood Conservation Area.

Less than Significant Impact: The Build Alternative with Design Options 3A and 3B would have indirect impacts on the Ninth Street Neighborhood Conservation Area and result in a less than significant impact determination. The new intersection associated with extending Howard Avenue north to 9th Street would alter the setting of the district in the vicinity of contributing historic resources, but not to a degree that would diminish the district's integrity.

Potentially Significant Impact: The Build Alternative with Design Options 2A and 2B would have direct and indirect impacts to the Ninth Street Neighborhood Conservation Area resulting in a significant impact. The direct impacts are caused by the introduction of a "T" intersection as a result of the extension of Howard Avenue north to 9th Street. These design options would result in acquisition of property Nos. 7, 9, 11, and 14 in the APE and they would be demolished. The historic residences (Nos. 7 and 11) are contributing resources to the Ninth Street Neighborhood Conservation Area's historic fabric. Destruction of two of the conservation area's contributing resources would diminish the integrity of the conservation area's integrity and the two residences would be demolished, which is considered a substantial adverse change.

Lincoln Park

Less than Significant Impacts: The Build Alternative with Design Options 1A, 2A, and 3A would result in demolition of the former FMC Plant 1 building and the two residences on 12th Street (3021 and 3009 12th Street) that are located between Lincoln Park and Plant 1. Demolition of the structures in the immediate setting of the park would alter the park's integrity of setting and association but would not result in a substantial adverse change to the setting of these character-defining features, resulting in a less than significant impact.

The Build Alternative with Design Options 1A through 3B would result in the demolition of the former FMC Plant 1 building. Demolishing Plant 1, which is a component of the setting of Lincoln Park, would diminish the park's integrity of setting and association, but would not result in a substantial adverse change to these character-defining features, resulting in a less than significant impact.

Worker's Houses: 4110, 4120, 4130 and 4140 Howard Avenue

Less than Significant Impacts: The Build Alternative with Design Options 1A through 3B would result in less than significant impacts to the four Worker's Houses. The Build Alternative and all the design options would result in a diminished integrity of setting, feel, and association because all design options would result in the demolition of the former FMC Plant 1 building. Plant 1 is part of the historic setting of the Worker's Houses. The ability of the houses to convey their historical associations with the citrus industry-related former FMC Complex is diminished as a result of the demolition of Plant 1, and the introduction of a parking lot directly across the street alters the immediate setting of the houses. These changes to the setting would not result in substantial adverse change to this character-defining feature; resulting in a less than significant impact.

(a) Citrus Thematic Industrial Historic District

Less than Significant Impacts: The Build Alternative and all design options would result in the demolition of the former FMC Plant 1 building, which would be considered an impact to a contributing feature of the Citrus Thematic Industrial Historic District warehouses. Demolition of the former FMC Plant 1 building would diminish the district's integrity of location, design, materials, and the setting but would not result in a substantial adverse change to the setting of these character-defining features, resulting in less than significant impacts.

Avoidance Alternatives[7]

To avoid impacts to historic resources, the following Avoidance Alternatives were evaluated:

Avoidance Alternative 1: New Platform and Tracks on the West Side of the Existing Station

Avoidance Alternative 1 avoids the former FMC Complex on the east side of the station by moving proposed improvements to the west side of the station (Figure 3.4-20). This avoidance alternative would provide a new platform and tracks on the west side of the existing station with pedestrian at-grade crossings at both ends of the new platform. The existing pedestrian overpass would be extended to the new platform with an option to extend to the main parking lot.

Although Avoidance Alternative 1 would avoid the former FMC Complex and result in a no significant impact determination to the former FMC Complex, it would not address the purpose and need of the Project for the following reasons:

- Does not allow the Perris Valley trains to use the west side platform because there are no existing crossovers between the Riverside-Downtown Station and the 91/PV Line connection, and BNSF will not allow new crossovers to be added/constructed.
- Eliminates two existing layover tracks on the west side of the station and precludes construction of a future planned third layover track at this location. The removal of layover tracks directly adjacent to the Riverside-Downtown Station would result in commuter trains being serviced and parked at a remote facility in Colton, which would add operational logistics and costs to accommodate the loss of the layover tracks at the Riverside-Downtown Station. The remote facility would need to be confirmed for adequate space to service and park the trains. Agreements with BNSF would also need to be checked for adequate permission to move trains between the remote facility and the Riverside-Downtown Station. The remote facility would also require additional train movements on the BNSF system which would be above the current limits in the Shared Use Agreement between BNSF and RCTC. Therefore, renegotiation of the Shared Use Agreement would be required. Efforts to

[7] Figures 3.4-20 through 3.4-26 are located at the end of this section.

renegotiate the existing Shared Use Agreement have been ongoing for the last 20 years, and BNSF may object to the additional train movements.

- Requires construction of a new railroad bridge over 14th Street.
- Requires a new turnout and Control Point (CP) on BNSF Mainline Track 1.
- Reduces existing parking capacity.
- Requires reconfiguration of bus access into the main station parking lot.

Avoidance Alternative 1A: New Platform and Tracks on the West Side of the Existing Station (avoids crossing the 14th Street Railroad Bridge)

Avoidance Alternative 1A avoids the former FMC Complex on the east side of the station by moving proposed improvements to the west side of the station (Figure 3.4-21. Avoidance Alternative 1A would provide a new turnout to the platform and tracks on the west side of the existing station with pedestrian at-grade crossings at both ends of the new platform. The existing pedestrian overpass would be extended to the new platform with an option to extend to the main parking lot.

Although Avoidance Alternative 1A would avoid the former FMC Complex and result in a no significant impact determination to the complex it would not address the purpose and need of the Project for the following reasons:

- Does not allow the Perris Valley trains to use the west side platform due to the lack of crossovers between the Riverside-Downtown Station and the 91/PV Line connection and BNSF will not allow new crossovers to be added/constructed.
- Eliminates and requires replacement of two existing layover tracks on the west side of the Riverside-Downtown Station and precludes construction of a future planned third layover track at this location. The removal of layover tracks directly adjacent to the station would result in commuter trains being serviced and parked at a remote facility in Colton, which would add operational logistics and costs to accommodate the loss of the layover tracks at the station. The remote facility would need to be checked for adequate space to service and park the trains. Agreements with BNSF would also need to be confirmed for adequate permission to move trains between the remote facility and the Riverside-Downtown Station. The remote facility would also require additional train movements on the BNSF system which would be above the current limits in the Shared Use Agreement between BNSF and RCTC. Therefore, renegotiation of the Shared Use Agreement would be required. Efforts to renegotiate the Shared Use Agreement have been ongoing for the last 20 years, and BNSF may object to the additional train movements.
- Requires a new turnout and Control Point on BNSF Mainline Track 1.
- Reduces existing parking capacity and requires reconfiguration of bus access into the main station parking lot.

Avoidance Alternative 2: New Platform and Tracks on the East Side of the Existing Station (stub ended)

Avoidance Alternative 2 avoids the former FMC Complex on the east side of the station by moving proposed improvements north of the complex. (Figure 3.4-22). Avoidance Alternative 2 would provide a new platform and tracks on the east side of the existing station with pedestrian grade crossings at the east end of the new platform. This alternative would increase Metrolink train storage capacity while minimizing impacts to BNSF operations. In addition, the south end of the new platform would be near the existing overflow parking lot for convenient access for passengers.

Although Avoidance Alternative 2 would avoid the former FMC Complex and would result in a no significant impact determination to the complex, it would not address the purpose and need of the Project for the following reasons:

- Includes a stub-ended configuration that is not acceptable for train operations at this location because it reduces train storage capacity and trains that were parked on the eastside of Platform 2 would block trains from leaving at the stub ended tracks.
- Requires a right-hand turnout within the limits of the existing platform at the station, which would not meet Metrolink standards and would not be permitted due to operational restrictions.
- Requires widening of the existing bridge over University Avenue.
- Eliminates and requires replacement of two existing layover tracks. The removal of layover tracks directly adjacent to the Riverside-Downtown Station would result in commuter trains being serviced and parked at a

remote facility in Colton, which would add operational logistics and costs to accommodate the loss of the layover tracks at the station. The remote facility would need to be checked for adequate space to service and park the trains. Agreements with BNSF would also need to be confirmed for adequate permission to move trains between the remote facility and the Riverside-Downtown Station. The remote facility would also require additional train movements on the BNSF system, which would be above the current limits in the Shared Use Agreement between BNSF and RCTC. Therefore, renegotiation of the Shared Use Agreement would be required. Efforts to renegotiate the Shared Use Agreement have been ongoing for the last 20 years, and BNSF may object to the additional train movements.

- The location of the proposed platform, combined with the configuration of station tracks, prevents the placement of proper pedestrian paths between the proposed platform and existing Platform 2. The pedestrian paths from the proposed platform to Platform 2 would violate Metrolink criteria and result in unsafe conditions. Without paths from the proposed platform to Platform 2, passengers would need to leave the main station area to access the existing platforms and west side main parking area.
- It does not increase parking capacity.

Avoidance Alternative 2A: New Platform and Tracks on the East Side of the Existing Station (avoids existing layover tracks)

Avoidance Alternative 2A avoids the former FMC Complex and the two existing layover tracks on the east side of the station by shifting improvements north of Mission Inn Avenue (Figure 3.4-23). This avoidance alternative would provide a new platform and tracks on the east side of the existing station, and pedestrian grade crossings would be provided at both ends of the new platform.

Although Avoidance Alternative 2A would avoid the former FMC Complex and result in a no significant impact determination to the complex, it would not address the purpose and need of the Project for the following reasons:

- Requires Mission Inn Avenue to be grade separated to accommodate the 4th and 5th tracks and meet California Public Utilities Commission (CPUC) standards.
- Requires a new turnout on BNSF Mainline Track 3 and CP.
- Increases the distance of the west end of platform to the pedestrian bridge to 2,300 feet from the main parking, and the east end of the platform to the furthest parking spot in the main parking area is 4,600 feet, which would not provide convenient passenger access.
- Does not increase parking capacity.

Avoidance Alternative 2B: New Platform and Tracks on the East Side of the Existing Station (avoids existing layover tracks and Mission Inn Avenue)

Avoidance Alternative 2B avoids the former FMC Complex on the east side of the station and avoids the existing layover tracks by shifting the track improvements farther north, past Mission Inn Avenue (Figure 3.4-24). This avoidance alternative would provide a new platform and tracks on the east side of the existing station and pedestrian grade crossing would be provided at the south end of the new platform.

Although Avoidance Alternative 2B would avoid the former FMC Complex and result in a no significant impact determination to the complex, it would not address the purpose and need of the Project for the following reasons:

- Includes a stub-ended configuration that is not acceptable for train operations at this location because it would require a reverse movement (double move) on the BNSF mainline, adversely impacting their operations. The additional movements would create delays, inefficiencies, and unacceptable operations.
- Requires a new turnout on BNSF Mainline Track 3 and new CP.
- Increases the distance to the west end of platform to the pedestrian bridge to 2,300 feet from the main parking, and the east end of the platform to the furthest parking spot in the main parking area is 4,600 feet, which would not provide convenient passenger access.
- Does not increase parking capacity.

Avoidance Alternative 2C: New Platform and Tracks on the East Side of the Existing Station (not stub ended)

Avoidance Alternative 2C avoids the former FMC Complex on the east side of the station by shifting the improvements just north of the complex (Figure 3.4-25). This avoidance alternative would provide a new platform

and tracks just north of the Riverside-Downtown Station, and pedestrian grade crossings would be provided at both ends of the new platform.

Although Avoidance Alternative 2C would avoid the former FMC Complex and result in a no significant impact determination to the complex, it would not address the purpose and need of the Project for the following reasons:

- Would not accommodate passengers to gain access from Platforms 1 and 2 or to the main parking lot on the west side of the station without leaving the main station because it would require a new pedestrian crossing for passengers transferring from the new platform to the existing platform, which is not permitted.
- Requires Mission Inn Avenue to be grade separated to accommodate the 4th and 5th tracks and meet CPUC standards.
- Requires widening of the existing bridge over University Avenue.
- Eliminates and requires replacement of two existing layover tracks. The removal of layover tracks directly adjacent to the Riverside-Downtown Station would result in commuter trains being serviced and parked at a remote facility in Colton, which would add operational logistics and costs to accommodate the loss of the layover tracks at the station. The remote facility would need to be confirmed for adequate space to service and park the trains. Agreements with BNSF would also need to be checked for adequate permission to move trains between the remote facility and the Riverside-Downtown Station. The remote facility would also require additional train movements on the BNSF mainline, which would be above the current limits in the Shared Use Agreement between BNSF and RCTC. Therefore, renegotiation of the Shared Use Agreement would be required. Efforts to renegotiate the Shared Use Agreement have been ongoing for the last 20 years, and BNSF may object to the additional train movements.
- Requires a new turnout on BNSF Mainline Track 3 and CP.
- Increases the distance from west end of platform to the pedestrian bridge to 1,100 feet from the main parking, and the east end of the platform to the furthest parking spot in the main parking area is 3,400 feet, which would not provide convenient passenger access.

Avoidance Alternative 3: New Platform and Tracks on the East Side of 14th Street

Avoidance Alternative 3 avoids the former FMC Complex on the east side of the station by shifting the improvements south of 14th Street (Figure 3.4-26). Avoidance Alternative 3 would provide a new platform and tracks on the south side of the existing station, and pedestrian grade crossings would be provided at both ends of the new platform.

Although Avoidance Alternative 3 would avoid the former FMC Complex and result in a no significant impact determination to the complex, it would not address the purpose and need of the Project for the following reasons:

- Is not acceptable for train operations at this location because it would require a reverse movement (double move) on the BNSF mainline, adversely impacting their operations. The additional movements would create delays, inefficiencies, and unacceptable operations.
- Requires relocation and modification of existing signals facilities.
- Requires extensive ROW acquisition of frontage road and adjacent properties to accommodate a new platform and tracks and also requires a vacation of Commerce Street.
- Increases the distance from the west end of platform to the pedestrian bridge to 2,300 feet from the main parking, and the east end of the platform to the furthest parking spot in the main parking area is 4,600 feet, which would not provide convenient passenger access.

Summary of Avoidance Alternatives

The Build Alternative and Avoidance Alternatives were evaluated based on how they best met the core evaluation criteria. In addition to the CEQA significance thresholds, the core evaluation criteria was based on the purpose and need and project objectives, as described herein, and was used to screen all potential project alternatives.

Purpose and Need

The purpose of the proposed Project is to expand the capacity, improve operations and efficiency, connectivity, and the passenger experience at the Riverside-Downtown Station.

Project Objectives

- Expand platform capacity to meet passenger train storage needs

- Allow for train meets off the BNSF mainline and minimize impacts to BNSF operations
- Improve train connectivity and accessibility while minimizing impacts on improvement projects near the station that are already designed or in construction
- Facilitate more efficient passenger flow and reduce dwell times
- Enhance safety and access for station users
- Accommodate projected future demand

Table 3.4-11 describes the core evaluation criteria and summarizes how each of the alternatives met the core evaluation criteria.

Table 3.4-11. Summary of Core Evaluation Criteria by Avoidance Alternative

Evaluation Criteria	Build Alternative	Avoidance Alternatives 1 and 1A	Avoidance Alternative 2	Avoidance Alternatives 2A and 2B	Avoidance Alternative 2C	Avoidance Alternative 3
No impacts to Layover capacity	X	--	--	X	--	X
Meets Connectivity/ Service Plan Needs	X	X	--	--	--	--
No property acquisition/ No Impact to adjacent businesses	--	--	X	X	X	--
No impact to BNSF operations	X	--	X	--	--	--
Meets Metrolink Design Criteria	X	X	--	X	--	X
No impacts to Capacity for future growth (e.g., parking)	X	--	--	--	--	--
Meets Purpose and Need	X	--	--	--	--	--
Criteria Met	**6**	**2**	**2**	**3**	**1**	**2**

X = meets core performance criteria
-- indicates does not meet core performance criteria

Consideration of Avoidance Alternatives

Avoidance Alternatives 1, 1A, 2, 2A, 2B, 2C, and 3 would avoid impacts to the former FMC Complex (APE Map Numbers 17, 18, 21, 28, and 33); however, they did not meet the performance criteria, project objectives or the purpose and need. In addition, Alternatives 2A and 2C would require a grade separation of Mission Inn Avenue, estimated to cost an additional $45 million, which would more than double the estimated cost of the project, resulting in construction costs of an extraordinary magnitude. Alternatives 1, 1A, 2, and 2C would impact existing layover capacity and would not accommodate expansion of parking. Alternative 2B and 3 would require a double move on the BNSF mainline. Based on this evaluation, Avoidance Alternatives 1, 1A, 2, 2A, 2B, 2C, and 3 were considered, but eliminated from further review.

In the evaluation of the Build Alternative and all the Avoidance Alternatives against the core performance criteria, the Build Alternative was identified as the best alternative for the expansion of the Riverside-Downtown Station because it is the only alternative that meets the project objectives and purpose and need for the Project, and met most of the core performance criteria, including the capacity for additional growth in the future.

Minimization of Harm/Build Alternative Option for Full Adaptive and Partial Reuse

Build Alternative Option for Full Adaptive Reuse

A full adaptive reuse option was also considered to minimize harm to the historic, former FMC Complex Plant 1 building while weighing the overall project objectives against core performance criteria, as previously discussed. The following conceptual analysis addresses an adaptive reuse scenario for a complete retrofit/reuse of the existing Plant 1, and a partial reuse of Plant 1, incorporating the building into the Project.

The Build Alternative places the new tracks and passenger loading platform in the current location of Plant 1. Full adaptive reuse of the building to serve as an enclosed passenger rail station would entail structural changes to the building to accommodate the tracks and platform while retaining the building's exterior and interior historic materials and structural elements. Based on a structural condition analysis performed in 2019, there are a number of existing structural issues associated with the predominantly timber-constructed building (timber trusses, timber purlins, timber girders, timber roof, timber columns, and timber floor planks). Many of the timber trusses, girders, and columns show signs of cracking and splitting that could compromise the compression capabilities of these structural, supporting members. To meet structural and seismic code, a new "skeleton" structure would have to be constructed because the timber structural members are deteriorating. In addition to these changes, the majority of the glass windows in the clerestories have been replaced with translucent plastic panels (existing condition), and the current owners of the building have been making ongoing repairs to the structure, further compromising the design and material integrity of the historic structure. The exterior walls (including the character-defining, multi-light windows) would need to be removed or partially removed to allow proper ventilation of the interior while trains are stopped inside. The exposed timber framing, trusses and sawtooth roof would be the only historic elements remaining, and they would be heavily modified from their original configuration (encased in steel or concrete), as a result of the changes necessary to meet fire and safety codes.

Operational Constraints

To reuse Plant 1 as a part of the expansion of the Riverside-Downtown Station, new tracks would have to ladder off an existing station track and the new station tracks would have to thread through the building structure. Operationally, this would reduce the capacity of the existing and proposed platform and would also require a substantial retrofit of the structure. This alternative could impact BNSF operations and layover tracks and consideration would need to be made to accommodate the right size train. This alternative may also require building another bridge over University Avenue.

Environmental Impacts

There are also environmental concerns with the Full Adaptive Reuse Option. In 2018, a Phase I Environmental Site Assessment was performed at the proposed project site. There are Recognized Environmental Conditions (RECs) and Activity Use Limitations for portions of the proposed project site. Land Use Covenants also dictate that the site shall not be used for sensitive receptors and soil disturbance activities shall not be conducted without the consent of the Department of Toxic Substances Control (DTSC). There are ongoing remediation efforts at the proposed project site and DTSC has also indicated a hazardous waste plume in soils and groundwater. The cost of remediation would be dependent on the type of impact to groundwater (up to $5 million for limited excavation) which would take up to three years to complete and monitoring would be required for at least 30 years. The DTSC could still provide RCTC with a Land Use Covenant restricting some uses of the property. However, at this time, the only use that has been approved by the DTSC is a surface, (open air) parking lot.

Cost Factors

In summary, there are a number of challenges associated with adaptive reuse of the existing approximately 120,000-square foot structure to accommodate the proposed passenger rail platform and tracks. In addition to the approximately $20 million for construction of the Build Alternative, if the entire structure is retrofitted for adaptive reuse, RCTC estimated the cost for purposes of evaluating the feasibility to be $600 per square foot to $800 per square foot ($72 million to $96 million) due to the following factors:

- Hazardous waste/materials (e.g., lead paint; spills over the decades from industrial tenants).
- Ventilation requirements – in lieu of mechanical ventilation, at least 50 percent of the walls would have to be removed and likely a large portion of the roof opened up to accommodate ventilation.

- Fire-resistive construction – as an "Enclosed" station under National Fire Protection Association 130, structure and finishes would have to be 2-hour, fire-rated construction, separated from other uses. Essentially, the exposed timber framing would need to be encased in fire-rated materials, such as concrete or steel.
- Canopy would have to include full fire-sprinkler system.
- Portions not used for train boarding (and used other than a shed), require a partition wall between occupancies.
- A steel moment-resisting frame would be needed to frame the openings of the appropriate dimension where the tracks enter and exit; similarly, at the point where the pedestrian bridge, elevator tower and stairs enter, a moment frame would need to be constructed, resulting in a special condition in contrast to the support of the rest of the sawtooth roof.
- In accordance with the CEQA Guidelines § 15126.6(f)(1), the full adaptive reuse option meets one of the three screening criteria:(1) fails to meet most of the basic project objectives; (2) is infeasible; and/or (3) is unable to avoid significant impacts. This alternative would fail to avoid significant effects as explained herein.

While this alternative would reuse the structural timber trusses and supports, and retain the distinctive sawtooth roof, the building's overall integrity of design, materials, workmanship, and feel would be compromised as a result of the substantial loss of historic fabric associated with full adaptive reuse as a covered, enclosed train station. The alterations to make the structure a fire-rated enclosure for the train station includes encapsulation of the reused timber trusses, supports, and framing elements (all character-defining features) in fireproof materials, such as concrete or steel. This alternative would not meet the SOI Standards for Rehabilitation, thus, would result in an adverse effect.

Build Alternative Option for Partial Adaptive Reuse

A partial adaptive reuse option, would be to deconstruct Plant 1 so that only a canopy remained, covering a portion of the proposed track and platform, reducing the structure's size to a much smaller one than the existing size of Plant 1. The canopy structure would be open (not enclosed or filled with train exhaust or hazardous waste/materials) to allow for ventilation. The existing structure is approximately 450 feet long. The entire length of structure would likely remain if the new platform is completely within the footprint of the building. However, with the canopy option, portions of the building would be removed (exterior walls, interior partitions, and spaces), leaving a 450-foot-long canopy above the station platform. The canopy structure would only be 56,000 square feet as opposed to the full adaptive reuse of the existing 120,000-square foot structure.

Operational Constraints

To reuse Plant 1 as a part of the expansion of the Riverside-Downtown Station, new tracks would have to ladder off an existing station track and the new station tracks would have to thread through the building structure. Operationally, this would reduce the capacity of the existing and proposed platform and would also require a substantial retrofit of the structure. This alternative could impact BNSF operations and layover tracks, and consideration would need to be made to accommodate the right size train. This alternative may also require building another bridge over University Avenue.

Design Constraints

Design challenges associated with the partial adaptive reuse option include: 1) a redundant steel frame would have to be built underneath the sawtooth roof to cradle it, essentially, building a building within a building, with its own foundation and fire-resistive cladding; 2) the foundation installation would be further complicated by the need to keep existing columns and beams (overhead clearance for a drill rig) in place; and, 3) the fragility of the sawtooth roof would entail exceptionally careful handling by the contractor to avoid irreparable damage; and, 4) special detailing and connections would be needed to connect new to old in a context sensitive manner.

While the partial reuse of the building would retain portions of character-defining features (the sawtooth roof, supporting columns, and trusses), the removal of the exterior walls, the historic fenestration, interior partitions and spaces, and portions of the sawtooth roof would compromise the building's integrity of design, materials, workmanship, feel, and association. Additional interpretive measures would need to be included in the overall mitigation strategy, such as interpretive displays, careful removal and salvaging of building materials to be donated, and photographic documentation of the structure prior to alterations (Historic American Buildings Survey [HABS] level documentation).

Environmental Impacts

There are also environmental concerns with the Partial Adaptive Reuse Option. In 2018, a Phase I Environmental Site Assessment was performed at the proposed project site. There are RECs and Activity Use Limitations for portions of the proposed project site. Land Use Covenants also dictate that the site shall not be used for sensitive receptors and soil disturbance activities shall not be conducted without the consent of DTSC. There are ongoing remediation efforts at the proposed project site and DTSC has also indicated a hazardous waste plume in soils and groundwater. The cost of remediation would be dependent on the type of impact to groundwater (up to $5 million for limited excavation), which would take up to 3 years to complete, and monitoring would be required for at least 30 years. DTSC could still provide RCTC with a Land Use Covenant restricting some uses of the property. Currently, the only use that has been approved by DTSC is a surface, (open air) parking lot.

Cost Factors

In summary, there are a number of challenges associated with partial adaptive reuse of the existing approximately 56,000-square foot structure to accommodate the proposed passenger rail platform and tracks. If the entire structure is retrofitted for adaptive reuse, RCTC estimated the cost for purposes of evaluating the feasibility to be between $600 and $800 per square foot ($72 million to $96 million) due to the following factors:

- Hazardous waste/materials (e.g., lead paint; spills over the decades from Industrial tenants).
- Fire-resistive construction – as an "Enclosed" station under National Fire Protection Association 130, structure and finishes would have to be 2-hour, fire-rated construction, separated from other uses. Essentially, the exposed timber framing would need to be encased in fire-rated materials, such as concrete or steel.
- A canopy would have to include full fire-sprinkler system.
- Portions not used for train boarding (and used other than a shed), require demising wall between occupancies.
- A steel moment-resisting frame would be needed to frame the openings of the appropriate dimension where the tracks enter and exit. Similarly, at the point where the pedestrian bridge, elevator tower, and stairs enter, a moment-resisting frame would need to be constructed, resulting in a special condition in contrast to the support of the rest of the sawtooth roof.
- Based on the CEQA Guidelines section 15126.6(f)(1), the partial adaptive reuse option meets one of the three screening criteria: (1) fails to meet most of the basic project objectives; (2) is infeasible; and/or (3) is unable to avoid significant impacts. This alternative would fail to avoid significant effects as explained below.

While this alternative would reuse the structural timber trusses and supports, and retain the distinctive sawtooth roof, the building's overall integrity of design, materials, workmanship, and feel would be compromised as a result of the substantial loss of historic fabric associated with partial adaptive reuse as a covered, but open train station. The alterations to make the structure a fire-rated enclosure for the train station includes encapsulation of the reused timber trusses, supports, and framing elements (all character-defining features) in fireproof materials, such as concrete or steel. This alternative would not meet the SOI Standards for Rehabilitation, thus, would result in an adverse effect.

The Partial Adaptive Reuse Alternative would cost between $34 million and $45 million. The remainder of the parcel could be developed into parking (a permitted use), although there may be fewer parking spaces (approximately 80 to 100 spaces lost) as a result of the partial adaptive reuse option.

(b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Less Than Significant with Mitigation Incorporated. The project study area has been previously developed with railroad tracks, paved roads, concrete sidewalks, buildings, and grass or landscaped grounds. The entire APE has been affected by 19th- and 20th-century industrial, commercial, and residential development, agricultural activities, irrigation systems, and transportation (railway) installation. Much of the project area was cleared/graded for these activities, but development has covered some historic features, potentially leaving remnants of them in a subsurface context. The four resources recorded within the Archaeological APE all relate to these 19th and 20th century activities; no prehistoric cultural resources were identified. The historic resources include a short segment of the Upper Riverside Canal, two commercial buildings, a buried portion of the Southern Pacific Co. Riverside Branch Main Line rail line alignment and there may be an early racially segregated pool that was once part of Lincoln Park at the southwest intersection of 12th and Howard Avenue beneath the blacktop paving.

Temporary and Permanent Impacts

Although no impacts are anticipated, there is a potential for encountering undiscovered archaeological resources in a subsurface context during ground disturbing activities which could result in a potentially significant impact to archaeological resources. To avoid significant impacts, construction monitoring by a qualified archaeologist and other measures, including preparation of an Inadvertent Discovery Plan/Archaeological Treatment Plan will be implemented during ground disturbing activities which would result in less than significant impacts with mitigation. The Build Alternative with all design options would not result in permanent impacts to the significance of archaeological resources from project operations.

(c) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact. The project study area is in a developed urban area with railroad tracks, paved roads, concrete sidewalks, buildings and grass or landscaped grounds that is highly disturbed with undocumented artificial fill generally associated with previous grading and existing structure/roadway improvements. The undocumented fill layers may extend up to 10 feet below ground surface (bgs) in some areas, especially near the Prism Aerospace building. therefore, the Build Alternative is not anticipated to disturb any human remains, including those interred outside a formal cemetery.

Temporary/Permanent Impacts

Contaminated soil removal to an estimated depth of 5 feet below the surface would be required across the majority of the APE in areas of undocumented artificial fill. Deeper excavation is anticipated to reach a maximum depth of 10 feet below surface where removal of foundations of existing structures or new foundations are required for the extension of the pedestrian overpass. Therefore, the Build Alternative with all design options would not result in temporary or permanent impacts or disturbance to any human remains, including those interred outside of formal cemeteries.

3.4.7 Avoidance, Minimization, and/or Mitigation Measures Avoidance, Minimization, and/or Mitigation Measures

Measures provided in this section summarize mitigation measures to address significant impacts to cultural resources to be conducted by the project proponents to ensure impacts are avoided or minimized.

CUL-1 Historical Resources and Build Alternative with Design Options 1A and 1B

Former FMC Plant 1 Building

Potential mitigation/minimization measures for the demolition of Plant 1 and associated impacts to Plant 2 would include HABS-like documentation/recordation of both buildings. Additionally, it would be appropriate to salvage building materials (e.g., station signage for the historic site) for reuse at the station and/or donate the materials to a local building salvage company. Additional measures may be identified during public involvement and ongoing consultation with interested parties and with the SHPO.

12th Street Residences and Worker's Houses

To minimize impacts to residences from proposed design options, fences and/or vegetated screening could be placed between the houses on 12th Street, the proposed noise barrier, and the proposed passenger station and parking lot. For the four houses on Howard Avenue, vegetated screening could be placed between the parking lot and Howard Avenue. Streetscape enhancements (street trees and sidewalks) would lessen the overall change to the setting caused by the demolition of Plant 1.

CUL-2 Historical Resources and Build Alternative with Design Options 2A and 2B

Former FMC Plant 1 Building

Potential mitigation/minimization measures for the demolition of Plant 1 and associated impacts to Plant 2 would include HABS-like documentation/recordation of both buildings. Additionally, it would be appropriate to salvage building materials (e.g., station signage for the historic site) for reuse at the station and/or donate the materials to a local building salvage company. Additional measures may result as part of the public involvement and ongoing consultation with interested parties and with the SHPO.

12th Street Residences and Ninth Street Neighborhood Conservation Area Residences

To minimize potential impacts to residences from proposed design options, fences and/or vegetated screening could be placed between the houses on 12th Street, the proposed noise barrier, the proposed passenger station and parking

lot, and Howard Avenue. ,Impacts can be further minimized through streetscape enhancements (already proposed as part of the Project).

For the 9th Street residences that would be demolished as a result of Design Options 2A and 2B (3006 9th Street and 2994 9th Street), mitigation measures would include HABS-like documentation/recordation of both buildings.

CUL-3 Historical Resource and Build Alternative with Options 3A and 3B

Former FMC Plant 1 Building

Potential mitigation/minimization measures for the demolition of Plant 1 and associated impacts to Plant 2 would include HABS-like documentation/recordation of both buildings. Additionally, it would be appropriate to salvage building materials (e.g., station signage for the historic site) for reuse at the station and/or donate to a local building salvage company. Additional measures may result as part of the public involvement and ongoing consultation with interested parties and with the SHPO.

12th Street Residences, Howard Avenue Worker's Houses

To minimize impacts to residences from proposed design options, fences and/or vegetated screening could be placed between the houses on 12th Street, the proposed noise barrier, and the proposed passenger station and parking lot. For the four houses on Howard Avenue, vegetated screening could be placed between the parking lot and Howard Avenue. Streetscape enhancements (street trees and sidewalks) will lessen the overall change to the setting caused by the demolition of Plant 1.

Ninth Street Neighborhood Conservation Area

The Howard Avenue extension will feature new lighting, and planting strips and street trees that would soften the edge between the historic residences in the Ninth Street Neighborhood Conservation Area (9th Street and Howard Avenue) and the new roadway, which would minimize changes to the setting of the residences adjacent to the new roadway.

AES-5: Consultation regarding potential indirect adverse visual effects to historic properties will be conducted with consulting parties in accordance with Section 106 of the National Historic Preservation Act of 1966.

CUL-4 Archaeological Resources

All ground-disturbing activities including grading will be monitored by a qualified Archaeologist and Native American Monitor. If archaeological resources are encountered, the monitor would have the authority to temporarily halt or redirect grading and other ground disturbing activity in the immediate area of the find (50-foot radius

In the course of monitoring, when ground-disturbing activities have reached a point that the monitors are reasonably certain that no additional cultural material would be encountered, monitoring could be halted after conferring with RCTC staff.

CUL-5 Human Remains

If human remains are discovered, the County Coroner shall be contacted. If the remains are determined to be of Native American origin, the Most Likely Descendant, as identified by the NAHC, will be contacted to determine proper treatment and disposition of the remains. All requirements of Health & Safety Code §7050.5 and PRC §5097.98 will be followed.

3.4.8 CEQA Significance Conclusion

Significant and Unavoidable Impacts to Historic Resources

Former FMC Complex

Potentially Significant Impact: The Build Alternative with all design options would result in a substantial adverse change to character-defining features and a significant impact, as a result of the demolition of the former FMC Plant 1 building. The direct project impacts (demolition) would result in a substantial adverse change to historic character-defining features (Plant 1) and severely impact the former FMC Complex's ability to convey its significance, as half of the complex would be demolished.

Although Plant 2 would not be directly impacted, demolition of Plant 1 would cause a significant adverse change to the setting of Plant 2. Plant 2 would also be impacted by the Build Alternative with Design Options 1A through 3B due to the demolition of the associated resources in the immediate setting, which would result in substantial adverse changes to Plant 2, specifically, its integrity of setting, feel, and association.

(a) 12th Street Residences: 3021 12th Street and 3009 12th Street

Potentially Significant Impact: The Build Alternative with Design Options 1A, 2A, and 3A would result in demolition of both historic resources. The Build Alternative with Design Options 1B, 2B, and 3B would also result in impacts because the immediate setting would be substantially, adversely changed by the demolition of Plant 1, which is a component of the historic setting of the residences. Plant 1, which is adjacent to 3021 12th Street, provides a physical, audible, and visual screen from the active railroad corridor. Removing Plant 1 will substantially alter the setting (through the introduction of a parking lot) and anticipated increase in noise levels.

Less than Significant Impact with Mitigation Incorporated: Build Alternative with Option 1B, 2B, or 3B would avoid the demolition of the 12th Street residences located at 3021 and 3009 12th Street, and with Mitigation Measures CUL-1 to CUL-3, and AES-5, would result in less than significant impacts with mitigation.

Potentially Significant Impact: The Build Alternative with Design Options 2A and 2B would have direct and indirect impacts to the Ninth Street Neighborhood Conservation Area and result in a significant impact. The direct impacts are caused by the introduction of a "T" intersection as a result of the extension of Howard Avenue north to 9th Street. These design options would result in acquisition of property Nos. 7, 9, 11, and 14 in the APE and they would be demolished. The historic residences (Nos. 7 and 11) are contributing resources to the Ninth Street Neighborhood Conservation Area's historic fabric. Destruction of two of the conservation area's contributing resources would diminish the integrity of the conservation area's integrity and the two residences would be demolished, which is considered a substantial adverse change.

Less than Significant with Mitigation Incorporated: The Build Alternative with Design Options 3A and 3B would not require demolition of historic residences (Nos. 7 and 11), and with mitigation Measures CUL-1 to CUL-3 and AES-5 would result in indirect impacts on the Ninth Street Neighborhood Conservation Area and would result in a less than significant impact with mitigation. The new intersection associated with extending Howard Avenue north to 9th Street would alter the setting of the district in the vicinity of contributing historic resources, but not to a degree that would diminish the district's integrity.

No Impact: The Build Alternative with Design Options 1A and 1B would not result in impacts to the Ninth Street Neighborhood Conservation Area, thus, avoiding impacts to properties.

Less Than Significant with Mitigation Incorporated: The Build Alternative with all design options, including mitigation Measures CUL-1 to CUL-3, and AES-5, would result in less than significant impacts to Lincoln Park, the Worker's Houses (4110, 4120, 4130, and 4140 Howard Avenue), and the Citrus Thematic Industrial District.

(b) Less than Significant Impact: The project study area has been previously developed with railroad tracks, paved roads, concrete sidewalks, buildings, and grasses or landscaped grounds. Based on the results of the ASR, records search, and field review, there are no known archaeological resources within the APE. During construction, mitigation Measure CUL-4 will be implemented to avoid or minimize potential impacts to archaeological resources.

(c) No Impact: The project study area is in a developed urban area, with railroad tracks, paved roads, concrete sidewalks, buildings, and grasses or landscaped grounds, that is highly disturbed; therefore, the Build Alternative is not anticipated to disturb any human remains, including those interred outside a formal cemetery. During construction, mitigation Measure CUL-5 will be implemented if human remains are discovered.

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Figure 3.4-20. Avoidance Alternative 1

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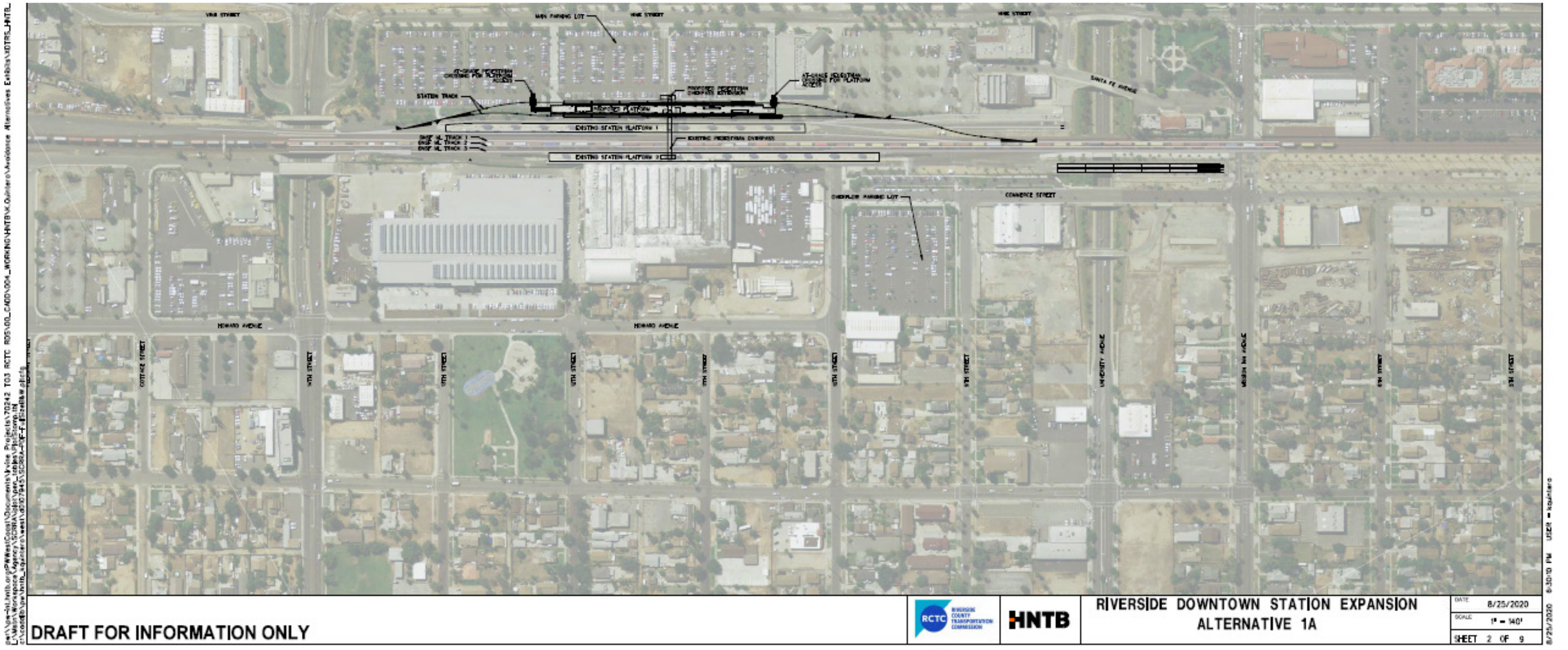

Figure 3.4-21. Avoidance Alternative 1A

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Figure 3.4-22. Avoidance Alternative 2

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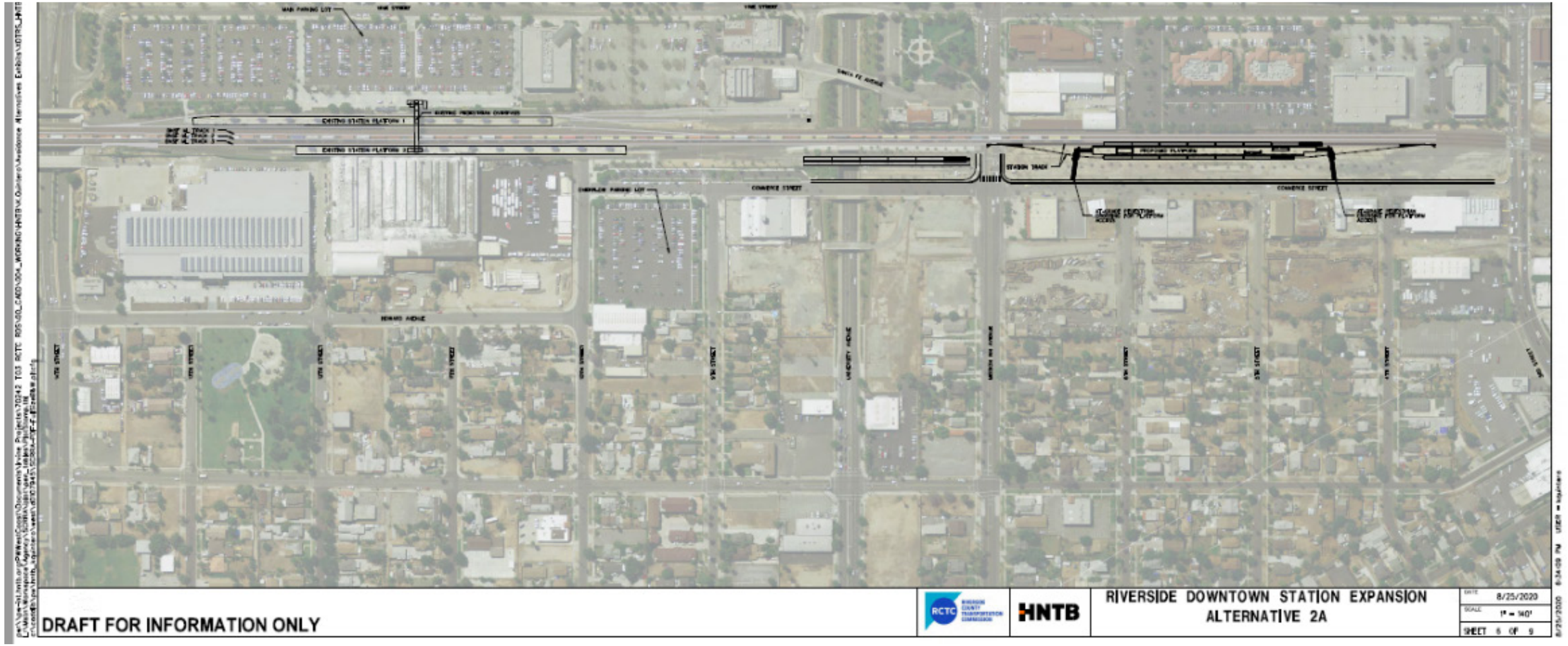

Figure 3.4-23. Avoidance Alternative 2A

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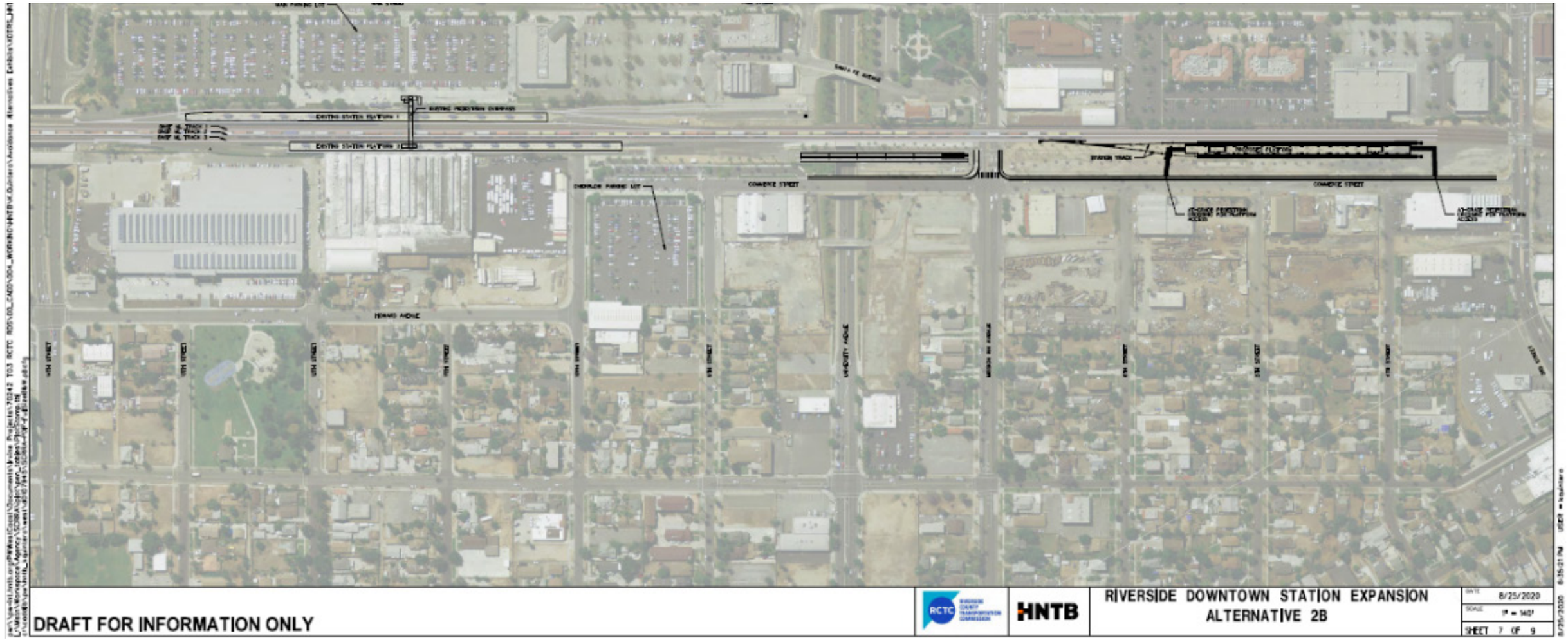

Figure 3.4-24. Avoidance Alternative 2B

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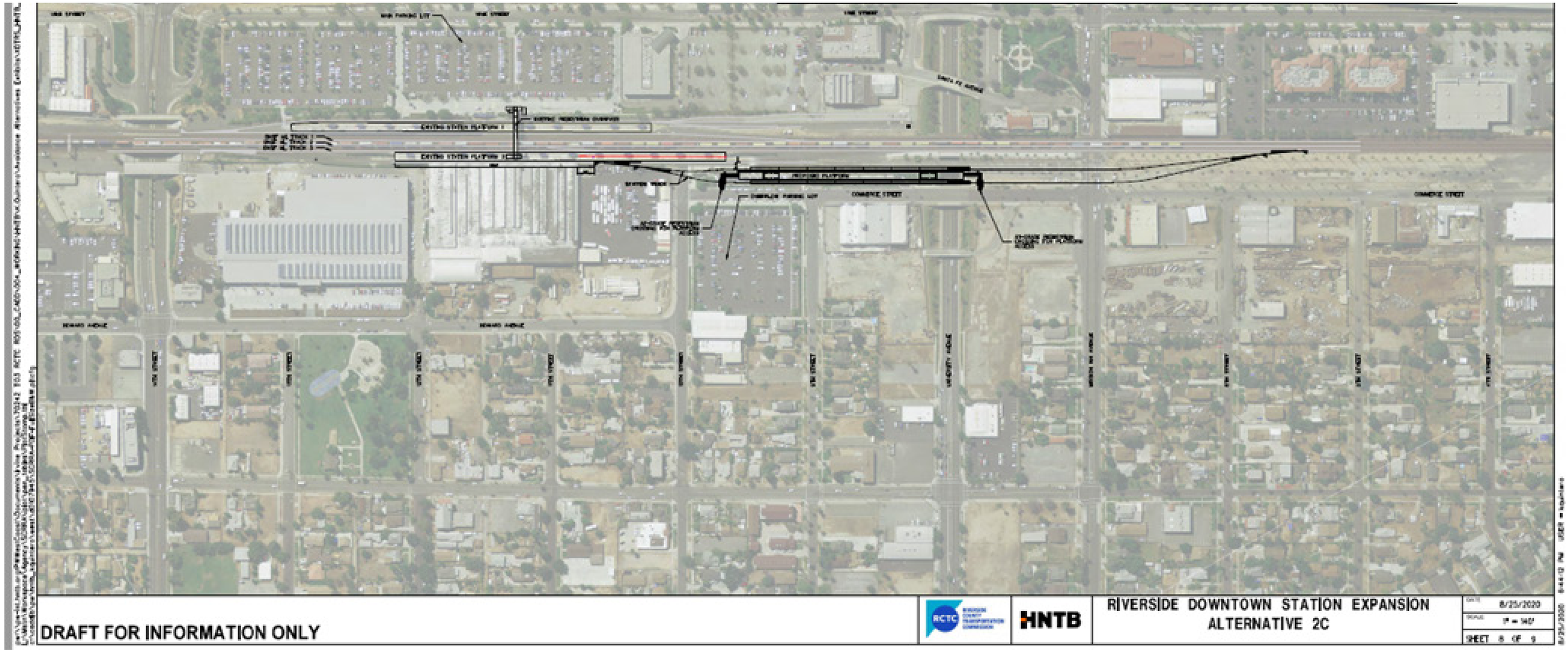

Figure 3.4-25. Avoidance Alternative 2C

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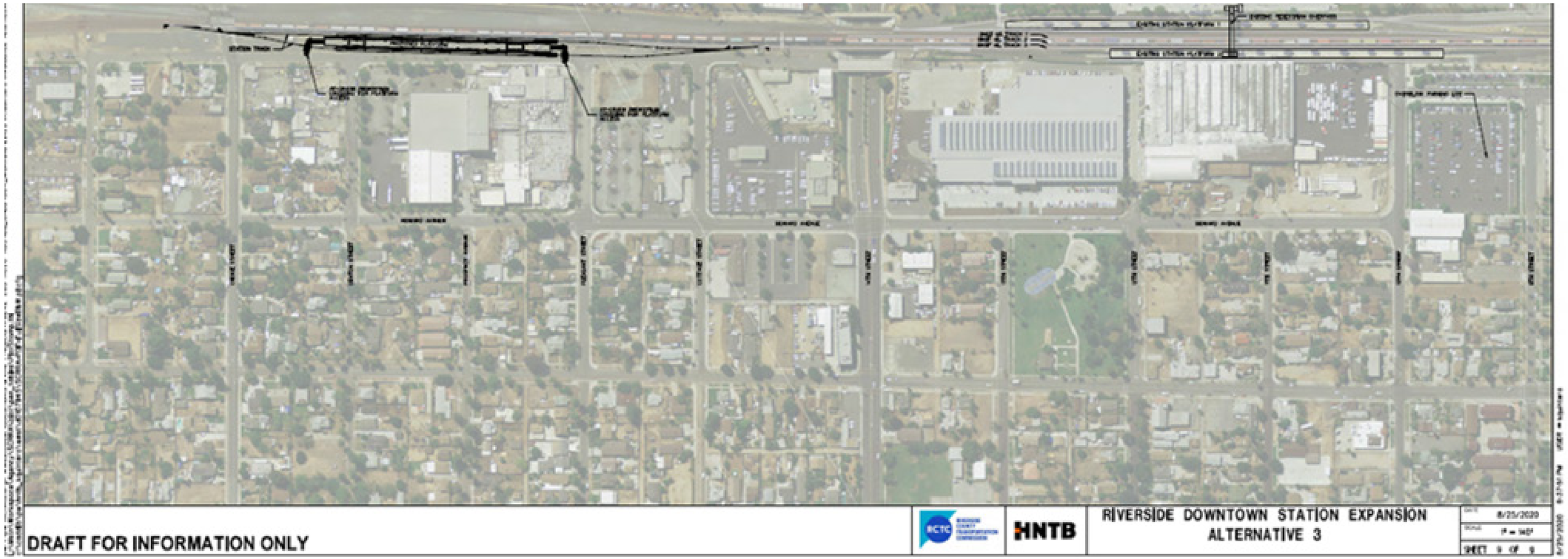

Figure 3.4-26. Avoidance Alternative 3

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3.5. Energy

This section discusses the potential impacts to energy resulting from the construction and operations of the proposed Build Alternative and all design options for within the study area. Information provided in this section are based on the results of the technical analysis in the *Energy Analysis Technical Memorandum* (HNTB, 2021) prepared for the proposed Project (Appendix K).

3.5.1. Regulatory Framework

Applicable policies, laws, and regulations relative to energy are provided herein.

State Requirements

California Energy Commission (CEC). The CEC is the state's primary energy policy and planning agency and it is playing a critical role to create a clean and modern energy system. Senate Bill (SB) 1389 (Chapter 568, Statutes of 2002) requires the CEC to prepare an Integrated Energy Policy Report no less frequently than biennial. The report should include a description of the international energy market prospects and an evaluation of its export promotion activities.

California Energy Efficiency Standards for Residential and Nonresidential Buildings—California Green Building Standards Code (2011), Title 24 Updates. Provides energy and water efficiency requirements (and indoor air quality requirements) for newly constructed buildings, additions to existing buildings, and alterations to existing buildings. PRC § 25402 subdivisions (a)-(b) and 25402.1 emphasize the importance of building design and construction flexibility by requiring the Energy Commission to establish performance standards, in the form of an "energy budget" in terms of the energy consumption per square foot of floor space.

Executive Order (EO) S-3-05. EO S-3-05, enacted in June 2005, sets target to reduce 2050 greenhouse gas (GHG) emissions to 80 percent below 1990 levels.

Assembly Bill (AB) 32: Global Warming Solutions Act. AB 32 requires the state board, CARB, to adopt limits for the 2020 statewide GHG emissions to be equivalent to the statewide GHG emissions levels in 1990. The California 2017 Climate Change Scoping Plan was first approved by CARB in 2008, and it should be updated at least every 5 years. The plan identified how the state can reach the 2030 climate target to reduce GHG emissions by 40 percent from 1990 levels, and how it plans to advance toward the 2050 climate goal to reduce GHG emissions by 80 percent below 1990 levels.

AB 2076: Reducing Dependence on Petroleum. AB 2076 (passed in 2000, Shelley, Chapter 936, Statutes of 2000) directs the CARB and the CEC to develop and adopt recommendations for the Governor and the Legislature on a strategy to reduce California's dependence on petroleum.

Regional and Local Regulations

Southern California Association of Governments (SCAG). SCAG is the metropolitan planning organization with six counties in California including Riverside County. SCAG's regional council adopted the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS) on April 7, 2016. The 2016 RTP/SCS includes Transportation Demand Management (TDM) strategies throughout the region to reduce the number of drive-alone trips and overall VMT.

Riverside County Transportation Commission (RCTC). Resolution No. 21-003 is the policy that guides the implementation of solar power systems at commission-owned properties.

3.5.2. Methodology for Evaluating Environmental Impacts

The analysis of the proposed Project's potential impacts to energy considers potential project effects within the study area related to construction and operations of the Riverside-Downtown Station Improvements Project.

CEQA guidelines require that an EIR include an analysis of a project's potential for significant environmental effects resulting from wasteful, inefficient, or unnecessary use of energy. A quantitative analysis is required for projects that increase capacity or provide congestion relief, both of which could affect the ability of a transportation facility to accommodate existing and future traffic demand. The example of congestion relief or capacity-increasing projects that would require a quantitative analysis includes new roadway or facility (bypass, new or extended highway, and new interchange), additional lanes, interchange reconfiguration, and auxiliary lanes more than 1 mile long. Although the Build Alternative would increase parking spaces, train service would not increase as a result of the proposed Project

because the passenger train traffic is determined by Metrolink. The amount of trains passing through the Riverside-Downtown Station would increase in the future regardless of whether the station improvements are constructed as identified in Metrolink's *Business Strategic Plan* (2020). The proposed Project would construct additional parking to accommodate and encourage future ridership and provide operational improvements to address train congestion along the BNSF mainline and provide more reliable service. Hence, the proposed Project was not classified as a capacity increasing project and is not expected to change the existing vehicle mix. Examples of capacity increasing projects include new highways, added travel or auxiliary lanes, and new or reconfigured interchanges. However, the Project will relieve congestion on regional roadways by promoting public transportation. An assessment of the proposed project's potential direct and indirect energy consumption was performed. Direct energy includes operational energy use and the one-time energy expenditure from project construction. Indirect energy includes maintenance activities required to operate or maintain the Project.

The estimate of construction-related energy use was calculated by applying the 2020 U.S. EPA-derived carbon dioxide (CO_2) emissions per gallon of fuel to the total CO_2 emissions estimated using the 2016 California Emissions Estimator Model (CalEEMod) as discussed in more detail in Section 3.2 as part of the air quality emissions analysis prepared for the proposed Project. The Air Quality Technical Report (Appendix G) includes details on construction equipment and activity assumptions that were used to estimate CO_2 emissions. Emissions were then converted to million British thermal units (MMBTU) using energy unit conversion factors (HNTB, 2020).

Long-term maintenance of the various roadways within the project footprint would occur under either the Build Alternative or No Build Alternative. The Build Alternative would address these energy consumptions from maintenance by alleviating local traffic congestion and promoting public transportation. The quantitative analysis would be adopted for the indirect energy consumption.

In conducting the impact analysis of energy, two principal factors were taken into consideration, 1) the potential for significant impacts due to energy consumption from project construction or operation, and 2) conflicts to renewable energy or energy efficiency plans from project construction or operations. A significant impact would occur if the proposed Project would result in any conditions listed in the *2021 CEQA Statute & Guidelines, Appendix G, Environmental Checklist Form, VI. Energy*, Issues (a) and (b). If a significant impact is identified, mitigation measures would be applied to reduce the effect to less than significant levels on the air quality. If mitigation measures are not feasible to implement or do not reduce the proposed Project's effect, then a potentially significant impact would occur.

Direct impacts would occur when wasteful, inefficient, or unnecessary energy consumption practices occur during construction or operation of the Project. Energy consumption is temporarily increased during project construction due to the operation of construction equipment. Direct impacts would be considered permanent if they would occur during project operation, such as promoting increased energy consumption through less efficient modes of transportation.

Direct energy consumption during construction was calculated by converting CO_2 emissions into fuel consumption during construction. CO_2 emissions were quantified by itemizing emissions per phase of construction. Metric tons of CO_2 were then converted to fuel using GHG equivalencies U.S. EPA, 2020)[8]. The calculation includes converting CO_2 into gallons of diesel and gasoline fuel and converting gallons of diesel and gasoline fuel into to BTUs using the Energy Information Administration (EIA, 2020) conversion rates[9].

Construction period energy consumptions were modeled for the Build Alternative with Circulation and Parking Design Option 1A (herein referred to as Design Option 1A) and for the Build Alternative with Circulation and Parking Design Option 2A (herein referred to as Design Option 2A). Based on the impact footprint and amount of demolition required, these two Build Alternative parking design options are anticipated to require the most construction activity; thus, they require the highest level of energy consumption.

Indirect impacts are typically further in time or at a different location. These can occur permanently, for example, if long-term operation of the facility results in an increase in local energy consumption. Indirect impacts can also occur temporarily and off-site during construction, for example, an increase in energy consumption due to longer vehicular trips around the project site due to maintenance of traffic activities.

[8] U.S. Energy Information Administration. 2020. Units and Calculators Explained – British Thermal Units (BTU).

[9] U.S. EPA. 2020. Greenhouse Gases Equivalences Calculation – Calculations and References.

3.5.3. Affected Environment

Statewide Energy Consumption

Energy consumption can be grouped into several categories, by fuel source and by end-use sector. According to Figure 3.5-1 and Table 3.5-1, natural gas is California's most prevalent fuel source, representing 28 percent of the state's energy consumption, and it is the fuel source responsible for over 40 percent of in-state electricity generation[10,11]. Motor gasoline accounts for 22 percent of statewide energy consumption and petroleum-based fuels other than motor gasoline represent a combined 22 percent of California's energy use.

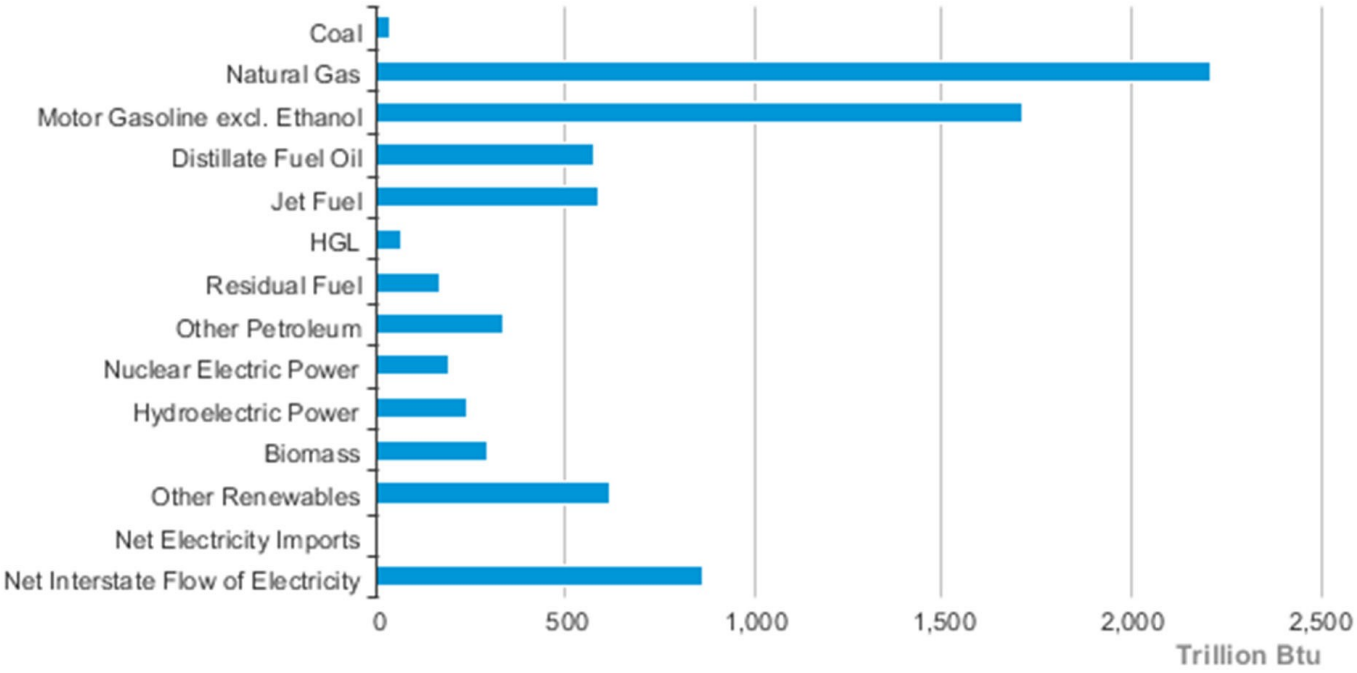

Figure 3.5-1. California Energy Consumption Estimates by Source, 2018

Source: U.S. Energy Information Administration, 2018

Table 3.5-1. Energy Consumption in California

Fuel Type	Energy Consumption (Trillion BTU)	Percent of Total Energy Consumption
Coal	33	0.4%
Natural Gas	2,210	28.0%
Motor Gasoline excl. Ethanol	1,716	21.7%
Distillate Fuel Oil	576	7.3%
Jet Fuel	593	7.5%
Hydrocarbon Gas Liquids (HGL)	58	0.7%
Residual Fuel	169	2.1%
Other Petroleum	332	4.2%
Nuclear Electric Power	190	2.4%
Hydroelectric Power	240	3.0%

[10] U.S. Energy Information Administration, 2021; California Energy Consumption Estimates by Source, 2018

[11] California Transportation Data for Alternative Fuels and Vehicles, 2019

Fuel Type	Energy Consumption (Trillion BTU)	Percent of Total Energy Consumption
Biomass	297	3.8%
Other Renewables	618	7.8%
Net Electricity Imports	3	0.0%
Net Interstate Flow of Electricity	866	11.0%
Total	**7,900**	**100.0%**

Source: U.S. Energy Administration (2018)

Figure 3.5-2 shows California energy use by end-use sector. The transportation sector is responsible for largest share of the state's energy use, accounting for just under 40 percent of the California total. Residential, commercial, and industrial users are each responsible for roughly one-fifth of energy use[10].

Energy resources for transportation include gasoline, natural gas, biofuels, and electricity, with petroleum-based fuels, and account for 96 percent of the state's transportation needs[11].

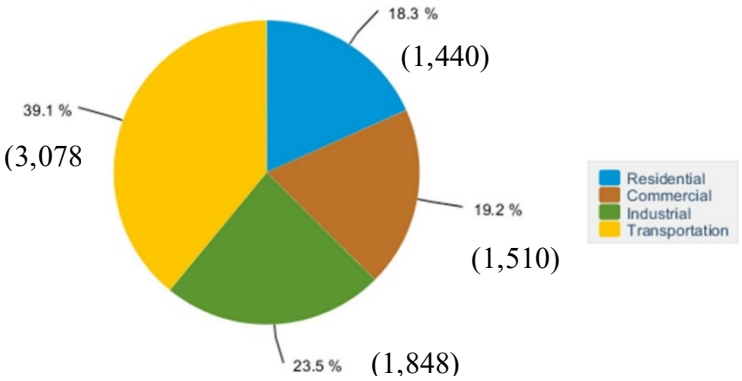

Figure 3.5-2. California Energy Consumption (percentage and absolute values) by End-Use Sector, 2018

Source: U.S. Energy Information Administration, 2018

Note: percentage and absolute values based on trillion British thermal units

Regional Energy Consumption

With the high density of population relying on highway system for mobility, two major ports serving as hubs for good movement and three large airports, Southern California's energy consumption differs from the state in that a greater proportion of the energy consumed in the region is for the purposes of transportation. According to Figure 3.5-3, transportation related energy consumption accounts for approximately 60 percent of energy used in the SCAB (which comprises all of Orange County and the non-desert portions of Los Angeles, San Bernardino, and Riverside counties)[12].

[12] South Coast Air Quality Management District, 2012; 2012 Air Quality Management Plan, Chapter 10: Energy and Climate

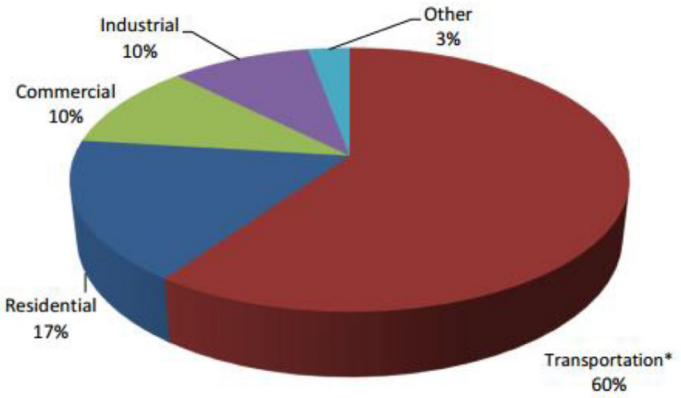

Figure 3.5-3. Share of Energy Use in South Coast Basin in 2008

According to SCAG's 2016-2040 RTP/SCS, by 2040, about 3.8 million people is expected to add to the six-county SCAG region (Ventura, Los Angeles, Orange, San Bernardino, Riverside, and Imperial counties)[13]. This additional population growth is expected to pose transportation challenges for the region, as travel demand in California will likely increase, which will also increase the regional energy consumption level in the future.

3.5.4. Environmental Impacts and Consequences

CEQA Thresholds of Significance for Energy

In accordance with the *2021 CEQA Statute & Guidelines, Appendix G, Environmental Checklist Form, VI. Energy*, Issues (a) and (b), the proposed Project would result in a significant impact on energy, if the construction and/or operations of the proposed Project would result in any of the conditions listed in the following table.

The discussion below includes the CEQA checklist for energy, and the discussion that follows provides the rationale for the following significance determinations:

- No Impact
- Less than Significant Impact
- Less than Significant Impact with Mitigation
- Potentially Significant Impact

Would the project:

Question	CEQA Determination
(a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Less Than Significant Impact
(b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Less Than Significant Impact

Results of the *Energy Analysis Technical Memorandum* (HNTB, 2021) prepared for the proposed Project are used to support the CEQA significance determination for each energy-related issue identified in the abovementioned CEQA Statute & Guidelines Environmental Checklist Form.

[13] Southern California Association of Governments. 2016. 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy.

(a) Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Temporary Impacts (Construction)

Less than Significant Impact. As shown in Table 3.5-2 and Table 3.5-3, approximately 20,000 and 25,000 total MMBTU would be consumed during the construction of Design Options 1A and 2A respectively, most of which would be in the form of diesel fuel used by construction equipment and vehicles. Although an estimated 150,000 gallons of diesel fuel would be consumed by construction vehicles and equipment, the fuel consumption would be temporary in nature and would represent a negligible increase in regional demand, and an insignificant amount relative to the more than 18 billion gallons of on-road fuels used in the state in 2013 (California Energy Commission, 2014). Given the extensive network of fueling stations throughout the project vicinity and the fact that construction would be short-term, it is anticipated that no new or expanded sources of energy or infrastructure would be required to meet the energy demands due to Design Options 1A and 2A construction activities. Additionally, the 2-year construction window for the proposed project would result in even smaller annual energy expenditures, representing an even smaller annual energy consumption. It is anticipated that the energy expenditure required to construct the Build Alternative would be partially offset by the long-term operational reductions in energy consumption realized through more efficient public transport. Therefore, Design Options 1A and 2A would not result in the wasteful or inefficient use of energy. Impacts related to regional energy supply, demand, and conservation during the construction period would be less than significant under CEQA.

Table 3.5-2. Construction Annual Energy Consumption of Build Design Option 1A

Construction Phase	CO_2 Emission (MT)		Fuel (Gallon)		Energy (MMBTU)		
	Diesel	Gasoline	Diesel	Gasoline	Diesel	Gasoline	Total
Demolition	64	2	6,242	255	858	31	889
Site Preparation	43	2	4,249	233	584	28	612
Grading	100	3	9,860	371	1,355	45	1,400
Paving	36	1	3,585	159	493	19	512
Track Construction	116	5	11,385	572	1,564	69	1,633
Bridge/Platform Construction	1,146	303	112,555	34,110	15,463	4,103	19,566
Architectural Coating	1	1	125	148	17	18	35
Total	**1,507**	**319**	**148,001**	**35,847**	**20,333**	**4,312**	**24,645**

MMBTU = million British thermal units
MT = metric ton

Table 3.5-3. Construction Annual Energy Consumption of Build Design Option 2A

Construction Phase	CO_2 Emission (MT)		Fuel (Gallon)		Energy (MMBTU)		
	Diesel	Gasoline	Diesel	Gasoline	Diesel	Gasoline	Total
Demolition	67	2	6,564	260	902	31	933
Site Preparation	52	2	5,062	277	695	33	728
Grading	119	4	11,653	438	1,601	53	1,654
Paving	46	2	4,474	188	615	23	638
Track Construction	116	5	11,385	572	1,564	69	1,633

Construction Phase	CO_2 Emission (MT)		Fuel (Gallon)		Energy (MMBTU)		
	Diesel	Gasoline	Diesel	Gasoline	Diesel	Gasoline	Total
Bridge/Platform Construction	1,145	302	112,519	34,017	15,458	4,092	19,550
Architectural Coating	2	2	176	207	24	25	49
Total	**1,546**	**320**	**151,832**	**35,960**	**20,859**	**4,325**	**25,184**

1. U.S. EPA (2020) conversion rates: 10.180 × 10-3 metric tons CO2/gallon of diesel, 8.887 × 10-3 metric tons CO2/gallon of gasoline
2. EIA (2020) conversion rate 1 gallon diesel = 137,381 BTUs, 1 gallon gasoline = 120,286 BTUs

Permanent Impacts (Operations)

Less than Significant Impact. Operation energy involves all energy consumed by vehicle propulsion. This is a function of traffic characteristics such as VMT, vehicle speed, and vehicle mix. The purpose of the Project is to provide station improvements to enhance Metrolink service and increase ridership. Increased ridership would result in a reduction in regional VMT and associated criteria pollutant emissions. While the Project would result in increased vehicle trips to and from the station, these trips would generally be of short distances and the VMT for these trips would be offset using transit. As such, operation of the Project would not result in a net increase energy consumption. Impacts on energy consumption from this project would be less than significant.

Indirect Impacts

The Build Alternative would reduce long-term maintenance need of regional road facilities by alleviating traffic congestion through promoting public transportation. More efficient light-emitting diode (LED) lighting technology could be employed in the new facilities area. This technology has a longer lifetime than is currently used in existing traffic signals and pedestrian-scale lighting, further reducing future maintenance needs. Based on this, operationally, the Build Alternative would have an energy savings, as compared to the No Build Alternative.

(b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Temporary Impacts (Construction)

Less than Significant Impact. Energy usage on the project site during construction would be temporary in nature, and energy impacts would be negligible at the regional level. The Project would not necessitate use of any construction equipment that would be less energy efficient than others at comparable construction sites in the region or the state. Because California's energy conservation planning actions are conducted at a regional level, and because the Project's total impacts to regional energy supplies would be minor, the energy consumption from construction would not conflict with California's energy conservation plans as described in the CEC's 2018 Integrated Energy Policy Report Update. The proposed project, as indicated above, would also comply with Title 24 and CALGreen Code standards. Additionally, construction of the Project would not obstruct implementation of energy conservation practices included in the SCAG 2016 RTP/SCS as energy demands for the Project would not exceed demands of comparable projects. The proposed project is not likely to cause wasteful, inefficient, or unnecessary consumption of energy resources during project construction.

Permanent Impacts (Operations)

Less than Significant Impact. Due to the insignificant energy consumption of the Project from operation, it would not conflict with California's energy conservation plans as described in the CEC's 2018 Integrated Energy Policy Report Update. Additionally, operation of the facility would not require increased or inefficient energy consumption that would obstruct the implementation of the SCAG 2016 RTP/SCS energy conservation practices. The proposed Project would likely result in less energy consumption locally due to improved train accessibility as a result of the Project. The proposed Project is not likely to cause inefficient, wasteful, and unnecessary consumption of energy resources or any irreversible or irretrievable commitments of energy during operation.

3.5.5. Avoidance, Minimization, and/or Mitigation Measures

This section summarizes avoidance and minimization measures to be conducted by RCTC that would avoid and minimize impacts and enhance energy efficiency.

E-1: Energy efficient lighting with a longer lifespan, such as LED, would be used at the station to reduce future maintenance needs.

3.5.6. CEQA Significance Conclusion

The Build Alternative, including all design options, would occur within an existing rail station and neighboring industrial development in urbanized Downtown Riverside. Overall, the proposed Project would result in limited consumption of energy resources during construction and operation. The Project would have a less than significant impact on energy.

3.6. Geology and Soils

This section discusses the potential impacts resulting from the construction and operations of the proposed Build Alternative and all design options for geology and soils within the project study area. Information provided in this section is based on the results of the technical analysis in the *Geotechnical Exploration Report* (HNTB, 2020) prepared for the proposed Project.

3.6.1. Regulatory Framework

Applicable polices, laws, and regulations relative to geology and soils are as follows:

State Requirements

California Building Code. This code addresses the specific building conditions and structural requirements for California, as well as provides guidance on foundation design and structural engineering for different soil types.

Alquist-Priolo Earthquake Special Studies Zone Act. This act was passed into law following the destructive February 9, 1971, San Fernando earthquake. The intent of the Alquist-Priolo Act is to ensure public safety by prohibiting the siting of most structures for human occupancy across traces of active faults that constitute a potential hazard to structures from surface faulting or fault creep.

Local and Regional Regulations

County of Riverside General Plan (2003). The Safety Element establishes policies and programs to protect the community from risks associated with seismic, geologic, flood, and wildfire hazards.

3.6.2. Methodology for Evaluating Environmental Impacts

The analysis of the proposed Project's potential impacts to geology and soils considers project effects within the study area related to construction and operations of the Project.

Field exploration consisted of the excavation of four hollow stem borings located generally in areas of planned improvements to provide a basis for foundation and pavement design. During exploration, soil samples were collected by for further laboratory testing and evaluation.

Laboratory tests were performed on representative soil samples to provide a basis for developing earthwork control and foundation designs.

3.6.3. Affected Environment

Regional Geology

The site is located within a prominent natural geomorphic province in Southern California known as the Peninsular Ranges. This province is characterized by steep, elongated ranges and valleys that trend northwestward. More specifically, the proposed site is located within the northern portion of the relatively stable Perris Block.

The Perris Block, approximately 20 miles by 50 miles in extent, is bounded by the San Jacinto Fault Zone to the northeast, the Chino Fault Zone to the west, and the Elsinore Fault Zone to the southwest. The Perris Block has had a complex tectonic history in response to movement on the Elsinore and San Jacinto Fault Zones. Thin sedimentary and volcanic materials locally cover crystalline bedrock, consisting of the Val Verde Tonalite (Kvt) and lesser amounts of Cretaceous granitic dikes (Kg).

Site-Specific Geology

Artificial Fill and Alluvial Deposits

Field exploration, observations, and review of the pertinent literature indicate that the site is underlain by the following artificial fill and alluvial deposits:

- **Undocumented Artificial Fill.** Undocumented artificial fill is generally associated with previous grading and existing structure/roadway improvements. The undocumented artificial fill layers may extend up to 10 feet bgs in some areas, especially near the Prism Aerospace building. Localized pockets of artificial fill that were not identified during field exploration may also be encountered elsewhere on this site bgs. Where encountered, the artificial fill consisted of medium dense to dense, silty to clayey sand.

- **Young Alluvial Fan Deposit.** Young alluvial soils were encountered in the western portion of the site, mainly between 10th Street and 13th Street. This alluvium may extend up to 15 feet bgs, and generally consists of loose to medium dense, silty to clayey sand. These materials are expected to generally possess a low expansion potential and collapse potential of up to 6.5 percent, as encountered in borings along Howard Avenue.
- **Old Alluvial Fan Deposit.** Older alluvial soils, generally consisting of loose to dense silty to clayey sand and localized, poorly-graded sand were encountered in all borings below the artificial fill and/or younger alluvium. This older alluvium is expected to generally possess a low expansion potential and slight collapse potential of less than 1.5 percent.

Groundwater and Surface Water

The Project is within the Santa Ana River watershed (Middle Santa Ana River). Tequesquite Arroyo Creek is located approximately 0.7 mile to the south and runs underneath SR 91. Riverside Canal is located just west of the project footprint, is culverted underground to the north of 14th Street, and daylighted south of 14th Street, approximately 70 feet to the west. Lake Evans is 1.25 miles to the northwest. The Santa Ana River is approximately 1.8 miles to the west of the project study area. No standing or surface water was observed on the site at the time of field exploration. In addition, groundwater was not encountered during previous exploration to the total depth explored of 50 feet. Historical groundwater data from the Riverside Manufactured Gas Plant, approximately 500 feet northeast of the site, indicates that the depth to groundwater at this nearby facility was approximately 107 feet in 2008, and the flow direction was northwest to west-southwest (EnviroStor, 2019).

Regional Faulting and Fault Activity

The Southern California region is seismically active because of the influence of several earthquake fault systems resulting from interaction between the Pacific and North American crustal plates. An active fault is defined by the State of California as a sufficiently active and well-defined fault that has exhibited surface displacement within the last 11,000 years. A potentially active fault is defined by the state as a fault with a history of movement between 11,000 and 1.6 million years ago. There are two primary hazards associated with active faults: 1) fault-induced ground rupture and 2) ground shaking.

The subject site, is located within a seismically active region as a result of being located near the active margin between the North American and Pacific tectonic plates. The principal source of seismic activity is movement along the northwest-trending regional fault systems such as the San Andreas, San Jacinto, and Elsinore fault zones. Based on published geologic hazard maps, this site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone or county fault zone.

Geologic Hazards

Seismically induced landslides are rock, earth, or debris flows on slopes that can occur as a result of earthquake-related seismic shaking or specific soil, moisture, and angle or slope conditions. Seismic settlement is a phenomenon in which loose, unsaturated sands tend to settle or become denser during strong seismic shaking. Intensity of ground shaking at a given location depends primarily upon earthquake magnitude, site distance from the source, and site response (soil type) characteristics. Strong ground shaking can be expected at the site during moderate to severe earthquakes in this general area. However, since this site is not located within a mapped fault zone, the possibility of ground surface-fault-rupture is very low at this site. Ground shaking can induce "secondary" seismic hazards such as liquefaction, lateral spreading, flooding, seiche and tsunami, collapsible soils, and ground rupture. The Riverside County Geologic Hazards maps indicate that the site is located in a zone of low to moderate liquefaction potential. However, liquefaction-induced or dynamic dry settlement is not expected to be a significant hazard at this site due to the absence of shallow groundwater, near surface saturated sand layers, and underlying dense older alluvium. The analysis of dynamic settlement due to ground shaking based on peak ground acceleration of 0.73g with a moment magnitude of 8.1 is estimated to be 3.5 inches. This settlement is expected to be generally global and over a large area. As such, the seismic differential settlement is not expected to exceed 1 inch in a 30-foot horizontal distance within this site. Due to a relatively flat terrain and dense underlying older alluvium, lateral spreading is not considered a geologic hazard on this site.

Seiche and Tsunami

The study area is not adjacent to or in the vicinity of large water bodies that could experience seiches. The study area is above elevations that could experience flooding associated with tsunamis. As a result, tsunamis and seiches are not considered potential geologic hazards for the Build Alternative.

Expansive Soils

Expansive soils are clay-rich soils that have the ability to shrink and swell with wetting and drying. The mineralogy and percentage of clay-sized particles present in soil determine the potential for expansive behavior. Laboratory testing indicates that the on-site soils (older alluvium) are expected to possess a slight collapse potential of less than 1.5 percent; however, the surficial soil and younger alluvium are expected to possess a collapse potential of up to 6.6 percent. Data indicate that on-site soils generally possess a low expansion potential.

3.6.4. Environmental Impacts and Consequences

CEQA Thresholds of Significance for Geology and Soils

In accordance with the *2021 CEQA Statute & Guidelines, Appendix G, Environmental Checklist Form*, VII. Geology and Soils: (a) through (f), the proposed Project would result in impacts to geology and soils, if the construction or operations of the proposed Project would result in any of the conditions listed in the following table.

The discussion below includes the CEQA checklist for geology and soils and the discussion that follows provides the rationale for the following significance determinations:

- No Impact
- Less than Significant Impact
- Less than Significant Impact with Mitigation
- Potentially Significant Impact

Would the project:

Question	CEQA Determination
(a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	No Impact
ii) Strong seismic ground shaking?	Less Than Significant Impact
iii) Seismic-related ground failure, including liquefaction?	Less Than Significant Impact
iv) Landslides?	No Impact
(b) Result in substantial soil erosion or the loss of topsoil?	Less Than Significant Impact
(c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	Less Than Significant Impact
(d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	Less Than Significant Impact
(e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	No Impact
(f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Less Than Significant Impact

(a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

(i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

(iv) Landslides?

No Impact. Based on published geologic hazard maps, this site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone or in a county fault zone; therefore, the potential for fault rupture to occur is unlikely. The project study area is nearly flat and not adjacent to any hills or steep slopes. Therefore, the potential for landslides to occur within the project study area is unlikely. No impacts are identified for these issue areas.

(a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

(ii) Strong seismic ground shaking?

(iii) Seismic-related ground failure, including liquefaction?

Temporary Impacts (Construction)

Less Than Significant Impact. During construction, the project site would be subject to the same level of ground motion in the event of an earthquake; however, standard safety protocols, in accordance with Occupational Safety and Health Administration (OHSA) requirements, would be implemented during construction to prevent risk of loss, injury, or death if seismic activity is encountered during construction. For this reason, construction of the proposed Project would not worsen existing hazards related to seismic ground shaking. Therefore, impacts are considered less than significant.

Permanent Impacts (Operations)

Less Than Significant Impact. Strong seismic ground shaking can be expected at the site during moderate to severe earthquakes in the region. This is a common condition in most of Southern California. Intensity of ground shaking at a given location depends primarily upon earthquake magnitude, site distance from the source, and site response (soil type) characterisitcs. The project-related infrastructure would be designed in accordance with appropriate industry standards, including established engineering and construction practices and methods. In addition, the Riverside County Geologic Hazards maps indicate that the site is located in a zone of low to moderate liquefaction potential. However, liquefaction-induced settlement is not expected to be a significant hazard at this site due to the absence of shallow groundwater, near surface saturated sand layers, and underlying dense older alluvium. This settlement is expected to be generally global and over a large area. As such, the seismic differential settlement is not expected to exceed 1-inch in a 30-foot horizontal distance within this site; therefore, project implementation would not worsen the seismic ground shaking resulting in ground failure or liquefaction, when compared to no build conditions. Therefore, anticipated impacts would be considered less than significant.

(b) Result in substantial soil erosion or the loss of topsoil?

Temporary Impacts (Construction)

Less Than Significant Impact. The majority of the project study area consists of disturbed areas with existing station, tracks, paved driveways, parking areas and an industrial building. Construction activities could result in temporary disturbance of soils within the site but would not result in substantial soil erosion or the loss of topsoil. Impacts are considered less than significant.

Permanent Impacts (Operations)

Less Than Significant Impact. Once the project is constructed, there would be a new surface parking lot and there would not be a substantial amount of exposed soil during operations. Impacts are considered less than significant.

(c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Temporary Impacts (Construction)

Less Than Significant Impact. The project site is not located on a geologic unit or soil that is unstable or within an area prone to landslides. The site is located in a zone of low to moderate liquefaction potential. Liquefaction-induced settelement is not expected to be a significant hazard at this site due to the absence of shallow groundwater, near surface saturated sand layers, and underlying dense older alluvium. This settlement is expected to be generally global and over a large area. Laboratory testing indicates that the on-site soils (older alluvium) are expected to possess a slight collapse potential of less than 1.5 percent; however, the surficial soil and younger alluvium are expected to possess a collapse potential of up to 6.6 percent. During construction, the Build Alternative would result in less than significant impacts.

Permanent Impacts (Operations)

Less Than Significant Impact. Liquefaction-induced settlement is not anticipated to occur. The project infrastructure would be designed and constructed in accordance with standard engineering practices. Due to the relatively flat terrain and dense underlying older alluvium, lateral spreading is not considered a geologic hazard on this site. After construction is complete and the Project is operational, the likelihood that the Project would be affected by either subsidence, due to the settlement of compressible layers and/or liquefaction-induced settlement, is low. Impacts are considered less than significant.

(d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Temporary/Permanent Impacts

Less than Significant Impact. The soils within the project study area are considered to have low soil expansion potential, based on the results from the preliminary geotechnical investigation. The proposed Project would be designed and constructed to meet all applicable American Society for Testing and Materials Standard D1557 requirements for construction on expansive soils and would not create substantial direct or indirect risks to life or property.

Less than significant impacts are anticipated.

(e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. The proposed Project is in a developed area that is supported by waste and wastewater disposal systems. The proposed Project would not involve changes to the existing sewer system, and it would not require the installation of any new septic tanks or alternative wastewater disposal systems. No impact is identified for this issue area.

(f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Temporary/Permanent Impacts (Operations)

Less Than Significant Impact. The project footprint and adjacent areas are developed and were previously disturbed during development activities with railroad tracks, paved roads, concrete sidewalks, buildings and grass or landscaped grounds. Artificial fill generally associated with previous grading and existing structures/roadways improvements may extend up to 10 feet bgs in some areas, especially near the Prism Aerospace building. Most of the excavation is anticipated to be at depths up to 5 feet with spot locations for construction of the elevator for the extension of the pedestrian overpass or footings for the soundwall which may extend to 10 feet. Therefore, the likelihood of discovering undisturbed paleontological resources is low and the Build Alternative would result in less than significant impacts. Based on the records search results and analysis of geologic maps, geotechnical bore logs, literature, and online databases, as well as the current project description, construction activities for the Project may encounter paleontological resources during excavation that extend into native Pleistocene-age older alluvial fan deposits (Qoa) in the subsurface of the project area.

3.6.5. Avoidance, Minimization, and/or Mitigation Measures

Measures provided in this section summarize avoidance and minimization measures to be conducted by RCTC to ensure less than significant impacts are avoided or minimized.

GEO-1: Prior to grading, the proposed structural improvement areas (i.e., all-structural fill areas, pavement, buildings, etc.) will be cleared of surface and subsurface pipelines and obstructions. Heavy vegetation, roots, and debris should be disposed of off-site. Any on-site wells or septic waste should be removed or abandoned in accordance with the Riverside Country Department of Environmental Health (DEH). Voids created by removal of buried/unsuitable materials should be backfilled with properly compacted soil in general accordance with the recommendations of the *Geotechnical Exploration Report* (HNTB, 2020).

GEO-2: Import soils and/or borrow sites, if needed, will be evaluated prior to import. Import soils will be uncontaminated, granular in nature, free of organic material and have very low expansion potential and a low corrosion impact to the proposed improvements.

GEO-3: To support the completion of final design plans, a site-specific investigation and subsurface data liquefaction screening and analysis will be performed to evaluate the potential stability and settlement characteristics for the proposed improvements. Information gathered from the subsurface data will allow structures to be designed to withstand a defined level of ground acceleration and fault offset, where applicable.

GEO-4: In the event of unanticipated paleontological resource discoveries during project-related activities, work in the immediate vicinity of the discovery will be halted, until the unanticipated discovery can be evaluated by a qualified paleontologist.

3.6.6. CEQA Significance Conclusion

The proposed Project, including all design options, would occur within an existing rail station and neighboring industrial development in urbanized Downtown Riverside. The Project and all design options under consideration would not produce major changes with regards to geology and soils. There are limited geologic and soils resources within and near the Project. The proposed Project would have a less than significant impact on geology and soils.

3.7. Greenhouse Gas Emissions

This section discusses the potential GHG impacts resulting from the construction and operations of the proposed Build Alternative and all design options within the study area . Information provided in this section is based on the results of the technical analysis in the *Air Quality and Greenhouse Gas Emissions Technical Report* (HNTB, 2021) prepared for the proposed Project (Appendix G).

3.7.1. Regulatory Framework

Applicable policies, laws, and regulations relative to GHG Emissions are provided herein:

Federal Regulations

Clean Air Act (CAA). The FCAA, as amended, is the primary federal law that governs air quality while the CCAA is its companion state law. These laws, and related regulations by U.S. EPA and the CARB, set standards for the concentration of pollutants in the air. The U.S. Supreme Court ruled on April 2, 2007, in Massachusetts v. U.S. Environmental Protection Agency that CO_2 is an air pollutant, as defined under CAA, and that U.S. EPA has the authority to regulate emissions of GHGs. U.S. EPA announced that GHG emissions (including CO_2, Methane [CH_4], N_2O, hydrofluorocarbon [HFC], perfluorocarbon [PFC], and sulfur hexafluoride [SF_6]) threaten the public health and welfare of the American people.

Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards. U.S. EPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) worked together on developing a national program of regulations to reduce GHG emissions and to improve fuel economy of light-duty vehicles.

State Requirements

California Code of Regulations (CCR) Title 24 Part 6. California's Energy Efficiency Standards for Residential and Nonresidential Buildings were first established in 1978 in response to a legislative mandate to reduce California's energy consumption.

California Green Building Standards and Code. Mandates requirements for new residential and nonresidential buildings (including industrial buildings) throughout California. The code is Part 11 of the California Building Standards Code in Title 24 of the CCR (California Building Standards Commission 2019).

AB 75. Mandates state agencies to develop and implement an integrated waste management plan to reduce GHG emissions related to solid waste disposal. In addition, the bill mandates that community service districts providing solid waste services report the disposal and diversion information to the appropriate city, county, or regional jurisdiction.

AB 341. The state legislature enacted AB 341 (California PRC § 42649.2), increasing the diversion target to 75 percent statewide. AB 341 requires all businesses and public entities that generate 4 cubic yards or more of waste per week to have a recycling program in place.

EO S-3-05. Proclaimed that California is vulnerable to climate change impacts. It declared that increased temperatures could reduce snowpack in the Sierra Nevada, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. EO S-3-05 calls for a reduction in GHG emissions to the year 2000 level by 2010, to year 1990 levels by 2020, and to 80 percent below 1990 levels by 2050.

EO S-01-07. Directs that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by the year 2020. It orders that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established for California and directs CARB to determine whether a LCFS can be adopted as a discrete early action measure pursuant to AB 32.

EO B-30-15. Established a California GHG emission reduction target of 40 percent below 1990 levels by 2030. The EO aligns California's GHG emission reduction targets with those of leading international governments, including the 28-nation European Union.

EO S-13-08. Implements actions and strategies to reduce California's vulnerability to climate change. EO S-13-08 includes the development of the California Climate Adaptation Strategy (CAS) to assess the state's climate change impacts, assess where California is most vulnerable to climate change, and recommend adaptation strategies.

EO B-55-18 to Achieve Carbon Neutrality. Established a new statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." The EO says that this new goal "is in addition to the existing statewide targets of reducing greenhouse gas emissions."

SB 350. Includes a tiered increase to the Renewable Portfolio Standard (RPS) of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 sets a goal to double energy efficiency savings in natural gas and electricity through conservation measures and efficiency practices.

AB 32. Requires that the CARB develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB is directed to set a GHG emission limit, based on 1990 levels, to be achieved by 2020. AB 32 enacts the goals of EO S-3-05.

SB 32. Extends California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include § 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030.

AB 197. Requires that CARB consider the social costs of GHG emissions and prioritize direct reductions in GHG emissions at mobile sources and large stationary sources.

AB 1493. Vehicular Emissions of Greenhouse Gases. Requires that CARB develop and adopt regulations that achieve "the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty truck and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the State."

SB 100. As part of the General Plan Air Quality Element, the County of Riverside adopted a Climate Action Plan (CAP) in 2015. The CAP "establishes goals and policies that incorporate environmental responsibility into its daily management of residential, commercial and industrial growth, education, energy and water use, air quality, transportation, waste, education, economic development and open space and natural habitats to further their commitment."

SB 97. Required the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, including but not limited to, effects associated with transportation or energy consumption.

SB 375. Aligns regional transportation planning efforts, regional GHG reduction targets, and affordable housing allocations. Metropolitan Planning Organizations (MPOs) are required to adopt a SCS, which allocates land uses in the MPOs' Regional Transportation Plan (RTP). Qualified projects consistent with an approved SCS or Alternative Planning Strategy categorized as "transit priority projects" would receive incentives to streamline CEQA processing.

California Air Resources Board Climate Change Scoping Plan (2017). Contains the main strategies California will implement to achieve the mandate of AB 32 to reduce statewide GHG emissions to 1990 levels by 2020. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team early actions and additional GHG reduction measures by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program.

Local and Regional Regulations

Southern California Association of Governments (SCAG). SCAG, of which the City of Riverside is a member agency, adopted the 2020-2045 RTP/SCS, also called Connect SoCal, in September 2020. The RTP/SCS is a State- and federally required long-range plan for regional transportation and land use that aims to achieve a more sustainable growth pattern. The RTP/SCS plans for more than $639 billion in transportation system investments through 2045. It is anticipated that implementation of the RTP/SCS would result in a 19 percent reduction in GHG emissions per capita by 2035, compared with 2005 levels (SCAG, 2020).

County of Riverside Climate Action Plan. As part of the General Plan Air Quality Element, the County of Riverside adopted a CAP in 2015. The CAP "establishes goals and policies that incorporate environmental responsibility into its daily management of residential, commercial and industrial growth, education, energy and water use, air quality, transportation, waste, education, economic development and open space and natural habitats to further their commitment." The CAP identified an emissions reduction target for 2020 and was updated in 2019 for the years 2035 and 2050 target years (County of Riverside, 2019).

3.7.2. Methodology for Evaluating Environmental Impacts

The analysis of the proposed Project's potential impacts to GHG considers potential project effects within the study area related to construction and operations of the Project.

Construction period criteria pollutant and GHG emissions were calculated using CalEEMod, Version 2016.3.2. CalEEMod is a computer model used to estimate criteria air pollutant and GHG emissions resulting from construction and operation of land development projects throughout the state of California. CalEEMod was developed by SCAQMD with the input of several air quality management and pollution control districts. CalEEMod output files are included in Appendix G.

In conducting the impact analysis for GHGs, two principal factors were taken into consideration: potential for significant indirect or direct impacts from GHG emissions or conflicts with existing GHG emission policies, regulations, or plans implemented to reduce emissions. A significant impact would occur if the proposed Project would result in any conditions listed Appendix G of the *CEQA Guidelines Checklist, VIII. Greenhouse Gas Emissions*, Issues (a) and (b). If a significant impact is identified, mitigation measures would be applied to reduce the effect to less-than significant levels on the air quality. If mitigation measures are not feasible to implement or do not reduce the proposed Project's effect, then a potentially significant impact would occur.

Impacts can be direct or indirect and occur during project construction (temporary impacts), during operation of the Project (permanent impacts), or cumulatively in combination with other projects.

Direct impacts would occur when GHG emissions are temporarily increased during project construction due to the burning of fossil fuels due to the operation of construction equipment. Direct impacts would be considered permanent if they would occur during project operation, such as increasing GHG concentrations within the project vicinity for an extended duration following construction.

Indirect impacts are typically further in time or at a different location. These can occur permanently, for example increased vehicular traffic to the Riverside-Downtown Station could result in long-term changes to GHG emissions in the area. Indirect impacts can also occur temporarily during construction, for example from elevated levels GHG emissions due to construction equipment operation. Indirect impacts can occur off-site, for example to downwind sites that receive on-site GHG emissions during construction or operation.

3.7.3. Affected Environment

The Project is located in Riverside County within the SCAB, which consists of all or part of four counties: Los Angeles, San Bernardino, Riverside, and Orange. The distinctive climate of the SCAB is determined by its terrain and geographic location. The SCAB is a coastal plain with connecting broad valleys and low hills. It is bound by the Pacific Ocean to the southwest and high mountains around the rest of its perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light, average wind speeds.

Air quality in the non-desert portion of Riverside County is regulated by SCAQMD. As a regional agency, SCAQMD works directly with SCAG, County transportation commissions, and local governments and cooperates actively with all federal and state government agencies. SCAQMD develops rules and regulations; establishes permitting requirements for stationary sources; inspects emissions sources; and enforces such measures through educational programs or fines, when necessary.

For 2018, total GHG emissions worldwide were estimated at 47,525 million metric tons (MMT) carbon dioxide equivalent (CO_2e) (World Resources Institute, 2020). The U.S. contributed the second largest portion of GHG emissions (behind China) at 13 percent of global emissions, with 6,018 MMT CO_2e in 2018. On a national level in 2018, approximately 28 percent of GHG emissions were associated with transportation, and about 27 percent were associated with electricity generation (CARB, 2021).

CARB performs statewide GHG inventories. The inventory is divided into six broad sectors: agriculture and forestry, commercial, electricity generation, industrial, residential, and transportation. Emissions are quantified in MMT CO_2e. Table 3.7-1 shows the estimated statewide GHG emissions for the years 1990, 2000, 2010, and 2018.

Table 3.7-1. California Greenhouse Gas Emissions by Sector (MMT CO_2e) and Year

Sector	1990	2000	2010	2018
Agriculture and Forestry	23.4 (5%)	31.0 (7%)	34.7 (8%)	32.6 (8%)
Commercial	14.4 (3%)	14.1 (3%)	20.1 (4%)	23.9 (6%)
Electricity Generation	110.6 (26%)	105.3 (22%)	90.6 (20%)	63.2 (15%)
Industrial	103.0 (24%)	105.8 (22%)	101.8 (23%)	101.3 (24%)
Residential	29.7 (7%)	31.7 (7%)	32.1 (7%)	30.5 (6%)
Transportation	150.7 (35%)	183.2 (39%)	170.2 (38%)	174.3 (41%)
Total	**431.8**	**471.1**	**449.5**	**425.8**

Source: CARB 2007 and CARB 2020

Statewide GHG emissions totaled 433 MMT CO_2e in 1990, 472 MMT CO_2e in 2000, 448 MMT CO_2e in 2010, and 425 MMT CO_2e in 2018. Transportation-related emissions consistently contribute the most GHG emissions, followed by industrial emissions and electricity generation.

A Riverside County regional emissions inventory was prepared as part of the CAP Update. The 2017 emissions inventory for the unincorporated areas of Riverside County is duplicated, as shown in Table 3.7-2. The unincorporated areas of Riverside County together emitted 4,905,518 metric tons (MT) CO_2e in 2017. The largest portion of Riverside County's 2017 emissions were from transportation (36 percent), followed by agriculture (34 percent), and electricity and natural gas use in buildings (24 percent).

Table 3.7-2. 2017 Countywide GHG Emissions by Source (MT CO_2e) and Year

Emissions Category	2017	Percent of Total Emissions
On-road Transportation	1,766,784	36%
Agriculture	1,670,954	34%
Energy (Electricity and Natural Gas)	1,188,138	24%
Solid Waste	204,365	4%
Water and Wastewater	44,606	0.9%
Aviation	26,786	0.5%
Off-road Sources	3,883	0.08%
Total	**4,905,516**	**Not Applicable**

3.7.4. Environmental Impacts and Consequences

CEQA Thresholds of Significance for GHG Emissions

In accordance with Appendix G of the *CEQA Guidelines Checklist Form, VIII. Greenhouse Gas Emissions*, Issues (a) and (b), the proposed Project would result in impacts to GHG emissions, if the construction and/or operation of the proposed Project would result in any of the conditions listed in the following table.

The discussion below includes the CEQA checklist for GHG emissions, and the discussion that follows provides the rationale for the following significance determinations:

- No Impact
- Less than Significant Impact
- Less than Significant Impact with Mitigation
- Potentially Significant Impact

Would the project:

Question	CEQA Determination
(a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or?	Less Than Significant
(b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?	Less Than Significant

Source: 2021 CEQA Statue and Guidelines Appendix G.

Given the relatively small levels of emissions generated by a typical development in relationship to the total amount of GHG emissions generated on a national or global basis, individual development projects are not expected to result in significant, direct impacts with respect to climate change. However, given the magnitude of the impact of GHG emissions on the global climate, GHG emissions from new development could result in significant, cumulative impacts with respect to climate change. Thus, the potential for a significant GHG impact is limited to cumulative impacts.

The County of Riverside's CAP Update establishes a screening level threshold of 3,000 MT CO_2e per year for development projects. County guidance also recommends including construction emissions (amortized over a typical duration of 30 years) in the comparison to the screening threshold. For projects that exceed this screening level, compliance with the CAP Screening Tables or a reduction of 25 percent over the business-as-usual scenario must be demonstrated.

(a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or?

Less than Significant Impact. The Build Alternative and all design options would have less than significant impacts either directly or indirectly with regards to generating GHG emissions as described in the following section.

Temporary Impacts (Construction)

Emissions of GHGs during project construction would be temporary. The County of Riverside's Climate Action Plan Update establishes a screening level threshold of 3,000 MT CO2e per year for development projects. County guidance also recommends including construction emissions (amortized over a typical duration of 30 years) which would be 100 MT in the comparison to the screening threshold. Design Options 1A and 2A are anticipated to require the most construction activity; thus, they generate the highest level of pollutant emissions of the proposed design options. Therefore, if emissions associated with Design Options 1A and 2A are below significance thresholds, it is assumed that emissions associated with the other proposed design options would be below GHG emissions significance thresholds as well. As shown in Table 3.7-3 and Table 3.7-4, total GHG emissions associated with construction of Design Option 1A are estimated at 1,832 MT CO2e and emissions associated with construction of Design Option 2A are estimated at 1,872 MT CO2e which is below the county's threshold for significance. For construction emissions, SCAQMD and County guidance recommend that the emissions be amortized (i.e., averaged) over 30 years and added to operational emissions. Averaged over 30 years, the proposed construction activities would contribute approximately 61 MT CO2e emissions per year for Design Option 1A and 62 MT CO2e per year for Design Option 2A which would result in less than significant impacts.

Table 3.7-3. Design Option 1A Estimated Construction GHG Emissions

Construction Phase	Emissions (MT CO_2e)
Demolition	66
Site Preparation	46
Grading	105
Paving	38
Track Construction	122
Bridge/Platform Construction	1,453

Construction Phase	Emissions (MT CO_2e)
Architectural Coating	3
Total[1]	**1,833**
Amortized Construction Emissions[2]	61

Source: CalEEMod (output data is provided in Appendix G)

1. Total presented is the sum of the unrounded values
2. Construction emissions are amortized over 30 years in accordance with SCAQMD and County guidance.

Table 3.7-4. Option 2A Estimated Construction GHG Emissions

Construction Phase	Emissions (MT CO_2e)
Demolition	70
Site Preparation	54
Grading	124
Paving	48
Track Construction	122
Bridge/Platform Construction	1,452
Architectural Coating	4
Total[1]	**1,874**
Amortized Construction Emissions[2]	61

Source: CalEEMod (output data is provided in Appendix G)

1. Total presented is the sum of the unrounded values.
2. Construction emissions are amortized over 30 years in accordance with SCAQMD and County guidance.

Permanent Impacts (Operations)

Operation of the proposed Project would result in GHG emissions primarily from mobile (vehicular) sources and on-site energy use. Mobile sources would be associated with the increased number of vehicle trips to and from the station due to increased train ridership. Energy usage would be associated with lighting provided at the station and the parking lot. Overall, however, the Project would result in a net decrease in emissions compared to existing conditions. The purpose of the Project is to provide station improvements to enhance Metrolink service and increase train ridership. Increased ridership would result in a reduction in regional VMT and associated GHG emissions.

While the Project would result in increased vehicle trips to and from the station, these trips would generally be of short distances and the VMT for these trips would be offset by the use of trains. As such, operation of the Project, with the consideration of amortized construction emissions, would not result in an increase in GHG emissions that would exceed the 3,000-MT threshold or have a significant effect on the environment. Impacts would be less than significant.

(b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

Less Than Significant Impact. The Build Alternative and all design options would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions as described in the following information.

Temporary Impacts (Construction)

There are numerous State plans, policies, and regulations adopted for the purpose of reducing GHG emissions. The principal overall State plan and policy is AB 32 and SB 32, the California Global Warming Solutions Act of 2006. The quantitative goal of AB 32 was to reduce GHG emissions to 1990 levels by 2020. SB 32 requires further reductions of 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. Statewide plans and regulations are being implemented at the statewide level, and compliance on a project-specific level is not addressed. However, as previously discussed, the County CAP Update applies a screening threshold of 3,000 MT CO_2e per year to comply with the reduction goals of AB 32 and SB 32. The proposed Project's increase in GHG emissions would be less than the county's screening threshold; therefore, the Project would be consistent with the Riverside County CAP Update, as well as AB 32 and SB 32. This would represent a less than significant impact.

Permanent Impacts (Operations)

The proposed Project would provide station improvements to enhance Metrolink service and accommodate future increases in ridership. Increased ridership would result in a reduction in regional VMT and associated GHG emissions. This would directly contribute to the goals of SCAG's RTP/SCS, which are focused on increasing train use and thereby decreasing transportation-related GHG emissions. Station improvements would promote mass transportation and reduce automobile use, which is consistent with several adopted State and local policies and regulations in reducing GHG emissions. Therefore, implementation of the proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. This would represent a less than significant impact.

3.7.5. Avoidance, Minimization, and/or Mitigation Measures

The proposed Project does not require any avoidance, minimization, and/or mitigation measures to maintain a less than significant impact to GHG emissions determination.

3.7.6. CEQA Significance Conclusion

The proposed Project, including all design options, would occur within an existing rail station and neighboring industrial development in urbanized Downtown Riverside. Implementation of the Project will allow for increased access to alternative modes of transportation; therefore, there are limited GHG concerns within and near the proposed Project. The proposed Project would have a less than significant impact on GHG emissions.

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3.8. Hazards and Hazardous Materials

This section discusses the potential impacts from hazards and hazardous materials resulting from the construction and operations of the proposed Build Alternative and all design options. Information provided in this section is based on the results of the technical analysis, as documented in the *Phase I Environmental Site Assessment (ESA)* (Ninyo & Moore, 2018) and *Limited Phase II Environmental Site Assessment* (Ninyo & Moore, 2019).

3.8.1. Regulatory Framework

Applicable policies, laws, and regulations relative to hazards and hazardous materials are summarized herein.

Federal Regulations

Resource Conservation and Recovery Act (RCRA). RCRA establishes U.S. EPA as the federal authority over the generation, transportation, treatment, and the storage and disposal of hazardous materials.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980. CERCLA (also known as "Superfund") establishes standards to respond to abandoned hazardous material sites or active release of hazardous materials that pose a potential danger to public or environmental health.

Superfund Amendments and Reauthorization Act (SARA) of 1986. SARA is an amendment to CERCLA and promotes permanent remedies and innovative cleanup practices, provides increased funding for cleanup activities, increases state involvement in the implementation of the program, and requires Superfund cleanup activities to consider requirements in other state and federal environmental laws and regulations.

Toxic Substance Control Act (TSCA) of 1976. TSCA establishes reporting, record-keeping, testing requirements, and restrictions on chemical substances. TSCA oversees the production, use, transportation, and disposal of potential on-site hazards, including polychlorinated biphenyl (PCBs), asbestos, and lead-based paint.

Federal Occupational Safety and Health Act of 1970. This act, established in conjunction with OSHA, was implemented to promote healthful on-site worker conditions. Requirements set forth by the act include implementation of worker safety, right-to-know, and training practices pertaining to potential on-site hazards.

State Requirements

California Hazardous Waste Control Law (CHWCL), California Health and Safety Code, Division 20, Chapter 6.5. CHWCL established regulations and incentives to ensure that hazardous material generators employ BMP when handling, treating, destroying, and recycling hazardous materials. Additionally, CHWCL established permitting standards that require DTSC to permit or authorize all hazardous materials treatment.

Carpenter-Presley-Tanner Hazardous Substance Account Act (CPTHSAA), California Health and Safety Code, Division 20, Chapter 6.8. CPTHSAA imposes liability for hazardous substances removal or remedial actions and requires the Attorney General to recover costs for removal or remedial action, from the liable party incurred by DTSC or a California (RWQCB).

California U.S. EPA-DTSC. Hazardous materials use and management is governed by California's U.S. EPA-DTSC and SWRCB. DTSC serves as the regulatory authority that oversees enforcement of hazardous materials management under the hazardous waste control law to local jurisdictions that enter into agreements with California U.S. EPA.

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The Unified Program implemented the consolidation of six hazardous waste programs under one agency: a Certified Unified Program Agency (CUPA). The CUPA for the region associated with the Project is the Riverside County DEH, which also oversees the participating agency that implements the hazardous materials programs within the county, the Riverside Fire Department.

Local and Regional Regulations

Riverside General Plan, Public Safety Element – Hazardous Materials (2025). The Hazardous Materials section of the Public Safety Element chapter of the Riverside General Plan provides existing concerns, objectives, and policies to identify, regulate, and mitigate concerns within the city pertaining to hazardous materials. Objectives listed in the plan include ensuring the proper handling of hazardous materials, working with agencies to identify and regulate disposal of hazardous materials, allocating appropriate resources to the fire department for hazardous waste management, reducing risk of ground transportation hazards, and encouraging sewer service to minimize groundwater contamination.

Riverside County Hazardous Waste Management Plan (RCHWMP). Riverside County adopted the RCHWMP on September 12, 1989. The RCHWMP includes a framework for existing and recommended programs and serves as the primary planning document for the management of hazardous materials within the county.

3.8.2. Methodology for Evaluating Environmental Impacts

The analysis of potential and hazards and hazardous materials considers potential project-related impacts within the study area related to construction and operations of the Project. Figure 3.8-1 illustrates the limits of the Phase I ESA site investigation, and Figure 3.8-2 illustrates the limits of the Limited Phase II site investigation conducted for the proposed Project.

Direct impacts would occur when on-site workers or adjacent property owners are temporarily exposed to contaminated soils or vapors during soil disturbing activities. Direct impacts would be considered permanent if they would result in long-term public health concerns for on-site workers or adjacent property owners, or if construction of the Project results in additional contaminants being released into the air, soil, or groundwater.

Indirect impacts are typically realized further in time or at a different location and may occur as a result of site modifications. These can occur permanently, for example, from site alteration resulting in migration of subsurface contaminants off-site or increased seepage of contaminants into groundwater. Both on-site and off-site indirect impacts can also occur temporarily during construction. For example, stormwater runoff flowing from the contaminated sites to either the construction site or to existing drainage systems resulting in downstream degradation of water quality.

3.8.3. Affected Environment

Findings and conclusions provided in this section are based on the Phase I ESA and Limited Phase II ESA investigations, which evaluated potential hazards pertaining to the adjacent Prism Aerospace site (subdivided into Areas A, B, and C), a vacant lot used for freight truck parking (Area D), and two residential parcels (Area E) (Figure 3.8-2).

Preparation of the Phase I ESA included an environmental records review; historical records research; historical aerial photographs review; a city directory review; a site reconnaissance of the project study area; and a review of the SWRCB GeoTracker online database.

Preparation of the Phase II ESA included development of a site-specific health and safety plan; underground service alert and geophysical survey; soil and vapor sampling; and laboratory analysis of samples. In May 2021, HNTB conducted a subsequent SWRCB GeoTracker database and DTSC's EnviroStor search to verify whether site conditions have changed, or additional hazardous materials or events were reported since the Phase I and Phase II ESAs were prepared.

The updated records search also included an expanded area that may be subject to ground-disturbing activities under all project design options. Supplemental GeoTracker and EnviroStor database searches are included in Appendix M of this EIR.

Project Location and Setting

The project site is bounded by 10th Street to the north, Howard Avenue to the east, 12th Street to the south, and Metrolink train tracks and platform to the west. The study area for the hazardous materials investigations includes areas where ground-disturbing activities related to the Build Alternative and design options would occur. The study area for the hazardous materials investigation is approximately 8 acres and includes the following properties in Riverside, California:

- 2994 and 3006 9th Street
- 2989, 3034, 3052, 3075, 3084, and 3088 10th Street
- 3010 11th Street
- 3009, 3021, and 3087 12th Street

Figure 3.8-1. Phase I ESA Study Area

Source: California State Water Resources Control Board, 2018, GeoTracker

The project site was evaluated for RECs that could pose a hazard to human health and safety. Identification of RECs fall into three categories and are defined as follows:

1. **Existing RECs:** Defined as the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: 1) due to any known release to the environment; 2) under conditions indicative of a release to the environment; or 3) under conditions that pose a material threat of a future release to the environment. *De minimis* conditions (conditions that do not generally pose a threat to public or environmental health) are not RECs.

2. **Historical RECs (HRECs)**: Defined as a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations [AULs], institutional controls, or engineering controls). An HREC is an environmental condition, which in the past, would have been considered an REC, but currently may or may not be considered an REC. An example of an HREC may be a former gas station where a release of gasoline had occurred, but the site was cleaned up to an unrestricted land use standard.
3. **Controlled RECs (CRECs).** Defined as a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by a regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (e.g., property use restrictions, AULs, institutional controls, or engineering controls). An example of a CREC could be a former gas station where a release of gasoline has been cleaned up to a commercial use standard but does not meet unrestricted residential cleanup criteria.

Soil Sampling Locations

Due to the results of the Phase I ESA and the level of contamination discovered at the Prism Aerospace site, a Limited Phase II ESA was conducted within this specific site to further determine the extent and severity of the contamination. Soil samples were taken and analyzed to determine the type and concentration of the hazardous materials at the site. The project site for the Limited Phase II ESA has been subdivided into the following areas (Figure 3.8-2):

- Area A – Prism Aerospace, located at 3084 East 10th Street in the northwestern portion of the site (formerly occupied by Southern California Gas Company).
- Area B – Storage yard for Prism Aerospace, located at 3034 East 10th Street in the northeastern portion of the site (formerly occupied by Home Oil and Royal Citrus/MLM Trucking).
- Area C – Prism Aerospace, located at 3075 and 3087 12th Street in the southwestern portion of the site (formerly occupied by FMC.
- Area D – Vacant lot used for freight truck parking, located at 3010 11th Street in the southeastern portion of the site (formerly occupied by Campbell Oil and Poma Distributing).
- Area E – Residences at 3009 and 3021 12th Street in the southeast corner of the site. Area E is not a part of the Limited Phase II ESA.

Figure 3.8-2. Limited Phase II ESA Study Area and Boring Sample Locations

Environmental Records Review

An environmental information database search was performed in March 2018 and May 2021. The search included federal, state, tribal, and local databases. The review was conducted to evaluate whether the site or properties within the site vicinity have been documented as having experienced significant unauthorized releases of hazardous substances or other events with potentially adverse environmental effects. Results of the environmental records review indicate the following conditions exist within the project site vicinity:

- The historical presence of railroad tracks on the project site presents potential contamination resulting from leaks or spills from railcars or from historical application of surface chemicals during railroad operations.

- There is an abandoned elevator shaft with an associated pump and hydraulic oil system at the southern portion of the manufacturing building (Area C). The exact age of the elevator is unknown, but it has been inoperable for many years, and it is not permitted with the building department. There is a potential for leakage of hydraulic oils into the subsurface.
- The site overlies a groundwater plume, known as the Riverside Plume, which VOCs, pesticides, herbicides, nitrate, and perchlorate impact. Sampling of groundwater between 2005 and 2008 showed significant VOC groundwater concentrations (primarily perchloroethylene [PCE] and trichloroethylene [TCE]) in the site vicinity.
- Contaminated soil may be present beneath Area C because of former FMC's historical industrial operations and its known use of solvents.
- The remedial action and acceptance by the DTSC in Area A is associated with the former manufactured gas plant (MGP) within the portions of the area is considered a HREC.
- AULs exist for portions of Areas A and C where excavation of contaminants could not be conducted due to accessibility issues. The land use covenants (LUCs) on these portions of the site dictate the following:
  - The site shall not be used for sensitive receptors.
  - Soil disturbance activities shall not be conducted without the preparation of a soil management plan (SMP) and the consent of the DTSC.
  - Groundwater monitoring wells shall not be disturbed, among other provisions.
- The presence of the LUC on portions of the site is considered a CREC.
- The presence of total petroleum hydrocarbon (TPH)-impacted soil and soil vapor associated with the inactive case at Area D (former Campbell Oil) is an REC.
- The potential presence of TPH-impacted soils in Area B associated with the former Home Oil is an REC.
- A vapor encroachment condition (VEC), which is the presence or likely presence of potential chemicals of concern (COC) vapors in subsurface soils, caused by the release of vapors from contaminated soil or groundwater either on or near the site, likely exists beneath the Prism Aerospace building.

Environmental Lien and AUL Search

An environmental lien search was provided by EDR and dated March 23, 2018. According to the EDR Environmental Lien and AUL report, AULs were found for the site APNs 211-201-004 and 211-201-039 (Areas A and C, as shown on Figure 3.8-2). A LUC was issued by DTSC to the then owner of the property (MLM Properties, LLC) in 2012. The LUC was administered after the Removal Action Completion Report (RACR) was conducted at the former Southern California Gas Company in Area A. The LUC was applied to areas where soil remediation did not occur during the RACR. The LUC consists of the following restrictions for portions of Areas A and C:

- The property shall not be used as a residence, hospital, school, daycare, or other similar sensitive use resulting in indoor habitation greater than 12 hours a day.
- Soil disturbance activities shall not be allowed on the property without approval of the SMP by the DTSC and prior notification. Any soil removal at the property shall be managed in accordance with all applicable state and federal provisions.
- Any entities administering the long-term monitoring of the property shall be provided with reasonable right-of-entry and access to the property.
- Activities that may disturb, alter, damage, or destroy groundwater monitoring wells on the property are prohibited unless given authorization by the DTSC. The use of the property shall preserve the integrity and physical accessibility of the groundwater monitoring wells. The DTSC shall be notified about any damage caused to the groundwater monitoring wells.
- Annual reports shall be submitted to the DTSC regarding compliance with the LUCs.

The EDR Environmental Lien and AUL report did not include environmental liens or restrictions on Areas B, D, or E.

Site Reconnaissance

The objective of the site reconnaissance was to obtain information indicating the potential for RECs in connection with the site. The site reconnaissance occurred on March 27, 2018, and included a representative for the owner of Areas A, B, and C. The owner of Area D was also interviewed. The site reconnaissance consisted of walking the site to observe potential RECs. A summary of the results of the site reconnaissance is provided in Table 3.8-1.

A preliminary vapor encroachment screen (pVES) for potential COCs that may migrate as vapors onto the site, as a result of contaminated soil and/or groundwater near the site, was conducted. The purpose of the pVES is to identify a VEC, which is the presence or likely presence of COC vapors in subsurface soils at the site caused by the release of vapors from contaminated soil or groundwater either on or near the site. Based on the results of the analysis, it is likely that a VEC exists beneath the site.

Table 3.8-1. Site Observation Summary Table

Conditions	Observed or Noted?	Comments
Hazardous Substances/Petroleum Products	**Yes**	Approximately 30 10-gallon propane tanks used for forklifts were stored at the western end of the storage yard in Area A. A flammables cabinet containing small quantities of flammables was observed within the manufacturing building (Area C).
Potential PCB-Containing Equipment	**Yes**	Multiple pad-mounted transformers were observed on the eastern and western ends of the storage yard (Area A). Signs of staining or release of PCBs were not observed.
Concrete Patches/Pads	**Yes**	Concrete patches and pads were observed around the manufacturing building (Area C). The nature of the patches and pads is unknown, but may be related to the environmental investigation of the former FMC Corp.
Floor Drains/Sumps	**Yes**	Floor drains were observed around the manufacturing building (Area C) and storage yard (Area A). Additionally, storm drains were observed in a natural depression at the western edge of 11th Street. Staining or other signs of release of hazardous materials were not observed.
Elevator	**Yes**	An abandoned elevator shaft was observed at the southern portion of the manufacturing building (Area C). This is considered an REC.
Wells	**Yes**	A municipal water well operated by the City of Riverside was observed at the northwestern portion of the manufacturing building (Area C).
Stained Soil or Pavement	**Yes**	Minor oil staining was observed on pavement.

Limited Phase II ESA

Based on the findings and recommendations of the Phase I ESA, a Limited Phase II ESA (September 2019) was conducted within Areas A, B, C, and D. Soil samples were taken at these locations to determine the extent and type of contamination. The results of the Limited Phase II ESA indicate the following:

- Concentrations of arsenic were detected above DTSC background limit in samples within the upper 1.5 feet in Area C (in non-LUC areas).
- Arsenic above DTSC Southern California Regional Background Arsenic Concentration of 12 milligrams per kilograms (mg/kg) in soil samples collected in the upper 1-2 feet of soil along the former railroad tracks in Area C.

- Arsenic was not detected above DTSC Southern California Regional Background Levels. Arsenic Concentration in soil of 12 mg/kg in soil samples were collected within the LUC areas. Arsenic was not detected in soil samples above California or federal hazardous waste criteria.
- Lead was detected at 430 mg/kg in a non-LUC area surface sample in Area C. Based on soluble lead analyses, the soils represented by these samples would be classified as non-hazardous waste, except for one sampled location, which is considered California hazardous waste.
- TPHs in the gasoline range were not detected in the LUC areas and were detected in Area D. TPHs in the diesel range in Area C exceeded one or more screening level values in select soil samples, including one sample in Area B, collected in the northern area.
- TPHs in the heavy hydrocarbon range, VOCs, semivolatile organic compounds (SVOCs), and PCBs, were present in select soil samples above the laboratory reporting limits; however, these were below their respective regulatory screening levels. TPHs in the heavy hydrocarbon range were detected relatively higher in the LUC areas than in other parts of the site. Elevated VOCs were not detected in the LUC areas or beneath Area C in such a way as to indicate a potential to impact groundwater beneath the site (at a depth of about 110 feet bgs).
- PAHs were detected at relatively higher concentrations in the LUC areas than in other portions of the site.
- PCBs were generally not detected in the LUC areas; however, they were detected in some of the surface samples from Area C.
- VOCs (e.g., benzene, PCE, TCE, etc.) were present above their respective regulatory screening levels for commercial land use in some of the soil vapor samples analyzed. Concentrations of VOCs, where detected in soil vapor, were generally similar in LUC versus non-LUC areas.

3.8.4. Environmental Impacts and Consequences

CEQA Thresholds of Significance for Hazards and Hazardous Materials

In accordance with the *2021 CEQA Statute & Guidelines, Appendix G, Environmental Checklist Form*, *IX. Hazards and Hazardous Materials,* Issues (a) to (g), the proposed Project would result in impacts to hazards or hazardous materials if the construction or operation of the proposed Project would result in any of the conditions listed in the following table.

The discussion below includes the CEQA checklist for hazards or hazardous materials, followed by the discussion that provides the rationale for the following significance determinations:

- No Impact
- Less than Significant Impact
- Less than Significant Impact with Mitigation
- Potentially Significant Impact

Would the project:

Question	CEQA Determination
(a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less Than Significant with Mitigation Incorporated
(b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Less Than Significant with Mitigation Incorporated
(c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Less Than Significant with Mitigation Incorporated
(d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code§ 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	No Impact
(e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use	No Impact

Question	CEQA Determination
airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	
(f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	No Impact
(g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	No Impact

(a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less Than Significant with Mitigation Incorporated. The Build Alternative and all design options would have less-than-significant impacts with mitigation incorporated as it relates to the routine transport, use, or disposal of hazardous materials as described herein.

Temporary Impacts (Construction)

Construction of the Project would require the handling, storage, transport, and disposal of hazardous materials. The use of construction equipment would likely generate on-site hazardous waste during construction, including diesel and petroleum fuels, paint and paint chips, equipment lubricants, resins, and hot-mix asphalt/concrete residual waste. Construction equipment fueling would also occur on-site. Aboveground storage tanks will be placed within the project site at specified locations. During construction, a potential accidental release of on-site generated hazardous waste or accidental spill could occur. A release of hazardous materials on-site could potentially pose a temporary hazard to the public, construction workers, and surrounding environment, until appropriate containment and cleanup measures are taken. The potential release of hazardous materials would be mitigated through on-site BMPs; however, due to the construction activities and transport and disposal of hazardous materials, the potential for an accidental release or spill would remain present.

Due to the disturbance of contaminated soils within the project site, excavation of contaminated soils would require specialized handling, treatment, and off-site transport. If excavation occurs within an area where contaminated soils are present, as noted in the Limited Phase II ESA, appropriate excavation, transport, and disposal would be conducted by a licensed hazardous waste transporter in accordance with CCR Title 22, Division 4.5 regulations. Contaminated soils will be disposed of at an appropriate facility in accordance with local, state (22 CCR 4.5), and federal regulations CFR Title 40 (239-282). The transport, use, and disposal of hazardous materials, including contaminated soils, is considered a potentially significant impact.

Mitigation Measures are proposed to reduce potential impacts to less than significant. An SMP will be used to avoid potentially significant impacts: monitoring during excavation to ensure soil handling, stockpiling, characterization, on-site reuse, export, and disposal protocols are in place and dust control measures, air quality monitoring, and stockpile management is used to avoid community or worker exposure.

Section 3.8.5 Avoidance, Minimization, and/or Mitigation Measures provides the details of all proposed mitigation measures.

Permanent Impacts (Operations)

The routine transport, use, and storage of potentially hazardous materials during operations and maintenance of the train station would remain similar to existing conditions; however, under the Build Alternative the contaminated soils and materials would be capped and contained under the new surface parking lot. Metrolink service is anticipated to increase in the future, which would result in additional train arrivals and departures of trains at the station. Hazardous materials including fuel, lubricants, and brake fluids are likely to be present on-site and within the vicinity of the station. The potential for accidental release of hazardous materials into the environment due to the operations and maintenance of the train station would remain similar to existing conditions. The continued use of fuels, coolants, and other various hazardous fluids would pose the potential risk for accidental release. In accordance with federal (40 CFR 2390282), state (22 CC 4.5), and other local regulations, potentially hazardous wastes will be handled, transported, stored, and disposed appropriately. RCTC will be required to prepare and acquire approval of a hazardous materials business plan (HMBP) through the Riverside County DEH. The HMBP will include a plan for proper storage, disposal, and handling of hazardous materials during operation of the facility. Impacts due to the operations of the facility is considered to be less than significant.

(b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less Than Significant with Mitigation Incorporated. The Build Alternative and all design options would have less-than-significant impacts with mitigation related to the creation of a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment as described herein.

Temporary Impacts (Construction)

The Project would not require long-term storage, treatment, disposal, or transport of significant quantities of hazardous materials; however, small quantities of hazardous materials would be stored, used, and handled during construction. These materials would generally be used in excavation equipment, generators, and other construction equipment and would be contained within vessels engineered for safe storage. Spills during on-site fueling of equipment or an upset condition (i.e., puncture of a fuel tank through operator error) could result in a release of small quantities of fuel, lubricants, hydraulic fluid, or other hazardous substances. Accidents or mechanical failure involving heavy equipment could also result in the accidental release of fuels and oils. These types of spills on construction sites are typically in small quantities, localized, and are cleaned up in a timely manner.

Project construction activities would involve excavating, trenching, and grading activities. Results of soil sampling conducted at the Prism Aerospace site indicate hazardous materials are present at the site, which could expose construction workers and the public to contaminated soil and chemical vapors during construction. An analysis of soil samples indicated varying concentrations, above and below regulatory limits, of arsenic, lead, TPHs, PAHs, VOCs, SVOCs, and PCBs. Volatile contaminant vapors are also present within the construction site. Due to the location of construction activities, a potential for exposure to contaminated soils or migration of contaminants could occur. Depending on the nature and extent of contamination encountered, adverse health effects could result if precautions such as proper handling, storage, and transport of contaminated soils are not implemented. This is considered a potentially significant impact. Mitigation Measures HAZ-1, HAZ-2, HAZ-3, HAZ-6, HAZ-7, and HAZ-9 are proposed to reduce potential impacts to less than significant. An SMP will be prepared to address the possibility of encountering localized areas containing contaminants of potential concern. Consideration will be given to placement of a high-visibility geomembrane at the base of excavation in areas of impacted soil or soil vapor to advise excavators of potential underlying exposure to chemicals detected below the membrane. Dust control measures to minimize fugitive dust emissions during construction and demolition activities will be implemented. Dirt tracked onto paved roads from unpaved areas will be minimized. Trucks hauling excavated materials to the disposal site will be covered and haul routes to the disposal site will avoid the proposed Eastside Neighborhood School.

Buildings proposed to be demolished within the project site may have been constructed using asbestos-containing materials (ACMs) and lead-based paints (LBPs) due to the age of the buildings. U.S. EPA and OSHA have determined exposure to asbestos and lead to be an adverse health risk. Demolition of structures containing LBP requires specific remediation activities regulated by federal (40 CFR 745), state (17 CCR 35001-36100), and local laws. Release of ACMs or LBPs into the environment is considered a significant impact. To avoid potentially significant impacts; before disturbing utilities (e.g., cementitious pipelines), electrical/lighting equipment, and hazardous building materials, a hazardous waste management plan will be prepared and implemented. The plan will address testing protocols, handling, and disposal requirements, and will be implemented by a California Department of Public Health Certified Lead Inspector/Assessor, California Division of Occupational Safety and Health Certified Asbestos Consultant, and/or professionals appropriately qualified in their field, in accordance with applicable local, state, and federal guidelines and regulations and buildings planned for demolition will require an ACM survey to be conducted in accordance with the local SCAQMD Rule 1403 requirements. Lead-containing surfaces that may be present in buildings will require handling and disposal needs in accordance with 17 CCR and 8 CCR, Division of Occupational Safety and Health Lead in Construction Standard § 1532.1.

Mitigation Measures HAZ-4 and HAZ-5 are proposed to reduce less-than-significant impacts.

Permanent Impacts (Operations)

The potential for accidental release of hazardous materials into the environment due to the operations and maintenance of the train station would remain similar to existing conditions. The continued use of fuels, coolants, and other various hazardous fluids would pose the potential risk for accidental release. In accordance with federal (40 CFR 2390282), state (22 CC 4.5), and other local regulations, potentially hazardous wastes will be handled, transported, stored, and disposed appropriately. RCTC will be required to prepare and acquire approval of a HMBP

through the Riverside County DEH. The HMBP will include a plan for proper storage, disposal, and handling of hazardous materials during operation of the facility. Impacts due to the operations of the facility is considered to be less than significant.

(c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less than Significant with Mitigation Incorporated. The Build Alternative and all design options would have less-than-significant impacts with mitigation related to hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.

Mitigation Measures HAZ-1, HAZ-2, HAZ-3, HAZ-4, HAZ-5, HAZ-6 and HAZ-9 are proposed to reduce potentially significant impacts to less than significant impacts.

Temporary Impacts (Construction)

An existing school is not within a 0.25-mile search radius of the Project; however, the Riverside Unified School District (RUSD) is currently proposing to develop a school within the Eastside Neighborhood, located approximately 0.1 mile southeast of the project area. The proposed RUSD school site is bounded by 12th Street and 13th Street to the northeast, Victoria Avenue to the southeast, 14th Street to the southwest, and Howard Avenue to the northwest. Due to the proximity of the proposed school relative to potential haul routes, there is a potential for the release of hazardous emissions and materials. If the proposed school is constructed before the Project, fugitive dust emissions from construction activities and hauling of contaminated soil from the project site may be released and expose sensitive receptors to dust and hazardous materials. To mitigate the potential release of hazardous emissions and materials, ACM, LBP and other hazardous material surveys will be conducted to determine the location(s) of hazardous materials prior to the start of construction. In addition, a Soil Management Plan and Hazardous Waste Management Plan will be prepared prior to ground disturbing activities to include measures such as covering trucks hauling soils off-site to control fugitive dust emissions and routing haul trucks to avoid the school site. On-site dust control measures would be implemented to limit fugitive dust emissions, and dust tracked from unpaved areas onto paved areas would be minimized.

Permanent Impacts (Operations)

The Build Alternative and all design options would pave over an exposed soil area at the Prism Aerospace property that is identified as containing contaminated soils. The proposed parking lot expansion would effectively cap contaminated soils within the project site to prevent leaching and soil contaminant migration to off-site areas, including the proposed Eastside Neighborhood school. Less-than-significant impacts are anticipated.

(d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code§ 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

(e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

(f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

(g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

No Impact. The Build Alternative and all design options would not be located on a site which is included on a list of hazardous materials sites (Cortese) pursuant to Government Code§ 65962.5 and, as a result, would not create a significant hazard to the public or the environment.

The study area is not located within 2 miles of a public airport. The nearest public airport, Flabob Airport, is 2.25 miles northwest of the study area. Due to the distance of the nearest airport to the project site, there would be no impact.

Temporary (Construction)/Permanent Impacts (Operations)

The study area does not contain any roadways that are considered disaster routes or primary emergency response corridors. The nearest disaster route, SR 91, is adjacent to the Metrolink Station; however, traffic flow along SR 91 and its interchanges would not be impeded due to lane or road closures, construction, or operations of the Project. Therefore, there would be no impact.

The area surrounding the Project is considered developed with a high density of residential, commercial, and industrial properties. The study area is not within a State or Local Responsibility Area – Very High Fire Hazard Severity Zone. The nearest State and Local Responsibility Area – Very High Fire Hazard Severity Zone is located in the Box Springs Mountain Reserve, approximately 2.38 miles east of the study area. Due to the proximity of the nearest fire hazard severity zones and the developed land use surrounding the Project, there would be no impact.

3.8.5. Avoidance, Minimization, and/or Mitigation Measures

The following mitigation measures would ensure potentially significant impacts are avoided, minimized.

HAZ-1: Prior to subsurface disturbance activities, an SMP will be prepared to address the possibility of encountering localized areas containing contaminants of potential concern, including VOCs, petroleum hydrocarbons, SVOCs, and metals. The plan will be prepared by a qualified environmental consultant and will be implemented during soil disturbance activities under the oversight of an environmental professional. The plan will address monitoring excavated soil; community and worker health and safety; and soil handling, stockpiling, characterization, on-site reuse, export, and disposal protocols.

HAZ-2: For areas with the potential for encountering soil contamination (e.g., near areas of known or suspected contamination), appropriate worker and community health and safety measures (e.g., dust control, air monitoring, and stockpile management) will be implemented by the contractor, under the oversight of a qualified environmental professional.

HAZ-3: Before disturbing utilities (e.g., cementitious pipelines), electrical/lighting equipment, and hazardous building materials such as ACM, LBP, treated wood, and other materials falling under Universal Waste Rules (UWR) requirements, a hazardous waste management plan will be prepared. The plan will address testing protocols, handling, and disposal requirements, and will be implemented by a California Department of Public Health Certified Lead Inspector/Assessor, California Division of Occupational Safety and Health Certified Asbestos Consultant, and/or professionals appropriately qualified in their field, in accordance with applicable local, state, and federal guidelines and regulations.

HAZ-4: Buildings planned for demolition require an ACM survey to be conducted in accordance with the local SCAQMD Rule 1403 requirements. Lead-containing surfaces that may be present in buildings require handling and disposal needs in accordance with 17 CCR and 8 CCR, Division of Occupational Safety and Health Lead in Construction Standard § 1532.1. Other hazardous materials that may be present within structures also require proper clean up, handling, and disposal in accordance with UWR, if planned for removal.

HAZ-5: Consideration will be given to placement of a high-visibility geomembrane at the base of excavation in areas of impacted soil or soil vapor to advise excavators of potential underlying exposure to chemicals detected below the membrane.

HAZ-6: Arsenic above DTSC Southern California Regional Background Arsenic Concentration of 12 mg/kg in soil samples collected in the upper 1 to 2 feet of soil along the former railroad tracks in Area C are considered as hazardous material. Soil within the width of the railroad tracks to a depth of 2 feet will be separately stockpiled for off-site disposal at a licensed facility that will accept soil with elevated arsenic levels.

HAZ-7: Soil disturbance activities will not be allowed on the So. Cal Gas property (Area A and C) without approval of the SMP by the DTSC and prior notification. Any soil removal in the property will be managed in accordance with all applicable state and federal provisions.

HAZ-8: Activities that may disturb, alter, damage, or destroy groundwater monitoring wells on the So. Cal Gas property (Area A and C) are prohibited unless given authorization by the DTSC. The use of the property will preserve the integrity and physical accessibility of the groundwater monitoring wells. DTSC will be notified about any damage caused to the groundwater monitoring wells.

HAZ-9: Dust control measures to minimize fugitive dust emissions during construction and demolition activities will be implemented. Dirt tracked onto paved roads from unpaved areas will be minimized. Trucks hauling excavated materials to the disposal site will be covered and haul routes to the disposal site will avoid the proposed Eastside Neighborhood School.

3.8.6. CEQA Significance Conclusion

The Build Alternative, including all design options, would occur within an existing rail station and neighboring industrial development in urbanized Downtown Riverside. With the implementation of the proposed mitigation measures (HAZ-1 through HAZ-9), potentially significant impacts related to hazards and hazardous materials would be less than significant with mitigation.

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3.9. Hydrology and Water Quality

This section discusses the potential impacts on hydrology and water quality within the study area resulting from the construction and operations of the proposed Build Alternative and all design options. Information provided in this section are based on the results of the technical analysis in the *Hydrology/Hydraulics and Stormwater Quality Technical Memorandum* (HNTB, 2020) prepared for the proposed Project.

3.9.1. Regulatory Framework

Applicable policies, laws, and regulations relative to geology and soils are provided below:

Federal Regulations

EO 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. To comply, the following must be analyzed:

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

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

Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities that comply with FEMA regulations that limit development in floodplains. FEMA also issues Flood Insurance Rate Maps (FIRM) that identify which land areas are subject to flooding and flood hazard zones in the community. The design standard for flood protection covered by the FIRM is established by FEMA, with the minimum level of flood protection for new development determined to be the 1-in-100 (0.01) annual exceedance probability (the 100-year flood event).

Clean Water Act

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the United States (WOTUS from any point source[14] unlawful unless the discharge is in compliance with a NPDES permit. This act and its amendments are known today as the CWA. Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of stormwater from municipal and industrial/construction point sources to comply with the NPDES permit scheme. The following are important CWA sections:

Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.

Section 401 requires an applicant for a federal license or permit that wishes to conduct any activity that may result in a discharge to waters of the WOTUS to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request.

Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into WOTUS This permit program is administered by the RWQCB in California. Section 402(p) requires permits for discharges of stormwater from industrial/construction and municipal separate storm sewer systems (MS4).

Section 404 establishes a permit program for the discharge of dredge or fill material into WOTUS This permit program is administered by the U.S. Army Corps of Engineers (USACE).

The goal of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."

[14] A point source is any discrete conveyance such as a pipe or a human-made ditch.

State Regulations

Porter-Cologne Water Quality Control Act

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

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

State Water Resources Control Board and Regional Water Quality Control Boards

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

National Pollutant Discharge Elimination System Program

Municipal Separate Storm Sewer Systems

Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of stormwater discharges, including Municipal Separate Storm Sewer Systems (MS4). An MS4 is defined as "any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over stormwater, that is designed or used for collecting or conveying storm water."

Construction General Permit

Construction General Permit (CGP), Order No. 2009-0009-DWQ (adopted on September 2, 2009, and effective on July 1, 2010), as amended by Order No. 2010-0014-DWQ (effective February 14, 2011) and Order No. 2012-0006-DWQ (effective on July 17, 2012). The permit regulates stormwater discharges from construction sites that result in a Disturbed Soil Area (DSA) of 1 acre or greater, and/or smaller sites that are part of a larger common plan of development. By law, all stormwater discharges associated with construction activity where clearing, grading, and excavation result in soil disturbance of at least 1 acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than 1 acre is subject to the CGP if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop Stormwater Pollution Prevention Plans (SWPPP); to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the CGP.

The CGP separates projects into Risk Levels 1, 2, or 3. Risk levels are determined during the planning and design phases and based on potential erosion and transport to receiving waters. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory storm water runoff pH and turbidity monitoring, and before construction and after construction aquatic biological assessments during specified seasonal windows. For all projects subject to the permit, applicants are required to develop and implement an effective SWPPP.

In accordance with the Department's stormwater management plan and standard specifications, a water pollution control program is necessary for projects with DSA less than 1 acre.

Section 401 Permitting

Under Section 401 of the CWA, any project requiring a federal license or permit that may result in a discharge to a water of the U.S. must obtain a 401 Certification, which certifies that the project will be in compliance with state water quality standards. The most common federal permits triggering 401 Certification are CWA Section 404 permits issued by the USACE. The 401 permit certifications are obtained from the appropriate RWQCB, dependent on the project location, and are required before the USACE issues a 404 permit.

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

Local and Regional Regulations

City of Riverside General Plan 2025

The City of Riverside's General Plan 2025 (GP 2025) contains objectives and policies related to drainage and water quality in the Open Space and Conservation Element and Public Facilities and Infrastructure Element that are applicable to the Project. The Project would be subject to the following objectives and policies:

- **Objective PS-2:** Reduce potential flood hazards within Riverside.
- **Policy PS-2.1:** Reduce flood risks for residents and businesses within urbanized areas, as feasible.
- **Policy PS-2.2:** Encourage flood control infrastructure that does not reduce the natural character or limit the use of the site.
- **Policy PS-2.3:** Minimize additional flood risk exposure in developing areas.

3.9.2. Methodology for Evaluating Environmental Impacts

The study area for hydrology and water quality is defined as the project site where ground disturbance would occur under the Build Alternative and all design options. The analysis of the proposed project's potential impacts to hydrology and water quality considers potential effects within the study area related to construction and operations of the proposed Project. Impacts can be direct or indirect and occur during project construction (temporary impacts) or during operation of the Project (permanent impacts). A significant impact would occur if the proposed Project would result in any conditions listed in the *2021 CEQA Statute & Guidelines, Appendix G, Environmental Checklist Form, X. Hydrology and Water Quality*, Issues (a) to (e). If a significant impact is identified, mitigation measures would be applied to reduce the effect to less-than-significant levels on hydrology and water quality. If mitigation measures are not feasible to implement or do not reduce the proposed Project's effect, then a potentially significant impact would occur.

3.9.3. Affected Environment

Existing Project Site and Conditions

The project site is located within an urbanized environment characterized by existing residential, commercial, and industrial development. The project site is mostly built-out with existing structures and paved surfaces with the exception of parcels located north of Howard Avenue and west of 10th Street. APNs: 211-201-007, 211-201-008, 211-201-037, and 211-201-030 are currently operating as manufacturing and industrial businesses and these parcels are generally used as equipment storage yards. Surface conditions at these parcels consist of paved areas, compacted soil, ornamental landscaping, and non-native vegetation.

Hydrology and Hydraulics

The project site is within the Middle Santa Ana River watershed and the tributary drainage area in this watershed is 480 square miles. Tequesquite Arroyo is located approximately 0.7 mile to the south and runs underneath SR 91. Project-related runoff will discharge into Tequesquite Arroyo and ultimately Reach 3 of the Santa Ana River. Riverside Canal is located just west of the project site. The canal is in an underground culvert for the majority of the length of the station with a short daylighted segment in an engineered channel, parallel to the southernmost part of the

project site. There is no riparian vegetation associated with the canal, as it is a constructed watercourse. There are no natural communities or designated critical habitat within or adjacent to the project footprint. There are no waters or wetlands within the project study area that would be directly modified by the proposed Project.

Soils within the project study area are Buren fine sandy loam with 2 to 8 percent slopes (eroded), Hanford coarse sandy loam (very deep, well drained) with 2 to 8 percent slopes, and Arlington fine sandy loam (deep) with 2 to 8 percent slopes (NRCS, 2020). However, the majority of the project footprint is covered with paving, concrete, and hardscape with the exception of small, landscaped areas. Plant species within the project area typically consist of non-native and ornamental landscaping. Ruderal and weedy species are commonly found at the margins of hardscape areas, where they can exploit small patches of disturbed soil areas.

The Riverside County Flood Control and Water Conservation District (RCFCWCD) is responsible for the regional flood control and drainage facilities. The city maintains local facilities that tie into the RCFCWCD regional system. Local drainage facilities, consisting mostly of underground closed conduits and storm drains located primarily in developed portions of the city collect stormwater and convey it to regional facilities, including the Santa Ana River.

As shown on Figure 3.9-1, the general drainage patterns for the overall site (including off-site areas) drain toward the west, away from the railroad to Howard Avenue and the flow ultimately drains into the Santa Ana River. The site is mostly impervious, except for areas within an existing industrial parcel west of Howard Avenue and south of 10th Street, as this area contains permeable compacted soil surface. Off-site areas consist mostly of residential areas to the north and east, an industrial solar facility to the south and the existing railroad tracks and station to the west. The site's low point is located just west of Howard Avenue on 11th Street, where the water on the site flows easterly, away from the railroad toward the low point. The surrounding site, just to the east of the project site, generally drains to the west, toward the same low point on 11th Street. At this low point, stormwater is conveyed to two catch basins (at the west end of 11th Street and at the intersection of Howard Avenue/11th Street). Furthermore, the existing low point located at 11th Street floods during annual storm events. This is caused by the approximately 10.5 acres of off-site stormwater runoff area that accumulates, contributing flow to this low point. The drainage system is undersized for intercepting and conveying flow from this amount of area; drainage facilities consists of three 3.5-foot curb inlet catch basins located at the low point that outlets through one 12-inch pipe that connects to an existing 42-inch storm drain. This storm drain ultimately flows into a box culvert under the existing Riverside-Downtown Station (Figure 3.9-1). The existing off-site runoff from the surrounding sites has been estimated at 42 cubic feet per second (cfs) for the 10-year storm and 67 cfs for the 100-year storm events. The three existing catch basins take in a substantial amount of flow from both on-site and off-site areas, which causes general flooding at the low point at the western terminus on 11th Street.

Floodplains

Flooding in the City of Riverside mainly results from intense rainfall, which usually occurs in the winter. FEMA FIRM show that portions of the city fall within the 100-year flood zone. Flood hazard risks are greatest in the vicinity of channels, creeks, streams, and watercourses. This includes the Santa Ana River and several dams. As shown on Figure 3.9-1, the proposed Project is within the vicinity of a 100-year existing floodplain (Zone AE), within the Middle Santa Ana River Watershed, which ultimately flows into the Santa Ana River through Prado Dam. The floodplain offers flood storage for the Santa Ana River to spread out and accommodate temporary storage of flood water, which reduces the erosion potential and flood peaks. Based on the FEMA FIRM, the 100-year base flood elevation (BFE) is approximately 886 feet for the project site. Figure 3.9-2 illustrates the base 100-year floodplain.

Water Quality

The Water Quality Control Plan for the Santa Ana River Basin ("Basin Plan") is designed to preserve and enhance the quality of water resources in the Santa Ana River basin for the benefit of present and future generations. The purpose of the Basin Plan is to designate beneficial uses of the region's surface and ground waters, designate water quality objectives for the reasonable protection of those uses and establish an implementation plan to achieve the objectives. Table 3.9-1 summarizes beneficial uses for Santa Ana River Reach 3 and Tequesquite Arroyo. Table 3.9-2 provides water quality objectives for Santa Ana River Reach 3.

Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States, and section 303(d) requires a priority list of Impaired Waterbodies ("the 303(d) list"). These waters do not meet their numeric and/or narrative state Water Quality Standards necessary to protect their Beneficial Uses (Table 3.9-1 and Table 3.9-2). The Project is within the Santa Ana River's Reach 3 and has three impairments: pathogens, copper, and lead. The Middle Santa Ana River Bacterial Indicator TMDL is currently in effect to address pathogens. Copper and

lead TMDLs are slated to be in effect for 2021. Tequesquite Arroyo is not included in the 303(d) list and does not have numeric water quality objectives; however, narrative objectives would apply. Water quality standards are attained when designated beneficial uses are achieved and water quality objectives are being met. The regulatory programs of the RWQCB are designed to minimize pollutant discharges to surface and ground waters within the region, largely through permitting, such that water quality standards are effectively attained.

Table 3.9-1. Beneficial Uses and Constituents for Receiving Waters

Receiving Waterbody	303(d) List Constituents	TMDL Constituents	Beneficial Uses
Tequesquite Arroyo Creek	N/A	N/A	GWR, REC1, REC2, WARM, WILD, SPWN
Santa Ana River Reach 3	Copper, Lead	Pathogens	AGR, GWR, REC1, REC2, WARM, WILD, RARE, SPWN
Definition of Beneficial Uses			
AGR	Waters used for farming, horticulture, or ranching. Uses may include, but are not limited to, irrigation, stock watering, and support of vegetation for range grazing.		
GWR	Groundwater recharge waters, used for natural or artificial recharge of groundwater for purposes that may include future extraction, maintaining water quality, or halting saltwater intrusion in freshwater aquifers.		
MUN	Waters are used for community, military, municipal or individual water supply systems. These uses may include, but are not limited to, drinking water supply.		
RARE	Rare, threatened, or endangered species waters support habitats necessary for the survival and successful maintenance of plant or animal species designated under the State or federal law as rare, threatened, or endangered.		
REC1	Water contact recreation water used for recreational activities involving body contact with water where ingestion of water is reasonably possible. Uses may include swimming, wading, water-skiing, skin and scuba diving, surfing, whitewater activities, fishing, and use of natural hot springs.		
REC2	Non-contact water recreation waters, used for recreational activities involving proximity to water, but not normally involving body contact with water where ingestion of water would be reasonably possible. These uses may include picnicking, sunbathing, hiking, beachcombing, camping, boating, sightseeing, and aesthetic enjoyment in conjunction of the above activities.		
SPWN	Spawning, reproduction, and development sites.		
WARM	Warm freshwater habitat waters support waters support warm ecosystems that may include preservation and enhancement of aquatic habitats, vegetation, fish, and wildlife, including invertebrates.		
WILD	Wildlife habitat waters support wildlife habitats that may include the preservation and enhancement of vegetation and prey species used by waterfowl and other wildlife.		

Source: Riverside County Flood Control District, Middle Santa Ana River Fact Sheet, April 2015

N/A = Not Applicable

Table 3.9-2. Numeric Water Quality Objectives for Santa Ana River, Reach 3[1]

Water Body	Water Quality Objectives (mg/L)							
	Total Dissolved Solids	Hardness	Sodium	Chloride	Total Inorganic Nitrogen	Sulfate	Chemical Oxygen Demand	Boron
Santa Ana River Reach 3 (Base Flow)	700	350	100	140	10	150	30	0.75

Source: Santa Ana Water Quality Control Board, Chapter 4, Water Quality Objectives, June 2019

mg/L = milligrams per liter

[1.] Santa Ana River Reach 3 from Prado Dam to Mission Boulevard in Riverside

Groundwater

Water supplies throughout the City of Riverside are predominately sustained by groundwater basins. Groundwater conditions in these basins are influenced by natural hydrologic conditions such as precipitation, groundwater seepage and surface water from the Santa Ana River and the six arroyos that traverse the city. According to the City of Riverside General Plan 2025, local groundwater basins are actively recharged by various agencies with stormwater runoff, treated wastewater, and imported water. The Santa Ana RWQCB manages groundwater quality and water rights issues through waste discharge permits and well permitting. Groundwater elevation levels, and basin management is generally overseen by the California Department of Water Resources (DWR). Groundwater measurements collected in 2008 were anticipated to be encountered at a depth of 100 to 110 feet bgs within the project site. The groundwater gradient was reported to flow towards the south-southwest. Groundwater levels, gradient, and flow direction can fluctuate due to seasonal variations, groundwater withdrawal or injection, changes in land use, and other factors.

Current industrial uses of the site present potential for contamination resulting from leaks or spills from railcars or historic application of surface chemicals during railroad operations. In addition, proposed acquisition of industrial property for the station improvements may contain contaminated soils due to historical industrial operations by the FMC Complex and use of chemical solvents. Results of the Phase 1 Environmental Site Assessment conducted for the proposed Project indicate that the project site overlies a groundwater plume impacted by VOCs, pesticides, herbicides, nitrate, and perchlorate (known as the Riverside Plume). Sampling of groundwater between 2005 and 2008 showed significant VOC impacts (primarily PCE and TCE) in the site vicinity (Ninyo & Moore, 2018). Additional Phase II Environmental Site Assessments and soil sampling were conducted in August and September 2020 confirming the presence of metals and VOCs; however, the full extent of the vertical and horizontal contamination of the project site has not been fully determined.

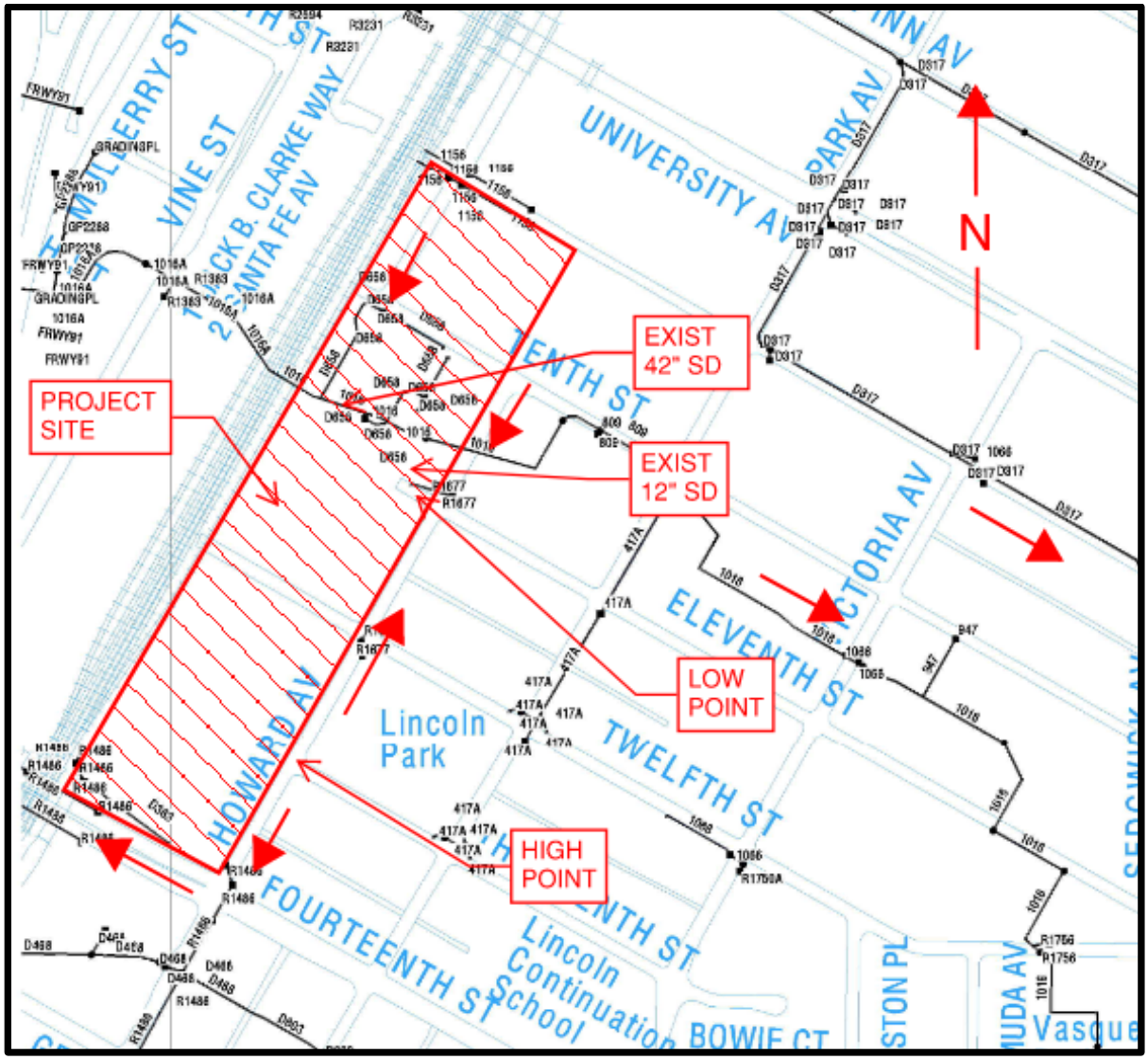

Figure 3.9-1. Existing Storm Drain System Network

Source: Storm Drain Map Index, City of Riverside

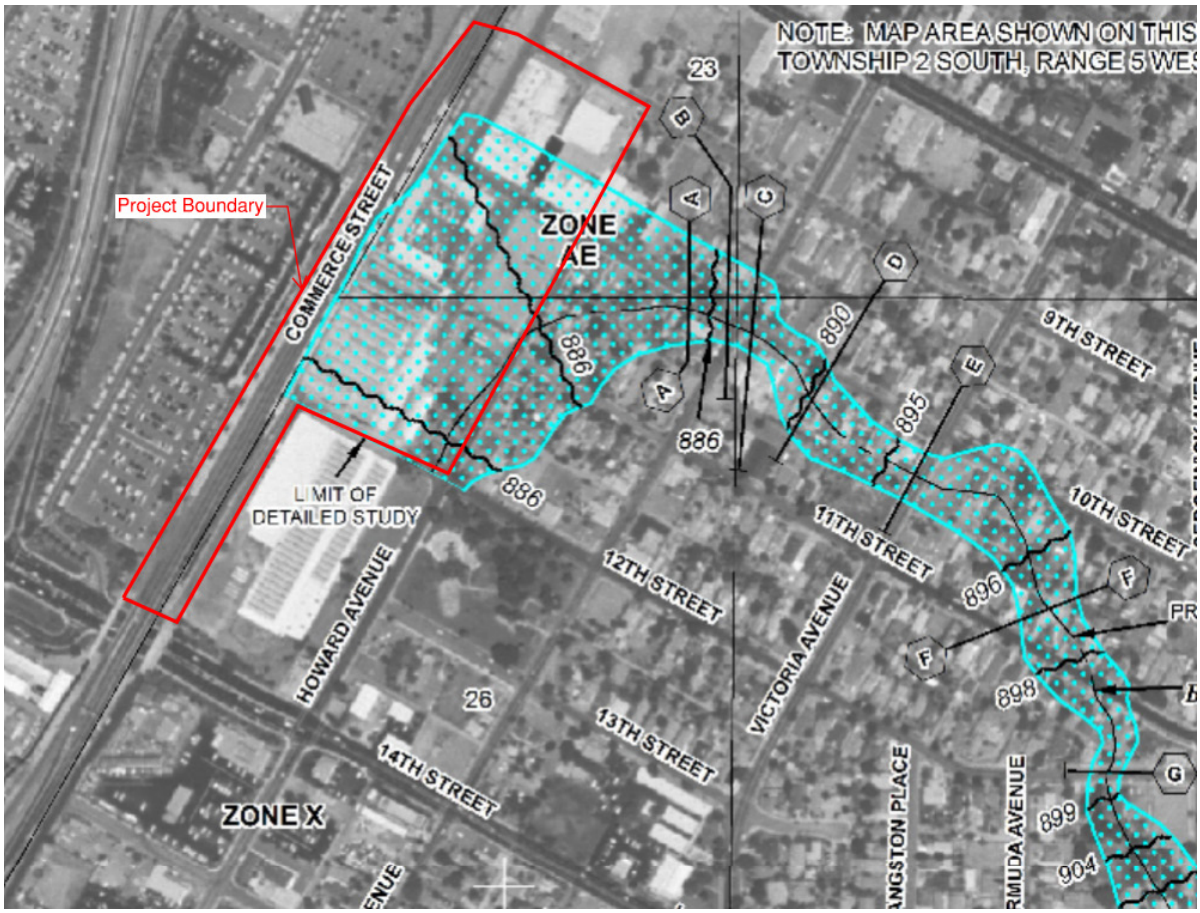

Figure 3.9-2. 100-Year Floodplain Within the Project Boundary

Source: Flood Insurance Rate Map (06065C0726G), Federal Emergency Management Agency

3.9.4. Environmental Impacts and Consequences

CEQA Thresholds of Significance for Hydrology and Water Quality Resources

In accordance with the *2021 CEQA Statute & Guidelines, Appendix G, Environmental Checklist Form, X. Hydrology and Water Quality,* Issues (a) to (e), the proposed Project would result in impacts to hydrology and water quality if the construction or operation of the proposed Project would result in any of the conditions listed in the following table.

The discussion below includes the CEQA checklist for hydrology and water quality, followed by the discussion that provides the rationale for the following significance determinations:

Would the Project:

Question	CEQA Determination
(a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Less Than Significant Impact
(b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Less Than Significant Impact
(c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would: i. Result in substantial erosion or siltation on- or off-site;	Less Than Significant Impact

Question	CEQA Determination
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv. Impede or redirect flood flows	
(d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation, conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Less Than Significant Impact
(e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Less Than Significant Impact

(a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less Than Significant Impact. The Build Alternative and all design options are anticipated to result in less than significant impacts as it relates to water quality standards or waste discharge requirements. The project site is located within the Santa Ana River's Reach 3 (Middle Santa Ana River), which is a 303(d)-listed watershed that does not meet state water quality standards. The project may potentially affect water quality due to associated pollutant sources during the operation of the proposed Project, which include commuter and freight trains, motor vehicles, station maintenance, illicit discharge, spills, and landscaping care.

Temporary Impacts (Construction)

Various construction activities like excavation, grading, paving, and others will expose disturbed and loosened soils to erosion by wind and runoff; therefore, construction activities could potentially result in increased erosion and siltation, including potential additional nutrient loading and increased total suspended solid concentration. Erosion and siltation from construction could affect drainages downstream of the project area, which would pose a potentially minor impact to water quality.

Construction activities for the Project have the potential to result in the creation of additional polluted runoff. Grading, paving, and construction activities associated with this project could create additional sources of polluted runoff throughout the project site because of construction related pollution and waste discharge. The proposed Project may impact stormwater quality due to construction that will convey pollutants to the overall watershed. Runoff generated during construction activities could contribute pollutants to receiving waters. Pollutants associated with construction activities typically include gasoline, oil, rubber particles, herbicides, pesticides, paint, adhesives, tar, other chemicals, and other construction-related pollutants such as, but not limited to:

- Sediment and erosion from grading operations
- Trash and debris from waste management
- Petroleum hydrocarbons, carboxylic acids from asphalt paving
- Oil and grease from motor vehicles

These contaminants could affect surface water quality downstream of the project construction site if appropriate construction BMPs are not implemented. Construction activities could release such pollutants onto roadways and soils, from where it would be carried off-site in runoff. Some pollutants can lead to turbidity (i.e., cloudiness), which blocks light transmission and penetration, reduces oxygen levels, affects the food chain, and creates changes in water temperature. During construction, soil-disturbance activities include earth-moving activities such as excavation, trenching, soil compaction and moving, cut and fill activities, and grading. Disturbed soils are susceptible to high rates of erosion from wind and rain and can result in sediment transport via stormwater runoff. Pollutants in stormwater could also cause chemical degradation and aquatic toxicity in the receiving waters, adversely affecting the survival of plant and animal species, their populations, and the ecosystem structure. As discussed in Section 3.8. Hazards and Hazardous Materials, the Prism Aerospace site contains contaminated soils that could potentially migrate off-site during construction and affect downstream water quality. In addition to the recommended general

construction related water quality BMPs described below, a soil management plan would be prepared and implemented prior to ground disturbing activities as previously described in measure HAZ-1.

Given these considerations, general construction site water quality BMPs under the CGP would be used, as appropriate:

- Placing fiber rolls and compost socks to shorten slope length, intercept runoff, reduce runoff velocity, and remove sediment
- Placing inlet protection for any existing catch basins in the vicinity to minimize sedimentation impacts to existing storm drain systems
- Placing mulch or compost blankets to reduce runoff and the transport of sediment
- Managing solid waste management for litter and debris removal

In addition to the abovementioned construction site BMPs, the Project must comply with the NPDES Statewide General Construction Permit (Order No. 09-09- DWQ). The permit requires preparation of an effective SWPPP, which describes erosion and sediment control BMPs to prevent stormwater pollution during construction. The proposed Project is expected to result in a less than significant impact on water quality of the receiving waters.

Permanent Impacts (Operations)

When considering impacts to water quality, the amount of additional impervious surface that is proposed within a particular watershed is of primary concern. Converting natural earth surfaces to paved surfaces contributes to higher runoff rates and increases the number of pollutants entering receiving waters. The proposed Project is expected to increase the volume of downstream flow due to the addition of impervious surface area. The Build Alternative and all design options would increase the amount of impervious surface area by approximately 45,000 square feet and the potential for pollutants to enter receiving waters and peak flows would consequently increase slightly from existing conditions. However, this increase in the amount of impervious surface area is minimal relative to the total watershed area for the Santa Ana River Watershed (Middle Santa Ana River) Area is approximately 480 square miles. The proposed additional impervious area within the watershed comprises approximately 0.0003 percent of this area. This can be expected to translate into minor localized increases in urban runoff within the project vicinity. With the minor increase in impervious surface, this project would produce an insignificant increase in the total peak flow for the Santa Ana River project area.

Implementation of non-infiltration type BMPs per the SWPPP such as lined vegetated swales, bioretention devices, and catch basin inserts as further described below would address increases in stormwater runoff resulting from the construction of the Build Alternative and all design options. Stormwater treatment BMPs are proposed to be incorporated into the project design in order to minimize the impacts to water quality from post-project conditions. Treatment devices will be sized to capture additional run-off generated by the total impervious surface area within the project limits. Non-infiltration BMPs under the SWPPP would be implemented to comply with water quality regulations and to decrease the potential on-site runoff increases. Furthermore, non-infiltration BMPs would be utilized to prevent stormwater from infiltrating contaminated soils. One of the following or a combination of the following potential BMPs would be used throughout the site:

- Lined bioswales, where water is funneled through a vegetated ditch, which reduces the overall runoff volume.
- Bioretention, where soil areas act as plant-based filtration to remove pollutants and helps to reduce the overall runoff volume.
- Self-contained tree well boxes are a good example of a potential treatment device that will not allow water to percolate into the groundwater but still be able to have biotreatment.
- Catch basin filter inserts that can filter out hydrocarbons, pollutants with trash capture abilities.

Through the implementation of permanent water quality BMPs under the SWPPP, water leaving the site would not substantially degrade the water quality of the downstream facilities in the final condition. Less than significant impacts are anticipated.

(b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less Than Significant Impact. Although the Build Alternatives and all design options would increase the amount of impervious surface within the project site, the incorporation of paved surfaces would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge. It would help avoid or minimize contamination of groundwater as described below.

Temporary Impacts (Construction)

Construction activities could potentially release oils, grease, concrete, and other pollutants into the soil. These pollutants could contaminate the groundwater through storms and construction watering activities; however, the preparation and implementation of a SWPPP during all phases of construction would reduce the risk of potential effects to groundwater.

Excavation activities are not expected to reach the groundwater. Construction of the Build Alternative and all design options would require grading and excavation of soil between 5 feet and 10 feet (at some locations) in depth. Groundwater is anticipated to be encountered at a depth of 100 to 110 feet bgs. Therefore, the Build Alternative and all design options would result in less than significant impacts to the groundwater during construction.

Permanent Impacts (Operations)

Similar to current use of water at the existing station, the Build Alternative and all design options would require use of groundwater to maintain proposed landscaping elements that would be incorporated as part of the station; however, landscaping associated with the station improvements would be minimal because the majority of the site would construct an expanded parking lot and other hardscape elements. Landscaping elements would be limited and use of drought-tolerant plants would be incorporated to reduce water use.

Since the underlying soils at the project site are contaminated, water must be prevented from percolating through the soil to avoid contaminants from entering the groundwater. The Build Alternative and all design options would have less permeable area compared to existing site conditions, therefore decreasing the amount of infiltration into the groundwater and the overall amount of groundwater recharge. As mentioned previously, the proposed 45,000 square-foot paved area comprises 0.0003 percent of the overall watershed and would not considerably affect groundwater recharge. Based on coordination with the DTSC and RWQCB, both agencies agreed to cap the surface of the project site to prevent water from percolating into the contaminated soil by limiting the use of the project site to an open-paved surface parking lot. This land-use restriction would prevent further contaminants from exacerbating conditions of the Riverside Plume. By preventing further contamination, downstream groundwater management becomes more sustainable. Based on preliminary design plans, the proposed Project is consistent with this agreement to construct an open-paved surface parking lot. Correspondence regarding the land use restriction at the Prism Aerospace property and the Land Use Restriction Covenant issued by DTSC (2012) are provided in Appendix M.

Given that the site is not suitable for groundwater recharge due to existing contamination and the relatively minor increase of surface water runoff (but will have on-site filtration), less than significant impacts are anticipated to groundwater.

(c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would:

i. Result in substantial erosion or siltation on- or off-site;

Less Than Significant Impacts. This Project will be designed to minimize site topographic changes and will therefore result in insignificant changes to drainage patterns within the project site. Grading activities will be minimized, existing tall structures will be removed and replaced with tracks, platforms, and a noise barrier. All of these improvements will result in a larger detention volume for the site, which should reduce the BFE and improve potential flooding impacts. Changes to on-site drainage patterns would be negligible as the design of the station improvements would maintain the flow pattern away from the railroad tracks toward the low point at 11th Street. For all the design options, the low point would remain at its current location and connect to the existing 42-inch storm drain located at the project site to mimic existing conditions. A noise barrier has been recommended at the project site, though it will be placed parallel to the overall flood flow direction in the vicinity of the Prism Aerospace Building to be demolished. Due to its much narrower footprint and alignment with the flow direction, its impact would be much less than that of the existing buildings that are to be demolished. Furthermore, the project site would maintain the location of the existing low point at 11th Street since off-site areas drain to this location. As currently designed, the Build Alternative and all design options would not result in significant impacts to hydrology.

Temporary Impacts (Construction)

During construction, the construction contractor may temporarily reroute drainage patterns within the construction site. If not effectively managed through construction site BMPs, this could result in the loosening and migration of soil to other areas beyond the construction site. BMPs that could be used to manage erosion and siltation may include

but are not limited to the following: fiber rolls, compost socks, placing inlet protection for any existing catch basins, mulch or compost blankets, concrete washouts, and silt fences. Additional BMP measures beyond those identified above may be incorporated through the preparation of a SWPPP, which will identify all BMP measures to control stormwater discharge during construction. Less than significant impacts are anticipated.

Permanent Impacts (Operations)

The proposed Project will be designed to follow the existing ground and drainage patterns. The proposed Project will result in an additional 45,000 square feet of impervious area, which will have an incremental increase of approximately 2 cfs if no BMPs are incorporated. The additional runoff would cause the potential for flooding within the site causing erosion and siltation downstream. It would also increase the potential for erosion downstream as the rate of the downstream system would increase causing waterways to expand beyond the previous limits. With the addition of permanent BMPs as mentioned in (a), the Project is expected to control the erosion, siltation, and flow. Less than significant impacts are anticipated.

(c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would:

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

Less Than Significant Impact. Under the Build Alternative and all design options, the proposed Project would increase impervious surface area to approximately 45,000 square feet. The Build Alternative would incorporate grading, drainage, stormwater BMPs and elimination of structures in such a way to prevent additional flooding from occurring in on-site and off-site areas. The stormwater runoff rate increases due to additional impervious surface, but this is minimal (approximately 2 cfs). With the implementation of Low Impact Development (LID), BMPs designed to add volume for retention of stormwater, reduce peak flow rates and/or reduce on-site flow velocities, the overall runoff rate will not significantly impact hydraulic capacity of the downstream system.

Temporary Impacts (Construction)

During construction, drainage patterns could be rerouted and potentially alter the rate of runoff to different discharge points within the site. However, with implementation of general construction site water quality BMPs, the rate will be controlled to avoid on- and off-site flooding. The SWPPP will outline the steps to comply with the terms and conditions of the CGP to protect water quality by implementing BMPs to stabilize the site, protect slopes and channels, reduce impervious surfaces and promote infiltration, control the perimeter, protect receiving waters adjacent to the site, follow pollution prevention measures, minimize the area and duration of exposed soils during the construction of the Project and result in less than significant impacts.

Permanent Impacts (Operations)

Additional impervious surface area could increase stormwater runoff and has the potential to result in on- and off-site flooding. These industrial parcels are currently operating as equipment storage yards with compacted soils. Under the Build Alternative and all design options, the unpaved areas would be incorporated into the project's surface parking lot. The proposed Project will result in an additional 45,000 square feet of impervious area that will have an incremental increase of an estimated 2 cfs. The proposed Project would result in a minor increase in a stormwater runoff rate of 2 cfs, which is not anticipated to result in significant impacts to site hydraulics. Moreover, the design of the station improvements, including new structures, would maintain onsite existing drainage patterns so that the rate of surface runoff would not increase and result in additional flooding of both onsite and off-site areas compared to existing conditions resulting in less than significant impacts.

The existing site is served by a 42-inch storm drain that exits the site. This storm drain ultimately flows into a box culvert under the current Riverside-Downtown Station that parallels the western border of the site. The existing runoff from the site and surrounding areas have been estimated at 42 cfs for the 10-year storm and 67 cfs for the 100-year storm events. The 42-inch storm drain has an ultimate capacity of up to approximately 107 cfs, which would be adequate capacity for the additional 2 cfs resulting from the Project; however, the proposed Project would address the additional 2 cfs increase through implementation of BMPs. Less than significant impacts are anticipated.

(c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would:

iv. Impede or redirect flood flows

Less Than Significant Impact. The proposed Project is in or within the vicinity of an existing 100-year floodplain (Zone AE) that is part of the Middle Santa Ana River Watershed, which ultimately flows into the Santa Ana River through Prado Dam. The floodplain offers flood storage for the Santa Ana River to spread out and accommodate temporary storage of flood water, which reduces the erosion potential and flood peaks. Based on the FEMA FIRM, the 100-year BFE for the project site is approximately 886 feet.

Temporary Impacts (Construction)

The existing site is between 5 and 13 feet under the BFE, and all construction activities will be below this level. The construction activities include minor grading activities and temporary rerouting of existing drainage patterns and systems. The risk of redirecting flood flows is not significant because the project site is located within the end of a flood zone. Activities that could potentially alter flood flows include the substantial amount of import and stockpile of fill material on-site that could redirect flows outside of the floodplain; however, the proposed Project would not import or stockpile a significant amount of fill material on site and the flood storage volume under the BFE will remain the same. Less than significant impacts are anticipated.

Permanent Impacts (Operations)

Given that the proposed Project is within the 100-year floodplain, completely avoiding floods cannot be achieved; the existing station and surrounding buildings would be inundated during the 100-year flood event. With the addition of the tracks, platform and extended pedestrian bridge, these structures would be under water if the 100-year flood event occurred. Compared to existing conditions, the likelihood of flooding would be similar or reduced under post-project conditions.

Construction of additional structures within the floodplain would add mass within the BFE and could potentially alter or expand the floodplain to adjacent structures; however, the additional mass is minimal compared to the overall floodplain volume and the mass taken out from the floodplain due to the removal of buildings. The Build Alternative and all design options would be removing the Prism Aerospace buildings and ancillary structures, which will remove obstructions within the floodplain, which will improve or maintain existing flooding patterns in the BFE. A noise barrier has been recommended on the east side of the station per the Noise Study Report (Helix, 2021). This barrier would minimize impacts to the water surface and would not significantly obstruct flow given its alignment with the overall topography of the site. Due to its much narrower footprint and alignment, its impact to the floodplain would be much less than that of the existing buildings that are to be demolished. It is expected that the removal of the Prism Aerospace buildings along with reconstruction of the site under the Build Alternative and all design options would maintain the existing ground levels for the majority of the site; therefore, project features would not result in a significant encroachment and would have a positive effect on the overall floodplain as the proposed site elevation where the buildings are to be demolished would be below the BFE.

Given that the existing train station is within the flood zone and that a net increase of mass will not be constructed under the BFE, the proposed Project would not result in significant floodplain encroachment and result in a net positive effect on the overall floodplain as the proposed site elevation is below the BFE and large structures that currently impede flows would be removed. As previously shown on Figure 3.9-1, existing buildings encompass the majority of the westernmost boundary of the floodplain – The Build alternative and all design options proposed the removal of these buildings and conversion of the majority of area to a parking lot which would improve conditions. Improvements at the project site would be designed to maintain similar grades as that of existing grades to the greatest extent possible, which would allow the floodplain to use its current storage area and avoid increasing the BFE. Less than Significant impacts are anticipated.

(d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation, conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant Impact. Due to the City's distance from the ocean, there is no foreseeable risk of tsunami (tidal wave) inundation. Seiches are oscillations in enclosed bodies of water caused by seismic waves. Existing development is subject to hazards from seiches in reservoirs such as Lake Evans at Fairmount Park and other small

waterbodies. Mudflows associated with erosion may also occur in nearby areas. The project site is not located near Lake Evans, which is approximately 1.25-miles away; is not located in a coastal area that is subject to tsunamis; and is not located near the Santa Ana River, Lake Hills, Norco Hills, or Box Springs Mountain area or arroyos that are subject to significant mudflows. The proposed Project is located within a 100-year floodplain which could be inundated during storm events and potentially release pollutants during Project construction and operations if adequate stormwater BMPs are not in place. The following information provides detailed descriptions of the flooding hazards and the BMPs that would be incorporated into the design and construction documents to minimize potential impacts.

Temporary Impacts (Construction)

The proposed Project is within a 100-year existing floodplain, creating a potential to release pollutants if a flood event were to occur during the construction phase of the proposed Project. During a 100-year flood event, the project site would be inundated and potentially release pollutants in the flood waters during construction. Pollutants associated with construction activities typically include gasoline, oil, rubber particles, herbicides, pesticides, paint, adhesives, tar, other chemicals, and other construction-related pollutants such as trash and debris. Because the existing train station is within the floodplain, the risk of release of such pollutants is the same under the Build Alternative as the existing condition. General Construction Permit SWPPP water quality BMPs would be implemented during construction to ensure that pollutants are not released during a flood event. These would include erosion and sediment control BMPs, drain inlet protection, stabilized entrances and exits, appropriate concrete washout placement and vehicle storage location, rain event action plans, etc. With the incorporation of these BMPs, anticipated impacts will be less than significant.

Permanent Impacts (Operations)

The Prism Aerospace building is located within a designated industrial land use; its removal would benefit the floodplain water quality because there would be less hazardous materials that would be released if a flood occurred. The Phase 1 Environmental Site Assessment (Ninyo & Moore, 2018) prepared for the Project, indicates that soil contains PAHs, benzidine, PCE, naphthalene, PCBs, arsenic, and lead. Concentration of these contaminants at some locations could be detrimental to sensitive receptors. The Build Alternative and all design options would pave exposed soil areas to minimize or avoid sources of polluted run-off or contamination from entering the floodplain. The paved site would infiltrate less through the contaminated soils compared to existing conditions and essentially place a cap over the hazardous material.

The proposed Project would construct additional railroad tracks within the vicinity of the station. During a 100-year flood event, the station would be inundated, including existing and proposed railroad tracks containing chemicals associated with railroad ties that could potentially contaminate flood waters. The platform and pedestrian bridge would also be under water and could potentially release hydraulic fluids, which will require certain features such as underground conduits and the elevator system to be sealed from infiltration of flood water and may necessitate the inclusion of flood warning devices.

The railroad, however, is located along the higher side of the project site. Therefore, it should incur minimal inundation longevity during the storm event. Additionally, the track is located over pervious track ballast and sub-ballast (which retain pollutants to protect against their transport into the environment).

Other potential pollutants that could be released during a flood event would originate from project elements such as the parking lot, where parked cars would be submerged. Considering that these sources of potential pollutants already exist within the site (Riverside-Downtown Station), the proposed Project would not increase the risk of releasing pollutants into the floodwaters from the parking lot. Furthermore, removal of existing industrial buildings within the project site would decrease the risk of release of other pollutants and chemicals used in commercial and manufacturing activities associated with these uses.

Compared to existing conditions, the risk of release of pollutants due to inundation would be generally similar to post-project conditions and could potentially reduce the risk of releasing contaminated soil into the watershed; therefore, less than significant impacts are anticipated.

(e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant Impact. The Project is located within the Santa Ana RWQCB planning and management boundaries. Local water management plans must, at a minimum, comply with water quality thresholds and measures as defined by the Santa Ana Basin Plan. The Santa Ana Basin Plan has factors to be considered for establishing water quality objectives as previously shown in Table 3.9-2. Incorporation of construction and permanent BMPs into design plans, would satisfy and address water quality objectives through avoiding and minimizing pollutants entering receiving waters.

Temporary Impacts (Construction)

The proposed Project would be consistent with water quality control plans. In accordance with U.S. EPA requirements, construction sites that would disturb more than 1 acre are mandated to prepare a SWPPP. The Build Alternative and all design options would result in up to 8 acres of ground disturbing activities. A SWPPP will be prepared and implemented that would avoid and minimize stormwater pollution through the implementation of BMPs during construction activities.

As stated in (b), construction excavation activities are limited to depths of up to 10 feet and would not reach groundwater; therefore, the proposed Project would not conflict or obstruct with groundwater management plan. Less than significant impacts are anticipated during construction.

Permanent Impacts (Operations)

The Build Alternative and all design options will add impervious surface area, which, without the implementation of CGP SWPPP stormwater/flow control BMPs, would be inconsistent with the water quality control plan because of the increase in the rate of runoff. However, implementation of General Construction Permit SWPPP BMPs using the County's LID measures would reduce the post design stormwater runoff rate to match the existing conditions and potentially decrease the existing runoff rate. Implementation of these BMPs to reduce the run-off rate to existing conditions would result in consistency with the water quality control plans.

Underlying soils within the project site contain known hazardous contaminants. The Build Alternative and all design options would prevent further contamination of the groundwater by capping existing exposed soil areas so that less water will infiltrate into the contaminated soil. This prevents pollutants from entering groundwater from the surface and reduces the potential for migration of the existing plume by preventing groundwater infiltration into the contaminated area, which is consistent with the goals and policies of the groundwater management plan. Therefore, less than significant impacts are anticipated.

3.9.5. Avoidance, Minimization, and/or Mitigation Measures

No mitigation measures related to hydrology and water quality have been identified because project design features, compliance with the CGP, implementation of a project-specific water quality management plan, SWPPP, and compliance with NPDES permit requirements would eliminate or reduce potential significant impacts related to hydrology and water quality to less than significant. Measures provided in this section summarize avoidance and minimization actions to be conducted by the project proponents to ensure less than significant impacts are avoided or further minimize any impacts.

WQ-1: Proposed grades will remain similar to existing grades and maintain existing flow paths/patterns.

WQ-2: The construction of the paved surface parking lot (under all design options) and implementation of non-infiltration BMPs will be implemented to avoid worsening the existing contamination within the project site. In addition, RCTC will implement the Final Soil Management Plan (as approved by DTSC) to ensure contaminated soils are handled appropriately and avoid potential impacts to groundwater.

WQ-3: Design the on-site storm drain system to connect with the existing 42-inch storm drain system to minimize the amount of flow draining to the low point at Howard Ave/11th Street.

WQ-4: To the greatest extent feasible, maintain existing grades at the project site to allow the floodplain to utilize its current storage area and avoid altering the footprint of the 100-year floodplain. Reduce barriers to flow in floodplain by demolishing Prism Aerospace Structure and placing noise barrier in line with flow direction.

Design of station improvements will follow RCTC design standard requirements within floodplains and coordinated with the City of Riverside and County of Riverside Flood Control.

Certain items such as underground conduits and the elevator system should be designed to be sealed from infiltration of flood water during the final design phase.

The inclusion of flood warning devices may also be required.

The City of Riverside is the Flood Plain Coordinator for this site. Therefore, coordination with the City will be required during the final design phase of the project. During design, a hydraulic study showing the proposed improvements and the impacts to the overall BFE will be required.

WQ-5: During construction of the station improvements, BMPs such as fiber rolls, inlet protection, etc., will be implemented to comply with CGP requirements. Other construction BMPs, as required by local and regulatory agencies, will be implemented by the construction contractor.

As directed by RCTC and/or regulatory agencies, non-infiltration BMPs will be implemented to address additional runoff due to the creation of additional impervious surfaces.

3.9.6. CEQA Significance Conclusion

The Build Alternative, including all design options, would occur within an existing rail station and neighboring industrial development in urbanized downtown Riverside. The Build Alternative and all design options would convert a relatively small permeable area to impervious surface and any potential increases in runoff will be addressed through the CGP SWPPP and the incorporation of permanent water quality BMPs to achieve at least a net-zero run-off rate. Although the Project would be constructed within an existing floodplain, the Project would remove existing impediments within the floodplain and design station improvements similar to existing topography to maintain existing BFE. The Project is anticipated to result in a less than significant impact on hydrology and water quality.

3.10. Land Use and Planning

This section discusses the potential impacts on land use and planning within the project study area resulting from the construction and operations of the proposed Build Alternative and all design options. This section provides a discussion on potential impacts resulting from the construction and operation of the proposed Build Alternative and all design options. Information provided in this section is based on the results of the technical analysis in the *Community Impact Assessment* (CIA) (HNTB, May 2021) prepared for the proposed project.

3.10.1. Regulatory Framework

Applicable policies, laws, and regulations relative to geology and soils are provided herein:

State Requirements

California Government Code (CGC) Section (§) 65300, 65800, and 65450 – State Planning and Zoning Laws. CGC § 65300 requires municipal and counties to develop and implement general plans. CGC § 65450 establishes the development of specific plans governing a particular geographic area, which must be consistent with the general plan governing the same geography. CGC § 65800 establishes that zoning ordinances must be consistent with local, general and specific plans.

Local and Regional Regulations and Plans

Southern California Association of Governments (SCAG) 2020-2045 Regional Transportation/Sustainable Communities Strategy (Connect SoCal). SCAG is a metropolitan planning organization that represents six counties and 191 cities in Southern California. SCAG's 2020-2045 RTP/SCS, titled *Connect SoCal* was adopted on September 3, 2020, and includes the proposed Project (RIV141203). Connect SoCal is a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern. It charts a path toward a more mobile, sustainable, and prosperous region by making connections between transportation networks, planning strategies, and the people whose collaboration can improve the quality of life for Southern Californians.

City of Riverside Climate Action Plan (2016). The City of Riverside has progressively demonstrated its commitment to taking action on the pressing issue of climate change, reducing GHG emissions, and supporting the transition to a low-carbon economy. It is the city's view that actions to reduce GHG emissions represent opportunities to inspire economic development through investment in urban development, infrastructure, mobility systems, and entrepreneurship and includes the following transportation policy goal:

- Transportation and land use measures will reduce single-occupancy vehicle travel, increase non-motorized travel, improve public transit access, increase motor vehicle efficiency, encourage alternative fuel vehicles, and promote sustainable growth patterns.

City of Riverside Master Bicycle Plan (2007) and Update Addendum (2012). The following set of goals, objectives, and policies covers bicycle facility development, bicycle education and encouragement, system maintenance, and regional connections. Goals and applicable policies are as follows:

- Goal 2: Plan for the Needs of Bicyclists
  - **Policy 2.1:** Design all street improvement projects in a comprehensive fashion to include consideration of street trees, pedestrian walkways, bicycle lanes, equestrian pathways, signing, lighting, noise, and air quality wherever any of these factors are applicable (Policy CCM-2.9).
- Goal 3: Eliminate Barriers to Bicycling
  - **Policy 3.1:** Minimize disruption to bicycle facilities during capital improvement and private development construction as well as maintenance activities to facilitate bicyclist safety at all times and provide alternate routes if required.
- Goal 5: Preserve and Sustain Existing Bicycle Infrastructure

Western Riverside Active Transportation Plan (2018). In this plan, goals were formulated to align with state and federal VMT reduction efforts, the Western Riverside Council of Government's Sustainability Framework, and GHG reduction objectives outlined in Riverside County's Climate Action Plan (2019).

The five goals to guide active transportation planning in Western Riverside are as follows:

1. Establish a "regional network of bicycle and pedestrian facilities through prioritization of local projects" to maximize regional mobility as stated in the Sustainability Framework.
2. Enhance safety, remove barriers to access, and correct unsafe conditions in areas of traffic and bicycle/pedestrian activity.
3. Provide active transportation modes as affordable options to reduce criteria pollutants, GHG emissions, and VMT.
4. Address public health through design and infrastructure that encourages residents to use active transportation as a way to integrate physical activity into their daily lives and improve future air quality.
5. Foster healthy; equitable, and economically vibrant communities where all residents have greater transportation choices and access to key destinations such as jobs, medical facilities, schools, and recreation through cohesive land use and transportation decisions.

Though these goals were developed to specifically relate to active transportation, many of the goals are multi-modal in nature and offer co-benefits for all users of the various transportation systems.

RCTC Short Range Transit Plan FY 20/21-24/25. This plan focuses on the regional transit programs administered by RCTC, the vanpool program, known as VanClub, and the commuter rail service operated by the Southern California Regional Rail Authority (SCRRA), better known as Metrolink. Both of these transit programs span the Western Riverside County area. RCTC is also leading the planning efforts for the proposed Coachella Valley-San Gorgonio Rail Corridor, which would extend intercity-rail services from Los Angeles to Palm Springs and Indio. The Secure Real-time Transport Protocol (SRTP) serves as the blueprint for the service improvement plan and capital priorities for the next 5 years. In order to receive local, state, and federal funds for the first fiscal year (FY) of the plan, transit operators in the county submit an updated SRTP annually for the allocation and programming of funds. The SRTP is guided by the overall mission set forth by RCTC and the respective program goals to encourage viable alternative modes of travel. In March 2020, RCTC approved four core mission objectives: 1) Quality of Life; 2) Operational Excellence; 3) Connecting the Economy; and 4) Responsible Partner.

Metrolink Strategic Business Plan (Adopted January 22, 2021). The Strategic Business Plan provides a strategic outlook at key milestones for Metrolink, 5, 10, and 30 years out. The first 10 years of the Strategic Business Plan serve as Metrolink's Short-Range Transit Plan. The strategic outlook is based on the development of scenarios, with both constrained and unconstrained funding scenarios and the common goal to improve performance, reduce over-reliance on Member Agency subsidy and facilitate ridership growth.

Metrolink SCORE Program. Metrolink's SCORE Program is a $10 billion initiative to upgrade the regional rail system to meet the current and future needs of the traveling public. The first phase was awarded $876 million from the State's Transit and Intercity Rail Capital Program (TIRCP) in April 2018, which the Riverside-Downtown Station Track and Platform Project was a recipient of a portion of the grant. The first two phases of capital projects are envisioned to support expanded Metrolink service.

City of Riverside General Plan 2025 (2019). This is a strategic, long-range plan guiding growth to 2025. The General Plan reflects the views of residents that shared their ideas for the future of Riverside and provided input on key land use, social, economic, environmental and cultural issues. This plan provides the direction to create a sustainable, resilient, and livable Riverside and guides decisions and actions, strategic planning, development of projects, and is a means to achieve the City of Riverside's vision.

The City of Riverside General Plan 2025 identifies the city's 28 neighborhoods as the fundamental building blocks within the city and places a high priority on their protection and enhancement. To accomplish this, the general plan land use and urban design element includes a neighborhood plan for each of the neighborhoods. The neighborhood plans are intended to provide more detailed objectives, policies, tools and concepts for each neighborhood. The proposed Project is within the Eastside Neighborhood planning area. The intent of the Eastside Neighborhood Plan is to provide a blueprint to enhance and improve the quality of life in Riverside's Eastside Neighborhood. Table 3.10-1 summarizes the applicable policies from the City of Riverside General Plan 2025, and the Eastside Neighborhood Plan relevant to the proposed Project.

Table 3.10-1. City of Riverside General Plan Applicable Policies

Policy	Policy Text
Circulation Community Mobility Element	
Objective 2	Build and maintain a transportation system that combines a mix of transportation modes and transportation system management techniques and is designed to meet the needs of Riverside's residential system's impacts on air quality, the environment, and adjacent development.
Objective 6	Reduce peak-hour trips, roadway congestion and air pollution.
Objective 9	Promote and support an efficient public multi-modal transportation network that connects activity centers in Riverside to each other and to the region.
Objective 13	Ensure that adequate on- and off-street parking is provided throughout Riverside.
Arts and Cultural	
AC-4.20	Use art in public places, in coordination with landscaping, lighting, paving, and signage, at the City of Riverside's regional and local gateways, freeway corridors, and Metrolink stations to strengthen Riverside's identity as a cultural and arts center for regional visitors.
AC-4.12	Encourage the preservation and rehabilitation of existing cultural facilities in Riverside, such as the Fox Theater.
Public Safety	
PS-3.4	Reduce the risks associated with ground transportation hazards, where feasible.
PS-4.8	Pursue grade-separated rail crossings as the first level priority for reducing street and rail conflicts.
PS-4.10	Use technology to improve safety at grade crossings that cause the least environmental harm, including Quiet Zone improvements such as upgraded and updated warning devices, additional gate arms, extended and raised medians, improved signage, and coordinated traffic signals.
PS-5.1	Enhance and maintain pedestrian safety through the inclusion of well-designed streets, sidewalks, crosswalks, traffic control devices, and school routes throughout the city. Reasonable means of pedestrian accessibility will be an important consideration in the approval of new development.
PS-5.4	Require that new development provides adequate safety lighting in pedestrian areas and parking lots.
PS-10.4	Continue to ensure that each development or neighborhood in the city has adequate emergency ingress and egress, and review neighborhood access needs to solve problems, if possible.
Eastside Neighborhood Plan	
ENP 8.1.4	Encourage new development that promotes pedestrian access through design and orientation.
ENP 8.2.6	Work with RCTC to explore expansion of the number of Metrolink trips, particularly on weekends.

Source: City of Riverside General Plan, 2007 (Amended 2019)

Marketplace District Vision Plan (2019). This plan was adopted in 2019 by SCAG as part of their High-Quality Transit Area (HQTA) Analysis. According to SCAG, a HQTA is an area within easy walking distance to current or anticipated transit service with 15-minute or better headway service. The HQTA Analysis program was created to help implement the goals and objectives of the 2016 RTP/SCS. The 2016 RTP/SCS forecasts that 46 percent of future household growth will be within HQTAs. The Riverside Marketplace was identified as a HQTA by SCAG.

Riverside Marketplace Specific Plan (1991). This plan establishes development standards for the plan area in order to implement the City of Riverside's General Plan with the stated purpose to accomplish the following:

1. Create incentives to redevelop the Riverside Marketplace area.
2. Preserve and enhance historic buildings and elements, especially along Seventh Street.
3. Beautify the entrances to Downtown and University Avenue.
4. Provide additional commerce and employment opportunity for the Eastside community.
5. Complement the redevelopment efforts occurring within the Downtown area.

The Riverside Marketplace Specific Plan area is generally bounded by the SR 91 freeway to the west, 14th Street to the south, Park Avenue to the east and 3rd Street to the north. Within this specific plan area, eight sub-area plans with specific goals, objectives and land uses have been adopted by the City of Riverside. The project site is entirely located within the Marketplace Industrial Park sub-area.

3.10.2. Methodology for Evaluating Environmental Impacts

The analysis of the proposed Project's potential impacts to land use and planning considers potential project effects within the study area related to construction and operations of the Project.

The potential land use and planning impacts were qualitatively evaluated based on the compatibility of the Project with existing land use, the consistency of the project with local plans and policies, and the potential for growth beyond what is projected. Significance thresholds are used to determine whether a project may have a significant environmental effect. The following information considers significance thresholds, as defined by federal and state regulations and guidelines:

- Direct impacts would occur when temporary construction easements (TCEs) are required for construction of the Project. Direct impacts would be considered permanent if they would physically divide existing communities through the new construction of a physical barrier or extension of an existing barrier.
- Indirect impacts are typically further in time or at a different location and may occur as a result of the Project altering regional development. These can occur permanently or temporarily, for example, construction of the Project resulting in localized changes to land use patterns or growth patterns that were not outlined in local and regional planning.

3.10.3. Affected Environment

Existing Land Use Patterns

An analysis of existing land use patterns within the project study area characterizes where residents live, work, and recreate. The varied existing land uses within the project study area include medium-density residential (single- and multi-family units), commercial, public facilities, industrial, parks/open space, transportation, mixed-uses, recreation, and areas under construction. The surrounding area contains several destination sites, including the Mission Inn Historic District, Riverside-Downtown Metrolink station, schools, and County of Riverside offices (to the west of the project study area). Medium-density residential land uses are clustered east of the study area, while commercial and industrial uses line the SR 91 freeway. Mixed-use development is interspersed along the University Avenue corridor. This mixture of land uses is conducive to high-transit activity between points within the study area and the Riverside-Downtown Station. Local land use plans and policies in the City of Riverside are supportive of establishing communities that integrate transit and other alternative modes of transportation into the fabric of planned development.

Table 3.10-2 shows the land uses within the study area. Figure 3.10-1 illustrates the existing land uses within the study area.

Table 3.10-2. Existing Land Uses in CIA Study Area

Land Use Designation	Acres	Percent
Medium Density Residential	114.2	32%
Commercial	88.4	25%
Industrial	29.2	8%
Park/Open Space	5.5	2%
Mixed Use	4.9	1%
Public Facilities	2.4	1%
Other	Various	31%

Source: City of Riverside General Plan (Open Data Version), 2019
% = percent

The project site is located almost entirely within an area designated as commercial and industrial uses; however, there are two single-family residences on industrial designated land located at the northwest corner of Howard Avenue and 12th Street. The area, to the north of the project site, south of 9th Street is designated for industrial and commercial uses; however, there are non-conforming multi-family residential buildings predating the adoption of the current City of Riverside General Plan Land Use map as depicted on Figure 3.10-1.

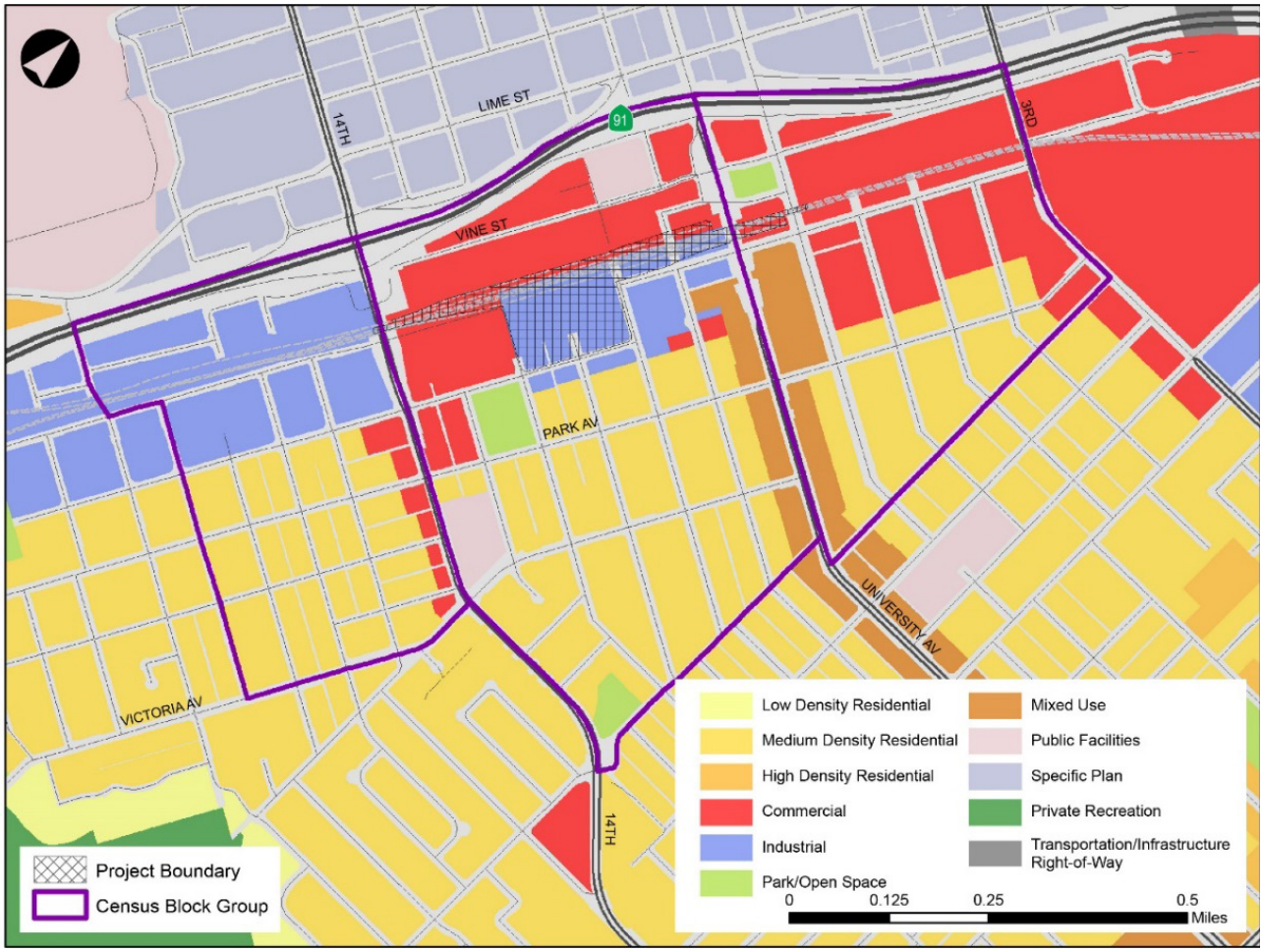

Figure 3.10-1. Existing Land Uses in Project Vicinity

Source: City of Riverside General Plan (Open Data Version), 2019; U.S. Census Bureau, 2019

Future Land Use

The project study area is urbanized with limited open space areas where new development could occur. Recent development trends in the Community Impact Assessment (CIA) study area consist mostly of infill development and a few land development projects within vacant lots. According to the City of Riverside General Plan 2025, there are a total of five projects in various stages of development within the CIA study area. These related projects consist of residential and institutional land uses, as summarized in Table 3.10-3. Figure 3.10-2 illustrates the location of these projects.

Table 3.10-3. Land Use Development Near the Project Site

No.	Project Type	Project Description	Status
1	Junior/Community College Conditional Use Permit for new Vocational/Technical School 3550 Vine Street	Expand Brandman University to occupy approximately 10,000 square feet of existing office space in the building complex. Construction of 8 classrooms, 11 offices, 1 conference room, and 1 lunchroom.	Completed
2	Mid-Rise Multifamily Housing Mission Lofts Apartment Complex 3050 Mission Inn Avenue	Construction of a transit-oriented development consisting of 212 residential units, 640 square feet of commercial uses, and 315 parking spaces.	This project was completed in 2019
3	Multifamily Low-Rise Affordable Housing Development 2719 11th Street	Construct eight affordable multi-family residential units.	Status unknown
4	Vine Street Mobility Hub between Vine Street and 9th and SR 91 Freeway	Construct up to 18 bus bays and a design that incorporates the latest technology in preparation for RTA's zero-emission bus deployment. The hub will also include seating, shelters, security features, a driver's lounge, drought tolerant landscaping, and integration with the City of Riverside's bike lanes.	The RTA Board of Directors has approved a conceptual plan for a mobility hub on 5 acres across from the Riverside-Downtown Metrolink Station. With this conceptual plan approved, RTA will move into the project's architectural and engineering phase.
5	Lincoln Continuation High School expansion or modification.	The Riverside Unified School District proposes to develop a TK-6 school with 31 classrooms to serve the Eastside Neighborhood. Three options will be reviewed under CEQA. All would require vacating Park Avenue between 13th and 14th Streets, and acquisition of 25 parcels in Block B and C, totaling 4.27 acres. The proposed project would involve demolition of the existing structures on the acquired parcels and construction of about 67,300 to 71,000 square feet of building space depending on the option.	The NOP of the Draft EIR was published on 5/10/21, a scoping meeting was held on 5/19/21 and the scoping period ended 6/10/21.

RTA = Riverside Transit Authority

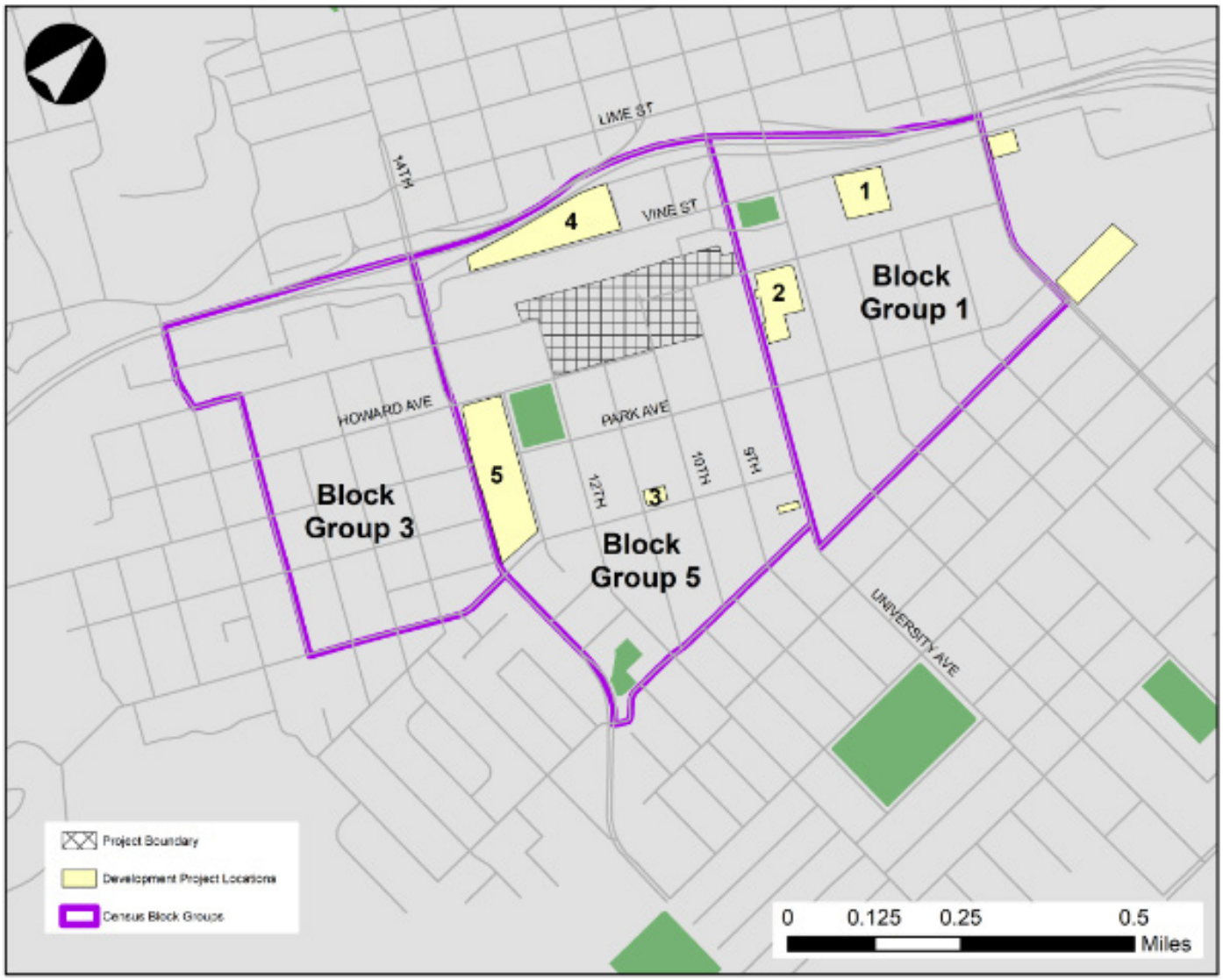

Figure 3.10-2. Development Project Locations

3.10.4. Environmental Impacts and Consequences

CEQA Thresholds of Significance for Land Use and Planning

In accordance with the *2021 CEQA Statute & Guidelines, Appendix G, Environmental Checklist Form, XI. Land Use and Planning,* Issues (a) and (b), the proposed Project would result in impacts to land use and planning, if the construction or operations of the proposed Project would result in any of the conditions listed in the following table.

The discussion below includes the CEQA checklist for land use and planning and the discussion that follows provides the rationale for the following significance determinations:

- No Impact
- Less than Significant Impact
- Less than Significant Impact with Mitigation
- Potentially Significant Impact

Would the project:

Question	CEQA Determination
(a) Physically divide an established community?	No Impact
(b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	Less Than Significant Impact

(a) Physically divide an established community?

Temporary Impacts (Construction)/Permanent Impacts (Operations)

(a) No Impact. Construction activities would not temporarily divide an established community as access would be maintained during construction of the Build Alternative and design options 1A, 1B, 2A, 2B, 3A, and 3B.

Although railroad tracks are considered a barrier that could physically divide a community, the additional tracks proposed under the Build Alternative would be constructed along the existing BNSF railroad corridor and adjacent to the existing Riverside-Downtown Station; the Build Alternative and design options would not create a new barrier that would physically divide an established community as the new railroad tracks would be constructed within an area designated for transportation uses and BNSF operational ROW. Given that the Build Alternative and all design options would construct station improvements along an existing railroad facility and that station improvements incorporate features that would enhance access and connectivity, the proposed Project would not physically divide an established community or expand on an existing physical barrier. Therefore, there would be no impact.

(b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Temporary Impacts/Permanent

Less Than Significant Impact. The Build Alternative and all design options improve train service, operations and accessibility consistent with the following plans, policies, and regulations adopted for the purpose of avoiding or mitigating environmental effects:

- SCAG 2020-2045 RTP/SCS (Connect SoCal)
- City of Riverside Climate Action Plan (2016)
- City of Riverside Master Bicycle Plan (2007 and Addendum 2012)
- Western Riverside Active Transportation Plan (2018)
- RCTC Short Range Transit Plan FY 20/21 to 24/25
- Metrolink Strategic Business Plan (2021)
- Metrolink SCORE Program
- City of Riverside General Plan (2025)
- Marketplace District Vision Plan (2019)
- Riverside Market Specific Plan (1991) Local Tree Ordinances:
- County of Riverside Tree Removal Ordinance No 559
- The City of Riverside's Urban Forestry Policy (2015)
- Western Riverside County Multiple Species Habitat Conservation Plan (2003-2004)
- Riverside County Hazardous Waste Management Plan
- Citywide Design Guidelines and Sign Guidelines (adopted November 2007)
- SCAQMD: Rule 402: Nuisance and Rule 403: Fugitive Dust
- Title 20 of the Riverside Municipal Code: designation and preservation of cultural resources

The Build Alternative and all design options would be built within railroad ROW and in areas designated for industrial use. The characteristics of the improvements (pedestrian bridge, additional platform and track, and expanded parking lot) are intended to complement an existing passenger train station and would require the conversion of industrial facilities, two single-family and multi-family residences on land designated for industrial or commercial use to transportation uses. Additionally, Design Options 2A, 2B, 3A, and 3B (Howard Avenue extension) would vacate existing local roadways and incorporate segments of 10th Street and Commerce Street as part of the proposed station parking lot expansion. Table 3.10-4 shows the existing land uses that would be converted to transportation uses and/or incorporated into the Riverside-Downtown Station by design option. Land use conversion required by the Build Alternative range between 6.95 acres and 9.18 acres, depending on the design option. The Build Alternative and all design options would affect existing residential, industrial, transportation, and public facilities located on areas designated for industrial use.

Table 3.10-4. Land Use Impact Comparison

Existing Land Use	Build Alternative Land Use Permanent Impacts by Design Option (Acres)					
	1A	1B	2A	2B	3A	3B
Residential (Single-Family)	0.37	0.05	0.37	0.05	0.37	0.05
Residential (Multi-Family)	0	0	0.37	0.37	0	0
Industrial	6.9	6.9	7.67	7.67	6.9	6.9
Transportation ROW[1]	0	0	0.77	0.77	0.61	0.61
Public Facilities (Parking Lot)[2]	0	0	0	0	0.65	0.65
Total	**7.27**	**6.95**	**9.18**	**8.86**	**8.53**	**8.21**

1. Transportation land uses consist of local roadways (10th Street and Commerce Street) that would be incorporated into the Riverside-Downtown Station.
2. Design Option 3A and 3B requires a small portion of the existing Riverside-Downtown Station overflow parking lot to be converted to a roadway to connect to 9th Street.

According to the Riverside Marketplace Specific Plan and Environmental Impact Report (City of Riverside, 1991), the project site is located within the Marketplace Industrial Park sub-area, which allows development related to "passenger train, bus terminals and parking lots uses. The Build Alternative with all design options would expand passenger train facilities and the parking lot within the Marketplace Industrial Park sub-area. Although the proposed Project would reduce industrial land uses within the area, this conversion to transportation uses is consistent with the permitted uses identified in the Riverside Marketplace Specific Plan resulting in a less than significant impact.

In addition to the conversion of industrial uses, existing residential properties would be converted to transportation uses; two existing residential properties at the intersection of Howard Avenue and 12th Street, and two existing multi-family units located along 9th Street are inconsistent with the City of Riverside's land use plan because these residential properties are located in an area designated for industrial uses. These existing homes were constructed prior to the adoption of the current City of Riverside General Plan and Marketplace Specific Plan and are currently considered as non-conforming land uses. Conversion of these residential properties would conform to local plans because the properties would be converted to permitted land uses (passenger train and parking lot uses) resulting in less than significant impacts.

Depending on the design option, some existing residential properties would not be affected and would remain inconsistent with the City of Riverside's land use plan after the implementation of the Build Alternative. Indirect Impacts (Operations)

No Impact. Indirect impacts (e.g., changes in regional development and growth-related changes) to land use patterns are not anticipated with implementation of the Build Alternative. Parcels subject to ROW acquisition are located within an urbanized area containing few vacant parcels. It is possible that the presence of an expanded train station could result in localized changes to adjacent land parcels; however, the post-project land use pattern is expected to conform to existing land use plans because of the scarcity of available vacant parcels and adherence of land developers to conform with the City of Riverside's land use and zoning requirements. Hence, implementation of the Build Alternative and any of the design options would not result in indirect impacts on land use.

To the greatest extent practicable, the project design of the Riverside-Downtown Station improvements will be carried out to minimize ROW impacts and adhere to RCTC and Metrolink design and operational criteria to maintain a safe train station facility. During final design, efforts will be undertaken to further minimize construction and operational impacts to existing and planned land uses. Based on the scale of this project and its consistency with adopted local plans and compatibility with adjacent land uses (existing station, industrial and commercial), the Build Alternative and all design options would not result in indirect significant or adverse effects to land use plans.

The proposed Project would not cause a significant environmental impact, either directly or indirectly, due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect; therefore, there would be less than significant impact.

3.10.5. Avoidance, Minimization, and/or Mitigation Measures

The proposed Project is compatible with the existing pattern of land use and development in the study area. Project elements are consistent with adopted land use plans, policies, and regulations of the applicable local and regional jurisdictions. Therefore, the project will not result in substantial or adverse effects related to land use and no avoidance, minimization, and/or mitigation measures are required.

3.10.6. CEQA Significance Conclusion

The Build Alternative, including all design options, would occur within an existing rail station and neighboring industrial development in urbanized Downtown Riverside. Although the project is within general and specific plan areas, construction and operations of the Project would not result in significant direct or indirect impacts to land use patterns or local and regional planning. The Project would have a less than significant impact to land use and planning.

3.11. Noise and Vibration

This section discusses the potential noise and vibration impacts with in the study area resulting from the construction and operations of the proposed Build Alternative and all design options. Information provided in this section is based on the results of the *Noise and Vibration Technical Report* (Helix Environmental Planning, Inc., July 2021) prepared for the proposed Project provided in Appendix N.

3.11.1. Regulatory Framework

Applicable policies, laws, and regulations relative to geology and soils are provided herein:

Federal Regulations

Federal noise and vibration impact assessment methodology is defined in the FTA *Transit Noise and Vibration Impact Assessment* Manual (FTA, 2018). This guidance manual establishes impact criteria for noise and vibration, defines sensitive receivers, and provides methodology for assessing impacts to transit projects seeking federal funds. This manual also includes prediction procedures and impact criteria for noise and vibration from construction.

State Requirements

The state of California does not provide specific limits for noise and vibration from transit projects; rather, CEQA provides a checklist of issues, included in the *2021 CEQA Statute & Guidelines, Appendix G, Environmental Checklist Form, XIII. Noise,* to evaluate potential noise and vibration impacts. The guidelines provide a list of questions that can be used to determine whether a project would generate an impact on a specific issue area related to noise and vibration.

Local Regulations

The *City of Riverside General Plan* regulates new uses and development (City, 2007). The Noise Element provides noise and land use compatibility guidelines that show a range of noise standards for various land use categories. These standards are shown on Figure 3.11-1, Noise/Land Use Compatibility Criteria on the following page.

The City of Riverside's Municipal Code regulates the exterior and interior noise levels for land use categories. Noise standards have been established for each land use category with corresponding noise limits and time periods. According to Section 7.35.020 of the City's Municipal Code, construction noise sources are exempt from City requirements, shown in Table 3.11-1 and Table 3.11-2, if construction does not take place between the hours of 7:00 p.m. and 7:00 a.m. on weekdays, between the hours of 5:00 p.m. and 8:00 a.m. on Saturdays, or at any time on Sunday or a federal holiday.

Table 3.11-1. City of Riverside Exterior Noise Standards

Land Use Category	Time Period	Noise Level
Residential	Night (10 p.m. to 7 a.m.)/ Day (7 a.m. to 10 p.m.)	45 dBA/ 55 dBA
Office/Commercial	Any time	65 dBA
Industrial	Any time	70 dBA
Community Support	Any time	60 dBA
Public Recreation Facility	Any time	65 dBA
Non-urban	Any time	70 dBA

Source: City Municipal Code Table 7.25.010A (City 2019)

dBA = A-weighted decibels

Table 3.11-2. City of Riverside Interior Noise Standards

Land Use Category	Time Period	Noise Level
Residential	Night (10 p.m. to 7 a.m.)/ Day (7 a.m. to 10 p.m.)	35 dBA/ 45 dBA
School	7 a.m. to 10 p.m.[1]	45 dBA
Hospital	Any time	45 dBA

Source: City Municipal Code Table 7.30.015 (City 2019)

[1.] Hours are while school is in session.

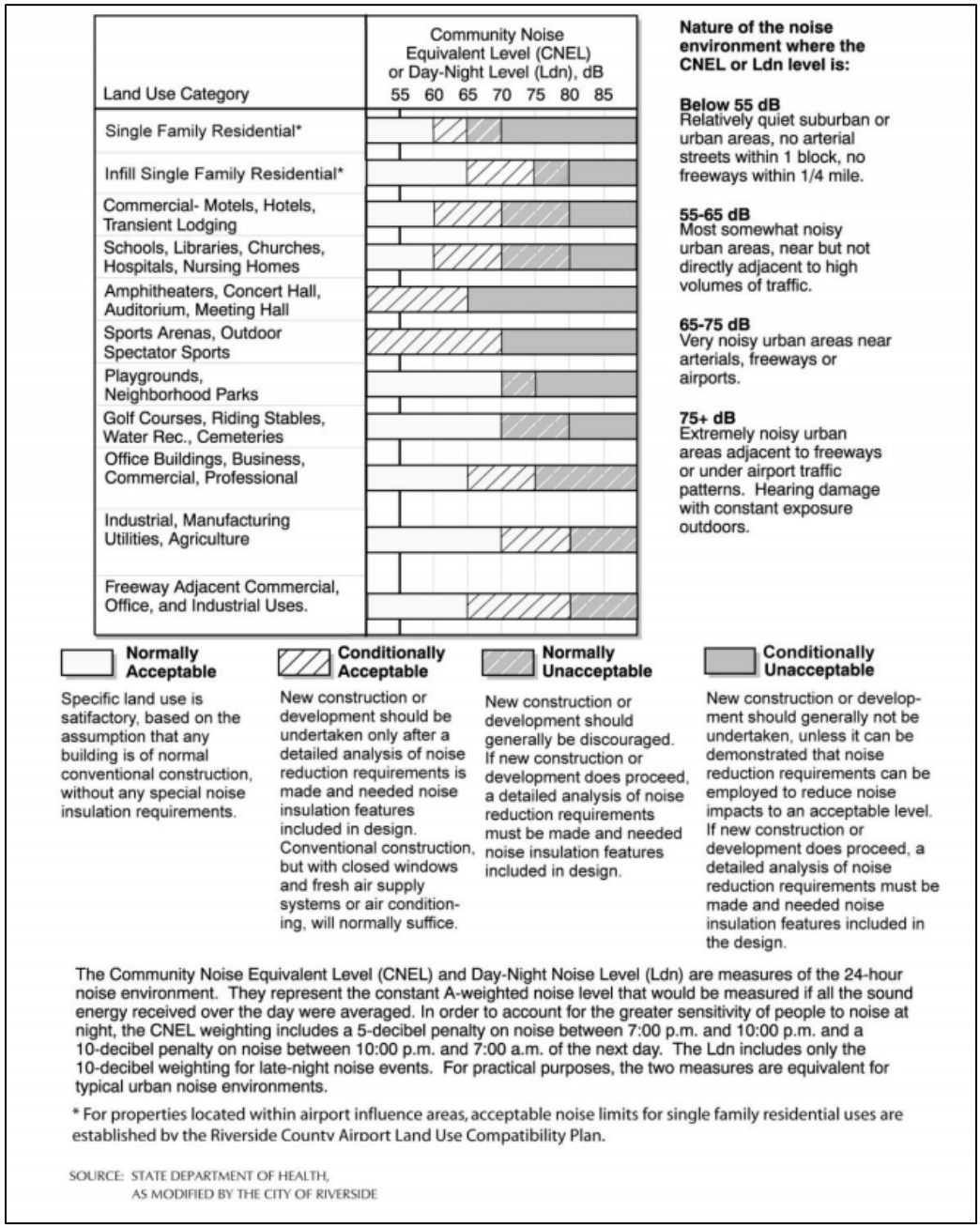

Figure 3.11-1. Noise/Land Use Compatibility Criteria

3.11.2. Methodology for Evaluating Environmental Impacts

FTA Noise and Vibration Impact Assessment

CEQA does not provide specific limits or impact criteria for noise and vibration to evaluate the checklist of issues stated in Appendix G of the CEQA Guidelines, XIII. Noise. However, a provision in the CEQA guidelines allows the lead agency to use "applicable standards of other agencies" to evaluate the proposed Project's potential noise and vibration impacts. For the Riverside-Downtown Station Improvements Project, FTA's Transit Noise and Vibration Impact Assessment (FTA, 2018) is utilized to establish impact criteria for noise and vibration, define sensitive receivers, and provide methodology for assessing impacts during construction and operation of the proposed Project.

Construction Noise

No standardized criteria have been developed by the FTA for assessing construction noise impacts. The FTA recommends the following criteria for determining whether a detailed assessment of construction noise is warranted, and it provides two analysis and assessment options. This analysis compares the combined construction equipment noise to identify locations where noise may exceed the criteria as specified in Table 3.11-3. If these criteria are exceeded, there may be adverse community reaction.

Table 3.11-3. Detailed Analysis Criteria for Construction Noise

Land Use	8-Hour L_{EQ} (dBA) Day	8-Hour L_{EQ} (dBA) Night	L_{DN} (dBA) 30-Day Average
Residential	80	70	75
Commercial	85	85	80
Industrial	90	90	85*

Source: FTA 2018

L_{EQ} = peak hour noise equivalent level
L_{DN} = day night average sound level
* 24-hour L_{EQ}, not L_{DN}

Vibration

The FTA specifies human annoyance criteria to assess potential construction vibration impacts. Table 3.11-4 describes the FTA's ground-borne vibration and ground borne noise impact criteria for general assessment. For the purposes of this project, the general assessment criteria would be applicable to construction vibration. The impact criteria for general assessment are based on the vibration-sensitive land use categories. Normal construction activities would be considered infrequent events, and nearby residences would be considered Category 2 land uses as shown in Table 3.11-4. Separate criteria are used to assess potential structural damage due to construction. Table 3.11-5 describes the FTA's vibration criteria for four building/structural categories.

Table 3.11-4. Ground-Borne Vibration and Ground-Borne Noise Impact Criteria for General Assessment

Land Use Category	Frequent Events[1]	Occasional Events[2]	Infrequent Events[3]	Frequent Events[1]	Occasional Events[2]	Infrequent Events[3]
Category 2: Residences and buildings where people normally sleep	72 VdB	75 VdB	80 VdB	35 dBA	38 dBA	43 dBA

Source: FTA 2018

1. Frequent Events are defined as more than 70 vibration events of the same source per day
2. Occasional Events are defined as between 30 and 70 vibration events of the same source per day
3. Infrequent Events are defined as fewer than 30 vibration events of the same kind per day pounds/day.

* Impact Levels (velocity in decibels [VdB] re 1 micro-in/sec)
** Impact Level (dB re 20 micro Pascals (mPa)

Table 3.11-5. Construction Vibration Damage Criteria

Building/Structural Category	PPV (in/sec)	Approximate L_v[1]
I. Reinforced concrete, steel, or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

Source: FTA 2018

[1.] RMS (root-mean-square) VdB (vibration velocity levels) re 1 micro in/sec

PPV = peak particle velocity
LV = vertical vibration velocity level

Vibration impacts to people at existing residential land uses would be substantial if construction of the Project leads to an increase in vibration levels exceeding the impact levels shown in Table 3.11-4.

Vibration impacts to structures would be substantial if construction of the Project leads to an increase in vibration levels exceeding the impact levels shown in Table 3.11-5.

Operational Noise

The FTA provides different operational noise criteria for different scenarios and land uses. Noise impact criteria can be assessed for projects that generate new sources of transit noise and for projects that propose changes to an existing transit system. The proposed project would involve modifications to an existing transit facility; therefore, the impact criteria for that scenario is used for the proposed Project. Three land-use categories are identified by the FTA for impact assessment. For Category 2 land uses (residential areas where people sleep), noise exposure is characterized using L_{DN}. For Category 1 and Category 3 land uses (areas with primarily daytime use), noise exposure is characterized using the peak hour L_{EQ}, which is a time-averaged sound level over the noisiest hour of transit-related activity.

The FTA noise impact criteria are represented by a sliding scale based on existing noise exposure and land use of sensitive receivers. The basic concept of the FTA noise impact criteria is that more project noise is allowed in areas where existing noise is higher. However, in areas where existing noise exposure is higher, the allowable increase above the existing noise exposure decreases. FTA defines two levels of noise impact: moderate and severe. In accordance with FTA guidance, mitigation to reduce noise levels must be considered for both degrees of impact. Figure 3.11-2, Allowed Increase in Noise Levels (Category 2 Land Uses) and Figure 3.11-3, Allowed Increase in Noise Levels (Category 3 Land Uses) depict the amount of project-added noise that is allowed for Category 2(e.g. residences) and Category 3 land (e.g., parks).

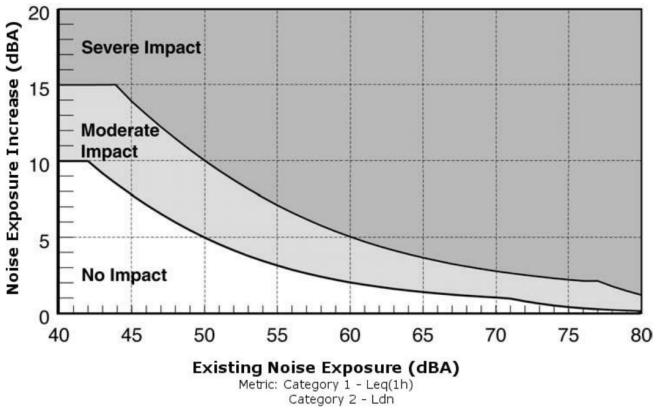

Figure 3.11-2. Allowed Increase in Noise Levels (Category 2 Land Uses)

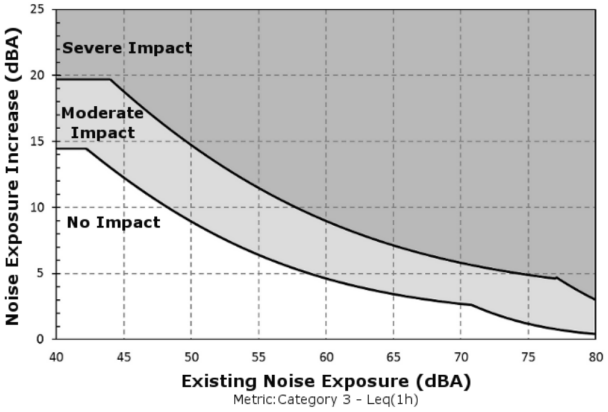

Figure 3.11-3. Allowed Increase in Noise Levels (Category 3 Land Uses)

For residential land uses, the noise criteria are applied outside the building locations at noise-sensitive areas with frequent human use, including outdoor patios, decks, pools, and play areas. If none of these areas are present, the criteria should be applied near building doors and windows. For parks and other significant outdoor use, the criteria are applied at the property line.

3.11.3. Affected Environment

Project Location and Setting

The project site is located at the existing Riverside-Downtown Station and near the SR 91 freeway. The project site is surrounded by existing residential, commercial, and industrial development. Adjacent land uses to the project site include single-family residences to the east, industrial uses and Lincoln Park to the south, commercial uses to the west, and industrial and residential uses to the north. Other nearby land uses in the vicinity include churches and vacant lots.

Existing Noise Environment

Six measurements were taken in and around the project site for the ambient noise survey. Measurements were conducted to assess the general noise conditions of the site, gain insight on noise sources, and to gather specific measurements throughout the project vicinity. Nearby land uses and measurement locations are illustrated on Figure 3.11-4.

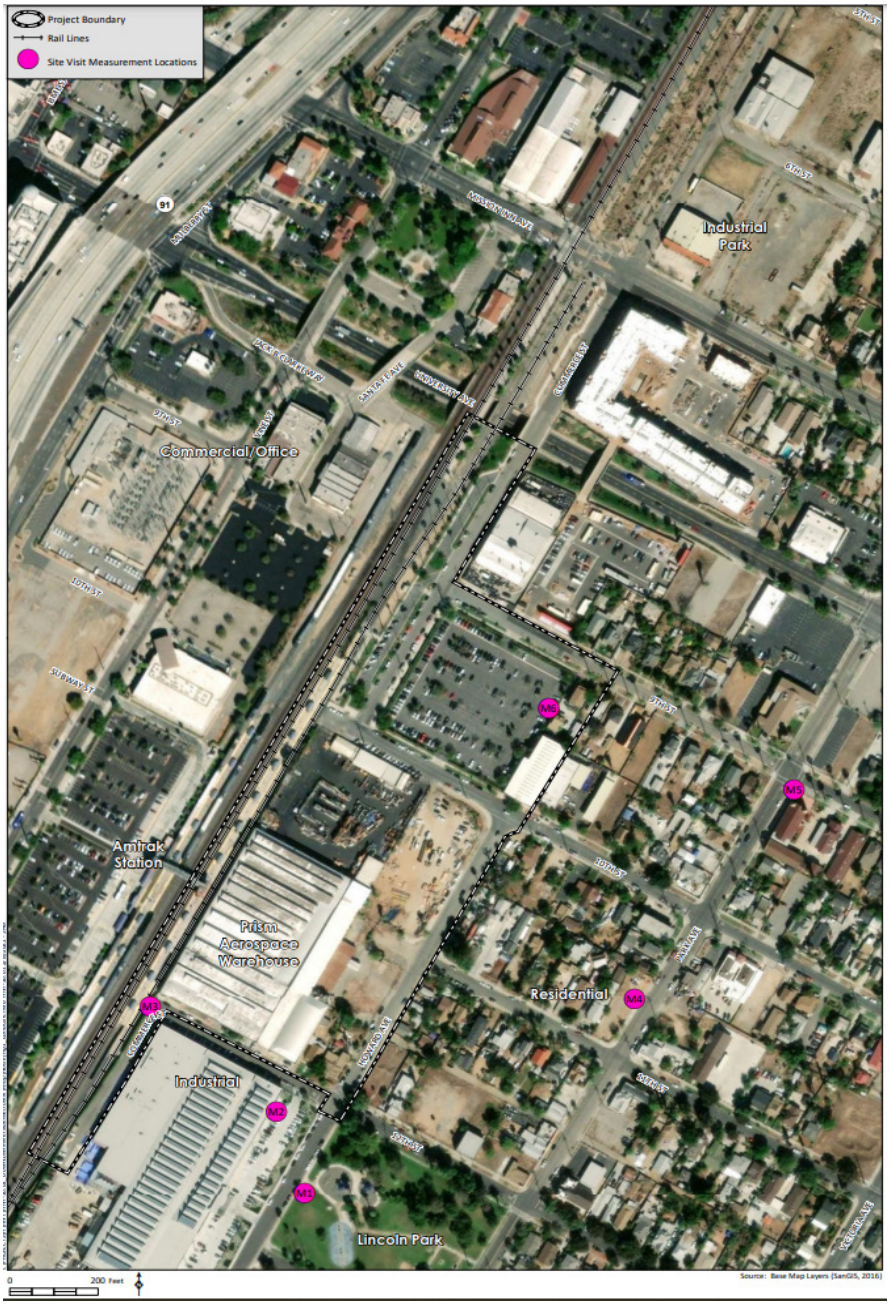

Figure 3.11-4. Nearby Land Uses and Site Visit Measurement Locations

Existing Noise Sources

Railroad Noise. Noise sources from the existing railroad include passenger and freight trains. Train noise occurs during both daytime and nighttime hours, and noise levels from 24-hour train operations are incorporated into the noise analysis. The Riverside-Downtown Station serves multiple passenger trains, including Amtrak's daily Southwest Chief and Metrolink's commuter rail. Passenger train modeling is based on Metrolink train schedules used prior to the COVID-19 pandemic (Metrolink, 2018) and two daily Amtrak trains. Passenger train data used to assess potential noise includes future passenger train traffic. Future passenger train traffic includes the Riverside Line, 91/PV Line, and IEOC Lines. Per Metrolink's *Strategic Business Plan* (Metrolink, 2021), future train traffic for Year 2050 includes 40 trains for 91/PV Line and 42 trains for IEOC. Although the *Strategic Business Plan* did not include Year 2050 estimates for the Riverside Line, RCTC's *Short Range Transit Plan FY 20/21- 24/25* (RCTC, 2020) indicates that up to 16 trains would service the Riverside-Downtown Station by 2025. It has been assumed that an additional six trains could be in operation by 2050 for a total of 22 for the Riverside Line.

Moreover, the analysis assumed an increase in Amtrak trips from the existing two trains to four trains in future Year 2050 conditions. Future year conditions have been assumed in the analysis to ensure that potential noise impacts are

adequately addressed, and, if noise impacts are identified, effective noise abatement measures could be incorporated into the design to reduce future noise levels.

Although train pass-bys from passenger trains can be as low as 30 per day, the noise analysis conservatively assumes 108 passenger trains per day with a maximum of six trains in a given hour, each with one engine and five cars. Because passenger trains would stop at the Riverside-Downtown Station, passenger trains are modeled as traveling at an average speed of 15 miles per hour.

Detailed freight train schedules are not publicly available, but they are estimated to range from 60 to 126 pass-bys per 24-hour period. Based on observations during the site visit, it was noted that approximately three trains passed the Project each hour. In addition, freight trains utilize an average of two engines and 100 cars. This analysis assumes three freight trains pass the project site per direction in a given daytime hour. During nighttime hours from 10:00 p.m. to 4:00 a.m., one freight train per hour was assumed for a total of 126 freight trains over a 24-hour period. Although they may travel at varying speeds, freight trains were conservatively modeled at approximately 50 miles per hour.

Vehicle Traffic. Vehicular noise in the project vicinity consists of traffic on local roadways and vehicles traveling along SR 91. Traffic volume data along local roadways were derived by the Project's Traffic Impact Analysis (TIA) (HNTB, 2020). Existing traffic volumes were calculated in the TIA from traffic counts for each roadway in the project vicinity. Project trip generation for the Project was calculated for the future parking lot expansion. Future traffic levels on nearby roadways accounted for additional project traffic minus the trips generated by the existing Prism Aerospace warehouse use in the building that would be demolished. The net project trips are incorporated into this analysis.

Although an ambient noise site survey was conducted at the Project and in the project vicinity, the existing noise conditions are not defined by these measurements. A noise model was created to establish the existing conditions of the proposed Project in the typical noise environment. The Project's NOP was published in January 2020 and existing conditions should reflect the noise environment at the project site as they existed at the time of the issuance of the NOP. In March 2020, a state of emergency was ordered in response to the COVID-19 pandemic, which imposed significant restrictions on several public and commercial activities. Following that declaration, commuting patterns and traffic levels have been altered, typically resulting in reduced vehicular use and traffic throughout the state at the time the noise analysis commenced. To ensure an accurate and conservative noise analysis, vehicle traffic volumes prior to the COVID-19 pandemic were utilized to assess existing and future noise conditions.

Freight and passenger train services, due to their proximity to nearby residences, are a source of a substantial amount of existing noise and were largely unchanged during the COVID-19 pandemic. However, vehicular noise, particularly along SR 91, also contributes to ambient noise within the project vicinity. Noise level measurements conducted during the December 2020 noise survey are expected to be substantially lower than noise levels at the time of the NOP's publication. A noise model was created to approximate the existing ambient noise conditions of the project vicinity to present a fair and accurate description of the Project's environmental impacts. Noise sources were applied to the model to approximate transportation noise from vehicle and train traffic.

Using the noise model methodology to estimate existing conditions results in higher existing noise levels than the December 2020 ambient noise survey. This generally results in more conservative noise impact conclusions, as the FTA thresholds for areas affected by higher existing noise levels are more restrictive.

Noise Study Area

The noise study area is defined as noise-sensitive land uses where areas of frequent human use could be affected by the construction and operation of the proposed Project. Noise sensitive land-uses within the project vicinity include residential uses and a neighborhood park (Lincoln Park). These noise receivers are generally located near the project site along Howard Avenue, 9th Street, 10th Street, 11th Street, and 12th and 13th Streets, as depicted on Figure 3.11-5.

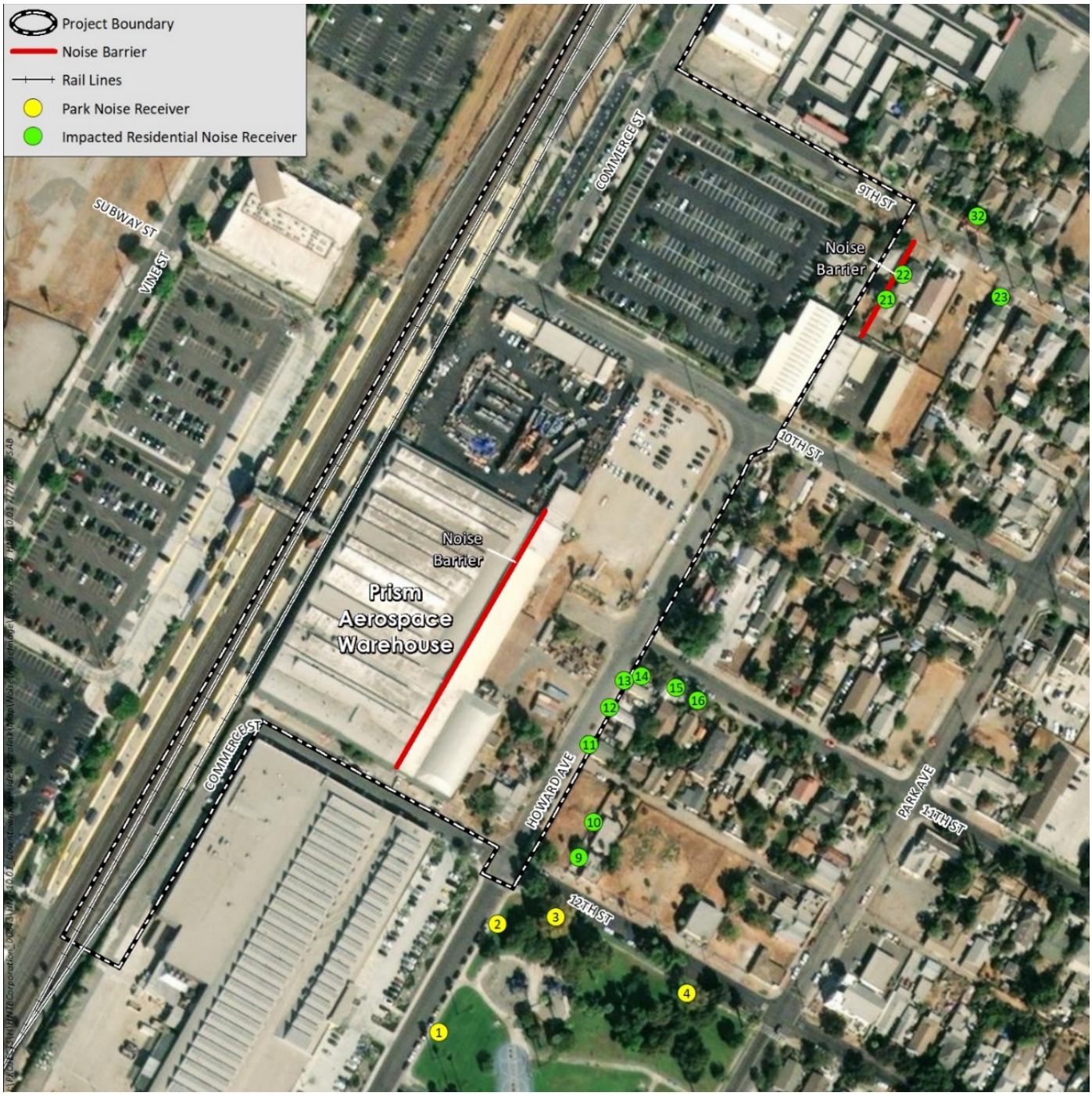

Figure 3.11-5. Noise Barriers and Modeled Noise Receiver Locations

Existing Noise Conditions

Results of the existing conditions analysis indicate current noise levels within the study area range from 54.5 dBA to 72.7 dBA within residential uses. Table 3.11-6 shows the existing noise levels at each residential receiver location along with the associated increases at which point noise impacts would be considered significant and/or substantial for those locations. For noise receivers at Lincoln Park, existing noise conditions are projected to range between 58.6 dBA and 61 dBA. Table 3.11-7 shows the existing noise at the four park receiver locations and the associated noise increase impact thresholds.

Table 3.11-6. Existing Noise Levels and Impact Thresholds – Residential Receivers

Residential Receiver	Modeled Noise (dBA L_{DN})	Increase Threshold for Moderate Impact[1] (dBA L_{DN})	Increase Threshold for Severe Impact[1] (dBA L_{DN})
1	62.7	1.4	4.4
2	60.8	1.8	4.8
3	58.6	2.2	5.4
4	55.6	2.8	6.6
5	56.3	2.8	6.6
6	55.1	3	7
7	55.0	3	7
8	54.6	3	7
9	58.0	2.4	5.8
10	54.5	3	7
11	60.5	2	5
12	61.6	1.6	4.6
13	62.3	1.6	4.6
14	62.8	1.4	4.4
15	62.7	1.4	4.4
16	62.5	1.6	4.6
17	65.7	1	3.8
18	64.6	1	4
19	72.7	0.5	3
20	71.2	0.5	3
21	61.6	1.6	4.6
22	61.0	1.8	4.8
23	64.0	1.2	4.2
24	63.8	1.2	4.2
25	63.5	1.4	4.4
26	63.2	1.4	4.4
27	62.8	1.4	4.4
28	69.3	1	3.2
29	68.6	1	3.2
30	68.0	1	3.4
31	67.1	1	3.6
32	66.2	1	3.8
33	65.6	1	3.8
34	65.1	1	4
35	63.6	1.2	4.2

[1]. Approximate noise increase threshold is based on the graph depicted on Figure 3.11-2.

Table 3.11-7. Existing Noise Levels and Impact Thresholds – Park Receivers

Park Receivers	Modeled Noise (dBA L_{DN})	Increase Threshold for Moderate Impact[1] (dBA L_{DN})	Increase Threshold for Severe Impact[1] (dBA L_{DN})
1	58.6	5	9
2	59.1	5	9
3	61.0	4	8
4	61.0	4	8

[1.] Approximate noise increase threshold is based on the graph depicted on Figure 3.11-3.

Operational Noise Assumptions

Both the existing and future noise environment scenarios assume the presence of vehicular traffic, railroad traffic, and parking lot noise. The future noise environment assumes additional project-related roadway noise and parking lot noise, but rail operations are assumed to remain relatively unchanged, as the Project would not increase the frequency of train trips along the corridor. The Project does not propose the addition of noise-generating sources such as equipment or machinery.

3.11.4. Environmental Impacts and Consequences

CEQA Thresholds of Significance for Noise

In accordance with the 2021 CEQA Statute & Guidelines, *Appendix G, Environmental Checklist Form*, *XIII. Noise,* Issues (a), (b), and (c) the proposed Project would result in impacts to noise if the construction or operations of the proposed Project would result in any of the conditions listed in the following table.

The discussion below includes the CEQA checklist for land use and planning and the discussion that follows provides the rationale for the following significance determinations:

- No Impact
- Less than Significant Impact
- Less than Significant Impact with Mitigation Incorporated
- Potentially Significant

Would the project result in:

Question	CEQA Determination
(a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Potentially Significant
(b) Generation of excessive groundborne vibration or groundborne noise levels?	Potentially Significant
(c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	No Impact

Results of the noise and vibration study prepared for the proposed Project are utilized to evaluate the CEQA significance determination for each issue identified in the abovementioned *CEQA Guidelines' Appendix G: Environmental Checklist Form.* Subsequent sections provide an impact analysis for each of the noise issue topics under the No Project and Build alternatives.

The Build Alternative has six proposed design options of which three options propose to change the existing roadway access configuration with the option to acquire and incorporate two single-family parcels at the northwest corner of Howard Avenue and 12th Street as part of the expanded station (Design Option "A"). Conversely, Design Option "B" would not acquire these properties. Because of the similarities of the proposed station improvements between the "A" and "B" design options as it relates to the noise analysis, the impact analyses are combined and presented as follows for Opening Year 2025 Conditions: Design Option 1A and 1B, Design Option 2A and 2B, and Design Option 3A and 3B.

(a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Temporary Impacts

Potentially Significant Impact. Construction noise impacts would occur if noise from daytime construction work exceeds 80 dBA L_{EQ} (8-hour) or if nighttime project construction work exceeds 70 dBA L_{EQ} (8-hour) at nearby residences.

Construction of the Project would require the demolition of existing structures, installation of utilities, and construction of a new platform and tracks. The magnitude of the impact would depend on the type of construction activity, equipment, duration of each construction phase, distance between the noise source and receiver, and any intervening structures. There are residences both adjacent to and across the street from the project construction site. The two residences on 12th Street are located next to the Prism Aerospace Building and the rest of the affected residences are across the street on Howard Avenue. Construction would generate elevated noise levels that may disrupt nearby residences for the Build Alternative and all design options including noise-extensive demolition activities. At the two residences on 12th Street, demolition activities would occur adjacent to the Prism Aerospace Building while the average distance of residences along Howard Avenue are evaluated at approximately 250 feet from demolition activities.

Construction equipment would not all operate at the same time or location and would not be in constant use during a typical 8-hour operating day. The two residences on 12th Street that are located next to the Prism Aerospace Building that would experience temporary but significant noise impacts if impacts cannot be mitigated during the demolition of the Prism Aerospace Building for the Build Alternative if Design Option 1B, 2B, or 3B is selected. Multiple construction equipment types would be in use throughout the day. For example, a dozer and an excavator may be working on the site simultaneously but would not be working in close proximity to one another at a given time due to the nature of their respective operations. An excavator, loader, and dump truck were analyzed together for construction noise impacts during demolition due to their likelihood of being used in conjunction with one another.

Based on these assumptions, general construction using an excavator, loader, and dump truck at the nearest noise-sensitive land use, such as residences, would be 67.4 dBA L_{EQ} (8-hour) at 250 feet. Additional modeled construction equipment is provided in Table 3.11-8. At these distances throughout a given workday, construction equipment is not anticipated to exceed the 80 dBA L_{EQ} (8-hour) screening level for noise. However, on individual days, construction activities may occur at distances closer to residences than those analyzed in Table 3.11-8. For example, heavy equipment may be required near the two 12th Street residences next to the Prism Aerospace Building if the Build Alternative with Design Option 1B, 2B or 3B is selected, in this case construction noise impacts would be temporary but may be substantial.

Table 3.11-8. Construction Equipment Noise Levels

Equipment	Percent Used Per Day	Noise Levels (dBA L_{EQ} [8-hour]) at 250 feet
Loader/Dozer/Excavator	40	67.4
Loader	40	61.2
Dozer	40	63.7
Excavator	40	62.8
Grader	40	67.0

Equipment	Percent Used Per Day	Noise Levels (dBA L_{EQ} [8-hour]) at 250 feet
Paver	50	60.2
Roller	20	59.0
Crane	16	58.6
Tractor	40	66.0
Backhoe	40	59.6
Generator	40	63.6

Hauling would be required to remove existing on-site material and import aggregate/sleepers/rails during construction. Approximately four trucks would be required per hour during site preparation, demolition, and construction. Haul routes to reach the project site would likely be along short segments of Howard Avenue and Commerce Street.

During demolition of the Prism Aerospace warehouse, demolition would be required at the property line of the residence at 3021 12th Street. Because heavy equipment would be required during demolition of the warehouse, and because this work would be located at the residence's shared property line and within 10 feet of the residence itself, noise impacts from the use of anticipated demolition equipment, such as an excavator, loader, and dump truck, are assessed as significant under Design Options 1B, 2B, and 3B. The Build Alternative would result in potentially significant temporary construction noise-related impact at residences near the Riverside-Downtown Station along 12th Street if design option 1B, 2B, or 3B is selected.

To mitigate potentially significant noise impacts during construction, the contractor would be required to use standard construction noise control measures such as temporary construction noise barriers, low noise emission equipment, and the use of acoustic enclosures for particularly noisy equipment to reduce the likelihood of any increases in construction noise above the local noise ordinance maximum levels. In addition, RCTC may provide temporary but similar housing accommodations within the city of Riverside to affected residents of 3021 12th Street during periods of construction where significant noise is generated, such as during the demolition work to remove the existing Prism Aerospace warehouse walls or if construction work exceeds the following thresholds: daytime construction work exceeds 80 dBA L_{EQ} (8-hour) or if nighttime project construction work exceeds 70 dBA L_{EQ} (8-hour) at nearby residences. A Construction Noise Management Plan will also be implemented to ensure compliance with the noise and vibration limits.

Conformance with Local Regulations

The City Municipal Code requires that construction shall not occur between the hours of 7:00 p.m. and 7:00 a.m. on weekdays, between the hours of 5:00 p.m. and 8:00 a.m. on Saturdays or at any time on Sunday or a federal holiday. The City does not provide specific limits on construction noise. If construction activities occur during nighttime hours, appropriate noise control measures would be implemented, such as prohibiting noise-intensive activities, e.g., pile-driving and demolition. A Construction Noise Management Plan would be prepared and implemented to ensure construction-noise related impacts to residences are avoided or minimized.

Permanent Impacts

Less Than Significant Impact with Mitigation Incorporated. Based on FTA's noise impact criteria, moderately impacted residential receivers were not considered substantial; however, residential receivers identified as severely impacted were considered significant impacts, and mitigation in the form of noise abatement is required to reduce severe noise impacts to at least moderate levels. Noise barriers are effective in reducing severe and moderate impacts to affected properties; the technique is recognized by FTA as effective and is used by state agencies and RCTC. The length of the barrier is important to its effectiveness so that noise generated beyond the ends of the barrier does not compromise the effectiveness of the barrier at noise-sensitive locations. A solid, impervious noise barrier that is sufficiently high would block the direct path of the noise source to reduce community noise levels. Noise abatement measures would be required to reduce severe impacts at nearby noise-sensitive receivers in the vicinity of the project site.

Implementation of the Build Alternative would result in noise level increases at multiple receivers for each design option. Noise levels would increase primarily due to the removal of the existing Prism Aerospace warehouse. This structure currently provides noise attenuation for multiple residential receivers along Howard Avenue from railroad and freeway noise sources. With the removal of this existing structure, the barrier to noise would be removed and expose residences to elevated noise levels. Similarly, Design Option 2A and 2B would result in the removal of existing structures to accommodate the extension of Howard Avenue and result in a noise level increase for those first-row residences.

Noise level increases range from 0.1 dBA L_{DN} to 14.7 dBA L_{DN}. The largest noise increase would occur for the Design Option 1B, 2B, and 3B scenarios at residences located at the northern corner of Howard Avenue and 12th Street. Noise levels at residential receiver 6 would increase by 14.7 dBA L_{DN}, which is above the 7 dBA L_{DN} threshold for severe impacts which would result in significant impacts.

The Opening Year (2025) scenario's modeled noise levels for residential receivers, corresponding noise level increases above existing conditions, and determination of moderate and severe impacts are provided below. Table 3.11-9 provides the results for Design Options 1A and 1B, Table 3.11-10 provides the results for Design Options 2A and 2B, and Table 3.11-11 provides the results for Design Options 3A and 3B.

Design Options 1A and 3A would have the fewest number of impacted locations with 12 receivers modeled with a moderate impact and six receivers modeled with a severe impact. Design Option 2B would have the highest number of impacted locations with 19 receivers modeled with a moderate impact and 11 receivers modeled with a severe impact. Design Options 1A, 2A, and 3A would not have noise impacts at the residences at the northern corner of Howard Avenue and 12th Street as those residences would be demolished as part of the Project.

Table 3.11-9. Opening Year (2025) Option 1A and 1B Noise Impacts – Residential Receivers

Residential Receivers	Existing Noise Levels (dBA L_{DN})[2]	Modeled Noise Levels (dBA L_{DN})	Noise Level Increase (dBA L_{DN})	Moderate Impact?	Severe Impact?
1	62.7	63.0	0.3	No	No
2	60.8	61.2	0.4	No	No
3	58.6	59.9	1.3	No	No
4	55.6	**58.6**	**3.0**	**Yes**	No
5	56.3	**59.3**	**3.0**	**Yes**	No
6[1]	55.1	**69.8[1]**	**14.7[1]**	**Yes[1]**	**Yes[1]**
7[1]	55.0	**67.6[1]**	**12.6[1]**	**Yes[1]**	**Yes[1]**
8[1]	54.6	**65.2[1]**	**10.6[1]**	**Yes[1]**	**Yes[1]**
9	58.0	**64.1**	**6.1**	**Yes**	**Yes**
10	54.5	**64.7**	**10.2**	**Yes**	**Yes**
11	60.5	**67.4**	**6.9**	**Yes**	**Yes**
12	61.6	**67.9**	**6.3**	**Yes**	**Yes**
13	62.3	**68.0**	**5.7**	**Yes**	**Yes**
14	62.8	**67.8**	**5.0**	**Yes**	**Yes**
15	62.7	**66.4**	**3.7**	**Yes**	No
16	62.5	**65.6**	**3.1**	**Yes**	No
17	65.7	**67.4**	**1.7**	**Yes**	No
18	64.6	**66.3**	**1.7**	**Yes**	No
19	72.7	72.9	0.2	No	No

Residential Receivers	Existing Noise Levels (dBA L_{DN})[2]	Modeled Noise Levels (dBA L_{DN})	Noise Level Increase (dBA L_{DN})	Moderate Impact?	Severe Impact?
20	71.2	71.6	0.4	No	No
21	61.6	61.6	0.0	No	No
22	61.0	61.0	0.0	No	No
23	64.0	64.1	0.1	No	No
24	63.8	63.8	0.0	No	No
25	63.5	63.5	0.0	No	No
26	63.2	63.5	0.3	No	No
27	62.8	63.4	0.6	No	No
28	69.3	69.6	0.3	No	No
29	68.6	69.1	0.5	No	No
30	68.0	68.2	0.2	No	No
31	67.1	67.1	0.0	No	No
32	66.2	66.2	0.0	No	No
33	65.6	65.6	0.0	No	No
34	65.1	65.1	0.0	No	No
35	63.6	63.7	0.1	No	No

* Bold text denotes a moderate or moderate/severe receiver impact.
1. Noise levels for Design Option 1B shown. Residential receivers 6 through 8 would not exist in the Design Option 1A scenario as the residences these receivers represent would be demolished.
2. Existing noise levels are those modeled and shown in Table 3.11-6.

Table 3.11-10. Opening Year (2025) Option 2A and 2B Noise Impacts – Residential Receivers*

Residential Receivers	Existing Noise Levels (dBA L_{DN})[3]	Modeled Noise Levels (dBA L_{DN})	Noise Level Increase (dBA L_{DN})	Moderate Impact?	Severe Impact?
1	62.7	63.0	0.3	No	No
2	60.8	61.2	0.4	No	No
3	58.6	59.8	1.2	No	No
4	55.6	**58.6**	**3.0**	**Yes**	No
5	56.3	**59.2**	**2.9**	**Yes**	No
6[1]	55.1	**68.3**	**13.2**	**Yes[1]**	**Yes[1]**
7[1]	55.0	**65.1**	**10.1**	**Yes[1]**	**Yes[1]**
8[1]	54.6	**65.2**	**10.6**	**Yes[1]**	**Yes[1]**
9	58.0	**63.9**	**5.9**	**Yes**	**Yes**
10	54.5	**64.7**	**10.2**	**Yes**	**Yes**
11	60.5	**67.4**	**6.9**	**Yes**	**Yes**
12	61.6	**67.7**	**6.1**	**Yes**	**Yes**
13	62.3	**67.8**	**5.5**	**Yes**	**Yes**
14	62.8	**67.6**	**4.8**	**Yes**	**Yes**

Residential Receivers	Existing Noise Levels (dBA L_{DN})[3]	Modeled Noise Levels (dBA L_{DN})	Noise Level Increase (dBA L_{DN})	Moderate Impact?	Severe Impact?
15	62.7	**66.4**	**3.7**	**Yes**	No
16	62.5	**65.8**	**3.3**	**Yes**	No
17	65.7	**68.1**	**2.4**	**Yes**	No
18	64.6	**67.9**	**3.3**	**Yes**	No
19[2]	72.7	N/A	N/A	N/A	N/A
20[2]	71.2	N/A	N/A	N/A	N/A
21	61.6	**68.0**	**6.4**	**Yes**	**Yes**
22	61.0	**68.2**	**7.2**	**Yes**	**Yes**
23	64.0	**65.3**	**1.3**	**Yes**	No
24	63.8	64.9	1.1	No	No
25	63.5	64.5	1.0	No	No
26	63.2	64.4	1.2	No	No
27	62.8	64.2	1.4	No	No
28	69.3	69.6	0.3	No	No
29	68.6	69.1	0.5	No	No
30	68.0	68.5	0.5	No	No
31	67.1	67.9	0.8	No	No
32	66.2	**67.3**	**1.1**	**Yes**	No
33	65.6	66.4	0.8	No	No
34	65.1	65.8	0.7	No	No
35	63.6	64.6	1.0	No	No

***** Bold text denotes a moderate or moderate/severe receiver impact.

1. Noise levels for Design Option 2B shown. Residential receivers 6 through 8 would not exist in the Design Option 2A scenario as the residences these receivers represent would be demolished.

2. Residential receivers 19 and 20 would not exist in Design Option 2A or 2B scenarios as the residences these receivers represent would be demolished.

3. Existing noise levels are those modeled and shown in Table 3.11-6.

Table 3.11-11. Opening Year (2025) Option 3A and 3B Noise Impacts – Residential Receivers*

Residential Receivers	Existing Noise Levels (dBA L_{DN})[2]	Modeled Noise Levels (dBA L_{DN})	Noise Level Increase (dBA L_{DN})	Moderate Impact?	Severe Impact?
1	62.7	63.0	0.3	No	No
2	60.8	61.2	0.4	No	No
3	58.6	59.9	1.3	No	No
4	55.6	**58.6**	**3.0**	**Yes**	No
5	56.3	**59.3**	**3.0**	**Yes**	No
6[1]	55.1	**69.8**	**14.7**	**Yes[1]**	**Yes[1]**
7[1]	55.0	**67.6**	**12.6**	**Yes[1]**	**Yes[1]**
8[1]	54.6	**65.2**	**10.6**	**Yes[1]**	**Yes[1]**
9	58.0	**64.1**	**6.1**	**Yes**	**Yes**

Residential Receivers	Existing Noise Levels (dBA L_{DN})[2]	Modeled Noise Levels (dBA L_{DN})	Noise Level Increase (dBA L_{DN})	Moderate Impact?	Severe Impact?
10	54.5	**64.7**	**10.2**	**Yes**	**Yes**
11	60.5	**67.4**	**6.9**	**Yes**	**Yes**
12	61.6	**67.9**	**6.3**	**Yes**	**Yes**
13	62.3	**68.0**	**5.7**	**Yes**	**Yes**
14	62.8	**67.8**	**5.0**	**Yes**	**Yes**
15	62.7	**66.4**	**3.7**	**Yes**	No
16	62.5	**65.6**	**3.1**	**Yes**	No
17	65.7	**67.3**	**1.6**	**Yes**	No
18	64.6	**66.1**	**1.5**	**Yes**	No
19	72.7	69.5	-3.2	No	No
20	71.2	69.3	-1.9	No	No
21	61.6	61.4	-0.2	No	No
22	61.0	61.0	0.0	No	No
23	64.0	64.0	0.0	No	No
24	63.8	63.8	0.0	No	No
25	63.5	63.5	0.0	No	No
26	63.2	63.5	0.3	No	No
27	62.8	63.4	0.6	No	No
28	69.3	69.6	0.3	No	No
29	68.6	69.0	0.4	No	No
30	68.0	68.1	0.1	No	No
31	67.1	67.1	0.0	No	No
32	66.2	66.2	0.0	No	No
33	65.6	65.6	0.0	No	No
34	65.1	65.1	0.0	No	No
35	63.6	63.7	0.1	No	No

***** Bold text denotes a moderate or moderate/severe receiver impact.

[1.] Noise levels for Design Option 3B shown. Residential receivers 6 through 8 would not exist in the Design Option 3A scenario as the residences these receivers represent would be demolished.

[2.] Existing noise levels are those modeled and shown in Table 3.11-6.

As shown in Table 3.11-9 through Table 3.11-11, moderate and severe impacts to nearby residences would occur for all design options. Based on FTA's noise impact criteria, moderately impacted residential receivers were not considered substantial; however, residential receivers identified as severely impacted were considered significant impacts and mitigation in the form of noise abatement barriers that meet Sound Transmission Class (STC) criteria would be required to reduce severe noise impacts to at least moderate levels.

Lincoln Park

The Opening Year (2025) scenario's modeled noise levels for park receivers, corresponding noise level increases above existing conditions, and determination of moderate and severe impacts are provided below. Table 3.11-12 provides the results for Design Options 1A and 1B, Table 3.11-13 provides the results for Design Options 2A and 2B, and Table 3.11-14 provides the results for Design Options 3A and 3B.

Table 3.11-12. Opening Year (2025) Option 1A and 1B Noise Impacts – Park Receivers*

Park Receiver	Existing Noise Levels (dBA L_{DN})	Modeled Noise Levels (dBA L_{EQ})	Noise Level Increase (dBA L_{EQ})	Moderate Impact?	Severe Impact?
1	58.6	61.4	2.8	No	No
2	59.1	**64.7**	**5.6**	**Yes**	No
3	61.0	**66.5**	**5.5**	**Yes**	No
4	61.0	63.7	2.7	No	No

* Bold text denotes a moderate impact.

Table 3.11-13. Opening Year (2025) Option 2A and 2B Noise Impacts – Park Receivers*

Park Receiver	Existing Noise Levels (dBA L_{DN})	Modeled Noise Levels (dBA L_{EQ})	Noise Level Increase (dBA L_{EQ})	Moderate Impact?	Severe Impact?
1	58.6	61.5	2.9	No	No
2	59.1	**64.7**	**5.6**	**Yes**	No
3	61.0	**66.5**	**5.5**	**Yes**	No
4	61.0	63.8	2.8	No	No

* Bold text denotes a moderate impact.

Table 3.11-14. Opening Year (2025) Option 3A and 3B Noise Impacts – Park Receivers*

Park Receiver	Existing Noise Levels (dBA L_{DN})	Modeled Noise Levels (dBA L_{EQ})	Noise Level Increase (dBA L_{EQ})	Moderate Impact?	Severe Impact?
1	58.6	61.4	2.8	No	No
2	59.1	**64.7**	**5.6**	**Yes**	No
3	61.0	**66.5**	**5.5**	**Yes**	No
4	61.0	63.7	2.7	No	No

* Bold text denotes a moderate impact.

Implementation of the Project would lead to noise level increases for each option. Noise levels at the northern corner of the park (receivers 2 and 3) for all scenarios would increase by 5.6 dBA L_{EQ} and 5.5 dBA L_{EQ}, respectively, which is within their respective 5 dBA L_{EQ} and 4 dBA L_{EQ} thresholds for moderate impacts. Receivers 1 and 4 are generally located further from noise sources or are blocked by intervening structures. No park receiver would have a severe impact.

Conformance with Local Regulations

Multiple single-family residential locations would be exposed to noise levels exceeding the limits required for new development according to the *City General Plan Noise Element* as previously shown on Figure 3.11-1. Based on the results of the Opening Year 2025 noise impact analysis, receptors would move from the "Normally Acceptable" category (below 60 L_{DN}) to "Conditionally Acceptable" category (60 to 65 L_{DN}). The Project would also move some receptors from "Conditionally Acceptable" to "Normally Unacceptable" (65 to 70 L_{DN}) and result in a potentially significant impact. Construction of a noise barrier that meets STC criteria would reduce noise levels for multiple residential locations from potentially significant to less than significant with mitigation.

(b) Generation of excessive groundborne vibration or groundborne noise levels?

Temporary Impacts

Potentially Significant Impact. A possible source of vibration during general project construction activities would be a vibratory roller, which may be used for compaction of soil beneath the parking lots. A vibratory roller would be expected to create the highest vibration levels during fill compaction. FTA's Transit Noise and Vibration Impact Assessment provides vibration source levels for common construction equipment and lists a vibratory roller as generating approximately 94 VdB at 25 feet. Construction equipment would be mobile throughout the site and evaluated as operating at an average distance of 250 feet from the off-site residential uses. Using the vibration formula provided in that table, a roller would generate approximately 64 VdB at 250 feet, which would be below the 80 VdB threshold for infrequent events affecting residences and buildings where people normally sleep.

Under the Build Alternative with Design Options 1A, 2A, or 3A, a vibratory roller would create approximately 0.210 inch per second PPV at a distance of 25 feet (Caltrans, 2013). A 0.210 inch per second PPV vibration level would equal 0.007 inch per second PPV at a distance of 250 feet. This would be lower than the structural damage impact to non-engineered timber and masonry buildings of 0.2 inch per second PPV. Additionally, off-site exposure to such ground-borne vibration would be short-term and temporary. Therefore, even though vibration may be perceptible at nearby residences, temporary impacts associated with the roller (and other potential equipment) would not be considered a significant impact. A Construction Noise Management Plan (Measure N-3) will be implemented to ensure compliance with the noise and vibration limits.

Under the Build Alternative with Design Options 1B, 2B, and 3B, a residence on 12th Street directly abutting the Prism Aerospace building may experience significant ground-borne vibration during the demolition of the building due to the proximity of the residential structure relative to the building to be demolished. For all the "B" design options, significant vibration impacts may occur if mitigation measures are not incorporated. Similar to the measure proposed for Design Options 1A, 2A and 3A to, Measure N-3 would be implemented to ensure that construction vibration would not result in significant structural damage to adjacent properties. To address significant vibration and noise impacts to the residents of 3021 12th Street for Design Options 1B, 2B, and 3B only, temporary but similar housing accommodations will be provided within the City of Riverside during periods of demolition work to remove the existing warehouse walls immediately adjacent to the property s. If residents will not accept temporary accommodations
(Measure N-4) during construction, vibration impacts during construction and demolition activities would remain significant. Potentially significant impacts are anticipated.

Permanent Impacts

Less Than Significant Impact. The Build Alternative and all design options would not add vibration-generating sources, such as permanent equipment or machinery. Additionally, trains traveling through Riverside-Downtown Station have the potential to cause ground-borne vibration impacts related to the Build Alternative. Vibration impacts to existing residential land uses would be substantial if construction of the proposed Project leads to an increase in vibration levels exceeding the impact levels shown in Table 3.11-5. The Build Alternative would include additional tracks and loading platforms at the existing station to accommodate future increases in ridership as forecasted by Metrolink. Whether the Build Alternative is constructed or not, the Project has no influence on the number of trains traveling through the station or no direct result in an increase in the frequency of train trips along the corridor. Additional tracks proposed for the Project is proposed to relieve existing train queues to address existing train congestion, resulting in a less than significant impact to project-related vibration.

(c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Temporary/Permanent Impacts

No Impact. The Build Alternative and all design options are not located within the vicinity of a private airstrip or an airport land use plan. The project site is not located within 2 miles of a public airport or public use airport. The nearest airport to the site is Flabob Airport, which is approximately 3 miles away from the project site.

3.11.5. Avoidance, Minimization, and/or Mitigation Measures

Measures provided in this section summarize the actions to be implemented to ensure potential construction and operational noise impacts are avoided, minimized, or mitigated. Significant impacts are anticipated during the construction and operation of the Build Alternative and all design options. Measures are proposed to address potentially significant noise impacts during construction, and noise abatement is recommended to reduce operational noise through the use of noise barriers. The design of noise barriers presented are preliminary at a level appropriate for environmental review and may be refined during the final design phase. Preliminary information on the physical location, length, and height of noise barriers are provided to illustrate the effectiveness of the noise barrier to abate noise.

Noise Barriers

Noise barriers are effective in reducing severe and moderate impacts to affected properties; the technique is recognized by FTA as effective and is used by state agencies and RCTC. The length of the barrier is important to its effectiveness so that noise generated beyond the ends of the barrier do not compromise the effectiveness of the barrier at noise-sensitive locations. A solid, impervious noise barrier that is sufficiently high would block the direct path of the noise source to reduce community noise levels.

Noise abatement measures would be required to reduce severe impacts at nearby noise-sensitive receivers in the vicinity of the project site. As shown in Table 3.11-9 through Table 3.11-14, severe impacts were identified at multiple residential locations based on FTA thresholds. For the purposes of the noise barrier analysis, impacted receivers for Design Option 2A are modeled[15] because this design option represents the worst-case scenario.

Figure 3.11-5 shows two locations for noise barriers to reduce severe noise impacts at nearby residential receivers. An approximately 500-foot noise barrier was modeled along the eastern edge of the existing warehouse structure and a noise barrier along the potential extension of Howard Avenue near 9th Street. The noise barrier was modeled to reduce severe impacts to receivers 9 through 14 for all design options. The noise barrier would also benefit houses along 12th Street and west of Howard Avenue (receivers 6 through 8) that would remain under design option 1B, 2B and 3B.

The noise barrier along the potential extension of Howard Avenue near 9th Street would only be required if Design Option 2A or 2B were implemented. Severe impacts to receivers 21 and 22 were only identified for these two options. The noise barrier's location would generally be on the eastern edge of the potential extension of Howard Avenue at the existing western property wall of 2982 9th Street.

Table 3.11-15 shows the results of the noise reductions for severe and moderately impacted residential receivers with the implementation of the noise barrier near the existing warehouse location. Noise level increases over existing conditions are provided for walls with heights ranging from 8 feet to 12 feet.

Table 3.11-16 shows the results of noise reductions for moderately impacted park receivers with the implementation of this barrier.

Table 3.11-17 shows the results of the noise reductions with the implementation of the noise barrier along the potential extension of Howard Avenue.

[15] Measures to reduce noise at Receivers 6 through 8 for Design Option 1B, 2B, and 3B scenarios are not considered in this mitigation analysis.

Table 3.11-15. Opening Year (2025) Option 2A Impacts – Residential Receivers with 500-Foot Warehouse Wall*

Residential Receivers	No Wall				With 8-Foot Wall				With 10-Foot Wall				With 12-Foot Wall			
	Modeled Noise Levels (dBA LDN)	Noise Level Increase (dBA LDN)	Moderate Impact?	Severe Impact?	Modeled Noise Levels (dBA LDN)	Noise Level Increase (dBA LDN)	Moderate Impact?	Severe Impact?	Modeled Noise Levels (dBA LDN)	Noise Level Increase (dBA LDN)	Moderate Impact?	Severe Impact?	Modeled Noise Levels (dBA LDN)	Noise Level Increase (dBA LDN)	Moderate Impact?	Severe Impact?
4	58.6	3.1	**Yes**	No	58.6	3.0	**Yes**	No	58.5	2.9	**Yes**	No	58.4	2.8	**Yes**	No
5	59.3	3.0	**Yes**	No	59.1	2.8	No	No	59.0	2.7	No	No	58.8	2.5	No	No
9	64.1	6.1	**Yes**	**Yes**	62.4	4.4	**Yes**	No	61.0	3.0	**Yes**	No	60.0	2.0	No	No
10	64.7	10.2	**Yes**	**Yes**	62.9	8.5	**Yes**	**Yes**	61.7	7.2	**Yes**	**Yes**	60.8	6.3	**Yes**	No
11	67.4	6.9	**Yes**	**Yes**	66.1	5.6	**Yes**	**Yes**	65.0	4.5	**Yes**	No	64.2	3.7	**Yes**	No
12	67.9	6.3	**Yes**	**Yes**	67.5	5.9	**Yes**	**Yes**	66.9	5.4	**Yes**	**Yes**	66.2	4.6	**Yes**	No
13	68.0	5.7	**Yes**	**Yes**	67.8	5.5	**Yes**	**Yes**	67.3	4.9	**Yes**	**Yes**	66.6	4.2	**Yes**	No
14	67.8	5.0	**Yes**	**Yes**	67.3	4.6	**Yes**	**Yes**	67.0	4.2	**Yes**	No	66.5	3.8	**Yes**	No
15	66.4	3.7	**Yes**	No	65.6	2.9	**Yes**	No	65.2	2.5	**Yes**	No	64.6	1.9	**Yes**	No
16	65.6	3.2	**Yes**	No	64.6	2.1	**Yes**	No	64.1	1.6	**Yes**	No	63.5	1.0	No	No

* Bold text denotes a moderate or moderate/severe receiver impact

Table 3.11-16. Opening Year (2025) Option 2A Impacts – Park Receivers with Noise Barriers

Park Receivers	No Wall				With 8-Foot Wall				With 10-Foot Wall				With 12-Foot Wall			
	Modeled Noise Levels (dBA LEQ)	Noise Level Increase (dBA LEQ)	Moderate Impact?	Severe Impact?	Modeled Noise Levels (dBA LEQ)	Noise Level Increase (dBA LEQ)	Moderate Impact?	Severe Impact?	Modeled Noise Levels (dBA LEQ)	Noise Level Increase (dBA LEQ)	Moderate Impact?	Severe Impact?	Modeled Noise Levels (dBA LEQ)	Noise Level Increase (dBA LEQ)	Moderate Impact?	Severe Impact?
1	61.4	2.8	No	No	61.6	3.0	No	No	61.7	3.1	No	No	61.3	2.7	No	No
2	64.7	5.6	**Yes**	No	63.6	4.5	No	No	63.6	4.5	No	No	62.9	3.8	No	No
3	66.5	5.5	**Yes**	No	65.8	4.8	**Yes**	No	65.8	4.8	**Yes**	No	65.3	4.3	**Yes**	No
4	63.7	2.7	No	No	63.9	2.9	No	No	64.0	3.0	No	No	63.7	2.7	No	No

* Bold text denotes a moderate impact.

Table 3.11-17. Opening Year (2025) Option 2A and 2B Impacts – Residential Receivers with Noise Barrier Along Future Howard Avenue Extension Near 9th Street

Residential Receivers	No Wall				With 8-Foot Wall			
	Modeled Noise Levels (dBA L_{DN})	Noise Level Increase (dBA L_{DN})	Moderate Impact?	Severe Impact?	Modeled Noise Levels (dBA L_{DN})	Noise Level Increase (dBA L_{DN})	Moderate Impact?	Severe Impact?
21	68.0	6.5	**Yes**	**Yes**	58.4	-3.2	No	No
22	68.2	7.2	**Yes**	**Yes**	54.5	-6.5	No	No
23	65.3	1.2	**Yes**	No	64.9	0.8	No	No
32	67.2	1.1	**Yes**	No	66.8	0.6	No	No

* Bold text denotes a moderate or moderate/severe receiver impact.

To reduce severe impacts for residential receivers 9 through 14, the 500-foot noise barrier along the existing warehouse wall location would need to be constructed at a height of at least 12 feet. To reduce severe impacts for residential receivers 21 and 22, the noise barrier along the potential extension of Howard Avenue near 9th Street would need to be at least 8 feet high. Moderate impacts at the park receivers at all but one location would be reduced with an 8-foot-high wall.

Based on the results of the noise barrier analysis, to reduce noise to levels below the severe impact threshold limit, noise barriers would be required to be constructed at the locations shown on Figure 3.11-5. Based on preliminary design, specifications for all potential noise barriers shall include the following:

N-1: Under the Build Alternative and all design options, a barrier would be constructed along the eastern edge of the existing warehouse structure with a length of approximately 500 feet. The barrier height for this wall would be at least 12 feet high to reduce severe noise impacts to at least moderate levels. The noise barriers would be required to meet a minimum STC rating of 22 to 23 to adequately ensure noise reduction. It can be constructed of masonry, wood, plastic, fiberglass, plexiglass, steel, or a combination of those materials if it meets the STC rating described above and there are no cracks or gaps through or below the wall. Any seams or cracks must be filled or caulked.

N-2: Under the Build Alternative and for Design Options 2A and 2B only, a noise barrier would be constructed along the entirety of the existing western property wall of 2982 9th Street. The barrier would be at least 8 feet high to reduce severe noise impacts to at least moderate levels. The noise barriers would be required to meet a minimum STC rating of 22 to 23 to adequately ensure noise reduction. It can be constructed of masonry, wood, plastic, fiberglass, plexiglass, steel, or a combination of those materials if it meets the STC rating described above and there are no cracks or gaps through or below the wall. Any seams or cracks must be filled or caulked.

During subsequent phases of engineering, the mitigation described above is subject to refinement to reflect any changes in design details. For instance, although this analysis assumes the most conservative impact analysis (i.e., greatest potential impact), a noise barrier in an area might need to be adjusted in height or length as more detailed calculations are done. If there are significant changes in the project design, the determination of final mitigation measure configuration and placement of noise barriers will be made during final design, when the complete design details that affect the noise impact analysis are known. The same type of mitigation measures, as described above, will be used such that impacts are reduced to below the FTA impact criteria and less than significant levels.

Construction

Construction noise would be potentially significant at nearby residences. Noise levels from project-related construction activities shall not exceed the noise limits specified in Table 3.11-3 when measured at noise-sensitive land uses. To reduce temporary construction-related noise impacts, the following measures would be implemented during construction:

N-3: A Construction Noise Management Plan will be prepared by the contractor who describes the measures to be included in the construction plans to ensure compliance with noise and vibration limits and submitted for approval by RCTC. The following measures will be included as feasible to reduce construction noise:

- Construction equipment to be properly outfitted and maintained with manufacturer-recommended noise-reduction devices.
- Diesel equipment to be operated with closed engine doors and equipped with factory-recommended mufflers.
- Mobile or fixed "package" equipment (e.g., arc welders and air compressors) to be equipped with shrouds and noise control features that are readily available for that type of equipment.
- Electrically powered equipment to be used instead of pneumatic or internal-combustion powered equipment, where feasible.
- Unnecessary idling of internal combustion engines (e.g., in excess of 5 minutes) to be prohibited.
- Material stockpiles and mobile equipment staging, parking, and maintenance areas to be located as far as practicable from noise sensitive receptors.
- The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only.
- No project-related public address or music system shall be audible at any adjacent sensitive receptor.

- Temporary sound barriers or sound blankets shall be installed between construction operations and adjacent noise-sensitive receptors. Due to equipment exhaust pipes being approximately 7 to 8 feet above ground, temporary sound barriers at least 10 feet high above grade may be utilized. To effectively reduce noise levels, the temporary sound barrier shall be constructed of a material with a minimum weight of 2 pounds per square foot with no gaps or perforations and shall remain in place until the conclusion of demolition, grading, and construction activities.
- RCTC shall notify residences within 100 feet of the Project's property line in writing within two weeks of any construction activity, such as demolition, asphalt removal, and/or heavy grading operations. The notification shall describe the activities anticipated, provide dates and hours, and provide contact information with a description of a complaint and response procedure.
- The on-site construction supervisor shall have the responsibility and authority to receive and resolve noise complaints. A clear appeal process for the affected resident shall be established prior to construction commencement to allow for resolution of noise problems that cannot be immediately solved by the site supervisor.

N-4: If Design Option 1B, 2B, or 3B is selected for construction, RCTC will provide temporary but similar housing accommodations within the City of Riverside to the residents of 3021 12th Street during periods of construction where significant noise is generated, such as during the demolition work to remove the existing Prism Aerospace warehouse walls or if construction work exceeds the following thresholds: daytime construction work exceeds 80 dBA L_{EQ} (8-hour) or if nighttime project construction work exceeds 70 dBA L_{EQ} (8-hour) at nearby residences.

3.11.6. CEQA Significance Conclusion

During construction, measure N-3 will be implemented for all design options, which would address construction-related noise and vibration and result in less than significant impacts with mitigation incorporated under the Build Alternative and Design Options 1A, 2A, and 3A. For Build Alternative and Design Options 1B, 2B, and 3B, two residences immediately adjacent to the construction site along 12th Street would remain. If Build Alternative with Design Option 1B, 2B, or 3B is selected, Mitigation Measure N-4 would be offered; however, noise and vibration impacts during construction and demolition activities would remain significant for residences adjacent to the Prism Aerospace building along 12th Street if residents will not accept temporary accommodations (Measure N-4) during demolition activities.

The Build Alternative, including all design options, would occur within an existing rail station and neighboring industrial development in urbanized downtown Riverside. Removal of existing structures that are effectively attenuating noise at nearby residences would result in permanent noise increases. Implementation of noise abatement measures would be required to attenuate operational noise levels. Noise abatement measure N-1 would reduce noise impacts for the Build Alternative and all design options to below FTA's severe impact thresholds. In addition to Mitigation Measure N-1, for Design Options 2A and 2B only, a noise barrier along the western property line of 2989 9th Street would be constructed as described in measure N-2. Operational impacts, as they relate to noise and vibration, would be less than significant with the implementation of Mitigation Measures N-1 through N-2 for the Build Alternative and all design options.

3.12. Population and Housing

This section discusses the potential impacts on the population and housing within the community impacts study area resulting from the construction and operations of the proposed Build Alternative and all design options. Information provided in this section is based on the results of the technical analysis in the *Community Impact Assessment* (HNTB, 2021) prepared for the proposed Project.

3.12.1. Regulatory Framework

Federal Regulations

Uniform Relocation Assistance and Real Property Acquisition Act (URA), 1970. The URA sets forth minimum standards for federally funded programs and projects that require relocation assistance due to the acquisition of real property or displacement of persons from their homes, businesses, or farms. The URA includes guidelines for property appraisal and acquisition negotiations, relocation advisory services for tenants and occupants, reimbursement for moving expenses, and compensation for the added cost of renting or purchasing comparable replacement housing.

Local and Regional Regulations and Plans

City of Riverside 2020-2024 Housing and Community Development Five-Year Consolidated Plan (City of Riverside, 2018). This plan provides a strategy and guidelines for appropriation of federal funds granted to the City of Riverside through the U.S. Housing and Urban Development (HUD) under the Community & Economic Development Block Grant (CDBG), Home Investment Partnerships (HOME), Emergency Solutions Grant (ESG), and Housing Opportunities for Persons with AIDS (HOPWA) programs. Programs and strategies included in the plan are intended to primarily benefit low- and moderate-income residents of the City of Riverside, neighborhoods with a high concentration of low- and moderate-income residents, and the city as a whole. Development of the plan includes extensive public outreach, stakeholder engagement, public hearings, and community meetings with organizations involved in the development of affordable housing and creation of job opportunities for low- and moderate-income residents and/or provision of services to children, elderly persons, persons with disabilities, persons with HIV/AIDS and their families, and homeless persons.

3.12.2. Methodology for Evaluating Environmental Impacts

The analysis of the proposed Project's potential impacts to population and housing considers potential effects within the study area related to construction and operations of the proposed Project.

Growth inducement is defined as the relationship between the proposed transportation project and growth within the affected project area. The relationship can be either one of facilitating planned growth or inducing unplanned growth.

It is often defined as the measurable increase in population, housing, and/or employment that can be reasonably attributable to implementation of a given project. An example would be construction of a new transportation facility in a completely undeveloped area, which would thereby create a means and motivation for new development to occur in the previously undeveloped area.

The growth-related impacts assessment process examines the relationship of a proposed project to economic and population growth or to construction of additional housing in the project area. It focuses on the potential for a project to facilitate or accelerate development beyond those already planned, or to cause a shift in growth from elsewhere in the region. Many factors other than the proposed implementation of a transportation project – such as the following conditions – could impact the amount, location, and rate of growth in a project study area:

1. Market demand for new development
2. Availability of other means of access
3. Developable land
4. National and regional economic trends
5. Availability of other infrastructure, such as water and sewer systems
6. Governmental policies
7. Climate

3.12.3. Affected Environment

Project Location and Setting

The project study area for population and housing analysis is located within Census Tract 304, Block Groups 1, 3, and 5 as previously shown on Figure 3.10-2. Single-family residential areas primarily comprise land uses within the project study area, along with some multi-family residential areas. Commercial areas are generally located along University and Chicago avenues, and light industrial and commercial land use clusters are located between east of SR 91 and Howard Avenue. The project study area is located entirely within the Eastside Neighborhood in the City of Riverside.

Medium-density residential areas – largely built out with single-family homes – mostly comprise the Eastside Neighborhood. These homes represent a diverse cross-section of architectural styles and sizes, with homes being built as early as the late 1800s and as recently as 2006. Although many of the single-family homes throughout the Eastside Neighborhood are modest bungalows, shotgun houses, and tract homes, there are several pockets of prominent and historic homes that contribute to the diverse housing stock. Within the vicinity of the project site, some residential properties were constructed in the late 1800s and early 1900s.

Table 3.12-1 presents the housing characteristics for the project study area, City of Riverside, and Riverside County. With an average household size of 4.3 persons, the study area has a larger average household size than the City (3.4 persons) and Riverside County (3.3 persons) by approximately one person. Approximately 11 percent of the housing units in the study area are vacant, more than the city's 6 percent, but less than the county's 14 percent. While approximately one-third of housing units in the study area are owner-occupied, more than half and two-thirds of housing units are owner-occupied in the city and county, respectively. The proportion of single-family homes to multi-family homes in the study area is similar to that of the city. Both have a higher proportion of multi-family homes than the county. No nontraditional types of housing units (such as boats, recreational vehicles, vans, etc.) are in the study area.

Demographic Characteristics

Demographic information for the project study area was obtained from the U.S. Census Bureau. A profile of the community was developed using the latest available demographic data from the U.S. Census Bureau (2010), including American Community Survey (ACS) 2014-2018 5-year estimates data, and supplemented with information obtained from the City of Riverside and County of Riverside. At the time of the preparation of the population and housing analysis, the 2020 U.S. census surveys were underway, and complete datasets from the decennial surveys were not available for the analysis provided in this section.

Between 2010 and 2018 the overall population of the project study area has declined from 3,900 to approximately 3,400 people. Although population in the project study area is trending lower, the total city population has increased from approximately 304,000 to 324,000 during the same eight-year period. SCAG projections indicate that population within the City of Riverside would continue to increase to 395,800 by 2045 (SCAG, 2020a).

Populations under the age of 18 or 65 and over tend to have unique characteristics relative to populations between those ages. Generally, those under 18 or 65 and over are less likely to work a full-time job, drive, or be raising children. There is little discrepancy between geographies for these groups, with a range of 24 percent to 29 percent of the population under 18, and 10 percent to 14 percent of the population 65 and over. Within the project study area, the under-18 demographic comprises 29 percent of the population, suggesting that a large portion of the residents are considered dependents, in the context of the greater-than-average household size of four people, compared with three people within the city.

Table 3.12-2 shows the comparison of the population under 18 and over 65 for the study area, City of Riverside, and Riverside County.

In addition to the change in population within the project study area, the composition of the population in terms of race and ethnicity has become increasingly more diverse between 2010 and 2018 with the predominant Hispanic/Latino population increasing from 87.8 percent to 91.5 percent of the ethnic composition of the total population. Ethnic homogeneity is often associated with a higher degree of community cohesion and the majority Hispanic/Latino population is indicative of homogeneity within the project study area.

Table 3.12-3 and Table 3.12-5 compare the 2010 and 2018 population compositions, respectively.

Table 3.12-1. Housing Characteristics

Geography	Total Households	Average Household Size	Housing Units					Occupied Housing Units				Housing Type					
			Total	Occupied		Vacant		Owner Occupied		Renter Occupied		Single Family		Multi Family		Other[a]	
				No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Study Area	800	4.3	903	800	89	103	11	273	34	527	66	605	67	298	33	0	0
City of Riverside	90,866	3.4	96,797	90,866	94	5,931	6	49,031	54	41,835	46	66,021	68	28,568	30	2,208	2
Riverside County	718,349	3.3	833,602	718,349	86	115,253	14	472,401	66	245,948	34	613,965	74	144,959	17	74,678	9

Source: U.S. Census Bureau, ACS, 2014-2018

[a] Units include mobile homes, recreational vehicles, vans, boats, etc.

% = percent
No. = number

Table 3.12-2. Population Under 18 and 65 and Over

Geography	Total Population	Age			
		Under 18		65 and Over	
		No.	%	No.	%
Study Area	3,406	981	29%	325	10%
City of Riverside	323,935	77,923	24%	33,695	10%
Riverside County	2,383,286	613,808	26%	328,609	14%

Source: U.S. Census Bureau, ACS, 2014-2018

Table 3.12-3. Population, Race, and Ethnicity (2010)

		Non-Hispanic/Latino														Hispanic/Latino (of any race)	
		White		Black		Asian		Native American		Native Hawaiian/ Pacific Islander		Other Race		Two or More Races			
Geography	Total Population	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Study Area	3,900	173	4.4	221	5.7	37	0.9	8	0.2	3	0.1	5	0.1	27	0.7	3,426	87.8
City of Riverside	303,871	103,398	34.0	19,917	6.6	21,934	7.2	1,297	0.4	1,019	0.3	617	0.2	6,736	2.2	148,953	49.0
Riverside County	2,189,641	869,068	39.7	130,823	6.0	125,921	5.8	10,931	0.5	5,849	0.3	3,682	0.2	48,110	2.2	995,257	45.5

Source: U.S. Census Bureau, 2010 Census (Last Revised: March 14, 2019)

Table 3.12-4. Population, Race, and Ethnicity (2018)

		Non-Hispanic/Latino														Hispanic/Latino (of any race)	
		White		Black		Asian		Native American		Native Hawaiian/ Pacific Islander		Other Race		Two or More Races			
Geography	Total Population	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Study Area	3,406	91	2.7	95	2.8	58	1.7	11	0.3	21	0.6	0	0.0	28	0.8	3116	91.5
City of Riverside	323,935	98,193	30.3	18,594	5.7	23,279	7.2	1,069	0.3	704	0.2	1,000	0.3	8,434	2.6	172,662	53.3
Riverside County	2,383,286	856,468	35.9	144,503	6.1	147,706	6.2	10,064	0.4	5,846	0.2	5,345	0.2	58,837	2.5	1,154,517	48.4

Source: U.S. Census Bureau, 2010 Census (Last Revised: March 14, 2019)

Regional Growth

Riverside County has continued its rapid growth and is expected to continue to grow through 2045. From 2006 to 2016, Riverside County had the largest share of population growth among the six counties in the SCAG region. During this period, an additional 360,000 new residents, nearly 40 percent of the region's increase in population moved to Riverside County, while Los Angeles County followed with the next largest share and experienced an increase of 190,000 residents (20 percent of the growth) (SCAG, 2020b). During an 18-year period between 2000 and 2018, the population growth rate in Riverside County was 56.3 percent (SCAG, 2019). Population growth projections developed for SCAG's 2020-2045 RTP indicate that population in the Riverside County is expected to continue to increase by approximately 32 percent between 2020 and 2045.

Local Growth

In the City of Riverside, the total population between 2000 and 2018 increased by 70,694 to 325,860 (SCAG, 2019). During this 18-year period, the city's growth rate of 27.7 percent was lower that the Riverside County growth rate of 56.3 percent. City of Riverside future population and employment forecasts between 2018 and 2045 indicate a projected increase of 21 percent and 28 percent, respectively. However, compared with the county's projected population growth rate of 35 percent and employment growth rate of 45 percent, the city's growth rate is lower than the county's growth rate.

Table 3.12-5 compares future projected city and county demographics.

Table 3.12-5. SCAG 2018 to 2045 City of Riverside and Riverside County Population/Household Comparison

	Population			Households		
Jurisdiction	2018	2045	% Change	2018	2045	% Change
City of Riverside	325,860	395,800	21%	94,703	115,100	22%
Riverside County	2,415,954	3,251,700	35%	729,920	1,086,100	49%

Source: Local Profiles Report: Profile of the City of Riverside, SCAG, 2019; Final Connect SOCAL Programmatic EIR, SCAG, 2019

3.12.4. Environmental Impacts and Consequences

CEQA Thresholds of Significance for Population and Housing

In accordance with the *2021 CEQA Statute & Guidelines, Appendix G, Environmental Checklist Form, XIV. Population and Housing:* (a) and (b), the proposed Project would result in impacts to population and housing if the construction or operation of the proposed Project would result in any of the conditions listed in the following table.

The discussion below includes the CEQA checklist for population and housing, followed by the discussion that provides the rationale for the following significance determinations:

- No Impact
- Less than Significant Impact
- Less than Significant Impact with Mitigation
- Potentially Significant Impact

Would the project:

Question	CEQA Determination
(a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Less Than Significant Impact
(b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	Less Than Significant Impact

(a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Temporary Impacts (Construction)/Permanent Impacts (Operations)

Less than Significant Impact. The Build Alternative and all design options are not expected to result in substantial changes to the existing population in the project study area. This alternative would not include the development of new housing or businesses that would directly induce population growth. Moreover, the expansion of the Riverside-Downtown Station may generate additional employment opportunities. However, there is currently a substantial employment base and residential population in the City of Riverside and the employment opportunities would not be expected to result in substantial migration of additional residents to the project study area. The proposed station improvements are expected to accommodate existing, approved, and planned growth in the area through enhancement of the existing train service but are not expected to directly influence the amount, timing, or location of growth in the area.

The City of Riverside plans to revitalize the Eastside Neighborhood through transit-oriented development (TOD) near the Riverside-Downtown Station. The area surrounding the station was identified by SCAG as a HQTA, and local land use plans and policies in the City of Riverside are supportive of establishing communities that integrate transit and other alternative modes of transportation into the fabric of planned development. While the proposed station improvements enhance the rail operations at the Riverside-Downtown Station, the implementation of a TOD district adjacent to the existing station is a planned City of Riverside endeavor and would require developers to obtain approvals from the City to initiate development within the HQTA. Although the proposed Project is a central element of the planned TOD district, the main station improvement features such as the new passenger platform, additional tracks and parking lot expansion are not anticipated to directly or indirectly influence the creation of the TOD district. Given the non-growth inducing features of the Project (operational improvements), declining trend in population within the Eastside Community and limited opportunities to develop areas near the station, the Project's potential to directly or indirectly induce growth (including establishing a TOD district) is not likely to occur.

Additionally, the creation of a new roadway may induce growth because of the potential of attracting new development to occur near the new roadway. Under Design Options 2A, 2B, 3A, and 3B, Commerce Street would be vacated to accommodate the construction of a drop-off area to the east of the station. The extension of Howard Avenue to 9th Street would be constructed within the vicinity of the station to replace the vacated east-west local roadway and provide local access to area residents and businesses. Parcels adjacent to the Howard Avenue extension are built-out with existing uses and would not indirectly induce population growth by attracting new development to the area; therefore, no impacts are anticipated.

(b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Temporary Impacts/Permanent

Less Than Significant Impact. The Build Alternative and all design options would not require displacing substantial numbers of people or existing housing, requiring the construction of temporary or permanent replacement housing during construction or operation.

Residential Displacements

(b) Less Than Significant Impact. Design Option 2A would acquire the greatest number of residential parcels and consequently result in the most displacements: approximately 10 residences. Design Option 2B would result in eight residential displacements, and Design Options 1A and 3A would result in two residential displacements. Design Options 1B and 3B would not result in any displacements, because these design options do not propose full residential acquisitions.

Results of the analysis indicate that there are 880 suitable replacement properties and housing readily available within a 10-mile radius of the project site for lease or purchase as summarized herein:

- Single-family residences (lease): 41 units
- Single-family residences (purchase): 722
- Multi-family units (lease): 114 units
- Section 8 units: three units

The Build Alternative is not anticipated to result in substantial impacts to displaced residents because of the availability of replacement housing within the project study area for all income levels. Although the availability of replacement housing and the relatively low number of expected displaced households would result from the Build Alternative. If the Build Alternative with Design Options 1A, 2A, 3A, or 2B are selected, relocation assistance will be provided in accordance with the URA, as amended, and in conformance with all applicable regulations; therefore, the Build Alternative would result in less than significant impacts.

Business Displacements

(b) Less Than Significant Impact. Up to 10 non-residential parcel acquisitions including approximately three businesses may be displaced. Based on current market research, these businesses can be reestablished at comparable locations. There are 477 available replacement properties for rent (410 units) or purchase (67 units) within a 10-mile radius of the project site. Relocation assistance payments and counseling will be provided to persons and businesses subject to replacement. in accordance with the URA, as amended, and in conformance with all applicable regulations. With feasible relocation options available, business displacements would not result in substantial impacts.

Employee displacements would result from the implementation of the Build Alternative and all design options. Unemployment could result if a business were relocated, and an employee did not choose or was unable to work at the new business location. The Project will comply with the URA which includes provisions regarding relocation assistance payments and counseling to persons and businesses affected by displacements resulting from the Project. Therefore, impacts would be less than significant.

3.12.5. Avoidance, Minimization, and/or Mitigation Measures

The proposed Project would not affect the growth pattern or displace a substantial number of existing people within the project study area or directly or indirectly induce growth.

3.12.6. CEQA Significance Conclusion

The proposed Project, including the design options, would occur within an existing rail station and neighboring industrial development in urbanized Downtown Riverside. Proposed station improvements are operational improvements that would not induce population growth. Although the Project would displace surrounding residences and businesses, the number of residential and business displacements are not substantial. However, displaced residents and businesses may have special needs related to relocation. Compliance with the URA will provide appropriate compensation and assistance to eligible residents and businesses. Therefore, the Project would have a less than significant impact.

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3.13. Public Services

This section discusses the potential impacts on public services within the study area resulting from the construction and operations of the proposed Build Alternative and all design options. Information provided in this section are based on the results of the technical analysis in the *Community Impact Assessment* (HNTB, 2021) prepared for the proposed Project.

3.13.1. Regulatory Framework

Applicable policies, laws, and regulations relative to public services are provided herein:

Local and Regional Regulations

City of Riverside General Plan (2019). The following elements of the City of Riverside's General Plan pertaining to public services are as follows:

- **Education Element.** This element discusses growth needs of the Riverside Unified School District, including the construction of new facilities and establishment of new transportation corridors. Additionally, the Education Element includes strategies to ensure the Riverside library system remains an independent learning resource for Riverside residents and a complement to formal education.
- **Public Safety Element.** This element examines community hazards, natural- and human-caused, and includes risk reduction, prevention, coordination, and response strategies to ensure public safety providers can coordinate their activities to ensure the public's safety. The Public Safety Element addresses reducing the risk of geologic and flood hazards, managing hazardous materials, improving transportation-related safety, fire prevention and response, providing adequate police services, and reducing crime through environmental design.
- **Public Facilities and Infrastructure Element.** This element evaluates existing public facility and infrastructure capacity, future needs, and conservation strategies. The Public Facilities and Infrastructure Element provides a framework for maintaining and expanding existing facilities to meet the needs of Riverside residents.
- **Parks and Recreation Element.** This element supports the maintenance of 52 public parks and additional open space areas encompassing over 2,300 acres. The City of Riverside has established a standard of 2 acres of community park and 1 acre of neighborhood park per 1,000 residents. The Parks and Recreation Element discusses the 2020 City of Riverside Comprehensive Park, Recreation, and Community Services Master Plan to address the issues of park and recreational area shortage, overuse of facilities, maintenance issues, and negative public perceptions.

3.13.2. Methodology for Evaluating Environmental Impacts

The analysis of the potential impacts to public services considers potential project effects within the study area related to construction and operations of the proposed Project. Public services within or adjacent to the study area were identified through review of the City of Riverside General Plan and the latest, available aerial imagery. Potential impacts to public services were evaluated by examining existing facilities, within or adjacent to the study area, and comparing existing facilities and their service capacity to future demand based on the Project's direct and indirect impacts to the project site and surrounding area.

3.13.3. Affected Environment

Existing Facilities Within or Adjacent to the Project Study Area

Emergency Services. Police and fire protection in the project study area are provided by the Riverside Police Department and Riverside Fire Department, respectively. The nearest police and fire stations are approximately 0.4 mile from the project study area. The city contracts with American Medical Response for ambulance services. American Medical Response has a facility within the study area at 3198 15th Street, about 0.3 mile south of the project study area. Riverside Community Hospital is the closest hospital and is located less than a mile from the project study area.

Schools. The project study area is not within 0.25 mile of an existing school. The nearest existing school, Lincoln High School, is located approximately 0.35 mile southeast of the project study area. Lincoln High School is managed by the RUSD. Additionally, the RUSD has proposed the construction of a new elementary school (TK-6) within the Eastside Neighborhood, located approximately 0.1-mile southeast of the project study area. The proposed RUSD school site is bounded by 12th Street and 13th Street to the northeast, Victoria Avenue to the southeast, 14th Street to

the southwest, and Howard Avenue to the northwest. Construction of the proposed school is anticipated to begin in 2024.

Parks. Parks within the project study area provide the community with several amenities and recreational opportunities. The following discussion provides a description of parks within the project study area.

- **Lincoln Park**. Located adjacent to the project at the intersection of Howard Avenue and 12th Street at 4261 Park Avenue. This 3.26-acre neighborhood park provides basketball courts, fitness stations, and picnic tables, a playground, horse shoe pit, barbeque, and community center. The Lincoln Park Community Center is a small facility used for after school programs, summer camps and classes. After-school camps for youth ages 5 to 12 years old include intramural sports, games, dance, cheer, homework assistance and computer activities.
- **North Park.** Located west of the BNSF railroad at the intersection of Vine Street and Mission Inn Avenue at 3172 Mission Avenue. This 1.26-acre special-use park is an open area landscaped park used for special events. There are no designated playgrounds, recreational areas, picnic shelters, or benches on-site. The park provides on-site parking. Future planned upgrades to this park include the construction of a stage or area to create a music venue.
- **Dario Vasquez Park.** Located approximately 0.5 mile east of the project study area at the corner of 14th Street and Sedgwick Avenue at 2400 14th Street. This 1.36-acre neighborhood park provides recreational amenities that include basketball courts, picnic shelters, and playgrounds.

3.13.4. Environmental Impacts and Consequences

CEQA Thresholds of Significance for Public Services

In accordance with the *2021 CEQA Statute & Guidelines, Appendix G, Environmental Checklist Form, XV. Public Services* (a), the proposed Project would result in impacts to public services, if the construction or operation of the proposed Project would result in any of the conditions listed in the following table.

The discussion below includes the CEQA checklist for public services and the discussion that follows provides the rationale for the following significance determinations:

- No Impact
- Less than Significant Impact
- Less than Significant Impact with Mitigation
- Potentially Significant Impact

Would the project:

Question	CEQA Determination
(a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services? • Fire Protection? • Police Protection? • Schools? • Parks? • Other Public Facilities?	No Impact

(a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services?

- Fire Protection?
- Police Protection?
- Schools?
- Parks?
- Other Public Facilities?

Temporary/Permanent Impacts

(a) No Impact. The purpose of the project is to expand capacity and improve operations, efficiency, connectivity, and passenger experience at the Riverside Downtown Station. The proposed Project does not involve the acquisition or displacement of any police or fire stations, schools, parks, or other public facilities.

The proposed Project operations would not contribute to population growth in the project study area that would result in an increased demand for existing schools, parks, or other public facilities (e.g., libraries and community centers). Therefore, the proposed Project would not require new or physically altered governmental facilities to maintain acceptable service ratios or other performance objectives for any of these public services. Since the proposed Project does not increase the number of residents living in, or businesses operating in, the study area, City, or County of Riverside, it is not expected that it would induce demand for new or expanded emergency services, schools, parks, or other public facilities. Proposed project construction and operations would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental, police, or fire protection facilities in order to maintain acceptable service ratios or response times.

3.13.5. Avoidance, Minimization, and/or Mitigation Measures

No impacts related to public services would occur; therefore, no avoidance, minimization, and/or mitigation measures are required.

3.13.6. CEQA Significance Conclusion

The proposed Project, including all the design options, would occur within an existing rail station and neighboring industrial development in urbanized Downtown Riverside. Implementation of the Project would allow for increased access to alternative modes of transportation and would not create a need for new or modified public facilities; therefore, the Project would have no impact on public services.

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3.14. Recreation

This section discusses the potential impacts on recreation within the community impacts study area that would result from the construction and operations of the proposed Build Alternative and all design options. Information provided in this section is based on the results of the technical analysis in the *Community Impact Assessment* (HNTB, 2021) prepared for the proposed Project.

3.14.1. Regulatory Framework

Applicable policies, laws, and regulations relative to recreation are provided herein:

State Requirements

California Environmental Quality Act. CEQA establishes state policy to prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures. CEQA applies to actions directly undertaken, financed, or permitted by state lead agencies.

The Park Preservation Act. The Park Preservation Act (California PRC § 5400-5409) prohibits local and state agencies from acquiring any property that is in use as a public park at the time of acquisition, unless the acquiring agency pays sufficient compensation or land, or both, to enable the operator of the park to replace the park land and any park facilities on that land.

Local and Regional Regulations

City of Riverside Municipal Code Chapter 9.08 Use of Public Parks. The purpose and intent of this chapter is to protect public health, safety, and general welfare of people and premises in the City of Riverside, including the quiet enjoyment of city parks by enacting a permitting process for groups of over 50 individuals. (Ord. 7244 § 4, 2014).

City of Riverside General Plan: Parks and Recreation Element. Objective PR-2. Increase access to existing and future parks and expand pedestrian linkages between park and recreational facilities throughout Riverside.

City of Riverside Parks Master Plan Vision 2030. The Riverside Comprehensive Park, Recreation & Community Services Master Plan serves as a guide and implementation tool for the management and development of parks and recreational facilities and programs for the city.

3.14.2. Methodology for Evaluating Environmental Impacts

The analysis of the proposed Project's potential impacts to recreation considers potential project effects within the study area related to construction and operations of the proposed Project.

3.14.3. Affected Environment

Project Location and Setting

Several local parks and recreational facilities serve the City of Riverside's Eastside community. Within the study area there are three parks and a community center, North Park; Lincoln Park; and Dario Vasquez Park (directly adjacent to the project boundaries); and the community center is the Lincoln Community Center. All parks and community centers within and near the study area are illustrated on Figure 3.14-1.

Figure 3.14-1. Parks and Recreational Facilities within the Study Area

The following parks are within the project study area and provide the community with several amenities and recreational opportunities:

Lincoln Park. Located adjacent to the Project at the intersection of Howard Avenue and 12th Street at 4261 Park Avenue. This 3.26-acre neighborhood park provides basketball courts, fitness stations, and picnic tables, a playground, horse shoe pit, barbeque, and community center. The Lincoln Park Community Center is a small facility used for after school programs, summer camps, and classes. After school camps for youth ages 5 to 12 years old include intramural sports, games, dance, cheer, homework assistance, and computer activities.

North Park. Located west of the BNSF railroad at the intersection of Vine Street and Mission Inn Avenue at 3172 Mission Avenue. This 1.26-acre special-use park is an open area landscaped park used for special events. There are no designated playgrounds recreational areas, picnic shelters, or benches on-site. The park provides on-site parking. Future upgrades to this park include the construction of a stage or area to create a music venue.

Dario Vasquez Park. Located approximately 0.5 mile east of the project study area at the corner of 14th Street and Sedgwick Avenue at 2400 14th Street. This 1.36-acre neighborhood park provides recreational amenities that include basketball courts, picnic shelters, and playgrounds.

3.14.4. Environmental Impacts and Consequences

CEQA Thresholds of Significance for Recreational Resources

In accordance with the *2021 CEQA Statute & Guidelines, Appendix G, Environmental Checklist Form, XVI. Recreation* (a) and (b), the proposed Project would result in impacts to recreational resources, if the construction or operation of the proposed Project would result in any of the conditions listed in the following table.

The discussion below includes the CEQA checklist for recreation and the discussion that follows provides the rationale for the following significance determinations:

- No Impact
- Less than Significant Impact
- Less than Significant Impact with Mitigation
- Potentially Significant Impact

Would the project:

Question	CEQA Determination
(a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	Less Than Significant Impact
(b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	No Impact

(a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

(b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Temporary Impacts (Construction)

Less than Significant Impact. Temporary impacts at North Park and Dario Vasquez Park are not anticipated because of the location where construction activities and staging would occur; these two parks are approximately 0.2 to 0.5 mile from the project site. Construction of the proposed Project would happen across the street at the northwest corner of Lincoln Park and may result in minor, indirect, and temporary construction-related impacts such as dust, odors, and noise to Lincoln Park, which would not affect park activities. In addition, temporary street and/or lane closures may occur along Howard Avenue and 12th Street, adjacent to the park; however, access to the Lincoln Park would be maintained throughout construction and temporary road and/or lane closures would cease upon completion of the Project.

Permanent Impacts (Operations)

Less than Significant Impact. Under the Build Alternative and all design options, the proposed Project would not result in any physical ground disturbance or alter any recreational facilities, activities, features, or attributes of parks within the project study area. In addition, the Build Alternative would not permanently alter access Lincoln Park. North Park and Dario Vasquez Park is 0.2 to 0.5 mile from the project site and would not be affected by the proposed Project.

During operations of the Project, noise levels are anticipated to increase because the existing Prism Aerospace building, which is shielding noise from Lincoln Park, would be removed. However, the playground at Lincoln Park is not an area that is considered noise-sensitive because active recreation occurs. Therefore, no permanent impacts are anticipated as a result of the Build Alternative and all design options.

The proposed Project and all the design options are intended to increase regional transit capacity and trip reliability by improving the Riverside-Downtown Station. Improvements to the station would not create additional residential units that would increase the neighborhood population and result in an increase in demand for recreational activities of other existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

3.14.5. Avoidance, Minimization, and/or Mitigation Measures

Measures provided in this section summarize avoidance and minimization actions to be conducted by the project proponents to ensure less than significant impacts are avoided or further minimize any impacts.

REC-1: Implementation of construction BMPs to minimize dust, odors, and noise would ensure that park activities and amenities would not be substantially affected. In addition, temporary, localized, site-specific disruptions to the local roadways serving Lincoln Park in the project study area may occur during various stages of construction. To avoid access related impacts to Lincoln Park during construction, RCTC must coordinate with construction contractor and the City of Riverside to maintain access to Lincoln Park.

3.14.6. CEQA Significance Conclusion

The proposed Project, including the design options, would occur within an existing rail station and neighboring industrial development in urbanized Downtown Riverside. Although there are recreational resources within the community impact study area, there are no recreational resources within the project footprint; therefore, construction and operations of the Project would not result in direct or indirect impacts on recreational resources, and the Project would have a less than significant impact to recreational resources.

3.15. Transportation

This section discusses the potential impacts on existing transportation facilities and the roadway network within the traffic study area that would result from the construction and operations of the proposed Build Alternative and all design options. Impacts to the transit system, pedestrian and bicycle facilities, and parking are also addressed. Information provided in this section is based on the *Traffic Impact Analysis* (HNTB, 2020) and the CIA (HNTB, 2021), as prepared for the proposed Project.

3.15.1. Regulatory Framework

Applicable, laws, regulations and transportation plans relative to transportation and traffic are provided below:

State Requirements

CEQA § 15064.3 describes specific considerations for evaluating a project's transportation impacts. Generally, VMT is the most appropriate measure of transportation impacts. For the purposes of this section, "VMT" refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the Project on transit and non-motorized travel. Transportation projects that reduce, or have no impact on, VMT should be presumed to cause a less than significant transportation impact.

Senate Bill 743 (2013)

SB 743 amended CEQA to allow the Governor's Office of Planning and Research (OPR) to develop new guidelines under CEQA establishing alternative metrics to levels of service (LOS) for the analysis of transportation impacts. On December 28, 2018, the Office of Administrative Law approved the amendments to the CEQA Guidelines, including changes related to SB 743. The amended CEQA Guidelines added a new section on determining the significance of transportation impacts, and generally specify VMT as the most appropriate measure of transportation impacts.

The OPR of the State of California has issued a technical advisory that includes recommendations on evaluating VMT impacts of projects. OPR provides the following guidance regarding transit and active transportation projects: "Transit and active transportation projects generally reduce VMT, and therefore, are presumed to cause a less than significant impact on transportation. This presumption may apply to all passenger rail projects, bus and bus rapid transit projects, and bicycle and pedestrian infrastructure projects. Streamlining transit and active transportation projects aligns with each of the three statutory goals contained in SB 743 by reducing GHG emissions, increasing multimodal transportation networks, and facilitating mixed use development."

Local Plans and Guidance

City of Riverside General Plan 2025

The City of Riverside's General Plan (2019) is a strategic, long-range plan guiding growth to 2025. As part of the plan, the Circulation Community Mobility Element outlines the city's transportation objectives and policies. The following objectives apply to the Project:

- Build and maintain a transportation system that combines a mix of transportation modes and transportation system management techniques, and that is designed to meet the needs of Riverside's residential system's impacts on air quality, the environment and adjacent development.
- Reduce peak-hour trips, roadway congestion and air pollution.
- Promote and support an efficient public multi-modal transportation network that connects activity centers in Riverside to each other and to the region.
- Ensure that adequate on and off-street parking is provided throughout Riverside.

City of Riverside Climate Action Plan (2016)

The City of Riverside has progressively demonstrated its commitment to taking action on the pressing issue of climate change, including reducing GHG emissions and supporting the transition to a low-carbon economy. It is the city's view that actions to reduce GHG emissions represent opportunities to inspire economic development through investment in urban development, infrastructure, mobility systems, and entrepreneurship and include the following transportation policy goal: Transportation and land use measures will reduce single-occupancy vehicle travel, increase non-motorized travel, improve public transit access, increase motor vehicle efficiency, encourage alternative fuel vehicles, and promote sustainable growth patterns.

City of Riverside Master Bicycle Plan (2007)

The following set of goals, objectives, and policies cover bicycle facility development, bicycle education and encouragement, system maintenance, and regional connections. Goals and applicable policies are as follows:

- Goal 2: Plan for the Needs of Bicyclists
  - **Policy 2.1:** Design all street improvement projects in a comprehensive fashion to include consideration of street trees, pedestrian walkways, bicycle lanes, equestrian pathways, signing, lighting, noise, and air quality wherever any of these factors are applicable (Policy CCM-2.9).
- Goal 3: Eliminate Barriers to Bicycling
  - **Policy 3.1:** Minimize disruption to bicycle facilities during capital improvement, private development construction, and maintenance activities to facilitate bicyclist safety at all times and provide alternate routes if required.
- Goal 5: Preserve and Sustain Existing Bicycle Infrastructure

Western Riverside Active Transportation Plan (2018)

Goals were formulated to align with state and federal VMT reduction efforts, the Western Riverside Council of Governments Sustainability Framework, and GHG reduction objectives outlined in the Riverside County Climate Action Plan (County of Riverside, 2019).

The five goals to guide active transportation planning in Western Riverside are:

1. Establish a "regional network of bicycle and pedestrian facilities through prioritization of local projects" to maximize regional mobility as stated in the Sustainability Framework.
2. Enhance safety, remove barriers to access, and correct unsafe conditions in areas of traffic and bicycle/pedestrian activity.
3. Provide active transportation modes as affordable options to reduce criteria pollutants, greenhouse gas emissions, and VMT.
4. Address public health through design and infrastructure that encourages residents to use active transportation as a way to integrate physical activity into their daily lives and improve future air quality.
5. Foster healthy, equitable, and economically vibrant communities where all residents have greater transportation choices and access to key destinations, such as jobs, medical facilities, schools, and recreation through cohesive land use and transportation decisions.

Though these goals were developed to specifically relate to active transportation, many of the goals are multi-modal in nature and other co-benefits for all users of the various transportation systems.

City of Riverside Traffic Impact Analysis Guide (2017)

This document provides guidance for the preparation of traffic impact analysis (TIA) to comply with CEQA requirements and consistency with the City of Riverside's General Plan (2025). This guidance document establishes the City's traffic performance standards and CEQA impact significance thresholds within the roadway network.

3.15.2. Methodology for Evaluating Environmental Impacts

The 2021 CEQA Statute & Guidelines § 15064.3 was used to determine the significance of transportation impacts using VMT as the most appropriate measure of transportation impacts. The OPR of the State of California has issued a technical advisory that includes recommendations on evaluating VMT impacts of projects. It provides the following guidance regarding transit and active transportation projects: "Transit and active transportation projects generally reduce VMT and therefore are presumed to cause a less-than-significant impact on transportation. This presumption may apply to all passenger rail projects, bus and bus rapid transit projects, and bicycle and pedestrian infrastructure projects. Streamlining transit and active transportation projects aligns with each of the three statutory goals contained in SB 743 by reducing GHG emissions, increasing multimodal transportation networks, and facilitating mixed use development."

The traffic analysis summarized in this section was prepared in accordance with the requirements outlined in the City of Riverside *Public Works Department Traffic Impact Analysis Preparation Guide* (November 2017) to satisfy CEQA requirements by analyzing potential impacts to existing transportation facilities, identifying feasible mitigation measures, and determining significance.

3.15.3. Affected Environment

This section describes the affected environment within the traffic study area.

State Highway

SR 91 is within the traffic study area located west of the station and is a major east-west facility in Riverside County that is primarily used for interstate, inter-regional, and intraregional travel consisting of people and goods movement through Los Angeles, Orange, Riverside, and San Bernardino Counties. SR 91 is part of the National Highway System and Freeway and Expressway System and is a terminal access route. Its functional classification is "other Freeway or Expressway."

Local Roads

Construction and operation of the proposed Project may affect roadway facilities within the traffic study area. According to the City of Riverside's General Plan 2025 (Master Plan of Roadways map section), the following roadways are classified as major arterials and are located within the traffic study area:

- **14th Street:** 14th Street is designated as a 4-lane, 100- to 110-foot arterial. There is no assigned bicycle lane on the roadway.
- **Mission Inn Avenue:** Mission Inn Avenue is designated as a 4-lane, 100- to 110-foot arterial and scenic boulevard requiring special landscaping. There is no assigned bicycle lane on the roadway.
- **Lime Street/Olivewood Avenue:** Lime Street/Olivewood Avenue is designated as a 4-lane, 88-foot arterial. There is no assigned bicycle lane on the roadway.

Public Transportation

The City of Riverside General Plan 2025 (Transit Facilities in the Transportation/Traffic Section) identifies the transit routes and stations within the City of Riverside. The project study area coincides with many of the Riverside Transit Agency (RTA) bus routes, including routes: 1, 10, 12, 13, 14, 15, 16, 29, 41, 49, 200, and 208. The Project involves expansion of the Riverside-Downtown Station including connections to the Metrolink and SR 91/IEOC lines. Other bus routes providing services to the Riverside-Downtown Station include the Omnitrans 215. In addition to public transit routes to the Riverside-Downtown Station, free Metrolink Shuttle service is available to and from the station along local streets traversing Vine Street, University Avenue, Market Street, 10th Street, Lemon Street, and 14th Street.

Passenger Trains

SCRRA (Metrolink) is a joint powers authority established in 1991 to plan, design, build, and operate passenger rail service in the Southern California region. Metrolink provides regional passenger rail service in Los Angeles, Riverside, San Bernardino, and Ventura counties and the City of Oceanside in San Diego County. The Riverside-Downtown Station provides connections between three of Metrolink's seven regional lines, 91/PV Line, IEOC Line, and Riverside Line.

In addition to the Metrolink passenger trains there are two Amtrak trains that provide passenger service at the station.

Parking Facilities

The Riverside-Downtown Station provides on-site parking at two parking lots located adjacent to the station at Vine Street and 10th Street. There are currently 1,115 parking spaces and 25 handicapped spaces available at the main station parking lot off Vine Street. The existing overflow parking lot off Commerce Street provides 325 parking spaces. On-street parking is permitted along Vine Street, 9th Street, 10th Street, and Commerce Street nearby the station.

Bicycle and Pedestrian Facilities

The main components of the pedestrian circulation system are sidewalks and crosswalks. Most developed properties within the project study area are improved with paved sidewalks. While the city requires installation of sidewalks in conjunction with new development, some older local streets within the project study area that were built before this requirement took effect do not have sidewalk improvements adjacent to the developed parcel. Properties without paved sidewalks include residential homes on 12th Street; several residences and an industrial building with vacant lots on Howard Avenue; and an industrial building on 10th Street.

Within the project study area roadways, there are no dedicated, Class I bike paths; however, there is one Class II bike lane on University Avenue between Park Avenue and Canyon Crest Drive. The 2012 City of Riverside Master

Bicycle Plan (update) recommended an extension of the Class II bike lane on University Avenue from Park Avenue to Market Street. Currently, bicycles share the roadway with vehicles within the project study area. At the Riverside-Downtown Station, bicycle racks and lockers are provided on site.

3.15.4. Environmental Impacts and Consequences

CEQA Thresholds of Significance for Transportation

In accordance with the *2021 CEQA Statute & Guidelines, Appendix G, Environmental Checklist Form*, *XVII. Transportation Resources:* (a), (b), and (c), the proposed Project would result in impacts to transportation facilities, if the construction or operations of the proposed Project would result in any of the conditions listed in the following table.

The discussion below includes the CEQA checklist for transportation resources, and the discussion that follows provides the rationale for the following significance determinations:

- No Impact
- Less than Significant Impact
- Less than Significant Impact with Mitigation
- Potentially Significant Impact

Would the project:

Question	CEQA Determination
(a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	No Impact
(b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	Less Than Significant Impact
(c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	No Impact
(d) Result in inadequate emergency access?	Less Than Significant Impact

(a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

No Impact. The Riverside-Downtown Station is a regional passenger train hub serviced by local and regional transit routes. Existing transit service within the project study area would not be affected after the completion of the Project. Station improvements would improve regional train service and benefit the City of Riverside and the surrounding communities. Expansion of the existing station infrastructure would enhance access for station users, accommodate projected future travel demand and encourage ridership and would accomplish several objectives identified in the City of Riverside's General Plan (2025). The Build Alternative and all design options would expand Riverside's multimodal transportation system, reduce single vehicle use and GHG emissions, improve circulation and pedestrian facilities and would not preclude planned bicycle improvements. The addition of parking and ADA compliant sidewalks with trees and lighting would also improve access to the station and provide new facilities for pedestrians improving active transportation. The proposed project elements are summarized in Table 3.15-1.

Table 3.15-1. Proposed Project Elements

Element	Description
Station Platform and Track Improvements	• Add new center platform • Add new tracks • Modification of railroad signal system
Pedestrian Overpass Access Improvements	• Extend pedestrian access to new platform • Emergency egress would be provided at three locations

Element	Description
Traffic Circulation Options, Parking and Streetscape Improvements	• Add sidewalks and trees • Traffic Circulation Options and Howard Avenue Extension • Add up to 572 additional parking spaces • Relocate ADA parking

The Build Alternative with all design options including Parking Design Options 2A, 2B, 3A, and 3B (proposed extension of Howard Avenue and vacation of the segment of 10th Street between Howard Avenue and Commerce Street and Commerce Street between 10th Street and 9th Street). In addition, if any of these design options are selected, the existing on-street parking on Commerce Street (approximately 20 spaces) would be eliminated; however, the proposed parking lot would add up to 560 spaces and would offset any lost parking.

Under the Build Alternative with all design options, including Parking Design Options 2A, 2B, or 2C (proposed extension of Howard Avenue) for Opening Year (2025) and Build-out (2045), the LOS for the traffic study area intersections would either remain the same or stay at above acceptable LOS D threshold, as established by the City of Riverside. For more information on existing and 2025/2045 LOS for intersections within the traffic study area, refer to TIA Tables 7.2 and 7.4 in Appendix R.

As stated in Section 3-10, Land Use/Planning, the proposed Project would be consistent with the following programs, plans, and policies addressing the overall transportation network and circulation system:

- SCAG 2020-2045 RTP/SCS
- City of Riverside General Plan 2025
  - Riverside Marketplace District Vision Plan
  - Riverside Marketplace Specific Plan
  - Eastside Neighborhood Plan
- City of Riverside Climate Action Plan (2016)
- RCTC Short-Range Transportation Plan (2020)
- Metrolink Strategic Business Plan (2021)
- City of Riverside Master Bicycle Plan (2007) and 2016 Update and Addendum
- Western Riverside Active Transportation Plan (2018)

The proposed Project would be consistent with the goals to promote and support an efficient public multi-modal transportation network, encourage ridership, reduce GHG emissions, reduce single-occupancy vehicle travel, improve public transportation access, and promote sustainable growth patterns. Therefore, the Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

(b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less Than Significant Impact. As the proposed Project is a passenger rail project that proposes to expand capacity and accessibility improvements at the Riverside-Downtown Station, the proposed Project would encourage ridership and reduce regional VMT and achieve the goals of SB 743. In accordance with CEQA Guidelines Section 15064.3(b)(2), "Transportation projects that reduce, or have no impact on, VMT should be presumed to cause a less than significant transportation impact." Since the proposed Project is a passenger rail project, VMT-related impacts are presumed to be less than significant. Based on OPR guidance, VMT-related impacts are presumed to be less than significant.

(c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. The proposed project improvements would not create sharp curves or dangerous intersections in the project study area. The design and construction of station improvements, including the pedestrian bridge, parking, circulation, and streetscape elements surrounding the station would be designed to meet applicable safety standards.

RCTC would also coordinate and comply with agency and/or stakeholder requirements including FTA, Metrolink, BNSF and the City of Riverside to ensure the geometric design for the Project would not increase hazards or create incompatible uses. The improvements would also be designed in accordance with the most recent applicable codes and, SCRRA, BNSF, ADA, American Railway Engineering and Maintenance-of-Way Association (AREMA), Federal Rail Administration (FRA), and CPUC standards and guidelines.

All project elements, including new street intersections and pedestrian connections, would be designed and constructed to comply with applicable agency standards and specifications to maximize safety for both motorized and non-motorized forms of transportation and would result in no impact.

(d) Result in inadequate emergency access?

Temporary/Permanent Impacts

Less than Significant Impact. Under the Build Alternative with Parking Design Option 2A, 2B, 3A, and 3B (extension of Howard Avenue) the Opening Year (2025) and Build-out (2045) intersections within the traffic study area would remain at or above acceptable LOS D thresholds, as established by the City of Riverside. For more information on existing and future LOS see Tables 7.2 and 7.4 of the TIA in Appendix R. Permanent changes to the roadway network would increase rather than decrease access to the neighborhood; thus, access for emergency services would remain unchanged or improve. Build Alternative with Parking Design Option 2A, 2B, 3A, and 3B (Howard Avenue extension) would vacate existing local roadways and incorporate segments of 10th Street and Commerce Street as part of the proposed station parking lot expansion. If the Build Alternative with one of the aforementioned options is selected, the proposed vacation would be coordinated with the City of Riverside and emergency service providers to ensure that adequate access is maintained during final design activities. The proposed Project would not result in inadequate emergency access.

Construction of the station improvements would affect local circulation and access due to roadway and lane closures. Closures would require traffic detouring. Given that traffic would be diverted to nearby roadways, the LOS at adjacent intersections may temporarily be affected. Delays are anticipated along roadways and intersections subject to street and lane closures and could affect emergency responders and access. Although construction would require some temporary roadway closures, not all of the roadway closures would occur at the same time, and other roadways would be available in the event of an evacuation to allow emergency vehicles access to the project site and the Riverside-Downtown Station. Emergency access would be maintained around the project study area throughout construction activities, resulting in less than significant impacts.

Minimal project-related increase delays are expected at intersections within the study area. Planned internal parking lot reconfiguration and associated modifications to fire lanes and access roads would not significantly affect emergency access, primarily because the Riverside-Downtown Station would be accessible to emergency service providers using the existing fire lanes. Emergency access would be provided at the expanded parking lot at various driveways to the west, south, and east of the proposed station facility expansion, which would provide emergency and fire lane access to the southern side of the station. Planned internal roadway reconfigurations and associated modifications would be coordinated and approved by the City of Riverside Fire Department to ensure that adequate access is incorporated into the final design plans for emergency service providers. The proposed Project would not result in inadequate emergency access. Therefore, impacts would be less than significant.

3.15.5. Avoidance, Minimization, and/or Mitigation Measures

Measures provided in this section summarize avoidance and minimization actions to ensure less than significant impacts are avoided and minimized. Measure T-1 is identified as a measure to minimize potential impacts during construction.

T-1: A TMP would be developed in coordination with the City of Riverside and emergency responders during the final design phase and would be implemented prior to and during construction to ensure traffic safety, minimize construction-related traffic congestion, detour routes, and minimize inconveniences to commuters, local residences, and businesses. At a minimum, the TMP would include appropriate signage, identification of alternate/detour routes, incident management, construction strategies, on-site and off-site street circulation, and anticipated temporary traffic lane closures.

3.15.6. CEQA Significance Conclusion

The proposed Project is a passenger rail project and under SB743 and OPR guidance for VMT, the Project's impacts on transportation would be less than significant. The Project is consistent with regional and local transportation and land use planning and would be constructed in collaboration with the City of Riverside, Metrolink, BNSF, and FTA to ensure the design meets all applicable safety and design requirements.

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3.16. Tribal Cultural Resources

This section discusses the potential impacts on tribal cultural resources within the study area resulting from the construction and operations of the proposed Build Alternative and all design options. Information provided in this section is based on the results of the technical analysis in the *Archaeological Study Report* (ASR) (HNTB, 2021) prepared for the proposed Project.

3.16.1. Regulatory Framework

Applicable policies, laws, and regulations relative to tribal cultural resources are provided herein:

State Requirements

California Environmental Quality Act. CEQA requires the consideration of cultural resources that are historical resources and tribal cultural resources, as well as "unique" archaeological resources. PRC § 5024.1 established the California Register of Historic Resources (CRHR) and outlined the necessary criteria for a cultural resource to be considered eligible for listing in the CRHR, therefore, a historical resource. Historical resources are defined in PRC § 5020.1(j). In 2014 CEQA, PRC § 21084.1, and CCR Title 14 § 15064.5 address determining the significance of impacts to archaeological and historic resources and discuss significant cultural resources as "historical resources," which are defined as follows:

- Resource(s) listed or determined eligible by the State Historical Resources Commission for listing in the CRHR (14 CCR § 15064.5[a][1]).
- Resource(s) either listed in the NRHP or in a "local register of historical resources" or identified as significant in a historical resource survey meeting the requirements of § 5024.1(g) of the PRC, unless "the preponderance of evidence demonstrates that it is not historically or culturally significant" (14 CCR § 15064.5[a][2]).
- Resources determined by the lead agency to meet the criteria for listing on the CRHR (14 CCR § 15064.5[a][3]).

The Traditional Tribal Cultural Places Bill of 2004. This bill requires local governments to consult with Native American Tribes during the project planning process, specifically before adopting or amending a general plan or a specific plan, or when designating land as open space for the purpose of protecting Native American cultural places. The intent of this legislation is to encourage consultation and assist in the preservation of Native American places of prehistoric, archaeological, cultural, spiritual, and ceremonial importance.

State Assembly Bill 52. AB 52, effective July 1, 2015, introduced the Tribal Cultural Resource as a class of cultural resources and introduced additional considerations relating to Native American consultation into CEQA. As a general concept, a TCR is similar to the federally defined Tribal Cultural Property (TCP); however, it incorporates consideration of local and state significance, as well as required mitigation measures, under CEQA. A TCR may be considered significant (i.e., a historical resource) if it is included in a local or state register of historical resources, determined by the lead agency to be significant pursuant to criteria set forth in PRC §5024.1, or is a geographically defined cultural landscape that meets one or more of these criteria; or is a historical resource described in PRC §21084.1, a unique archaeological resource described in PRC §21083.2; or is a non-unique archaeological resource if it conforms with the above criteria.

Local and Regional Regulations

City of Riverside Title 20. The City of Riverside adopted 20 CCR for the purpose of promoting "the public health, safety and general welfare by providing for the identification, protection, enhancement, perpetuation and use of improvements, buildings, structures, signs, objects, features, sites, places, areas, districts, neighborhoods, streets, works of art, natural features and significant permanent landscaping having special historical, archaeological, cultural, architectural, community, aesthetic or artistic value in the City."

3.16.2. Methodology for Evaluating Environmental Impacts

The analysis of potential impacts to tribal cultural resources considers potential project effects within the study area related to construction and operations of the proposed Project.

Area of Potential Effects

An archaeological APE was established for the Project with the limits of disturbance (LOD). This is the zone where there may be ground disturbance from project construction (often referred to as the Direct APE). The LOD includes both the horizontal and vertical areas associated with ground disturbing and physical construction activities.

Subsurface disturbance will occur during removal of structures and contaminated soil removal to an estimated depth between 3 to 5 feet across the majority of the proposed project site and up to 10 feet below the surface at spot locations (building foundations).

Records Search and Field Survey

The NAHC was contacted on December 11, 2019, requesting a Sacred Lands File search and list of Native American contacts for the project area. No Sacred Lands were found in the Sacred Lands Search; however, during consultation with the Agua Caliente Band of Cahuilla Indians (ACBCI) the project site is within the Tribe's traditional use area. A records search of the California Historical Resources Information System (CHRIS) at the Eastern Information Center (EIC) was conducted on December 17, 2019. The records search covered a 0.5-mile radius around the project study area/APE and included the identification of previously recorded cultural resources, locations, and citations for previous cultural resources studies. A review of the NRHP, CRHR, and state Office of Historic Preservation (OHP) historic properties directories was also conducted.

A pedestrian field survey of the Project's archaeological APE was conducted on March 9, 2020. The area immediately adjacent to the railroad tracks could not be accessed, and some private yards were fenced and not accessible. For the most part, the project study area has been previously developed with railroad tracks, paved roads, concrete sidewalks, buildings, and grass or landscaped grounds, leaving a small amount of ground visible for inspection.

3.16.3. Affected Environment

Tribal Ethnohistory

The Project is located in an area that appears to have been used and/or occupied by various Native peoples, especially after European contact, when many Native people were forced from their traditional lands or moved at least seasonally to take work on ranches and in other enterprises. The NAHC identified Cahuilla, Luiseño, Gabrieleño (Gabrieliño, Tongva), Serrano, and Tataviam/Kitanemuk/Vanyume Tribes and individuals as potentially affiliated with the area.

Cahuilla

The Cahuilla term īvīatim refers to those who speak the Cahuilla language and is also a recognition of a commonly shared cultural tradition. Prehistorically, the Cahuilla territory was topographically diverse, occupying elevations from 11,000 feet in the San Bernardino Mountains to below sea level at the Salton Sea. The Cahuilla are thought to have been, in part, distinguished from other Uto-Aztecan-speaking groups (the Luiseño, Serrano, and Gabrielino) by mountain ranges and plains, but they are known to have interacted regularly with these and other groups through trade, intermarriage, ritual, and war. Cahuilla villages were commonly situated within canyons extending into mountain ranges or on nearby alluvial fans, typically near sources of water and food. The diverse habitat of the Cahuilla enabled a wide variety of plant and animal species to be used for food, goods manufacture, and medicine.

Luiseño

The name Luiseño derives from Mission San Luis Rey de Francia and has been used to refer to the Indians associated with the mission. The Luiseño language belongs to the Cupan group of the Takic subfamily and is part of the widespread Uto-Aztecan language family. Neighboring groups that speak Cupan languages are Cupeño, Cahuilla, and Gabrielino. The Luiseño social organization is noted for: 1) extensive proliferation of social statuses, 2) clearly defined ruling families that interlocked various rancherias within the ethnic nationality, 3) a sophisticated philosophical structure associated with the taking of hallucinogenics (datura), and 4) elaborate ritual paraphernalia including sand paintings symbolic of an avenging sacred being named Chinigchingish. Material culture of the Luiseño people found archaeologically includes small, triangular, pressure-flaked projectile points; milling implements: mortars and pestles, manos and metates, and bedrock milling features; bone awls; Olivella shell beads; other stone and shell ornaments; pottery vessels, red and black pictographs, cremations, and later, "such nonaboriginal items as metal knives and glass beads."

Gabrielino

The Gabrielino occupied most of present day Los Angeles and Orange counties, extending along the coast from the southern portion of the Santa Monica Mountains to the northern portion of the Santa Ana Mountains and east along the watersheds of the Los Angeles, San Gabriel, and Santa Ana rivers. Additionally, the Gabrielino occupied several offshore islands, including San Clemente, Santa Catalina, and San Nicholas. The name Gabrielino stems from one of the two major Spanish missions established in the Gabrielino territory, the San Gabriel Mission. The Gabrielino were

among the most powerful and populous ethnic nationalities in California's prehistory, however, few ethnographic studies were accomplished, and therefore, little is known of them.

At the time of Spanish explorer Juan Rodriguez Cabrillo's entrance into Gabrielino territory, it is estimated that their population may have reached nearly 5,000 people. They were semi-nomadic and subsisted on a hunter-gatherer lifestyle in the rich landscape abundant in coastal resources, as well as acorns, pine nuts, and small game. The Gabrielino settlements were situated near water courses; permanent villages were always established "in the fertile lowlands along rivers and streams." Both primary and subsistence villages were occupied continuously, with smaller gathering camps being intermittently occupied, depending on the season and resource. Gabrielino people maintained a rich material culture of varied and technical tools.

Like their neighbors, the Chumash, they created wooden planked canoes, called ti'ats, which allowed them to populate and exploit the resources of the Southern Channel Islands. Among these resources was steatite, a type of soapstone that was carved into vessels and ornaments and traded with neighboring tribes. The Gabrielino also created rock art and produced ceramic vessels. They used asphaltum, which occurs naturally in the area, both as a waterproof seal and as an adhesive to attach shell decorations to items. Other tools included portable mortars and metates, scrapers, knives, drills, paddles, wooden spoons and bowls, bone saws, needles, fishhooks, awls, slings, clubs, and baskets. Their pre-contact and contact period burial practices included cremation and flexed burials.

AB 52 Tribal Consultation

The NAHC was contacted on December 11, 2019, requesting a Sacred Lands File search and list of Native American contacts for the project area. RCTC conducted Native American outreach for compliance with AB 52 under CEQA.

On February 25, 2020, RCTC sent letters to tribal contacts identified by NAHC to provide project maps and information and to invite them to initiate consultation in compliance with AB 52. AB 52 consultation is summarized in Table 3.16-1.

Table 3.16-1. AB 52 Tribal Consultation

Date	Tribe	Response or Correspondence
February 27, 2020	Morongo Band of Mission Indians	Responded they had no additional comments at this time.
March 3, 2020	San Manuel Band of Mission Indians (SMBMI)	Indicated that the project area was outside the Serrano ancestral territory and, as such, the SMBMI will not be requesting consulting party status with the lead agency.
March 20, 2020	Agua Caliente Band of Cahuilla Indians (ACBCI)	Indicated the Project was not within their boundaries; however, it is within the Tribe's traditional use area, so the THPO requested copies of project related cultural resource documentation. ACBCI also requested that ground-disturbing activity be monitored by a qualified archaeologist and a Native American tribal cultural monitor. The THPO also indicated "This letter does not conclude consultation. Upon receipt of requested materials the ACBCI THPO may have additional recommendations or require further mitigation measures." On April 7, 2020, RCTC responded that they would provide the Tribe with a copy of the ASR once it was completed and that consultation efforts would be continued.
April 8, 2020	Soboba Band of Luiseno Indians (SBLI)	Requested initiation of formal consultation, and on April 20, 2020, a consultation meeting between RCTC and SBLI was held by telephone. SBLI indicated that although the general area is sensitive, in terms of Native American cultural resources, no resources are known in the immediate vicinity of the project site. SBLI requested that the environmental documents provide measures to address inadvertent discoveries, notification to the tribes, and tribal monitoring in the event of such discoveries. Soboba indicated that having an archaeologist present to monitor during construction to identify resources and notify

Date	Tribe	Response or Correspondence
		tribal monitors in the event of a discovery would be sufficient; they did not request tribal monitoring.
January 11, 2021	Soboba and ACBCI	Updated project information was provided to both SBLI and ACBCI, as the Project description was refined, and both Tribes were invited to reopen consultation with RCTC if desired.
May 12, 2021	ACBCI	Indicated the Project was not within their boundaries; however, it is within the Tribe's traditional use area. The THPO indicated "At this time ACBCI has no comments, but please continue to provide our office with updates as the project progresses. Also, please inform our office if there are changes to the scope of this project."

Source: ASR (HNTB, 2021)

SMBMI = San Manuel Band of Mission Indians
ACBMI = Agua Caliente Band of Cahuilla Indians
SBLI = Soboba Band of Luiseno Indians
THPO = Tribal Historic Preservation Officer

3.16.4. Environmental Impacts and Consequences

CEQA Thresholds of Significance for Tribal Cultural Resources

In accordance with the *2021 CEQA Statute & Guidelines, Appendix G, Environmental Checklist Form, XVIII. Tribal Cultural Resources:* (a) and (b), the proposed Project would result in impacts to tribal cultural resources, if the construction or operations of the proposed Project would result in any of the conditions listed in the following table.

The discussion below includes the CEQA checklist for tribal cultural resources, and the discussion that follows provides the rationale for the following significance determinations:

- No Impact
- Less than Significant Impact
- Less than Significant Impact with Mitigation
- Potentially Significant Impact

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

Question	CEQA Determination
(**a**) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	No Impact
(b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	Less Than Significant with Mitigation Incorporated

(a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)

No Impact. There are no recorded tribal cultural resources listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC § 5020.1(k) within the APE; therefore, the construction and operation of the Project would not result in any direct or indirect impacts.

(b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Temporary Impacts (Construction)

Less than Significant Impact with Mitigation Incorporated. The project area has been previously developed with railroad tracks, paved roads, concrete sidewalks, buildings, and grass or landscaped grounds, and soils in the project area have been highly disturbed with undocumented artificial fill generally associated with the previous grading for existing structures/roadways improvements. The undocumented fill layers may extend up to 10 feet bgs in some areas, especially near the Prism Aerospace building. There are no recorded tribal cultural resources within the project APE; however, the APE is located is not within the boundaries of the ACBCI; however, it is located within the ACBCI traditional use area. The Soboba indicated although the general area is sensitive, in terms of Native American cultural resources, no resources are known in the immediate vicinity of the project site. Soboba requested that the environmental documents provide measures to address inadvertent discoveries, notification to the Tribes, and tribal monitoring in the event of such discoveries. Soboba indicated that having an archaeologist present to monitor during construction to identify resources and notify tribal monitors in the event of a discovery would be sufficient; they did not request tribal monitoring.

Temporary/Permanent Impacts

The majority of construction within the APE is anticipated to reach a maximum depth of 5 feet and 10 feet below the surface at spot locations. Since the general area is sensitive and the area is within the ACBCI traditional use area, there is a potential for significant impacts if tribal cultural resources are encountered. To mitigate potentially significant impacts, an archaeologist and a Native American tribal monitor will provide monitoring during ground disturbing activities. If cultural material is discovered, the monitors will coordinate with RCTC staff to develop and implement appropriate mitigation measures such as resulting in less than significant impacts with mitigation.

Permanent Impacts (Operations)

After the Project is constructed, no permanent impacts from operations are anticipated.

3.16.5. Avoidance, Minimization, and/or Mitigation Measures

Measures provided in this section summarize avoidance, minimization, and/or mitigation measures to be conducted by the project proponents to ensure potentially significant impacts are mitigated and less than significant impacts are avoided or minimized.

TCR-1 Pre-construction Activities. Prior to construction, RCTC will establish the notification protocol with Tribes that have requested consultation as part of the AB 52 process. This consultation will address the evaluation of the newly discovered resources and avoidance and/or mitigation measures, as appropriate, and a pre-construction meeting will be held with the construction contractor (for ground disturbing activities) and include the qualified Native American tribal cultural monitor.

TCR-2 Construction Monitoring. Construction related ground disturbing activities such as grading, and other activity will be monitored during construction by a qualified Native American tribal cultural monitor.

TCR-3 Inadvertent Discovery of Tribal Cultural Resources during Construction. In the event that tribal cultural resources are encountered, the Native American tribal cultural monitor would have the authority to temporarily halt or redirect grading and other ground-disturbing activity within a 50-foot radius of the find, and these materials and their context will be avoided until the archaeological principal investigator and RCTC have been notified and notice has been given to the consulting Tribes. Project personnel will not collect or retain cultural resources. Prehistoric resources include, but are not limited to, flaked stone tools and debitage; projectile points; mortars and pestles; dark, friable soil containing shell and bone; dietary debris; heat-affected rock; or human burials. Pursuant to California PRC § 21083.2(b), avoidance is the preferred method of preservation for archaeological resources.

TCR-4 Tribal Cultural Resources that may be Eligible for NRHP or CRHR. If cultural material is encountered that appears to be eligible for CRHR, the monitors will coordinate with RCTC staff to develop and implement appropriate mitigation measures. Anticipated mitigation measures include documentation and collection of cultural material, as well as controlled excavation, if necessary. Cataloging and analysis methods will be agreed upon among the parties but will not delay project construction.

3.16.6. CEQA Significance Conclusion

The proposed Project, including the design options, would occur within a previously disturbed area in an existing rail station and neighboring industrial development in urbanized Downtown Riverside. There are no recorded tribal cultural resources listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC § 5020.1(k) or a resource determined by the lead agency in its discretion and supported by substantial evidence to be significant within the project APE. However, the project APE is located within the ACBCI traditional use area; therefore, the Project is anticipated to result in a less than significant impact with mitigation.

3.17. Utilities and Service Systems

This section discusses potential impacts to utilities and service systems resulting from the construction and operations of the proposed Build Alternative and all design options. Information provided in this section is based on the discussion of utilities and service systems in the Community Impact Assessment (HNTB, 2021) prepared for the proposed Project.

3.17.1. Regulatory Framework

Applicable policies, laws, and regulations relative to public services are provided herein:

State Requirements

State Bill (SB) 610. This bill requires the city or county that determines if a project is subject to CEQA to identify public water systems that will potentially supply water for the project and to request those water systems to prepare a water supply assessment (WSA). Projects requiring a WSA under this bill include large residential, commercial, and industrial developments that meet the minimum criteria set forth in this bill.

Integrated Waste Management Act (IWMA), 1989. This act establishes goals for the reduction of waste disposal while providing a framework for waste reduction program implementation, solid waste planning, and solid waste/landfill facility planning. As of January 1, 2010, responsibilities under the IWMA were transferred from the California Integrated Waste Management Board (CIWMB) to CalRecycle, operating under the jurisdiction of the Natural Resources Agency.

Solid Waste Reuse and Recycling Act (SWRRA), 1991. This act was enacted to help local jurisdictions meet the goals of the IWMA. SWRRA establishes standards for the collection and transportation of recyclable materials for development projects.

Local and Regional Regulations

City of Riverside General Plan 2025 (2019). The Public Facilities and Infrastructure element of the plan details existing water service and treatment infrastructure and provides a summary of ongoing conservation programs. Wastewater treatment in the region is provided by the Riverside Regional Water Quality Treatment Plant (RRWQTP). This element of the plan discusses the existing treatment capacity and establishes planned water treatment capacity adequate for meeting the needs of future Riverside residents and businesses. Additionally, this element establishes goals for supplying future water demands, supporting existing utilities and water districts, and implementing future water conservation programs.

This element also outlines the existing solid waste programs, as established by the IWMA. Waste reduction programs, including recycling standards, household hazardous wastes and appliances removal, and green waste removal (i.e., plants, weeds, tree limbs, etc.) have been implemented to reduce instances of improper disposal of solid wastes.

3.17.2. Methodology for Evaluating Environmental Impacts

The analysis of the proposed Project's potential impacts to utilities and service systems considers potential project effects within the study area related to construction and operations of the Project. Utilities and service systems within or adjacent to the study area were identified through review of existing utility mapping and coordination with public and private utilities. Potential impacts to utilities and service systems were evaluated by examining existing utilities, within or adjacent to the study area, and determining the potential for disturbance to existing utilities due to construction and operations of the Project.

3.17.3. Affected Environment

Water and electricity in the study area are provided by Riverside Public Utilities, a customer-owned utility governed by community volunteers and the City of Riverside. The City of Riverside Public Works Department maintains the sewer, stormwater system, and trash and recycling in the study area. SoCal Gas Company provides natural gas service in the study area. Fiber optic and television providers for the study area include AT&T, Frontier Communications, Spectrum, Sprint, and CenturyLink.

Solid Waste

The Riverside Public Works Department collects trash from 70 percent of all households. Excessive waste generation is discouraged by charging additional costs if a second trash container is required. The remaining portion of the city's trash is collected by a private contractor. The private contractor services approximately 20,000 customers in the La Sierra, University, and Orangecrest neighborhoods.

Before the IWMA was passed, the City of Riverside did not have a municipally sponsored recycling program; however, once IWMA was established, the city met the law's requirement of diverting 50 percent of solid waste from landfills by the year 2000, which was 5 years early. As of 2004, the City of Riverside claimed a diversion rate of 60 percent. Additionally, the city has implemented the following waste reduction programs:

- Curbside Recycling
- Newspaper Drop-off
- Car Tire Amnesty Program
- Household Hazardous Waste Program
- Backyard Composting Workshops
- Appliances
- Refrigerator Recycling Rebate Program
- Refrigerated Appliance Collection Program
- C.U.R.E. – Clean Up Riverside's Environment
- Electronic Waste Collection
- Curbside Oil Collection Program
- Keep Riverside Clean and Beautiful
- Recycling Market Development Zone

Solid waste collection and disposal capacity is anticipated to increase from 884 tons per day to 2,573 tons per day by 2025. The City of Riverside currently contributes approximately 287 tons of solid waste to landfills per day, which is approximately 2 percent of what solid waste landfills can accept daily. By 2025, the City of Riverside will contribute 14 percent of the amount of solid waste to landfills. With the remaining capacity of approximately 56.57 million tons and a 9- to 15-year lifespan (with potential for expansion of existing landfills), the increase in solid waste generated by planned community growth is not anticipated to exceed the capacity of the landfills.

3.17.4. Environmental Impacts and Consequences

CEQA Thresholds of Significance for Utilities and Service Systems

In accordance with the *2021 CEQA Statute & Guidelines, Appendix G, Environmental Checklist Form, XIX. Utilities and Service Systems:* (a) through (e), the proposed Project would result in impacts to utilities and service systems if the construction or operation of the proposed Project would result in any of the conditions listed in the following table.

The discussion below includes the CEQA checklist for utilities and service systems, followed by the discussion that provides the rationale for the following significance determinations:

- No Impact
- Less than Significant Impact
- Less than Significant Impact with Mitigation
- Potentially Significant Impact

Would the Project:

Question	CEQA Determination
(a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Less Than Significant with Mitigation Incorporated
(b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	No Impact
(c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	No Impact
(d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	No Impact
(e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	No Impact

(a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Temporary Impacts (Construction)

Less Than Significant Impact. The Build Alternative may result in the temporary relocation of the following service systems: gas (Southern California Gas Company [SoCal Gas]); electric, water, storm drain, and sewer (City of Riverside); fiber optic (AT&T, Spectrum, Frontier, and Sprint); or cable TV (CenturyLink) resulting in less than significant impacts. To avoid and minimize disruptions of service during construction.

Permanent Impacts (Operations)

Less Than Significant with Mitigation Incorporated. The Build Alternative and all design options may result in the permanent relocation of the following service systems: gas (Southern California Gas Company [SoCal Gas]); electric, water, storm drain, and sewer (City of Riverside); fiber optic (AT&T, Spectrum, Frontier, and Sprint); or cable TV (CenturyLink); however, there would be no permanent impacts provision of these services. The proposed Project would require the abandonment of an existing city irrigation well at the proposed location of the new platform and tracks for the construction of the Build Alternative with any of the proposed Design Options resulting in a significant impact. To reduce impacts to less than significant, coordination with Riverside Public Utilities has indicated that the existing well could be capped, and rather than relocating the well and RCTC would continue coordination with Riverside Public Utilities to rehabilitate an existing well located offsite. Rehabilitation of the well would recover the flow lost from the irrigation well at the Station. Due to the rehabilitation of an existing well to offset the on-site irrigation well abandonment, as agreed upon by RCTC and Riverside Public Utilities, impacts would be less than significant with the proposed mitigation.

(b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Temporary Impacts (Construction)/Permanent Impacts (Operations)

No Impact. Construction of the Build Alternative and design options would maintain sufficient water supply to serve the Project and future development during normal, dry, and multiple dry years. Water would be required on-site during the normal course of construction. RCTC and the construction contractor would coordinate with the operator of the water supply to ensure that construction water use does not impact community water use. Therefore, there would be no impact.

(c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No Impact. The proposed Project is not anticipated to result in growth-inducing impacts resulting in an increase in demand for wastewater services. Construction of the Build Alternative and design options would not impact existing wastewater infrastructure's capacity to serve the Project's projected demand. Therefore, there would be no impact.

(d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

No Impact. Solid waste generated during construction and operations of the Project would not exceed state or local standards and would be disposed of off-site in accordance with existing solid waste removal statutes. The Project is not expected to cause a sizeable increase in solid waste generation exceeding local solid waste disposal infrastructure capacity. Additionally, the Project is not expected to impact solid-waste-reduction programs outlined in the City of Riverside General Plan. Therefore, there would be no impact.

(e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

No Impact. Solid waste generated by Project construction or operations, including hazardous waste, would be removed from the site in accordance with applicable federal, state, and local statutes and regulations. If required, a licensed professional will conduct removal of solid wastes. Therefore, there would be no impact.

3.17.5. Avoidance, Minimization, and/or Mitigation Measures

Measures provided in this section summarize mitigation measures to be conducted by RCTC to ensure potentially significant impacts are reduced to less than significant and avoidance and minimization measures for less than significant impacts are avoided or minimized.

UTIL-1: RCTC will protect in place or relocate affected utilities with minimal disruption to services and provide advanced notification. RCTC would develop a plan for public outreach to inform customers of construction schedules and potential short-term disruptions to service systems, as needed.

UTIL-2: RCTC would continue coordination with Riverside Public Utilities to provide compensation to rehabilitate an existing well located offsite.

3.17.6. CEQA Significance Conclusion

The proposed Project, including the parking lot design options, would occur within an existing rail station and neighboring industrial development in urbanized Downtown Riverside. Implementation of the Project is not anticipated to result in significant utility relocation, inhibit implementation of solid waste reduction programs, or impact wastewater infrastructure or water supply. Therefore, there are limited utilities and service system concerns within and near the Project. With the implementation of the proposed Measures UTIL-1 and UTIL-2, the Project will have a less than significant impact with mitigation incorporated on utilities and system services.

3.18. Wildfire

This section provides a discussion on potential wildfire impacts resulting from the construction and operations of the proposed Build Alternative and all design options within the study area.

3.18.1. Regulatory Framework

Applicable policies, laws, and regulations relative to wildfire are as follows:

State Requirements

California Department of Forestry and Fire Protection (Cal Fire) adopted Fire Hazard Severity Zone maps for State Responsibility Areas in November 2007. The maps and related regulations were approved by the Office of Administrative Law.

Local and Regional Regulations

California Government Code § 51179 (2017) states, "A local agency shall designate, by ordinance, very high fire hazard severity zones in its jurisdiction within 120 days of receiving recommendations from the director pursuant to subdivisions (b) and (c) of § 51178. A local agency shall be exempt from this requirement if ordinances of the local agency, adopted on or before December 31, 1992, impose standards that are equivalent to, or more restrictive than, the standards imposed by this chapter."

3.18.2. Methodology for Evaluating Environmental Impacts

The analysis of the proposed Project's potential impacts to wildfire considers potential project effects within the study area related to construction and operations of the proposed Project. A review of fire severity maps prepared by the Cal Fire was conducted to determine the Project's direct and indirect risk to wildfires.

3.18.3. Affected Environment

Project Location and Setting

The project study area is highly developed with residential, commercial, industrial, public facilities, and parks, as well as a railroad corridor owned by RCTC and used by passenger and freight rail. Residential uses are concentrated to the east, while commercial and industrial uses are interspersed on the west side of the study area. SR 91 is located approximately 0.1 mile to the west, and SR 60 is located approximately 1.3 miles to the north.

According to the County of Los Angeles' Fire Department Fire Hazard Severity Zone (FHSZ) map, the project study area is not within a state responsibility area or an area classified as very high fire hazard severity.

3.18.4. Environmental Impacts and Consequences

CEQA Thresholds of Significance for Wildfire

In accordance with the *2021 CEQA Statute & Guidelines, Appendix G, Environmental Checklist Form, XX. Wildfire:* (a) through (d), the proposed Project would result in impacts to wildfire, if the construction or operation of the proposed Project would result in any of the conditions listed in the following table.

The discussion below includes the CEQA checklist for impacts to wildfire and the discussion that follows provides the rationale for the following significance determinations:

- No Impact
- Less than Significant Impact
- Less than Significant Impact with Mitigation
- Potentially Significant Impact

Would the project:

Question	CEQA Determination
(a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	No Impact
(b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	No Impact
(c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	No Impact
(d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	No Impact

A review of fire severity maps prepared by Cal Fire was conducted to determine the Project's direct and indirect risk to wildfires to support the CEQA significance determination for wildfire-related issues. The following information provides the impact analysis for each wildfire topic under the No Project and Build Alternatives including design options.

Temporary/Permanent Impacts (Construction/Operations)

No Impact. No impacts related to construction would occur. According to Cal Fire, the Project is not located in a high fire hazard zone. Therefore, the Project would not exacerbate or increase wildfire risk. As such, the proposed Project would not expose people or structures to an increased risk of wildfires in accordance with *CEQA Statute & Guidelines, Appendix G, Environmental Checklist Form, XX. Wildfire* (a) through (d).

3.18.5. Avoidance, Minimization, and/or Mitigation Measures

No impacts related to wildfire would occur; therefore, no avoidance, minimization, and/or mitigation measures are required.

3.18.6. CEQA Significance Conclusion

The proposed Project, including the design options, would occur within an existing rail station and neighboring industrial development in urbanized Downtown Riverside. According to the County of Riverside's Fire Department FHSZ map, the project study area is not within a state responsibility area or an area classified as very high fire hazard severity (California Department of Forestry Protection, 2009); therefore, there would be no impact.

4.0 Cumulative Impacts

Cumulative impacts are impacts that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of the proposed Project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

4.1. Regulatory Setting

CEQA requires an EIR to include an evaluation of a project's contribution to cumulative impacts. Cumulative impacts are the project's impacts combined with the impacts of the related past, present, and reasonably foreseeable future projects. CEQA Guidelines (Section [§] 15355) define a cumulative impact as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." The CEQA Guidelines § 15130(a)(1) further state that "an EIR should not discuss impacts which do not result in part from the project."

Section 15130(a) of the CEQA Guidelines adds that "[A]n EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable..." Cumulatively considerable, as defined in § 15065(a)(3), "means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."

4.1.1. No Build Alternative

Under the No Build Alternative, no construction would occur within the project footprint. Existing conditions would be perpetuated, and the impacts associated with the Build Alternative would not occur. Therefore, no cumulative impacts are anticipated under the No Build Alternative.

4.1.2. Build Alternative

Methodology

There are several steps involved in analyzing cumulative impacts. The initial steps involve analyzing direct and indirect impacts followed by the application of those results to cumulative impacts. These steps are generally outlined as follows:

Step 1: Identify and define the project-specific resources to include in the cumulative impact analysis.

Step 2: Define the geographic boundary or resource study area (RSA) for each resource to be addressed in the cumulative impact analysis.

Step 3: Describe the current health and the historical context of each resource.

Step 4: Identify the direct and indirect impacts of the proposed project that may result in a cumulative impact on the identified resources.

Step 5: Identify other current and reasonably foreseeable future actions or projects and associated environmental impacts.

Step 6: Assess potential cumulative impacts.

Step 7: Report cumulative impact analysis results in the environmental document.

Step 8: Assess the need for avoidance, minimization, and/or mitigation measures and/or recommendations for actions by other agencies to address a cumulative impact.

A proposed project would not contribute to a cumulative impact of a resource if that project does not result in a direct or indirect impact to a resource. In accordance with State CEQA Guidelines § 15130(a), if an incremental effect is not "cumulatively considerable," the EIR need not consider the effect significant, but must briefly describe the basis for concluding that the incremental effect is not cumulatively considerable. A cumulative analysis is automatically required for resources with significant impacts. Project-specific impacts to environmental resources are evaluated in Chapter 3.0. In addition, a cumulative analysis is conducted for resources with a less than significant impact on resources in poor health, declining health, or at risk.

Evaluated Resources

Based on the analysis presented in Chapter 3.0, the following resources would not be directly or indirectly impacted by the Build Alternative: Agriculture and forestry resources, mineral resources, public services, recreation, or wildfire. As such, the proposed Project would not cumulatively contribute to impacts related to these resource topics.

The Build Alternative and all design options would result in a less than significant impact level to the following resource topics: Aesthetics, air quality, biological resources, energy, geology and soils, greenhouse gas, hydrology and water quality, land use and planning, population and housing, transportation, and tribal cultural resources. These topics are discussed within this section.

For the purposes of the cumulative analysis, air quality, transportation, and hydrology/water quality will be further analyzed in detail because these resources are in poor health, declining health, or at risk, as described in the Affected Environment section for each respective resource. Although the Build Alternative's effects on these resources are relatively minor or insignificant, the existing condition of these resources are of concern, as changes to these resources, albeit minor, may further worsen its current precarious condition. The evaluation of these resources is provided in Section 4.1.3.

The Build Alternative would result in impacts to hazards and hazardous materials and utilities and service systems at less than significant levels with mitigation incorporated and may result in a cumulatively significant impact because the Build Alternative's singular effect on these resources could contribute to a cumulative impact in conjunction with other projects. Similarly, cultural resources and noise are evaluated for cumulative impacts because the Build Alternative would result in a potentially significant impact. These resource topics are evaluated for potential cumulative impacts in Section 4.1.3.

Aesthetics: A visual impact assessment was conducted near the project site and resulted in less than significant impacts because of the absence of existing scenic views of the surrounding mountain ranges. In addition, the Build Alternative and design options would result in minor improvement to the overall visual quality of the area with the removal of existing structures that are currently obstructing views to nearby land formations such as Mount Rubidoux to the west of the project site. Because of the Build Alternative's beneficial effect on visual resources (removal of existing obstruction to scenic views), the proposed Project's contribution to a cumulative impact to further degrade visual and aesthetic resources is not anticipated. The overall condition of visual and aesthetic resources within the surrounding area is relatively in acceptable health, as visual resources within the location of the site has been historically associated with urbanization and mostly built-out, which limits opportunities of further urbanization to construct structures that could obstruct scenic views.

Biological Resources: The results of the biological resources indicate that within the 500-foot BSA, there are no natural communities within or adjacent to the project footprint. The BSA is located within an entirely urbanized area that consists of existing development and landscaped areas. The majority of this area is covered with hardscape. Plant species within the BSA typically consist of non-native and ornamental landscaping. Ruderal and weedy species are commonly found at the margins of hardscape areas, where they can grow in small patches of disturbed soil areas. Because of the absence of suitable habitat within the BSA, there is no potential for state or federally listed species to occur within the BSA. As such, the Build Alternative is located within the downtown core of the City of Riverside and would not cumulatively contribute to impacts to biological resources.

Energy: Operation energy involves all energy consumed by vehicle propulsion. The purpose of the Project is to provide operational station improvements to enhance Metrolink service and promote transit ridership. The Build Alternative would reduce train congestion through the construction of additional tracks to reduce train queues along the BNSF mainline, which would reduce the consumption of energy. In addition, the proposed Project would not directly influence the number of trains servicing the Riverside-Downtown Station because the frequency of train service is determined by Metrolink. Increased ridership would result in a reduction in regional VMT and associated criteria pollutant emissions. While the Project would result in increased vehicle trips to and from the station, these trips would generally be of short distances and the VMT for these trips would be offset by commuters using transit as opposed to vehicle trips. As such, operation of the Project would not result in a net increase energy consumption. Because of the Build Alternative's potential to reduce energy consumption, the proposed Project is not anticipated to cumulatively contribute to energy impacts.

Geology and Soils: As discussed in Section 3.6, Geology and Soils of this EIR, the Build Alternative and all design options are not located within a designated earthquake fault zone or within an area subject to landslides. The project site is located in a zone of low to moderate liquefaction potential. Liquefaction-induced settlement is not expected to be a significant hazard at this site due to the absence of shallow groundwater, near surface saturated sand layers, and underlying dense, older alluvium. In addition to the low potential for liquefaction, soils within the project study area are considered to have low potential for soil expansion.

The project footprint and adjacent areas are developed and were previously disturbed during development activities. Therefore, the likelihood of discovering undisturbed paleontological resources is low. Based on the records search results and analysis of geologic maps, geotechnical bore logs, literature, and online databases, as well as the current project description, construction activity for the Project has the potential to encounter paleontological resources if excavation activities extend into native Pleistocene-age older alluvial fan deposits in the subsurface of the project area. However, excavation activities related to the Project are limited to a depth of 3 to 5 feet and 10 feet (at spot locations) due to contaminated soils.

Given the geologic and soil conditions of the project site, the scope of the construction activities, and that there are no other known projects within the surrounding area, the Build Alternative would not cumulatively contribute to impacts related to geology, soils or paleontological resources.

Greenhouse Gas (GHG): Operation of the proposed Project would result in GHG emissions primarily from mobile (vehicular) sources and on-site energy use. Mobile sources would be associated with the increased number of vehicle trips to and from the station due to increased transit ridership. Energy usage would be associated with lighting provided at the station and the parking lot. Overall, however, the project would result in a net decrease in emissions compared to existing conditions. The purpose of the project is to provide station improvements to enhance Metrolink service and promote transit ridership. An increase in ridership would result in a reduction in regional VMT and associated GHG emissions because of reduction of passenger car trips. While the project would result in increased vehicle trips to and from the station, these trips would generally be of short distances and the VMT for these trips would be offset by the use of transit. Because of the proposed Project's potential to reduce GHG emissions, the Build Alternative and all design options are not anticipated to cumulatively contribute to potential GHG impacts.

Land Use and Planning: The Build Alternative and all design options would construct station improvements along an existing railroad facility and incorporate features that would enhance access and connectivity. As discussed in Section 3.10, Land Use, the proposed Project would not physically divide an established community or expand on an existing physical barrier. Therefore, the Build Alternative and all design options would not contribute to a cumulative impact that would divide an established community or expand an existing physical barrier.

The Build Alternative and all design options are consistent with the *Riverside Marketplace Specific Plan and Environmental Impact Report* (City of Riverside, 1991), the project site is located within the Marketplace Industrial Park sub-area, which allows development related to passenger train, bus terminals and parking lots uses. Although the proposed Project would reduce industrial land uses within the area, this conversion to transportation uses is consistent with the permitted uses identified in the Riverside Marketplace Specific Plan. The proposed station improvements would expand passenger train facilities and the parking lot within the Marketplace Industrial Park sub-area. The proposed Project would not cause a significant environmental impact, either directly or indirectly, due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect; therefore, the Build Alternative's consistency with adopted land use plan would not contribute to a cumulative impact.

Tribal Cultural: The project area has been previously developed with railroad tracks, paved roads, concrete sidewalks, buildings, and grass or landscaped grounds, and there are no recorded tribal cultural resources within the project's area of potential effect (APE); however, the APE is located within the Agua Caliente Band of Cahuilla Indians traditional use area. Consultation was conducted with the NAHC and several Native American tribes to comply with AB52. The results of the tribal consultation indicated that tribal cultural resources are not anticipated to be found within the project footprint (refer to Section 3.16, Tribal Cultural Resources). Excavation activities associated with grading throughout the project site would extend to a depth between 3 to 5 feet and 10 feet at spot locations. However, ground disturbance is generally shallow and it is unlikely that ground disturbance would uncover tribal cultural resources; thus, the potential for the Project to impact cultural resources is relatively low. RCTC would implement a limited archaeological and Native American monitoring program with interested tribes, as appropriate, prior to and during project construction.

Resource Study Areas

An RSA corresponds to a geographic area cumulative impacts to a particular resource can be analyzed within. Only active projects, defined as currently under construction or planned, were considered within each RSA. Active projects were identified using information obtained from the City of Riverside and agency websites within the RSA. While this list of active projects was not exhaustive, it included major projects that could contribute to cumulative impacts within the study areas for each respective resource analyzed in this EIR. The RSA includes active projects located within the City of Riverside, specifically within Census Block Groups 1, 3, and 5, as shown in Figure 4.1-1. These cumulative projects have been selected for evaluation because of their potential to cumulatively affect environmental resources in conjunction with the proposed Project.

4.1.3. Resources Evaluated for Cumulative Impacts

The information in this section is presented by environmental resource area. The reasonably foreseeable projects and respective actions considered in this analysis are presented in Table 4.1-1. Table 4.1-1 includes transportation and development projects that are relevant to the proposed Project, but it does not include a comprehensive list of projects because the status of planned development is unknown or the applicant has not pursued further action on their project. Information on cumulative projects evaluated in this EIR was obtained from the City of Riverside, RTA, and RUSD. At the time of the preparation of environmental studies, the following cumulative projects were in various stages of development:

- Planning: Vine Street Mobility Hub (No. 4) and the Lincoln High School Expansion (No. 5)
- Development: Junior/Community College (No. 1) and multi-family development (No. 3)

The mid-rise multi-family development was completed in 2019, but was not fully occupied at the time of the preparation of the study; hence, this cumulative project is evaluated as a future project to account for the future impact of this project in conjunction with the four other cumulative projects.

Table 4.1-1. Reasonably Foreseeable Actions and Projects

No.	Project Type	Status	Location	Description
1	• Junior/Community College • Conditional Use Permit for new Vocational/Technical School	In development	3550 Vine Street	Brandman University will be expanded to occupy approximately 10,000 square feet of existing office space in the building complex. Construction of 8 classrooms, 11 offices, 1 conference room, and 1 lunchroom is in process.
2	• Mid-Rise Multi-family Housing • Mission Lofts Apartment Complex	This project was completed in 2019, but is not fully occupied.	3050 Mission Inn Avenue	A transit-oriented development consisting of 212 residential units, 640 square feet of commercial uses, and 315 parking spaces was constructed.
3	• Multi-family Low-Rise • Affordable Housing Development	In development	2719 11th Street	Eight affordable multi-family residential units will be developed.

No.	Project Type	Status	Location	Description
4	Vine Street Mobility Hub	The RTA Board of Directors has approved a conceptual plan for a mobility hub on 5 acres across from the Riverside-Downtown Metrolink Station. With this conceptual plan approved, RTA will move into the Project's architectural and engineering phase.	Between Vine Street and 19th and SR 91 Freeway	The conceptual plan calls for up to 18 bus bays and a design that incorporates the latest technology in preparation for RTA's zero-emission bus deployment. The hub will also include seating, shelters, security features, a driver's lounge, drought tolerant landscaping, and integration with the City of Riverside's bike lanes.
5	Lincoln Continuation High School Expansion or Modification.	A Notice of Preparation of a Draft EIR was published on 5/10/21, a scoping meeting was held on 5/19/21 and the scoping period ended 6/10/21.	Located along 14th Street between Victoria Avenue and Howard Avenue	The Riverside Unified School District proposes to develop a TK-6 school with 31 classrooms to serve the Eastside Neighborhood. Three options will be reviewed under the CEQA. All would require vacating Park Avenue between 13th and 14th Streets, and acquisition of 25 parcels in Blocks B and C, totaling 4.27 acres. The proposed Project would involve removal of existing structures on the acquired parcels and constructing approximately 67,300 to 71,000 square feet of building space, depending on the option.

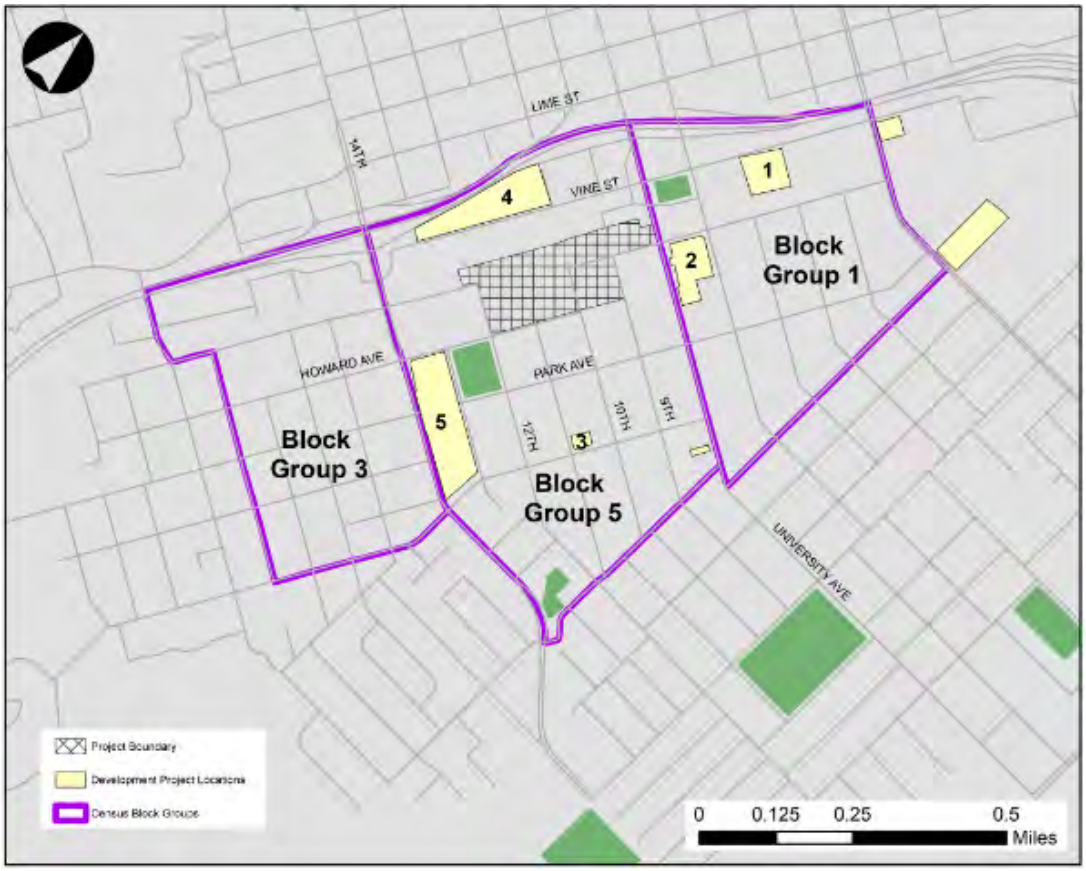

Figure 4.1-1. Development Project Locations

Air Quality

Resource Study Area

The RSA for permanent cumulative impacts on air quality includes the SCAB. The SCAB includes Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. The RSA for temporary cumulative impacts on air quality includes the project footprint and nearby areas adjacent to the existing Riverside-Downtown Station.

Project Impacts

As discussed in Section 3.2, Air Quality, the SCAB is currently designated as a non-attainment area with respect to the state and federal O_3 and $PM_{2.5}$ standards and state PM_{10} standards. The proposed Project would result in short-term degradation of air quality due to the release of exhaust emissions from construction equipment and fugitive dust emissions from excavation, grading, hauling, and other activities. Construction of the proposed Project would be required to comply with SCAQMD rules and regulations (AQ-1). Construction emissions would be short-term and intermittent; therefore, the proposed Project's contribution to cumulative effects on air quality during construction would be minor.

Once operational, the proposed Project would contribute to long-term emissions of criteria air pollutants associated with the use of motor vehicles to and from the Riverside-Downtown Station; however, these trips would generally be of short distances and the emissions from these trips would be offset by the use of transit. As discussed in Section 3.2, Air Quality, the proposed Project would reduce regional VMT and associated vehicle emissions. Therefore, the Build Alternative and all design options would not generate operational emissions that could potentially cause an increase in the frequency or severity of existing air quality violations; cause or contribute to new violations; or delay timely attainment of air quality standards.

The Project was included in SCAG's conforming *2019 Federal Transportation Improvement Program (*FTIP) as Project ID RIV141203 (SCAG 2018, Appendix B). The Project's design concept and scope have not changed significantly from what was included in SCAG's *Regional Emission Analysis.* This analysis found that the plan, which

takes into account regionally significant projects and financial constraint, will conform to the state implementation plan for attaining and maintaining the NAAQS, as provided in § 176(c) of FCAA. FHWA determined that the FTIP conforms to the SIP on December 17, 2018.

Furthermore, as detailed in the 2019 FTIP project list, RIV141203 was found to be exempt from all project-level conformity requirements in accordance with Title 40, CFR § 93.126. Therefore, all air quality conformity requirements have been met.

Current and Reasonably Foreseeable Future Actions

Current and reasonably foreseeable actions in the RSA include transportation and in-fill development projects. The construction of cumulative projects would contribute to temporary increases in air pollutants during the construction phase of each respective project. Cumulative projects listed in Table 4.1-1 would contribute to short-term increases in air pollutant emissions during their construction that would exceed SCAQMD's thresholds. Therefore, construction emissions from other development projects could be cumulatively considerable. However, construction emissions would be relatively short term and would be minimized to the greatest extent feasible with implementation of construction BMPs. As stated above, the proposed project's contribution to cumulative effects on air quality during construction would be minor, and construction of the proposed Project would incorporate SCAQMD rules and regulations (AQ-1) in addressing construction air quality concerns.

Cumulative projects are anticipated to increase populations in the RSA and contribute to increased long-term air pollutant emissions associated with increased vehicle trips. However, as previously mentioned, the proposed Project's contribution to cumulative effects on air quality during operation would result in a net reduction of emissions because the Project will potential reduce regional VMT, and in combination, long-term air pollutant emissions associated with vehicle trips are anticipated to be reduced in the future because of implementation of fuel regulations, improved fleet average fuel economy, and the gradual removal of older vehicles from the roads.

Conclusion of Cumulative Impacts

The RSA is a non-attainment area for several criteria air pollutants. Although in consideration with other current and reasonably foreseeable actions, the proposed Project would contribute to cumulative effects during construction on air quality within the RSA; however, the proposed Project's contribution to effects on air quality during operation is anticipated to result in a net decrease in emissions compared to existing conditions due to the reduction in regional VMT. Therefore, the proposed Project, in conjunction with past, present, and reasonably foreseeable actions, would not result in a cumulatively adverse effect related to air quality, and mitigation would not be required.

Cultural Resources

Resource Study Area

The RSA for cultural resources is within the APE previously shown in Section 3.4 on Figure 3.4-1. The APE encompasses two elements, the LOD, and the buffer zone where there may be additional effects on surrounding parcels from noise, vibration, or visual intrusions associated with construction and post-construction project operations.

Project Impacts

Former FMC Plant 1 Building

As discussed in Section 3.4, Cultural Resources, the Build Alternative and all design options would result in a substantial adverse change to character-defining features and a significant impact because the former FMC Plant 1 building is a historic resource and would be removed.

The direct Project impacts (removal) would result in a substantial adverse change to historic character-defining features (Plant 1) and severely impact the significance of the former FMC Complex because half of the complex would be removed.

Although the former FMC Plant 2 building would not be directly impacted, removal of the former FMC Plant 1 building would cause a significant adverse change to the setting of Plant 2. Plant 2 would also be impacted by the Build Alternative with Design Options 1A through 3B because the associated resources in the immediate setting would also be removed, which would result in substantial adverse changes to Plant 2, specifically, its integrity of setting, feel, and association.

In addition to impacts to the former FMC Complex, the Build Alternative (Design Options 1A, 2A, and 3A) would result in removal of two historical resources, residences at 3021 12th Street and 3009 12th Street. Although removal of these two homes are not proposed under Design Options 1B, 2B, or 3B, these design options would also result in impacts, as the immediate setting would be substantially, adversely changed by the removal of Plant 1, as Plant 1 is a component of the historic setting of the residences. Plant 1, which is adjacent to 3021 12th Street, provides a physical, audible, and visual screen from the active railroad corridor. Removing Plant 1 would increase noise levels and substantially alter the setting through the introduction of a parking lot.

Other indirect impacts resulting from the Build Alternative and all design options include Lincoln Park and worker houses at 4110, 4120, and 4140 Howard Avenue. Implementation of the proposed Project would result in diminished integrity of setting, feel, and association, as all design options would result in the removal of the former FMC Plant 1 building. The former FMC Plant 1 building is part of the historic setting of Lincoln Park and Worker's Houses. The ability of the houses to convey their historical associations with the citrus industry-related FMC Complex would be diminished by removing the former FMC Plant 1 building, and the introduction of a parking lot directly across the street alters the immediate setting of the houses.

Ninth Street Neighborhood Conservation Area

The 9th Street houses are eligible as contributing resources within the Ninth Street Neighborhood Conservation Area, which was designated by the City of Riverside as a potentially eligible historic conservation area and considered as a historic resource under CEQA; however, the Conservation Area is not considered eligible for the NRHP due to a lack of integrity and cohesiveness within the designated conservation area. The Build Alternative with Design Options 2A and 2B would have direct and indirect impacts to the Ninth Street Neighborhood Conservation Area resulting in a significant impact. The direct impacts would be caused by the introduction of a "T" intersection as a result of extending Howard Avenue north to 9th Street. These design options would result in acquisition of properties Nos. 7, 9, 11, and 14 in the APE and they would be removed. The historic residences (Nos. 7 and 11) are contributing resources to the Ninth Street Neighborhood Conservation Area's historic fabric. Removal of two of the conservation area's contributing resources would diminish the integrity of the conservation area integrity and the two residences would be removed, which is considered a substantial adverse change.

Current and Reasonably Foreseeable Future Actions

Current and reasonably foreseeable actions in the RSA include the proposed transportation and in-fill development projects listed in Table 4.1-1. Based on the location of these cumulative projects and current information, historic resources analyzed within the RSA are not expected to be directly affected by related projects through acquisition or by removal. However, RUSD is proposing a project to construct a new school within the Eastside Neighborhood located along 14th Street and Howard Avenue. As proposed, the new school may select a joint use option of Lincoln Park, which may construct on-site improvements. At the early stage of the planning process, details of potential improvements at the park is not known or whether RUSD will select this design option for the new school. If a joint use is selected, it is anticipated that RUSD will analyze effects of their project on this locally eligible historic landmark.

Cumulative projects are within the vicinity of the historic resources identified in Section 3.4, Cultural Resources, and could potentially diminish the integrity of setting, feel, and association. The construction of cumulative projects would contribute to permanent impacts to historic resources because these cumulative projects generate traffic that would utilize adjoining streets where historic resources are located. It is anticipated that traffic noise would incrementally increase during the operation of these cumulative projects. Noise increases would alter the setting of historic residences at 3021 12th Street and 3009 12th Street.

Cumulative Impact Section

Past urbanization, in-fill developments, and renovation has contributed to gradual diminishing of historic properties over time within the RSA. As indicated in Section 3.4, Cultural Resources, the Build Alternative and all design options' impacts on historic resources would be substantial because of the removal of the former FMC Plant 1 building and potential removal of historic residences at 3021 12th Street and 3009 12th Street. Other current and reasonably foreseeable actions would contribute to minor effects on historic resources within the RSA because other development projects would not result in direct impacts to aforementioned historic properties. Although mitigation Measures CUL-1 and CUL-2 (refer to Section 3.4 for details) are proposed to mitigate significant impacts to historic resources, the direct project impacts (demolition) would result in a substantial adverse change to historic character-defining features (Plant 1) and severely impact the significance of the former FMC Complex, as half of the complex

would be removed. Similarly, removal of the 12th Street residences under Design Options 1A, 2A, and 3A would result in the demolition of these historic homes. Therefore, the proposed Project, in conjunction with past, present, and reasonably foreseeable actions, would result in a cumulatively significant and unavoidable impact related to cultural and historic resources.

Hazards and Hazardous Materials

Resource Study Area

The RSA for hazards and hazardous materials is bounded by the BNSF railroad tracks to the west, 14th Street to the south, Howard Avenue to the east, and University Avenue to the north, as shown on Figure 3.8-1. The RSA includes the project footprint and areas that would involve ground-disturbance, work areas, and potential staging areas for the proposed Project.

Project Impacts

As noted in Section 3.8, Hazards and Hazardous Materials, existing hazardous contamination would be encountered within the Prism Aerospace property. Current industrial uses of the site present the potential for contamination resulting from leaks or spills from railcars or historic application of surface chemicals during railroad operations. In addition, proposed acquisition of industrial property for the station improvements may contain contaminated soils due to historical industrial operations by the former FMC Complex and use of chemical solvents. Results of the *Phase 1 Environmental Site Assessment* (Ninyo & Moore, 2018) conducted for the proposed Project indicate that the project site overlies a groundwater plume impacted by VOCs, pesticides, herbicides, nitrate, and perchlorate (known as the Riverside Plume). Groundwater sampling conducted between 2005 and 2008 showed significant VOC impacts (primarily PCE and TCE) in the site vicinity. Additional Phase II Environmental Site Assessments and soil sampling were conducted in August and September 2020 (Ninyo & Moore. 2020) confirming the presence of metals and VOCs; however, the full extent of the vertical and horizontal contamination of the project site has not been fully determined. The proposed features of the expanded station are consistent with DTSC and RWQCB agreement in managing the existing on-site contamination. The Build Alternative and all design options would pave over an exposed soil area at the Prism Aerospace property that would effectively cap contaminated soils within the project site to prevent leaching and soil contaminant migration to off-site areas, including the proposed Eastside Neighborhood school.

During construction, accidental release of hazardous materials on-site, disturbance of contaminated soils, and excavation of contaminated soils within the project site could potentially pose a temporary hazard to the public, construction workers, and surrounding environment, until appropriate containment and cleanup measures are taken. In addition, transport of contaminated soil off-site could pose as a hazard to the public. Excavation and transport of contaminated soils would require specialized handling and treatment. Appropriate excavation, transport, and disposal would be conducted by a licensed hazardous waste transporter in accordance with CCR Title 22, Division 4.5 regulations. Contaminated soils will be disposed of at an appropriate facility in accordance with local, state (22 CCR 4.5), and federal regulations CFR Title 40 Parts 239 through 282. The transport, use, and disposal of hazardous materials, including contaminated soils, is considered a significant impact. Mitigation measures are proposed to reduce potential impacts to less than significant. Any discovered hazardous material would be handled safely and securely according to applicable local, state, and federal laws.

Current and Reasonably Foreseeable Future Actions

Current and reasonably foreseeable actions in the RSA include transportation and in-fill development projects. The projects listed in Table 4.1-1 have the potential to expose receptors to hazardous materials during their construction. Based on the location of the cumulative projects relative to the RSA and available information about the individual projects, other development projects are not expected to involve any ground-disturbing activities within the RSA or at the project-site. However, construction of these projects may coincide with the construction of the of the Riverside-Downtown Station Improvement Project and may transport potentially hazardous materials within the RSA.

Cumulative Impacts

Cumulative projects would not result in an impact to known hazardous materials and RECs within the RSA. Information on hazardous materials and extent of contamination of other cumulative projects are not known. It is anticipated that each cumulative project would conduct its own hazardous material studies, disclose potential hazards, and incorporate measures to address potential impacts (if any). If hazardous materials are present, , the City of Riverside would require (as part of the conditions of approval) measures to be implemented for the cumulative project to mitigate potential release of hazardous materials, including transport of hazardous materials within the RSA.

Although the Prism Aerospace property is a known REC, post-project conditions would result in a positive impact in controlling hazardous material migration through the paving of exposed soil areas. With implementation of Mitigation Measures HAZ-1, HAZ-2, HAZ-3, HAZ-6, HAZ-7, and HAZ-9, cumulatively considerable impacts are not anticipated.

Hydrology and Water Quality

Resource Study Area

The RSA for water quality and stormwater runoff is the Middle Santa Ana River watershed and the tributary drainage area, including Tequesquite Arroyo, which is located approximately 0.7 mile to the south and runs underneath SR 91. The Middle Santa Ana River encompasses an area approximately 480 square miles.

Project Impacts

The existing train station is within the flood zone; however, a net increase of mass (structures constructed within the flood zone) will not be constructed under the BFE. The Build Alternative would not result in significant floodplain encroachment and result in a net positive effect on the overall floodplain because the proposed site elevation is below the BFE, and large structures that currently impede flows would be removed. Removing these buildings and converting the majority of area to a parking lot are anticipated to improve conditions. Improvements at the project site would be designed to maintain similar grades as that of existing grades to the greatest extent possible, which would allow the floodplain to use its current storage area and avoid increasing the BFE. Because the proposed Project would improve conditions within the floodplain, impacts to surface hydrology is not anticipated.

The project site is within the Santa Ana River's Reach 3 and identified as an impaired water body under the 303(d) list, which has three impairments, pathogens, copper, and lead. Water quality standards are attained when designated beneficial uses are achieved and water quality objectives are being met. The regulatory programs of the RWQCB are designed to minimize pollutant discharges to surface and groundwaters within the region, largely through permitting, such that water quality standards are effectively attained. As discussed in Section 3.9, Hydrology and Water Quality, the Build Alternative and all design options have the potential to affect water quality due to associated pollutant sources during the construction and operation of the proposed Project. The Build Alternative and all design options would increase the amount of impervious surface area by approximately 45,000 square feet, and the potential for pollutants to enter receiving waters and peak flows would consequently increase slightly from existing conditions. However, this increase in the amount of impervious surface area relative to the total watershed area for the Santa Ana River Watershed Area (Middle Santa Ana River) is approximately 480 square miles. The proposed additional impervious area within the watershed comprises approximately 0.0003 percent of this area. This can be expected to translate into minor localized increases in urban runoff within the project vicinity. With the minor increase in impervious surface, this project would produce an insignificant increase in the total peak flow for the Santa Ana River project area. With the implementation of permanent BMPs, effects to water quality due to the Project operations would be treated to ensure that on-site pollutants do not degrade water quality standards. Proposed BMPs to be incorporated into project design include, lined vegetated swales, bioretention devices, and catch basin inserts, as further described herein would address increases in stormwater runoff resulting from the construction of the Build Alternative and all design options. Therefore, the proposed Project's contribution to cumulative effects on water quality and stormwater runoff during operation would be minor.

In addition, underlying soils within the project site contain known hazardous contaminants. The Build Alternative and all design options would prevent further contamination of the groundwater by capping existing exposed soil areas so that less water would infiltrate into the contaminated soil. This prevents pollutants from entering groundwater from the surface and reduces the potential for migration of the existing plume by preventing groundwater infiltration into the contaminated area, which is consistent with the goals and policies of the RWQCB's *Water Quality Control Plan* for the Santa Ana River Basin (RWQCB, 2019). Project features and implementation of BMPs would not result in an individual impact on water quality and groundwater resulting from the proposed Project; therefore, the Build Alternative's contribution to a cumulative effect would be minor.

The proposed project construction could degrade water quality of downstream surface waters or groundwater through the use of chemicals, such as diesel fuel, as well as earthwork activities resulting in sedimentation. Proposed project construction would comply with all applicable permit requirements, including the MS4 Permit, NPDES Water Permit, Construction General Permit ,and a Stormwater Pollution Prevention Plan (SWPPP) would be required, which would identify construction site BMPs to reduce potential for erosion, sedimentation, and other water quality impacts. If

required, dewatering and discharges to the storm drain system would comply with all federal, state, and local permits and regulations. Therefore, the proposed Project's contribution to cumulative effects on water quality and stormwater runoff during construction would be minor.

Current and Reasonably Foreseeable Future Actions

Current and reasonably foreseeable actions in the RSA include transportation and in-fill development projects. The projects listed in Table 4.1-1 proposed the Middle Santa Ana River watershed could temporarily degrade water quality during their construction. However, these projects would be required to obtain all applicable permits related to water quality prior to construction activities. Projects that disturb greater than 1 acre of soil area would be required to develop SWPPPs and implement construction site BMPs to reduce construction-related impacts on water quality. In addition, projects that create more than 1 acre of new impervious surface area would be required to implement low impact development practices and permanent water quality BMPs to reduce long-term impacts on water quality. Therefore, the contribution to cumulative effects on water quality from these projects would be minor.

Cumulative Impacts

Past urbanization has contributed to degradation of water quality within the RSA. The proposed project's effects on water quality and stormwater runoff would be relatively minor. Other current and reasonably foreseeable actions would contribute to minor effects on water quality and stormwater runoff within the RSA. Therefore, the proposed project, in conjunction with past, present, and reasonably foreseeable actions, would not result in a cumulatively significant impact related to water quality and stormwater runoff, and mitigation would not be required.

Noise

Resource Study Area

The RSA for noise includes sensitive receptors along Howard Avenue, 9th Street 10th Street, 11th Street, 12th and 13th Street as depicted in Figure 3.11-5. These sensitive receptors consist of residences and park receivers.

Project Impacts

Implementation of the Build Alternative would result in noise level increases at multiple receivers for each design option. Noise levels would increase primarily due to the removal of the existing Prism Aerospace warehouse. This structure currently provides noise attenuation for multiple residential receivers along Howard Avenue from railroad and freeway noise sources. With the removal of this existing structure and its replacement with a level parking lot, the barrier to noise would be removed and expose residences to elevated noise levels. Similarly, the Design Options 2A and 2B would result in the removal of existing structures to accommodate the extension of Howard Avenue and result in a noise level increase for those first-row residences.

Noise level increases range from 0.1 dBA L_{DN} to 14.7 dBA L_{DN}. The largest noise increase would occur for the Design Option 1B, 2B, and 3B scenarios at residences located at the northern corner of Howard Avenue and 12th Street. Design Options 1A and 3A would have the fewest number of impacted locations, with 12 receivers modeled with at least a moderate impact and six receivers modeled with a severe impact. Design Option 2B would have the highest number of impacted locations, with at least 19 receivers modeled with a moderate impact and 11 receivers modeled with a severe impact. Design Options 1A, 2A, and 3A would not have noise impacts at the residences at the northern corner of Howard Avenue and 12th Street because those residences would be removed as part of the Project.

Implementation of the Project would lead to noise level increases for each option at the nearby Lincoln Park. Noise levels at the northern corner of the park for all scenarios would increase by 5.6 dBA LEQ and 5.5 dBA LEQ, respectively, which is within their respective 5 dBA LEQ and 4 dBA LEQ thresholds for moderate impacts. Receivers generally located further from noise sources or are blocked by intervening structures. No park receiver would result in a severe impact.

As indicated in Section 3.11, Noise and Vibration, significant noise impacts are anticipated at multiple receiver locations primarily due to the removal of the Prism Aerospace building. Noise abatement is required to reduce severe noise impacts to acceptable moderate levels. Based on the results of the noise barrier analysis, severe noise impacts would be reduced with the construction of a 12-foot-high wall at the approximate location of the Prism Aerospace building eastern boundary. The noise barrier would reduce significant impacts to less than significant levels.

During the removal of the Prism Aerospace warehouse, demolition activities would occur at the property line of the residence at 3021 12th Street. Because heavy equipment would be required during the removal of the warehouse, and this work would be located at the residence's shared property line, within 10 feet of the residence, noise impacts from

the use of anticipated construction equipment such as an excavator, loader, and dump truck, are assessed as a potentially significant impact under Design Options 1B, 2B, and 3B.

Current and Reasonably Foreseeable Future Actions

Current and reasonably foreseeable actions in the RSA include transportation and in-fill development projects. The noise analysis conducted for the proposed Project was based on traffic forecasts that accounted for future growth and additional trips generated by planned development. As summarized in Table 4.1-1, the cumulative projects would increase population density and/or generate new trips within the RSA. Additional traffic within the roadway network would consequently generate traffic noise within the RSA that could contribute to the future noise environment. The proposed residential development, Vine Street Mobility Hub and the RUSD school sites would generate traffic-related noise because vehicle and bus traffic use nearby roadways adjacent to the train station and would cumulatively contribute to future noise.

Cumulative Impacts

The noise analysis prepared for the proposed Project incorporated ambient growth and future traffic noise generated by future development and were evaluated in conjunction with the noise generated by the Build Alternative. As described in Section 3.11 Noise and Vibration, the primary factor in the increase in future noise at receiver locations is the removal of the Prism Aerospace building, which is providing noise attenuation for multiple residential and park receivers. Removing this building would result in significant noise impacts. Therefore, the contribution to cumulative effects on noise within the RSA is primarily attributed to the proposed Project. However, the proposed Project is recommending the construction of a noise barrier within the same general area of the Prism Aerospace building to reduce severe noise impacts to moderate levels. With the incorporation of noise abatement, the Build Alternative and all design options would result in a less than significant cumulative impact during operations.

The Build Alternative would generate construction-related noise and would implement measures to avoid, minimize and mitigate potential noise impacts. Similarly, cumulative projects would implement measures to address construction noise and comply with the City of Riverside's noise ordinance. For the Build Alternative with Design Options 1A, 2A, 3A, construction-related noise would be mitigated to less than significant levels by implementing noise control measures. Therefore, the contribution to cumulative effects related to noise during construction from other development projects in the RSA would be minor. For the Build Alternative with Design Options 1B, 2B, and 3B, temporary construction-related noise during demolition of the former FMC Plant 1 building would result in potentially significant impacts because of the proximity of demolition activities relative to the residence at 3021 12th Street. Although mitigation measures are proposed, the demolition activities, in conjunction with other development projects that overlap construction activities within the same period, the proposed Project's contribution to temporary construction noise-related to demolition could potentially be cumulatively considerable.

Population and Housing

Resource Study Area

The RSA for population and housing encompass the Census Tract 304, Block Groups 1, 3, and 5 as previously shown in Figure 4.1-1. Single-family residential areas primarily comprise land uses within the RSA, along with some multi-family residential areas. Commercial areas are generally located along University and Chicago avenues, and light industrial and commercial land use clusters are located between east of SR 91 and Howard Avenue. The RSA is located entirely within the Eastside Neighborhood in the City of Riverside.

Project Impacts

Station improvement features such as the new passenger platform, additional tracks, and parking lot expansion are not anticipated to directly or indirectly influence substantial unplanned population growth within the area. Given the non-growth inducing features of the Build Alternative (operational improvements), declining trend in population within the Eastside Community, and limited opportunities to develop areas near the station, the Build Alternative's potential to directly or indirectly induce growth is not likely to occur; hence, the Build Alternative and all design options are not anticipated to cumulatively contribute to unplanned population growth.

As discussed in Section 3.12, Population and Housing, the Build Alternative and all design options would acquire existing residential properties and the residents of those properties would be displaced. However, the displacement of residents is not anticipated to result in substantial impacts because of the availability of replacement housing within the project study area for all income levels. Although there is available replacement housing and the relatively low number of expected displaced households would result from the Build Alternative, impacts due to the operation of the

Project could be potentially significant if displaced persons have special needs and relocation assistance is not provided. To address this issue, RCTC would provide appropriate compensation to eligible recipients as stated in measure REL-1. As an individual project, less than significant impact with the implementation of this measure is anticipated.

Cumulative Impacts

Other cumulative projects within the RSA would construct new housing such as the Mission Lofts Apartment Complex and affordable housing development (Cumulative Projects Nos. 2 and 3, respectively). Although these projects are could be considered growth-inducing, both developments are planned local projects that are equitable development that support transit-oriented development and affordable housing. Both projects are required to go through the City of Riverside's project-approval process and individually address their own environmental impacts through implementation of measures to off-set or reduce impacts to affected environmental resources. The proposed Brandman University project (Cumulative Project No. 1) is an in-fill development that would occupy an *existing* space within a building complex. It is anticipated that potential growth-inducement impacts of existing facility have been accounted in the preparation of the original environmental document prior to the construction of the building complex, which has addressed potential environmental impacts. The Vine Street Mobility Hub would be constructed within a vacant lot surrounded by existing development. It is not anticipated that this transit project would not induce growth as the RSA is mostly built-out and there are limited opportunities for development. The RUSD school expansion project would require acquisition of nearby homes and commercial properties adjacent to Lincoln High School and would displace Eastside Community residents and businesses. It is anticipated that RUSD would provide relocation assistance and provide fair compensation to property owners and displaced persons. Given the availability of replacement housing (including the two affordable housing projects [Cumulative Projects Nos. 2 and 3] within the RSA), a declining trend in population within the Eastside Neighborhood, and relocation assistance provided to residents and businesses, the proposed Project is not anticipated to cumulatively contribute to unplanned growth and necessitate the need to construct replacement housing.

Transportation

Resource Study Area

The RSA for traffic and transportation/pedestrian and bicycle facilities includes 9th Street, 10th Street, 12th Street, 14th Street, Mission Inn Avenue, Lime Street/Olivewood Avenue, Vine Street, Commerce Street, Park Avenue and the SR 91 on and off ramps at Mission Avenue, 14th Street, and Mulberry Street.

Project Impacts

Operations. The Riverside-Downtown Station is a regional transit hub serviced by local and regional transit routes. Existing transit service within the project study area would not be affected after the completion of the Project. Station improvements would improve regional train service and benefit the City of Riverside and the surrounding communities. Expansion of the existing station infrastructure would enhance access for station users, accommodate projected future travel demand and encourage transit ridership and would accomplish several objectives identified in the City of Riverside's General Plan (2025). The Build Alternative and all design options would expand Riverside's multimodal transportation system, reduce single vehicle use and GHG emissions, improve circulation and pedestrian facilities and would not preclude planned bicycle improvements. The addition of parking and ADA-compliant sidewalks with trees and lighting would also improve access to the Riverside-Downtown Station and provide new facilities for pedestrians improving active transportation.

The proposed Project would be consistent with the goals to promote and support an efficient public multi-modal transportation network, encourage transit use, reduce GHG emissions, reduce single-occupancy vehicle travel, improve public transit access, and promote sustainable growth patterns. Therefore, the Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

As the proposed Project is a passenger rail project that proposes to expand capacity and accessibility improvements at the Riverside-Downtown Station, the proposed Project would increase transit ridership, reduce regional VMT and achieve the goals of SB743, as described in Section 3.15, Transportation. In accordance with CEQA Guidelines § 15064.3(b)(2), "Transportation projects that reduce, or have no impact on, VMT should be presumed to cause a less than significant transportation impact." Since the proposed Project is a passenger rail project, VMT-related impacts

are presumed to be less than significant. Hence, the proposed project's overall contribution to cumulative effects on traffic and transportation and bicycle and pedestrian facilities during operation would be beneficial.

Construction

Under the Build Alternative and design options, construction of the Project would require a large number of construction workers, the import and export of materials and equipment, and the localized movement of equipment to and from multiple locations within the traffic study area. Construction of the Project is anticipated to occur over an approximately 2-year time period. The additional traffic generated during construction would consist of construction equipment, construction employee vehicles, and construction material deliveries in trucks. These additional trips generated by construction activities would add additional traffic on the local roadway network and may temporarily affect LOS at the study area roadways and intersections. Existing transit service and bicycle traffic may experience minor delays due to potential construction-related traffic and activities.

In addition, heavy trucks and construction equipment may result in temporary lane and/or street closures to accommodate construction activities and ingress/egress movements to and from the project site, which may affect local circulation and access to nearby residences and businesses as construction activities encroach into local streets adjacent to the project site.

Construction activities would primarily be contained within the project site boundaries. In some instances, existing sidewalks and adjacent roadway lanes would be occupied intermittently throughout the construction phase to accommodate sidewalk reconstruction and other streetscape improvements. Alternate pedestrian access, bicycle and vehicle detours would be provided to and from the Riverside-Downtown Station and adjacent residences and businesses throughout the duration of construction.

A TMP will be developed prior to project construction and will be implemented during construction to ensure traffic safety, reduce accident hazards, minimize construction-related traffic congestion, detour routes, and minimize inconveniences to commuters and local residences and businesses. At a minimum, the TMP must include appropriate signage, identification of alternate/detour routes, incident management, construction strategies, onsite and offsite street circulation, planned haul routes, anticipated temporary traffic lane closures, demand management and a public awareness campaign. The project construction contractor shall follow the plan and coordinate with the City in advance if any deviations or changes to the plan are necessary. Therefore, the Project's contribution to cumulative effects on traffic and transportation facilities during construction would be minor

Following construction, the proposed Project is anticipated to encourage use of mass transit and reduce VMTs on roadways and freeways.

Current and Reasonably Foreseeable Future Actions

Current and reasonably foreseeable actions in the RSA include transportation and in-fill development projects, which may require temporary road closures and detours that could affect traffic circulation within the RSA. However, as required by the City of Riverside, a transportation management plan would be developed to minimize construction-related impacts on the transportation system. Therefore, the cumulative projects' contribution to cumulative effects on traffic and transportation and bicycle and pedestrian facilities in the RSA would be minor.

Cumulative projects identified in Table 4.1-1 are planned projects that would generate additional traffic within the RSA. The City of Riverside requires the preparation of a traffic impact analysis for development projects within the city's jurisdiction. Each cumulative project is required to analyze project-specific impacts on the roadway network and mitigate resulting significant impacts. The following mitigation options are available to the project applicant:

1. Modify the Project's built environment characteristics to reduce VMT generated by the project.
2. Implement TDM measures to reduce VMT generated by the project.
3. Participate in a VMT fee program and/or VMT mitigation exchange/banking program (if they exist) to reduce VMT from the Project or other land uses to achieve acceptable levels.

Any impacts to the City of Riverside's roadway network resulting from traffic generated by each individual cumulative project would require a form of mitigation to offset VMT impacts. Therefore, the cumulative effects on traffic and transportation and bicycle and pedestrian facilities from these development projects in the RSA would be minor.

Cumulative Impacts

Overall, the local circulation system within the RSA experiences congestion due to increasing travel demand. The proposed project's contribution to cumulative effects on traffic and transportation and pedestrian and bicycle facilities would be minor during construction and beneficial during operation because the Build Alternative has the potential to reduce regional VMTs. Although the Build Alternative would generate traffic to and from the expanded station, these trips are short-distances and are off-set by the elimination of existing local traffic generated by the Prism Aerospace building. On a regional level, traffic would be reduced on freeways and highways through the use of transit. Other current and reasonably foreseeable actions would generate traffic within the local roadway network, and mitigation to off-set potential VMT increases for those project-specific impacts would be required. The proposed RUSD school expansion project is anticipated to generate vehicle and school bus traffic within the RSA due to student drop-off during the morning peak hour and student pick-up during the afternoon peak hour. In conjunction with the Build Alternative, it is anticipated that the peak hours of the RUSD school expansion project and the proposed Project would occur at different times. During the AM peak hour, most commuters would arrive at the station between 5:00 a.m. and 7:00 a.m., while the majority of school-related traffic would occur between 7:30 a.m. to 8:30 a.m. During the PM peak hour, school-related traffic is anticipated to occur between 2:30 p.m. and 3:30 p.m., while commuter traffic at the station is busiest between 5:00 p.m. to 7:00 p.m. As such, minor cumulative effects on traffic and transportation and bicycle facilities within the RSA are anticipated. Therefore, the proposed Project, in conjunction with past, present, and reasonably foreseeable actions, would not result in a cumulatively significant impact related to traffic and transportation or bicycle facilities, and mitigation would not be required.

Utilities and Utility Service Systems

Resource Study Area

The RSA for utilities and utility service systems include the project site and adjacent area where utility locations would occur.

Project Impacts

The Build Alternative and all design options may result in the permanent relocation of the following service systems:

- Gas (Southern California Gas Company [SoCal Gas])
- Electric, water, storm drain, and sewer (City of Riverside)
- Fiber optic (AT&T, Spectrum, Frontier, and Sprint)
- Cable TV (CenturyLink)

RCTC would coordinate with utility owners prior to relocation to avoid or minimize service disruption during construction and as design progresses, as part of the utility relocation plan. The proposed Project would require the abandonment of an existing city irrigation well at the proposed location of the new platform and tracks for the construction of the Build Alternative and Design Options 1A, 1B, 2A, 2B, 3A, and 3B. Coordination with Riverside Public Utilities has indicated that the existing well could be capped, and rather than relocating the well, RCTC would continue coordination with Riverside Public Utilities to rehabilitate an existing well located off-site. Rehabilitation of the well would recover the flow lost from the irrigation well at the project site. Due to the rehabilitation of an existing well to offset the on-site irrigation well abandonment, as agreed upon by RCTC and Riverside Public Utilities, impacts would be less than significant with the proposed mitigation. Therefore, the Project's contribution to cumulative impacts would be minor. No permanent impacts due to operations of the Project are anticipated.

Current and Reasonably Foreseeable Future Actions

Current and reasonably foreseeable actions in the RSA include transportation and in-fill development projects as identified in Table 4.1-1. These cumulative projects would require connections to the utility network within the RSA prior to operations so that water, electricity, gas, cable TV, and communication could be provided to its users. Project features would require coordination with affected utility companies to minimize any service disruptions during construction. Based on the location of the cumulative projects, there are no wells that are anticipated to be impacted by other development project.

Cumulative Impacts

As noted in Section 3.17, Utilities/Service Systems, the Build Alternative would not result in operational (long-term) impacts to utilities. Construction-related impacts could occur if utilities are relocated and result in significant service disruptions. However, it is anticipated (as standard practice) that the Build Alternative and each cumulative project within the RSA would coordinate with affected utility providers to minimize service disruptions as part of the project development process. An irrigation well at the project site would be capped to accommodate the construction of the station improvements. To offset the on-site irrigation well abandonment, rehabilitation of an off-site well, as agreed upon by RCTC and Riverside Public Utilities, would mitigate the loss of production from the abandoned well. Other development projects are not anticipated to affect local wells within the RSA. Therefore, the Project's contribution to cumulative impacts would be minor.

5.0 Comparison of Alternatives

5.1. Introduction

The CEQA Guidelines § 15126.6(f) notes that the range of alternatives required in an EIR is governed by a rule of reason and must include only those alternatives that are necessary to permit a reasoned choice. The alternatives considered should avoid or substantially lessen the Project's significant effects. Furthermore, only the alternative(s) that the lead agency determines could feasibly attain most of the basic objectives of the Project should be analyzed in detail. CEQA Guidelines § 15126.6(e) requires that an EIR evaluate the No Project or No Build alternative along with its impact. CEQA Guidelines also require that the No Project Alternative analysis discuss the existing conditions as well as what would be reasonably expected to occur in the foreseeable future if the Project were not approved, based on current plans and policies and consistent with the available infrastructure and community services. Refer to Section 5.4 for a discussion of the No Project/No Build Alternative.

In addition, the EIR should compare merits of the alternatives and determine an environmentally superior alternative (refer to Section 5.7 for details). The comparison of alternatives consists of the No Build Alternative and the Build Alternative with design options. Pursuant to CEQA Guidelines § 15126.6(d), this comparison would include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed Project. For the purposes of this analysis, it is assumed that the Build Alternative and all design options would comply with applicable federal, state, and local regulations, policies, and ordinances. It is also assumed that all mitigation measures, unless stated otherwise, are required for implementation and would apply to the Build Alternative with design options.

5.2. Alternatives Considered but Eliminated from Further Evaluation

Pursuant to § 15126.6(c) of the CEQA Guidelines, a range of potential alternatives to the proposed Project should include those that could feasibly accomplish most of the basic objectives of the Project and could avoid or substantially lessen one or more of the significant effects. CEQA Guidelines also require EIRs to identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process; the reasons underlying the lead agency's determination should be briefly explained. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts.

A reasonable range of alternatives were considered by RCTC and include six Project Definition Report (PDR) alternatives, seven historic resource avoidance alternatives, and two historic adaptive reuse alternatives. These preliminary alternatives were initially evaluated and eliminated from consideration because they did not meet major factors established by RCTC and resulted in fatal flaws and were determined to be infeasible to construct; failed to meet basic project objectives; and/or could not avoid significant environmental impacts. The discussion provided in this section outlines the rationale for the elimination of these preliminary alternatives from further consideration and the justification in the selection of the alternatives (No Project and Build Alternative) evaluated in this EIR.

Alternatives Evaluated in the Project Definition Report

In November 2016, RCTC completed the *Project Definition Report* (RCTC, 2016) for the project. A PDR is a preliminary report that defines the major project components, describes the project issues, recommends a preferred design approach, and establishes a conceptual cost estimate. Six alternatives were considered in the PDR and evaluated against the evaluation criteria. Major factors evaluated in the initial screening of alternatives considered environmental impacts of each alternative, including property acquisitions and avoiding impacts to historic properties such as the former FMC Complex (Plant 1 and Plant 2). Following a comprehensive process reviewing six alternative concepts in partnership with Metrolink during preparation of the PDR, the Build Alternative (identified as Alternative 6 in the PDR) was identified as the best alternative for the expansion of the Riverside-Downtown Station because it met the most criteria (including the capacity for additional growth) and was moved forward for analysis of this Draft EIR. shows the proposed alternatives, evaluation criteria, and whether the evaluation criteria were met (indicated by an "X"). In addition to low evaluation criteria results, Alternatives 1 through 5 were eliminated from further consideration because the five alternative concepts resulted in fatal flaws and were determined to be infeasible to construct, and/or were not able to avoid significant environmental impacts.

Table 5.2-1. 2016 Project Definition Report Alternatives Evaluation and Criteria

Evaluation Criteria	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6
Layover Capacity	X	X	X	X	X	X
Connectivity	N/A	X	X	X	X	X
Safe Access	X	X	X	X	X	X
No Property Needs	N/A	N/A	X	X	N/A	N/A
Environmental	X	X	X	X	X	X
No Impact to Businesses	N/A	N/A	X	X	N/A	N/A
Meets Service Plan Needs	X	X	N/A	N/A	X	X
Capacity for Growth Beyond Plan	N/A	N/A	N/A	N/A	X	X
No BNSF Impact	X	X	N/A	N/A	N/A	X
Criteria Met	5	6	6	6	6	7

X = evaluation criteria were met
N/A = not applicable

As shown in Table 5.2-1, PDR Alternatives 1 through 5 ranked lowest in the initial screening evaluation and did not meet some of the following basic project objectives supporting the purpose of the Project:

- Expand platform capacity to meet passenger train storage needs
- Allow for train meets off the BNSF Railway mainline and minimize impacts to BNSF operations
- Improve train connectivity and operations while minimizing impacts on improvement projects near the station that are already designed or in construction
- Facilitate more efficient passenger flow and reduce dwell times
- Enhance safety and access for station users
- Accommodate projected future demand

In addition to ranking highest in the initial screening evaluation in the PDR, the Build Alternative (Alternative 6) meets all the basic project objectives previously described.

Project alternatives as evaluated in the PDR and the reasons for their elimination from further consideration in this EIR are described herein:

Alternative 1: Based on the CEQA Guidelines § 15126.6(f)(1), Alternative 1 was eliminated from consideration in this EIR because it met at least one of the three following factors for its elimination: (1) fails to meet most of the basic project objectives; (2) is infeasible; and/or (3) is unable to avoid significant impacts. This alternative failed to meet the project objectives for the following reasons. Alternative 1 focused on adding additional platform capacity on the east side of the station with the new platform adjacent to, but slightly north of, the existing platform. This alternative provided the capacity required while minimizing impact to BNSF but presented impacts to passenger accessibility and convenience. Locating the station platform further north required two pedestrian crossings between platforms, thus lengthening the time it would take to transfer between services. The location of the station platform would not achieve the project's basic objective of facilitating efficient passenger flow.

Alternative 2: Based on the CEQA Guidelines § 15126.6(f)(1), Alternative 2 was eliminated from consideration in this EIR because it met at least one of the three following factors for its elimination: (1) fails to meet most of the basic project objectives; (2) is infeasible; and/or (3) is unable to avoid significant impacts. This alternative was unable to avoid significant impacts for the following reasons: Alternative 2 shifted the platform further south, providing improved passenger accessibility by allowing for the existing pedestrian bridge to potentially be extended. This alternative also limited impacts to BNSF but required multiple property acquisitions, including both the Prism Aerospace building (former FMC Plant 1 building) and the SolarMax building (former FMC Plant 2 building) just south of the station. This was identified as an unacceptable impact in the initial alternatives development and eliminated from further consideration because this alternative would result in significant environmental impacts and the most property acquisitions and displacements This alternative would also result in the greatest impacts to historic properties because the former FMC Complex (Plant 1 and Plant 2), would be removed.

Alternative 3: Based on the CEQA Guidelines § 15126.6(f)(1), Alternative 3 was eliminated from consideration in this EIR because it met at least one of the three following factors for its elimination: (1) fails to meet most of the basic project objectives; (2) is infeasible; and/or (3) is unable to avoid significant impacts. Alternative 3 proposed to construct additional tracks and platform on RCTC owned property on the west side of the station. Although Alternative 3 avoids the removal of historic buildings, provides convenient passenger access and minimizes any impacts to adjacent businesses by constructing the additional tracks and platform on RCTC-owned property on the west side of the station, this alternative failed to meet project objectives and determined to be infeasible.

Alternative 3 would not meet project objectives because it would require the removal of existing station amenities and improvements that are planned or in construction. It would require reconfiguration of bus access and drop-off areas at the station. Removal or reconfiguration of on-site bus facilities would not enhance access to the station because bus drop-off areas and lay-over capacity would be reduced and affect bus connectivity with the train station. Alternative 3 may cause onsite traffic circulation issues that could result in inefficiencies for bus to train passenger connections. Alternative 3 would reduce existing parking at the station due to the additional tracks and new passenger platform at the main parking lot. In addition, this alternative would not provide the capacity for growth and accommodate future travel demand because the proposed station configuration inhibits efficient drop-off at the station and reduce the available parking stalls to accommodate existing commuters and worsen parking needs as projected future travel demand increase.

Alternative 3 would not allow the 91//PV Line and IEOC trains to use the west side platform because there are no existing crossovers between the Riverside-Downtown Station and the 91/PV Line connection, and it would require additional crossovers to be constructed on the BNSF mainline between the Riverside-Downtown Station and CP Highgrove. Alternative 3 would result in impacts to BNSF operations, which would not achieve one of the basic objectives of the Project – to minimize impacts to BNSF operations.

In addition to failing to meet most of the project objectives, Alternative 3 was an infeasible alternative to be carried forward for further evaluation in this EIR. The term "feasible" is defined in CEQA Guidelines § 15364 as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors" (see Public Resources Code § 21061.1). CEQA Guidelines § 15126.6(f)(1) provides additional factors that may be taken into account when addressing the feasibility of alternatives. These factors include site suitability; economic viability; availability of infrastructure; general plan consistency; other plans or regulatory limitations; jurisdictional boundaries; and whether the proponent can reasonably acquire, control, or otherwise have access to potential alternative sites.

Alternative 3 requires BNSF approval to allow work within BNSF ROW to construct the crossovers. BNSF will not allow new crossovers to be added/constructed because it would significantly impede BNSF operations. The feasibility of this alternative requires BNSF support and approval of the new crossovers because it is a critical element for this alternative to be considered as a feasible alternative in the EIR. Since BNSF approval of the new crossovers would not be granted or attained within a reasonable period of time to allow reasonable access to construct the crossovers within their jurisdictional boundaries, Alternative 3 was determined not to be a feasible alternative.

Alternative 4: Based on the CEQA Guidelines § 15126.6(f)(1), Alternative 4 was eliminated from consideration in this EIR because it met at least one of the three following factors for its elimination: (1) fails to meet most of the basic project objectives; (2) is infeasible; and/or (3) is unable to avoid significant impacts. This alternative failed to meet project objectives and was determined to be infeasible. Alternative 4 minimized the need for property acquisition by shifting the track usage of the BNSF mainline to the west. This alternative increased the off-mainline capacity of the existing platform by shifting the BNSF mainline using a series of reversing curves. To replace the lost platform

capacity on the west side of the station, a platform track with a side platform would require less property to construct at 16 feet (versus 26 to 30 feet for a center platform). Additionally, it would repurpose the existing layover tracks to mainline tracks and require a new at grade crossing across Mission Inn Avenue. While this alternative reduced the need for property acquisitions and avoided impacts to historic buildings, Alternative 4 does not allow the Perris Valley trains to use the west side platform because there are no existing crossovers between the Riverside-Downtown Station and the 91/PV Line connection, and BNSF will not allow new crossovers to be added/constructed because it would significantly impede BNSF operations. It would also require a new crossover track on the BNSF mainline 1 between the Riverside Downtown Station and CP Highgrove and a new railroad bridge over 14th Street.

Alternative 4 would not meet project objectives because it would not improve train connectivity and operations and accommodate projected future demand. The elimination of two existing layover tracks on the west side of the station would also preclude construction of a future planned third layover track at this location and would not allow capacity for future growth to accommodate future travel demand. The removal of the existing layover tracks directly adjacent to the Riverside-Downtown Station would result in commuter trains being serviced and parked at a remote facility in Colton, which would add operational logistics and costs to accommodate the loss of the layover tracks at the Riverside-Downtown Station. The remote facility would need to be checked for adequate space to service and park the trains. Agreements with BNSF would also need to be confirmed for adequate permission to move trains between the remote facility and the Riverside-Downtown Station. The remote facility would also require additional train movements on the BNSF system, which would be above the current limits in the Shared Use Agreement between BNSF and RCTC. Therefore, renegotiation of the Shared Use Agreement would be required. Efforts to renegotiate the existing Shared Use Agreement have been ongoing for the last 20 years, and BNSF may object to the additional train movements. It would also require reconfiguration of bus access into the main station parking lot and reduces existing parking capacity.

In addition to failing to meet most of the project objectives, this alternative was considered infeasible and eliminated from further consideration because of the required approvals from BNSF. Similar to the Alternative 3, BNSF approval is a critical element for Alternative 4 to be considered as a viable alternative. As mentioned previously, on-going negotiations with BNSF on the Share Use Agreement for the last 20 years and approval would not be obtained within a reasonable period of time, legal factors, and would not result in reasonable access to BNSF ROW to allow construction of the new crossovers. Furthermore, Alternative 4 is infeasible because of the economic viability because of the construction of a new railroad bridge over 14th Street and the availability of infrastructure to implement this alternative.

Alternative 5: Based on the CEQA Guidelines § 15126.6(f)(1), Alternative 5 was eliminated from consideration in this EIR because it met at least one of the three following factors for its elimination: (1) fails to meet most of the basic project objectives; (2) is infeasible; and/or (3) is unable to avoid significant impacts. This alternative failed to meet most of the project objectives and was infeasible for the following reasons: Alternative 5 intended to provide additional capacity on both the west and east sides of the station. Though this approach minimized impacts to adjacent properties and BNSF while maintaining passenger accessibility, it still required removing the existing Riverside-Downtown Station features on the west side of the station and the construction of a new pedestrian bridge over the tracks because the proposed new platform would be located where the west elevators and security tower are located. This alternative would result in the removal of the historic, former FMC Plant 1 building, and potentially the removal of the adjacent former FMC Plant 2 building (or a portion thereof).

Alternative 6: This alternative extended the station's footprint to the south and required a partial or complete property acquisition of the former FMC Plant 1 building (currently, Prism Aerospace). While modifications or removal of the building is required, this alternative preserved the solar panel manufacturing business (Solar Max) to the south and required only minimal property acquisition, adjacent to this business. Passenger and layover capacity would be maintained and expanded to the north of the station.

All six alternative concepts were reviewed in partnership with Metrolink during preparation of the PDR, Alternative 6 (the Build Alternative) was identified as the alternative for the expansion of the Riverside-Downtown Station because it met most of the project objectives and evaluation criteria (including the capacity for additional growth) and was moved forward for analysis of this EIR. shows the proposed alternatives, evaluation criteria, and whether the evaluation criteria were met (indicated by an "X"). In addition to low evaluation criteria results, Alternatives 1 through 5 were eliminated from further consideration because the five alternative concepts resulted in fatal flaws and were determined to be infeasible to construct, failed to meet basic project objectives, and/or were not able to avoid significant environmental impacts.

Historic Resources Avoidance Alternatives

In addition to the alternatives considered in the PDR, seven historic resource avoidance alternatives and two historic resource adaptive reuse alternatives were developed to avoid and minimize impacts to the former FMC Plant 1 building. The historic resource avoidance alternatives and adaptive reuse alternatives were considered but eliminated from further review because they were not reasonable and/or feasible and would not meet the project objectives or purpose and need. A detailed discussion of avoidance alternatives and the reasons they were found infeasible are discussed in the following section.

Avoidance Alternative 1 proposed the construction of the new platform and tracks on the westside of the existing station. This alternative avoids the former FMC Complex (Plant 1 and Plant 2) on the east side of the station by moving proposed improvements to the west side of the station (Figure 3.4-20 in Section 3.4). This avoidance alternative would provide a new platform and tracks on the west side of the existing station with pedestrian at-grade crossings at both ends of the new platform. The existing pedestrian overpass would be extended to the new platform with an option to extend to the main parking lot.

Although Avoidance Alternative 1 would avoid the former FMC Complex and result in a no significant impact determination to the former FMC Complex, based on CEQA Guidelines § 15126.6(f)(1), Avoidance Alternative 1 was eliminated from consideration because it met at least one of the three following factors for its elimination: (1) fails to meet most of the basic project objectives; (2) is infeasible; and/or (3) is unable to avoid significant impacts. Avoidance Alternative 1 failed to meet most of the project objects and was eliminated from further review for the following reasons:

- Does not allow the Perris Valley trains to use the west side platform because there are no existing crossovers between the Riverside-Downtown Station and the 91/PV Line connection, and BNSF will not allow new crossovers to be added/constructed.
- Eliminates two existing layover tracks on the west side of the station and precludes construction of a future planned third layover track at this location. The removal of layover tracks directly adjacent to the Riverside-Downtown Station would result in commuter trains being serviced and parked at a remote facility in Colton, which would add operational logistics and costs to accommodate the loss of the layover tracks at the Riverside-Downtown Station. The remote facility would need to be checked for adequate space to service and park the trains. Agreements with BNSF would also need to be confirmed for adequate permission to move trains between the remote facility and the Riverside-Downtown Station. The remote facility would also require additional train movements on the BNSF system, which would be above the current limits in the Shared Use Agreement between BNSF and RCTC. Therefore, renegotiation of the Shared Use Agreement would be required. Efforts to renegotiate the existing Shared Use Agreement have been ongoing for the last 20 years, and BNSF may object to the additional train movements.
- Requires construction of a new railroad bridge over 14th Street.
- Requires a new turnout and CP on BNSF Mainline Track 1.
- Reduces existing parking capacity.
- Requires reconfiguration of bus access into the main station parking lot.

Avoidance Alternative 1A proposed the construction of a new platform on the west side of the existing station to avoid crossing the 14th Street railroad bridge. This alternative avoids the former FMC Complex on the east side of the station by moving proposed improvements to the west side of the station. Avoidance Alternative 1A would provide a new turnout to the platform and tracks on the west side of the existing station with pedestrian at-grade crossings at both ends of the new platform. The existing pedestrian overpass would be extended to the new platform with an option to extend to the main parking lot.

Although Avoidance Alternative 1A would avoid the FMC Complex and result in a no significant impact determination to the former FMC Complex, based on the CEQA Guidelines § 15126.6(f)(1), Avoidance Alternative 1A was eliminated from consideration because it met at least one of the three following factors for its elimination: (1) fails to meet most of the basic project objectives; (2) is infeasible; and/or (3) is unable to avoid significant impacts. Avoidance Alternative 1A failed to meet most of the project objects and was eliminated from further review for the following reasons:

- Does not allow the Perris Valley trains to use the west side platform due to the lack of crossovers between the Riverside-Downtown Station and the 91/PV Line connection and BNSF will not allow new crossovers to be added/constructed.
- Eliminates and requires replacement of three existing layover tracks and a security office on the west side of the Riverside-Downtown Station . The removal of layover tracks directly adjacent to the station would result in commuter trains being serviced and parked at a remote facility in Colton, which would add operational logistics and costs to accommodate the loss of the layover tracks at the station. The remote facility would need to be checked for adequate space to service and park the trains. Agreements with BNSF would also need to be confirmed for adequate permission to move trains between the remote facility and the Riverside-Downtown Station. The remote facility would also require additional train movements on the BNSF system which would be above the current limits in the Shared Use Agreement between BNSF and RCTC. Therefore, renegotiation of the Shared Use Agreement would be required. Efforts to renegotiate the Shared Use Agreement have been ongoing for the last 20 years and BNSF may object to the additional train movements.
- Requires a new turnout and Control Point on BNSF Mainline Track 1.
- Reduces existing parking capacity and requires reconfiguration of bus access into the main station parking lot.

Avoidance Alternative 2 proposed to construct a new platform and tracks on the east side of the existing station (stub ended). This alternative avoids the former FMC Complex (Plant 1 and Plant 2) on the east side of the station by moving proposed improvements north of the former FMC Complex. Avoidance Alternative 2 would provide a new platform and tracks on the east side of the existing station with pedestrian grade crossings at the east end of the new platform. This alternative would increase Metrolink train storage capacity while minimizing impacts to BNSF operations. In addition, the south end of the new platform would be near the existing overflow parking lot for convenient access for passengers.

Although Avoidance Alternative 2 would avoid the former FMC Complex and would result in a no significant impact determination to the former FMC Complex, based on the CEQA Guidelines § 15126.6(f)(1), Avoidance Alternative 2 was eliminated from consideration because it met at least one of the three following factors for its elimination: (1) fails to meet most of the basic project objectives; (2) is infeasible; and/or (3) is unable to avoid significant impacts. Avoidance Alternative 2 failed to meet most of the project objects, was determined to be infeasible, and was eliminated from further review for the following reasons:

- Includes a stub-ended configuration that is not acceptable for train operations at this location because it reduces train storage capacity, and trains that were parked on the eastside of Platform 2 would block trains from leaving at the stub ended tracks.
- Requires a right-hand turnout within the limits of the existing platform at the station, which would not meet Metrolink standards and would not be permitted because of operational restrictions.
- Requires widening the existing bridge over University Avenue.
- Eliminates and requires replacement of two existing layover tracks. The removal of layover tracks directly adjacent to the Riverside-Downtown Station would result in commuter trains being serviced and parked at a remote facility in Colton, which would add operational logistics and costs to accommodate the loss of the layover tracks at the station. The remote facility would need to be checked for adequate space to service and park the trains. Agreements with BNSF would also need to be confirmed for adequate permission to move trains between the remote facility and the Riverside-Downtown Station. The remote facility would also require additional train movements on the BNSF system, which would be above the current limits in the Shared Use Agreement between BNSF and RCTC. Therefore, renegotiation of the Shared Use Agreement would be required. Efforts to renegotiate the Shared Use Agreement have been ongoing for the last 20 years, and BNSF may object to the additional train movements.
- The location of the proposed platform, combined with the configuration of station tracks, prevents the placement of proper pedestrian paths between the proposed platform and existing Platform 2. The pedestrian paths from the proposed platform to Platform 2 would violate Metrolink criteria and result in unsafe conditions. Without paths from the proposed platform to Platform 2, passengers would need to leave the main station area to access the existing platforms and west side main parking area.
- It does not increase parking capacity.

Avoidance Alternative 2A: New Platform and Tracks on the East Side of the Existing Station (avoids existing layover tracks)

Avoidance Alternative 2A avoids the former FMC Complex (Plant 1 and Plant 2) and the two existing layover tracks on the east side of the station by shifting improvements north of Mission Inn Avenue (Figure 3.4-23). This avoidance alternative would provide a new platform and tracks on the east side of the existing station, and pedestrian grade crossings would be provided at both ends of the new platform.

Although Avoidance Alternative 2A would avoid the former FMC Complex and result in a no significant impact determination to the former FMC Complex, based on the CEQA Guidelines § 15126.6(f)(1), Avoidance Alternative 2A was eliminated from consideration because it met at least one of the three following factors for its elimination: (1) fails to meet most of the basic project objectives; (2) is infeasible; and/or (3) is unable to avoid significant impacts. Avoidance Alternative 2A failed to meet most of the project objects and was eliminated from further review for the following reasons:

- Requires Mission Inn Avenue to be grade separated to accommodate the 4th and 5th tracks and meet CPUC standards.
- Requires a new turnout on BNSF Mainline Track 3 and CP.
- Increases the distance of the west end of platform to the pedestrian bridge to 2,300 feet from the main parking, and the east end of the platform to the furthest parking spot in the main parking area is 4,600 feet, which would not provide convenient passenger access.
- Does not increase parking capacity.

Avoidance Alternative 2B: New Platform and Tracks on the East Side of the Existing Station (avoids existing layover tracks and Mission Inn Avenue)

Avoidance Alternative 2B avoids the former FMC Complex on the east side of the station and avoids the existing layover tracks by shifting the track improvements farther north, past Mission Inn Avenue (Figure 3.4-24). This avoidance alternative would provide a new platform and tracks on the east side of the existing station, and pedestrian grade crossing would be provided at the south end of the new platform.

Although Avoidance Alternative 2B would avoid the former FMC Complex and result in a no significant impact determination to the former FMC Complex, based on the CEQA Guidelines § 15126.6(f)(1), Avoidance Alternative 2B was eliminated from consideration because it met at least one of the three following factors for its elimination: (1) fails to meet most of the basic project objectives; (2) is infeasible; and/or (3) is unable to avoid significant impacts. Avoidance Alternative 2B failed to meet most of the project objects and was eliminated from further review for the following reasons:

- Includes a stub-ended configuration that is not acceptable for train operations at this location because it would require a reverse movement (double move) on the BNSF mainline, adversely impacting their operations. The additional movements would create delays, inefficiencies, and unacceptable operations.
- Requires a new turnout on BNSF Mainline Track 3 and new CP.
- Increases the distance to the west end of the platform to the pedestrian bridge to 2,300 feet from the main parking, and the east end of the platform to the furthest parking spot in the main parking area is 4,600 feet, which would not provide convenient passenger access.
- Does not increase parking capacity.

Avoidance Alternative 2C: New Platform and Tracks on the East Side of the Existing Station (not stub ended)

Avoidance Alternative 2C avoids the former FMC Complex on the east side of the station by shifting the improvements just north of the former FMC Complex (Figure 3.4-25). This avoidance alternative would provide a new platform and tracks just north of the Riverside-Downtown Station, and pedestrian grade crossings would be provided at both ends of the new platform.

Although Avoidance Alternative 2C would avoid the former FMC Complex and result in a no significant impact determination to the former FMC Complex (Plant 1 and Plant 2), based on the CEQA Guidelines § 15126.6(f)(1), Avoidance Alternative 2C was eliminated from consideration because it met at least one of the three following factors for its elimination: (1) fails to meet most of the basic project objectives; (2) is infeasible; and/or (3) is unable to avoid

significant impacts. Avoidance Alternative 2C failed to meet most of the project objects, was determined to be infeasible, and was eliminated from further review for the following reasons:

- Would not accommodate passengers to gain access from Platforms 1 and 2 or to the main parking lot on the west side of the station without leaving the main station because it would require a new pedestrian crossing for passengers transferring from the new platform to the existing platform, which is not permitted.
- Requires Mission Inn Avenue to be grade separated to accommodate the 4th and 5th tracks and meet CPUC standards.
- Requires widening the existing bridge over University Avenue.
- Eliminates and requires replacement of two existing layover tracks. The removal of layover tracks directly adjacent to the Riverside-Downtown Station would result in commuter trains being serviced and parked at a remote facility in Colton, which would add operational logistics and costs to accommodate the loss of the layover tracks at the station. The remote facility would need to be checked for adequate space to service and park the trains. Agreements with BNSF would also need to be confirmed for adequate permission to move trains between the remote facility and the Riverside-Downtown Station. The remote facility would also require additional train movements on the BNSF mainline, which would be above the current limits in the Shared Use Agreement between BNSF and RCTC. Therefore, renegotiation of the Shared Use Agreement would be required. Efforts to renegotiate the Shared Use Agreement have been ongoing for the last 20 years, and BNSF may object to the additional train movements.
- Requires a new turnout on BNSF Mainline Track 3 and CP.
- Increases the distance from west end of platform to the pedestrian bridge to 1,100 feet from the main parking, and the east end of the platform to the furthest parking spot in the main parking area is 3,400 feet, which would not provide convenient passenger access.

Avoidance Alternative 3: New Platform and Tracks on the East Side of 14th Street

Avoidance Alternative 3 avoids the former FMC Complex on the east side of the station by shifting the improvements south of 14th Street (Figure 3.4-26). Avoidance Alternative 3 would provide a new platform and tracks on the south side of the existing station, and pedestrian grade crossings would be provided at both ends of the new platform.

Although Avoidance Alternative 3 would avoid the former FMC Complex and result in a no significant impact determination to the former FMC Complex, based on the CEQA Guidelines § 15126.6(f)(1), Avoidance Alternative 3 was eliminated from consideration because it met at least one of the three following factors for its elimination: (1) fails to meet most of the basic project objectives; (2) is infeasible; and/or (3) is unable to avoid significant impacts. Avoidance Alternative 3 failed to meet most of the project objects and was eliminated from further review for the following reasons:

- Is not acceptable for train operations at this location because it would require a reverse movement (double move) on the BNSF mainline, adversely impacting their operations. The additional movements would create delays, inefficiencies, and unacceptable operations.
- Requires relocation and modification of existing signals facilities.
- Requires extensive right of way (ROW) acquisition of frontage road and adjacent properties to accommodate a new platform and tracks and also requires a vacation of Commerce Street.
- Increases the distance from the west end of platform to the pedestrian bridge to 2,300 feet from the main parking, and the east end of the platform to the furthest parking spot in the main parking area is 4,600 feet, which would not provide convenient passenger access.

Summary of Historic Resource Avoidance Alternatives

The Avoidance Alternatives were also evaluated based on how they best met the core evaluation criteria in comparison to the Build Alternative. The core evaluation criteria was based on the project objectives, as described herein, and was used to screen all potential project alternatives.

Purpose and Need

The purpose and need of the proposed Project is to expand the capacity, improve operations and efficiency, connectivity, and the passenger experience at the Riverside-Downtown Station.

Project Objectives

- Expand platform capacity to meet passenger train storage needs
- Allow for train meets off the BNSF mainline and minimize impacts to BNSF operations
- Improve train connectivity and accessibility while minimizing impacts on improvement projects near the station that are already designed or in construction
- Facilitate more efficient passenger flow and reduce dwell times
- Enhance safety and access for station users
- Accommodate projected future demand

Table 5.2-2 describes the core evaluation criteria and summarizes how each of the alternatives met the core evaluation criteria.

Table 5.2-2. Summary of Core Evaluation Criteria by Avoidance Alternative

Evaluation Criteria	Build Alternative	Avoidance Alternatives 1 and 1A	Avoidance Alternative 2	Avoidance Alternatives 2A and 2B	Avoidance Alternative 2C	Avoidance Alternative 3
No impacts to Layover capacity	X	--	--	X	--	X
Meets Connectivity/ Service Plan Needs	X	X	--	--	--	--
No property acquisition/ No Impact to adjacent businesses	--	--	X	X	X	--
No impact to BNSF operations	X	--	X	--	--	--
Meets Metrolink Design Criteria	X	X	--	X	--	X
No impacts to Capacity for future growth (e.g., parking)	X	--	--	--	--	--
Meets Purpose and Need	X	--	--	--	--	--
Criteria Met	**6**	**2**	**2**	**3**	**1**	**2**

X = meets core performance criteria
-- indicates does not meet core performance criteria

Consideration of Historic Resource Avoidance Alternatives

Avoidance Alternatives 1, 1A, 2, 2A, 2B, 2C, and 3 would avoid impacts to the former FMC Complex (APE Map Numbers 17, 18, 21, 28, and 33); however, they did not meet the performance criteria, most of the basic project objectives or the purpose and need of the Project. In addition, Alternatives 2A and 2C would require a grade separation of Mission Inn Avenue, estimated to cost an additional $45 million, which would substantially increase the estimated cost of the project. Alternatives 1, 1A, 2, and 2C would impact existing layover capacity and would not accommodate expansion of parking. Alternative 2B and 3 would require a double reverse move on the BNSF mainline. Based on the CEQA Guidelines § 15126.6(f)(1), all of the avoidance alternatives would meet at least one of the three screening criteria: (1) fails to meet most of the basic project objectives; (2) is infeasible; and/or (3) is unable to avoid significant impacts.

Based on this evaluation, Avoidance Alternatives 1, 1A, 2, 2A, 2B, 2C, and 3 all failed to meet most of the project objectives and were eliminated from further review.

In the evaluation of the Build Alternative and all the Avoidance Alternatives against the core performance criteria, the Build Alternative was still identified as the best alternative for the expansion of the Riverside-Downtown Station because it is the only alternative that meets most of the project objectives and core performance criteria, including the capacity for additional growth in the future.

Minimization of Harm/Build Alternative Option for Full Adaptive and Partial Reuse

Build Alternative Option for Full Adaptive Reuse

A full adaptive reuse option was also considered to minimize harm to the historic, former FMC building, Plant 1, while weighing the overall project objectives against core performance criteria, as previously discussed. The following conceptual analysis addresses an adaptive reuse scenario for a complete retrofit/reuse of the existing Plant 1, and a partial reuse of Plant 1, incorporating the building into the Project.

The Build Alternative places the new tracks and passenger loading platform in the current location of Plant 1. Full adaptive reuse of the building to serve as an enclosed passenger rail station would entail structural changes to the building to accommodate the tracks and platform while retaining the building's exterior and interior historic materials and structural elements.

Based on a structural condition analysis performed in 2019, there are a number of existing structural issues associated with the predominantly timber-constructed building (timber trusses, timber purlins, timber girders, timber roof, timber columns, and timber floor planks). Many of the timber trusses, girders, and columns show signs of cracking and splitting that could compromise the compression capabilities of these structural, supporting members. To meet structural and seismic code, a new "skeleton" structure would have to be constructed because the timber structural members are deteriorating.

In addition to these changes, the majority of the glass windows in the clerestories have been replaced with translucent plastic panels (existing condition), and the current owners of the building have been making ongoing repairs to the structure, further compromising the design and material integrity of the historic structure. The exterior walls (including the character-defining, multi-light windows) would need to be removed or partially removed to allow proper ventilation of the interior while trains are stopped inside. The exposed timber framing, trusses and sawtooth roof would be the only historic elements remaining, and they would be heavily modified from their original configuration (encased in steel or concrete), as a result of the changes necessary to meet fire and safety codes.

Operational Constraints

To reuse Plant 1 as a part of the expansion of the Riverside-Downtown Station, new tracks would have to ladder off an existing station track and the new station tracks would have to thread through the building structure. Operationally, this would reduce the capacity of the existing and proposed platform and would also require a substantial retrofit of the structure. This alternative could impact BNSF operations and layover tracks, and consideration would need to be made to accommodate the right size train. This alternative may also require building another bridge over University Avenue.

Environmental Impacts

There are also environmental concerns with the Full Adaptive Reuse Option. In 2018, the *Phase I Environmental Site Assessment* was performed at the proposed project site. There are Recognized Environmental Conditions and Activity Use Limitations for portions of the proposed project site. Land Use Covenants also dictate that the site shall not be used for sensitive receptors, and soil disturbance activities shall not be conducted without the consent of the Department of Toxic Substances Control (DTSC). There are ongoing remediation efforts at the proposed project site, and DTSC has also indicated a hazardous waste plume in soils and groundwater. The cost of remediation would be dependent on the type of impact to groundwater (up to $5 million for limited excavation, which would take up to 3 years to complete, and monitoring would be required for at least 30 years. DTSC could still provide RCTC with a Land Use Covenant restricting some uses of the property. However, at this time, the only use that has been approved by DTSC is a surface (open air) parking lot.

Cost Factors

In summary, there are a number of challenges associated with adaptive reuse of the existing approximately 120,000-square-foot (SF) structure to accommodate the proposed passenger rail platform and tracks. If the entire structure is retrofitted for adaptive reuse, RCTC calculated the cost for purpose of evaluating the feasibility to be $600 per SF to $800 per SF ($72 million to $96 million) due to the following factors:

- Hazardous waste/materials (e.g., lead paint and or spills over the decades from industrial tenants).
- Ventilation requirements – in lieu of mechanical ventilation, at least 50 percent of the walls would have to be removed and likely a large portion of the roof opened up to accommodate ventilation.
- Fire-resistive construction – as an "Enclosed" station under National Fire Protection Association 130, structure and finishes would have to be 2-hour, fire-rated construction, separated from other uses. Essentially, the exposed timber framing would need to be encased in fire-rated materials, such as concrete or steel.
- The canopy would have to include a full fire-sprinkler system.
- Portions not used for train boarding (and used other than a shed), require a partition wall between occupancies.
- A steel moment-resisting frame would be needed to frame the openings of the appropriate dimension where the tracks enter and exit; similarly, at the point where the pedestrian bridge, elevator tower, and stairs enter, a moment-resisting frame would need to be constructed, resulting in a special condition in contrast to the support of the rest of the sawtooth roof.

In accordance with the CEQA Guidelines § 15126.6(f)(1), the full adaptive reuse option meets one of the three screening criteria:(1) fails to meet most of the basic project objectives; (2) is infeasible; and/or (3) is unable to avoid significant impacts. This alternative would fail to avoid significant effects as explained herein.

While this alternative would reuse the structural timber trusses and supports, and retain the distinctive sawtooth roof, the building's overall integrity of design, materials, workmanship, and feel would be compromised, as a result of the substantial loss of historic fabric associated with full adaptive reuse as a covered, enclosed train station. The alterations to make the structure a fire-rated enclosure for the train station includes encapsulation of the reused timber trusses, supports, and framing elements (all character-defining features) in fireproof materials, such as concrete or steel. This alternative would not meet the SOI Standards for Rehabilitation, thus, would result in an adverse effect.

Build Alternative Option for Partial Adaptive Reuse

A partial adaptive reuse option would be to deconstruct Plant 1 so that only a canopy remained, covering a portion of the proposed track and platform, reducing the structure's size to a much smaller one than the existing size of Plant 1. The canopy structure would be open (not enclosed or filled with train exhaust or hazardous waste/materials) to allow for ventilation. The existing structure is approximately 450 feet long. The entire length of structure would likely remain if the new platform is completely within the footprint of the building. However, with the canopy option, portions of the building would be removed (exterior walls, interior partitions, and spaces), leaving a 450-foot-long canopy above the station platform. The canopy structure would only be 56,000 SF, as opposed to the full adaptive reuse of the existing 120,000 SF structure.

Operational Constraints

To reuse Plant 1 as a part of the expansion of the Riverside-Downtown Station, new tracks would have to ladder off an existing station track and the new station tracks would have to thread through the building structure. Operationally, this would reduce the capacity of the existing and proposed platform and would also require a substantial retrofit of the structure. This alternative could impact BNSF operations and layover tracks, and consideration would need to be made to accommodate the right size train. This alternative may also require building another bridge over University Avenue.

Design Constraints

The following design challenges are associated with the partial adaptive reuse option:

1. A redundant steel frame would have to be built underneath the sawtooth roof to cradle it, essentially, building a building within a building, with its own foundation and fire-resistive cladding.
2. The foundation installation would be further complicated by the need to keep existing columns and beams (overhead clearance for a drill rig) in place.

3. The fragility of the sawtooth roof would entail exceptionally careful handling by the contractor to avoid irreparable damage.
4. Special detailing and connections would be needed to connect new to old in a context sensitive manner.

While the partial reuse of the building would retain portions of character-defining features (the sawtooth roof, supporting columns, and trusses), the removal of the exterior walls, the historic fenestration, interior partitions and spaces, and portions of the sawtooth roof would compromise the building's integrity of design, materials, workmanship, feel, and association. Additional interpretive measures would need to be included in the overall mitigation strategy, such as interpretive displays, careful removing of and salvaging building materials to be donated and photographic documentation of the structure prior to alterations (Historic American Buildings Survey [HABS] level documentation).

Environmental Impacts

There are also environmental concerns with the Partial Adaptive Reuse Option. In 2018, the *Phase I Environmental Site Assessment* was performed at the proposed project site. There are Recognized Environmental Conditions and Activity Use Limitations for portions of the proposed project site. Land Use Covenants also dictate that the site shall not be used for sensitive receptors, and soil disturbance activities shall not be conducted without the consent of DTSC. There are ongoing remediation efforts at the proposed project site and DTSC has also indicated a hazardous waste plume in soils and groundwater. The cost of remediation would be dependent on the type of impact to groundwater (up to $5 million for limited excavation), which would take up to 3 years to complete, and monitoring would be required for at least 30 years. DTSC could still provide RCTC with a Land Use Covenant restricting some uses of the property. Currently, the only use that has been approved by DTSC is a surface (open air) parking lot.

Cost Factors

In summary, there are a number of challenges associated with partial adaptive reuse of the existing approximately 56,000 SF structure to accommodate the proposed passenger rail platform and tracks. If the entire structure is retrofitted for adaptive reuse, it could cost between $600 and $800 per SF ($72 million to $96 million as estimated in the design report) due to the following factors:

- Presence of hazardous waste/materials (e.g., lead paint; spills over the decades from Industrial tenants) on-site.
- Fire-resistive construction – as an "Enclosed" station under National Fire Protection Association 130, structure and finishes would have to be 2-hour, fire-rated construction, separated from other uses. Essentially, the exposed timber framing would need to be encased in fire-rated materials, such as concrete or steel.
- A canopy would have to include full fire-sprinkler system.
- Portions not used for train boarding (and used other than a shed), require demising wall between occupancies.
- A steel moment-resisting frame would be needed to frame the openings of the appropriate dimension where the tracks enter and exit. Similarly, at the point where the pedestrian bridge, elevator tower, and stairs enter, a moment-resisting frame would need to be constructed, resulting in a special condition in contrast to the support of the rest of the sawtooth roof.
- Based on the CEQA Guidelines § 15126.6(f)(1), the partial adaptive reuse option meets one of the three screening criteria: (1) fails to meet most of the basic project objectives; (2) is infeasible; and/or (3) is unable to avoid significant impacts. This alternative would fail to avoid significant effects as explained below.

While this alternative would reuse the structural timber trusses and supports, and retain the distinctive sawtooth roof, the building's overall integrity of design, materials, workmanship, the feel would be compromised as a result of the substantial loss of historic fabric associated with partial adaptive reuse as a covered, but open train station. The alterations to make the structure a fire-rated enclosure for the train station includes encapsulation of the reused timber trusses, supports, and framing elements (all character-defining features) in fireproof materials, such as concrete or steel. This alternative would not meet the SOI Standards for Rehabilitation, thus, would result in an adverse effect.

The Partial Adaptive Reuse Alternative would cost between $34 million and $45 million as estimated in the design report. The remainder of the parcel could be developed into parking (a permitted use), although there may be fewer parking spaces (approximately 80 to 100 spaces lost) as a result of the partial adaptive reuse option.

5.3. CEQA Alternatives

After the initial screening of the range of alternatives discussed in Section 5.2, RCTC determined one feasible Build Alternative (analyzed as Alternative 6 in the PDR) to be carried forward for further evaluation in this EIR because it met many or most of the objectives of the Project and would avoid or substantially lessen one or more of the proposed Project's significant environmental impacts. The basic objectives of the proposed Project are as follows:

- Expand platform capacity to meet passenger train storage needs.
- Allow for train meets off the BNSF Railway mainline and minimize impacts to BNSF operations.
- Improve train connectivity and operations while minimizing impacts on improvement projects near the station that are already designed or in construction.
- Facilitate more efficient passenger flow and reduce dwell times.
- Enhance safety and access for station users.
- Accommodate projected future demand.

Pursuant to § 15126.6(d) of the CEQA Guidelines, the evaluation of alternatives must include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed Project. In addition to the Build Alternative, § 15126.6(e) of the CEQA Guidelines requires evaluation of the No Project/No Build Alternative along with its impact. The purpose of describing and analyzing a No Project Alternative is to allow decisionmakers to compare the impacts of approving the proposed Project with the impacts of not approving the proposed Project.

Based on the previous discussion, the following alternatives to the proposed Project were identified:

- No Project/No Build Alternative
- Build Alternative with Design Options (1A, 1B, 2A, 2B, 3A, 3B)

5.4. No Project/No Build Alternative

Under the No Project/No Build Alternative, implementation of improvements at the Riverside-Downtown Station would not be constructed and the current configuration of the Riverside-Downtown Station would remain the same. Although there would be no project-related impacts to environmental resources, the No Project/No Build Alternative would not meet the Project's objectives or improve operations to accommodate future train service for the 91/PV Line, Riverside Line, or the IEOC Lines. Train capacity and storage would be limited to the existing station facilities and trains using the existing railroad tracks may experience delays during periods of high train traffic. Delays would result in idling trains along the BNSF mainline. Passenger loading platforms would be limited to the existing two platform configuration and would not accommodate an increase in the future projected increase in transit ridership. During periods of high travel demand, the station's parking lot may be fully occupied and could result in the use of on-street parking at adjacent streets. The No Project/No Build Alternative does provide insight on future conditions with no improvements and serves as a baseline for comparison with the Build Alternative. The No Project/No Build Alternative would result in no impacts (temporary and permanent) to any of the environmental resources and issues identified in the *2021 CEQA Statute & Guidelines, Appendix G, Environmental Checklist Form* (Issues I to XXI).

5.5. Build Alternative

The Build Alternative consists of the construction of a new center platform, new tracks, modification of the railroad signal system, extension of the pedestrian overpass access to the new platform, emergency access, ADA parking, modification of the bus drop-off area and streetscape improvements. The Build Alternative requires acquisition of an adjacent private property (Prism Aerospace building, located at 3087 12th Street) east of the existing station to accommodate the construction of the new passenger platform and additional tracks. The remaining area of the acquired property will be incorporated as part of the expanded Riverside-Downtown Station as a new surface parking lot, which would increase available parking to the east of the station. RCTC currently owns and operates the overflow parking lot to the northeast of the station and would combine the existing overflow parking lot with the proposed new parking lot under the Build Alternative. Six parking lot design options are evaluated in this EIR to determine the best configuration of the expanded parking lot to enhance the station's amenities and serve the needs of the general public. Under all parking lot design options, the area proposed to be converted to a parking lot is more or less contained within the same parcels, with minor variations in size and number of parking stalls, but generally within the same

construction footprint. As such, the Build Alternative would construct the same common project features (e.g. new platform and new tracks) under all design options, with the exception of the parking lot that has six variations of the same project feature. The parking lot design variations are identified as "design options" because the variation may lessen or avoid a specific impact to an evaluated environmental resource but would not substantially alter the overall environmental effects of the proposed Project. In contrast, an "alternative" will have a greater potential to either significantly increase or lessen the environmental effects of a project when compared to a design option.

The Build Alternative requires a commitment of resources and would result in environmental impacts. This commitment is balanced with the ability to meet the Project's purpose and need and the effects of not implementing the Project (the No Project/No-Build Alternative). Based on the analysis conducted for each environmental resource topic, the Build Alternative would result in the following:

- The Build Alternative and all design options would result in *no impacts* to agriculture and forestry resources, mineral resources, public services, recreation or wildfire in the vicinity of the Project.
- The Build Alternative and all design options would result in a *less than significant impact* to the following resource topics: aesthetics, air quality, biological resources, energy, geology and soils, greenhouse gas, hydrology and water quality, land use and planning, population and housing, transportation, and tribal cultural resources.
- The Build Alternative and all design options would result in *less than significant impact with mitigation incorporated* to the following resource topics: hazards and hazardous materials, noise (operations), population and housing, and utilities and service systems.
- The Build Alternative with Design Options 1B, 2B, or 3B would result in a *significant temporary construction noise-related impact* at residences near the Riverside-Downtown Station along 12th Street..
- The Build Alternative and all design options would result in *significant and unavoidable impacts* to Cultural Resources. The former FMC Plant 1 building is a historic resource, and the Build Alternative would require it be demolished . Demolition of the historic structures would also cause indirect impacts to the Eastside Neighborhood's integrity of setting and association.

5.6. Evaluation of CEQA Alternatives

A comparison of the Build Alternative with design options 1, 1A, 1B, 2A, 2B, 3A, 3B and the No Build Alternative was conducted and included an overview of potential impacts associated with each design option. The majority of impacts for the Build Alternative with a design option would be less than significant or less than significant with mitigation; however, the Build Alternative would result in significant and unavoidable impacts to historical resources. Under the No Build Alternative, the project would not be constructed therefore, no environmental impacts are anticipated; however, the No Build Alternative would not meet project objectives and would not provide the following benefits in comparison to the Build Alternative: opportunities and equitable access to public transportation for all users, convenient access and regional connectivity to train service within the Eastside Neighborhood and the City of Riverside, pedestrian friendly, ADA compliant sidewalks and crosswalks adjacent to the station with enhanced lighting, trees and landscape, enhanced train efficiency and operations to allow more reliable and on-time train service, ADA access, additional parking and drop off areas on the eastside which would increase ridership and reduce vehicles and congestion on the transportation network and associated vehicle emissions in the region.

5.7. Environmentally Superior Alternative

An EIR must identify an "environmentally superior" alternative; and, where the no project alternative is environmentally superior, the EIR is then required to identify an alternative from among the others evaluated as environmentally superior (14 California Code of Regulations §15126.6(e)(2). With respect to identifying an environmentally superior alternative among those analyzed in this EIR, the range of feasible alternatives includes the No Build Alternative and the Build Alternative with design options 1, 1A, 1B, 2A, 2B, 3A, and 3B.

The No Build Alternative would be the environmentally superior alternative, as it would result in no new environmental impacts and would avoid property acquisitions, potential environmental resource impacts and significant and unavoidable impacts related to cultural resources. Although the No Build Alternative would result in a greater number of reduced environmental impacts, § 15126.6(e)(2) of the CEQA Guidelines indicates that if the environmentally superior alternative is the No Project Alternative, the EIR should also identify another environmentally superior alternative among the other alternatives. The remaining alternative, Build Alternative with design options, was reviewed in accordance with the CEQA Guidelines requirements.

Common features of the Build Alternative include adding a new center platform, new tracks with existing track improvements, modifying the railroad signal system, and extending the existing pedestrian overpass, pedestrian at-grade access from the proposed surface parking lot, and emergency egress at three locations from the new platform. The Build Alternative includes six design options that include extending the pedestrian overpass from Platform 3 to the new surface parking lot and options that vary in the configuration pertaining to the following project elements: parking, circulation, and streetscape improvements. Although there were some differences between the Build Alternative with the different design options, environmental resource topics analyzed in this EIR resulted in similar level of impacts and overall CEQA determination. An evaluation of the Build Alternative with each of the design options identified potential impacts for environmental resources affected by construction and operation of the Project is summarized in Table 5.7-1.

Table 5.7-1. Summary of Impacts of the Build Alternative and Design Options

Build Alternative	**Build Alternative Potential Impacts (applies to all design options)**
Build Alternative • Add a new center platform (Platform 3) • Add new tracks (Station Tracks 5 and 6) • Modify the railroad signal system • Extend pedestrian overpass access to the new Platform 3 • Provide emergency egress at three locations • Expanded Parking	• Significant and unavoidable impacts to the former FMC Plant 1 building • 1 business displacement • 45,000 SF of new impervious surfaces with incorporation of permanent BMPs the project would have the same or decreased stormwater runoff • Abandonment of an existing city irrigation well • Potential permanent relocation of utilities: gas (Southern California Gas Company [SoCal Gas]); electric, water, storm drain, and sewer (City of Riverside); fiber optic (AT&T, Spectrum, Frontier, and Sprint); or cable TV (CenturyLink) • Short-term construction-related impacts to energy consumption, air quality and GHG, noise, traffic circulation, and visual resources
Build Alternative with Design Option	**Potential Impacts with Design Options**
Design Option 1 Extend Pedestrian Overpass to new surface parking lot Estimated Cost: $6.1 million	Build Alternative Potential Impacts
Design Option 1A New Surface Parking Lot Estimated cost $67.2 million • Up to approximately 556 parking spaces[1] • 12-foot Noise barrier	Build Alternative Potential Impacts • 12th Street residential displacements • 2 residential displacements • Removal/Replacement of 36 trees • Moderate noise impacts to 24 residences
Design Option 1B New Surface Parking Lot Estimated cost $64.7 million • New surface parking lot • Up to approximately 500 parking spaces[1] • 12-foot Noise barrier	Build Alternative Potential Impacts • Removal/Replacement of 32 trees • Moderate noise impacts to 24 residences • Potentially significant construction-related noise impacts along 12th Street homes.

Build Alternative	Build Alternative Potential Impacts (applies to all design options)
Design Option 2A New Surface Parking Lot Combined with Overflow Lot extends Howard Avenue Estimated cost $74.3 million • Up to approximately 560 parking spaces[1] • 12-foot Noise barrier • 8-foot Noise barrier • Extends Howard Avenue	Build Alternative Potential Impacts • 12th Street residential displacements • 9th Street Conservation Neighborhood • 2 residential and 2 multifamily (8 residential unit displacements) • 2 business displacements • Vacate 10th and Commerce Street • Removal/Replacement of 51 trees • Moderate noise impacts to 30 residences
Design Option 2B New Surface Parking Lot Combined with Overflow Lot extends Howard Avenue Estimated cost $71.1 million • New surface parking lot combined with overflow lot • Up to approximately 516 parking spaces[1] • 12-foot Noise barrier • 8-foot Noise barrier • Extends Howard Avenue	Build Alternative Potential Impacts • 12th Street residential displacements • 9th Street Conservation Neighborhood • 2 multifamily (8 residential unit displacements) • 2 business displacements • Vacate 10th and Commerce Street • Removal/Replacement of 47 trees • Moderate noise impacts to 30 residences • Potentially significant construction-related noise impacts along 12th Street homes
Design Option 3A New Surface Parking Lot Combined with Overflow Lot extends Howard Avenue Estimated cost $68.9 million • Up to approximately 470 parking spaces[1] • 12-foot Noise barrier • 8-foot Noise barrier • Extends Howard Avenue	Build Alternative Potential Impacts • 12th Street residential displacements • 2 residential displacements • Vacate 10th and Commerce Street • Removal/Replacement of 47 trees • Moderate noise impacts to 30 residences
Design Option 3B New Surface Parking Lot Combined with Overflow Lot extends Howard Avenue Estimated cost: $66.4 million • Up to approximately 414 parking spaces[1] • 12-foot Noise barrier • Extends Howard Avenue	Build Alternative Potential Impacts • 12th Street residential displacements • Vacate 10th and Commerce Street • Removal/Replacement of 43 trees • Moderate noise impacts to 24 residences • Potentially significant construction-related noise impacts along 12th Street homes

Note: Cost estimates are based on RCTC preliminary design estimates.

1. Indicates an approximate number of parking stalls. Number of parking stalls provided are the maximum estimate of parking stalls within the preliminary layout for each design option. These options illustrate the potential capacity of each parking lot design option for evaluation and comparison purposes in this EIR. The number of stalls may change due to implementation of proposed avoidance, minimization, and mitigation measures for noise. In addition, the number of stalls may change during the final design phase due to design refinement to accommodate existing site hydrological conditions. These factors may reduce the approximate number parking stalls under each estimate, but the potential reductions in the number of parking stalls are proportionate with the maximum parking stall estimate under each design option.

The Build Alternative with any of the Design Options would result in:

- Removal of the former FMC Plant 1 building and one business displacement
- New impervious surfaces amounting to 45,000 SF
- Abandonment of an existing city irrigation well
- Potential permanent relocation of utilities: gas (Southern California Gas Company [SoCal Gas]); electric, water, storm drain, and sewer (City of Riverside); fiber optic (AT&T, Spectrum, Frontier, and Sprint); or cable TV (CenturyLink).
- Short-term and temporary construction-related impacts to energy, air quality and GHG, noise, access and circulation.

In addition, to the impacts previously mentioned, the Build Alternative with the following design options would have the following impacts:

- Design Option 1 would have no additional impacts.
- Design Options 1A and 3A would result in the acquisition of the 12th Street residences and two residential displacements.
- Design Options 1B, 2B, and 3B would result in potentially significant construction-related noise impacts along 12th Street homes.
- Design Options 2A and 2B would result in the acquisition of the former FMC Plant 1 building, the 12th Street residences, and properties in the 9th Street Conservation Neighborhood and result in the following displacements: two business, two single family residences and two multi-family residences (with eight residential units).
- Design Options 2A and 2B would result in the greatest number (30) of impacted residential noise receptors, while Design Option 1A, 1B, 3A, and 3B would result the least number (24) of impacted residential noise receptors.
- Design Option 2A would result in the greatest number (51) of trees removed/replaced at the project site, while Design Option 1B would result in the fewest number (32) trees removed/replaced at the project site.

Comparing the potential impacts of the Build Alternative with each design option, the Build Alternative with Design Option 2A would result in the greatest number of permanent impacts, while the Build Alternative with Design Option 1B would result in the least amount of permanent environmental impacts. Therefore, the Build Alternative with Design Option 1B would be the environmentally superior alternative that meets the Project's objectives. Although the Build Alternative with Design Option 1B would result in the least amount of permanent impacts, it is anticipated that significant construction-related noise impacts are anticipated at residences at the northwest corner of 12th Street and Howard Avenue – this significant noise-related impact would cease upon construction completion and is considered *temporary*. In comparison with the Build Alternative with Design Option 1A, construction-related noise impacts would not occur because the residential properties would be acquired and consequently result in a *permanent* impact in the displacement of the residents of the subject property.

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6.0 Comments and Coordination

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. Coordination helps agencies determine the necessary scope of environmental documentation and the level of analysis required and to identify potential impacts, as well as avoidance, minimization, and/or mitigation measures and related environmental requirements. Agency and tribal consultation and public participation for this Project have been accomplished through a variety of formal and informal methods, including interagency coordination meetings, public meetings, public notices, and focus meetings. This chapter summarizes the results of RCTC's efforts to fully identify, address, and resolve project-related issues through early and continuing coordination. Letters of correspondence are provided in Appendix C.

6.1. Public Scoping

6.1.1. Notice of Preparation

On January 17, 2020, the NOP and scoping meeting date and time were advertised in two local newspapers in the project area — the Press Enterprise and the La Prensa, a Spanish publication. On January 21, 2020, the NOP was first distributed locally to local public agencies, organizations, elected officials, and the general public. The NOP letter summarized the proposed Project, stated RCTC's intent to prepare an EIR, how and when comments could be submitted, and how the NOP could be accessed. The CEQA-required 30-day NOP review period began with the filing of the NOP at the Riverside County Clerk and public notification on January 17, 2020 and concluded on February 20, 2020. A subsequent NOP was submitted to State Clearinghouse on September 1, 2021 for distribution to state responsible and trustee agencies. The NOP letter summarized the proposed Project, stated RCTC's intent to prepare an EIR, how and when (September 1, 2021 to September 30, 2021) comments could be submitted, and how the NOP could be accessed. Pursuant to CEQA, the NOP review period is 30 days; therefore, the comment period closed on September 30, 2021. Written comments received during the 30-day NOP review period, as well as during the public scoping meeting, are summarized below.

To encourage attendance at the scoping meeting, the following additional methods were used to notify residents, the community, and Metrolink riders of the proposed Project and upcoming scoping meeting:

- Electronic version of the notice was distributed via email to 132 contacts included in the project database.
- Information about the scoping meeting was posted on RCTC social media accounts, including Facebook, Twitter, and Instagram.
- Postcards (more than 4,500) were mailed to residents and businesses within a 0.5-mile radius of the Riverside-Downtown Station.
- Meeting notice postcards were posted on various support beams of the bench shelters at the Riverside-Downtown Metrolink Station on each platform.

6.1.2. Scoping Meeting

On February 6, 2020, RCTC hosted a scoping meeting for the Riverside-Downtown Station Improvements Project. The scoping meeting provided an opportunity for the public, community, interest groups, media, and government agencies to obtain information, ask questions, and provide comments regarding the proposed Project.

The meeting was held at Abraham Lincoln High School in the City of Riverside and was open to the public for 2.5 hours between 5:00 PM and 7:30 PM, Attendees were welcomed and asked to sign in so they could be added to the project distribution list; they were then informed of the open house meeting format and invited to view exhibits, learn about the proposed Project, and ask questions. Options for submitting comments included, 1) submitting comment cards at the scoping meeting, 2) mailing comment cards after the scoping meeting, and 3) emailing comments to stationproject@rctc.org, until the close of scoping comment period, Thursday, February 20, 2020. Meeting materials were translated into Spanish and Spanish translation was available at the meeting.

The following representatives and agencies hosted the scoping meeting:

- RCTC: David Lewis, Lorelle Moe-Luna, Cheryl Donahue, Ariel-Alcon Tapia, Karl Sauer
- Metrolink: Javier Hernandez, Aubrey Smith
- City of Riverside: Nathan Mustafa
- City of Riverside City Council, Andrew Melendrez' Office: Miguel Lujano

Additional support for the meeting was provided by the HNTB consultant team.

Nineteen members of the public attended the meeting and provided written comments. Comment cards are in Appendix C, and comments received are summarized herein:

- Air Quality and Greenhouse Gas concerns regarding air pollution
- Community Impacts/Section 4(f)
  - Concerns about the impact on the neighborhood. Growth should go toward the freeway, not toward the residents and houses.
  - Concerns that additional parking will hinder pedestrian access.
  - Concerns about increase in crime.
  - Concerns about potential job loss for the community.
  - Questions regarding the benefit the Project will have on the community.
- Cultural (Historic and Archaeology)
  - Impact on the historic building.
  - Maintaining the historic value of the building.
  - Opportunity to reuse the historic building.
  - Incorporate building into design; make it a hub for people.
  - Hazardous Waste and Materials – concerns about waste and impact to the community.
- Noise/Vibration
  - Concerns about increased noise.
  - Make the area a quiet zone to alleviate increased noise.
- Traffic Analysis
  - Want to see more pedestrian improvements.
  - Concerns about increased traffic.
- General
  - Supportive of the Project.
  - Request for additional project information.
  - Request for additional communication with the public.
  - Implement residential permit parking.
  - Why is this project needed?
  - What is the purpose of this project?
  - Have other alternatives been explored?
  - Can improvements be accomplished at another location?
  - Will I have to sell and or will the Project take my home through eminent domain?
  - How will the project be funded?

6.2. Public Participation

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. Table 6.2-1 summarizes ongoing public outreach and engagement as part of the environmental process. Additional stakeholder, agency, and public meetings are anticipated to be conducted throughout the project development process to ensure concerns and questions about the proposed Project are addressed.

Table 6.2-1. Summary of Public and Agency Participation

Date	Notice/Meeting	Audience/Attendees
January 17, 2020	NOP	• Press Enterprise • La Prensa
January 21, 2020	NOP – Riverside County Clerk	• Local public agencies, organizations, elected officials, and the general public.
Week of January 27, 2020	NOP	• Mail Distribution – 132 contacts in database • Postcard Distribution to residents/businesses – ½-mile radius (4,500+) • Social Media: Facebook, Twitter, Instagram • Scoping meeting notices posted at Riverside-Downtown Station
February 6, 2020	Scoping Meeting	• Public Participants: • 19 individuals signed in at the open house style meeting • Agency Attendees • RCTC: David Lewis, Lorelle Moe-Luna, Cheryl Donahue, Ariel-Alcon Tapia, Karl Sauer • Metrolink: Javier Hernandez, Aubrey Smith • City of Riverside: Nathan Mustafa • City of Riverside City Council: Andrew Melendrez, Miguel Lujano
February 29, 2020	Meeting	• Downtown Riverside Chamber of Commerce
March 5, 2020	Meeting	• Councilman Melendrez' Office – Eastside Neighborhood Forum
August 13, 2020	Meeting	• Transportation Now Riverside Chapter
December 16, 2020	Meeting	• City of Riverside Cultural Heritage Board
February 11, 2021	Meeting	• Transportation Now Riverside Chapter
March 3, 2021	Meeting	• Karen Spiegel, Supervisor District 2
April 1, 2021	Meeting	• Eastside Neighborhood Forum
May 6, 2021	Meeting	• Old Riverside Foundation
June 15, 2021	Meeting	• Riverside Unified School District
July 8, 2021	Meeting	• City of Riverside Mobility and Infrastructure Committee
September 1, 2021	NOP-State Clearinghouse	• State responsible and trustee agencies
September 16, 2021	Meeting	• Riverside Community Health Foundation/Healthy Eating Active Living (HEAL) Zone Program
October 6, 2021	Meeting	• Center for Community Action and Environmental Justice and League of United Latin American Citizens 3190

Date	Notice/Meeting	Audience/Attendees
October 7, 2021	Meeting	• Greater Riverside Chamber of Commerce
October 18, 2021	Meeting	• Downtown Area Neighborhood Alliance
October 20, 2021	Meeting	• City of Riverside Cultural Heritage Board
November 3, 2021	Meeting	• City of Riverside City Council Ward 1
November 4, 2021	Meeting	• Old Riverside Foundation
November 8, 2021	Meeting	• Commissioner Conder
November 8, 2021	Meeting	• Riverside County District 1 Supervisor Kevin Jefferies
November 10, 2021	Meeting	• Riverside City Councilmember Clarissa Cervantes
November 15, 2021	Meeting	• Councilmember Perry and Councilmember Hemenway
November 16, 2021	Meeting	• Assemblymember Medina
November 17, 2021	Meeting	• City of Riverside Cultural Heritage Board
November 18, 2021	Meeting	• Eastside Neighborhood Forum

6.2.1. Assembly Bill 52 Tribal Consultation

NAHC was contacted on December 11, 2019, to request a Sacred Lands File search and list of Native American contacts for the Project. RCTC conducted Native American outreach for compliance with AB 52 under CEQA.

On February 25, 2020, RCTC sent letters to tribal contacts identified by NAHC providing project maps and information and inviting them to initiate consultation in compliance with AB 52. AB 52 consultation is summarized in Table 6.2-2.

Table 6.2-2. AB 52 Tribal Consultation

Date	Tribe	Response
February 27, 2020	Morongo Band of Mission Indians	Responded they had no additional comments at this time.
March 3, 2020	San Manuel Band of Indians (SMBMI)	Indicated that the project area was outside the Serrano ancestral territory, and as such, the SMBMI will not be requesting consulting party status with the lead agency.
March 20, 2020	Agua Caliente Band of Cahuilla Indians (ACBCI)	Indicated the Project was not within their boundaries; however, it is within the Tribe's traditional use area, so the Tribal Historic Preservation Officer (THPO) requested copies of project-related cultural resource documentation ACBCI also requested that ground-disturbing activity be monitored by a qualified archaeologist and a Native American tribal cultural monitor. The THPO also indicated "This letter does not conclude consultation. Upon receipt of requested materials the ACBCI THPO may have additional recommendations or require further mitigation measures." On April 7, 2020, RCTC responded that they would provide the Tribe with a copy of the ASR once it was completed, and that consultation efforts would continue.

Date	Tribe	Response
April 8, 2020	Soboba Band of Luiseno Indians (Soboba)	Requested initiation of formal consultation, and on April 20, 2020, a consultation meeting between RCTC and Soboba was conducted by telephone. Soboba indicated that although the general area is sensitive, in terms of Native American cultural resources, no resources are known in the immediate vicinity of the project site. Soboba requested that the environmental documents provide measures to address inadvertent discoveries, notification to the Tribes, and tribal monitoring in the event of such discoveries. Soboba indicated that having an archaeologist present to monitor during construction to identify resources and notify tribal monitors in the event of a discovery would be sufficient; they did not request tribal monitoring.
January 11, 2021	Soboba and ACBCI	Updated project information was provided to both Soboba and ACBCI, as the project description was refined, and both Tribes were invited to reopen consultation with RCTC if desired.
May 12, 2021	ACBCI	Indicated the Project was not within their boundaries; however, it is within the Tribe's traditional use area. The THPO indicated "At this time ACBCI has no comments, but please continue to provide our office with updates as the Project progresses. Also, please inform our office if there are changes to the scope of this Project."
September 10, 2021	NAHC	In response to the NOP sent on September 1, 2021, the NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographical area of your proposed project as early as possible to avoid inadvertent discoveries of Native American remains and best protect tribal cultural resources.

6.3. Cultural Resources Consultation and Coordination

6.3.1. State Historic Preservation Office

On April 7, 2020, FTA, as federal lead agency and in coordination with RCTC, sent a letter to initiate Section 106 consultation for the proposed Project to SHPO asking for comments on the delineation of the APE pursuant to Section 106 of the NHPA, as amended Title 36, CFR 800 (FTA, 2020). A regional location map, proposed project area map, APE map, and the APE Technical Memo (HNTB, 2020) were also attached. On June 4, 2020, SHPO sent a letter to FTA and found that the APE, as delineated, was appropriate (SHPO, 2020).

Subsequent design options and the refinements to the existing project description warranted an update to the project description to reflect the refinements and to provide additional detail. To address the refinements, on January 5, 2021, FTA sent a letter to SHPO requesting their review and comment on the Updated Project Description Memorandum (HNTB, 2020). FTA's letter concluded the original project description and the current APE (including the LOD) were consistent with the design refinements and additional project details described in the Build Alternative for the following reasons:

- The APE Methodology Technical Memorandum (HNTB, 2020) described improving traffic circulation, and the proposed traffic circulation and parking options (with the option of extending Howard Avenue from 10th to 9th Streets) are consistent with that original project description.
- The LOD included all the areas anticipated to have ground disturbance and excavation. For clarification, the maximum depth of disturbance would be up to 10 feet across all areas within the LOD where structure removal, excavation of materials, foundations, and other ground-disturbing construction activities might occur. In addition, a tribal monitor and an archaeologist would be on-site monitoring all ground-disturbing activities during construction, and a post-review discovery plan would be in place prior to commencement of construction activities.

On March 17, 2021, SHPO sent a letter to FTA concluding that the original project description and the current APE (including the LOD) were consistent with the design refinements and additional project details described in the Build Alternative (SHPO, 2021). On March 25, 2021, FTA submitted the Historic Resources Report (HNTB, 2021) to SHPO for review and comment.

On September 16, 2021, SHPO sent a letter to FTA providing concurrence on the former FMC Complex (Plant 1 and Plant 2) determination that these properties are NRHP-eligible, under Criteria A and B, and the Worker's Houses are eligible for the NRHP. SHPO also recommended additional research and further discussion of the eligibility of these two properties under Criterion D. I recommend that further discussions as the Project progresses forward with the FOE.

6.3.2. City of Riverside Cultural Heritage Board

On December 16, 2020, the project team conducted a virtual meeting with the City's Cultural Heritage Board to familiarize members with the Project and efforts to identify historic and culturally significant resources within the APE, comment on the undertaking, and answer any questions. Following the meeting, on January 11, 2021, FTA, in coordination with RCTC, sent a letter to the Cultural Heritage Board inviting the board to participate as interested parties in the Section 106 process (FTA, 2021). The project team continued Section 106 coordination through additional meetings held on October 20, 2021 and November 17, 2021.

6.4. Interested Parties

On January 11, 2021, FTA, in coordination with RCTC, sent letters to the following interested parties inviting them to participate in the Section 106 consultation; responses to the letters are summarized in Table 6.4-1.

- American Association for State and Local History
- California Citrus State Historic Park
- The California Historical Society
- California Preservation Foundation
- City of Riverside
- Japanese American Citizens League, Riverside Chapter
- Lincoln Park Neighborhood Group
- Museum of Riverside
- National Trust for Historic Preservation
- Old Riverside Foundation
- Riverside African-American Historic Society
- Riverside County Mexican American Historical Society
- Riverside Historical Society
- Riverside Neighborhood Partnership
- The Mission Inn Foundation

Table 6.4-1. Summary of Responses Received from Interested Parties

Date	Contact	Comment/Response
January 12, 2021	Riverside Historic Society	Responded that they did not have any concerns with this project with regard to historic structures and the like.
January 25, 2021	Museum of Riverside	Provided additional information about the significance of Lincoln Park (No. 31 in the APE) and brought to the project team's attention that there are significant resources in the general vicinity, but outside the APE. The Museum of Riverside recommended that a historical archaeologist assess sites and any houses to be acquired or demolished prior to grading near the lodge (outside the APE).
January 27, 2021	American Association for State and Local History	Responded that they do not participate in local preservation or improvement projects.
February 2, 2021	City of Riverside	Provided comments regarding the historic status of the Mission Inn Historic District (not NRHP-eligible) and the Seventh Street Historic District (NRHP-eligible).

Date	Contact	Comment/Response
February 17, 2021	Old Riverside Foundation	Provided comments regarding the historic significance of the former FMC Complex to Riverside's history, including 3080 10th Street, which is also a part of the former FMC Complex. They also indicated that there are historic residences in the APE, beyond the LOD, on Howard Avenue and 12th Street. And finally, they informed the project team about the historic lodges in the Eastside neighborhood.
February 25, 2021	Riverside County Mexican American Historical Society	Responded that the organization did not have any historic sites to identify related to the Project.

FMC = Food Machinery Corporation
NRHP = National Register of Historic Places

6.4.1. Old Riverside Foundation

On May 6, 2021, the project team was invited to provide an update on the proposed Project to the Old Riverside Foundation. The project team conducted a presentation about the Project that included the project overview, project schedule, efforts to identify historic and culturally significant resources within the APE, resources potentially impacted, avoidance alternatives under consideration, and questions and answers regarding the Project. In addition, the project team met with the Old Riverside Foundation on November 4, 2021. RCTC encouraged ongoing coordination and to provide any feedback on the Project.

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7.0 Other CEQA Topics

The CEQA Guidelines, § 15126, require consideration and discussion of a range of additional topics extending beyond the analysis of potential project-specific impacts discussed in Chapter 3.0, Affected Environment of this Draft EIR. Those topics and the following other mandatory CEQA topics are summarized in this section:

- Significant and Unavoidable Environmental Impacts
- Significant Irreversible Environmental Changes
- Energy Conservation
- Growth-Inducing Impacts

7.1. Significant and Unavoidable Environmental Impacts

CEQA Guidelines § 21100(b)(2)(A) requires that a Draft EIR identify any significant environmental effects that cannot be avoided if the Project is implemented. Many impacts identified for the Project would either be less than significant or could be mitigated to a less-than-significant level. Specifically, § 15126.2(c) of the CEQA Guidelines requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures.

7.1.1. Cultural and Historic Resources

The environmental effects of the proposed Project's impact on cultural and historic resources are discussed in detail in Chapter 3.4, Cultural Resources. The analysis concluded the proposed Project would result in a significant and unavoidable impact because of the removal of the Prism Aerospace building (formerly FMC Plant 1 building), which is identified as a historic resource. Alternatives were considered to avoid or minimize impacts to this historic resource; however, it was determined that these avoidance alternatives are not feasible and would not meet the objectives of the Project. Measures have been identified to reduce potential impacts; however, impacts would remain significant and unavoidable.

7.2. Significant Irreversible Environmental Changes

CEQA Guidelines § 15126.2(d) requires a discussion of any significant irreversible environmental changes that would be caused by the Project, which states:

> *"Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified."*

Generally, a project would result in significant irreversible environmental changes if:

- The primary and secondary impacts would generally commit future generations to similar uses.
- The project would involve a large commitment of nonrenewable resources.
- The proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).
- The project involves uses in which irreversible damage could result from potential environmental accidents associated with the project.

Implementation of the proposed Project would result in the long-term commitment of resources of the project site to transportation land use. The proposed Project would likely result in or contribute to the following irreversible environmental changes:

1. Up to 8 acres of industrial and residential land uses would be converted to transportation use, thus committing land uses annexed as part of the Project in the future for transportation. This would be a long-term commitment of land and resources because residential and industrial uses within the vicinity of the project site would be reduced.
2. Increased noise levels associated with the removal of a building that is effectively shielding train noise. As discussed in Section 3.11, Noise and Vibration, significant noise impacts would be reduced to less than significant with the construction of noise barriers.

CEQA Guidelines § 15126.2(d) also require a discussion of the potential for irreversible environmental damage caused by an accident associated with the proposed Project. The Project would result in transport, storage, and disposal of hazardous waste during construction. In addition, known environmental conditions on the project site could expose workers or the public to human health and safety impacts if measures are not implemented. As described in the Mitigation Monitoring Reporting Program/Environmental Commitments Record, attached as Appendix E to this EIR, mitigation measures and project design features are in place to ensure the site and all recognized environmental conditions and other potential environmental effects are appropriately remediated or minimized. Additionally, all project activities would comply with applicable state and federal laws. This would significantly reduce the likelihood and severity of accidents and other effects that could result in irreversible environmental effects.

7.3. Energy Conservation

The proposed Project is intended to reduce energy usage by encouraging use of mass transportation. As indicated in Chapter 3.5, Energy, the purpose of the Project is to provide station improvements to enhance Metrolink service and increase ridership. Increased ridership is expected to result in an overall reduction in regional VMT and associated criteria pollutant emissions. While the project would result in increased vehicle trips to and from the Riverside-Downtown Station, these trips would generally be of short distances and the VMT for these trips would be offset by the use of trains. Operation of the Project would not result in a net increase of energy consumption.

During construction of the proposed Project, approximately 25,000 total MMBTU of energy would be consumed, most of which would be in the form of diesel fuel used by construction equipment and vehicles. Although an estimated 150,000 gallons of diesel fuel would be consumed by construction vehicles and equipment, the increased fuel consumption demand from equipment operation would be short-term in nature and would represent a negligible increase in regional demand. This would be an insignificant amount, relative to the more than 18 billion gallons of on-road fuels used, as compared to fuel consumption in the state in 2013 (California Energy Commission, 2014). Additionally, the 2-year construction window for the proposed Project would result in even smaller annual energy expenditures, representing an even smaller annual energy consumption. It is anticipated that the energy expenditure required to construct the proposed Project would be partially offset by the long-term operational reductions in energy consumption realized through more efficient public transport.

The proposed Project would enhance an affordable and sustainable mode of transportation for the general public. Energy used for the construction of Riverside-Downtown Station improvements and operations of the upgraded facility would not be considered a wasteful, inefficient, or unnecessary consumption use of energy, or a wasteful use of energy resources.

7.4. Growth-Inducing Impacts

CEQA Guidelines § 21100(b)(5) requires that an EIR discuss the growth-inducing impacts of a proposed project. Section 15126.2(e) clarifies this requirement, stating that an EIR must address "the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly in the surrounding environment." Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Section 15126.2(e) also discusses the characteristic of some projects that may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively.

Growth inducement may not be considered necessarily detrimental, beneficial, or of significance under CEQA. Induced growth is considered a significant impact only if it directly or indirectly affects the ability of agencies to provide needed public services, or if it can be demonstrated that the potential growth, in some other way, significantly affects the environment (i.e., if it requires constructing new facilities that would adversely affect the environment).

A growth inducement analysis was conducted for the proposed Project as part of the *Community Impact Assessment* (CIA), (HNTB, 2021). The CIA provided an overview of population and employment trends in Riverside County and the City of Riverside. Both Riverside County and the City of Riverside have experienced population, housing, and employment growth, which was attributed to rapid development and economic growth in recent decades. The region is projected to continue to experience population growth, which is expected to occur with or without implementation of the Build Alternative and all Design Options 1A, 1B, 2A, 2B, 3A, and 3B. Although the Riverside-Downtown Station is located within the city, which experienced 6 percent population growth in the last decade, the general area (Eastside Community) of the project study area conversely experienced a 12 percent decline in population between 2010 and 2018.

The proposed Project is not expected to *directly* influence the amount, timing, or location of growth in the area because proposed project features do not include the development of new housing or businesses that would directly induce population growth nor would the proposed Project generate substantial long-term employment opportunities that would result in migration of additional residents to the area. The proposed Project would be implemented at an existing transportation facility where adjacent areas are mostly developed. Moreover, there are limited vacant parcels available within the Eastside Community to develop new housing or commercial stock that could potentially, *indirectly* induce growth through attracting new development to occur. The proposed Project would not construct an entirely *new* transportation facility, but rather, improve existing train service operations at the Riverside-Downtown Station through the construction of an additional loading platform and train tracks to address existing train congestion and accommodate future train service. Additional train service through the Riverside-Downtown Station would occur with or without the proposed Project because the increase in train service are planned enhancements by Metrolink to encourage mass transportation use.

The City of Riverside plans to revitalize the Eastside Community through TOD near the Riverside-Downtown Station. The area surrounding the station was identified by the SCAG as a HQTA, and local land use plans and policies in the City of Riverside are supportive of establishing communities that integrate transit and other alternative modes of transportation into the fabric of planned development. While the Project enhances the rail operations at the station, the implementation of a TOD district adjacent to the existing station is consistent with the City of Riverside plans.

Given the non-growth inducing features of the Project (operational improvements), the declining trend in population within the Eastside Community, and limited opportunities to develop areas near the station, the Project's potential to induce growth directly or indirectly is low and would not influence the need for additional public services or facilities.

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8.0 Mandatory Findings of Significance

CEQA requires the analysis of a project's mandatory findings of significance. The analysis of the mandatory findings of significance is based on the findings of the Project's impacts on all the required environmental resource issues discussed throughout Chapter 3.0 of this Draft EIR.

8.1. Methodology for Evaluating Impacts

In accordance with CEQA Guidelines, § 15065 (a), the lead agency shall find that a project may have a significant effect on the environment and thereby require an EIR to be prepared for the project where there is substantial evidence, in light of the whole record, that any of the following conditions may occur:

1. The project has the potential to substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; substantially reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory.
2. The project has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals.
3. The project has possible environmental effects that are individually limited but cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.
4. The environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly.

8.2. Environmental Consequences

The CEQA checklist identifies physical, biological, social, and economic factors that might be affected by the proposed Project. In many cases, background studies performed in connection with the projects will indicate that there are no impacts to a particular resource. A NO IMPACT answer in the last column (CEQA Determination) of the table immediately following reflects this determination. The words "significant" and "significance" used throughout the EIR are related to CEQA impacts. The discussion below includes the CEQA checklist thresholds for Mandatory Findings of Significance and the discussion that follows provides the rationale for the following significance determinations:

- No Impact
- Less than Significant Impact
- Less than Significant Impact with Mitigation
- Potentially Significant Impact

CEQA Thresholds of Significance for Mandatory Findings of Significance

Question	CEQA Determination
(a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	Potentially Significant Impact

Question	CEQA Determination
(b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	Potentially Significant Impact
(c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	Potentially Significant Impact

(a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Potentially Significant Impact. The proposed Project would not substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal. However, the proposed Project would eliminate important examples of the major periods of California history under the Build Alternative and all design options, as described in the following sections.

Biological Resources

Construction of the proposed Project would occur within an urbanized area. The project site would be located on developed land and within private property and existing public ROW. As analyzed in Section 3.3, Biological Resources, the proposed Project would not result in direct impacts to any sensitive species or wildlife habitat; therefore, impacts to biological resources would be less than significant. Since the proposed Project may result in the removal of ornamental vegetation in various locations at the project site, the proposed Project could result in potential impacts to nesting birds protected by MBTA. Measures BIO-1, BIO-2, and BIO-3 have been included to avoid, minimize, and mitigate potential impacts to nesting birds, bats, and trees during construction. Less than significant impacts with mitigation are anticipated for biological resources.

Cultural/Historic Resources

The Build Alternative and all design options would require the removal of the current Prism Aerospace building, which was the former FMC Plant 1 building where it underscores Riverside's historic fruit-packing industry. As discussed in Section 3.4, Cultural Resources, the proposed Project would result in a significant and unavoidable impact with the elimination of this period-era historic resource, even with mitigation incorporated. Results of the avoidance alternative analysis indicate that there are no feasible alternatives that could be implemented to avoid impacts to the former FMC Complex that could meet the Project's objectives.

Although Plant 2 would not be directly impacted, demolition of Plant 1 would cause a significant adverse change to the setting of Plant 2. Plant 2 would also be impacted by the Build Alternative with Design Options 1A through 3B due to the destruction of the associated resources in the immediate setting, which would result in substantial adverse changes to Plant 2, specifically, its integrity of setting, feel, and association.

The Build Alternative with Design Options 1A, 2A, and 3A would result in demolition of residences at 3021 12th Street and 3009 12th Street, both considered to be historical resources. The Build Alternative with Design Options 1B, 2B, and 3B would also result in impacts, as the immediate setting would be substantially and adversely changed by the demolition of former FMC Plant 1 building, which is a component of the historic setting of the residences. Plant 1, which is adjacent to 3021 12th Street, provides a physical, audible, and visual screen from the active railroad corridor. Removing Plant 1 substantially alters the setting through the introduction of a parking lot and increasing noise levels.

Although mitigation measures CUL-1 through CUL-5 and AES-5 will be implemented, including documentation/recordation and reuse of salvage building materials of the former FMC Complex, potentially significant impacts would occur.

(b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Potentially Significant Impact. The Build Alternative and all design options would individually result in potentially significant impacts to cultural resources and noise and would contribute to a cumulatively considerable impact for these two resources. The proposed Project's potential cumulative impacts are discussed in detail in Chapter 4.0 of this Draft EIR. To contribute to a cumulative impact on an environmental resource, there must be an impact on the resource as a result of the Build Alternative.

With the exception of cultural, other environmental resources analyzed in this Draft EIR would individually result in less than significant impacts. Cumulative projects in the vicinity are described in detail in Chapter 4.0 and are shown on Figure 4.1-1. Future transportation and development projects are planned in the vicinity of the project area that may incrementally contribute to a cumulative impact. However, it is anticipated that these future projects would seek approvals from the agency with jurisdictional authority, prepare an environmental document, and propose measures to off-set potential environmental impacts. All permanent and temporary impacts to environmental resources (except for cultural) resulting from the Build Alternative, can be mitigated to a level of less than significant – for these resources, the Build Alternative and all design options, would not contribute to cumulatively considerable impacts.

Cultural/Historic Resources

(As previously discussed in this chapter and in Section 3.4, Cultural Resources, the removal of the former FMC Complex and 12th Street residences would result in a significant and unavoidable impact. Considering the incremental effects of this Project, when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects, the Build Alternative's effects would be cumulatively considerable because of the limited number of industrial buildings in existence featuring this period-era architectural design and example of Riverside's historic fruit packing history.

Noise

Temporary (Construction)

Construction of the Project would require demolition of existing structures, installation of utilities, and construction of new platform and tracks. The magnitude of the impact would depend on the type of construction activity, equipment, duration of each construction phase, distance between the noise source and receiver, and any intervening structures. Due to the proximity of residences both adjacent to the project construction site and across Howard Avenue from the project site, construction would generate elevated noise levels that may disrupt nearby residences for all design options. On individual days, construction activities may occur at distances closer to residences than those analyzed. Because heavy equipment may be required near residences, construction noise impacts would be temporary, but may be substantial for residential properties within 10 feet of the construction noise source under the Build Alternative with Design Options 1B, 2B, and 3B.

During demolition of the Prism Aerospace warehouse, demolition would be required up to the property line of the residence at 3021 12th Street. Because heavy equipment would be required during demolition of the warehouse and the work would be located at the residence's shared property line (within 10 feet of the residence itself), noise impacts from the use of anticipated demolition equipment (for example an excavator, loader, and dump truck), are assessed as substantial under the Build Alternative with Design Options 1B, 2B, and 3B. Implementation of noise measures are required to mitigate adverse effects to this residence. A Construction Noise Plan would be prepared and implemented to mitigate potential noise impacts during construction (see Measure N-3 in Section 3.11). Under Design Options 1B, 2B, or 3B, temporary accommodations for residences at 3021 12th Street would be required during the demolition phase of the adjoining Prism Aerospace building. By implementing a Construction Noise Plan and providing temporary accommodations for residents immediately adjacent to demolition activities, a temporary significant noise impact would occur under the Build Alternative with Design Options 1B, 2B, or 3B due to the proximity of the residential property at 3021 12th Street. Considering the incremental effects of this Project, when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects, the Build Alternative's effects would be cumulatively considerable. This is because of the significant contribution of construction-related noise generated by the Build Alternative with Design Options 1B, 2B, or 3B in conjunction with other development projects that could construct within the same time frame. However, construction-related noise

impacts for Design Options 1A, 2A, and 3A would result in a less than significant impact with mitigation incorporated because these design options would acquire the property located at 3021 12th Street prior to construction and would not experience potentially significant construction-related noise due to demolition activities. Under the Build Alternative with Design Options 1A, 2A, and 3A, the implementation of a Construction Noise Plan would address construction-related noise for residents along Howard Avenue and 9th Street. Because of the distance of other development projects relative to the Project site, construction-related noise effects would not result in a cumulatively considerable impact.

Permanent (Operations)

Implementing the Build Alternative would result in noise level increases at multiple receivers for each design option. Noise levels would increase primarily due to the removal of the existing Prism Aerospace warehouse. This structure currently provides noise attenuation for multiple residential receivers along Howard Avenue from railroad and freeway noise sources. With the removal of this existing structure and its replacement with a level parking lot, the barrier to noise would be removed and expose residences to elevated noise levels. Similarly, Design Options 2A and 2B would result in the removal of existing structures to accommodate the extension of Howard Avenue and result in a noise level increase for those first-row residences. In addition to removing the existing Prism Aerospace building in a future noise model, anticipated increases in train and traffic noise were incorporated into the future noise condition assumptions, which include traffic noise due to ambient growth and traffic noise generated by other development projects. Hence, noise generated by cumulative projects have been assumed in the noise analysis. Based on the results of the noise study, moderate and severe impacts to nearby residences would occur for all design options. Based on FTA's noise impact criteria, moderately impacted residential receivers are not considered substantial; however, residential receivers identified as "severely impacted" are considered significant impacts, and mitigation in the form of noise abatement would be required to reduce severe noise impacts to at least moderate levels. Considering the incremental noise effects of this Project, when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects, the Build Alternative's effects would be cumulatively considerable. However, construction of a noise barrier would reduce cumulatively considerable noise levels to less than significant with the incorporation of noise barriers. Therefore, the proposed Project's cumulative contribution to noise would be mitigated.

(c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Potentially Significant Impact. Consistent with § 15065(a)(4) of the CEQA Guidelines, a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to cause substantial adverse effects on human beings, either directly or indirectly. Under this standard, a change to the physical environment that might otherwise be minor must be treated as significant, if people will be significantly affected. This factor relates to adverse changes to the environment of human beings generally, but not to effects on particular individuals. While changes to the environment that could indirectly affect people will be represented by all of the designated CEQA issue areas, those that could directly affect human beings include air quality, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, population and housing, public services, transportation/traffic, and utilities, which are addressed in this Draft EIR.

This Project will have a potentially significant impact environmental effects to human beings, either directly or indirectly for noise. As discussed in Section 3.11, Noise, the Build Alternative and all design options would result in a significant impact; however, implementation of a construction noise plan and the construction of noise barriers would mitigate potentially significant noise impacts to less than significant levels for Design Options 1A, 2A, and 3A. If Design Options 1B, 2B, and 3B are selected, potentially significant construction-related noise impacts may occur due to the proximity of demolition activities relative to the location of residences because this work would be located at the residence's shared property line and within 10 feet of the residence itself.

Other environmental issue topics throughout Chapter 3.0 that could affect people would not result in potentially significant impacts during the construction or operation of the Build Alternative with the implementation of avoidance, minimization and mitigation measures.

Residential and business displacements would occur as a result of the Build Alternative and all design options; however, these relocations would not be substantial. As discussed in Section 3.12, up to 10 residences and 10 non-residential properties would be acquired to construct the proposed Project. Property acquisitions and subsequent displacement of residences and people may result in a potentially significant impact; however, replacement

commercial and residential properties are available within the city and county. Approximately 11 percent of the housing units in the CIA study area are vacant, more than the city's 6 percent, but less than the county's 14 percent vacancy rate. Considering the declining population trend and the higher vacancy rate (compared to the city and county), replacement housing is anticipated to be available within the CIA study area. Replacement housing is available for lease or purchase within a 10-mile radius of the proposed Project and includes the following housing options:

- Single-family residences (lease): 41 units
- Single-family residences (purchase): 722 units
- Multi-family units (lease): 114 units
- Section 8 units: 3 units

Replacement property for businesses displaced as a result of the proposed Project are available within a 10-mile radius. There are 410 industrial business sites for lease and 67 available for purchase. The Project will comply with the Uniform Relocation Assistance and Real Property Acquisition Act program, which includes provisions on relocation assistance payments and counseling to persons and businesses affected by displacements resulting from the Project.

Given the potential impacts to human beings during construction and operations of the Build Alternative, less than significant impacts with mitigation are anticipated for Design Options 1A, 2A, and 3A. However, potentially significant impacts are anticipated for Design Options 1B, 2B, and 3B due to construction-related noise impacts.

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