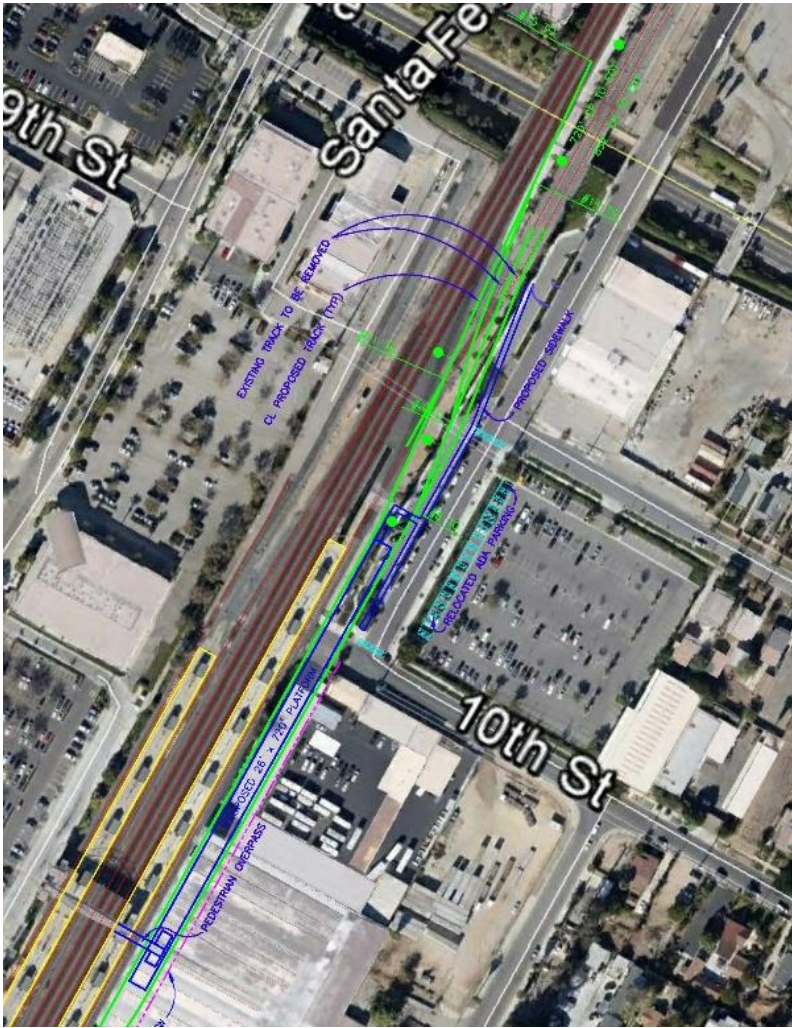


## Appendix W. Project Definition Report

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Project Definition Report

Riverside-Downtown Station Track & Platform Project  
City of Riverside  
(MP 9.9 to MP 10.2)



Riverside County Transportation Commission

[www.rctc.org](http://www.rctc.org)

October 31, 2016

**Project Definition Report**

**Riverside-Downtown Station Track & Platform Project  
City of Riverside  
(MP 9.9 to MP 10.2)**

This Project Report has been prepared under the supervision of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.



Christopher M.F. Poli, P.E.  
RCE 50401  
Expires 06/30/17

10-31-2016  
Date



Revision	Reviewed by:	Organization	Date	Signature
1	Lauren German	WSP   PB	11/16/16	<i>Lauren German</i>
2	Lauren German	WSP	1/12/18	<i>Lauren German</i>

## Project Definition Report

### **Project Description**

The Riverside-Downtown Station Track and Platform Project consists of the construction of an additional platform, extended bridge and elevator, and associated tracks on the south side of the station, which will allow for two trains to service the station off the BNSF Railway (BNSF) mainline. The additional train traffic from the Perris Valley Line can then connect with additional Metrolink Lines without impacting operations on the BNSF.

The station as it is currently constructed consists of two center platforms, the outside of the north one accessible only by stub tracks. This Project would add two additional platform faces to the south side of the station, improving the feasibility and convenience of train meet times. This project would also maintain the existing storage tracks located east of the station, on the south side of the BNSF right-of-way.

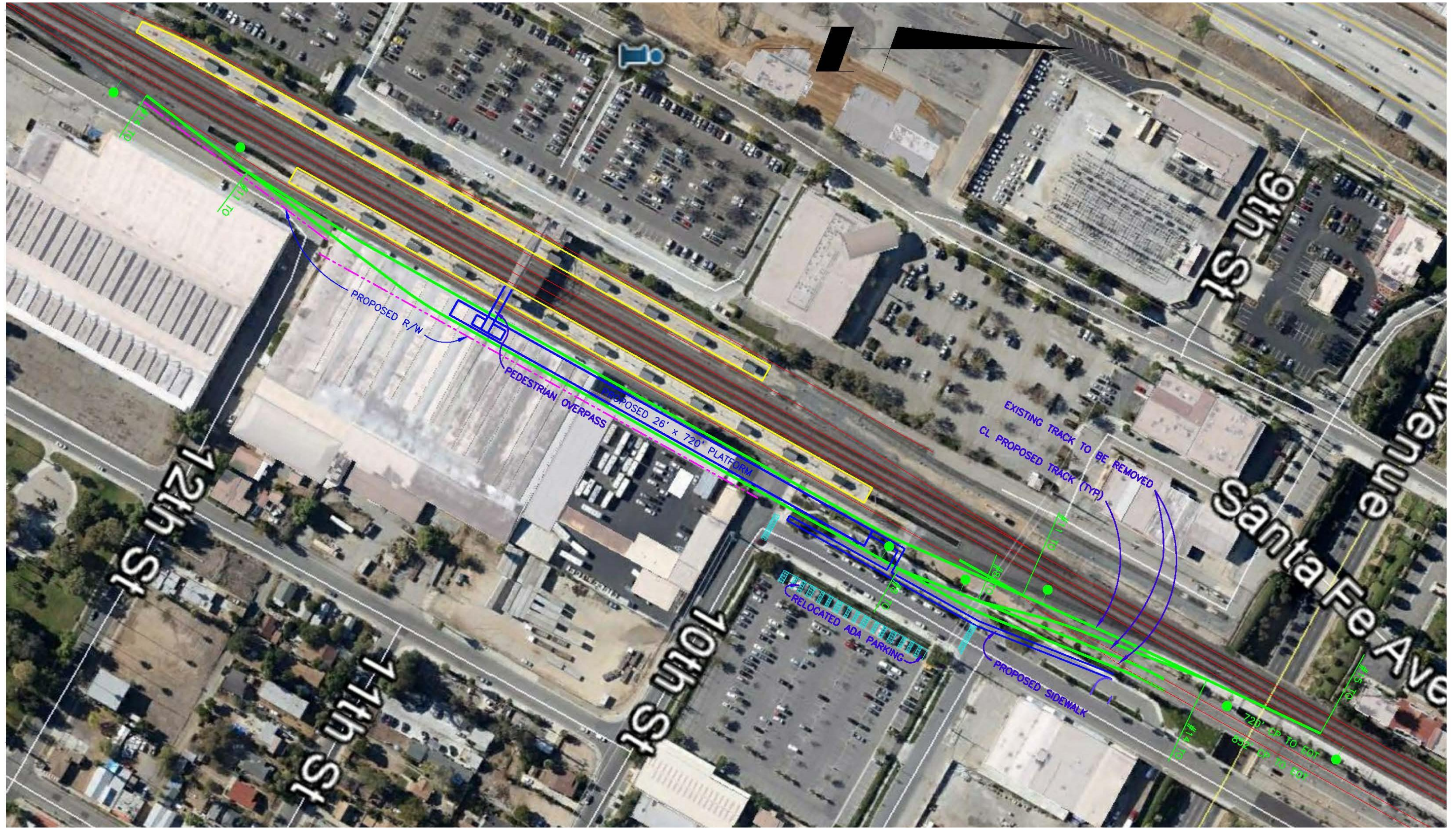
The Project is not defined strictly within the existing station footprint and acquisition of property is expected to be required. Riverside County Transportation Committee (RCTC), shall manage Project progress with all stakeholders including: Federal Transit Administration (FTA), Southern California Regional Rail Authority (SCRRA), County of Riverside, City of Riverside, and BNSF.

Additionally, the planned staging of the Project shall be closely coordinated with the operators and right-of-way owner (BNSF) to minimize any potential service disruptions during construction. This includes both Metrolink (operated by SCRRA) and the Southwest Chief (operated by Amtrak).

This version of the proposed work is a combination of four alternatives that were originally developed for RCTC. The other alternatives presented issues that RCTC felt were fatal flaws that did not provide the most effective solution for achieving the goals of the project as defined above. In two of the four original alternatives, the platform locations were not conducive to convenient connectivity with other Metrolink Lines due to their proposed locations being either east of the existing station platforms or north. In addition, some of the alternatives also required new at-grade crossings, which was considered a non-starter with the California Public Utilities Commission (CPUC). Each alternative was carefully reviewed and it was determined that individually none were adequate in terms of meeting all goals of the project. The proposed alternative, labeled Alternative 1, took the effective parts of the four original alternatives and combined them.

The Project has an initial rough order of magnitude cost estimate of \$24M and RCTC is responsible for coordinating the funding and implementation of the Project. Stakeholders noted above shall be involved in review of the project design and permitting agencies are listed in the Environmental Clearance section of this report.

Project Definition Report



Project Definition Report

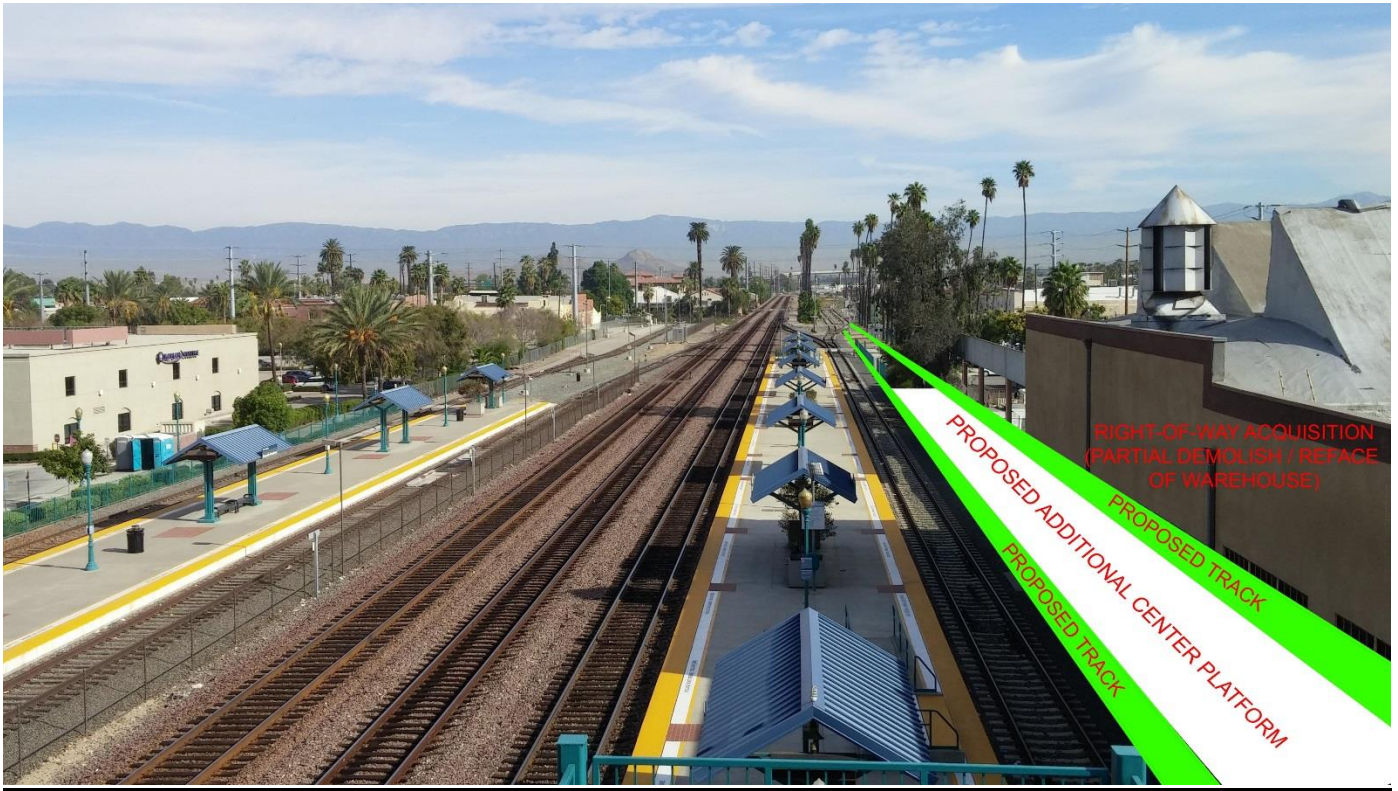


Figure 1: Riverside-Downtown Station – Looking East

**Project Location**

The Project is located at the existing Riverside-Downtown Station in the City of Riverside at approximately Milepost 9.9 to 10.2 on the BNSF San Bernardino Subdivision.

The footprint of the Project will extend beyond the limits of the existing station footprint to the south and property acquisition will be required. It is assumed that the required new right-of-way is obtainable from the neighboring properties. The property acquisition from the solar panel manufacturing building property located southeast of the existing station platforms should be minimal and enough property should remain between the northwest corner of the building and the railroad right-of-way to maintain a single-vehicle driveway entrance off of 12th Street. The right-of-way acquisition needed for the Project from the former tank assembly building property directly to the south of the station is more significant. At a minimum, this would entail a partial take and demolition of the existing building.

**Project Purpose and Need**

The Riverside-Downtown Station Track & Platform Project is required to increase rail capacity and service reliability at the Station. In addition, this Project is greatly necessitated by the opening of the new Perris Valley Line. With this new line, most of the Metrolink 91 Service is extended to South Perris and rebranded as the 91/Perris Valley Line (91/PV Line). Four of the 91 morning trains will originate from the Perris-South Station and four of the afternoon or evening trains will now terminate there. Therefore, the Project is required to improve connectivity between the 91/PV Line service to other

## Project Definition Report

Metrolink lines and transit services. In addition, new “local” service will be provided operating between the Riverside-Downtown and Perris-South stations. This new local service will terminate in Riverside-Downtown, increasing the desire to provide convenient connectivity from these trains to other trains in the Metrolink system, 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.

To accommodate the necessary connectivity from this new Metrolink 91/PV Line service as well as future growth, this station expansion project is required. Without increasing the station tracks, this station would not be able to handle the anticipated train meets and would cause blockages on the BNSF mainline since trains operating to or from Perris-South are not able to utilize the northern platform tracks at the station due to the lack of crossovers on the BNSF east of the station.

This extension of the 91/PV Line is expected to reduce traffic congestion on I-215 and improve transit options for southwestern Riverside County residents, who have some of the longest commutes in Southern California. The 91/PV Line is part of the Southern California Association of Government’s (SCAG) 2012-2035 Regional Transportation Plan and Sustainable Communities Strategy, the long-range plan that improves regional mobility and greenhouse gas emission reduction standards required in AB 32 and SB 375. It also is consistent with and supported by the City of Riverside General Plan 2025 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.

### **Current Rail Service**

The Riverside-Downtown Station currently provides service to three Metrolink lines (Riverside, 91/PV Line, and Inland Empire-Orange County (IEOC)) and Amtrak’s Southwest Chief. The station is an origin and destination station for all Riverside Line trains currently and three 91/PV Line and eight IEOC Line trains. Eight additional IEOC line trains operate each day through the Riverside-Downtown Station, traveling between San Bernardino County and Orange County. Including the two Amtrak trains operating through the station each day, 39 total weekday passenger trains currently service the Riverside-Downtown Station.

Both the BNSF and the Union Pacific Railroad (UPRR) operate freight trains through the Riverside-Downtown Station. While BNSF is the right-of-way 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 50-60 freight trains operate through the Riverside-Downtown Station each day, with this number raising or lowering based on seasonal variations.

### **Project Benefits**

The projected ridership originating on the 91/PV Line is 4,300 daily riders. 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. This translates to much more passenger traffic at the station. With this project, cross-platform transfers will now be possible to facilitate more efficient passenger flow and thereby allowing for reduced dwell times for trains.



## Project Definition Report

Effectively, with this alteration, the Riverside-Downtown Station would be capable of handling twice the amount of existing rail service. This would support the anticipated growing travel needs of Riverside County demonstrated in a recently completed Market Study Analysis. That analysis indicated the expected increases of travel patterns both within Riverside County as well as Riverside County residents commuting to Los Angeles and Northern Orange County who could take advantage of increase rail service.

Additionally, in terms of rail traffic, the infrastructure east 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. As such, trains coming from or going to Perris and Riverside are not able to meet or pass each other. In addition, the San Jacinto Subdivision, extending from CP Highgrove to Perris, is currently a single track mainline and does not permit trains to meet or pass. This limitation in infrastructure between Riverside-Downtown and Perris-South creates a need for additional platform tracks on the south side of the Station where trains can meet and hold off the BNSF mainline. This would help ensure that the additional passenger service does not impede the through freight service.

Beyond the infrastructure capacity need, operationally, the ability to meet trains operating between Perris-South and Riverside-Downtown with trains operating to/from 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.

### **Scope of Work**

The scope of work for this project includes the following:

- Prepare design documents for bidding construction as follows:
  - Alternatives Analysis (complete)
  - 30% Design Plans
  - 60% Design Plans
  - 90% Design Plans
  - 100% bid ready Design Plan set and construction specifications
- Prepare design reports as follows:
  - Geotechnical Report
  - Hydrology and Hydraulic Report
  - Environmental Constraints Report
- Obtain environmental clearance as outlined in the Environmental Clearance section of this PDR
- Obtain permits as outlined in the Environmental Clearance section of this PDR

## Project Definition Report

- Obtain appropriate environmental Mitigation property or credits at mitigation banks as outlined in the Environmental Clearance section of this PDR
- Obtain required property, permanent easements, and construction easements
- Identify and implement appropriate mitigation measures
- Coordinate and obtain resource agency permits
- Award and manage the construction contract

### **The Physical Scope required to complete the project includes:**

- Partially Demolish/Reface warehouse
- Relocate ADA parking
- Modify parking lot
- Modify existing/Construct new pedestrian at-grade rail crossing
- Modify Transit Drop-Off Area
  - Relocate/Construct Exit Driveway
- Construct 720-foot center platform
- Construct Pedestrian Overpass
  - Construct Elevator
  - Construct Stairs
  - Construct Bridge
- Construct new platform tracks
- Remove 1,100 feet of existing track
- Relocate/Construct new Control Points
- Construct sidewalk
- Modify railroad signal system
- Extend Culverts
- Relocate utilities, as necessary
- Construct various other ancillary civil and track improvements

### **Project Management Responsibilities**

Project management will be performed by either RCTC or SCRRA under a memorandum of understanding. The managing agency will work cooperatively with BNSF, the City of Riverside, environmental resource agencies, and other stakeholders in delivering this project.

## Project Definition Report

### **Project Schedule**

#### Milestone

NTP Issued

Begin Conceptual Design	NTP + 1 Month
Complete Conceptual Design	NTP + 2 Months
Prepare Property Cost Estimate	NTP + 2 Months
Complete Property Cost Estimate	NTP + 3 Months
Prepare and Draft Final Technical Memo	NTP + 3 Months
Begin Environmental Phase (PA&ED)	NTP + 6 Months
Complete Final Technical Memo	NTP + 6 Months
Begin Design (PS&E) Phase	NTP + 6 Months
Circulate Draft Environmental Document	NTP + 9 Months
30% Design Complete	NTP + 10 Months
End Environmental Phase (PA&ED) Completion	NTP + 14 Months
End Design Phase (Ready to List for Advertising)	NTP + 16 Months
Advertise, Bid and Award	NTP + 19 Months
Begin Construction (Contract Award)	NTP + 20 Months
End Construction (Construction Contract Acceptance)	NTP + 36 Months
Begin Closeout Phase	NTP + 37 Months
End Closeout Phase (Closeout or Final Report)	NTP + 38 Months

### **Environmental Clearance & Permits**

The project is subject to compliance with California Environmental Quality Act (CEQA), and National Environmental Policy Act (NEPA).

It is anticipated that the project qualifies for a NEPA Categorical Exclusion (CE) under 64 FR 28545, and the type of activity is included in FRA NEPA Categorical Exclusion Checklist as follows:

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“Assembly or construction of facilities or stations that are consistent with existing land use and zoning requirements, do not result in a major change in traffic density on existing rail or highway facilities and result in approximately less than ten acres of surface disturbance, such as storage and maintenance facilities, freight or passenger loading and unloading facilities or stations, parking facilities, passenger platforms, canopies, shelters, pedestrian overpasses or underpasses, paving, or landscaping.”<sup>1</sup> If information became available during environmental review to indicate that the project may have the potential for significant impact on the environment, a NEPA CE may not be appropriate, and the preparation of Environmental Assessment (EA) with a Finding of No Significant Impact may be required.

The project proposes to increase station tracks to improve operation of anticipated train meets and to prevent blockages on the BNSF mainline. The project would not result in the increase of service or alter the facility use. It is anticipated that the project qualifies for a CEQA Categorical Exemption (CE) under Title 14, Section 1530 as follows: Existing Facility “Class 1 consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination”. If information becomes available during the environmental review process of the project to indicate that CEQA CE is barred by one of the exemptions specified Section 15300.2, then an Initial Study (IS) with a Negative Declaration (ND) or Mitigated Negative Declaration (MND) may be required. The exceptions include the following:

- Significant cumulative impact on the environment
- Significant effect on the environment due to unusual circumstances.
- Damage of scenic highways
- Use of hazardous waste site
- Substantial adverse change in the significance of historical resources

Preliminary evaluation of the project’s environmental compliance issues include the following topics:

- Land Use: The project is located within a mixture of land developments that includes Commercial, Business/Office, and Medium Density Residential Areas. The project is consistent with the existing and planned land use for the project area. <sup>2</sup>
- Property acquisition: It is anticipated that the project will affect one business located adjacent to the project area. The project will acquire new right-of-way from the solar panel manufacturing building property located southeast of the existing station platforms; however, the property take should be minimized and a single-vehicle driveway entrance off of 12th Street maintained. If the business becomes not viable due to right-of-way requirements, the project may be required to provide relocation benefits according to the Real Property Acquisition Policies Act, depending on the level of impact.
- Visual Resources: Several palm trees line the project area that may be removed as a result of the project. The City of Riverside General Plan policies and objectives protects trees as an important

<sup>1</sup> <http://www.fra.dot.gov/Page/P0550>

## Project Definition Report

visual resource, and encourages maintaining, preserving, and new planting of trees.<sup>2</sup> The project may be required to replace trees that are affected by the project construction.

- **Cultural Resources:** A search of the California Historical Resources Information System (CHRIS) archeological resources was conducted for the project's Area of Potential Effect (APE). The APE consists of the project general Limits of Disturbance (LOD) with a 1/2 mile buffer area. The following is a description of the search results: (See attached map for the APE Map and Location of Identified Archeological Sites)
  - P-33-009678 and P-33-01391 refer to group of archaeological resources in the same location, John W. North Park north of the project area;
  - P-33-009769 is a series of three building complexes associated with the historic "Citrus Machinery Pioneering", on the east side of the existing railroad tracks;
  - P-33-021086 is part of the earlier Santa Ana Railroad that seems to have passed through some of the lots that now hold the Citrus Machinery Pioneering buildings (P-33-9769). It seems to be a railroad spur running from just south of 14th Street and extending up to about 12th Street;
- Site (P-33-021086) may potentially be disturbed or covered during the construction of the adjacent industrial buildings. The highest potential area of the site that may remain is the paved areas directly north of 14th Street. None of the proposed alternatives may extend within these limits, and it is unlikely that the any remains of the railroad would be affected by the project. Further investigation of this resource may be required for the environmental documentation.
- **Biological Resource:** A search of the CNDDDB resulted in five species of interest that are historically present within the project area, of which only one is listed Federally Threatened and State Endangered (western yellow-billed cuckoo). However, the database indicates that all of these species are extant or are no longer present within this area. No species/habitat were identified in the project area in the USFW Critical Habitat dataset and Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).
- The project may result in removal of trees within in the project area, and will be required to comply with requirements of the Migratory Bird Treaty Act.
- **Hazardous Material:** Hazardous Material Preliminary Screening was performed for the project to identify parcels of property or facilities with known or potential environmental contamination that could affect the Project's design, cost, or schedule. The search included databases maintained by various state and federal agencies within one-quarter mile search buffer from the Project Site. Based on the database search report, 25 facilities were listed in one or more databases within 500 feet of the approximate project limits that may have the potential of source of contaminates. These adjacent and nearby facilities pose the highest risk of potential contamination impacting the Project. It is recommended that additional research/investigation activities be completed on key adjacent or nearby properties that pose a potential environmental threat to the Project activities. These additional activities could include obtaining and reviewing agency file records and reports which document and detail known contamination characteristics, extent of impacts, and remediation activities, if applicable.

<sup>2</sup> [https://www.riversideca.gov/planning/gp2025program/GP/04\\_Land\\_Use\\_and\\_Urban\\_Design\\_Element.pdf](https://www.riversideca.gov/planning/gp2025program/GP/04_Land_Use_and_Urban_Design_Element.pdf)

## Project Definition Report

- Noise/Vibration and Air quality: the project does not include increase in capacity and will not result in increase in rail traffic. It is not anticipated that the project will increase noise/vibration, and will not result in emissions increase. The project will not have noise and air quality impacts.
- The project may result in temporary construction impacts that require the implementation of the following measures:
  - Coordination with Riverside Transit Authority (RTA) for impacts on bus routes, if any.
  - Coordination with any utility providers, if the project requires utility relocation that may affect land use surrounding the station.
  - Maintain access during construction for pedestrians, parking, and local business traffic.

The following table summarizes the applicable environmental permits and approvals associated with the project.

Table 1: Summary of Anticipated Permits and Approvals

Permit or Approval	Responsible Agency	Status
Encroachment Permit	Riverside Public Utilities (Riverside Canal)	Coordination and permit will be required prior to beginning of construction

### **Environmental Mitigation**

Environmental Mitigation are not anticipated for this project. Tree replacement may be required for removal of palm trees. In addition, should any property acquisition be required and result in a business being displaced, compensation and relocation benefits will be provided as required by the law.

## Project Definition Report

### Project Cost Estimate

		<b>PROJECT COST ESTIMATE</b>			
		<b>Project Name:</b>		Riverside-Downtown Station Track & Platforms	
				<b>Design Level:</b>	Conceptual
				<b>Last Updated:</b>	8/4/16
ITEM	DESCRIPTION	QUANTITY	UNIT COST	TOTAL COST	NOTES
01000	GENERAL REQUIREMENTS			\$ 905,000	
02000	SITE PREPARATION			\$ 450,000	
02450	RAILROAD WORK			\$ 2,790,000	
02500	PAVEMENT			\$ -	
	CIVIL & STRUCTURAL			\$ 3,560,000	
02700	DRAINAGE			\$ 40,000	
02720	UTILITIES			\$ 330,000	
03300	CAST-IN-PLACE CONCRETE			\$ 70,000	
03400	PRE-CAST CONCRETE			\$ -	
13000	SIGNAL WORK			\$ 3,000,000	
	CONSTRUCTION CONTINGENCY (See Cost Details Page)			\$ 2,560,000	
<b>SUB-TOTAL: CONSTRUCTION COSTS</b>				<b>\$13,705,000</b>	
<b>CIVIL / STRUCTURAL ENGINEERING:</b>					
	GEOTECHNICAL INVESTIGATION			\$34,263	0.25% of Construction
	SURVEY / AERIAL MAPPING			\$34,263	0.25% of Construction
	DESIGN & DESIGN SUPPORT			\$1,301,975	9.5% of Construction
<b>SIGNALS</b>					
	MOC COSTS			\$45,000	1.5% of Signal Construction
	SIGNAL MAINTENANCE SUPPORT			\$240,000	8% of Signal Construction
	DESIGN & DESIGN SUPPORT			\$285,000	9.5% of Signal Construction
	CONSTRUCTION INSPECTION			\$240,000	8% of Signal Construction
	RIGHT OF WAY ACQUISITION			\$900,000	\$15/sq ft; 10% contingency
	ENVIRONMENTAL CLEARANCE			\$300,000	IS/EA => Neg Dec/FONSI 3% non-signal construction
	CONSTRUCTION MANAGEMENT			\$1,096,400	8% of Construction
	AGENCY COSTS			\$822,300	6% of Construction
	PROJECT MANAGEMENT			\$274,100	2% of Construction
	FLAGGING			\$959,350	7% of Construction
	PERMITTING/CITY REQUIREMENTS			\$274,100	2.0% of Construction
	OWNER-PROVIDED MATERIALS				N/A
<b>SUB-TOTAL ENGINEERING &amp; AGENCY COSTS</b>				<b>\$6,810,000</b>	
	PROJECT CONTINGENCY			\$3,077,250	15% of Construction, Engineering & Agency Costs
	INFLATION	Rate:	3.50%	# Years: 1.5	\$1,249,368
<b>TOTAL:</b>				<b>\$24,842,000</b>	

Riverside - Downtown Station Track & Platform

Project Definition Report

Track Chart (Existing Station Layout)

