

## **AGENDA**

### **Commuter Rail & Transit Committee Meeting**

**September 10, 2015**

**9:00 AM**

**Location**

**SANBAG**

*First Floor Lobby*

1170 W. 3rd Street, San Bernardino, CA 92410

#### ***Commuter Rail & Transit Committee Membership***

**Chair**

Supervisor James Ramos  
County of San Bernardino

Mayor L. Dennis Michael  
City of Rancho Cucamonga

**Vice Chair**

Mayor Pro Tem Bill Jahn  
City of Big Bear Lake

Mayor Pro Tem Jon Harrison  
City of Redlands

Council Member Mike Leonard  
City of Hesperia

Mayor Deborah Robertson  
City of Rialto

Mayor Larry McCallon  
City of Highland

Mayor Ray Musser  
City of Upland

Mayor Paul Eaton  
City of Montclair

Council Member Richard Riddell  
City of Yucaipa

Council Member Alan Wapner  
City of Ontario

**San Bernardino Associated Governments  
County Transportation Commission  
County Transportation Authority  
County Congestion Management Agency  
Service Authority for Freeway Emergencies**

**AGENDA**

**Commuter Rail & Transit Committee Meeting**

**September 10, 2015  
9:00 AM**

**Location**

**SANBAG Office**

**First Floor Lobby**

**1170 W. 3rd Street, San Bernardino, CA 92410**

To obtain additional information on any items, please contact the staff person listed under each item. You are encouraged to obtain any clarifying information prior to the meeting to allow the Board to move expeditiously in its deliberations. Additional *“Meeting Procedures”* and agenda explanations are attached to the end of this agenda.

**CALL TO ORDER**

(Meeting Chaired by James Ramos)

- i. Pledge of Allegiance
- ii. Attendance
- iii. Announcements
- iv. Agenda Notices/Modifications – Marleana Roman

**Possible Conflict of Interest Issues**

Note agenda item contractors, subcontractors and agents which may require member abstentions due to conflict of interest and financial interests. Board Member abstentions shall be stated under this item for recordation on the appropriate item.

**1. Information Relative to Possible Conflict of Interest**

Note agenda items and contractors/subcontractors, which may require member abstentions due to possible conflicts of interest.

**This item is prepared monthly for review by SANBAG Board and Committee members.**

**CONSENT CALENDAR**

Items listed on the Consent Calendar are expected to be routine and non-controversial. The Consent Calendar will be acted upon as a single motion. Items on the Consent Calendar may be removed for discussion by Board Members.

## **Consent - Transit/Rail**

### **2. Construction Contract Change Orders to on-going SANBAG Construction Contracts with Shimmick Construction Company, Inc. and Kemp Bros. Construction Inc.**

Receive and File Change Orders.

**Carrie Schindler**

**This item is not scheduled for review by any other policy committee or technical advisory committee.**

### **3. July 2015 Right-of-Way Grants of Use Report**

That the Commuter Rail and Transit Committee receive July 2015 Right-of-Way Grants of Use Report.

**Monica Morales**

**This item is not scheduled for review by any other policy committee or technical advisory committee.**

## **DISCUSSION ITEMS**

### **Discussion - Regional/Subregional Planning**

#### **4. Advanced Regional Rail Integrated Vision - East (ARRIVE) Corridor Project Update**

That the Commuter Rail and Transit Committee receive and file a presentation on the ARRIVE Corridor study.

**Timothy Byrne**

**This item was reviewed by the Transportation Technical Advisory Committee on August 31, 2015. This item is not scheduled for review by any other policy committee.**

### **Discussion - Transit/Rail**

#### **5. Amendment No. 1 to Memorandum of Understanding C12254 with the Southern California Regional Rail Authority for the Design and Construction Support for the Eastern Maintenance Facility and Downtown San Bernardino Passenger Rail Project**

That the Commuter Rail and Transit Committee recommend the Board, acting as the San Bernardino County Transportation Commission:

A. Approve Amendment No.1 to Contract No. C12254 with the Southern California Regional Rail Authority and the San Bernardino Associated Governments for the Design and Construction Support for the Eastern Maintenance Facility and the Downtown San Bernardino Passenger Rail Project, for an additional \$1,773,516 for an amended not-to exceed amount of \$2,562,491 and extend the contract term through June 30, 2017, with such revision as may be approved by the Executive Director and/or his designee in consultation with General Counsel.

B. Approve budget amendment to increase the Fiscal Year 2015/2016 budget for Task 0323 Downtown San Bernardino Passenger Rail Project in the amount of \$1,500,000 funded by the Local Transportation Fund for a new task total of \$52,661,438.

**Carrie Schindler**

**This item is not scheduled for review by any other policy committee or technical advisory committee. SANBAG General Counsel and Contract Administrator have reviewed and approved this item and Memorandum of Understanding as to form.**

## **6. Redlands Passenger Rail Project Update**

That the Commuter Rail and Transit Committee receive an update on the Redlands Passenger Rail Project.

**Carrie Schindler**

**This item is not scheduled for review by any other policy committee or technical advisory committee.**

## **7. Award Redlands Passenger Rail Project - Mainline Design**

That the Commuter Rail and Transit Committee recommend the Board, acting in its capacity as the San Bernardino County Transportation Authority:

A. Approve Contract No. 15-1001093 with HDR Engineering, Inc. for a five year term, with two one-year options in an amount not-to-exceed \$25,230,000 for Final Mainline Design Services on the Redlands Passenger Rail Project contingent upon approval of proposed insurance coverage by the SANBAG Risk Manager and General Counsel.

B. Approve contingency of an amount not-to-exceed \$2,523,000 for Contract No. 15-1001093 and authorize the Executive Director or his designee to release contingency as necessary for the project.

**Justin Fornelli**

**This item is not scheduled for review by any other policy committee or technical advisory committee. SANBAG General Counsel and Procurement Manager have reviewed this item and the contract.**

## **8. Award Contract 15-1001301 for Public Outreach and Branding Services for the Redlands Passenger Rail Project**

That the Committee recommend the Board, acting in its capacity as the San Bernardino County Transportation Authority, approve Contract No. 15-1001301 with Thomas Communications Group for a four year term with one one-year option in an amount not-to-exceed \$500,000 for the Public Outreach and Branding Services for the Redlands Passenger Rail Project. **Tim Watkins**

**This item is not scheduled for review by any other policy committee or technical advisory committee. SANBAG General Counsel and Procurement Manager have reviewed this item and the draft contract.**

## **Discussion - Transportation Programming and Fund Administration**

### **9. Fiscal Year 2015/2016 Operator Allocations and Budget Amendments**

That the Commuter Rail and Transit Committee recommend the Board, acting as the San Bernardino County Transportation Commission:

A. Allocate an additional \$14,285 of State Transit Assistance Funds to Morongo Basin Transit Authority and \$500,000 of State Transit Assistance Funds to Victor Valley Transit Authority.

B. Approve a budget amendment to SANBAG 2015/2016 budget to increase Task No. 0310 Transit Operating with Measure I 1990-2010 Elderly and Handicapped Transit funds from the following subareas:

i. Victor Valley - \$307,802.29

ii. North Desert - \$89,172.30

iii. Colorado River - \$9,387

iv. Morongo Basin - \$90

v. Mountains - \$27,335.55 **Nancy Strickert**

**This item is not scheduled for review by any other policy committee or technical advisory committee.**

## **10. Fiscal Year 2015/2016 Low Carbon Transit Operations Program - Population Share**

That the Commuter Rail and Transit Committee recommend the Board, acting in its capacity as the San Bernardino County Transportation Commission:

A. Approve a Low Carbon Transit Operations Program – Population Share Apportionment for Fiscal Year 2015/2016 of \$2.7 million be apportioned to the Valley and the Mountain/Desert Areas based on the 2015 California Department of Finance Population Data as follows:

- i. Valley Fiscal Year 2015/2016 Apportionment: \$1,961,550
- ii. Mountain/Desert Fiscal Year 2015/2016 Apportionment: \$738,450

B. Allocate \$2.7 million of Low Carbon Transit Operations Program – Population Share funding to the following projects:

- i. Transit Marketing and Fare Subsidies for Mountain/Desert Transit Operators - \$642,667
- ii. Victor Valley Transit Authority Bus Stop and Transfer Center Enhancements and Improvements - \$282,148
- iii. Omnitrans Route 290 Pilot Program Expansion - \$440,000
- iv. Omnitrans Freeway Express Pilot Program serving Yucaipa, Redlands, Hospitality Lane and San Bernardino Transit Center - \$300,000
- v. Ontario Airport Shuttle Service Pilot Program - \$1,035,185

C. Adopt Resolution No. 16-004 Authorization for the Execution of the Certifications and Assurances for the Low Carbon Transit Operations Program.

**Vanessa Jezik**

**This item is not scheduled for review by any other policy committee or technical advisory committee. SANBAG General Counsel has reviewed this item.**

## **11. Memorandum of Understanding Between Omnitrans and SANBAG**

That the Commuter Rail and Transit Committee recommend the Board, acting in its capacity as the San Bernardino County Transportation Commission, approve Memorandum of Understanding (MOU) 15-1001289 between Omnitrans and SANBAG outlining the sub-recipient responsibilities and payments for work completed for each agency.

**Nancy Strickert**

**This item is not scheduled for review by any other policy committee or technical advisory committee. SANBAG General Counsel and Procurement Manager have reviewed this item and MOU.**

## **Comments from Board Members**

Brief comments from Board Members

## **Public Comment**

Brief comments from the General Public

## **ADJOURNMENT**

## **Additional Information**

Attendance  
SANBAG Entities  
Acronym List  
Mission Statement

**The next Commuter Rail and Transit Committee Meeting will be October 15, 2015.**

## Meeting Procedures and Rules of Conduct

**Meeting Procedures** - The Ralph M. Brown Act is the state law which guarantees the public's right to attend and participate in meetings of local legislative bodies. These rules have been adopted by the Board of Directors in accordance with the Brown Act, Government Code 54950 et seq., and shall apply at all meetings of the Board of Directors and Policy Committees.

**Accessibility** - The SANBAG meeting facility is accessible to persons with disabilities. If assistive listening devices or other auxiliary aids or services are needed in order to participate in the public meeting, requests should be made through the Clerk of the Board at least three (3) business days prior to the Board meeting. The Clerk's telephone number is (909) 884-8276 and office is located at 1170 W. 3<sup>rd</sup> Street, 2<sup>nd</sup> Floor, San Bernardino, CA.

**Agendas** – All agendas are posted at 1170 W. 3<sup>rd</sup> Street, 2<sup>nd</sup> Floor, San Bernardino at least 72 hours in advance of the meeting. Complete packages of this agenda are available for public review at the SANBAG offices and our website: [www.sanbag.ca.gov](http://www.sanbag.ca.gov). Staff reports for items may be made available upon request. For additional information call (909) 884-8276.

**Agenda Actions** – Items listed on both the “Consent Calendar” and “Items for Discussion” contain suggested actions. The Board of Directors will generally consider items in the order listed on the agenda. However, items may be considered in any order. New agenda items can be added and action taken by two-thirds vote of the Board of Directors.

**Closed Session Agenda Items** – Consideration of closed session items *excludes* members of the public. These items include issues related to personnel, pending litigation, labor negotiations and real estate negotiations. Prior to each closed session, the Chair will announce the subject matter of the closed session. If action is taken in closed session, the Chair may report the action to the public at the conclusion of the closed session.

**Public Testimony on an Item** – Members of the public are afforded an opportunity to speak on any listed item. Individuals wishing to address the Board of Directors or Policy Committee Members should complete a “Request to Speak” form, provided at the rear of the meeting room, and present it to the SANBAG Clerk prior to the Board's consideration of the item. A "Request to Speak" form must be completed for *each* item when an individual wishes to speak on. When recognized by the Chair, speakers should be prepared to step forward and announce their name and address for the record. In the interest of facilitating the business of the Board, speakers are limited to three (3) minutes on each item. Additionally, a twelve (12) minute limitation is established for the total amount of time any one individual may address the Board at any one meeting. The Chair or a majority of the Board may establish a different time limit as appropriate, and parties to agenda items shall not be subject to the time limitations.

The Consent Calendar is considered a single item, thus the three (3) minute rule applies. Consent Calendar items can be pulled at Board member request and will be brought up individually at the specified time in the agenda allowing further public comment on those items.

**Agenda Times** – The Board is concerned that discussion take place in a timely and efficient manner. Agendas may be prepared with estimated times for categorical areas and certain topics to be discussed. These times may vary according to the length of presentation and amount of resulting discussion on agenda items.

**Public Comment** – At the end of the agenda, an opportunity is also provided for members of the public to speak on any subject within the Board's authority. *Matters raised under “Public Comment” may not be acted upon at that meeting. The time limits established in “Public Testimony on an Item” still apply.*

**Disruptive Conduct** – If any meeting of the Board is willfully disrupted by a person or by a group of persons so as to render the orderly conduct of the meeting impossible, the Chair may recess the meeting or order the person, group or groups of person willfully disrupting the meeting to leave the meeting or to be removed from the meeting. Disruptive conduct includes addressing the Board without first being recognized, not addressing the subject before the Board, repetitiously addressing the same subject, failing to relinquish the podium when requested to do so, or otherwise preventing the Board from conducting its meeting in an orderly manner. *Please be aware that a NO SMOKING policy has been established for meetings. Your cooperation is appreciated!*

**SANBAG General Practices for Conducting Meetings  
of  
Board of Directors and Policy Committees**

**Attendance.**

- The Chair of the Board or a Policy Committee (Chair) has the option of taking attendance by Roll Call or Self-Introductions. If attendance is taken by Roll Call, the Clerk of the Board will call out by jurisdiction or supervisorial district. The Member or Alternate will respond by stating his/her name. If attendance is by Self-Introduction, the Member or Alternate will state his/her name and jurisdiction or supervisorial district.
- A Member/Alternate, who arrives after attendance is taken, shall announce his/her name prior to voting on any item.
- A Member/Alternate, who wishes to leave the meeting after attendance is taken but before remaining items are voted on, shall announce his/her name and that he/she is leaving the meeting.

**Basic Agenda Item Discussion.**

- The Chair announces the agenda item number and states the subject.
- The Chair calls upon the appropriate staff member or Board Member to report on the item.
- The Chair asks members of the Board/Committee if they have any questions or comments on the item. General discussion ensues.
- The Chair calls for public comment based on “Request to Speak” forms which may be submitted.
- Following public comment, the Chair announces that public comment is closed and asks if there is any further discussion by members of the Board/Committee.
- The Chair calls for a motion from members of the Board/Committee.
- Upon a motion, the Chair announces the name of the member who makes the motion. Motions require a second by a member of the Board/Committee. Upon a second, the Chair announces the name of the Member who made the second, and the vote is taken.
- The “aye” votes in favor of the motion shall be made collectively. Any Member who wishes to oppose or abstain from voting on the motion, shall individually and orally state the Member’s “nay” vote or abstention. Members present who do not individually and orally state their “nay” vote or abstention shall be deemed, and reported to the public, to have voted “aye” on the motion.

**The Vote as specified in the SANBAG Bylaws.**

- Each Member of the Board of Directors shall have one vote. In the absence of the official representative, the alternate shall be entitled to vote. (Board of Directors only.)
- Voting may be either by voice or roll call vote. A roll call vote shall be conducted upon the demand of five official representatives present, or at the discretion of the presiding officer.

**Amendment or Substitute Motion.**

- Occasionally a Board Member offers a substitute motion before the vote on a previous motion. In instances where there is a motion and a second, the maker of the original motion is asked if he/she would like to amend the motion to include the substitution or withdraw the motion on the floor. If the maker of the original motion does not want to amend or withdraw, the substitute motion is not addressed until after a vote on the first motion.
- Occasionally, a motion dies for lack of a second.

**Call for the Question.**

- At times, a Member of the Board/Committee may “Call for the Question.”
- Upon a “Call for the Question,” the Chair may order that the debate stop or may allow for limited further comment to provide clarity on the proceedings.
- Alternatively and at the Chair’s discretion, the Chair may call for a vote of the Board/Committee to determine whether or not debate is stopped.
- The Chair re-states the motion before the Board/Committee and calls for the vote on the item.

**The Chair.**

- At all times, meetings are conducted in accordance with the Chair’s direction.
- These general practices provide guidelines for orderly conduct.
- From time-to-time circumstances require deviation from general practice.
- Deviation from general practice is at the discretion of the Chair.

**Courtesy and Decorum.**

- These general practices provide for business of the Board/Committee to be conducted efficiently, fairly and with full participation.
- It is the responsibility of the Chair and Members to maintain common courtesy and decorum.

*Adopted By SANBAG Board of Directors January 2008  
Revised March 2014*

- San Bernardino County Transportation Commission
- San Bernardino County Transportation Authority
- San Bernardino County Congestion Management Agency
- Service Authority for Freeway Emergencies

***Minute Action***

AGENDA ITEM: 1

***Date:*** September 10, 2015

***Subject:***  
 Information Relative to Possible Conflict of Interest

***Recommendation:***  
 Note agenda items and contractors/subcontractors, which may require member abstentions due to possible conflicts of interest.

***Background:***  
 In accordance with California Government Code 84308, members of the SANBAG Board may not participate in any action concerning a contract where they have received a campaign contribution of more than \$250 in the prior twelve months from an entity or individual, except for the initial award of a competitively bid public works contract. This agenda contains recommendations for action relative to the following contractors:

Item No.	Contract No.	Principals & Agents	Subcontractors
2	C14002	Kemp Bros. Construction Inc. <i>Steven R. Solaas</i>	Howard Contracting Harris Rebar Winegardner SCW Contracting Corp. KCB Towers Schmitt Contracting Crownier Sheet Metal MK Roofing Hutington Glazing Continental Marble & Tile Company Hamilton Ceiling Systems JH Bryant Signs & Lucite Products Landscape Forms Empyrean Plumbing Inc. Air Flow Safeway Electric A&S Cement Contractors Inc. Western Paving Contractors Inc. Century Fences Pacific Premier Landscape Robert B Longway Inc. DBC Inc.

*Entity: CMA, COG, CTA, CTC, SAFE*

## Commuter Rail &amp; Transit Committee Agenda Item

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2	C14001	Shimmick Construction Company Inc. <i>Paul Camaur</i>	Allied Steel Co., Inc. Marina Landscape, Inc. Innovative Concrete & Engineering Giroux Glass Winegardner Masonry Excelsior Elevator Fencecorp Inc. Ellis Excavating Gerdau Eberhard EMC Rutherford Co., Inc. M.B. Herzog Electric Hardy & Harper, Inc.
7	15-1001093	HDR Engineering, Inc. <i>Robert Klovsky</i>	Acumen Building Enterprise, Inc. Atwell Consulting Group ICF International Lance Schulte L.D. King, Inc. PAC Engineering LLC Pacific Railway Enterprises, Inc. Project Design Consultants Stack Traffic Consulting, Inc. Orange Coast Analytical, Inc. 2R Drilling, Inc. Cascade Drilling, L.P. Anderson Environmental
8	15-1001301	Thomas Communications Group <i>Barbara Thomas</i>	N/A

**Financial Impact:**

This item has no direct impact on the SANBAG budget.

**Reviewed By:**

This item is prepared monthly for review by SANBAG Board and Committee members.

**Responsible Staff:**

Carrie Schindler, Director of Transit and Rail

Approved  
Commuter Rail & Transit Committee  
Date: September 10, 2015

Witnessed By:

## *Minute Action*

AGENDA ITEM: 2

**Date:** September 10, 2015

**Subject:**

Construction Contract Change Orders to on-going SANBAG Construction Contracts with Shimmick Construction Company, Inc. and Kemp Bros. Construction Inc.

**Recommendation:**

Receive and File Change Orders.

**Background:**

Of SANBAG's two on-going Transit and Rail construction contracts, both had Construction Change Orders (CCOs) approved since the last report to the Commuter Rail and Transit Committee.

- A. Contract Number C14001 with Shimmick Construction Company, Inc. for construction of the Downtown San Bernardino Passenger Rail Project: CCO No. 4 (\$71,656.12 additional electrical work for power pedestals, rail lubricator, signal house, and other additional miscellaneous electrical work).
- B. Contract Number C14002 with Kemp Bros. Construction, Inc. for construction of the San Bernardino Transit Center project: CCO No. 8 (\$44,164.43 miscellaneous building/site submittal and RFI changes, additional work associated with utility service connections, additional miscellaneous street work). CCO No. 9 (\$437,026.27 additional occupancy sensors, final allowance item reallocation, contract time extension, and final negotiated settlement amount).

**Financial Impact:**

This item is consistent with the approved Fiscal Year 2015/2016 SANBAG Budget. All change orders are within the approved contingency amount under Task No. 0322 and 0323.

**Reviewed By:**

This item is not scheduled for review by any other policy committee or technical advisory committee.

**Responsible Staff:**

Carrie Schindler, Director of Transit and Rail

Approved  
 Commuter Rail & Transit Committee  
 Date: September 10, 2015

Witnessed By:

Entity: CTC

## Rail and Transit Construction Contracts

<b>San Bernardino Transit Center (C14002) – Executed Change Orders</b>		
Number	Description	Amount
1	Removal and Disposal of man-made objects (CN 1-\$50,000), Remove & Replace AC (CN 7-\$31,000).	\$81,000.00
2	Additional Traffic Signal Conduit (CN 3-\$67,046.17), Install Interim Irrigation at Affaitati property (CN 4-\$9,144.15), New Block Wall Drain and Blockout (CN 5-\$9,763.87), Revised Roof Hatch and other Building Revisions (CN 8-\$10,547.77), Remove Buried Debris at Rialto (CN 9-\$5,185.96).	\$101,687.92
3	Affaitati Parking Lot Revisions (CN 2-\$88,941.45), Misc Building/Site Submittal and RFI changes (CN 8.1-\$48,238.58), Storm and Sewer Pipeline Revisions (CN 10-\$17,345.45), Utility Service Feeds (CN 12-\$46,600.00).	\$201,125.48
4	Affaitati Additional Parking Lot Revisions (CN 2.1-\$63,328.70), Armed Guard Services (CN 6-\$14,856.30), Misc Building/Site Submittal and RFI changes (CN 8.2-\$34,470.98).	\$112,655.98
5	Affaitati Parking Lot Landscape Revisions (CN 2.2-\$23,325.00).	\$23,325.00
6	Additional Parking Lot Paving (CN 2.3-\$14,831.81), Misc Building/Site Submittal and RFI changes (CN 8.3-\$13,665.02, CN 13-\$1,232.90), Additional Utility Service Feeds (CN 12.1-\$3,018.85), Unforeseen Concrete Removal (CN 14.1-\$8,038.23).	\$40,786.81
7	Roof Hatch Modifications (CN 8.4-\$2,370.48), Misc Building/Site Submittal and RFI changes (CN 8.5-\$25,042.95, Utility Service Feeds (CN 12.2-\$3,102.42), Miscellaneous Street Work (CN 14.2-\$18,012.73), Additional PA Speakers (CN 15-\$30,000), Additional Design Revisions (CN 16-\$59,270.50), West Plaza Wall and Bench Revisions (CN 17-\$12,950.00). Allowance Item Reduction (CN 000-(-\$80,174)	\$70,574.66
8	<b>Submittal &amp; RFI Changes (CN 8.6-\$33,696.13), Utility Service Feeds (CN 12.3-\$4,600.50, Miscellaneous Street Work (CN 14.3-\$5,867.80)</b>	<b>\$44,164.43</b>
9	<b>Door hardware (CN 19-\$24,527.71), Occupancy Sensors (CN 22-\$7,843.91, Final Allowance Item Reallocation (CN 000.1-(-\$5,979.45)), Contract Time Extension (CN 23-\$150,000), Cost Resolution (CN 99-\$260,134.10)</b>	<b>\$437,026.27</b>
		<b>\$1,112,346.55</b>
<b>APPROVED CONTINGENCY</b>		<b>\$1,131,175.00</b>
<b>REMAINING CONTINGENCY</b>		<b>\$18,828.45</b>

Attachment: Rail and Transit CCOs Matrix\_Attachment-For Committee Mtg (2161 : Construction Contracts-CCOs)

**Bold**-Construction Change Orders approved since the last reporting to the Commuter Rail Transit Committee  
 Amounts shown in parentheses represent a credit to the Agency

## Rail and Transit Construction Contracts

<b>Downtown San Bernardino Passenger Rail Project (C14001) – Executed Change Orders</b>		
Number	Description	Amount
1	Replace Signals Mast at Depot for Tracks P5 and P6, (CN 5-\$60,761), Remove and Dispose of Debris (CN 6-\$27,000).	\$87,761.00
2	Build Temporary Mini-High (CN 4.1-\$81,320), Removal of Property Owner Debris (CN 6.1-\$52,000). Install Temp Fence adjacent to San Bernardino Transit Center (CN 12-\$5,000).	\$138,320.00
3	Reconstruct CMU block wall trash enclosure at the San Manuel stadium (CN 010-\$34,950), Additional tree removal along railroad right-of-way (CN 16-\$18,000); Relocate equipment and materials at the San Bernardino Transit Center parking lot (CN 17-\$40,000); Construction of temporary platform at Santa Fe Depot (CN 18-\$40,000).	\$132,950.00
4	<b>Additional electrical work for power pedestal, rail lubricator and signal house (CN 2-\$45,179.50). Additional miscellaneous electrical work (CN 14-\$26,476.62).</b>	<b>\$71,656.12</b>
<b>CCO TOTAL</b>		<b>\$430,687.12</b>
<b>APPROVED CONTINGENCY</b>		<b>\$2,981,464.00</b>
<b>REMAINING CONTINGENCY</b>		<b>\$2,550,776.88</b>

Attachment: Rail and Transit CCOs Matrix\_Attachment-For Committee Mtg (2161 : Construction Contracts-CCOs)

**Bold-**Construction Change Orders approved since the last reporting to the Commuter Rail Transit Committee  
 Amounts shown in parentheses represent a credit to the Agency

## *Minute Action*

AGENDA ITEM: 3

**Date:** September 10, 2015

**Subject:**

July 2015 Right-of-Way Grants of Use Report

**Recommendation:**

That the Commuter Rail and Transit Committee receive July 2015 Right-of-Way Grants of Use Report.

**Background:**

The Board of Directors adopted the SANBAG Rail Property Policy (Policy No. 31602) on July 2, 2014. Within the policy under Section B - Policy Principals and Authority to Execute Grants of Right of Use, the Board authorized the Executive Director, or designee, to approve all grants of rights of use documents as approved to form by General Counsel.

Attachment A includes all grants of use approved during the month of July 2015.

**Financial Impact:**

This item has no impact on the Fiscal Year 2015/2016 Budget. Presentation of the monthly Right-of-Way report demonstrates compliance with the SANBAG Rail Property Policy (Policy No. 31602).

**Reviewed By:**

This item is not scheduled for review by any other policy committee or technical advisory committee.

**Responsible Staff:**

Monica Morales, Transit Analyst

Approved  
 Commuter Rail & Transit Committee  
 Date: September 10, 2015

Witnessed By:

Entity: CTA, CTC

Attachment A

July 2015 Right-of-Way Grants of Use Report

Vendor Name	Contract No.	Agreement Type	Linked Agreements	Executed Date	Term Date	Application Fee	Annual Admin Fee	Use Fee	Use Fee Duration	Fee's Waived	Waived Fee Amount	Waived Fee Comments
MCC Pipeline, Inc.	16-1001323	ROE	15-1001305	7/14/15	08/30/2015	\$ 2,230.00	\$0.00	\$1,500.00	one-time	NA	\$ -	

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**Total One-time Application Fee \$ 2,230.00**  
**Total Annual Admin Fee \$0.00**  
**Total One-time Use Fee \$1,500.00**

Attachment: Attachment A July 2015 (1870 : July 2015 Right-of-Way Grants of Use Report)

## *Minute Action*

AGENDA ITEM: 4

**Date:** *September 10, 2015*

**Subject:**

Advanced Regional Rail Integrated Vision - East (ARRIVE) Corridor Project Update

**Recommendation:**

That the Commuter Rail and Transit Committee receive and file a presentation on the ARRIVE Corridor study.

**Background:**

On August 14, 2014 the SANBAG Board of Directors received an update on the status and direction of the study with the full title of “Regional Rail/Land Use Vision and Implementation Strategy for the San Bernardino Metrolink Line.” The project has examined the feasibility of transitioning this traditional commuter rail corridor, over time, to a corridor that fully integrates transit oriented development (TOD) and regional rail. The corridor has been very successful as a commuter rail line, with over 12,000 daily passengers on 38 trains. This project has explored how to build on that success by evaluating opportunities for TOD across all of the stations on the San Bernardino Line within the County.

To provide greater identity for this corridor, “The ARRIVE Corridor” is being used as the moniker. The acronym ARRIVE stands for “Advanced Regional Rail Integrated Vision - East.” The term captures the thrust of this initiative, that ultimately this rail service will not merely send more commuters westward to Los Angeles, but will support a series of in-County destinations in their own right. The objective is to lay the groundwork that will eventually lead to an increase in the number of passengers “arriving” via rail in the County to work, shop, recreate, and conduct business. At the same time, the hope is that these station-area nodes can become more significant mixed-use, walkable activity centers, contributing to the livability and economy of the San Bernardino Valley.

The approach to this project recognizes that multiple challenges must be addressed and practical steps will be needed to bring this vision to reality. Currently, the San Bernardino Line is successful at primarily serving commuters to Los Angeles, but has the potential of becoming a more robust regional rail system that connects major nodes of activity to, from, and within San Bernardino County. The study team fully recognizes that this transition, if feasible, will take time and will require deliberate actions on the part of local jurisdictions, land owners, the business community, and transportation agencies. Some of the challenges include:

- Noise and air quality impacts from train activity;
- Limited undeveloped land around the station areas;
- Economic costs of redevelopment;
- Some station areas may not yet be ripe for higher density development and face competition for development energy from lower-cost greenfield development;
- High degree of parcelization;

*Entity: CTC*

## Commuter Rail &amp; Transit Committee Agenda Item

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- Significant destinations that are just outside the typical “catchment area” for rail transit stations;
- Concerns communities may have about densification in general;
- Difficulties convincing private developers and capital markets that mixed use and/or mixed-income housing projects can be viable and valuable at TOD sites;
- Challenges in balancing financial realities and social equity goals; and
- Fare structure on Metrolink that is higher than one would find in a light rail or rapid bus line

This project has engaged a broad cross-section of transportation, urban planning, economic, environmental, and other stakeholders to map out a vision for the corridor, to address the barriers listed above, and to define the steps for preparing the corridor for TOD. This includes the types of investments that will be needed as well as the mechanisms that must be put in place to support TOD. The focus is not primarily on land use planning, although a certain amount of land use planning has been involved. The primary emphasis has been on addressing the barriers listed above, particularly the economic, institutional, and environmental ones. The study team views the San Bernardino Metrolink line as an underutilized asset that has the potential for improved mobility, economic growth, and sustainability for San Bernardino County.

A key project element included convening an Urban Land Institute (ULI) Advisory Services Panel to assist the project team in identifying implementable actions to achieve the project objectives. An Advisory Services Panel consists of national experts in the fields of transportation planning, market analysis, economics, development, financing and architecture that can provide practical and candid advice for application in San Bernardino County. The panel was held from Monday, September 8, 2014 through Wednesday, September 10, 2014. The panel interviewed stakeholders the afternoon of Monday, September 8, 2014 at the 4 Points by Sheraton Hotel in Rancho Cucamonga. Stakeholders participating in the panel interview and final presentation by the panel included members of the public, city staff, county staff and elected officials.

The Advisory Services Panel focused on the following challenges to implementation of TOD in the ARRIVE corridor:

- Existing suburban development pattern – currently the corridor has no vertical mixed-use development and there is an extensive amount of vacant land within the urban boundaries of the six cities that will compete with TOD near the Metrolink stations.
- Recovering economy – the region is in recovery from significant effects of the Great Recession for both the housing and job markets.
- Conversion of existing uses around the stations – vacant sites around the stations are relatively small or confined and developed sites frequently have multiple owners that are reluctant to give up rental income from existing uses to sell for higher-density mixed-use development.
- Metrolink cost and service deficiencies – Metrolink is relatively expensive to use, with scheduling difficulties with connecting buses and lacks easy connections to nearby economic hubs such as Ontario International Airport, hospitals and employment centers.

Implementation strategies recommended by the panel included:

- Create place making – the transit connection at the Metrolink stations is insufficient to overcome the challenges of suburban development patterns, a relatively weak economy and Metrolink service deficiencies. SANBAG must catalyze action at the city level to

foster place making that changes the land use around the stations to produce higher density, more connectivity and greater concentration of interesting uses.

- Address the gap between market and costs – the market in the San Bernardino Valley is not strong enough to support the costs of higher-density, transit-oriented development around the Metrolink stations, especially where those costs include the expense of additional infrastructure to address the place-making goal. Resources need to be directed to address the gap between market and costs.
- Empower the cities – Although SANBAG can provide leadership and help catalyze change, the cities will be on the front line with implementation. SANBAG can assist cities with specific planning processes, infrastructure financing, and organizational expertise at crafting the public/private partnerships necessary for TOD to occur.
- Collaborate on implementation – In addition to empowering the cities, SANBAG needs to foster a more collaborative decision-making ethic on many fronts. Here are some key areas for collaboration:
  - Greater outreach and collaboration between the cities and the private sector
  - Partnership with SCAG on funding allocations to TOD
  - Greater coordination of the multiple transit providers
  - Greater involvement of the cities in a regional economic development entity

The study has continued to work off of the foundation laid by the ULI Advisory Services Panel. As the study is nearing completion, an overall corridor-wide vision and station-specific strategies have been developed. While the overall vision requires a long-term solution, near term strategies exist that can begin to move the corridor in the right direction. The study identified the following six overall corridor-wide vision elements:

- Metrolink operations improvements
  - Double-tracking of two segments
  - Increasing train frequency and mid-day trains
  - Reducing fare structure for short trips
  - Improving air quality through new equipment.
- Physical character and infrastructure enhancements for future TODs
  - Railway corridor as a transit entrance to the cities
  - Adequate land use setback if right-of-way is constrained for Metrolink and other improvements
  - Landscape/open space and sidewalk improvements
- Metrolink station accessibility and mobility improvements
  - Pedestrian and bicycle accessibility to the stations
  - Bus service/access to the stations (first and last mile strategies)
  - More seamless rail/bus integration
- Champion the expansion and operation of the network
  - Gold line extension
  - West Valley Connector and connection to Ontario International Airport
  - Redlands Rail
  - Metrolink service and operational improvements
- Creating a dynamic urban environment through land use tailored to individual stations
  - Brand stations along corridor
  - Higher density/intensity residential and mixed-use TOD at stations
  - Transit related retail and commercial uses
  - Adaptive reuse

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- Attract daytime and evening populations
- Park-once districts
  - Shared parking allows for multiple stops but park only once
  - Enhance place-making by freeing up space for development and public gathering

Corridor-wide implementation strategies have been grouped into three categories: transit infrastructure/operations, institutional and funding. Transit infrastructure/operations strategies include outreach to major employers and activity centers, continued implementation of bicycle, pedestrian and bus accessibility improvements, pursuit of funding for double-tracking of the rail corridor, development of a strategy for fare adjustments for short trips, integration of bus/rail fare media and acquisition of clean locomotives.

Institutional strategies include advocating for restoration of financial tools to offset the loss of redevelopment, organization of a marketing board to attract non-traditional developers, build TOD expertise through training and partnerships, streamline the development process for TOD and consideration of a land trust of economic development corporation. Funding strategies include developing partnerships between cities, SANBAG, Omnitrans and other stakeholders on sustainability funding to strengthen leverage for programs such as Cap and Trade, develop shared station-area parking, pursue quiet zone funding and tailor development impact fees and incentives for TOD.

A strategy that seems to offer the greatest potential for the corridor is the development of a marketing board that focuses its efforts on the Metrolink corridor and station area development throughout the San Bernardino Valley. The board would promote station development opportunities to developers and city leadership. A collaborative approach to marketing the corridor would provide greater leverage than individual cities particularly when pursuing grant funding opportunities.

The next steps for the ARRIVE corridor study are to develop a final project report and continue to coordinate with local jurisdictions on how best to move the corridor forward. A fact sheet has been provided with this agenda item, providing an overview of the ARRIVE implementation strategy.

***Financial Impact:***

This item is consistent with the adopted Fiscal Year 2015-2016 budget, Task 0404.

***Reviewed By:***

This item was reviewed by the Transportation Technical Advisory Committee on August 31, 2015. This item is not scheduled for review by any other policy committee.

***Responsible Staff:***

Timothy Byrne, Chief of Planning

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Approved  
Commuter Rail & Transit Committee  
Date: September 10, 2015

Witnessed By:

# THE ARRIVE CORRIDOR

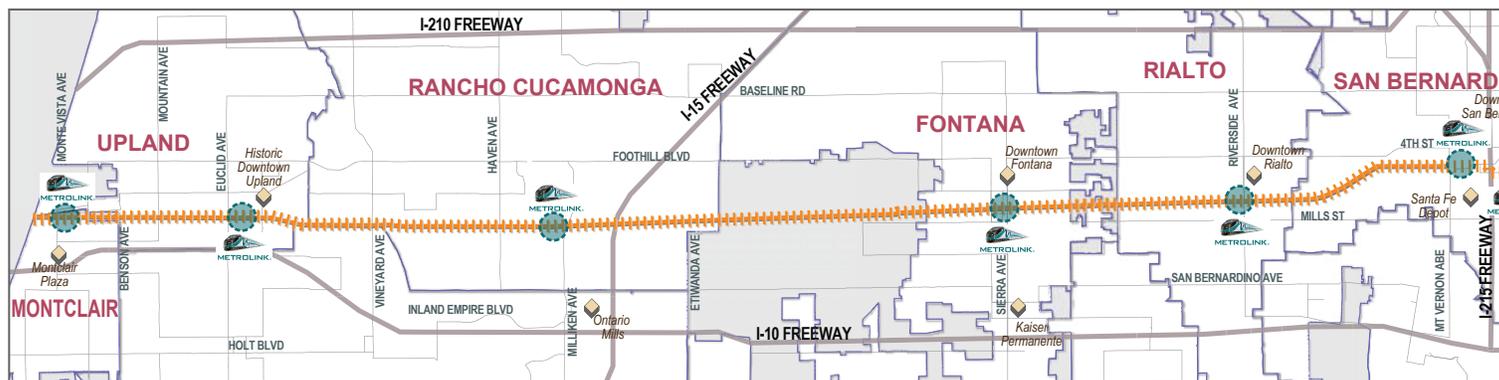
## About the Project

Metrolink in general and the San Bernardino Line and its station areas in particular have been highly successful at improving transit mobility, but they are also underutilized assets. Even though the San Bernardino Line is the busiest in the system, almost 90 percent of riders on the line access the system by car. Only about 6 percent walk or bike to the stations, suggesting that land use around the stations is neither proximate enough nor of sufficient density to generate substantial ridership from around the station areas.

The "ARRIVE Corridor" project will look into creating an integrated regional rail/land use vision and implementation strategy for the San Bernardino (SB) Metrolink Line and the areas around the Montclair, Upland, Rancho Cucamonga, Fontana, Rialto and San Bernardino stations. The acronym ARRIVE stands for "Advanced Regional Rail Integrated Vision - East."

This project will engage a broad cross-section of transportation, urban planning, economic, environmental and other stakeholders to map out a vision for the corridor, identify barriers and define the steps for implementation. The primary emphasis will be addressing the barriers to Transit-Oriented Development (TOD), particularly the economic, institutional, and environmental ones. This project has completed a market study that will help define the types of investments that will be required and the financial/policy mechanisms that may need to be put in place to transition station areas, over time, to more mixed-use, pedestrian-friendly activity centers. The existing conditions analysis and the market study can be found on SANBAG's website.

The project team recognizes that there are many challenges to developing TOD, particularly on a suburban commuter rail corridor. This is San Bernardino County's best opportunity to do so, and the high level of Metrolink service and ridership on this line is an asset that SANBAG and all cities along the corridor must seek to build upon. We have every reason to be optimistic, but must also understand and address the economic and institutional realities in a way that will increase the probability of success.



## Overall Project Objectives

- \* Define an overall vision and implementation strategy for transitioning the San Bernardino Metrolink line to a fully functional, integrated regional rail/TOD corridor.
- \* Set the stage for incorporating implementation initiatives into SANBAG, Metrolink and local jurisdictions' plans, policies and action plans.
- \* Make the station areas their own destinations, rather than the bedroom community for Downtown Los Angeles.
- \* Consider how Metrolink capacity and operational improvements might be staged over time to accomplish the vision.
- \* Determine how to improve access to destinations along the corridor from Metrolink station areas.
- \* Document the results for continuing reference by SANBAG and local jurisdictions to foster implementation of the corridor vision over time.
- \* Provide a "lessons learned" document that can be applied to other commuter rail corridors.

## Outreach

- \* Technical Advisory Committee (TAC)  
SANBAG, SCAG, Gruen Associates, HR&A, HDR, local jurisdiction planning and community development staff and Omnitrans
- \* Individual Stakeholder Outreach  
Civic groups, business leaders, developers, land owners etc.
- \* Community Workshops  
Opportunity to obtain input from the public and incorporate into ultimate corridor vision
- \* Urban Land Institute (ULI) Advisory Services Panel  
National experts panel including developers, planners, financiers, market analysts, economists, architects completed the final September 7-10, 2015. ULI Advisory Services Panel Report and can be found on SANBAG's website.

## Schedule

The project is expected to be completed by October of 2015.

# THE ARRIVE CORRIDOR

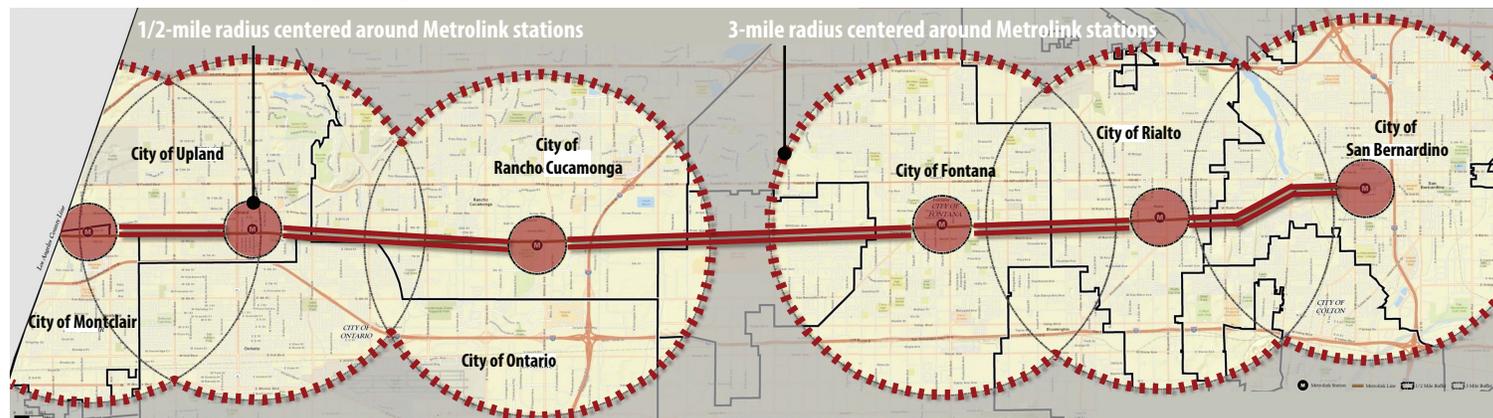
## Vision and Implementation Strategies - Working Draft

### ARRIVE Corridor Vision Statement

Transition the ARRIVE Corridor, over time, to an integrated TOD/regional rail corridor, serving residents and businesses within active, growing, transit-oriented communities at the station locations and providing a high degree of transit interconnectivity to Valley destinations

### ARRIVE Corridor Overall Strategy

- \* Corridor-wide Vision and Strategies
  - Keep strengthening the transit and multi-modal network
  - Build a "critical mass" of origins and destinations
  - Improve connectivity internally and to peripheral destinations
  - Position the entire corridor to attract investment
- \* Individual decisions by the cities in context of the corridor-wide game plan
  - Refine the regulatory environment to be conducive to TOD development
  - Continue to develop public/private partnerships with developers and securing funding



### Overall Corridor-Wide Vision<sup>1</sup>

- \* Metrolink Operations Improvements (long term)
  - Double-tracking of two segments
  - Increasing train frequency and mid-day trains
  - Improving air and noise quality through new equipment
- \* Physical Character and Infrastructure Enhancements for Future TODs (1/2-mi.)
  - Railway corridor as a "transit entrance" to the cities
  - Infrastructure/open space and sidewalk improvements
  - Quiet Zones
- \* Metrolink Station Accessibility and Mobility Improvements (3-mi.)
  - Pedestrian and bicycle accessibility to the Metrolink stations
  - More seamless rail/bus integration
- \* Champion the Expansion and Operation of the Network
  - Gold Line extension
  - West Valley Connector/Redlands Rail/ONT connection
- \* Creating a Dynamic Urban Environment through Land Use Tailored to Individual Stations
  - Brand/Theme stations along the corridor
  - Higher density/intensity residential and mixed-use TOD
- \* Park-Once Districts

### Potential Corridor-Wide Implementation Strategies<sup>1</sup>

- \* Transit Infrastructure/Operations
  - Outreach to major employers and activity centers
  - Pursue funding opportunities
- \* Institutional
  - Advocate for restoration of financial tools
  - Organize a Marketing Board to attract non-traditional developers
- \* Funding
  - City, SANBAG, and Omnitrans partnerships on sustainability funding to strengthen leverage such as Cap and Trade
  - Pursue funding for quiet zones



Attachment: ARRIVE Fact Sheet (1735 : ARRIVE Corridor)

<sup>1</sup> Lists are abbreviated representations of actual comprehensive recommendations

## *Minute Action*

AGENDA ITEM: 5

**Date:** *September 10, 2015*

**Subject:**

Amendment No. 1 to Memorandum of Understanding C12254 with the Southern California Regional Rail Authority for the Design and Construction Support for the Eastern Maintenance Facility and Downtown San Bernardino Passenger Rail Project

**Recommendation:**

That the Commuter Rail and Transit Committee recommend the Board, acting as the San Bernardino County Transportation Commission:

A. Approve Amendment No.1 to Contract No. C12254 with the Southern California Regional Rail Authority and the San Bernardino Associated Governments for the Design and Construction Support for the Eastern Maintenance Facility and the Downtown San Bernardino Passenger Rail Project, for an additional \$1,773,516 for an amended not-to exceed amount of \$2,562,491 and extend the contract term through June 30, 2017, with such revision as may be approved by the Executive Director and/or his designee in consultation with General Counsel.

B. Approve budget amendment to increase the Fiscal Year 2015/2016 budget for Task 0323 Downtown San Bernardino Passenger Rail Project in the amount of \$1,500,000 funded by the Local Transportation Fund for a new task total of \$52,661,438.

**Background:**

On July 11, 2012, the San Bernardino Associated Governments (SANBAG) Board of Directors approved the Memorandum of Understanding No. C12254 (MOU) with the Southern California Regional Rail Authority (SCRRA) for the design review and construction support for the expansion of the Eastern Maintenance Facility (EMF) and the Downtown San Bernardino Passenger Rail Project (DSBPRP) for a not-to-exceed amount of \$788,975. Construction of EMF is complete and the proposed amendment takes into account actual SCRRA expenses related to the EMF portion of the MOU. Construction of the DSBPRP is ongoing and the need for additional SCRRA activities has been identified.

SANBAG has encountered unforeseen delays to the DSBPRP schedule envisioned in the original agreement, which will result in an extended period of SCRRA support to the project. Additionally, SANBAG has requested that SCRRA provide additional support to the DSBPRP that was not included in the scope of the original MOU Agreement, therefore requiring a \$1,773,516 amendment as identified in Attachment A to the MOU. The additional services consist of:

1. Supply, installation, and integration of Ticket Vending Machines and Passenger Information Phones.
2. Testing and integration of Customer Information Systems in the SCRRA network.

**Entity:** *CTC*

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3. Supply of equipment, and management, coordination, testing, and integration for the Positive Train Control system for the First Mile extension into the existing SCRRRA network.
4. Statutory Inspection and Reporting of the track and signal infrastructure under Federal Railroad Administration requirements for the First Mile, subsequent to SANBAG accepting this responsibility for the Redlands Subdivision as of June 1, 2015.
5. Provision of railroad flagging support services for an extended period of time.

***Financial Impact:***

This item is not consistent with the Fiscal Year 2015/2016 SANBAG Budget. A budget amendment is included in the recommendation above increasing Task No. 0323 Downtown San Bernardino Passenger Rail Project in the amount of \$1,500,000 using Valley Local Transportation Funds.

***Reviewed By:***

This item is not scheduled for review by any other policy committee or technical advisory committee. SANBAG General Counsel and Contract Administrator have reviewed and approved this item and Memorandum of Understanding as to form.

***Responsible Staff:***

Carrie Schindler, Director of Transit and Rail

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Approved  
Commuter Rail & Transit Committee  
Date: September 10, 2015

Witnessed By:

**Contract Summary Sheet**

**General Contract Information**

Contract No: C12254 (00-1000716) Amendment No.: 1 Vendor No.: 2003  
 Vendor/Customer Name: Southern California Regional Rail Authority Sole Source?  Yes  No  
 Description: Design Review and Construction Support for the expansion of the EMF and the DSBPRP  
 Start Date: 06/21/2012 Expiration Date: 06/30/2016 Revised Expiration Date: 06/30/2017  
 Has Contract Term Been Amended?  No  Yes - Please Explain Extended to 6/30/2017  
 List Any Related Contracts Nos.: \_\_\_\_\_

Dollar Amount			
Original Contract	\$ 788,975.00	Original Contingency	\$ -
Revised Contract (Inclusive of Prior Amendments)	\$ 788,975.00	Revised Contingency (Inclusive of Prior Amendments)	\$ -
Current Amendment	\$ 1,773,516.00	Contingency Amendment	\$ -
TOTAL CONTRACT VALUE	\$ 2,562,491.00	TOTAL CONTINGENCY VALUE	\$ -
		TOTAL DOLLAR AUTHORITY (Contract Value and Contingency)	\$ 2,562,491.00

**Contract Authorization**

Executive Director Date: 99/99/999  
 Executive Director Action: \_\_\_\_\_  
 Board of Directors Date: 10/07/2015

Board of Directors Action:

The Board, acting as the San Bernardino County Transportation Commission:  
 A. Approve Amendment No.1 to Contract No. C12254 with the Southern California Regional Rail Authority and SANBAG for the Design and Construction Support for the Eastern Maintenance Facility and the Downtown San Bernardino Passenger Rail Project, increasing the contract amount by \$1,773,516 for an amended not-to exceed amount of \$2,562,491, with such revision as may be approved by the Executive Director in consultation with General Counsel.  
 B. Approve budget amendment to increase the Fiscal Year 2015/2016 budget for Task 0323 Downtown San Bernardino Passenger Rail Project in the amount of \$1,500,000 funded by the Local Transportation Fund for a new task total of \$52,661,438.

**Contract Management: Payable/Miscellaneous**

Invoice Warning: 20% Renewals: \_\_\_\_\_ Type:  Capital  PAA  Other  
 Retention: % Maximum Retention: \$ -  
 Services:  Construction  Intrgrnt/MOU/COOP  A & E Services  Other Professional Services  
 Disadvantaged Business Enterprise (DBE) Goal %

**Contract Management: Receivable**

E-76 and/or CTC Date \_\_\_\_\_ (Attach Copy)  Program Supplement No.: \_\_\_\_\_  
 Finance Letter  Reversion Date: \_\_\_\_\_  EA No.: \_\_\_\_\_

**All of the above MUST be submitted to FINANCE including originals, amendments and miscellaneous transaction changes**

**Additional Information**

Project Manager: Victor Lopez

Attachment: C12254-1\_SANBAG Contract Summary Sheet (1882 : Amendment to Metrolink 1st Mile Agreement)

**AMENDMENT NO. 1****SANBAG CONTRACT # C12254****MEMORANDUM OF UNDERSTANDING****BETWEEN THE****SAN BERNARDINO ASSOCIATED GOVERNMENTS****AND THE SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY****FOR THE DEVELOPMENT OF****THE EASTERN MAINTENANCE FACILITY (EMF) EXPANSION PHASE 3 PROJECT AND THE  
DOWNTOWN SAN BERNARDINO PASSENGER RAIL PROJECT (DSBPRP)**

This “AMENDMENT No. 1” to the Memorandum of Understanding for the Eastern Maintenance Facility (EMF) Expansion Phase 3 Project and the Downtown San Bernardino Passenger Rail Project (DSBPRP), effective June 21<sup>st</sup>, 2012, hereinafter referred to as “MOU” is made effective as of the \_\_\_\_\_ day of \_\_\_\_\_, 2015 (“Effective Date”) by and between the SAN BERNARDINO ASSOCIATED GOVERNMENTS (“SANBAG”), acting in its capacities as the San Bernardino County Transportation Commission (“Commission”) and the San Bernardino County Transportation Authority (“Authority”), and the SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY (“SCRRA”) (and together the “Parties”).

**RECITALS**

1. SANBAG and SCRRA entered into a Memorandum of Understanding dated June 21 2012, (“ORIGINAL AGREEMENT”) that defined the terms and conditions for the “Eastern Maintenance Facility (EMF) Expansion Phase 3 Project and the Downtown San Bernardino Passenger Rail Project (DSBPRP)”. In approving the ORIGINAL AGREEMENT, SANBAG was acting in its capacities as the Commission and the Authority. These Projects may be summarized as:

- a. The EMF expansion accommodates the staging, servicing, and maintenance of train sets proposed for operation of both Projects, inclusive of operations for the San Bernardino and Inland Empire Orange County (“IEOC”) lines.

- b. The DSBPRP is an extension of the existing SCRRA service utilizing the Redlands Branch right-of-way (ROW), from the current Santa Fe Depot terminus to the proposed San Bernardino Transit Center (SBTC) to be located at Rialto Avenue and E Street. The route from the Santa Fe Depot to the SBTC may be referred to as the “First Mile”.
2. SANBAG as lead agency is primarily responsible for all design and construction of the EMF and the DSBPRP. SCRRA, controls, operates, and maintains the EMF pursuant to its rights under a December 12, 2007 Agreement with the BNSF, and upon completion of construction will operate and maintain the service, ROW and associated infrastructure relative to the Operating Envelope to be developed through the EMF and DSBPRP. SCRRA's technical and operational assistance, guidance, and approval are therefore imperative to the successful design and construction of the Operating Envelope of both the EMF expansion Project and DSBPRP.
3. SANBAG has encountered unforeseen delays to the DSBPRP construction schedule envisioned in the ORIGINAL AGREEMENT, which will result in an extended period of SCRRA support to the project.
4. SANBAG has requested that SCRRA provide additional support to the DSBPRP not included within the scope of the ORIGINAL AGREEMENT:
- a. Supply, installation and integration of Ticket Vending Machines and Passenger Information Phones
  - b. Testing and integration of Customer Information Systems into the SCRRA network
  - c. Supply of equipment, and management coordination, testing and integration for the Positive Train Control system for the First Mile extension into the existing SCRRA network
  - d. Statutory Inspection and Reporting of the track and signal infrastructure under Federal Railroad Administration requirements for the First Mile, subsequent to SANBAG accepting this responsibility for the Redlands Subdivision through agreement with BNSF as of June 1<sup>st</sup>, 2015
  - e. Provision of railroad protective flagging support services for an extended period of time

5. SCRRA has requested that the budget for estimated support service costs be revised to accommodate additional scope as outlined above.

6. Therefore, it has been agreed that the ORIGINAL AGREEMENT will be amended in this Amendment No. 1 to clarify the roles and responsibilities for SCRRA in regards to the DSBPRP PROJECT.

## **AGREEMENT**

In consideration of the promises and mutual understandings of the parties hereto, SCRRA and SANBAG agree to changes, deletions and additions as identified below:

### **I. PARTIES AND TERM:**

#### **Article B. is changed to the following:**

The Term of this MOU will commence on the date first specified above and terminate upon the completion, acceptance and handover to SCRRA for operation and maintenance of the EMF expansion and DSBPRP operating envelopes, or June 30, **2017** whichever is earlier. For purposes of this MOU, the “Operating Envelope” shall mean those systems required by SCRRA for the operation and maintenance of Metrolink service, including track, signals, at-grade crossings, visual and audio information systems and crew facilities or within 25 feet from track centerlines including platforms.

### **III. SANBAG’s RESPONSIBILITIES:**

#### **Article D. 18 is changed to the following:**

All SCRRA or ROTEM deliveries and movements are to be unhindered by SANBAG’s contractor(s), with appropriate protection/flagging provision at SANBAG’s cost for any movement within the EMF construction area. SCRRA will provide flagging at the EMF through existing service providers at SANBAG’s cost. SANBAG and its contractors must coordinate with SCRRA to

arrange for all necessary SCRRA flagging. **Any work affecting the Shortway line will require flagging support provided by SCRRA and must be coordinated with both parties.** Flagging for the DSBPRP throughout the First Mile and the Santa Fe Depot will also be coordinated with SCRRA and BNSF. BNSF will provide flagging along its Main Line 3 and for all areas **where project works have the potential to affect BNSF operations.** SCRRA will provide flagging along the San Gabriel Subdivision Main Line, along platform tracks P1 through P6, S7 and S8 and for **any other areas where project work has the potential to affect Metrolink operations or infrastructure**

**Article E. 1 is changed to the following:**

SANBAG and its contractors will coordinate with BNSF and take full responsibility for maintenance of all ROW and infrastructure associated with the portion of the Redlands Branch affected by the DSBPRP (First Mile). **Upon SANBAG commencing Agency Rail Service and assuming full responsibility for all maintenance, inspection and statutory Federal Railroad Administration (FRA) reporting requirements through written agreement with BNSF (understood to be from June 1<sup>st</sup>, 2015 onwards) for the First Mile, SCRRA will, at SANBAG's written request and at SANBAG's sole expense:**

- a. **Secure and place out of service the First Mile every Monday morning and inspect track and place back into service the First Mile every Friday afternoon on a weekly basis, coordinated with SANBAG and its contractors,**
- b. **Assume responsibility for all inspections and reporting to the FRA for the First Mile track work and track infrastructure under all applicable FRA Part 213 legislation,**
- c. **Assume responsibility for all inspections and reporting to the FRA for the First Mile signal system and signal system infrastructure under all applicable FRA Part 234 legislation,**

until such time that formal handover to SCRRA at completion of DSBPRP Project construction, testing and commissioning work occurs. **All track, track infrastructure, signal system and signal system infrastructure throughout the First Mile will at all times continue to be maintained by SANBAG and its contractors prior to formal handover to SCRRA. Should a non-compliance**

be found during inspection by SCRRA, SANBAG and its contractors will immediately rectify and confirm action to SCRRA.

#### IV. SCRRA's RESPONSIBILITIES:

##### Article B. is changed to the following:

SCRRA may assign on a part-time basis a consulting engineer retained by SCRRA to attend meetings of SANBAG's Project team, to review submissions, advise on technical issues relating to design and construction of the Operating Envelope **and to provide inspection and oversight of work to ensure compliance with SCRRA standards and procedures.** At SCRRA's discretion, this engineer will be the day-to-day contact point between SANBAG and SCRRA for the Project and SCRRA will so notify SANBAG in writing. SCRRA's consulting engineer will also provide technical support to SANBAG's Project consultants in preparation of SANBAG's Project Management Plan. The time spent by this designated consulting engineer will be billable to and reimbursed by SANBAG in accordance with the terms of this Agreement.

##### Article E. is changed to the following:

SCRRA will:

- a. At SANBAG's request, provide any additional signal design and construction support for the Project,
- b. Procure, install, test and integrate into SCRRA's network two (2 No.) Ticket Vending Machines (TVMs) and three (3 No.) Passenger Information Phones (PIPs) at the new San Bernardino Transit Center and relocate, test and integrate two (2 No.) TVMs at the San Bernardino Santa Fe Depot Station,**
- c. Provide design and contractor support to assist with facilitating installation, testing and integration into SCRRA's network of the communication and Customer Information System (CIS) at both the Santa Fe Depot Station and new San Bernardino Transit Center,**
- d. Provide design, consultant and contractor support to assist with facilitating the installation, testing and integration into SCRRA's network of the Positive Train**

**Control (PTC) infrastructure and systems throughout the DSBPRP. Procure Radios, WMS and Software licenses associated with the PTC system.**

**All such support will be provided by SCRRA's consultants and contractors and will be fully reimbursed by SANBAG in accordance with the terms of this Agreement.**

**VI. PAYMENT FOR SCRRA WORK:**

**Article A. is changed to the following:**

Except as provided below, SANBAG will reimburse SCRRA on a time and materials basis in the total amount not-to-exceed **\$1,810,391** (“SCRRA Expense Cap”) for various costs incurred by SCRRA pursuant to this MOU, associated with the EMF Expansion and the DSBPR Project. In addition, SANBAG will reimburse SCRRA for all SCRRA flagging costs up to a total amount not-to-exceed **\$752,100** (**\$168,000** for the EMF and **\$584,100** for the DSBPRP), this figure being SCRRA’s estimated cost (see Attachment A). SCRRA will reassess provision of flagging costs as the work proceeds for both the EMF and DSBPRP, and will notify SANBAG a minimum of 90 days before these costs are forecast to be expended, to allow renegotiation between SCRRA and SANBAG of the total reimbursable costs for flagging provision. SCRRA will send monthly invoices to SANBAG. With each monthly invoice, SCRRA will include all back-up material including but not limited to detailed expenditures, time cards, invoices from third parties including consultants and contractors, and descriptions of activities performed. SANBAG will pay invoices within thirty (30) days of receipt of a complete invoice that contains all back-up material. SANBAG acknowledges that until SCRRA receives formal approval of its overhead rates by the Federal Transit Administration, (FTA), SCRRA’s cognizant audit agency, at the completion of its audit, an estimated allocated overhead rate will be provided for invoicing purposes.

**All paragraphs of the ORIGINAL AGREEMENT that are not amended in the Amendment No. 1 remain unchanged and in full force and effect.**

**WITNESS WHEREOF**, the **SAN BERNARDINO ASSOCIATED GOVERNMENTS** and the **SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY** have caused this **AGREEMENT** to be executed and attested by their duly qualified and authorized officials.

**SOUTHERN CALIFORNIA  
REGIONAL RAIL AUTHORITY**

**SAN BERNARDINO ASSOCIATED  
GOVERNMENTS**

By: \_\_\_\_\_  
Arthur T. Leahy  
Chief Executive Officer

By: \_\_\_\_\_  
Ryan McEachron  
Board President

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**APPROVED AS TO FORM:**

**APPROVED AS TO FORM:**

By: \_\_\_\_\_  
Don O. Del Rio  
General Counsel

By: \_\_\_\_\_  
Robert D. Herrick  
Asst. General Counsel

Date: \_\_\_\_\_

Date: \_\_\_\_\_

Attachment: C12254-1\_AMENDMENT NO. 1 EMF & DSBPRP SANBAG-SCRRRA MOU [Revision 1] (1882 : Amendment to Metrolink 1st Mile

**ATTACHMENT A**

**COST ESTIMATE OF SCRRRA SERVICES**

Attachment: C12254-1\_AMENDMENT NO. 1 EMF & DSBPRP SANBAG-SCRRRA MOU [Revision 1] (1882 : Amendment to Metrolink 1st Mile

**ATTACHMENT A****COST ESTIMATE OF SCRRA SERVICES****SCRRA EMF and DSBPRP Budget Summary and Forecasts as at May 1st, 2015****Assumptions:**

- 1) Allow 18 months (78 weeks) support to project completion (May 2015 - October 2016). Allow 3 months close-out period.
- 2) All CIS signage, speakers, strobes, fiber/power cables, Comms Shelter, Comms Shelter equipment to be procured, installed and tested by Shimmick, with PRE site support through SANBAG.
- 3) Existing TVM to be relocated at SFDepot. Two new TVMs to be provided by SCRRA at Downtown SBD
- 4) Passenger Information Phones (3 No.) to be provided by SCRRA for each platform at Downtown San Bernardino
- 5) All CCTV equipment, materials, testing to be procured, installed and tested by Shimmick at Downtown SBD
- 6) Track / Signal Inspection and FRA Reporting between May 2015 and December 2016 for First Mile section of Redlands Branch only. SCRRA operating/maintenance budget will be adjusted to cover inspection, maintenance and FRA reporting for the Redlands Branch beyond the first Mile.
- 7) Agency Staff Burdened hourly Rate based upon a multiplier of 3.36 (Salary = 1.0, Fringe Benefit = 0.60, Estimated Overhead = 1.76, TOTAL = 3.36)

<b>Agency Staff</b>	Duration	Hours	Hourly Rate (burdened)	Budget	Total
Project Manager	Construction	78 weeks	16	\$202.91 /hr	\$ 253,232
	Close-out	3 months	20	\$202.91/hr	\$ 12,175
Assist Director / Director Administration		21 months	5	\$221.42/hr	\$ 23,249
		21 months	3	\$164.64/hr	\$ 10,372
					<b>\$ 299,028</b>
<b>SCRRA Testing and Inspection</b>					
Inspector	78 weeks	8	\$110.85/hr	\$ 69,170	<b>\$ 69,170</b>
<b>Flagging</b>					
EIC	78 weeks	5 shifts	\$1200/shift	\$ 468,000	
EIC Contingency		15%		\$ 70,200	
RWP Training		30 classes	\$500/class	\$ 15,000	
Cable/Signal Marking		10 shifts	\$250/shift	\$ 2,500	
					<b>\$ 555,700</b>
<b>Signal Support (Mass Electric Maintenance)</b>					
Fiber CIS Cut-over support, witness testing, general oversight, meetings			LS	\$ 50,000	<b>\$ 50,000</b>
<b>Track Support (VTMI)</b>					
General Support to cut-overs, protection arrangements, meetings			LS	\$ 30,000	<b>\$ 30,000</b>
<b>TVMs</b>					
SFDepot - Relocation				\$ 10,000	
Downtown SBD - 2 No. Machines				\$ 120,000	
- Installation				\$ 10,000	
					<b>\$ 140,000</b>
<b>Passenger Information Phones</b>					
Downtown SBD - 3 No. phones, installation and testing				\$ 24,000	<b>\$ 24,000</b>

<b>Redlands Subdivision First Mile Inspection and FRA Reporting</b> (Assumed June 2015 thru Dec 2016)					
<b>Signals (Mass Electric):</b>		19 months	\$12,000/month	\$	228,000
<b>Track (VTMI):</b>					
Track Inspections/Reporting and take out/put back into service		19 months	\$8,000/month	\$	152,000
Lytle Creek Bridge Inspection			LS	\$	8,000
					<b>\$ 388,000</b>
<b>PTC</b>					
See separate attachment					<b>\$ 601,393</b>
<b>TOTAL SCRRRA BUDGET REQUIRED FROM MAY 2015 TO COMPLETION</b>					<b>\$ 2,157,291</b>

**Budget Comparison:**

Total available budget in June 2012 MOU for EMF (\$157,650) and DSBPRP (\$631,325) = **\$788,975**

	EMF Planned	EMF Actual	DSBPRP Planned Jun-12	DSBPRP Actual Dec-13 toApr-15	DSBPRP May-15 to Dec-16	DSBPRP Final
Agency Staff	\$ 73,050	\$ 60,000	\$ 160,325	\$ 113,300	\$ 299,028	\$ 412,328
Consultant / Contractor	\$ 48,600	\$ 9,000	\$ 135,000	\$ 26,500	\$ 149,170	\$ 175,670
Flagging	\$ 36,000	\$ 168,000	\$ 336,000	\$ 28,400	\$ 555,700	\$ 584,100
TVMs/PIPs	\$ -	\$ -	\$ -	\$ -	\$ 164,000	\$ 164,000
Total	\$ 157,650	\$ 237,000	\$ 631,325	\$ 168,200	\$ 1,167,898	\$ 1,336,098
<b>Additional Funding Required (Final - Planned)</b>		<b>\$ 79,350</b>				<b>\$ 704,773</b>

DSBPRP Final (with PTC and FRA Track/Signal Inspections)	
PTC	\$ 601,393
FRA Inspections	\$ 388,000
	<b>\$ 989,393</b>

<b>TOTAL ADDITIONAL FUNDING REQUIRED TO EXISTING JUNE 2012 MOU</b>	<b>\$ 1,773,516</b>
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**Notes:**

- 1) June 2012 budget did not include PTC support costs. At this PTC design and implementation was at an early stage of development.
- 2) June 2012 budget did not include procurement and installation of TVMs, PIPs or support services to cut-overs and SCRRRA system integration
- 3) June 2012 budget did not consider track or signal support for inspection and FRA reporting for First Mile. Handover assumed upon construction completion.
- 4) June 2012 budget did not include general VTMI support on the assumption prime contractor would employ a track work subcontractor familiar with SCRRRA operations
- 5) Project schedule affecting SCRRRA infrastructure and support has been delayed by 11 months since February 2014 baseline schedule issued. SCRRRA has continued to support meetings and discussions throughout this time, incurring \$168,200 costs
- 6) Additional flagging services were provided by SCRRRA, at BNSF request, for EMF Shortway support that were not budgeted in June 2012. Total Flagging expenditure was \$168,000, resulting in \$80,000 overspend to EMF total budget.
- 7) Overall schedule for DSBPRP was not defined in June 2012

**San Bernardino First Mile Project (DSBPRP)**

**Cost Estimate for PTC Implementation**

<b>Phases/ Activities:</b>	<b>Phase 1 - 3:</b> Coordination & Planning, Input & Design Support/Review, Task Orders	<b>Phase 4:</b> PTC Equip. Procurement, Installation, Design Review	<b>Phase 5/6:</b> Integration, Field Testing, FRA Coord, Back Office, Docum'tn, Cutover
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Function	Firm	Detail	FB Rate	Unit	2015												2016												Total Hrs	Total Cost
					May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec						
Project Management/ Coordination	SCRRA Consultant	PM	200	Hr	6	6	6	15	15	15	15	15	15	15	20	20	20	20	25	25	25	20	15	10	323	64,600				
		Project Controls	115	Hr	4	4	4	4	4	4	4	4	4	8	8	10	10	10	20	20	20	15	10	4	171	19,665				
SCRRA Agency Support	SCRRA	Director PTC	250	Hr	2	2	2	2	2	2	2	2	2	2	2	8	8	10	20	20	20	10	8	2	128	32,000				
		Add'l SCRRA PTC Staff	150	Hr	2	4	4	4	4	4	12	12	12	12	12	12	20	20	20	20	20	12	12	8	226	33,900				
Procure Radios, WMS, Software Licenses (4 each + 1 spare= 5)	SCRRA	PTC Wayside Radios (CalAmp)	1,800	Each														5						5	9,000					
		MCC Radio License & Maint	770	Each														5						5	3,850					
		WMS Units (Lilee)	3,950	Each														5						5	19,750					
		MCC WMS License	900	Each														5						5	4,500					
		Pre-paid Warranties	1,500	Each														10						10	15,000					
		Shipping, Procurement	700	Each														10						10	7,000					
		PTG 10% Markup	10	%														1						1	5,910					
Programming & Testing Radios	MASS	Back Office Support	150	Hr									3	3	8	8	10	20	20	80	20	8	2	182	27,300					
Survey & SUBDIV	RSE	PM	180	Hr																				2	162	29,160				
		Survey	90	Hr									4	4	6	10	40	8	8	8	8	20	40	8	2	166	14,940			
Back Office (CAD/BOS/MDM)	Wabtec/MASS	Back Office Support	150	Hr									3	3	3	8	8	10	20	20	20	10	8	2	115	17,250				
Comm Testing	MASS (222)		150	Hr									2	2	2	8	8	10	20	20	20	10	8	2	112	16,800				
Hyrail V&V	SCRRA	2-person Hy-rail Team	150	Hr													12	12	20	20	40	10		114	17,100					
		Config Mgmt Documentation	150	Hr															10	20	40	10		80	12,000					
		Vehicle usage	100	Day																	5			5	500					
CIS Back Office	MASS	Computer Programmer	150	Hr									2	2	2	8	8	10	20	20	20	10	8	2	112	16,800				
			150	Hr									2	2	2	8	8	10	20	20	20	10	8	2	112	16,800				
PTC Technical Suppt, FRA Submittals	RailPros, Systra	RailPros PM	250	Hr	3	4	4	4	4	6	6	6	8	8	8	10	10	10	20	20	20	10	8	2	171	42,750				
		RailPros Suppt Staff	150	Hr	3	3	3	3	3	3	3	3	3	3	3	8	8	10	20	20	20	10	8	2	139	20,850				
		Systra PM	225	Hr	3	4	4	4	4	6	6	6	8	8	8	8	8	10	20	20	20	10	8	2	167	37,575				
		Systra Suppt Staff	150	Hr	3	3	3	3	3	3	3	3	3	3	3	8	8	10	10	10	10	10	8	2	109	16,350				
Permits, FCC Licensing	Dodson	PM	150	Hr					2	2	2	20	40	40	20	8	8	2						144	21,600					

Subtotal 522,950  
 Contingency 78,443  
**Total 601,393**

Attachment: C12254-1\_Cost Estimate\_Attachment A (1882 : Amendment to Metrolink 1st Mile Agreement)

## *Minute Action*

AGENDA ITEM: 6

**Date:** September 10, 2015

**Subject:**

Redlands Passenger Rail Project Update

**Recommendation:**

That the Commuter Rail and Transit Committee receive an update on the Redlands Passenger Rail Project.

**Background:**

With the San Bernardino Associated Governments (SANBAG) Board of Directors identifying the Redlands Passenger Rail Project (RPRP) as one of its priority projects and RPRP having cleared environmental review in March of 2015, staff is moving forward with delivery of the project. Implementation of a new passenger rail service is complex, including not only design and construction but regulatory compliance and acquisition of new rail vehicles and operating and maintenance contracts. Below is a summary of key milestones and current status:

ACTIVITY	STATUS
Environmental Clearance	March 2015 - Completed
Award of the Program Management Contract	September 2015 - Completed
Award of the Final Design Contract	October 2015 - Scheduled
Award of the Public Outreach and Branding Services Contract	October 2015 - Scheduled
Determination of the Operating Structure	November 2015 – Scheduled
Award of the Vehicle Maintenance Facility Design Contract	December 2015 - Scheduled
Release Request for Proposal for Vehicle Procurement	February 2016 - Scheduled
Advertisement of Early Utility Relocation Construction Contract	April 2016 - Pending
Award of the Vehicle Procurement Contract	October 2016- Pending
Advertisement of RPRP Construction Contract	June 2017 – Scheduled
Begin Receiving Vehicles	October 2019- Pending
Construction Completion	Early 2020 - Pending
Operational	Mid 2020 - Pending

As indicated above, procurement of vehicles is one of the key activities with a long lead time. In the planning phases, the use of used locomotive hauled coaches with a Tier 4 upgrade and refurbishment was identified which was estimated at \$16 million for three train consists. As RPRP progressed through the environmental phase the use of diesel multiple unit (DMU) vehicles was identified and ultimately adopted as part of the Locally Preferred Alternative. In April 2015, a strategy to secure DMU vehicles was proposed by using a TEX Rail vehicle procurement contract option. On April 1, 2015, the SANBAG Board of Directors authorized the Director of Transit and Rail Programs to submit a letter to TEX Rail requesting they include a procurement option of DMUs for RPRP in their vehicle procurement contract. It is common for other agencies to request to be included on procurement options of transit vehicles, allowing for

*Entity: CTA*

added flexibility and lower costs due to economies of scale. However, the Federal Transit Administration (FTA) requires that all agencies jointly wanting to procure rolling stock to be named in the proposal during the initiation of the competitive process. Unfortunately, SANBAG's request for a contract option occurred after TEX Rail's competitive procurement was released. As such, RPRP vehicle procurement through the TEX Rail procurement is not an option. It should be noted that TEX Rail procured the FLIRT DMU manufactured by Stadler which has more seating capacity than what RPRP requires. The final TEX Rail procurement pricing for the larger FLIRT DMU that meets Buy America Requirements and was determined to meet the Federal Railroad Administration's (FRA) requirements for crashworthiness is \$11 million each. There are smaller DMU vehicles manufactured with the seating capacity needed for RPRP that are likely to meet the FRA's requirements for crashworthiness through FRA's Alternative Vehicle Technology program waiver process. Should federal funds be used to procure the RPRP vehicles then the vehicles would have to meet Buy America Requirements.

RPRP requires a minimum of three vehicles; two to run the daily operation and one in reserve as a ready spare. It is recommended a fourth vehicle be purchased to ensure service is not interrupted should one of the vehicles be taken out of service for an extended period of time for maintenance or repairs. Staff is considering purchasing three vehicles with an option for a fourth vehicle with the intent of using the fourth vehicle as an avenue to implement the use of alternative energy if possible. Any such strategy will be presented to the Board for approval.

In July 2015, SANBAG received the final report on the RPRP Operations/Maintenance and Vehicle Selection Study. A comprehensive overview of the findings is scheduled for the October 2015 Commuter Rail and Transit Committee and will include a more in depth discussion on the different DMU vendors as well as pros and cons of various vehicle options. However, since the findings indicate that it is likely that the vehicle procurement costs and vehicle maintenance facility costs will exceed what was budgeted in the 2014 Ten-Year Delivery Plan; SANBAG staff is providing an update on the overall project costs in conjunction with the above milestone summary.

The 2014 Ten-Year Delivery Plan identified an overall capital project cost of \$242 million with \$16 million identified for vehicles. The current estimate for three vehicles likely to meet the FRA's requirements for crashworthiness through FRA's Alternative Vehicle Technology program waiver process ranges from \$18 million to \$22 million, depending on the need to meet Buy America Requirements, resulting in a difference of \$2 million to \$6 million. It should be noted that with procurement of the vehicles there will be operational costs associated with testing, special tools, spare parts, training, etc. that are not included in the above estimates. Additionally, the estimate for the vehicle maintenance facility has increased from \$1 million to \$7 million resulting in a difference of \$6 million. The cost estimate for the maintenance facility will be further refined as final design progresses. Staff will continue to seek the most cost effective approach for the maintenance facility taking both capital construction costs and life-cycle operations costs into consideration.

Table 1 provides an updated overall capital project cost which takes into account the updated vehicle and vehicle maintenance facility costs as well as the current construction estimate and final contract amounts for Program Management, Final Design and Public Outreach/Branding. The current estimate ranges from \$246 million to \$250 million, \$4 million to \$8 million higher than the funding provided in the 2014 Ten-Year Delivery Plan. Funding for this project comes

## Commuter Rail &amp; Transit Committee Agenda Item

September 10, 2015

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from both highway and transit eligible fund sources. Therefore, funding for both the Highway and Rail Programs will need to be analyzed collectively to determine not only the effect of these cost increases on future transit projects such as the Gold Line, projected funding needs by both Omnitrans and Metrolink, and also projects such as the I-10 and I-15 Express Lanes. As part of the 2016 Ten-Year Delivery Plan update staff will analyze the effect of this cost increase on those projects. Lastly, earlier this year SANBAG submitted a request for \$14 million in 2015 TIGER Grant Funding that identified the need for additional vehicle funding. Notice of the 2015 TIGER Grant award recipients is expected in September. SANBAG staff will continue to seek other grant opportunities as well.

***Financial Impact:***

This item has no impact on the SANBAG Fiscal Year 2015/2016 Budget.

***Reviewed By:***

This item is not scheduled for review by any other policy committee or technical advisory committee.

***Responsible Staff:***

Carrie Schindler, Director of Transit and Rail

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Approved  
Commuter Rail & Transit Committee  
Date: September 10, 2015

Witnessed By:

Table 1

Redlands Passenger Rail Project Total Estimated Capital Delivery Cost

Capital Cost Component	Preliminary Engineering & Environmental Clearance	Alabama Street and Colton Avenue Early Work	Operation and Vehicle Selection Study	Program Management	Utility Potholing, Permitting and Mitigation	Final Design, Right-of-Way Engineering, & Utilities	Vehicle Maintenance Facility Design	Right-of-Way Acquisition and Legal Services	Metrolink Design Coordination and Positive Train Control	Public Outreach and Branding	Construction & Construction Management <sup>1</sup>	Vehicles <sup>2</sup>	Total <sup>3</sup>
Amount	\$10,067,471	\$3,075,717	\$543,266	\$11,828,524	\$1,227,893	\$25,230,000	\$750,000	\$5,100,000	\$3,650,000	\$500,000	\$166,000,000	\$18,000,000 to \$22,000,000	\$246,000,000 to \$250,000,000

<sup>1</sup>Includes costs associated with construction of the maintenance facility and utility relocation contract items.

<sup>2</sup>Does not include costs associated with special tools, testing, spare parts, etc.

<sup>3</sup>Does not include operation costs.

## *Minute Action*

AGENDA ITEM: 7

**Date:** *September 10, 2015*

**Subject:**

Award Redlands Passenger Rail Project - Mainline Design

**Recommendation:**

That the Commuter Rail and Transit Committee recommend the Board, acting in its capacity as the San Bernardino County Transportation Authority:

- A. Approve Contract No. 15-1001093 with HDR Engineering, Inc. for a five year term, with two one-year options in an amount not-to-exceed \$25,230,000 for Final Mainline Design Services on the Redlands Passenger Rail Project contingent upon approval of proposed insurance coverage by the SANBAG Risk Manager and General Counsel.
- B. Approve contingency of an amount not-to-exceed \$2,523,000 for Contract No. 15-1001093 and authorize the Executive Director or his designee to release contingency as necessary for the project.

**Background:**

With the San Bernardino Associated Governments (SANBAG) Board of Directors identifying the Redlands Passenger Rail Project (RPRP) as one of its priority projects and RPRP having cleared environmental review in March of this year, staff is moving forward with the delivery of the project. The implementation of a new passenger rail service is very complex, thus several types of consultants have been identified that will assist SANBAG staff in implementing the project, including program management, maintenance facility design, right-of-way legal services, and construction management. In addition, assistance is needed by staff to complete the final design of the mainline portion of the project.

The Mainline Design Consultant will assist SANBAG staff with performing final design, securing environmental and other necessary permits, design services during construction, environmental studies, and support services during outreach and coordination with third parties as required for the construction and implementation of the mainline portion of RPRP. The firm that the Evaluation Committee recommends for contract award based on technical abilities is HDR Engineering, Inc.

Discussions regarding appropriate insurance coverage and amounts for the HDR Engineering, Inc. team are currently ongoing and could have the potential to affect the final contract amount. In addition, SANBAG staff anticipates amending this contract in the future to include scope and fee to accommodate the New York Street Station and improvements to the University Station. These improvements would be funded by Esri and the University of Redlands respectively and memorialized in individual cooperative agreements which are scheduled to be presented to the SANBAG Board later this year.

*Entity: CTA*

Commuter Rail & Transit Committee Agenda Item

September 10, 2015

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Staff began the procurement process for all the necessary identified consultant services in December of 2014, starting with a consultant workshop followed by more than two-dozen meetings with consultants prior to release of Request for Proposal (RFP) No. 15-1001093 for Final Design services on March 11, 2015. This RFP was sent electronically to approximately five hundred fifty eight (558) consultants registered on Planet Bids. The solicitation was issued in accordance with current SANBAG policies and procedures for Architectural and Engineering services. The RFP was posted on SANBAG's website along with four trade publications. A Pre-Proposal meeting was held on March 24, 2015 and was attended by thirty-three (33) people representing twenty-nine (29) firms.

On May 1, 2015, one (1) proposal was received by the date and time specified in the RFP. HDR Engineering, Inc. was the only firm that submitted a proposal. Consultants that attended the Pre-Proposal Meeting and did not submit a proposal were contacted and stated that they were sub-consultants and could not find a prime consultant to team with. A responsiveness review was conducted by the Procurement Manager and found the proposal to be responsive.

The following is a summary of the events that transpired in the evaluation and selection process.

Summary of Evaluation Process:

May 1, 2015 – Copies of the proposal were disseminated to all evaluation panel members. Copies of the RFP, Addendums, Score Sheets and the Declaration of Impartiality and Confidentiality form were also distributed to the evaluation panel members. The Evaluation Panel was comprised of two individuals from SANBAG, one from the Orange County Transportation Authority, one from the Riverside County Transportation Commission, and the final individual was from the Southern California Regional Rail Authority.

Evaluation Panel Meeting:

Evaluators concluded their individual review of the proposal and convened to review, discuss and score the proposal. The Evaluation Panel members met on May 19, 2015 and discussed the proposal according to the evaluation criteria, including the proposal's strengths and weaknesses. The proposal's strengths included: knowledge of the project, knowledgeable staff, addressed a lot of potential issues, good sub-consultants, and an excellent work plan. The evaluation panel did not find any major weaknesses within the proposal.

The majority of the references provided by HDR Engineering, Inc. are members of the evaluation panel. At the completion of the discussion, the evaluation panel members individually scored the proposal based on the following evaluation criteria: Qualifications of the Firm, Related Experience and References - 30%; Proposed Staffing and Projection Organization - 30%; and Technical Approach/Work Plan - 40%.

Overall, the evaluation panel scored the firm very high. Minor variances in the criteria scores were noted and discussed. Full detail of the scores is included in the Contract Audit File.

As a result of the scoring, the evaluation panel recommends that the contract to perform the scope of work as outlined in the Request for Proposal 15-1001093 RPRP Final Design be awarded to HDR Engineering, Inc. The firm clearly demonstrated a thorough understanding of the scope of work and proposed an overall solid team.

The proposed fund source for the contract is Valley Metrolink and Passenger Rail Program funds. Although the final design contract amount is higher than identified in the 2014 Ten-Year Delivery Plan the additional Measure I funds are available from savings anticipated from the construction phase estimate.

Commuter Rail & Transit Committee Agenda Item

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***Financial Impact:***

This item is consistent with the SANBAG Fiscal Year 2015/2016 Budget.

***Reviewed By:***

This item is not scheduled for review by any other policy committee or technical advisory committee. SANBAG General Counsel and Procurement Manager have reviewed this item and the contract.

***Responsible Staff:***

Justin Fornelli, Chief of Transit and Rail Programs

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Approved  
Commuter Rail & Transit Committee  
Date: September 10, 2015

Witnessed By:

**Contract Summary Sheet**

**General Contract Information**

Contract No: 15-1001093 Amendment No.: n/a Vendor No.: 00982  
 Vendor/Customer Name: HDR Engineering, Inc. Sole Source?  Yes  No  
 Description: FINAL DESIGN SERVICES FOR REDLANDS PASSENGER RAIL PROJECT  
 Start Date: 10/07/2015 Expiration Date: 06/30/2020 Revised Expiration Date: \_\_\_\_\_  
 Has Contract Term Been Amended?  No  Yes - Please Explain \_\_\_\_\_  
 List Any Related Contracts Nos.: \_\_\_\_\_

Dollar Amount			
Original Contract	\$ 25,230,000.00	Original Contingency	\$ 2,523,000.00
Revised Contract (Inclusive of Prior Amendments)	\$ -	Revised Contingency (Inclusive of Prior Amendments)	\$ -
Current Amendment	\$ -	Contingency Amendment	\$ -
<b>TOTAL CONTRACT VALUE</b>	<b>\$ 25,230,000.00</b>	<b>TOTAL CONTINGENCY VALUE</b>	<b>\$ 2,523,000.00</b>
		<b>TOTAL DOLLAR AUTHORITY (Contract Value and Contingency)</b>	<b>\$ 27,753,000.00</b>

**Contract Authorization**

Executive Director Date: \_\_\_\_\_  
 Executive Director Action: \_\_\_\_\_  
 Board of Directors Date: 09/02/2015  
 Board of Directors Action: Approve Contract No. 15-1001093

**Contract Management: Payable/Miscellaneous**

Invoice Warning: 20% Renewals: \_\_\_\_\_ Type:  Capital  PAA  Other  
 Retention: \_\_\_\_\_ % Maximum Retention: \$ \_\_\_\_\_  
 Services:  Construction  Intrgrnt/MOU/COOP  A & E Services  Other Professional Services  
 Disadvantaged Business Enterprise (DBE) Goal \_\_\_\_\_ %

**Contract Management: Receivable**

E-76 and/or CTC Date \_\_\_\_\_ (Attach Copy)  Program Supplement No.: \_\_\_\_\_  
 Finance Letter  Reversion Date: \_\_\_\_\_  EA No.: \_\_\_\_\_

**All of the above MUST be submitted to FINANCE including originals, amendments and miscellaneous transaction changes**

**Additional Information**

Project Manager: Justin Fornelli

Attachment: 15-1001093 CSS [Revision 2] (1708 : Award RPRP Mainline Design)



**FINAL DESIGN**  
**Scope of Services**  
**San Bernardino County, California**

**August 2015**  
**Version 2.0**



***Prepared for:***  
San Bernardino Associated Governments  
1170 W. 3rd Street, 2nd Floor  
San Bernardino, CA 92410

***Prepared by:***  
HDR Engineering, Inc.  
2280 Market Street, Suite 100  
Riverside, CA 92501

Attachment: RPRP FD Scope of Services V2.0- FINAL 150828 (1708 : Award RPRP Mainline Design)

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- Task 1.1.2 - Project Deliverables Log with Regular Status Updates
- Task 1.3.2 - Project Work Breakdown Structure (WBS)
- Task 1.3.2 - CPM Schedule with Monthly Updates
- Task 1.4.4 - Technical Workshops Meeting Notes
- Task 1.4.4 - Other External Meeting Notes
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- Task 2.2.1.2 - FINAL Level Boarding Report
- Task 2.2.1.2 - Meeting notes from meetings with CPUC, Metrolink or FRA/FTA
- Task 2.3.1 - Railroad Safety Trained Consultant Project Team
- Task 2.3.1 - List of RR Safety Qualified Staff
- Task 2.4 - Project Specific Railroad Protective Liability Insurance Coverage – Certificate
- Task 2.6.3 - (Dry) Utility disposition coordination and Relocation Responsibility Matrix
- Task 2.6.3 - New service requirements matrix
- Task 2.6.3 - New service request letters
- Task 2.8 - Gage Canal Company (and City of Riverside): Meeting minutes
- Task 2.9.1 - Draft and Final Flood Control Permit Application for Twin Creek (1 hardcopy, 1 PDF)
- Task 2.9.1 - Draft and Final Flood Control Permit Application for Warm Creek (1 hardcopy, 1 PDF)
- Task 2.9.1 - Draft and Final Flood Control Permit Application for Santa Ana River (1 hardcopy, 1 PDF)
- Task 2.9.1 - Draft and Final Flood Control Permit Application for Mission Zanja Channel (1 hardcopy, 1 PDF)
- Task 2.9.1 - Draft and Final Flood Control Permit Application for Mill Creek (1 hardcopy, 1 PDF)
- Task 2.9.1 - Issued Flood Control Permits for Warm Creek, Twin Creek, Santa Ana River, Mission Zanja Channel, and Mill Creek (1 hardcopy, 1 PDF)
- Task 2.14.2 - Permit Application
- Task 2.14.2 - Parent Permit
- Task 2.15.1 Exhibits of the changes proposed at each grade crossing for use with the GO 88-B applications
- Task 2.17.2 - Conceptual Design for At-grade crossing and trail connections
- Task 3 - Exhibits as determined through PDT meetings and as requested by SANBAG.
- Task 5.1 - Control Notebook containing updated datum descriptions, control monuments, project monuments go-to forms, electronic and hardcopy pictures of the monuments, and final adjusted coordinate and elevation values.
- Task 5.2 - Survey control drawing (included in construction document deliverables - tasks 34-37)
- Task 5.2 - ASCII format file containing final adjusted primary and secondary project control points (Pt. No., Northing, Easting, Elv., Desc.)
- Task 5.4.5 - RPRP Main Corridor Digital Aerial Mapping, DTM, Georeferenced Digital Aerial Imagery
- Task 5.4.5 - IEMF Digital Aerial Mapping, DTM, Georeferenced Digital Aerial Imagery and Landnet

- Task 6.2 - Eight Draft and Final Geotechnical Reports (digital format only, with up to 4 hard copies each upon request)
- Task 6.3.2 - Report/Technical memorandum including recommendations for controlling corrosion of materials planned for underground and for Bridge 2.2 steel superstructure and members
- Task 6.3.2 - Coatings Maintenance Schedule/Recommendations memo
- Task 7.2.2 - Record Drawings obtained will be provided to SANBAG upon request
- Task 7.2.2 - Updated Utility Matrix (conflicts table) for the project
- Task 7.2.2 - Updated utility base mapping (CADD & Sheets for distribution to utility owners)
- Task 8.1.1 - Web map after 60% design submittal
- Task 8.1.2 - GIS Database at end of project
- Task 10.1 - Up to 60 Monthly Environmental Compliance Reports (including MMRP Matrix Updates) and 20 Quarterly Compliance Reports documenting compliance and verification activities, including agency coordination (1 hardcopy and 1 PDF)
- Task 10.1 - Documentation of compliance for Mitigation Measures LU-1, NV-1, NV-2, SS-1, SS-2, HAZ-5, HAZ-6, GEO-1, and CUL-3
- Task 10.1.1 - Two draft and final CEQA Addendums/NEPA Reevaluations
- Task 10.1.2 - Draft and Final specification for Environmental Section
- Task 10.2.1 - Administrative Draft and Draft Project SWPPP (1 hardcopy, 1 MS Word, 1 PDF)
- Task 10.2.2 - ECPs at the 60%, 90%, and 100% deliverable milestone.
- Task 10.2.1 - Attachments and appendices in both PDF and Word format
- Task 10.2.1 - Draft and Final BMP Alternative Evaluation Technical Memorandum (4 hardcopies, 1 MS Word, 1 PDF)
- Task 10.2.1 - Draft and Final WQMP (4 hardcopies, 1 MS Word, 1 PDF)
- Task 10.3.1.3 - Draft and Final Archaeological Monitoring Report (concurrent review by SANBAG) in PDF format
- Task 10.3.1.3 - Draft and Final CRMMP
- Task 10.3.1.3 - Daily monitoring logs, to be incorporated into monthly summaries and the project archaeological monitoring report (not a QC deliverable item)
- Task 10.3.1.4 - (Optional Services) Draft testing and evaluation report (concurrent review by SANBAG) in PDF format
- Task 10.3.1.4 - (Optional Services) Revised draft testing and evaluation report (review by SHPO) in PDF format
- Task 10.3.1.4 - (Optional Services) Final testing and evaluation report in PDF format
- Task 10.3.2.2 - Technical report documenting each Redlands Depot Historic District contributor building's character-defining architectural features
- Task 10.3.2.2 - Report showing compliance with mitigation
- Task 10.3.4 - Write-up showing compliance with mitigation
- Task 10.4.1 Traffic Management Plan
- Task 10.4.2 - Memo verifying compliance with TR-2 (1 hardcopy and 1 PDF)
- Task 10.5.1 - Annual Monitoring Reports to USCAE and RWQCB (1 hardcopy, 1 PDF)
- Task 10.5.1 - Pre- and Post-Construction Photo-documentation (up to six locations)
- Task 10.5.1 - DRAFT letter to Mitigation Banks and/or ILF Programs for submittal by SANBAG (up to 3 letters)
- Task 10.5.3 - Survey Report(s)
- Task 10.5.3 - Reporting to CDFW/USFWS, including CNDDDB forms (if applicable)
- Task 10.5.3 - GPS data for observed listed and special status species (shape/point file)
- Task 10.5.4 - Nesting Bird Plan (1 hardcopy, 1 PDF)
- Task 10.5.5 - Daily monitoring logs (1 hardcopy, 1 PDF)

- Task 10.5.6 - Daily Monitoring Log for each day that a survey is performed including additional supporting documentation.
- Task 10.5.6 - Photo-documentation
- Task 10.5.6 - GPS coordinates for species observations
- Task 10.5.7 - Worker Awareness Training Materials (4 hard copies; 1 PDF)
- Task 10.5.8 - Supplemental BUOW Habitat Assessment (1 hardcopy; 1PDF)
- Task 10.5.8 - BUOW Impacts and Mitigation Report (1 hardcopy; 1 PDF)
- Task 10.5.8 - Monitoring Reports (1 hardcopy; 1 PDF)
- Task 10.5.9 - Seed Collection, Propagation, and Monitoring Plan (1 hardcopy; 1 electronic)
- Task 10.5.9 - Annual Reports (1 hardcopy, 1 electronic)
- Task 10.5.10 - Bat Survey Results Letter Report (1 hardcopy; 1 electronic - PDF)
- Task 10.5.10 - Bat Assessment, Monitoring, and Protection Plan (1 hardcopy; 1 electronic - PDF)
- Task 10.5.11 - Draft and final AutoCAD, Word, or Excel files as well as half-size printable PDF files of drawings (up to 25 sheets)
- Task 10.5.11 - Draft and final Conceptual Revegetation Plan/Habitat Mitigation and Monitoring Plan (for up to 14 acres) (1 hardcopy, 1 PDF)
- Task 10.5.11 - Compliance Verification Memo (1 hardcopy, 1 PDF)
- Task 10.5.12 - Annual Monitoring Reports (through the life of this contract only)
- Task 10.5.12 - Final Compliance Verification Memo (1 hardcopy, 1 PDF)
- Task 10.6.3.1 - Draft and final arborist report (1 paper, 1 PDF)
- Task 10.6.3.2 - Draft and final conceptual tree replacement plan (1 paper, 1 PDF)
- Task 10.7.1.1 - Historic Building Structural Evaluation and stabilization ideas (observations, photos, discussion) in a letter type memo for five buildings
- Task 10.7.2 - Site-Specific Vibration Testing, Modeling and Recommendations Report (DRAFT and Final)
- Task 10.7.3 - DRAFT and Final Report and Recommendations for mitigation measures at up to 10 residential properties
- Task 10.8 - Draft and Final Form 620 (2 hardcopies; 1 PDF)
- Task 10.8 - Draft and Final NEPA Checklist (2 hardcopies; 1 PDF)
- Task 10.8 - Draft and Final Cultural Resources Letter Report (2 hardcopies; 1 PDF)
- Task 10.8 - Up to 10 consultation letters to SHPO, NAHC, and Native American tribes (1 PDF each)
- Task 10.1.2 – Additional Pre-Construction Survey and Monitoring Reports (if required)
- Task 10.1.2 – Additional Agency Consultation Letters (if required)
- Task 10.1.2 – Additional Cultural Resources Monitoring Reports (if required)
- Task 10.1.2 – Second Testing and Evaluation (if required)
- Task 10.9 – Draft and Final CEQA Addendum/NEPA Reevaluation (if required)
- Task 11.1 - Draft and final Phase 1 Update (3 hardcopies, 1 PDF)
- Task 11.3 - Draft and final Workplan
- Task 11.3 - Boring Logs
- Task 11.3 - Laboratory Results
- Task 11.4 - Draft and Final Phase II ESA (at 60% and 90% Submittal)
- Task 11.4 – Testing results and laboratory chain of custody
- Task 11.4 – Testing results and laboratory chain of custody
- Task 12.1.1 - Draft CONOPS for network communications
- Task 12.1.1 - Final CONOPS for network communications
- Task 12.1.2 - Draft CONOPS for EPIS
- Task 12.1.2 - Final CONOPS for EPIS

- Task 14.5 - DRAFT and Final Report of Railroad Preemption Scenarios for Signalized Intersections with Preemption
- Task 15.1.1 - Project Data Log.
- Task 15.1.2 - Workshop meeting notes and summary
- Task 15.1.5 - One electronic (PDF) and one (1) hardcopy of the Draft Report
- Task 15.1.5 - One electronic (PDF) and one (1) hardcopy of the Final Report
- Task 15.1.5 - Completed Comment/Response Log
- Task 15.2.1 - Draft Floodplain Evaluation – Warm Creek (Historic), Bridge 1.1
- Task 15.2.1 - Final Floodplain Evaluation – Warm Creek (Historic), Bridge 1.1
- Task 15.2.2 - Draft Flood Plan Evaluation – Twin Creek, Bridge 2.2
- Task 15.2.2 - Final Floodplain Evaluation – Twin Creek, Bridge 2.2
- Task 15.2.3 – Draft Flood Plan Evaluation – Santa Ana River (SAR), Bridge 3.4
- Task 15.2.3 – Final Floodplain Evaluation – Santa Ana River (SAR), Bridge 3.4
- Task 15.2.4 - Draft Flood Plan Evaluation – Mission Zanja Channel
- Task 15.2.4 - Final Floodplain Evaluation – Mission Zanja Channel
- Task 16.1 - Updated Existing Storm Drain Base map
- Task 16.1 - 60% Draft Redlands Passenger Rail Project Hydrology and Hydraulics Study
- Task 17.2 - Draft RPRP Red-Dot Method check set of Calculations at 90% Submittal
- Task 17.2 - Final RPRP Red-Dot Method check set of Calculations at 100% Submittal
- Task 17.3 – Retaining Wall Type Selection Report
- Task 18 - Final Technical Memorandum on Construction Staging and Sequencing Approach
- Task 20 - Draft CONOPS for Wi-Fi network communications
- Task 20 - Final CONOPS for Wi-Fi network communications
- Task 32.6 – 60% Early Utility Relocation Plans
- Task 32.6 – 90% Early Utility Relocation Plans
- Task 32.6 – 100% Early Utility Relocation Plans
- Task 32.6 – Final/IFB Early Utility Relocation Plans
- Task 32.7 - 60% Project Specifications (TOC only) - Early Utility Relocation
- Task 32.7 – 90% Project Specifications - Early Utility Relocation
- Task 32.7 – 100% Project Specifications - Early Utility Relocation
- Task 32.7 – Final/IFB Project Specifications - Early Utility Relocation
- Task 32.7.5 60% Bid Item List - Early Utility Relocation
- Task 32.7.5 90% Bid Item List - Early Utility Relocation
- Task 32.7.5 100% Bid Item List - Early Utility Relocation
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- Task 32.8 – 60% Engineer’s Estimate of Probable Construction Costs
- Task 32.8 – 90% Engineer’s Estimate of Probable Construction Costs
- Task 32.8 – 100% Engineer’s Estimate of Probable Construction Costs
- Task 32.8 – Final/IFB Engineer’s Estimate of Probable Construction Costs
- Task 32.9.1 - Email responses to requests by SANBAG for information or documentation in support of the development of the IFB document.
- Task 32.9.2 - Exhibits, plans, agendas and meeting minutes for pre-bid meeting
- Task 32.9.3 - Responses to design-related questions, clarifications or approved equal requests received from bidders, including questions that could not be addressed at the Pre-Bid meeting.
- Task 32.9.4 - Written addenda to the IFB package
- Task 32.9.5 - Bid examination input in the form of email correspondence
- Task 32.9.5 - Bid tabulations if requested
- Task 32.9.6 - Conformed documents
- Task 32.11 As-built Drawings (1 hard copy and 1 electronic copy)

- Task 33.1.2 - Final/IFB Demolition Plans 133 E Street
- Task 33.2 – 100% Project Specifications 133 E Street
- Task 33.2 – Final/IFB Project Specifications 133 E Street
- Task 33.3 - 100% Engineer’s Estimate of Probable Construction Costs
- Task 33.3 - Final Engineer’s Estimate of Probable Construction Costs
- Task 33.3.1 – 100% Bid Item List 133 E Street
- Task 33.3.1 – 100% Plans
- Task 33.3.11 – Final/IFB Bid Item List 133 E Street
- Task 33.4 - Email responses to requests by SANBAG for information or documentation in support of the development of the IFB document.
- Task 33.4 - Exhibits, plans, agendas and meeting minutes for use during the field walk and pre-bid meeting
- Task 33.4.3 - Responses to design-related questions, clarifications or approved equal requests received from bidders, including questions that could not be addressed at the Pre-Bid meeting.
- Task 33.4.4 - Written addenda to the IFB package
- Task 33.4.5 - Bid examination input in the form of email correspondence
- Task 33.4.5 - Bid tabulations if requested
- Task 33.4.6- Conformed documents
- Task 33.6 As-built Drawings (1 hard copy and 1 electronic copy)
- Task 34.1 to 34.14 - 60% Mainline Plans
- Task 34.15.1.1 - 60% Project Specifications (TOC only)
- Task 34.16 - 60% Estimate of Probable Construction Costs
- Task 34.15.1.6 - 60% Bid Item List
- Task 34 - 60% Response to comments
- Task 35.17.2 - DRAFT and Final Compliance Memo
- Task 35.1 to 35.14 - 90% Mainline Plans
- Task 35.15 - 90% Project Specifications
- Task 35.16 - 90% Estimate of Probable Construction Costs
- Task 35 - 90% Response to comments
- Task 36.1 through 36.14 - 100% Mainline Plans
- Task 36.15 - 100% Project Specifications
- Task 36.15.1.6 - 100% Bid List
- Task 36.16 - 100% Estimate of Probable Construction Costs
- Task 36.16 - Independent Cost Estimate
- Task 36 - 100% Response to comments
- Task 35.1 – 35.16 - IFB Mainline Plans
- Task 35.15.1 - IFB Project Specifications
- Task 35.16 - IFB Estimate of Probable Construction Costs
- Task 35 - Response to 100% Review Comments
- Task 38.1 - Final Design right-of-way footprint
- Task 38.5 - Revised right-of-way cost estimate and data sheet(s)
- Task 38.6 - Right of Entry Permits/Permission to enter
- Task 38.7 - NOI to appraise letters
- Task 38.7 - Written appraisals for each property
- Task 38.7 - Appraisal review recommending just compensation
- Task 38.8 - Purchase Agreements
- Task 38.8 - Closed Escrow Documents
- Task 38.8 - Title Insurance

- Task 38.8 - Closed Acquisition Files, including recorded deeds, temporary and permanent easements
- Task 38.10.2 - Relocation Assistance File
- Task 38.11 - Notices to Owners
- Task 38.11 - Franchise, easement, license agreement or other documentation demonstrating relocation responsibility
- Task 38.12 - Court Orders of Possession
- Task 38.12 - Title Insurance
- Task 38.13 - Right-of-way certification form and backup documents
- Task 38.13 - Certification Grant
- Task 38.14 - Additional customization of the web-based right-of-way management system and interactive map
- Task 39.1.1 - Email responses to requests by SANBAG for information or documentation in support of the development of the IFB document.
- Task 39.1.3 - Responses to design-related questions, clarifications or approved equal requests received from bidders, including questions that could not be addressed at the Pre-Bid meeting.
- Task 39.1.5 - Bid examination input in the form of email correspondence
- Task 39.1.5 - Bid tabulations
- Task 39.2 - Conformed documents
- Task 40.9.3 – Acceptance Test Plan (Network Low Voltage and EPIS)
- Task 41.1 Final As-Built Drawings for SANBAG (1 hard copy and 1 electronic copy)
- Task 41.1.1 Final As-Built Drawings for San Bernardino (1 hard copy and 1 electronic copy)
- Task 41.1.2 Final As-Built Drawings for Redlands (1 hard copy and 1 electronic copy)
- Task 41.1.3 Final As-Built Drawings for Metrolink (1 hard copy and 1 electronic copy)
- Task 41.2 GIS Files for SANBAG (electronic only)
- Task 41.3 Up to 20 Track Chart Drawings
- Task 41.3 Up to 40 Composite Maps
- Task 41.3 Updated Track and Signal Assets Spreadsheets

## INTRODUCTION

**CONTRACT TITLE:** Redlands Passenger Rail Design Project (RPRP)

### PROJECT DESCRIPTION

The HDR team (CONSULTANT), as the consultant to the San Bernardino Associated Governments (SANBAG), shall provide engineering and technical services to SANBAG. Under this contract, the CONSULTANT will provide services to SANBAG for specified tasks associated with the Redlands Passenger Rail Design Project (RFP15-1001093). Final Design will include the design of a 9-mile rail line on SANBAG's right of way from the San Bernardino Transit Center to the University of Redlands. The design will be for a single track with an approximately 2-mile long passing siding near the midpoint. Design for stations, bridge replacement or rehabilitation, grading and drainage improvements, and at-grade crossing improvements will be included as described in the Scope below.

The expected result of this contract is final design of the Project. The CONSULTANT will develop engineering documents and technical reports to support the development and submission to SANBAG of the 60% PS&E, 90% PS&E, 100% PS&E, and IFB PS&E and provide Bid Support and Design Services during Construction.

This contract builds on the work completed under the Redlands Passenger Rail Project, Preliminary Engineering & Environmental Review contract. The 60%, 90%, 100%, and IFB PS&E documents will further develop the design shown in the 30% PS&E package prepared for that previous contract and as shown in the approved environmental document. Only services described in this scope of work are included. Program Management services are assumed to be completed under SANBAG's separate contract for Redlands Passenger Rail Program Management Services (RFP15-1001146).

In general, the attached scope is the base scope for the project. Some tasks have been defined in this scope which are not included in the base scope, but which may be necessary for the successful delivery of the Project. These tasks are noted as "OPTIONAL SERVICES" and are intended to allow for a revised level of effort based on yet-unknown circumstances or specific decisions which may be made by SANBAG to successfully deliver the Project. Work on tasks labelled "OPTIONAL SERVICES" shall not be performed without prior written consent of the SANBAG Project Manager.

### SCOPE OF WORK

The scope of work shall consist of the following tasks and deliverables:

## PART I PROJECT MANAGEMENT

### TASK 1 PROJECT MANAGEMENT AND ADMINISTRATION

The CONSULTANT shall establish an organization structure coordinating the efforts of the Mainline Design CONSULTANT. The roles and responsibilities of key members of the team shall be clearly identified. Management may include, but not be limited to:

- Coordination of the development of the overall work tasks;
- Management of the schedule, contract budget, and staff resources;
- Reporting work progress and schedule updates to SANBAG;
- Developing and implementing a Quality Control/Quality Assurance Plan for the project;
- Scheduling, coordinating, and providing minutes of Project Development Team (PDT) meetings;
- Managing railroad safety training of the design team and adherence to required working practices around the railroad during the project.

CONSULTANT shall organize and facilitate regular design PDT meetings throughout the Project. The frequency of these meetings shall be determined with the SANBAG Project Manager. CONSULTANT shall record and document the discussions, decisions, and actions agreed to at these meetings. The CONSULTANT shall submit a baseline schedule at the start of the work. This schedule will serve as the basis for monitoring and controlling Project activities and will be reviewed and approved by SANBAG. The schedule shall show the relationship of the Project tasks, expected sequence of design, milestone submittals and decisions, coordination with third parties, and the effect of impacts to the overall schedule. CONSULTANT shall provide monthly progress reports in a SANBAG approved format as part of the monthly invoice. The Progress Report shall address activities and progress within the recent billing cycle, provide upcoming deliverables and actions, and shall include SANBAG Form 315 reporting of DBE participation. The CONSULTANT shall complete and maintain a Project Work Plan (PWP), following the format provided by the PMC that clearly identifies the CONSULTANT work process, roles and responsibilities, and Project risks. The CONSULTANT shall complete and maintain Project controls including document control, schedule, and budget. A Quality Control / Quality Assurance (QA/QC) Plan shall also be developed and utilized. CONSULTANT shall review each deliverable following the QA/QC Plan prior to submittal to SANBAG.

#### **Assumptions:**

- It is understood that the overall management responsibility for the Redlands Passenger Rail Project lies with the SANBAG Board of Directors and its Staff. To support this effort, SANBAG has procured program management services from a program management consultant (PMC). CONSULTANT will work closely with the PMC to jointly support SANBAG in the delivery of this project through the initiation of revenue service and contract close-out.
- The following schedule of major project milestones has been used as the basis of fee development associate with this scope of services:

Task	Approx. Completion Date
Notice to Proceed (NTP)	Estimated – October 8, 2015
Early Demolition Package Issue for Bid Document Submittal	NTP + 6 months (~April 2016)
Early Utilities Relocation Issue for Bid Document Submittal	NTP + 12 months (~September 2016)
60% Main Construction Package Design Submittal	NTP + 10 months (~August 2016)
90% Main Construction Package Design Submittal	60% Submittal + 6 months (~February 2017)
100% Main Construction Package Design Submittal	90% Submittal + 3 months (~May 2017)
Final Issued for Bid Main Construction Package Document Submittal	100% Submittal + 3 months (~August 2017)
Begin Design Services During Construction for Early Utilities and Demo work (Contractor NTP)	Early Demo Package IFB Submittal + 4 months (~August 2016)
Begin Design Services During Construction for Main Construction Package work (Contractor NTP)	Main Construction Package IFB Submittal + 5 months (~February 2018)
Substantial Completion of Construction	NTP Construction + 26 months (~March 2020)
Initial Revenue Service of Passenger Service	~September 2020
Design Contract Closeout / Completion	Initial Revenue Service of Passenger Service + 4 months (~December 2020)

## Task 1.1 Project Management

### Task 1.1.1 Notice to Proceed from SANBAG

This task includes the coordination in issuance of notices to proceed to the members of the team. No work shall commence until a written notice to proceed (NTP) has been issued by SANBAG to CONSULTANT. An NTP may be limited in the scope of allowable tasks. In such case, the NTP will identify those tasks that have been authorized.

### Task 1.1.2 Project Management Tasks

CONSULTANT will prepare a Project Management Plan following CONSULTANT's standard form. The previous Project Management Plan created for the preliminary engineering phase of the contract will serve as the basis of format for this final design phase and this Project Management Plan. This 4-part plan (Operations Plan, Communications Plan, a Production Plan, and a QA/QC Plan) will include key project information, names of the team members and

organization chart, discussion of project communications approaches, this scope of services and list of deliverables, contract change protocols, quality control QA/QC plan, health and safety plan, contract task budgets and work breakdown structure (WBS), project administration, technical related guidance including design criteria and standards to be used in course of the project.

Work items and deliverables will be identified in accordance with the WBS with a list of deliverables will be provided. The schedule included in the Project Management Plan will identify the critical path and will define each of the major tasks and subtasks to accurately depict the level of effort and durations for key elements of the work to be done over the life of the project. The Project Management Plan will also include relevant CADD standards.

Upon SANBAG's approval of the Project Management Plan, the CONSULTANT will also further develop and include the following additional items not previously addressed in a prior phase of the work done under the contract:

ProjectWise Accounts for this phase of work so that the project development team, including SANBAG, will have access to the project files;

Updated folder structure to store and retrieve documents, reports, correspondence, design files, and construction cost estimates;

A Project Deliverables Log developed to track each planned deliverable through its development, including when drafts are expected for circulation, scheduling of QC and agency reviews, actual submittal dates, who it was submitted to, when comments were received, and who responded to and resolved the comments and when.

**Deliverables:**

- Task 1.1.2 - Project Management Plan Following CONSULTANT's Standard Project Management Plan form and requirements
- Task 1.1.2 - ProjectWise Account and Setup for this Phase of Work
- Task 1.1.2 - Project Deliverables Log with Regular Status Updates

**Task 1.1.3 Project Close Out**

Upon successful completion of the project, as evidenced by the initiation of revenue operations and the closeout of the main construction contract(s), CONSULTANT will complete the contract closeout for this final design services contract. This work will consist of a final internal performance audit to confirm that each scope element or deliverable has been completed and delivered or otherwise relieved by the client. The activities anticipated in this final phase may include but not be limited to the following:

<b>Contract closeout</b>	Reconciliation and/or reallocation of budget to costs upon conclusion of the work to be done and as approved by the SANBAG Project Manager
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<b>Contract Completion Notifications</b>	To SANBAG, Issuers of permits, others as required
<b>Subconsultant Contract Closeout</b>	Scope completed, lien release (if required), notice of completion to each.
<b>Documentation</b>	Record documents produced including As-built Drawings, etc. Working files purged; only final deliverables kept Electronic files delivered per contract
<b>Financial</b>	Finalize internal accounting; costs allocated to project Request and confirm subconsultant final invoices Final invoice to client

## Task 1.2 Project Administration

### Task 1.2.1 Administrative Support Staff

The CONSULTANT will provide administrative staff for administrative tasks associated with execution of the scope of work.

### Task 1.2.2 Prime Agreement Contract Administration

CONSULTANT will perform administrative functions associated with the on-going management of the contract as it relates to the work herein. Activities may include but not be limited to routine contract administration, developing change orders, preparing letters of request, and authorization for the expenditure of optional services budgets.

### Task 1.2.3 Subconsultant Contract Administration

CONSULTANT will prepare, negotiate, and execute subconsultant agreements and other vendor agreements for services identified in this scope of services for the work envisioned. A list of major subconsultants is presented in the accompanying fee proposal. CONSULTANT will review and process subconsultant invoices for the project. Review will include consideration of the format and accuracy of the invoice, compliance with contract terms and conditions with respect to flow down provisions of the prime agreement and appropriateness of fee invoiced with respect to the completeness of the work during the billing period. Work will also include review and tracking of current insurance certificates for each subconsultant under contract with the CONSULTANT. CONSULTANT shall also track utilization of DBE sub-consultants and report the utilization via SANBAG Form 315 in monthly progress reports

Subcontract administration will also include the review, consideration, negotiation, and authorization of revised task orders (and associated fees) in response to changes in direction of the project. CONSULTANT will establish and implement an administrative and financial audit and reporting process based on the prime agreement requirements.

### Task 1.2.4 Accounting/Invoicing

Includes establishing and maintaining a system of cost accounts based on the Project's Work Breakdown Structure (WBS) and to provide monthly invoicing and progress reports for the status of work accomplished. Progress reports will include a narrative of work accomplished during the current billing period and a description of the work plan for next month. The report will also identify and issues of importance or risk to project delivery, cost or schedule and, as applicable, a description of potential measures to recover cost or schedule.

Additionally, the progress report will summarize the value of the contract amount billed during the billing cycle as expressed in dollars and as a percentage of the total contract value.

### Task 1.2.5 Deliverables Project Related Correspondence, Meeting Agenda and Notes

The CONSULTANT administrative staff will assist in the preparation of project related correspondence, setting up meetings and meeting rooms or conference calls for all aspects of the project, preparing agenda and meeting notes or meeting minutes as appropriate, updating project management tracking logs including the Project Deliverables Log, and preparing other types of project related documents including technical reports, studies and analyses, and other key documents and deliverables.

#### *Deliverables*

None.

### Task 1.3 Project Controls

The CONSULTANT will perform project controls including the development and tracking of project budgets and schedules and report the progress against each during regular meetings and as a part of the submittal of monthly progress payment requests (invoices).

#### Task 1.3.1 Project Work Breakdown Structure (WBS)

A project specific WBS will be established and maintained including an associated system of cost accounts in the CONSULTANT's accounting software. The WBS will be used to manage the budgeted expenditure of fees for the various tasks of work during the progress of the work. Progress reports will be prepared with monthly invoices and will include a narrative of work accomplished during the current period, tracking of the progress of the project against the baseline schedule, identification of issues of concern, and a description of recommended steps to address these concerns. Additionally, the monthly status report will include a discussion of the work planned for next month and items to receive extra consideration or prioritization to help the success in the project.

#### Task 1.3.2 Project Schedule

The CONSULTANT will develop and provide a project schedule that will include a sufficient number of activities to represent the progress of the project. This baseline schedule will be submitted as soon as practical after Notice to Proceed. Activities will be linked logically to one another to show the logical development of the project from beginning to end as well as the

dependency of activities on other activities so as to allow the identification of a critical path for the project from commencement to completion. Project deliverables will be shown on the schedule either at the end of an activity or as a milestone activity.

The schedule will be maintained and updated monthly, with the level of completeness (percent complete) of each activity, similarly as done on previous invoices to SANBAG. Slippage of the overall critical path of the schedule shall be reported to SANBAG with the most current Monthly Progress Report along with recommendations for schedule recovery.

Where necessary, additional activities will be added to the schedule to represent changes to the scope of the project as it is executed. Revisions to the critical path resulting from the addition of new activities will be identified at the time the new activities are added.

A copy of the project schedule will be submitted with each Monthly Progress Report complying with the contractually required deliverables, maintained, and updated monthly with progress and forecast completion dates. CONSULTANT shall provide appropriate schedule files to SANBAG to allow the integration of the MDC schedule into the Program Schedule maintained by the PMC.

### **Deliverables**

- Task 1.3.2 - Project Work Breakdown Structure (WBS)
- Task 1.3.2 - CPM Schedule with Monthly Updates

## **Task 1.4 Project Management Meetings**

The following meetings will be held to facilitate communication and the exchange of key project information throughout the decision making process and to report on the progress of the project to the client and key stakeholders:

### **Task 1.4.1 Bi-weekly Project Development Team (PDT) Meetings**

A Project Development Team shall be established for the project that will include the CONSULTANT's Project Manager, SANBAG representative, and key team members from both the CONSULTANT and SANBAG. The PDT meetings will be organized and lead by the CONSULTANT and will be documented by the Program Management Consultant (PMC). Additional members of the PDT may include representatives from the City of San Bernardino and the City of Redlands, CALTRANS, Metrolink, BNSF, and representatives of key utility owners, among others. Meetings will be held bi-weekly and will last not more than 2-hours.

### **Task 1.4.2 Technical Workshops**

CONSULTANT will participate in and provide technical information and expertise for Technical Workshops unless otherwise noted when the workshop or meeting is set. For purposes of fee estimating and scheduling, it has been assumed that an average of two technical workshops will be held each month through the design of the project and that these workshops will take a full day. Information and recommended decisions made in these workshops will be reported back to the PDT at the next PDT meeting.

### Task 1.4.3 Internal Project Team Meetings

Weekly progress meetings will be held within the CONSULTANT using a combination of physical meetings and conference calls to both manage the use of the team members' time while facilitating the transfer of information and key internal team decisions. These meetings will drive the progress of the project deliverables, internally, where client input is not required.

### Task 1.4.4 Other External Meetings

It is anticipated that a large number of external meetings will be held to communicate and coordinate the project to the public and to stakeholders, obtain information from same, and facilitate the development of both the preliminary design as well as the environmental documents for the project. Where specific meetings can be identified, they have been listed in the particular scope items later on in this document. However, it is anticipated that all of the meetings cannot be identified. As such, this activity allows for additional external meetings and establishes a fee budget to address the level of effort required to schedule and hold these meetings.

#### *Deliverables (Not a full QC deliverable)*

- Task 1.4.4 - Technical Workshops Meeting Notes
- Task 1.4.4 - Other External Meeting Notes

### Task 1.5 QA/QC Plan and Program

A Quality Control / Quality Assurance (“QA/QC”) Plan shall be developed and utilized as part of the PWP. CONSULTANT shall review and document the review of deliverables per the QA/QC Plan prior to submittal to SANBAG.

The QA/QC Plan establishes project specific procedures designed to provide services that meet client requirements and applicable standards of care. A project specific QA/QC plan will be prepared. The plan will allow for the implementation of the project activities following the industry's standard of care.

#### Task 1.5.1 Develop Project Specific QA/QC Plan

CONSULTANT will develop a project specific Quality Assurance/Quality Control Plan (RPRP QA/QC Plan) for applicable parts of this scope of services and that addresses procedures for items including but not limited to: technical memoranda and reports, cost estimates, plans, comment resolution, and will incorporate Quality Assurance Audits of the Quality Control process. The RPRP QA/QC Plan will address scope elements to meet standard of care for similar professional engineering industry practices and will include items listed as deliverables herein. The RPRP QA/QC Plan will adhere to the CONSULTANT Quality Plan and its associated [HDR] quality procedures.

CONSULTANT will implement QA/QC by documenting reviews and retaining copies of check prints and review documents as appropriate for reports, design, and preparation of construction documents. CONSULTANT will maintain a quality control database of reviews electronically on CONSULTANT's ProjectWise System and will coordinate with the project team for QC documentation.

Formal QC reviews will be conducted in compliance with requirements of QA/QC Plan at each major deliverable milestone.

Quality Assurance Reviews will be conducted prior to the final submittal of each of the deliverables identified in the deliverables list contained in this scope of services for compliance with the RPRP QA/QC Plan.

### **Task 1.5.2 Project Approach and Resource Review (TransPARR)**

CONSULTANT will perform a Project Approach and Resource Review, an internal independent review of senior experienced staff to support successful delivery of the project by the team to the client. The in-depth technical review of the project will be conducted within the first 60 days of the project, to determine if the right technical approach and the right technical resources are being effectively and efficiently utilized from the onset of the project to address project goals. CONSULTANT will employ by one or more individuals with extensive regional or national experience in the key technical issues associated with and similar to this project to lead or otherwise participate in the review. Recommendations made by the review team will be documented and tracked as a part of the internal project team meeting efforts described in Task 1.4.3 above.

## **PART II DATA GATHERING AND COORDINATION**

### **TASK 2 AGENCY AND OTHER PROJECT COORDINATION**

#### **Task 2.1 Federal Transportation Administration (FTA) – NOT INCLUDED**

##### **Task 2.1.1 Support SANBAG with Quarterly Reports to FTA – NOT INCLUDED**

This item removed during negotiations.

#### **Task 2.2 Federal Railway Administration and Federal Transit Administration (FRA/FTA)**

##### **Task 2.2.1 Level Boarding**

In accordance with 49 CFR Part 37.42, CONSULTANT shall develop a solution to level boarding at each platform with operations of either/or/both Diesel Multiple Unit (DMU) and Metrolink Express Trains proposed for the alignment and/or share tracks with the BNSF local freight train. CONSULTANT shall lead the effort on behalf of SANBAG to obtain acceptance of the solution from Metrolink, BNSF as well as FRA and FTA as necessary. The approach to the approval process shall meet the requirements of 36 CFR PART 1192 – Americans with Disabilities Act Accessibility Guidelines (ADAAG) for Transportation Vehicles and Appendix D to 49 CFR Part 37 – CONSTRUCTION AND INTERPRETATION OF PROVISIONS OF 49 CFR PART 37 and may include but not be limited to:

- Full Level-entry boarding;
- Car-borne lifts;
- Bridge plates, ramps or other appropriate devices;
- Mini-high platforms, with multiple mini-high platforms or multiple train stops to permit access to accessible cars available at that station; or
- Station-based lifts;

The solution shall attempt to provide 100% level boarding to all doors of each vehicle at all stations for the new Redlands Passenger Rail Service. The Metrolink Service shall be accommodated to the satisfaction of the Metrolink and other agencies as applicable.

##### **Task 2.2.1.1 Develop DRAFT Level Boarding Alternatives Report**

The CONSULTANT will review and consider each station location and the current planned and existing passenger or freight rail operations through or included at each location. A DRAFT report will be prepared that identifies potential solutions that meet the requirements of the Federal Code of Regulations and the intent of the American's with Disabilities Act for implementation with the project. A rough order of magnitude of the cost of each solution will also be included along with sketches to support the description of the alternatives.

The CONSULTANT will meet, present and review the alternatives for each station with each SANBAG and Metrolink and identify their preferred solutions from the alternatives presented. To the extent that exceptions to full compliance with level boarding or deviations of standard would be required of CPUC General Order 26-D or other regulatory requirements, CONSULTANT will initiate dialogue with either CPUC, Metrolink or FRA/FTA to explore the acceptability of individual solutions at stations or system-wide, as applicable. A deviation to General Order 26-D, if pursued, will be lead by CONSULTANT. Refer to GO 26 Waivers in Task 2.15.2, below.

### **Assumptions**

- It is recognized that the solution development for level boarding is highly unpredictable and may be highly iterative. The level of effort to be exerted in developing project solutions shall be commensurate with the amount of budget available in this element of work.

#### **Task 2.2.1.2 Develop FINAL Level Boarding Report**

When the identified solution(s) are solidified, a final report documenting the decision process and the selected solution will be prepared and circulated for approval by SANBAG and implementation in the final design.

### **Assumptions**

- Any public involvement process required by the process will be handled by SANBAG or its other consultants.

### **Deliverables**

- [Task 2.2.1.2 - DRAFT Level Boarding Alternatives Report](#)
- [Task 2.2.1.2 - FINAL Level Boarding Report](#)
- [Task 2.2.1.2 - Meeting notes from meetings with CPUC, Metrolink or FRA/FTA](#)

#### **Task 2.2.2 Buy America Waiver Support – OPTIONAL SERVICE**

CONSULTANT will make every reasonable effort that items specified in the design documents meet Buy America compliance. In instances when products proposed by CONSULTANT cannot meet Buy America criteria, the consultant will prepare a waiver application to the FTA.

### **Assumptions**

- A total of three waivers will be prepared.
- The contractor will be responsible for assessing products conformance to Buy America.

#### **Task 2.3 Railroad Safety Training for Project Team**

##### **Task 2.3.1 Railroad Safety Training of Project Team**

The Railroad Safety and Training task will provide for required safety trainings for staff assigned to visit the job site during the course of the project. The project management team will confirm

that all CONSULTANT team members, including subconsultants, are properly trained and equipped with personal protective equipment (PPE) prior to entering the railroad right-of-way. The Consultant will schedule or otherwise arrange for training of the team as required. Based on the transfer of maintenance responsibilities for the existing railroad to Metrolink on July 1, 2015, the following required trainings will be necessary for team members prior to visiting the railroad right-of-way within the project corridor:

- SCRRRA Roadway Worker On-Track Safety Training (annually).

### **Deliverables**

- Task 2.3.1 - Railroad Safety Trained Consultant Project Team
- Task 2.3.1 - List of RR Safety Qualified Staff

## **Task 2.4 Railroad Protective Liability Insurance**

In accordance with the contract terms and conditions associated with the prime agreement, the Consultant will purchase and/or update current coverage for Railroad Protective Liability related to working on or around the Railroad to SANBAG, BNSF, and SCRRRA for acts or omissions arising out of the work performed by the Consultant on the railroad property. The level of effort to obtain (or extend) coverage in the values identified in the prime agreement as well as the cost of this additional insurance coverage for this specific project is budgeted for and included in this activity.

### **Deliverables**

- Task 2.4 - Project Specific Railroad Protective Liability Insurance Coverage – Certificate

## **Task 2.5 Railroad Flagging Coordination**

### **Task 2.5.1 Site Visits/Flagging Costs/Other**

Prior to each time a member of the project team visits the railroad right-of-way, CONSULTANT shall contact the PMC to arrange for and schedule a safety briefing and flagging or other means of roadway worker protection for the duration of the site visit.

### **Assumptions**

- The Program Management Consultant Team will communicate with Metrolink and arrange for flagging for the project. CONSULTANT effort will be confined to development of work plans as required prior to visiting and performing work on the RR R/W.
- All flagging costs will be paid for directly by SANBAG, consistent with previous and on-going projects along the corridor.

## **Task 2.6 Dry (Franchise) Utility Owner Coordination**

The purpose of this task is to continue the coordination effort which has occurred during the Preliminary Engineering phase of the Project. This work is separate and independent from the work identified in section 7.1. After the utility base mapping is updated (see Task 7.1), utilities

identified and confirmed, will be tracked as to the ultimate disposition of the utility (removal, relocation, or protection) and for the balance of the design phase project. In this task, a dialogue with the utility owners will be initiated for purposes of developing conceptual relocation plans along with developing initial relocation cost allocation responsibilities between SANBAG and utility owners.

### Task 2.6.1 Utility Disposition Coordination

CONSULTANT will continue to coordinate the design for the planned RPRP with affected utility owners and jointly determine the disposition (protect, relocate, remove, abandon) for each utility of record found or identified from licenses/leases, record drawings, field investigations, potholing or other accumulated information. Buried utilities or other structures of no record and not readily identifiable from a standard field investigation will not be coordinated. The following utility companies own facilities within the project footprint and will be coordinated with:

- Southern California Edison (SCE)
- Southern California Gas (SCG)
- Kinder Morgan
- Time Warner Telecom (TWT)
- Time Warner Cable (TWC)
- Verizon
- AT&T
- Sunesys
- City of San Bernardino (Traffic Signals)
- City of Riverside
- City of Redlands (Traffic Signals)
- City of Loma Linda (Traffic Signals)
- University of Redlands
- SANBAG
- San Bernardino Valley MWD

#### Assumptions

- CONSULTANT will manage the utility disposition coordination process through the design phase of the project.
- SANBAG will manage the utility relocations during construction.

### Task 2.6.2 New Service Request Support

For each location requiring new or revised (dry) utility service, CONSULTANT will send preliminary notifications to respective providers that service will be needed. CONSULTANT will develop and maintain a new utility service requirements matrix with each address to be served,

and the services which will be required. This matrix will be updated during the project and made available to SANBAG and their consultants. This task addresses only the coordination activities with the utility service providers. All other utility service development associated with the design is included in Task 34.3.3.

### Task 2.6.3 Notice to Owners

In coordination with the Right-of-Way elements of work identified in Task 38, Utility Relocation Responsibility Coordination CONSULTANT will provide “Notices to Owners” for each existing utility that will require modification or other action as a result of the project. This sub task addresses the level of effort for internal coordination between the utility team and the right of way team. The processing of notices will be tracked in the utility matrix and/or the Right-of-Way matrix. Refer to Task 38 for additional information.

#### **Deliverables**

- Task 2.6.3 - (Dry) Utility disposition coordination and Relocation Responsibility Matrix
- Task 2.6.3 - New service requirements matrix
- Task 2.6.3 - New service request letters

### Task 2.7 Wet Utility Coordination

Coordination efforts associated with wet utility disposition is included in work described elsewhere. See Task 7, Task 32 and Task 34.3.

### Task 2.8 Gage Canal Company (and City of Riverside)

CONSULTANT will meet with the owners of the Gage Canal (City of Riverside, etc.) to present alternatives for replacing the existing railroad bridge at MP 3.9 over the Gage Canal. The coordination effort covered in this task is based on the following:

The preferred alternative, as discussed with SANBAG, is to remove the existing timber bridge and fill the portion of the Gage Canal that will experience railroad loading with Lightweight Concrete Fill (LWCF). This alternative is defined in the RPRP Bridge Alternatives Analysis Report prepared during the PE and Environmental Phase of the Project.

In Task 15.1 of this Scope of Work, a Flood Risk Assessment study will be performed early in the project to consider the best flood protection treatment for the section of the railroad alignment adjacent to the Mission Zanja Channel, including the hydraulic drop structure at the Gage Canal. Since the Gage Canal has prior rights over the railroad, CONSULTANT will meet with the owner’s of the Gage Canal (Gage Canal Co., City of Riverside, etc.) once the Flood Risk Assessment has been completed to present the results of the study and coordinate proposed changes to the configuration of the Gage Canal and related infrastructure. Prior to meeting with the owner’s of the Gage Canal, CONSULTANT will present and gain approval from SANBAG for proposed changes to the configuration of the Gage Canal.

### Assumptions

- CONSULTANT will meet with owners of the Gage Canal after Flood Risk Assessment has been completed.
- Assume six (6) meetings, total, to gain approval of design approach to modifications of Gage Canal facilities.

### Deliverables

- Task 2.8 - Gage Canal Company (and City of Riverside): Meeting minutes

## Task 2.9 San Bernardino County Flood Control District (SBCFCD)

### Task 2.9.1 SBCFCD Permit/Consultation Coordination

CONSULTANT will prepare draft applications and/or consultation requests for SANBAG's review and approval and submittal to the San Bernardino County Flood Control District (SBCFCD) to allow access for the project to the SBCFCD controlled areas affected by the project. A Flood Control Permit Application Package will be assembled for SANBAG review and approval prior to submittal to the SBCFCD. The package will include an application and associated documentation based on the Flood Control Permit application checklist.

### Deliverables

- Task 2.9.1 - Draft and Final Flood Control Permit Application for Twin Creek (1 hardcopy, 1 PDF)
- Task 2.9.1 - Draft and Final Flood Control Permit Application for Warm Creek (1 hardcopy, 1 PDF)
- Task 2.9.1 - Draft and Final Flood Control Permit Application for Santa Ana River (1 hardcopy, 1 PDF)
- Task 2.9.1 - Draft and Final Flood Control Permit Application for Mission Zanja Channel (1 hardcopy, 1 PDF)
- Task 2.9.1 - Draft and Final Flood Control Permit Application for Mill Creek (1 hardcopy, 1 PDF)
- Task 2.9.1 - Issued Flood Control Permits for Warm Creek, Twin Creek, Santa Ana River, Mission Zanja Channel, and Mill Creek (1 hardcopy, 1 PDF)

### Assumptions

- Arrangements for access will be obtained through a right of entry approval that will be issued in conjunction with the Flood Control Permit (see Task 38.6 - Rights of Entry).
- No Corps-constructed facilities will be modified and no 33 USC 408 approval will be required from the Corps' Engineering Division.

## Task 2.9.2 Joint Facility Construction Coordination

### Task 2.9.2.1 North Embankment Reconstruction – Mission Zanja Channel (MZC)

CONSULTANT will meet with SBCFCD to present the results of the Flood Risk Assessment and coordinate proposed improvements to the MZC and related infrastructure as well as discussion of how such improvements will be funded. See Task 15.1.

#### **Assumptions**

- Assumes four (4) meetings with the SBCFCD for this activity

## Task 2.9.3 Mitigation Improvements

### Task 2.9.3.1 Mission Zanja Channel

Additional segments of the Mission Zanja Channel between the Santa Ana River and California Street lie within the SANBAG R/W by way of license agreement. Some recent failures and other deficiencies in the integrity of the existing northerly embankment of the channel within these limits and as identified in the PRELIMINARY Geotechnical Design Report recommended corrective work. This task includes the coordination necessary to obtain SBCFCD concurrence of anticipated reconstruction of the north channel embankment for areas outside of the determined flood protection modifications described in the sub-task above. The CONSULTANT will coordinate with the SBCFCD meetings or permits required for this work.

#### **Assumptions**

- Assumes four (4) meetings with the SBCFCD for this activity.

## Task 2.10 BNSF Railway – NOT INCLUDED

### Task 2.10.1 Freight Embargo – NOT INCLUDED

CONSULTANT is not required to support SANBAG in the coordination efforts to obtain acceptance by BNSF of SANBAG imposed freight embargos along the corridor. This work will be performed by SANBAG or others.

## Task 2.11 Metrolink (SCRRA)

Numerous elements of the project may directly or indirectly involve Metrolink's participation. These areas may include but no be limited to: infrastructure construction and adaptation of existing Metrolink systems like positive train control system, centralized train control system (dispatching), voice and digital communications networks, automated fare collection systems, passenger information system, and video surveillance signal exchange. The project may also involve close coordination and input from Metrolink operations or maintenance groups or, in some circumstances, technical design reviews.

This task will cover the work necessary to coordinate Metrolink review, commenting, input and approval of connecting each of these respective systems or issues for the RPRP to Metrolink's systems and as it pertains to the specific issues associated with the development of

construction documents (plans and technical specifications) or in support of the design services during construction of the project. This work may include meetings, phone/email communication the documentation of decisions and tracking of issues specific to Metrolink and these systems.

### **Assumptions**

- The project will piggy-back onto and use the Metrolink PTC system and dispatching.
- Overall project will be designed based on a blended signal design approach of Metrolink and non-Metrolink criteria in accordance with the preliminary engineering documents.
- The level of effort included in this task to coordinate with Metrolink on the various design elements assumes that the blended system approach is acceptable to Metrolink and there will be no additional effort to address system compatibility, material or equipment selections, etc. in order to comply with Metrolink Standards. See Optional Services in Task 2.12 below.

### **Task 2.11.1 Railroad Signals, Centralized Train Control (CTC) and Positive Train Control (PTC) System Coordination**

Based on the understanding that the project will be implemented using Metrolink’s CTC and PTC systems, CONSULTANT will coordinate the addition of the individual signal components of the signal system of the Redlands Passenger Rail Project to these two Metrolink Systems.

### **Assumptions**

- The cost of Metrolink “back office” configuration changes that must be done by Metrolink or Metrolink vendors will be paid for by SANBAG. CONSULTANT will coordinate the transfer of system specific information to Metrolink or Metrolink vendors as required to make the configuration changes.

### **Task 2.11.2 Service Schedule Coordination Support**

The item of work removed during negotiations

### **Assumptions**

- SANBAG and its Program Management Consultant (PMC) will perform all aspects of this work.

### **Task 2.12 Metrolink (SCRRA) - Implementation Strategies Support Services**

This task covers the additional coordination work (only) necessary to accommodate partial adaptation of Metrolink standards with respect to the infrastructure and systems that will be operated and maintained by Metrolink for the proposed RPRP passenger rail service. This work may include meetings, phone/email communication the documentation of decisions and tracking of issues specific to Metrolink and these systems.

This item should be described more appropriately as “implementation strategies” and can be based on the assumption that SANBAG Board will agree that dispatching and maintenance of

way for track and signals will be performed by Metrolink and that SANBAG will negotiate an agreement with Metrolink for same. Among the support work to be performed in this activity, CONSULTANT will support cost estimating for capital and life-cycle costs to comply with SCRRRA standards. This information would be developed early, to support SANBAG decisions about which standards to accept and which ones to “push back on” and pursue waivers. This information will be necessary to support development of the maintenance and dispatching agreement for the proposed passenger rail services.

### **Assumptions**

- Coordination with Metrolink will be led by SANBAG or their PMC. CONSULTANT, will support and assist but may communicate directly with Metrolink where necessary and appropriate to complete work on schedule.

### **Task 2.13 Automated Fare Collection Coordination (Metrolink or Omnitrans)**

This element of work includes coordination and transfer of information specifically related to the selection of and adaptation of either Metrolink’s or Omnitrans’ automated fare collection system solution for the proposed Redlands Passenger Rail Project. The PMC will support SANBAG in the decision process of which system should be selected.

### **Task 2.14 Caltrans**

This element of work includes that level of effort necessary to engage Caltrans and gain approvals for work to be performed on or adjacent to State owned highway facilities and in accordance with Caltrans encroachment permit process. CONSULTANT will prepare and submit encroachment permit applications and gain initial acceptance by Caltrans prior to bid advertisement.

### **Assumptions**

- A Caltrans Cooperative Agreement (Co-op) will not be required for this project. The encroachment permit process will be sufficient to gain access and perform work on Caltrans right-of-way.
- Consultant will obtain Caltrans clearance of a “parent permit” for the work to be done. The selected contractor will obtain a “rider permit.”
- Encroachment permit fees, if applicable, will be paid for directly by SANBAG or by others.

### **Task 2.14.1 Encroachment Permits at Bridges 5.65 AND 9.48**

This work element includes the coordination process to gain acceptance and understanding from Caltrans of the placement of collision barriers in the railroad right-of-way adjacent to the existing bridge columns for the Caltrans OH structures located at MP 5.65 and MP 9.48 (I-10).

## Assumptions

- Construction drawings will be unique to the rail project and constitute improvements that will be owned and maintained by SANBAG or its designee on SANBAG right-of-way. The collision walls will not be attached to the existing bridge columns or foundations. Since Caltrans will not own or maintain the structures and they will not be attached to the Caltrans Structure or in their property, they need only be reviewed by Caltrans as a courtesy or informational item. No formal approval of the construction documents is required or included.

### Task 2.14.2 Encroachment Permit California Street Crossing

#### Task 2.14.2.1 Encroachment Permit Application and Coordination

This work element includes the coordination process to gain approvals from Caltrans for modification of the existing Caltrans owned and operated traffic signals at California Street and the Caltrans Interstate Route 10 eastbound ramps (I-10 EB Ramps) and related improvements (paving, drainage, etc.).

#### Task 2.14.2.2 Traffic Signal Equipment, Ramp and Intersection Modifications

This work will include the coordination, meetings and phone calls/conferences, submittal of construction documents for the state highway and technical specifications through the encroachment permit process, response and resolution of review comments and eventual approval, by Caltrans of the encroachment permit to modify the existing traffic signal and other state-owned or maintained facilities associated with the signalized intersection at California Street and I-10 EB Ramps.

#### Task 2.14.2.3 Modification of Traffic Signal Operations for RR Preemption

This work will include the coordination, meetings and phone calls/conferences required to gain approval and agreement from Caltrans to modify the signalized intersection timing and operations at California Street and I-10 EB Ramps to accommodate improvements to the grade crossing preemption events. Modifications to the signal operations may include reprogramming of the signal timing or systems interface to the railroad to accommodate upgraded failsafe connection or system characteristics, improve the flow of traffic before, during or after preemption events, and modifications to traffic signal phasing and operations to allow for advanced preemption, if appropriate.

This work will also allow for direct support by CONSULTANT to Caltrans District 8 Traffic Operations staff to gain their understanding and approval of the railroad preemption calculations prepared for this specific crossing location.

#### Task 2.14.2.4 Maintenance of Traffic/Construction Coordination

As part of the encroachment permitting process, CONSULTANT will meet with Caltrans to discuss and coordinate plans for traffic control and maintenance during construction of RPRP. Topics will include but not be limited to consideration for construction scheduling, contractor requirements for access; TCE's, work window restrictions, detour plans, temporary street closures, to name a few.

### Assumptions

- Assumes four (4) meetings with the stakeholder mentioned above for this activity.
- Assumes Caltrans will require SANBAG’s CONSULTANT to prepare traffic handling plans as a part of the parent permit approval.
- CONSULTANT will record meeting minutes and provide copy to Caltrans for their files.

### Deliverables

- Task 2.14.2 - Permit Application
- Task 2.14.2 - Parent Permit

## Task 2.15 California Public Utilities Commission (CPUC Grade Crossing Safety)

### Task 2.15.1 Grade Crossing Modification Requests (GO 88-B)

After review and comments have been received for the 60% submittal, CONSULTANT will develop a draft set of Exhibits (independent of the plan set drawings) for the CPUC under the guidelines for General Order 88-B (GO 88-B) for the modification of 26 highway-rail crossings between the San Bernardino Transit Center (SBTC) and the University of Redlands. CONSULTANT will develop the GO 88-B authorization request and exhibits package for submittal by SANBAG’s PMC to the CPUC. The draft package will be provided to SANBAG, the City of San Bernardino, the City of Redlands, Caltrans, BNSF and the CPUC for review and comment. Written concurrence will be obtained by SANBAG’s PMC from City of San Bernardino, the City of Redlands, Caltrans and BNSF for CPUC stipulations agreed-to at the field diagnostic meetings. The CONSULTANT will incorporate the requirements into the 90% project plans and specifications and prepare a final GO 88-B authorization request for SANBAG to submit to CPUC for approval a minimum of 45 working days before start of construction.

This work is coordinated with the development of Quiet Zones along the corridor. See Task 31 Quiet Zone Implementation Support. Per that task, the PMC will schedule and run field diagnostic meetings at each crossing affected by the project. CONSULTANT will participate in the field diagnostic meetings and in support of the selection, if any, of supplemental safety devices, along with other automatic warning devices, roadway or trackway modifications and the updating of pavement delineation and signage at each crossing and all as a part of the modification requests to be submitted to the CPUC under this task.

### Assumptions

- It is assumed that concurrence will be provided for all of the crossing modification work from the cities and BNSF and that formal applications for street crossing modifications will not be required and are not included in the scope of services to be performed.

### Deliverables

- Task 2.15.1 Exhibits of the changes proposed at each grade crossing for use with the GO 88-B applications

### Task 2.15.2 Formal In-station At-grade Crossing Applications

CONSULTANT will prepare and submit a single, combined formal application to the CPUC for the new in-station at-grade crossings listed under Task 34.4.1 - Rail Related Crossing Improvements.

### Task 2.15.3 GO 26 Waivers

CONSULTANT shall develop “Deviation to Standards” request(s) to deviate from the minimum clearance requirements contained in General Order 26-D at station platforms and to the extent agreed upon in the development of level boarding solutions for the project. Refer to Task 2.2.1.

### Task 2.16 SANBAG – Other Projects

The RPRP interfaces with several other projects along the proposed alignment. At these locations, inter-project coordination will be required to identify and eliminate physical conflicts, allocate project element design responsibilities, and develop project phasing and construction coordination requirements for the projects located along and adjacent to the RPRP alignment. This activity provides for the level of effort to meet and coordinate the RPRP with each of these other projects.

The following areas of coordination are anticipated:

- Coordinate physical & design interface for tracks & platforms
- Coordinate physical & design interface for site electrical services
- Coordinate physical & design interface for railroad signaling and communications
- Coordinate right-of-way requirements between RPRP and Other Projects (construction access, TCE’s, other, etc.)
- Coordinate physical and/or design interface for temporary and permanent sub-surface improvements (drainage, etc.) and other surface features (fencing, walkways, etc.) not mentioned above.

#### Task 2.16.1 San Bernardino Transit Center (SBTC)

CONSULTANT will gather as-builts from the recently constructed San Bernardino Transit Center (SBTC) Project and coordinate interface with RPRP mentioned above. This effort does not include collecting utility record mapping from utility owners which is addressed under Task 7.1.1.

#### Task 2.16.2 Downtown San Bernardino Passenger Rail Project

CONSULTANT will gather as-builts (if they are available) from the Downtown San Bernardino Passenger Rail Project (DSBPRP), currently under construction, and coordinate interface with RPRP mentioned above.

### Task 2.16.3 Alabama-Colton Grade Crossing Improvements

This task covers the coordination work required for CONSULTANT to gather as-builts from the recently constructed Alabama-Colton Grade Crossing Improvements Project in Redlands and coordinate the recently constructed roadway improvements by the City of Redlands with the proposed track signal and related improvements associated with RPRP.. Grade crossing and signal improvements will be constructed with this project from the documents prepared for the Alabama-Colton project. The construction documents will be reformatted to “flow” correctly with the rest of the work proposed with the Mainline Construction Package.

#### Assumptions

- New or substantially revised construction documents will not be required for the Alabama and Colton grade crossings.

### Task 2.16.4 Mountain View Avenue Widening Project - IVDA

CONSULTANT will coordinate with IVDA's planned Mountain View Ave Widening Project and coordinate regarding interface with RPRP mentioned above.

For RPRP design scope at highway-rail grade crossings, refer to Task 34.4.

#### Assumptions

- Assumes, as part of RPRP, the CONSULTANT will design the Mountain View Avenue Grade Crossing to align with the existing width of Mountain View Ave (i.e. RPRP Grade Crossing Design will not consider the full width street improvements shown in the proposed IVDA plans).
- Any redesign of the RPRP Mountain View Ave Grade Crossing to support the IVDA project's full width street improvements is not included in this scope of services. Said redesign would be included by a contract amendment.

### Task 2.16.5 California Street Station – NOT INCLUDED

### Task 2.16.6 RPRP Layover Facility at Inland Empire Maintenance Facility (IEMF)

Assumes no engineering design coordination is required at this time due to the physical separation between the two projects. However, in accordance with Task 5.4, CONSULTANT will provide updated aerial topographic and boundary mapping for the IEMF.

### Task 2.16.7 I-10/University Street Interchange Project

CONSULTANT will coordinate with the planned I-10/University Street Interchange Project in Redlands and coordinate interface with RPRP mentioned above.

## Task 2.17 Santa Ana River Trail

### Task 2.17.1 Design Coordination

CONSULTANT will coordinate with SANBAG, City of San Bernardino, County of San Bernardino and the CPUC as required regarding the development of an SAR Trail grade crossing at the east end of the Santa Ana River bridge.

#### **Assumptions**

- Assumes a total of ten (10) separate meetings with some or all of the agencies identified for this Task.
- Assumes County has obtained full Environmental clearance for the trail that crosses the trail and the document can be provided to CONSULTANT along with technical studies, mitigation studies, permit packages, etc.
- Any modifications to the Environmental clearance or permits will be performed by the County of San Bernardino as lead agency and within the timeline of the development of the RPRP.

### Task 2.17.2 Develop Conceptual At-grade Crossing Design

CONSULTANT will develop conceptual/preliminary engineering design of a new public multi-use trail single track at-grade crossing of the railroad at approximate Milepost 3.5 between the SAR bridge and the Greenbrier industry spur point of switch. The preliminary design will confirm feasibility of an at-grade crossing at this location and given the constraints of the bridge, industry spur and environmentally sensitive areas on approach of the trail to the crossing from both directions.

The CONSULTANT will meet, present and review the alternatives for the crossing with SANBAG and the County of San Bernardino and identify their preferred solutions from the alternatives presented.

#### **Assumptions:**

- The new pedestrian crossing will include most of the recommended design features discussed in the CPUC's "Pedestrian-Rail Crossings In California" (2008) and will be similar to the existing pedestrian crossing at Marcos Street in San Marcos, CA (*DOT Crossing No. 934296G; CPUC No. 106E-115.89-D*).

#### **Deliverables**

- [Task 2.17.2 - Conceptual Design for At-grade crossing and trail connections](#)

### Task 2.17.3 Grade Separation Study

Prior to engaging CPUC in dialogue about a new at-grade crossing, CONSULTANT will prepare a grade separation study proving that a grade separate crossing is impracticable. The study will provide design concepts for up to two alternatives of a trail crossing over the railroad and one alternative of a trail crossing under the railroad and a narrative of the reasons why these

solutions are not practicable. Each alternative will include an engineer's estimate of the cost of the alternative. The study will be presented to both SANBAG and the County of San Bernardino for review, comment and acceptance prior to presentation to CPUC.

#### **Task 2.17.4 Public Outreach and Data Gathering**

The formal application package will be preceded by a public outreach and data gathering period which has been identified as a prerequisite by CPUC for other crossings. The goal of the Public Outreach and Data Gathering process will be to identify and satisfy the “public need requirement” for the application to be successful. Data gathering will consist of information like trail usage (volumes/ped/bike counts/estimates, etc.). The public outreach will consist of up to two community outreach presentations/workshops using the data gathered and conceptual work performed to gain input from the public, users, adjacent property owners and other interested parties.

##### **Assumptions:**

- County of San Bernardino staff will take the lead on the public outreach effort. CONSULTANT and SANBAG Public Outreach and Branding Consultant will both support the effort. CONSULTANT will support meetings with a technical presentation and discussion in a workshop environment. Assume two meetings, total.

#### **Task 2.17.5 CPUC Filing Support to County**

CONSULTANT will develop a formal application package on behalf of the County of San Bernardino for a new at-grade crossing of the railroad at approximate Milepost 3.5 between the SAR Bridge and the Greenbrier industry spur point of switch. The application will be prepared in accordance with CPUC Rule 3.7 of the [Rules of Practice and Procedure - April 2014](#).

CONSULTANT will support the County of San Bernardino in the filing process but will not file the application as authorized representative. CONSULTANT will participate in meetings in the Southern California area and teleconferences but does not anticipate traveling to San Francisco formal hearings of the Commission or other actions.

##### **Assumptions:**

- Filing the application for the new crossing does not guarantee its acceptance by CPUC Staff of the Rail Crossing Safety Branch or from stakeholders, including operators on the line.
- It is recognized that approval or acceptance, respectively from CPUC and from stakeholders, including operators on the line, of a new at-grade crossing is highly unpredictable and may be highly iterative in order to reach acceptance. CONSULTANT will work diligently towards an acceptable solution for the parties affected.

#### **Task 2.17.6 Construction Documents**

After the County of San Bernardino obtains an affirmative decision from the CPUC for a new at-grade crossing, CONSULTANT will develop construction drawings for those elements of work that must be constructed coincident with the railroad project due to phasing, safety and

integration among other cost and schedule benefits. The work to prepare these construction documents is presented in Tasks 34, 35, 36, and 37. Refer to: Task 34.4.1, et. al.

## **Task 2.18 Mill Creek Zanja Trail – NOT INCLUDED**

### **Task 2.18.1 Project Study Report – NOT INCLUDED**

No work to be done on this task. This task removed from the scope during negotiations.

## **Task 2.19 SANBAG – Independent Taxpayer Oversight Committee (ITOC) – NOT INCLUDED**

## **Task 2.20 City of San Bernardino**

Nearly half of the project lies within the City of San Bernardino including two transit stations and 11 grade crossings among other key improvements. The CONSULTANT will meet and coordinate with the City of San Bernardino with regard to project activities.

### **Task 2.20.1 Utilities and Public Infrastructure**

The CONSULTANT will contact the City at the project outset to obtain the current City design standards, specifications, and City-approved materials list for public infrastructure and utilities work planned for the Project within City limits. It is anticipated that subsequent utility-specific related meetings will take place during design and are addressed in Task 7.1. City review of project design submittals is anticipated.

#### **Assumptions**

- Assumes six (6) meetings with the stakeholder mentioned above for this activity.
- CONSULTANT will record meeting minutes and provide copy to City for their files.

### **Task 2.20.2 Station Development**

The two planned stations in the City are the extension of the San Bernardino Transit Center Rail Platform improvements at E Street and the proposed Waterman Station along the railroad right-of-way east of the Waterman Street at-grade crossing.

The CONSULTANT will meet with the City to discuss plans and timing for infrastructure or other improvements planned in the project area that will require coordination with the RPRP. The meetings will seek to define the City's wants and needs regarding those adjacent development plans, schedules/timing for those developments, naming/branding desires for the stations, and commitments in providing station infrastructure and/or other components.

It is anticipated that subsequent meetings related to station development will take place during design.

#### **Assumptions**

- Assumes six (6) meetings with the stakeholder mentioned above for this activity.

- CONSULTANT will record meeting minutes and provide copy to City for their files.

### Task 2.20.3 Maintenance of Traffic/Construction Coordination

The CONSULTANT will meet with the City to discuss and coordinate plans for traffic control and maintenance of traffic during construction of RPRP. Topics will include but not be limited to consideration for construction timing of, and interface with, other City projects, contractor requirements for access; temporary construction easements, permits for work in public streets, work window restrictions, detour plans and temporary street closures, to name a few.

#### **Assumptions**

- Assumes four (4) meetings with the stakeholder mentioned above for this activity.
- Assumes contractor will prepare Traffic Control Plans and Detour Plans necessary to execute his work on this project.
- CONSULTANT will record meeting minutes and provide copy to City for their files.

### Task 2.20.4 City Review of City Infrastructure Plans

It is assumed that each milestone submittal will be submitted by CONSULTANT to the City for review of infrastructure design within City R/W especially at grade crossings and stations. When necessary, the CONSULTANT will meet with the City to discuss questions or concerns as a result of plan check comments made by the City. It is anticipated that subsequent meetings related to City review of milestone submittals will take place during design.

#### **Assumptions**

- Assumes six (6) meetings with the stakeholder mentioned above for this activity.
- CONSULTANT will record meeting minutes and provide copy to City for their files.

#### **Assumptions**

- It is assumed that coordination by the County with the City for purposes of trail improvements that may be designed or constructed with this project will be the responsibility of the County and their project staff and that Demolition at 133 S. E Street.

### Task 2.21 City of Loma Linda – NOT INCLUDED

No work is planned in the scope of the project that would impact infrastructure owned or maintained by the City of Loma Linda or otherwise require the City's involvement in reviewing or overseeing the design services contemplated herein.

### Task 2.22 City of Redlands

Over half of the project lies within the City of Redlands including three transit stations, 16 grade crossings and two freeway overcrossings. The CONSULTANT will meet and coordinate with the City of Redlands with regard to the project activities listed below.

### Task 2.22.1 Utilities and Public Infrastructure

The CONSULTANT will contact the City at the project outset to obtain the current City design standards, specifications, and City-approved materials list for utilities work planned for the Project within City limits. It is anticipated that subsequent utility related meetings will take place during design. City review of project design submittals is discussed elsewhere in this scope of work.

#### **Assumptions**

- Assumes twelve (12) meetings over the course of the design phase with the stakeholder mentioned above for this activity.
- CONSULTANT will record meeting minutes and provide copy to City for their files.

### Task 2.22.2 Station Development

Two of the planned transit stations are a result of private partnerships with SANBAG and one is located in downtown Redlands on the north side of the railroad right-of-way between Eureka and Orange Streets and will require coordination with the City both during design and construction.

The CONSULTANT will meet with the City to discuss plans and timing for infrastructure or other improvements planned in the area that will require coordination with the RPRP. The meetings will seek to define the City's wants and needs regarding those adjacent development plans, schedules/timing for those developments, naming/branding desires for the stations, and commitments in providing station infrastructure and/or other components.

It is anticipated that subsequent meetings related to station development will take place during design.

#### **Assumptions**

- Assumes six (6) meetings with the stakeholder mentioned above for this activity.
- CONSULTANT will record meeting minutes and provide copy to City for their files.

### Task 2.22.3 Maintenance of Traffic/Construction Coordination

The CONSULTANT will meet with the City to discuss and coordinate plans for traffic control and maintenance during construction of RPRP. Topics will include but not be limited to consideration for construction timing of, and interface with, other City projects, contractor requirements for access; TCE's, work window restrictions, detour plans, temporary street closures, to name a few.

#### **Assumptions**

- Assumes four (4) meetings with the stakeholder mentioned above for this activity.
- Assumes contractor will prepare Traffic Control Plans and Detour Plans necessary to execute his work on this project.

- CONSULTANT will record meeting minutes and provide copy to City for their files.

#### Task 2.22.4 City Review of City Infrastructure Plans

It is assumed that each milestone submittal will be submitted by CONSULTANT to the City for review of infrastructure design within City R/W especially at grade crossings and stations. When necessary, the CONSULTANT will meet with the City to discuss questions or concerns as a result of plan check comments made by the City. It is anticipated that subsequent meetings related to City review of milestone submittals will take place during design.

##### *Assumptions*

- Assumes six (6) meetings with the stakeholder mentioned above for this activity.
- CONSULTANT will record meeting minutes and provide copy to City for their files.

#### Task 2.22.5 Orange Blossom Trail Coordination – NOT INCLUDED

This item removed from scope during negotiations.

##### *Assumptions*

- Consultant will not need to support SANBAG in their discussion with the City over the Orange Blossom Trail.

#### Task 2.22.6 West Stuart Avenue – Frontage Improvements and Interim Parking

This task provides for the coordination between CONSULTANT and the City as regarding the planned bus transit improvements on West Stuart Avenue and interim parking associated with those improvements. The bus transit turnouts are planned to be located on W Stuart Avenue between N Eureka Avenue and Orange Street in downtown Redlands. The interim parking is assumed to be located just south of the bus turnouts on the site of the City's planned Park Once (parking) project.

##### *Assumptions*

- Assumes three (3) meetings with the stakeholder mentioned above for this activity.
- CONSULTANT to provide coordination only. City will be responsible for design of the frontage improvements on W Stuart Ave to accommodate both the bus turnouts and the interim parking mentioned above.

#### Task 2.23 Esri

The CONSULTANT will support SANBAG and PMC with their work to put an agreement into place with Esri to build a station at the New York Street. The level of effort to support will be based on the budget/hours established in the sub-task.

## Task 2.24 University of Redlands

The CONSULTANT will support SANBAG and PMC with their work to put an agreement into place with the University of Redlands to build a station at the University. The level of effort to support will be based on the budget/hours established in the sub-task.

### Task 2.24.1 Station Development – NOT INCLUDED

This work removed during negotiations.

### Task 2.24.2 Design coordination for Security Connectivity – NOT INCLUDED

This work removed during negotiations.

## TASK 3 EXHIBIT PREPARATION

CONSULTANT will prepare exhibits for use during biweekly RPRP team meetings or for other uses envisioned herein. This task allows for the preparation of various exhibits, sketches, drawings and other types of exhibits for use in SANBAG and stakeholder meetings and at public presentations that would be considered above and beyond the types of drawings or exhibits prepared as a part of the construction documents or exhibits planned for inclusion in the environmental permits or supporting technical studies.

The exhibits herein are anticipated to assist SANBAG in the development of public or agency support of the project, convey broad and detailed concepts to laypersons or other stakeholders, or otherwise be used to promote the project.

### Assumptions

- Complex visual simulations, renderings, animations or web-based applications/graphics are not anticipated or included.
- The number and complexity of exhibits required through the life of the project is difficult to estimate. As such, the level of effort expended on exhibits will be limited to available budget for this task.

### Deliverables

- Task 3 - Exhibits as determined through PDT meetings and as requested by SANBAG.

## TASK 4 PUBLIC OUTREACH AND BRANDING ASSISTANCE – NOT INCLUDED

This item removed during negotiations.

## TASK 5 SURVEY

### Task 5.1 Control Survey

CONSULTANT will rely as much as practical on the previous Survey Geodetic Control Network that was prepared as part of the RPRP 30% design effort. CONSULTANT will inventory the existing control monuments from the previous phase and re-set additional control as-required.

#### ***Deliverables***

- Task 5.1 - Control Notebook containing updated datum descriptions, control monuments, project monuments go-to forms, electronic and hardcopy pictures of the monuments, and final adjusted coordinate and elevation values.

### Task 5.2 Survey Control Drawing

CONSULTANT will prepare a Survey Control Drawing that will be included in the different construction drawing sets and at a minimum will show the following:

- Basis of Bearings and Coordinates
- The primary benchmark(s) for the project
- The primary control stations from the overall SANBAG corridor network
- Secondary control stations set for supplemental design surveys
- The aerial control (HV) targets set for the aerial mapping
- Preliminary (or final as available) rail alignments and stationing/milepost numbering

Survey Control will be based on the control network presented in Record of Survey 11-0077 prepared and recorded in March 2012 for this project. The aerial imagery, topography and design surveys will be performed or prepared utilizing the control network referenced on said ROS and continued in this phase of the project.

#### ***Deliverables:***

- Task 5.2 - Survey control drawing (included in construction document deliverables - tasks 34-37)
- Task 5.2 - ASCII format file containing final adjusted primary and secondary project control points (Pt. No., Northing, Easting, Elv., Desc.)

### Task 5.3 Research Right-of-Way Records and Review Preliminary Title Reports

CONSULTANT will update its research of record maps, railroad right-of-way maps and records, preliminary title reports, copies of vesting deeds, easements, leases, and other referenced property related documents to support the development of property acquisition documents associated with Task 38.4 Legal Descriptions and Plat Exhibits. This work will build from work completed during the PE phase.

## Task 5.4 Aerial Topographic Mapping and Digital Imagery

CONSULTANT will re-fly the project corridor. The area of the Inland Empire Maintenance Facility (IEMF) site will also be mapped and provided to SANBAG.

- Aerial Photography, Planimetric and Topographic Data Compilation.
- Digital terrain model (DTM).
- Provide high-accuracy ground control, for design-level photogrammetry.
- Longitudinal corridor limits shall be approximately G Street to Judson on the west and terminate on the east at the previous mapping limits at the University of Redlands. Provide aerial stereo photography to match the previous corridor mapping width and centered on the main track.
- Compile digital aerial topographic map with planimetric and vertical contour data to meet National Map Accuracy and ASPRS standards for 40 scale, one-foot contour interval mapping.
- Microstation DGN files for the topography and DTM files for the new aerial mapping.
- Include ACAD.
- Limits for the IEMF mapping will be the project site plus an additional 100+/- feet around the sides which is generally described as bounded on the east by Interstate 215, on the south by West 3rd Street and on the northwest by the existing BNSF Main Track 3 at BNSF San Bernardino 'B' Yard.

### Task 5.4.1 Digital Ortho Photography

CONSULTANT will prepare geo-referenced color digital orthophoto strip map imagery matching the existing corridor mapping width and with approximate resolution of 0.25 feet per pixel. Electronic files of the new high-resolution digital color ortho-photography shall be provided in .jpg or .tiff file formats.

### Task 5.4.2 Updated Landnet for RPRP Corridor Mapping

CONSULTANT will perform an updated records research for subsequent monuments set since the PE effort and that may affect the project railroad right-of-way. CONSULTANT will survey and locate said monuments and analyze their effect, if any, on the railroad R/W and RPRP.

### Task 5.4.3 Encroachment Surveys

Based on the work performed in other subtasks herein and to facilitate the removal of unauthorized encroachments into the SANBAG owned property, CONSULTANT will perform field surveys of up to 20 separate encroachments into the railroad right-of-way of improvements such as walls, buildings, fences, drain pipes, irrigation lines, paving & parking, landscaping or similar miscellaneous surface features. Using the field measurements, CONSULTANT will prepare sketch to scale and showing the limits of the encroachment for use by SANBAG and others in right-of-way actions associated with the removal or licensing of the encroachment(s).

#### Task 5.4.4 IEMF Boundary Survey

CONSULTANT will prepare a boundary survey of the IEMF property (as described above). The survey will use, to the extent practical, previous land net surveys as shown on recorded surveys prepared on behalf of SANBAG. The survey will be based on existing property monumentation, available evidence, research, record maps and deeds.

#### Task 5.4.5 IEMF Base Map Compilation

CONSULTANT will combine the boundary and aerial topographic survey described above to create a comprehensive base map for future engineering design. CONSULTANT will include recorded easement encumbrances or other rights or interests as may be contained within a preliminary title report and can be shown on a map.

The deliverable for IEMF will be in both AutoCAD and Microstation electronic file formats.

##### **Deliverables:**

- Task 5.4.5 - RPRP Main Corridor Digital Aerial Mapping, DTM, Georeferenced Digital Aerial Imagery
- Task 5.4.5 - IEMF Digital Aerial Mapping, DTM, Georeferenced Digital Aerial Imagery and Landnet

#### Task 5.5 Supplemental Survey Data Collection

CONSULTANT will provide up to twenty (20) work days of field survey that shall include new and/or confirmation of existing survey shots over the project corridor and in support of the project design.

#### Task 5.6 Mission Zanja Channel Cross-sections

CONSULTANT will provide cross-section data collection of spot elevations in the existing Mission Zanja Creek (Channel) between Santa Ana River and 1,600 feet east of Bryan Mawr Ave, Redlands (approx. 14,000 feet). The cross sections are estimated at 200ft OC, at top and bottom of channel for both sides plus salient surface feature in channel. This sub-task assumes approximately 75 cross-sections.

#### Task 5.7 Post-Construction Final Monuments

CONSULTANT will set final right-of-way (R/W) survey monuments "corners" at key points along the final RPRP right-of-way as represented on the survey control and R/W acquisition plats or drawings. Key points are considered to be at the crossing points of streets and major points of geometry change along the final right-of-way/boundary of the SANBAG owned/acquired railroad right-of-way as developed for the project. The timing of setting the monuments will be tied to the phasing of construction as required.

##### **Assumptions**

- Assumes approximately 100 monuments.

- Monuments set in roadways will be of the "well monument" type acceptable to the public agencies with maintenance responsibilities for the roadways.

### **Task 5.8 Post-Construction Record of Survey (RS)**

CONSULTANT will prepare, submit and file a Record of Survey with the County of San Bernardino including the monuments set in Task 5.7. The survey will document SANBAG's ownership of the railroad right-of-way and fee acquired properties for the project. This record of survey will be prepared after fee right-of-way transfers have been completed along with final transfers of public rights of way (roadway or other similar dedications) to public agencies.

### **Task 5.9 Pothole Survey Data Collection – NOT INCLUDED**

This item removed during negotiations.

## **TASK 6 GEOTECHNICAL EXPLORATION**

### **Task 6.1 Geotechnical Investigation**

CONSULTANT shall perform additional geotechnical exploration to collect supplemental subsurface information at the site for final design and provide supplemental geotechnical recommendations for design and construction of the proposed bridges and retaining walls, among other improvements and necessary for the subject project.

#### **Task 6.1.1 Pre-Field Activities & Permitting**

CONSULTANT will review previous geotechnical studies performed for the project alignment, including the preliminary geotechnical study prepared by CONSULTANT, along with geotechnical maps and other reports relevant to the project alignment.

CONSULTANT will mark the location of each of the proposed boring locations and contact Underground Service Alert (USA) for utility clearance. In addition, consultant will augment the USA markout information by using geophysical survey techniques to search for utilities at each proposed boring location.

CONSULTANT will prepare two work plans for the project; one for the non-sensitive sites and one for sensitive sites. Each work plan will be prepared for review and approval by SANBAG, Metrolink/BNSF and other appropriate agencies.

Encroachment and/or excavation permits will be obtained from San Bernardino County Flood Control where necessary.

#### **Assumptions**

- SANBAG will obtain encroachment permits from SBCFCD.

#### **Task 6.1.2 Field Investigation**

CONSULTANT will perform a subsurface exploration at approximately forty eight (48) locations. Exploration at each location will consist of either a drilled boring or advanced Cone Penetration

Test (CPT). The methods of drilling will consist of mud rotary, hollow stem auger (HSA) and hand auger. The exploratory borings or CPTs will range in depth from about 5 to 100+ feet below the existing grade or to refusal. The borings will be logged in the field at the time of the investigation. Soil samples will be collected at selected depths from the borings and transported to a laboratory for testing. The borings will be backfilled with soil cuttings except a locations encountering ground water. At these locations, borings will be backfilled with bentonite. Exploration-derived waste (EDW) consisting of drilling fluid where rotary wash borings are performed will be temporarily stored onsite pending EDW characterization and subsequently disposed of off-site at a suitable/allowable location.

### Task 6.1.3 Laboratory Testing

CONSULTANT will perform laboratory testing on selected soil samples to determine the engineering properties of the subsurface soils, including in-situ dry density and moisture content, grain-size analysis, Atterberg Limits, shear strength, consolidation, and corrosion potential.

#### Assumptions

- This project is subject to the Prevailing Wage Law.
- Our field exploration can be performed during daylight hours on weekdays.
- SANBAG will pay permit fees.
- Flood control permit required only within the Santa Ana River and Mission Zanja Channel (at selected locations).
- Available underground utility information will be provided to us prior to the field exploration. As required by the state of California, we will also notify Underground Service Alert of the locations of our planned explorations prior to drilling. We will take precautions to avoid utilities; however, despite reasonable efforts, there are inherent risks to utility damage from drilling. We cannot assume responsibility for the inherent risks if the utilities are not accurately marked at the site. Our proposal does not include costs or other provisions for utility repairs.
- Identification, handling, and treatment of hazardous materials or substances are beyond the scope of our geotechnical engineering services. If such materials are encountered, we will notify SANBAG immediately and a proposal for handling of such materials will be submitted upon request.
- Exploration-derived waste materials are not contaminated and do not require special disposal or treatment techniques.

### Task 6.2 Geotechnical Design Report and Recommendations

CONSULTANT will perform geotechnical analyses of the collected data including deep foundation design parameters for each of the proposed bridges, axial and lateral pile capacity, shallow foundation design for proposed lightly loaded structures, retaining wall design parameters, and supplemental slope stability evaluations based on updated geometric design and updated seismic design criteria.

Using the aforementioned analyses and results, CONSULTANT will prepare a geotechnical report presenting the observations and findings of the field investigation and appropriate recommendations to support the design of the proposed improvements.

The report will include:

- Foundation recommendations for bridges 1.1, 2.2, 3.4, 3.9, 9.4, and Interstate-10 collision wall foundations.
- Grading and slope reconstruction recommendations for Mission Zanja Creek embankments.
- Excavation and grading recommendations for track construction and at-grade crossings.
- Miscellaneous lightly loaded foundation recommendations for the design of at-grade station platforms
- Design parameters for the design of retaining walls up to 20' in height

**Assumptions:**

- There will not be any pedestrian bridges on the project. As such, foundations recommendations for such bridges are not included.
- Retaining wall heights of 20' are based on the height of the walls required to support the conceptual design of the Santa Ana River Trail connection to the railroad for an at-grade crossing.

**Deliverables**

- [Task 6.2 - Eight Draft and Final Geotechnical Reports \(digital format only, with up to 4 hard copies each upon request\)](#)

### **Task 6.3 Corrosion Report and Recommendation**

To supplement the geotechnical report and recommendations related to the design and construction of structures and related improvements for the project, CONSULTANT will perform field investigations, laboratory testing and associated analyses to develop recommendations for addressing corrosion of proposed improvements.

#### **Task 6.3.1 Review and Recommendations for Existing Bridge 2.2 Steel Superstructure Rehabilitation**

As a part of the field assessment of existing Bridge 2.2, CONSULTANT will perform a condition assessment of the existing coating of the steel superstructure and elements.

Based on the information obtained in the field and a review of current coating technology and practices (with emphasis on Railroad Bridges), CONSULTANT will identify potential alternatives and present recommendations for its rehab and on-going maintenance. Recommendations may consider coating spot repair vs. replacement vs. bare (atmospheric corrosion) alternatives among others.

CONSULTANT will meet and review alternatives and recommendations with SANBAG. Upon agreement of a preferred solution, CONSULTANT will develop a project specific rehabilitation specification for the bridge and include it in the appropriate package of construction documents (Task 35.15.1 – Project Technical Specifications).

### **Task 6.3.2 Develop Maintenance Schedule**

CONSULTANT will provide recommended maintenance schedule and requirements for the selected coating solution developed in Task 6.3.2. The recommendations will be provided in a separate memorandum to SANBAG.

#### **Deliverables**

- Task 6.3.2 - Report/Technical memorandum including recommendations for controlling corrosion of materials planned for underground and for Bridge 2.2 steel superstructure and members
- Task 6.3.2 - Coatings Maintenance Schedule/Recommendations memo

## **TASK 7 UTILITIES RESEARCH**

### **Task 7.1 Updated Utility Data Acquisition**

The purpose of this task is to obtain updated existing utility information necessary to identify project related impacts to utilities and from which to develop designs for removal, relocation or protection of existing utilities as a part of the project.

#### **Task 7.1.1 Record Drawings**

CONSULTANT will obtain new or updated record drawings for utilities within the project footprint. This work is separate and independent from the work identified in section 2.6. The existing base utility mapping prepared during the preliminary engineering phase work will be the baseline information to work from for the update. CONSULTANT will contact each of the known existing utility owners to request updates to their facilities mapping or record drawings for utilities along the project corridor. Newly received drawings along with the existing record drawings obtained during PE phase, will be reviewed to identify changes to the base utility mapping.

#### **Task 7.1.2 Review of Potholing Results**

The CONSULTANT will obtain and review the potholing data from SANBAG and confirm that it provides the elevation and location information needed to update the base utility mapping and also for the design of relocation or protection of utilities as a part of the project.

#### **Task 7.1.3 Changed Conditions**

CONSULTANT will review the aerial mapping prepared in Task 5 to identify changed conditions to surface features and appurtenances not otherwise identified in Task 7.1.1 or Task 7.1.2 and perform field verification of those changes if identified (Task 7.2.2).

## Assumptions

Research will be performed to determine impacts from the following projects:

- San Bernardino Transit Center (SBTC)
- Downtown San Bernardino Passenger Rail Project (DSBPRP)
- sbX
- Courthouse parking lot (between Arrowhead and Sierra)
- New York Street Irrigation line
- Alabama/Colton Grade Crossing Improvements
- Mountain View Avenue Widening Project
- I-10/University Street Interchange Project

## Task 7.2 Update to Base Utility Mapping

### Task 7.2.1 Update CADD Files

Using information obtained in Task 7.1 along with supplement field survey data obtained in Task 5, CONSULTANT will prepare updated base utility mapping for the project corridor suitable for use as a master reference file for several of the construction documents. This information will also be translated to the GIS database for the project.

### Task 7.2.2 Field Verification of Updated Base Utility Mapping

As a final check of the project base utility mapping, the CONSULTANT will perform an “end-to-end” field verification process to validate the base utility mapping to the record drawing and aerial mapping.

Once completed, the base utility mapping will be redistributed to the utility owners for their verification of our maps.

### Deliverables

- Task 7.2.2 - Record Drawings obtained will be provided to SANBAG upon request
- Task 7.2.2 - Updated Utility Matrix (conflicts table) for the project
- Task 7.2.2 - Updated utility base mapping (CADD & Sheets for distribution to utility owners)

## Task 7.3 Potholing – NOT INCLUDED

This item removed during negotiations.

## TASK 8 GIS SUPPORT SERVICES

### Task 8.1 Build, Update and Maintain Web Map for Project

CONSULTANT will continue the effort that was initiated during the Preliminary Engineering phase to create a web accessible map for the project. The web map will present key information about the existing corridor overlain by the linework representing the design, as it progress, for the proposed improvements and as associated with the project. This task provides for both the labor costs and direct expense of hosting, building and maintaining a web map containing project data and for use on the project.

#### Task 8.1.1 Web Map

CONSULTANT will host the web map application solution to allow selected user access to the stored graphic-based information and related documentation. The web map hosting and database will be maintained through the active life of the project (NTP through the initiation of revenue operations).

The Web Map will include the following information, at a minimum:

##### **Public Domain Data:**

- Aerial image background for the entire corridor
- City Boundary; Property lines; Feature labels and names for roadways and other landmarks, etc.

##### **Project Specific Data:**

- Project footprint
- Centerline of Track Alignment
- Stationing and Milepost numbering of the alignment
- Station area improvements (platform outline, canopy outline, mini-high, etc.)
- Symbolic location of railroad signal instrument houses, signal poles/masts and crossing warning devices
- Limits of roadway improvements
- Retaining Walls
- Bridges
- Existing and proposed utilities and drainage improvements
- Existing Railroad Right-of-way
- Proposed right-of-way acquisitions (shape with linked information)
- Proposed communications backbone, antennae
- From Environmental Technical Studies:

- Existing vegetation mapping with emphasis on sensitive habitats of concern/permit required
- Historic properties
- Limits of archeological/cultural resources (if allowed)
- Locations of known sensitive biological resources (Woolly Star, Santa Ana Sucker, LBV, other)
- Other project features and data as appropriate

The exact information to be shown will be reviewed and agreed upon prior to constructing the map.

### **Assumptions**

- The initial web map may be a ‘work in progress’ commencing as soon as practicable after NTP and improved throughout the early utility relocation design and 60% design efforts. The first “complete” web map will be accessible to users after the 60% design submittal.

### **Deliverable**

- [Task 8.1.1 - Web map after 60% design submittal](#)

### **Task 8.1.2 Web Map Updates**

CONSULTANT will update the base graphic information contained in the web map (engineering linework) representing the advancement of the design (in plan view) three times over the life of the project (post 60%, post 90%, Conformed Documents). Upon completion of the project and project closeout, the database will be updated for As-Built conditions (fourth update) then immediately transferred to SANBAG for its use in ongoing operations.

Minor updates of critical elements of the design to support key coordination of issues may occur more frequently and at the discretion of the CONSULTANT.

### **Deliverables**

- [Task 8.1.2 - GIS Database at end of project](#)

## PART III PERMITTING SUPPORT

### TASK 9 ENVIRONMENTAL CLEARANCE – CALIFORNIA STATION SITE – NOT INCLUDED

Not included.

### TASK 10 MITIGATION MONITORING AND REPORTING PROGRAM (MMRP) IMPLEMENTATION

CONSULTANT will provide mitigation compliance support prior to, during, and post-construction for the project per the requirements of the Mitigation Monitoring and Reporting Program (MMRP) adopted in conjunction with the Final DEIS/EIR for the Redlands Passenger Rail Project (SCH# 2012041012). Specific tasks include review of and documentation of the construction contractor's submittals; preparing monthly and quarterly compliance reports; and coordinating the overall environmental compliance effort prior to, during, and following construction. This task includes coordinating with and mobilizing specialty environmental monitors and consultants per the mitigation requirements identified in the MMRP and the specific sub-tasks identified below. Compliance tracking will use a single mitigation/permit condition matrix to track the progress and completion of each mitigation measure and permit condition.

#### Task 10.1 Environmental Compliance Manager and MMRP Tracking through Design, Pre-Construction, Construction and Post-Construction

To facilitate the tracking and compliance verification of the mitigation measures adopted in the MMRP, CONSULTANT will have a dedicated Environmental Compliance Manager (ECM) for the duration of the project to coordinate and manage compliance monitoring of the mitigation measures identified in the aforementioned MMRP and further clarified in this Task 10. The ECM will prepare project documentation, conduct field observations, and provide compliance reviews of deliverables produced by the Design Team, and other consultants including the Construction Manager (CM). During construction, one day per month, ECM will perform an on-site monitoring event. These monitoring events will be conducted randomly and will have a focus on verifying compliance with the adopted MMRP. Information obtained during these on-site monitoring events will be included in the monthly compliance reports. Coordination between the ECM, other consultants, SANBAG and its construction manager will be primarily by telephone or in writing (electronic correspondence) with up to eight (8) in person meetings.

In conjunction with this task, CONSULTANT will implement or coordinate the implementation of the following mitigation measures in efforts to verify compliance:

- MM LU-1 (Minimize Project Land Requirements)
- MM NV-1 (Construction Noise) – Prepare project specification. CM/Contractor to prepare compliance plan and implement it
- MM NV-2 (Community Notification Plan) – Confirm implementation of plan by SANBAG PMC and Public Outreach Consultant

- MM SS-1 (Safety and Security Mgmt. Plan) – See Task 26
- MM SS-2 (Fencing Plans) - see Task 34
- MM BIO-3 (Contractor Training) – see Task 10.5.7
- MM HAZ-5 and HAZ-6 (Wildfire Prevention) - Prepare project specification. CM/Contractor to prepare and implement
- MM GEO-1 (Confirmation of Geotechnical Mitigation) – see Task 6
- MM CUL-3 (Off-Site Replacement of Citrus Trees) – see Task 10.3.4

### **Assumptions**

- The construction era on-site monitoring events will start in September 2015 and end in September 2019.
- This task also assumes the ECM's attendance at up to eight, 2-hour meetings prior to, during, and at project close-out.
- This scope assumes that environmental compliance coordination and management activities will commence on or about September 1, 2015 and continue through September 30, 2020.

### **Deliverables**

- Task 10.1 - Up to 60 Monthly Environmental Compliance Reports (including MMRP Matrix Updates) and 20 Quarterly Compliance Reports documenting compliance and verification activities, including agency coordination (1 hardcopy and 1 PDF)
- Task 10.1 - Documentation of compliance for Mitigation Measures LU-1, NV-1, NV-2, SS-1, SS-2, HAZ-5, HAZ-6, GEO-1, and CUL-3

### **Task 10.1.1 Project Modifications Processing**

This task includes the preparation of up to two environmental addendums to review changes in the project description as presented in the Final EIS/EIR. This documentation may include a CEQA Addendums or a NEPA Reevaluation.

#### **Assumptions:**

- This scope assumes that the CEQA addendum and NEPA reevaluation would not result in new environmental effects that would otherwise require a supplemental EIR under CEQA or supplemental EA/FONSI under NEPA. The preparation of documentation beyond the addendum/reevaluation would require an amended scope of work.

#### **Deliverables:**

- Task 10.1.1 - Two draft and final CEQA Addendums/NEPA Reevaluations

## Task 10.1.2 Final Design Specifications

This subtask includes the work necessary to preparation and check the Environmental Section of the Construction Special Provisions. As part of this task, CONSULTANT will integrate the mitigation requirements from the MMRP and other permit conditions, as applicable, into the environmental section of the construction specifications. This will include the integration of regulatory permit conditions from permits that have yet to be secured.

### Assumptions:

- This subtask is specifically removed and included here and excluded from the work to prepare detailed technical specifications as identified in Part VI – Final Design Engineering Documents (Tasks 34-37).

### Deliverables:

- Task 10.1.2 - Draft and Final specification for Environmental Section

## Task 10.2 Hydrology and Water Quality

### Task 10.2.1 Construction SWPPP (Draft) (MM HWQ-2)

CONSULTANT will review and confirm the risk level assessment performed during Preliminary Engineering phase and develop a draft Stormwater Pollution Prevention Plan (SWPPP) for the project for coverage under a Construction General Permit. The draft project SWPPP will be prepared under the supervision of a Qualified SWPPP Developer (QSD), as required by the Construction General Permit.

#### Task 10.2.1.1 Prepare Erosion Control Plans

CONSULTANT will prepare Erosion Control Plans (ECP) to include, but not be limited to, erosion control, sediment control, wind erosion control, tracking control BMPs, location of staging yard, and access points. The ECPs will be coordinated with the Draft SWPPP, and related specifications and opinion of probable construction cost. Industry standards will be used to prepare the ECPs. Reference materials include the CASQA BMP Construction Handbook Web Portal and local City/County standards.

#### Task 10.2.1.2 Prepare Draft and Pre-Construction Draft SWPPP

In addition to the draft SWPPP document, this task includes the development of the following maps:

- Site Map: an 8.5 x 11 simply showing the regional location of the site (this will be submitted with the NOI).
- Best Management Practices (BMP) Map: a series of scaled project alignment/footprint maps (11 x 17 or 24 x 36), showing the locations of BMPs within the project area. These maps will include suggested water quality sampling locations for the Construction Site Monitoring Program (CSMP).

This task will involve addressing comments from SANBAG on the draft project SWPPP and finalizing the draft project SWPPP.

**Assumptions:**

- Assumes Risk Level 2 project with CSMP and water sampling required.
- Contractor and SANBAG will finalize the SWPPP, NOI, and file the project files in SMARTS database (State of California) as required to obtain a WDID Number.
- Compliance monitoring will be conducted by the CM. ECM will verify the execution of compliance monitoring under Task 10.1.
- The ECPs will not be phased consistent with the staging plans.

**Deliverables:**

- Task 10.2.1 - Administrative Draft and Draft Project SWPPP (1 hardcopy, 1 MS Word, 1 PDF)
- Task 10.2.2 - ECPs at the 60%, 90%, and 100% deliverable milestone.
- Task 10.2.1 - Attachments and appendices in both PDF and Word format

**Task 10.2.2 Industrial SWPPP (MM HWQ-6) – NOT INCLUDED**

**Task 10.2.3 Drainage Plan (MM HWQ-1)**

Refer to Task 16.

**Task 10.2.4 Water Quality Management Plan (MM HWQ-6)**

CONSULTANT will prepare a final Water Quality Management Plan (WQMP) in accordance with the Technical Guidance Document for Water Quality Management Plans for County of San Bernardino Area-wide Stormwater Program, dated June 7, 2013. The WQMP will summarize the stormwater quality issues of the project for the PS&E phase. The WQMP is used to document the decision-making process relating to the implementation of BMPs within the project.

CONSULTANT will prepare a BMP Alternative Evaluation Technical Memorandum (TM) in accordance with the Technical Guidance Document for Water Quality Management Plans. The TM will evaluate BMPs (mostly for the stations) and recommend a preferred BMP strategy to be the basis for the WQMP. An exhibit displaying the existing, proposed and reconstructed impervious areas (and acreages) will be included in the TM along with a breakdown of those areas and net increase in impervious areas. Required water quality calculations for existing/proposed conditions will be included.

CONSULTANT will provide recommendations on potential BMP alternatives for SANBAG's consideration. CONSULTANT will evaluate up to (3) three alternatives at a concept level to mitigate for stormwater quality impacts. For each BMP alternative, the TM will evaluate pros/cons, capital/maintenance costs, maintenance considerations, risks, and other issues and concern that merit discussion.

**Assumptions:**

- A WQMP will be required by the City of San Bernardino, City of Redlands and County of San Bernardino and will address applicable stormwater quality impacts and mitigation measures for the entire project, both within the railroad right-of-way and proposed stations.
- Project falls under a permit-specified category with corresponding pollutants of concern.
- The WQMP will expand upon and update the Preliminary WQMP included in the FEIS/EIR (2015).
- The BMP Alternative Evaluation TM will be prepared by a Civil Engineer registered in California.
- The WQMP will leverage information developed in conjunction with the drainage report and geotechnical report.
- This scope does not include changes to the Technical Guidance Document for Water Quality Management Plans for County of San Bernardino Area-wide Stormwater Program, dated June 7, 2013.
- The stations will require BMP maintenance agreements (up to 4), as applicable, with associated legal plats and exhibits.
- Any required hydromodification evaluation along Mission Zanja Creek will be part of a separate risk study.

**Deliverables:**

- Task 10.2.1 - Draft and Final BMP Alternative Evaluation Technical Memorandum (4 hardcopies, 1 MS Word, 1 PDF)
- Task 10.2.1 - Draft and Final WQMP (4 hardcopies, 1 MS Word, 1 PDF)

**Task 10.2.5 Natural Hazard Mgmt. Plan (MM HWQ-4) – NOT INCLUDED****Task 10.2.6 Flow Diversion Plan(s) (MM HWQ-4) – NOT INCLUDED**

Provided by CM/Contractor.

**Task 10.2.7 Flood-Proofing (MM HWQ-5)**

Refer to Task 16.

**Task 10.3 Cultural Resources****Task 10.3.1 Archaeological Monitoring (Redlands Chinatown) (MM CUL-4)**

## Task 10.3.1.1 Prepare Cultural Resource Monitoring and Discovery Plan (CRMMP)

Mitigation Measure CUL-4 from the RPRP FEIS/FEIR requires full-time archaeological monitoring in the vicinity of the Redlands Chinatown site during initial ground disturbance. The Redlands Chinatown site boundary covers the entire south half of Stewart Street between

Eureka Street and past Orange Street, and encompasses the Santa Fe Depot as well as five other historic properties. CONSULTANT will prepare a Cultural Resource Monitoring and Discovery Plan (CRMMP) for the project and submit it to SANBAG. The plan will comply with Section 106 of the National Register of Historic Places (NRHP) and CEQA. Mitigation measures from the Final EIS/EIR will be incorporated into the plan. CONSULTANT will review previously prepared cultural documents generated for the project and construction plans, as available, and prepare a map identifying areas designated for archaeological monitoring. As part of the CRMMP, CONSULTANT will prepare a research design protocol that will identify the required procedures in the event an unanticipated discovery occurs during construction monitoring. Comments from SANBAG and the California State Historic Preservation Office (SHPO) will be addressed and the plan will be finalized. Formal SHPO approval will be requested.

#### Task 10.3.1.2 Archaeological Monitoring

CONSULTANT will provide archaeological monitor(s) in areas of ground-disturbing construction activity within the boundaries of the Redlands Chinatown site including a 50-foot buffer around the site. The archaeologist(s) will monitor construction activities for cultural resources uncovered as a result of such activities. If previously unknown cultural resources are identified as a result of construction activities, procedures for unanticipated discoveries will be followed. The monitor(s) will compile daily monitoring logs and photos. The daily monitoring logs will be the basis for the ECO's monthly reports (Subtask 10.1). Non-compliance issues will be discussed and resolutions documented.

#### **Assumption**

- The labor/expense equivalent of one monitor, 3-months of full time monitoring, plus expenses. Work schedule is up to five 10-hour days per week.

#### Task 10.3.1.3 Final Archaeology Monitoring Report

Upon completion of archaeological monitoring, CONSULTANT will prepare a draft monitoring report for submittal to the SANBAG. This report will be based on the daily monitoring forms and will include a description of monitoring efforts, provide a complete list of cultural resources identified and recovered, and reference the documentation completed to document, evaluate, and treat each discovery. Cultural materials and archaeological features discovered during monitoring will be analyzed and described to the level of current best practices for modern archaeology. Non-compliance issues and their resolution will be discussed. Site records prepared during the monitoring effort will be appended to the report. A final version of this report will be provided to the South Central Coastal Information Center for its permanent records. The final report, when submitted to SANBAG/FTA, signifies the completion of the program to mitigate impacts to archaeological resources.

#### **Deliverables**

- Task 10.3.1.3 - Draft and Final Archaeological Monitoring Report (concurrent review by SANBAG) in PDF format
- Task 10.3.1.3 - Draft and Final CRMMP

- Task 10.3.1.3 - Daily monitoring logs, to be incorporated into monthly summaries and the project archaeological monitoring report (not a QC deliverable item)

#### Task 10.3.1.4 Unanticipated Archaeological Discovery – OPTIONAL SERVICES

CONSULTANT will address simple/minor discovery incidents in the quarterly monitoring reports. In the case of a potentially significant accidental discovery on the project, CONSULTANT will provide the necessary archaeological staff to expedite the process of determining the significance and boundaries of the find and to recover any archaeological materials. If necessary, testing and evaluation will be implemented, following the procedures described in the CRMMP. The use of mechanical or manual excavation methods employed will depend on several factors, including site structure and the type of materials present. If prehistoric or historical archaeological sites identified during monitoring of the project area are determined to meet one or more NRHP or CRHR eligibility criteria and retain integrity, the site will be considered significant and it will be necessary to prepare a Historic Property Treatment Plan, which will include a site-specific research design, prior to conducting a Phase III data recovery excavation, following the general procedures described in the CRMMP. However, if the identified site is determined to be not eligible for the NRHP or CRHR, subsurface investigation will cease at the testing and evaluation phase. In either case, at the completion of testing excavations and data recovery excavations, construction activities will resume in the area of discovery. CONSULTANT will prepare a testing and evaluation report for submittal to SANBAG (and FTA) and the SHPO.

#### **Assumptions:**

- For purposes of fee development, assume one (1) unanticipated archaeological discovery, one day of evaluative testing, and reporting.
- The one (1) discovered site will not meet the eligibility requirements for listing in the NRHP.
- No outside analysis or curation will be necessary.

#### **Deliverables**

- Task 10.3.1.4 - (Optional Services) Draft testing and evaluation report (concurrent review by SANBAG) in PDF format
- Task 10.3.1.4 - (Optional Services) Revised draft testing and evaluation report (review by SHPO) in PDF format
- Task 10.3.1.4 - (Optional Services) Final testing and evaluation report in PDF format

### **Task 10.3.2 Historic Structural Evaluations (MM CUL-1)**

#### Task 10.3.2.1 Redlands Depot Historic District Contributor Structural Evaluations

Mitigation Measure CUL-1 specifies that a qualified engineer will prepare structural evaluations (see Task 10.7.1.1) for five historic buildings in close proximity to the rail alignment that are contributors to the Redlands Santa Fe Depot District:

Redlands Depot Building	(351 Orange Street)
Cope Commercial Company Warehouse	(21 West Stuart Avenue)
Haight Packing House	(345 North Fifth Street)
Redlands City Transfer	(360 North Orange Street)
Brick Warehouse	(440 Oriental Avenue)

This subtask includes the work to be performed by the architectural historian and in response to mitigation measure CUL-1. Refer to Task 10.7.1 for the structural engineering analysis associated with this mitigation measure.

Prior to the structural evaluations, an architectural historian will conduct site visits to each of the five buildings to document their current conditions and to identify and inventory the character-defining architectural features that convey their significance. CONSULTANT will prepare a technical report documenting each contributor building's character-defining architectural features so that those features can be given appropriate consideration by the engineer conducting the structural analyses to determine vibration sensitivity (ref: Task 10.7.1). CONSULTANT will arrange for technical assistance from the SHPO in consultation with project engineering staff. The technical assistance would provide clear, SHPO-endorsed guidelines for temporary stabilization measures determined necessary will be implemented in accordance with Secretary of the Interior standards, and/or that the buildings' pre-construction conditions and character-defining features are effectively maintained or restored after implementation and removal of temporary stabilization measures deemed necessary as result of structural evaluation.

#### Task 10.3.2.2 Redlands Depot Construction Monitoring

As components of the project, the narrow landing at the north side of the Redlands Depot building, the sidewalk along the building's east side and the northeast corner of the building's grand plaza will be altered. The original brick narrow landing will be removed. To comply with the Americans with Disabilities Act, the uneven transition between the eastern grand plaza and the sidewalk at the east side of the building will be flattened, requiring removal of 275 square feet of original brick at the northeast portion of the grand plaza. The original brick is a character-defining architectural feature of the Redlands Depot. If possible, original brick removed to reduce the existing grade will be salvaged and re-installed. If this is not possible, original brick removed from the narrow landing will be installed at the flattened portions of the grand plaza's east end. If the original brick at the east end of the grand plaza and the narrow landing cannot be reused, in-kind replacement brick matching the size and color of the original brick will be procured and installed at the flattened portions of the grand plaza's east end. Additionally, a qualified expert will conduct analysis of the existing mortar and prepare appropriate mortar for the brickwork at the east end of the grand plaza in accordance with the National Park Service's (NPS) Preservation Brief 2: Repointing Mortar Joints in Historic Masonry Buildings. The brickwork at the east end of the grand plaza will also be conducted in accordance with the Secretary of the Interior's Standards for Rehabilitation with Guidelines for Applying the Standards.

CONSULTANT will conduct monitoring of construction activities related to grade alteration at the east end of the grand plaza. CONSULTANT will review construction drawings and specifications for this work to meet the Secretary of the Interior's Standards for Rehabilitation and NPS Preservation Brief 2. CONSULTANT will conduct up to five site visits over the course of

construction in order to confirm that the work is completed in accordance with the Secretary of the Interior’s Standards NPS Preservation Brief 2. CONSULTANT will prepare a monitoring report suitable for distribution to interested parties and SHPO that demonstrates how this element of the project has been completed in a manner that maintains the relevant Redlands Depot character-defining architectural features.

**Assumptions:**

- One draft report for each to be circulated and revised in response to comments, and one final report for each.

**Deliverables:**

- Task 10.3.2.2 - Technical report documenting each Redlands Depot Historic District contributor building’s character-defining architectural features
- Task 10.3.2.2 - Report showing compliance with mitigation

**Task 10.3.3 Minimize Adverse Effects of Noise Mitigation to Historic Properties (MM CUL2-a, CUL-2b) – NOT INCLUDED**

**Task 10.3.4 Historic Resource Mitigation at California/I-10 Citrus Grove (MM CUL-3)**

CONSULTANT will research Redlands Historic Citrus Preserve sites to determine which ones have capacity to receive new trees, including site visits to Historic Citrus Preserve. CONSULTANT will prepare a letter report outlining preserve sites’ receiving capacity and planting requirements. The report will provide recommendations for the most efficient means of satisfying Mitigation Measure CUL-3. The types of trees to be planted will be determined through consultation among SANBAG, the City of Redlands, and the City’s Citrus Preservation Commission. CONSULTANT will review construction documentation to confirm that the same number and type of trees removed from the California/I-10 Grove were planted at other Redlands Historic Citrus Preserve sites. CONSULTANT will provide a short write-up on the completion of this mitigation.

**Deliverables**

- Task 10.3.4 - Write-up showing compliance with mitigation

**Task 10.4 Traffic and Alternative Transportation**

**Task 10.4.1 Traffic Management Plan (MM TR-1)**

CONSULTANT will prepare the Traffic Management Plan (TMP) prior to the start of construction. The TMP will include the minimum requirements identified in MM TR-1 of Appendix Q (MMRP).

**Deliverables**

- Task 10.4.1 Traffic Management Plan

### Task 10.4.2 Traffic Mitigation Fee Support (MM TR-2)

CONSULTANT will assist SANBAG in the producing and retaining evidence of completion of mitigation fee support for traffic impacts to the City of San Bernardino Public Works Department and City of Redlands Municipal Engineering Department, as applicable.

#### *Deliverables*

- Task 10.4.2 - Memo verifying compliance with TR-2 (1 hardcopy and 1 PDF)

### Task 10.4.3 CPUC Approvals and Safety Measures (MM TR-3, TR-4)

See Task 2.15.

### Task 10.4.4 Transit Realignment (MM TR-5) – NOT INCLUDED

Not included. This work is to be performed by Omnitrans and coordinated by SANBAG or PMC as applicable. Task 34 includes design services to facilitate the relocation or improvement of existing bus stops so as to better serve each of the station locations, as applicable.

### Task 10.4.5 Santa Ana River Trail Accommodation (MM PCS-1)

See Task 2.17.

### Task 10.4.6 Orange Blossom Trail Planning (MM PCS-1)- NOT INCLUDED

This work removed during negotiations.

### Task 10.5 Biological Resources

#### Task 10.5.1 Final Permit Acquisition and Agency Coordination (MM BIO-6)

CONSULTANT will complete the permitting process for applicable regulatory permit applications to facilitate project construction in sensitive areas. Applications already filed for the project will be leveraged to the extent feasible contingent on their timing for completion. SANBAG has filed the following permit applications for the project:

- Clean Water Act, Section 404, Multiple Nationwide Permits (NWP), File No. SPL-2013-00117-SLP;
- Clean Water Act 401 Water Quality Certification File No. 332014-31(CIWQS # 810528); and
- Fish and Game Code, Section 1600, Streambed Alteration Agreement (“SAA” – File No. 1600-2014-0227-R6).

Additionally, SANBAG has completed consultations with USFWS and SHPO as part of the NEPA process. CONSULTANT will leverage these existing agency approvals and consultations as part of the permitting effort and assumes that no additional formal consultation will be required.

- USFWS, Section 7, Biological Opinion (File No. FWS-SB-1380313-14FOI68); and
- SHPO, Section 106, Letter of Concurrence (File No. FTA120830A).

In conjunction with this task, CONSULTANT will complete the following activities to support the permit approvals prior to construction along with the following:

- Coordination and Resolution of Permit Conflicts (SSA Condition 1.4)
- Compliance Reporting for 404/401 Permits
- Verification of BMP Compliance
- Pre- and Post-Construction Photo-documentation
- Verification of Water Quality Monitoring and Reporting (to RWQCB)
- Review and comment on the Water Diversion Plan (MM HWQ-3)
- Assistance with Purchasing of Mitigation Bank or ILF Credits

**Assumptions:**

- No additional formal consultation will be required.
- This task includes up to 200 hours of budget to support ongoing agency consultations in order to secure the required permits.
- CM/Contractor will be responsible for water quality monitoring, BMP implementation, and preparation of the draft Diversion Plan.
- SANBAG will be responsible for required permit fees.

**Deliverables:**

- Task 10.5.1 - Annual Monitoring Reports to USCAE and RWQCB (1 hardcopy, 1 PDF)
- Task 10.5.1 - Pre- and Post-Construction Photo-documentation (up to six locations)
- Task 10.5.1 - DRAFT letter to Mitigation Banks and/or ILF Programs for submittal by SANBAG (up to 3 letters)

**Task 10.5.2 Section 2081 Incidental Take Permit (Least Bell’s Vireo (LBV) and Santa Ana River Woollystar)**

CONSULTANT will prepare a letter application for a Section 2081 Incidental Take Permit (ITP) from the California Department of Fish and Wildlife (CDFW). The ITP application will describe the project, identify listed species that may be present, analyze how the project may impact each of these species and draw a “no effect,” “may affect, but not likely to adversely affect,” or “may affect, likely to adversely affect.”

**Assumptions**

- The letter application will leverage previously prepared documentation, including the previously prepared Biological Assessment (2014).

**Deliverable**

- [Task 10.5.2 - Draft and Final ITP Letter Application \(1 hardcopy; 1 PDF\)](#)

**Task 10.5.3 Pre-Construction Rare Plant and Wildlife (MM BIO-1 and SAA Condition 2.7)**

CONSULTANT will have a qualified biologist conduct a pre-construction survey for special status plant species including, but not limited to; Santa Ana River woolly star, slender-horned spineflower, smooth tarplant, and salt spring checkerbloom. Pre-construction surveys will also be conducted for special status wildlife species including San Bernardino kangaroo rat, burrowing owl, and western spadefoot toad to verify presence or absence in the Project area. Pre-construction burrowing owl take avoidance surveys are also required within 14 days of disturbing suitable habitat. If one or more species are detected, then CONSULTANT will notify SANBAG and provide a recommended course of action in consultations with the USFWS (or CDFW if appropriate) to develop additional minimization measures prior to project construction (if necessary). These additional measures may include construction timing restrictions and/or construction monitoring. In addition, if any special status plant or wildlife species are found within or adjacent to the project during pre-construction surveys, the CONSULTANT biologist shall submit a California Natural Diversity Data Base (CNDDDB) form and map to the CNDDDB within five working days of the find. Copies of the CNDDDB forms and survey maps will be provided to the regional CDFW office.

Pre-construction surveys for special-status avian species are addressed in the next subtask.

**Assumptions**

- Four passes by two biologists for two days each pass for rare plant surveys.
- Spadefoot toad surveys will require a minimum of three surveys and requires two biologists; suitable habitat can be covered in a single night.
- No mammal trapping included.
- Survey results may be combined into a single report.

**Deliverables:**

- [Task 10.5.3 - Survey Report\(s\)](#)
- [Task 10.5.3 - Reporting to CDFW/USFWS, including CNDDDB forms \(if applicable\)](#)
- [Task 10.5.3 - GPS data for observed listed and special status species \(shape/point file\)](#)

**Task 10.5.4 Nesting Bird Plan (SAA Condition 2.3)**

CONSULTANT will prepare and submit to CDFW for review a Nesting Bird Plan (NBP) at least 60 days prior to the start of construction that includes project specific avoidance and minimization measures so that impacts to nesting birds do not occur and that the project complies with applicable laws related to nesting birds and birds of prey. The NBP will include monitoring protocols; survey timing and duration; and project-specific avoidance and minimization measures including, but not limited to: project phasing and timing, monitoring of project-related noise, sound walls, and buffers.

**Deliverables:**

- Task 10.5.4 - Nesting Bird Plan (1 hardcopy, 1 PDF)

### **Task 10.5.5 Pre-Construction Breeding Bird Surveys (MM-BIO-1, MM BIO-2, MM BIO-3; BO CM-3)**

This task will also involve the implementation of mitigation measures adopted for bird species protected under the Migratory Bird Treaty Act (MBTA and ESA) prior to and during construction. Prior to habitat removal during the avian breeding season, CONSULTANT biologists will conduct a preconstruction nest survey for migratory birds throughout the active construction area 3 days prior to construction. CONSULTANT will document findings via a monitoring log that describes the findings of the survey and, if necessary, will submit the report to USFWS and/or CDFW.

This task includes LBV nest pre-construction surveys and monitoring, including monitoring of noise levels. Noise monitoring will occur during the LBV breeding season if nests occur within 500 feet of construction. Monitoring results will be reported daily to USFWS and CDFW. Appropriate guidance will be conveyed to the construction manager for implementation on site to address excessive noise levels and in accordance with the construction specifications developed for the project.

**Assumptions**

- Assumes a 32-month construction schedule spanning two breeding bird seasons (February 15 through August 31) with two visits a week for breeding bird surveys (breeding bird surveys are only valid for three days pursuant to SAA Condition 2.4).
- Up to 4 weeks of daily noise monitoring each of three years.

**Deliverables**

- Task 10.5.5 - Daily monitoring logs (1 hardcopy, 1 PDF)

### **Task 10.5.6 Biological Monitoring and Exclusionary Fencing (MM BIO-4)**

CONSULTANT's qualified biologist will carry out the day-to-day observations of the Contractor's activities for compliance with mitigation measures and permits. The Biological Monitor will report to The ECM, CM and SANBAG daily to discuss mitigation or permit related issues or concerns, to help resolve non-compliance issues, and/or to coordinate upcoming construction activities.

CONSULTANT will provide the bulk of the construction monitoring services as specified in the MMRP, 1600 SAA, and BO. At the conclusion of the environmental observations, CONSULTANT will prepare a post-construction log summarizing the project activities, environmental issues or concerns, and environmental successes. This log will include representative photographs of the activities conducted during the project's construction.

Monitoring activities will include monitoring the erection of the wildlife exclusionary fencing and construction fencing, between MP 3.3 and 4.0, including a five-foot buffer around the woollystar plant, and ongoing monitoring so that these fences are properly maintained throughout the construction period.

CONSULTANT will coordinate with the CM team on the schedule for initiation and completion of ground-disturbing activities and vegetation removal in habitat suitable for LBV, southwestern willow flycatcher, etc. CONSULTANT will provide summaries of experience and résumés for qualified biologists for SANBAG to use in obtaining approval of our biologists from the USFWS and/or CDFW.

When present on-site for construction monitoring, CONSULTANT's biological monitor will observe trenches and pipes for the presence of federally listed species at the beginning of each workday. When CONSULTANT's biologist is no longer on the site daily, construction personnel designated by the SANBAG shall be responsible for inspecting trenches and pipes daily.

Each day, prior to the start of grading, excavation, and vegetation removal activities, the biological monitor will observe the perimeter fence to see that there are no tears or holes, the base of the fence is still buried, and that no individuals have been trapped in the fence. The biological monitor will closely monitor LBV, San Bernardino kangaroo rat, or southwestern willow flycatcher found along and outside the fence until they move away from the construction area. The monitor will also check open trenches or holes and under parked vehicles for the presence of wildlife.

The biological monitor may not stay on-site for the entire day, but will be present to monitor vegetation removal and initial ground-disturbing activities in sensitive areas. CONSULTANT will document the results of monitoring on monitoring log sheets that will be provided to SANBAG for the project files.

CONSULTANT biologists will remain on-call throughout construction in case federal or state listed species are encountered. CONSULTANT will perform or assist in the relocation of federally listed species present in any life stage (individual, larva, or egg mass) or that may become trapped in a pipe or ditch or are found within the construction area and if authorized by the USFWS and/or CDFW. If authorized, remove and relocation/release will be to a suitable habitat (terrestrial, subterranean or aquatic) outside of the construction area and within 0.25 mile of the project area. Once initial ground-disturbing activities are completed, CONSULTANT will perform spot checks of the project area for the duration of construction in order to confirm that the contractor is maintaining the perimeter fence in good order, covering trenches, conducting checks beneath parked vehicles prior to their movement, and complying with other required biological protection measures.

When present, the biological monitor will check that excavated areas more than two feet deep are provided with one or more escape ramps constructed of earth fill or wooden planks or, if escape ramps cannot be provided, holes or trenches are covered with plywood or other hard material at the end of each workday to avoid entrapment or prevent injury or mortality of species resulting from falls.

When present, the biological monitor will check that piping larger than four inches in diameter has the ends taped, capped, or placed in such a manner that species are not permitted to enter and establish nesting sites or dens.

The biological monitor will coordinate with the CM regarding avoidance of construction during the breeding season of the least Bell's vireo (March 15 to September 15), unless survey documentation to USFWS confirms the riparian habitat is not occupied by LBV.

### Assumptions

- We have assumed that 8 hours (excluding travel) to conduct activities required on the site daily and that ground-disturbing activities will be completed within 150 days work days.
- Construction contractor will provide exclusion fencing and signage.
- Pre-construction BUOW, breeding bird surveys and nest monitoring will be conducted on the same days as general construction monitoring activities.
- CONSULTANT has included 100, 8-hour days for general biological monitoring and on-call time.
- Biological monitoring staff will not be required to possess a USFWS 10(a)1(A) permit<sup>1</sup>.
- Does not include pre- or post-construction water quality monitoring or functional assessment if required by the RWQCB.
- Does not include SWPPP monitoring. Assumes such monitoring will be provided by the CM.

### Deliverable

- Task 10.5.6 - Daily Monitoring Log for each day that a survey is performed including additional supporting documentation.
- Task 10.5.6 - Photo-documentation
- Task 10.5.6 - GPS coordinates for species observations

### Task 10.5.7 Worker Awareness Training (MM BIO-4)

CONSULTANT will prepare presentations and materials for two levels of worker awareness training; supervisory-level and crew-level training. These trainings will comply with training requirements included in the project's MMRP, BO, and permits to inform personnel of special-status species, habitats, or cultural resources that have the potential to occur on site or adjacent to the work area. The training will include applicable requirements related to environmental compliance, including communication protocols, project changes, stormwater and pollution control, and other pertinent resource areas.

Two pre-construction trainings will be provided to the Contractor, CM, SANBAG and other agency or consultant staff participating in or supporting construction and at the onset of field activities.

Up to six (6) additional worker-awareness-training sessions will be facilitated during the first year of active construction and coincident with general monitoring days included elsewhere in this scope of services.

<sup>1</sup> [Recovery and Interstate Commerce Permit](#) (Section 10(a)(1)(A) of the ESA) - sometimes required for scientific research on a listed species or activities to enhance a listed species propagation or survival. Examples include, but are not limited to: abundance surveys, genetic research, relocations, capture and marking, and telemetric monitoring. A permit may also be required to possess tissues and/or body parts of listed species.

### **Deliverable**

- Task 10.5.7 - Worker Awareness Training Materials (4 hard copies; 1 PDF)

### **Task 10.5.8 Burrowing Owl Habitat Assessment, Surveys, and Mitigation (MM-BIO-5; SAA Condition 2.7)**

Prior to the initiation of project activities, CONSULTANT will conduct a supplemental burrowing owl habitat assessment, if required. The assessment will consist of (a) qualified biologist(s) walking the entire project site and adjoining areas within 150 meters, including areas that may be indirectly impacted by the project, to identify the presence of burrowing owl habitat. A supplement to the original report summarizing the results of the habitat assessment will be submitted to CDFW within 30 days following the completion of the assessment.

*If Observed.* If surveys confirm occupied burrowing owl habitat in or adjoining the project area, CONSULTANT, in coordination with SANBAG, will contact CDFW and conduct an impact assessment, in accordance with Staff Report on Burrowing Owl Mitigation (Department of Fish and Game, March 2012), to assist in the development of avoidance, minimization, and mitigation measures, prior to commencing project activities. If a BUOW is observed, CONSULTANT will propose mitigation, including but not limited to, the preparation of an exclusion plan that would be developed and implemented in coordination with CDFW. This task assumes the construction contractor provides temporary buffer fencing until the biologist confirms that the burrow has been collapsed.

*Establish Buffer.* Should an active burrow occur in or adjacent to the construction work area, the CONSULTANT will establish a 100-foot buffer in accordance with CDFG 2012 Guidance around the burrow, delineate the exclusion area for construction, and monitor the burrow until hatchlings relocate. CONSULTANT will provide oversight and coordination with SANBAG's CM for this task.

### **Assumptions**

- Construction contractor provides temporary buffer fencing.
- No incidental take permit will be required. If non-passive relocation efforts will be undertaken in the event that BUOWs are located during the preconstruction surveys.
- Up to one week to install/monitor/collapse burrows within the construction area.
- Breeding season BUOW surveys requires two biologists two days to complete for each of the four survey passes.

### **Deliverables**

- Task 10.5.8 - Supplemental BUOW Habitat Assessment (1 hardcopy; 1PDF)
- Task 10.5.8 - BUOW Impacts and Mitigation Report (1 hardcopy; 1 PDF)
- Task 10.5.8 - Monitoring Reports (1 hardcopy; 1 PDF)

### **Task 10.5.9 Protection and Reseeding for Santa Ana River Woollystar (MM BIO-7; BO CM-21, 22, and 23)**

If take of the woolly star individual cannot be avoided, CONSULTANT will collect, store, broadcast/reseed (in accordance with the BO) using seeds from the closest known occurrences of woolly-star plants found both upstream and downstream of the Project area in the SAR during the seeding period (late July to mid-October) prior to construction. The collected seeds will be broadcast in the temporary impact areas, near the impacted woolly-star plant, after construction activities are complete and soils have been restored to pre-Project contours.

CONSULTANT will monitor the success of the woolly-star seedlings for a period of 2 years for successful establishment in planted areas. If no plants are established during this 2 year period, replanting in the impact area, off-site restoration, or purchase of mitigation credits will be required.

#### **Assumptions**

- Access to the up stream and downstream plant populations will be facilitated by the right of entry secured as part of the Flood Control Permit from SBCFCD.

#### **Deliverables**

- Task 10.5.9 - Seed Collection, Propagation, and Monitoring Plan (1 hardcopy; 1 electronic)
- Task 10.5.9 - Annual Reports (1 hardcopy, 1 electronic)

### **Task 10.5.10 Bat Assessment, Monitoring, and Protection Plan (1600 SAA Conditions 2.5 and 2.6)**

CONSULTANT will complete a bat roosting habitat suitability assessment of the structures and trees that may be removed, altered, or indirectly impacted by the proposed project using a CDFW-approved bat biologist. The results of this assessment will be provided to CDFW at least 90 days prior to the commencement of project activities. Locations with potential for roosting or suitable as a maternity roost will be surveyed by the CDFW-approved bat biologist using an appropriate combination of structure inspection, sampling, exit counts, and acoustic surveys. Surveys will be conducted during the appropriate season and time of day/night for detection of bats. If bats are found using bridges, culverts, or trees within the project area, the biologist shall identify the bats to the species level, and evaluate the colony to determine its size and significance. The bat survey will include: 1) the exact location of roosting sites (location shall be adequately described and drawn on a map), 2) the number of bats present at the time of visit (count or estimate), 3) each species of bat present shall be named (include how the species was identified), 4) the location, amount, distribution and age of bat guano shall be described and pinpointed on a map, and 5) the type of roost: night roost (rest at night while out feeding) versus a day roost (resting during the day) must also be clearly stated.

If there are suitable and/or occupied roosts or maternity roosts in the project construction areas or within a 200-foot buffer, CONSULTANT shall submit to CDFW for review and approval a Bat Avoidance, Monitoring, and Protection Plan (BAMPP) no less than 30 days prior to initiating Project activities, including site preparation and staging. The BAMPP will include project-specific avoidance and minimization measures so that that impacts to bats do not occur. The BAMPP

will be created in coordination with, and be implemented by, the CDFW-approved bat biologist. The BAMPP shall include, at a minimum: monitoring protocols; survey timing and duration; procedures and frequency of direct reporting to CDFW; and project-specific avoidance and minimization measures including, but not limited to: project phasing and timing; installation and monitoring of exclusionary materials, where and when appropriate; monitoring of project-related noise, vibration, and lighting; and installation of buffers.

### **Assumptions**

- Monitoring will be limited to up to three locations with potential to support bat species.
- Monitoring of installation, avoidance, or exclusion measures will be covered under Task 10.5.4.

### **Deliverables**

- Task 10.5.10 - Bat Survey Results Letter Report (1 hardcopy; 1 electronic - PDF)
- Task 10.5.10 - Bat Assessment, Monitoring, and Protection Plan (1 hardcopy; 1 electronic - PDF)

### **Task 10.5.11 Habitat Mitigation and Monitoring Plan (Condition 4.1; BO CM-4)**

CONSULTANT will prepare a draft and final Habitat Mitigation and Monitoring Plan (HMMP) with the mitigation lead by a California Certified Landscape Architect. The Draft HMMP shall be submitted to CDFW for review and approval as required under the various permits and prior to the initiation of project activities. Temporarily disturbed areas (up to 14 acres) of habitat will be restored on-site to their baseline conditions as defined by the success criteria described in Condition 4.1 of the SAA and BO Conservation Measure 4.

CONSULTANT's biological monitor will coordinate the timing and implementation of restoration of temporary impact areas and maximizing opportunities for natural recruitment. These methods and procedures will be documented in a conceptual revegetation plan/habitat mitigation and monitoring plan addressed below.

The HMMP is assumed to include a native hydroseeding layout plan and notes (up to 25 sheets) as well as a key plan (1 sheet). The restoration plan sheet will also include applicable SANBAG technical specifications for installation and maintenance during the plant establishment period. The plans are assumed to be set up using base files adapted from Task 34. The restoration plan sheet will use SANBAG (or other applicable) specifications for installation and maintenance during the plant establishment period. The plan will indicate the window for the best time of year for planting and/or earthwork to occur. Wetland vegetation will not need supplemental irrigation therefore irrigation design and a watering plan during the establishment period have not been included in this scope.

### **Assumptions**

- Two onsite meetings with SANBAG and SANBAG's CM have been assumed during which the mitigation approach will be finalized and approved.

- Container planting will not be required due to potential conflicts with County Flood Control Maintenance requirements and a high risk of plant material being washed out during subsequent storm events.
- Cost of seed and seeding shall be included in the work to be done by the contractor.

### **Deliverables**

- Task 10.5.11 - Draft and final AutoCAD, Word, or Excel files as well as half-size printable PDF files of drawings (up to 25 sheets)
- Task 10.5.11 - Draft and final Conceptual Revegetation Plan/Habitat Mitigation and Monitoring Plan (for up to 14 acres) (1 hardcopy, 1 PDF)
- Task 10.5.11 - Compliance Verification Memo (1 hardcopy, 1 PDF)

### **Task 10.5.12 LBV Compensatory Monitoring (MM BIO-2; BO CM-3; SAA Condition 4.2) – OPTIONAL SERVICES**

CONSULTANT will provide annual monitoring assistance and documentation of Southern Cottonwood-Willow Riparian Forest (SCWRF) and Southern Willow Scrub (SWS) habitat restoration until LBV is documented using the re-established habitat or until habitat attains 80 percent cover, including both shrub and overstory tree strata. At a minimum, the monitoring report will include the following information: (1) a description of the restoration activities conducted during the previous year, including: (a) the number by species of plants replaced or naturally recruited, (b) when the activities were conducted, and (c) adaptive management measures implemented; (2) current site conditions, including: (a) the percent survival, percent cover, and height of both tree and shrub species planted, and (b) the methods used to assess these parameters; and (3) information regarding nonnative plant removal, including: (a) the methods used for removal, (b) the amount removed and/or treated, (c) the frequency and timing of removal and treatment, (d) disposal specifics, and (e) a summary of the general successes and failures or failure of the nonnative removal plan. Functional assessment may also be required by USACE, however this detail had not yet been determined and has not been included in this Scope of Work. An amendment will be requested if functional assessment data is required by USACE based on the frequency of assessment proposed.

### **Assumptions**

- CONSULTANT assumes that if recruitment of SCWRF and SWS species is not evident within two years of project construction or habitat has not attained 60 percent cover within three years, impacts will be treated as permanent and additional mitigation for areas not meeting success criteria shall be provided through in-lieu fee payment to an appropriate mitigation bank for enhancement. CONSULTANT assumes SANBAG will provide the payment for additional fees.
- These services shall not be performed without prior authorization from SANBAG.

### **Deliverables**

- Task 10.5.12 - Annual Monitoring Reports (through the life of this contract only)
- Task 10.5.12 - Final Compliance Verification Memo (1 hardcopy, 1 PDF)

## Task 10.6 Visual Resources

### Task 10.6.1 Fencing and Screening Plans (MM VQA-1)

This mitigation measure will be coordinated with Task 34 as part of Task 10.1.

### Task 10.6.2 Enhance Exterior Appearance of Structural Facilities (MM VQA-2)

This mitigation measure will be coordinated with Task 34 as part of Task 10.1.

### Task 10.6.3 Tree Replacement Plan (MM VQA-3)

CONSULTANT will provide an International Society of Arboriculture (ISA) certified arborist to perform the arborist survey for the project. The survey will be performed in conformance with the City of San Bernardino and City of Redlands tree ordinances. Arborist will survey trees within the limits of grading, trees with at least a portion of their drip line within the limits of grading, and trees planned for removal. Trees six inches or larger diameter standard height (DSH), defined as 52 inches above grade, will be surveyed. In riparian corridors, trees four (4) inches or larger DSH will be surveyed. Trees will be surveyed with a GPS unit to record location and tagged with aluminum tree tags inscribed with a unique number. Based on the exhibit and aerial photography approximately 80 trees are anticipated to be affected by the project. Tree information to be gathered in the field will include:

- Tree tag number,
- Botanical and common names of trees,
- Native, ornamental, or invasive species status,
- Number of trunks,
- Diameter Standard Height,
- Drip-line radius of longest branch,
- General tree health, vigor, and structure rating for each tree based on a tree conditions matrix, and
- Remarks for each tree including observations related to health, vigor, and structure; and recommendations to improve health, vigor, and structure.
- Representative photos will be taken of the trees in the project area.

#### Task 10.6.3.1 Prepare Arborist Report

An arborist report with tree inventory will be prepared documenting and summarizing data collected during the arborist survey. The report will include a general qualitative description of the vegetative community, the survey methods, and the quantified survey results. The report will include recommendations for protection, preservation, and care of project trees (best management practices) that should be implemented during project construction. The report will also include a digital map of the site, including the identification number of each tree. An arborist report will be provided in PDF format for review and comment. Upon resolution of comments, the report will be revised and a final report submitted.

### Assumptions

- Fee based on a maximum of 100 trees will be included in the survey and report.
- The arborist survey does not include a tree risk assessment of trees surveyed.

### Deliverables

- [Task 10.6.3.1 - Draft and final arborist report \(1 paper, 1 PDF\)](#)

#### Task 10.6.3.2 Prepare Conceptual Tree Replacement Plan

A conceptual tree replacement plan will be prepared and will identify locations within San Bernardino and Redlands where tree mitigation could occur. The plan will include planting and irrigation conceptual design and details, schematic irrigation plan, and an irrigation schedule. The irrigation schedule will include planned irrigation run times for a three-year period following planting to allow for a water application transition from newly planted to established trees. A draft tree replacement plan will be provided in PDF format for review and comment. Upon resolution of comments, the plan will be revised and a final plan submitted.

### Assumptions

- Construction documents, cost estimate, and technical specifications are not required as part of the preparation of the Tree Replacement Plan.
- No new irrigation points of connection required; existing water supply will be available either as another part of the project or at the proposed new tree location(s).

### Deliverables

- [Task 10.6.3.2 - Draft and final conceptual tree replacement plan \(1 paper, 1 PDF\)](#)

#### Task 10.6.4 Sound Barrier Screening and Treatments (MM VQA-4) – NOT INCLUDED

#### Task 10.6.5 Minimize Exterior Lighting (MM VQA-5)

This mitigation measure will be coordinated with Task 34 as part of Task 10.1.

### Task 10.7 Noise and Vibration Studies

#### Task 10.7.1 Pre- and Post- Vibration Assessment (5 historic buildings; MM CUL-1)

##### Task 10.7.1.1 Historic Structures Evaluations

CONSULTANT will have an engineer experience in the evaluation of buildings for vibration effects perform a structural evaluation of five historic buildings and in response to requirements of the mitigation measure. The existing conditions will be documented with photos and text for:

Redlands Depot Building	(351 Orange Street)
Cope Commercial Company Warehouse	(21 West Stuart Avenue)
Haight Packing House	(345 North Fifth Street)
Redlands City Transfer	(360 North Orange Street)
Brick Warehouse	(440 Oriental Avenue)

Results of the documented observations will be used to guide the identification of maximum allowable levels of vibration, and if appropriate, will also be used to identify possible stabilization methods as well as the types and locations of vibration monitoring to be employed during construction. This work will be performed in coordination with the Architectural Historian's recommendations as provided in Task 10.3.2.

### Assumptions

- The evaluations will be visual observations only and not intended to be a full or partial analysis of code compliance or overall structural integrity of the building. No invasive work is proposed.
- Right of entry and physical access to the buildings will be freely provided by owner and tenant(s) without extraordinary measures and in the same contiguous time period (i.e. the buildings can be visited in the same week for economical field work).

### Deliverables

- [Task 10.7.1.1 - Historic Building Structural Evaluation and stabilization ideas \(observations, photos, discussion\) in a letter type memo for five buildings](#)

#### Task 10.7.1.2 Construction Vibration Monitoring and Mitigation

This scope also assumes that vibration monitoring will be necessary during construction at each of the five listed buildings. CONSULTANT acousticians will rent, configure and install monitoring systems to include continuous monitoring of vibration levels along with communication interface to provide notifications of vibration events. The construction vibration monitoring systems will be configured with two notification thresholds (approaching maximum levels/exceeding maximum levels).

The engineer will work with the architectural historian to identify and implement appropriate mitigation(s) stabilization measures in accordance with the Secretary of the Interior's guidelines for the treatment of historic properties. CONSULTANT will coordinate work with local contractors (to be procured by SANBAG) to install and remove the temporary stabilization measures. The buildings will be restored to pre-construction conditions when the stabilization measures are removed.

### Assumptions

- A formal set of construction documents will be prepared to facilitate procurement of a qualified contractor.
- Construction documentation including standard plans, specifications, and cost estimate, will be included with the project construction documents.

## Task 10.7.2 Site-Specific Vibration Testing and Mitigation Placement (MM NV-5, NV-6)

### Task 10.7.2.1 Survey Existing Vibration Levels

CONSULTANT will perform a Detailed Vibration Assessment in accordance with FTA procedures. This begins with an evaluation of the existing vibration conditions at the receptors of interest. The evaluation requires frequency-spectrum measurement of vibration either of the ambient natural vibration levels or the vibration levels due to specific events, depending upon the vibration sensitivity of the receptor. CONSULTANT proposes to measure the existing vibration levels at up to 10 receptor locations.

### Task 10.7.2.2 Measure Vibration Mobility at Receptor Sites

CONSULTANT will measure ground-borne vibrations associated with controlled impact events (using a weight dropping or hammer striking) and then measuring the vibration at various distances from the impact. A number of different impacts locations will be used to allow characterization of the paths that vibration may take from the rail line to the sensitive receptor. Where appropriate, measurements may be made inside buildings.

CONSULTANT proposes to perform vibration mobility measurements at ten receptor locations using a specialized instrumented impact apparatus and a multichannel data acquisition unit connected to several accelerometers. These measurements require that instruments be placed inside buildings. CONSULTANT will obtain right of entry for the purposes of performing these measurements with SANBAG assistance if necessary.

### Task 10.7.2.3 Measure Force Density at Existing Rail Lines

Where the previous measurements indication higher responses to vibration, CONSULTANT may use force density to predict vibration levels and ground-borne noise levels at locations where vibration impact was predicted during the EIS phase. The selected vehicle/vehicle manufacture may have these values characterized already. However, if they are not and if appropriate to model vibration characteristics at sensitive receptor locations, CONSULTANT can measure force density using a test train and track either on site or at a test location. In summary, a test train will need to pass at several different controlled speeds and certain measurements will be taken to characterize effect of speed on the force density. . In this task, CONSULTANT will coordinate the test and measure vibration as trains pass and perform the vibration mobility measurements at up to three different measurement locations. The force density will be derived from the up to three measured quantities of train vibration and vibration mobility.

### **Assumptions**

- Task assumes the measurement of vibration levels for two vehicle types: (1) DMU and (2) a locomotive and bi-level commuter coach.

### Task 10.7.2.4 Predict Future Vibration and Vibration Impact

CONSULTANT will perform signal processing techniques on the observed vibration signals gathered for the vibration mobility measurements and the force density information obtained

from the vehicle manufacturer (or measurements) in order to express the results as the ground-borne vibration propagation through the ground. Once the signal processing and data reduction are complete, CONSULTANT will use the results to develop prediction models. The prediction models will be used to predict vibration levels and ground-borne noise levels at locations where vibration impact was predicted during the EIS phase.

#### Task 10.7.2.5 Apply General Mitigation Measures and/or Develop Site Specific Mitigation Measures for Vibration

Vibration mitigation options will be evaluated for each of the EIS identified locations and where the predicted vibration levels exceeds the applicable FTA impact threshold or exceed specification limits for vibration sensitive equipment, as may exist at the locations. CONSULTANT will determine the effect of mitigation options either by obtaining data from manufacturers or by modeling the mitigation measure, and then inserting the mitigation into the vibration prediction model found in the previous task.

#### Task 10.7.2.6 Reporting

The results of the testing and analysis will be documented in a draft and final technical memorandums. The memos will summarize the test results, the predicted vibration levels, and our recommendations for vibration mitigation measures.

#### **Deliverables**

- [Task 10.7.2 - Site-Specific Vibration Testing, Modeling and Recommendations Report \(DRAFT and Final\)](#)

### **Task 10.7.3 Building Noise Insulation Assessment (MM NV-7)**

CONSULTANT Acousticians will investigate, assess and recommend improvements (or in lieu compensation) for up to ten residential structures for building noise insulation improvements at Receivers 3, 22, and 41 and as required by mitigation measure NV-7.

#### Task 10.7.3.1 Assess existing conditions

CONSULTANT Acousticians will perform a visual inspection of ten residential structures at Receivers 3, 22, and 41. Onsite visual field observations of residential structures will document the following:

- Building façade construction
- Location, size and construction of windows facing alignment and
- Location, size and construction of doors facing alignment

Photographs of primarily building façade elements will also be collected during the visual inspection for documentation. Destructive testing, such as opening of walls, will not be performed as part of the investigation. CONSULTANT will also request relevant and publicly available construction plans and documents related to the building façade construction, and assumes SANBAG will help clear release of said documents from public agencies.

Results of these field observations will be used to develop noise mitigation recommendations. Recommendations for building sound isolation will be based on FTA criteria for maximum interior noise levels due to transit related noise and target increase in sound isolation performance. The recommendations may include sealing and relocating vents, caulking and sealing gaps in the building façade and installing new doors and windows that are specially designed to meet acoustical transmission-loss requirements. A minimum STC rating of 39 will be used on windows exposed to the noise source. CONSULTANT will coordinate with the project public information and outreach team who will communicate directly with residents, request right of entry, and coordinate the site visits. CONSULTANT proposes to only perform these services at locations where written right of entry is provided (to CONSULTANT) prior to deployment. Unless otherwise agreed and for security reasons, four CONSULTANT members will participate in each site visit. SANBAG is encouraged to assign a representative to participate in the site visits. CONSULTANT may also inform the local police department of the date and timing of the site visits as an additional precautionary safety measure.

#### Task 10.7.3.2 Measurement of Train Pass-by

CONSULTANT will gather sound level measurement data of representative train pass-by events in the rail existing corridor. Pass-by measurements will occur at speeds and under conditions representative of future noise levels at Receivers 3, 22, and 41. CONSULTANT will collect pass-by noise levels from the existing DMU and locomotive with bi-level commuter coach to facilitate the collection of representative pass-by noise levels prior to the project's operation. Measurements may include wayside noise, crossovers, horns and crossing signals as applicable. The results of the measurements will be used to as reference project-related noise levels to calculate the interior noise levels due to train pass-by events.

#### Task 10.7.3.3 Develop mitigation recommendations

CONSULTANT acousticians will evaluate the information collected during the site visits. CONSULTANT will calculate the sound transmission loss associated with the existing structures, and prepare recommendations to enhance the building sound isolation performance and mitigate project-related noise. CONSULTANT will prepare a draft and final technical memorandum presenting results of the existing conditions assessment, mitigation recommendations, and supporting information. The technical memos will be provided in PDF format. The technical report will also contain an inventory of windows, doors and vents and their respective required acoustical performance. CONSULTANT assumes that each land owner is responsible for acquiring bids for window and door replacement and other necessary items.

#### **Deliverable**

- Task 10.7.3 - DRAFT and Final Report and Recommendations for mitigation measures at up to 10 residential properties

#### **Task 10.7.4 Construction Noise Monitoring and Outreach (MM NV-1 and NV-2; CONSULTANT) - NOT INCLUDED**

CONSULTANT will coordinate with CM to support verification under Task 10.1. CM will be responsible for implementation, monitoring, outreach, and responding to complaints.

Verification will be performed under Task 10.1.

### Task 10.7.5 Establish Quiet Zones (MM NV-3)

See Task 31.

### Task 10.7.6 Construct Sound Barriers (MM NV-4) – NOT INCLUDED

### Task 10.8 FCC Clearances for PTC and Regulated Facilities

CONSULTANT will facilitate the completion of the required FCC forms, NEPA checklist, and support Section 106 documentation to comply with the FCC's requirements and complete FCC Form 620s or 621 for the project communication facilities. As part of this task, CONSULTANT will define the communication facilities subject to FCC approval and delineate the area of construction. CONSULTANT will assess the proposed antennae and/or tower foundations against FCC's environmental criteria for preparation of an EA pursuant to NEPA. The assessment will be based on the desktop review of readily available data described above, including information contained in the 2015 EIS. In addition, CONSULTANT will assess whether other environmental permitting requirements may be necessary.

CONSULTANT will request an update to the records search conducted by the South Coast Information Center (SCIC) in support of the 2015 EIS. Based on the findings of the records search, CONSULTANT will conduct a thorough pedestrian survey for up to 15 acres. The pedestrian survey will be consistent with the Secretary of the Interior's (SOI) Standards and Guidelines for Archaeology and Historic Preservation (48FR 44716, September 29, 1983) with the intent to locate and record cultural resources.

The findings of the records search and field survey will be documented in a letter report that satisfies 36 CFR Part 800 guidelines/standards. The report will determine and summarize the types, number, location and condition, and distribution of existing cultural resources within the area of potential effect (APE). New cultural resources properties and previously recorded cultural resources will be recorded, or updated, on the appropriate Department of Parks and Recreation (DPR) Site Forms and then submitted to the SCIC.

Pursuant to section 106 and its implementing regulations at 36 CFR Part 800, CONSULTANT will prepare the documentation necessary for submittal. These documents include:

- Initial Consultation Letter – Project information, contact information, description of undertaking, project map, and APE.
- Native American Consultation Letters – Correspondence to and from tribal groups identified by the NAHC.
- Cultural Letter Report – Identification of historic properties, potential eligibility of historic resources, Determinations of Eligibility (DOEs) previously conducted.
- Finding of Effect (FOE).

#### **Assumptions:**

- Project will require the completion of up to 10 Form 620s (one per planned antenna foundation).

- Communication-related improvements will be contained with the APE defined for the project as presented in the 2015 EIS.
- An EA document will not be required based on the findings of the NEPA checklist.
- If finding is Adverse Affect, further consultation will be required to resolve adverse affects if SHPO concurs with the finding of adverse affects. Further consultation is covered the MMRP Optional Services.
- Assumes no Native American consultation beyond initial tribal contact to provide notice of the project. No Traditional Cultural Properties (TCP) assessment is included.
- No Section 106/NEPA level Phase II cultural resource assessments/evaluations are included.

**Deliverables:**

- Task 10.8 - Draft and Final Form 620 (2 hardcopies; 1 PDF)
- Task 10.8 - Draft and Final NEPA Checklist (2 hardcopies; 1 PDF)
- Task 10.8 - Draft and Final Cultural Resources Letter Report (2 hardcopies; 1 PDF)
- Task 10.8 - Up to 10 consultation letters to SHPO, NAHC, and Native American tribes (1 PDF each)

## Task 10.9 Optional Environmental Service – OPTIONAL SERVICES

An optional services budget was established for the environmental compliance activities in anticipation of unforeseen mitigation compliance issues that may be encountered as construction progresses. These optional services funds would be specifically used to support the following measures, if required, or an elongation in the project construction schedule: additional pre-construction surveys or monitoring activities per MM BIO-1 or BIO-3; resource discovery and curation as required under MM CUL-4 (discovery of archaeological resources or the encountering of human remains); and expanded agency consultation (e.g. USFWS, CDFW, or SHPO) in the event of a changes in the biological resources affect by project construction or cultural resources discovery.

This task includes the preparation of additional reevaluations for CEQA/NEPA in response to up to 2 additional project modifications. At this time, due to the unknown level of effort necessary to comply with unknown/unforeseen issues, the optional services budget is an estimate that may need to be adjusted to adequately address these issues.

**Assumptions:**

- This task includes up to 400 hours and associated direct costs to address unforeseen issues relating to biological resources, including expanded agency consultation, beyond the scope identified in Task 10.5.
- This task includes up to 500 hours and associated direct costs to address the discovery of cultural resources or human remains, coordination with SHPO or Native American Tribes, and preparation of a treatment plans beyond the scope contained in Tasks 10.1.4 and 10.3.

- This task includes up to 250 hours and associated direct costs to prepare an additional two CEQA addendums or NEPA reevaluations. This scope assumes that the evaluations would conclude that no new environmental effects would result that would otherwise require a supplemental EIR under CEQA or supplemental EA/FONSI under NEPA. The preparation of documentation beyond the addendum/reevaluation would require an amended scope of work.

#### **Deliverables:**

- Task 10.1.2 – Additional Pre-Construction Survey and Monitoring Reports (if required)
- Task 10.1.2 – Additional Agency Consultation Letters (if required)
- Task 10.1.2 – Additional Cultural Resources Monitoring Reports (if required)
- Task 10.1.2 – Second Testing and Evaluation (if required)
- Task 10.9 – Draft and Final CEQA Addendum/NEPA Reevaluation (if required)

## **TASK 11 PHASE II ENVIRONMENTAL SITE ASSESSMENT**

### **Task 11.1 Update to Phase I (MM HAZ-3)**

CONSULTANT will prepare a Phase I Environmental Site Assessment (ESA), in general conformance with ASTM E-1527-13, for approximately nine miles of track located between San Bernardino and Redlands, California. The project will include information gathered in the previous corridor Phase I efforts (which have now exceeded ASTM data applicability limits).

The proposed Phase I ESA will conform to the ASTM Phase I investigative process, including the following elements:

- Research into the environmental regulatory history of sites located along the corridor (using a subcontracted records search firm, EDR).
- Performance of a site reconnaissance by a qualified Environmental Professional (as defined by ASTM and USEPA), including photographic documentation of current site conditions. CONSULTANT will coordinate with the client for site access, and assumes that access will be complete and unfettered.
- Review of local and historical information sources as required by ASTM.
- Performance of interviews with regulatory agency representatives, and persons familiar with the area.
- Preparation of a report of findings.

As part of the reporting of our findings, CONSULTANT will identify candidate properties for subsequent Phase II.

#### **Assumptions**

- The site will be accessible for the site visit, with prior arrangements made through current property owners/agencies for the site visit (see Task 38.6 - Rights of Entry)

- Access to historical information will be available within a reasonable (three week) timeframe.
- The report will be prepared in general conformance with ASTM E 1527-13 guidelines.

### **Deliverables**

- **Task 11.1 - Draft and final Phase 1 Update (3 hardcopies, 1 PDF)**

## **Task 11.2 Agency Coordination**

The Hanford Foundry site previously located on the corner of West Rialto Ave. and South Arrowhead Avenue is an active Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) site. The site was classified as “higher priority for further assessment” in 2006. A portion of the site has been partially converted into a parking lot. This area is proposed for the construction of a pedestrian gate & crossing and a sidewalk easement.

Considering the land use restrictions associated with this site, CONSULTANT proposes to coordinate with the local agencies to during the Phase I ESA to ascertain agency feedback regarding the proposed development. It is assumed

The following assumptions would apply to the agency coordination:

- The majority of the coordination would occur via email.
- No more than one physical agency meetings between the CONSULTANT Hazardous Materials Specialist.
- No more than three conference calls.

## **Task 11.3 Perform Phase II Investigation**

This task covers oversight, management, and implementation of the Phase II ESA by CONSULTANT staff and the laboratory sub-consultant (Orange Coast Analytical).

*Sampling.* The field activities will include; soil sample collection in or immediately adjacent to the RPRP Project ROW (to characterize soil for disposal purposes), laboratory analysis to determine whether actionable concentrations are present for contaminants of concern (COCs).

Soil sample collection will be performed using a direct-push mobile drill rig, or by hand auger in locations that are not accessible by the direct-push rig. A SCRRRA approved flagman is required for work performed within railroad ROW and is assumed to be provided.

A total of 28 sites were determined in the EIR/EIS to be sites of concern based on the projected project components; however, based on what was approved in the ROD and the identified affected assessor parcel numbers, 32 sites have been noted as recognized environmental concern (REC) sites and, thus, are candidates for Phase II sampling. A total of three borings per site (96 total) will be advanced to an approximate depth of 10 feet below ground surface (bgs) for rig-advanced borings, and 3 to 4 feet bgs for hand augured borings.

Prior to advancement of borings, ballast rock located within the railroad track ROW will be cleared to allow access to the underlying soil. Soil samples will be collected continuously

through the borings for field screening by photoionization detector (PID), and one soil sample will be collected for laboratory analysis, depth based on the highest PID readings. If no elevated PID readings are encountered, the soil sample from the 5 foot depth in the direct push borings, and the 2 foot depth from the hand auger borings, will be submitted to the laboratory for analysis.

Soil samples will be submitted for the following analysis:

- Total Petroleum Hydrocarbon – Carbon Chain (Extractable) analysis using United States Environmental Protection Agency (EPA) Method 8015B;
- Chlorinated Herbicide analysis using EPA Method 8151B;
- Organochlorine Pesticide and Polychlorinated Biphenyl analysis using EPA Methods 8081A/8082;
- Semi-Volatile Organic Compounds analysis using EPA Method 8270C;
- California Code of Regulations Title 22 Metal analysis using EPA Methods 6010B/7471A; and, Volatile Organic Compounds and Fuel Oxygenates using EPA Methods 5035/8260B.

### **Assumptions**

- Level D Protection (gloves, steel-toe boots, hard hat, and eye protection) will be adequate for performing field activities described herein. Appropriate personal protective equipment will comply with SCRRRA requirements for working within railroad ROW (e.g., protective eyewear with side shields and appropriate orange vest [not red or green]). If Site conditions are encountered that require modification of this plan beyond Level D Protection, the Client will be notified and the appropriate changes made.
- The sampling activity can be completed by two people within one day, totaling 18 hours, including travel to and from our local office. If additional time is required to complete the assumed fieldwork due to circumstances beyond CONSULTANT's control, then SANBAG will be contacted for authorization of additional fees.
- USA DigAlert marking and notification can be completed within a 4-hour period by one person.
- CONSULTANT will attempt to collect samples with the proposed sampling equipment at the proposed sample locations and depths. Sampling will continue to the maximum proposed sampling depth or until refusal is met. If unforeseen difficulties are encountered, alternative sampling methods may be necessary at additional cost to complete the objectives of the proposed work.
- A geophysical survey will not be conducted prior to performance of field activities.
- Borings would be located within the railway ROW and local city or county jurisdictions permits would not be required to facilitate access or drilling.

### **Deliverables**

- [Task 11.3 - Draft and final Workplan](#)
- [Task 11.3 - Boring Logs](#)

➤ [Task 11.3 - Laboratory Results](#)

#### **Task 11.4 Prepare Phase II Report (MM HAZ-3)**

Upon completion of sampling, and receipt and review of the analytical results, a summary of the findings will be presented in a Phase II ESA Report provided to SANBAG. The report will document the methods used, locations sampled, and the analytical results for each sampling location. Particular attention will be paid to high risk sites located near planned stations, since those locations would involve more property acquisition and greater ground- disturbing activities. The Phase II ESA Report would also provide adequate detail for the preparation of Contaminated Media Management Plans (CMMPs) for contaminated areas that cannot be avoided by design modifications.

##### **Assumptions**

- The removal, transport, and disposal of contaminated media will be then responsibility of SANBAG or CM/Contractor.

##### **Deliverables**

- [Task 11.4 - Draft and Final Phase II ESA \(at 60% and 90% Submittal\)](#)

#### **Task 11.5 E Street Building Lead Paint and Asbestos Sampling and Testing (Demolition Permit – MM HAZ-2)**

CONSULTANT will coordinate the completion of a lead paint and asbestos sampling for the building located at 133 S. E St., San Bernardino (APN 0136-121-33), which is scheduled for removal as part of the project. According to public records, the building was built in 1968 and contains 6,950 square feet. Sampling will be completed by a licensed vendor to determine if lead paint and asbestos are onsite prior to the demolition of the building.

##### **Assumptions**

- Board up and fencing services will be contracted directly by SANBAG with coordinating assistance provided by the CONSULTANT.

##### **–Deliverables:**

- [Task 11.4 – Testing results and laboratory chain of custody](#)

#### **Task 11.6 Hazardous Material Management Plan (HMMP) and Hazardous Material Business Plan (HMBP) (MM HAZ-2) – NOT INCLUDED**

Assumed to be a CM/contractor responsibility.

## Task 11.7 HAZMAT Response (MM HAZ-4) – NOT INCLUDED

Not included. In the event of discovery of hazardous materials during the course of construction, CONSULTANT assumes the CM/Contractor will be responsible for site-specific sampling, testing, and, if necessary, disposal.

## Task 11.8 Phase II Additional Services – OPTIONAL SERVICES

CONSULTANT has included additional project optional services budget in the event that additional borings or laboratory data are required or additional access restrictions existing that require additional involvement of right-of-way staff.

### **Add Assumptions**

- An additional 100 hours and associated direct costs are included in the event that additional borings or laboratory analysis become required as part of the Phase II effort.
- An additional 120 hours and associated direct costs are included to support expanded involvement of Consultant's right-of-way staff.

### **Deliverables:**

- Task 11.4 – Testing results and laboratory chain of custody

## PART IV UPDATED ADVANCED PLANNING STUDIES

### TASK 12 BASIS OF DESIGN REPORT UPDATE

#### Task 12.1 System Design Criteria

No new system design criteria will be prepared. The basis of design report with system design criteria incorporated and produced during the preliminary engineering phase will serve the project going forward. The two new sub-tasks will be completed to document these new items of work:

##### Task 12.1.1 Network and Low Voltage Communications Concept of Operations

CONSULTANT will develop, with SANBAG and PMC, a concept of operations (CONOPS) for the network communications for the passenger rail system. The system will be capable of moving data for the systems for the project across a local area network and with connectivity to wide area networks and the public cloud as appropriate for the full functionality of the passenger railroad. The system will have drops (nodes) at appropriate locations including stations, railroad signal instrument houses, antenna locations and other data sources and recipient locations.

The concept of operations document will consist of a narrative, tables and/or diagrams to convey the physical and functional characteristics of the network and the systems that need to communicate over the system. The CONOPS will address data security, integrity and reliability requirements, connectivity to other systems, internal and external to the system and recommendations for network configuration including sub-networks or other functional approaches. Block diagrams, tables or other graphic methods of presentation shall be used to convey the concept of operations to SANBAG and other users of the document.

A DRAFT version of the document will be prepared and submitted to SANBAG for review and comment. Within three weeks of submittal, a comment review meeting will be held to review the document and plan for the network followed by additional meetings and coordination, etc. as required to resolve the comments. Upon resolution of review comments, the document will be finalized, submittal for final acceptance by SANBAG, incorporated into the Basis of Design by reference and used in the development of the construction drawings and specifications.

#### **Deliverables**

- [Task 12.1.1 - Draft CONOPS for network communications](#)
- [Task 12.1.1 - Final CONOPS for network communications](#)

#### **Assumptions**

- SANBAG and PMC will support and assist designer with coordination of network communications requirements between or with Metrolink and Omnitrans systems as applicable.
- No work shall be proposed on existing Metrolink and Omnitrans systems. CONSULTANT, with coordination from SANBAG and PMC, shall evaluate the existing

systems and provide recommendations on modifications of the systems to provide connectivity and functional operation.

### Task 12.1.2 Electronic Passenger Information System

CONSULTANT will develop, with SANBAG and PMC, a concept of operations (CONOPS) for the electronic passenger information system (EPIS) for the passenger rail system. The system will be capable of presenting train schedule and related information to passengers on the platforms. The system will convey information both visually and audibly in accordance with Section 810.7 of the [ADA Standards for Transportation Facilities](#). The EPIS will include equipment to provide communication with the transit system's operations center.

The concept of operations document will consist of a narrative, tables and/or diagrams to convey the physical and functional characteristics of the EPIS that need to communicate to users of the system including disabled patrons. The CONOPS will present the functional requirements of the system and hardware/software solutions to achieve the functional requirements. Block diagrams, tables, figures and other graphic methods of presentation shall be used to convey the concept of operations to SANBAG and other users of the document.

A DRAFT version of the document will be prepared and submitted to SANBAG for review and comment. Within three weeks of submittal, a comment review meeting will be held to review the document and plan for the network followed by additional meetings and coordination, etc. as required to resolve the comments. Upon resolution of review comments, the document will be finalized, submittal for final acceptance by SANBAG, incorporated into the Basis of Design by reference and used in the development of the construction drawings and specifications.

#### **Deliverables**

- Task 12.1.2 - Draft CONOPS for EPIS
- Task 12.1.2 - Final CONOPS for EPIS

#### **Assumptions**

- SANBAG will not be constructing an operations center to manage data or announcements presented over the EPIS but will be utilizing another transit systems operations center.
- CONSULTANT will coordinate, with the help of SANBAG and their PMC with the other agency, as identified by SANBAG, on the functional requirements and configuration of the system so that a CONOPS can be developed.
- The coordinating agency that will host the operations center must be identified within three (3) months of NTP in order to meet the deliverable schedule for the 60% design drawings.

### Task 12.2 Update Basis of Design Report – NOT INCLUDED

This item removed during negotiations. No updates will be prepared.

### Task 12.3 SANBAG Design Criteria Waivers – NOT INCLUDED

This item removed during negotiations. Since no formal system design criteria will be developed, no waivers will be required.

### Task 12.4 Metrolink Design Criteria Waivers – NOT INCLUDED

This item removed during negotiations.

## TASK 13 STATION SITING AND DEVELOPMENT OPPORTUNITIES – NOT INCLUDED

This item removed during negotiations.

## TASK 14 TRAFFIC OPERATIONS ANALYSIS FOR SIGNALS WITH RR PREEMPTION

Work performed as a part of this task includes traffic signal operational review and analysis at railroad preempted locations in order to develop input information and agreed-upon operational and infrastructure solutions to support construction document development. The expected result upon the conclusion of this task will be agreed upon traffic signal operations at each preempted signalized intersection location that will be implemented as a part of the construction project through a combination of traffic signal improvements or timing/phasing operational changes, or both.

The following signalized intersections will be studied:

Grade Crossing Street	Intersecting Street	Approx. Clear Storage Distance	Jurisdiction
South E St.	W. Rialto Ave	320'	City of San Bernardino
Tippecanoe	E Victoria Ave	230'	City of San Bernardino
California St.	I-10 EB Ramps	100'	Caltrans
Alabama St.	Redlands Blvd	160'	City of Redlands
Alabama St.	Industrial Park Ave	280'	“ “
Colton Ave.	Redlands Blvd	40'	“ “
Tennessee Ave.	Redlands Blvd	40'	“ “
N. Eureka St.	Oriental Ave	150'	“ “
Orange St.	W. Stuart Ave.	180'	“ “
University St.	I-10 EB On-Ramp (future signalization)	540'	Caltrans

### Task 14.1 Obtain Traffic Signal Timing and As-Built Drawings from Cities and Caltrans

CONSULTANT will contact each of the three agencies to obtain current traffic signal as-built drawings and signal timing including phasing and preemption operations current (or planned) for

each intersection. Coincident with the records research, CONSULTANT will meet with traffic operations staff at each agency to review current design and operational standards of each and in place for railroad preemption. CONSULTANT will also upload traffic signal timing program for each traffic signal in the field for a “soft” timing record to verify signal timing charts and for programming design activities. CONSULTANT will also review the traffic volumes and impact analyses obtained and prepared as a part of the EIR/EIS for each of the listed intersections.

### **Assumptions**

- As negotiated, the fee for this work is included in the fee for all other items related to Traffic Signal Preemption work and Final Design.

## **Task 14.2 Develop Preliminary Preemption/Advanced Preemption Operational Scenario(s)**

### **Task 14.2.1 Alternative Preemption Solution Development**

Using the information obtained in the previous sub-task, CONSULTANT will coordinate with the operations planners, signal engineer and rail engineer and develop an initial set of preemption scenarios for each signalized intersection and that provide the current industry standard of safety for each of the signalize intersections. Advanced preemption scenarios will be identified where traffic operations would show significant benefits from including advanced preemption due to high volumes, high turning volumes over the tracks, high pedestrian volumes or other operational characteristics that would warrant consideration of advanced preemption. A simple table depicting a short narrative of alternative preemption solutions (one or multiple alternatives as applicable per location) will be presented for discussion with SANBAG, first, then the agencies. Where additional signal infrastructure is proposed, preliminary or concept level sketches will be included in the package of information used to review with SANBAG and the agencies.

### **Assumption**

- No new traffic counts, pedestrian counts or other data will need to be collected in order to complete this initial effort

### **Task 14.2.2 Technical Evaluation of Preemption Scenarios – NOT INCLUDED**

This item removed during negotiations.

### **Task 14.2.3 Four Frame Videos at Three Locations – NOT INCLUDED**

This item removed during negotiations.

## **Task 14.3 Meet with SANBAG and Agencies to Review**

Once accepted by SANBAG, the proposed preemption operation (or alternative operational scenarios) will be presented to the respective agencies that own and operate the traffic signal. Separate meetings will be held with each agency. Other proposed safety features for the signal operation may be presented at the meeting to include information about use of supervisory circuit interconnect or other traffic signal modifications unique to railroad preempted operations.

### **Assumption**

- This will be an informational style meeting intended to provide the agency with information and expertise of the team so that the agency is comfortable with the idea of the railroad making modifications to their traffic signal or signal operations.
- CONSULTANT and SANBAG will pursue conceptual acceptance or agreement of the preemption sequence or operation for each of the agencies preempted signals and confirmation of which signals will be preempted and those that may be close to the crossing but do not require preemption

### **Task 14.4 Participate in Field Diagnostic Meetings at Signalized Intersections**

After conceptual review and approval by the owning agencies, CONSULTANT will participate in another round of field diagnostic review meetings with the CPUC and present, in the field, the preemption operational scenario for each location. The expected result will be to gain preliminary CPUC acceptance of the preemption sequence or operation for each preempted location. Refer to Task 2.15 - California Public Utilities Commission (CPUC Grade Crossing Safety).

### **Task 14.5 Prepare Final Preemption/Advanced Preemption Scenarios; Prepare Final Report**

Upon conceptual acceptance from CPUC and owning agencies of the preemption sequence or operation for each railroad preempted signalized intersection, CONSULTANT will prepare a final set of preemption/advance preemption calculations as appropriate and document the agreed upon preemption/advance preemption or sequence and operation at each location and for input into the design for the construction drawings for modification or construction of affected elements of the project.

CONSULTANT will submit one DRAFT report containing a narrative and sketches/calculations for each preempted signal location to SANBAG and the agencies. Upon final review and comment, CONSULTANT will revise and submit the final report.

### **Deliverables**

- [Task 14.5 - DRAFT and Final Report of Railroad Preemption Scenarios for Signalized Intersections with Preemption](#)

### **Task 14.6 Traffic Operations Analysis for Signals with RR preemption – South E Street location**

At SANBAG's request, CONSULTANT will include consideration of preemption at the intersection of South E Street and West Rialto Avenue for effects of queuing at the existing at-grade crossing south of the intersection. CONSULTANT will include this location with all of the same work to be performed in Task 14.1, Task 14.2, Task 14.3, Task 14.4 and Task 14.5, above.

## TASK 15 MAJOR DRAINAGE COURSES AND FLOOD ANALYSIS

### Task 15.1 Modified Flood Risk Assessment for Mission Zanja Channel

A hydraulic impact analysis report for Mission Zanja Channel, prepared by CONSULTANT in August 2012 divided the channel into three study reaches: Lower Mission Zanja Channel, Upper Mission Zanja Channel and Mill Creek Zanja. The Flood Risk Assessment will study the cost-benefit of only improvements in the Lower Mission Zanja Channel to the RPRP (Santa Ana River Confluence to 2000' east of Bryn Mawr Avenue).

#### Task 15.1.1 DATA COLLECTION

Collect available data from agencies and railroad operators to gather necessary information for the assessment of flood risk to rail mobility. CONSULTANT will prepare and submit an initial data collection request to SANBAG. Expected data items include, freight trips, forecasted passenger train trips and ridership, rail maintenance costs, historical flood repair costs, etc. After receiving responses from SANBAG, CONSULTANT will conduct a conference call to review the data submittal responses and document data that is not available within the required time frame.

##### **Assumptions:**

- SANBAG will assist in identifying key stakeholders within the study area and coordinate efforts to obtain available data for study input
- One teleconference to review data submittal responses

##### **Deliverables:**

- [Task 15.1.1 - Project Data Log.](#)

#### Task 15.1.2 SCOPING WORKSHOP

CONSULTANT will lead a scoping workshop with SANBAG to discuss model logic, model inputs and additional data needs, potential flood risk alternatives and solutions, and project study area definition. Items discussed will include topics such as: inclusion of incidental property damages in the BCA logic, types of alternatives to be considered in the analysis, project area where benefits would occur, and project scale.

##### **Assumptions:**

- The scoping workshop will be completed in one working day

##### **Deliverables:**

- [Task 15.1.2 - Workshop meeting notes and summary](#)

### Task 15.1.3 FLOOD RISK ASSESSMENT MODEL DEVELOPMENT AND ALTERNATIVES ANALYSIS

CONSULTANT will develop a customized flood risk assessment model. Alternatives will be analyzed and evaluated based on financial performance metrics. The model will be based on a combination of the existing condition HEC-RAS model developed for the 2012 analysis and revised to include up to eight (8) return periods (2, 5, 10, 25, 50, 100, 200, and 500 year events) and a customized cost assessment model will be developed on the basis of the model logic diagrams discussed in the scoping workshop. The cost risk model will employ Monte Carlo simulation techniques to combine the risks and produce probability distributions for total flood damage estimates. The computed water surface elevations in the model will be used to approximate the inundation areas and depths for each of the return periods. Where inundation areas are determined to be outside of the railroad right-of-way, the water surface elevations will be extrapolated until they daylight to natural ground or reach a physical obstruction.

#### Assumptions

- Up to three (3) design alternatives will also be modeled for the same return periods. It is anticipated that the alternatives would consist of modifications to railroad profile and/or channel configurations (to be identified during the Scoping Workshop).
- It is anticipated that the USACE HEC-FDA model or equivalent will be utilized
- The USACE HEC-RAS model will be used to evaluate water surface profiles and approximate inundation areas (i.e. no two-dimensional modeling included).
- Mapping of approximate inundation limits will be based on best available topography (anticipated to be the County's 1995 aerial topography)

#### Deliverables:

- None. Flood Risk Assessment Model and analysis of alternatives with results presented on the basis of financial performance metrics will be included in the Technical Report in Task 15.1.5.

### Task 15.1.4 RISK AND SENSITIVITY ANALYSIS

CONSULTANT will conduct a sensitivity analysis on the outputs from the flood risk model. The goal of the sensitivity analysis will be to identify variables and inputs into the model to which the model outputs are highly sensitive in small changes to. The results from the sensitivity analysis will be inspected to determine variables and data inputs which drive the analysis. CONSULTANT will provide a summary table of the sensitivity analysis findings to be incorporated into a technical report.

### Task 15.1.5 TECHNICAL REPORT

CONSULTANT will produce a technical report documenting the findings from the flood risk analysis.

#### Task 15.1.5.1 Draft Technical Report

An electronic copy of the draft report will be delivered to the SANBAG for review. A Comment/Response log will also be provided to record review comments.

#### Task 15.1.5.2 Draft Technical Report Presentation

The results of the flood risk analysis will be summarized in a MS PowerPoint presentation. Members of the study team will present and discuss report findings with SANBAG. SANBAG comments during the presentation will be recorded and considered in the preparation of the Final Technical Report.

#### Task 15.1.5.3 Final Technical Report

The final report will be submitted to SANBAG in both hard and electronic copy.

#### **Assumptions:**

- SANBAG will provide review comments on the Draft Technical Report within 4 weeks of receipt.
- The Final Technical Report will be delivered within 2 weeks of receiving comments from the Draft Technical Report or conclusion of the Draft Technical Report Presentation, whichever occurs later.

#### **Deliverables:**

- Task 15.1.5 - One electronic (PDF) and one (1) hardcopy of the Draft Report
- Task 15.1.5 - One electronic (PDF) and one (1) hardcopy of the Final Report
- Task 15.1.5 - Completed Comment/Response Log

## Task 15.2 Bridge Hydraulic and Flood Study Updates

Existing hydraulic conditions and hydraulics analyses (H&H), previously completed for Warm Creek (Bridge 1.1), Twin Creek (Bridge 2.2), and Santa Ana River (Bridge 3.4), and included with preliminary engineering submittals, will be updated for conformance with the final bridge design at each of these crossings. Update will also include confirmation of compliance with DOT Order 5650.2. The standard freeboard criteria selected for each bridge (in the following priority) are shown below.

- 1) 100-year water surface elevation below low chord;
- 2) 100-year energy grade line (EGL) elevation below top of subgrade and 50-year water surface[hydraulic grade line (HGL)] elevation below low chord;
- 3) 50-year water surface (HGL) elevation below low chord; and
- 4) No increase of water surface elevations within project area.

Although there are no bridge crossings over the Mission Zanja Creek (MZC) the existing hydraulic conditions and hydraulics analyses (H&H) previously completed during preliminary engineering will be updated as well. The design peak-flow data (100-, 200-, and 500-year) to be used in evaluating final water surface and scour estimates will be based upon the current FEMA FIS flows. Coordination with Federal Emergency Management Agency (FEMA), the County of San Bernardino (Floodplain Manager), and SANBAG may result in the need for additional hydrology to confirm the design flow rates, but no additional analysis is included in this task. A CLOMR for the Santa Ana River and/or MZC, if required, will be prepared and submitted to the County of San Bernardino Department of Public Works for approval by FEMA.

### **Task 15.2.1 Warm Creek (Bridge 1.1)**

Based on the results of the Hydraulic Impact Analysis – Warm Creek prepared by CONSULTANT (2014), the proposed bridge improvements will result in a no net rise in the 100-year water surface elevation. The modeling assumptions and proposed bridge improvements will be reviewed to confirm results. A final no-rise determination memo will be prepared. There is no Special Flood Hazard Area (i.e. regulatory floodplain) at this location; as such, no FEMA mapping changes will be required.

#### **Deliverables:**

- Task 15.2.1 - Draft Floodplain Evaluation – Warm Creek (Historic), Bridge 1.1
- Task 15.2.1 - Final Floodplain Evaluation – Warm Creek (Historic), Bridge 1.1

### **Task 15.2.2 Twin Creek (Bridge 2.2)**

Twin Creek (Lower Warm Creek) is a major channel that conveys flows from the Twin Creek Spreading Grounds in northern San Bernardino to its confluence with the Santa Ana River at the northeast quadrant of I-10/I-215 separation. Twin Creek is owned, operated, and maintained by the San Bernardino County Flood Control District (SBCFCD). The Redlands Branchline crosses Twin Creek at MP 2.2 and then parallels the floodplain essentially to the Santa Ana River. Contrary to what is shown on the FEMA flood map, the Hydraulic Impact Analysis – Twin Creek prepared by CONSULTANT (2012) concluded that the existing 100-year flows are contained within the channel and would not overtop the railroad at the bridge crossing. During this phase, our team will verify the existing hydrology and hydraulic study to determine potential impacts on the floodplain limits.

#### **Task 15.2.2.1 Effective Model**

The CONSULTANT will prepare a floodplain evaluation for Twin Creek. CONSULTANT will obtain the effective hydraulic model from FEMA and SBCFCD and will confirm that the existing bridge is modeled correctly in the effective model. As required, CONSULTANT will next revise the effective model to create revised existing model.

#### **Task 15.2.2.2 Creek Crossing Review**

Based on current FEMA Flood Insurance Rate Maps (FIRM), the creek crossing is located in Zone AE (no floodway). Utilizing the rail alignment and bridge design, CONSULTANT will evaluate potential impacts to the associated drainage course mapped floodplain as a result of the proposed bridge improvements. The CONSULTANT will confirm the design criteria for

bridge (low chord elevation, rail profile). In support of the bridge design, CONSULTANT will evaluate the creek hydraulics for up to two bridge alternatives for compliance to the design criteria. A summary of the analysis and results will be provided in the form of a technical memorandum.

#### Task 15.2.2.3 Longitudinal Encroachment Zone A

A portion of the rail alignment runs parallel to and within the Twin Creek floodplain. As a separate analysis, the CONSULTANT will evaluate potential impacts of proposed rail improvements on the Zone A area of Twin Creek. CONSULTANT will assist in the development of design criteria for the project with respect to longitudinal floodplain locations. A summary of the analysis and results will be provided in the form of a technical memorandum.

#### **Deliverables:**

- Task 15.2.2 - Draft Flood Plan Evaluation – Twin Creek, Bridge 2.2
- Task 15.2.2 - Final Floodplain Evaluation – Twin Creek, Bridge 2.2

#### **Task 15.2.3 Santa Ana River (Bridge 3.4)**

Bridge 3.4 crosses the Santa Ana River (SAR) within Zone AE (with Floodway). The Hydraulic Impact Analysis – Santa Ana River Bridge 3.4 prepared by HDR (2014) concluded that the proposed bridge improvements resulted in no adverse impact to the 100-year water surface or velocity. As such, it is anticipated that a CLOMR will not be required and a “No-Rise” Certificate will be prepared and submitted to the City/County. A detailed analysis of floodplain impacts will be prepared for this location as follows:

##### Task 15.2.3.1 Effective Model

The CONSULTANT will obtain the effective hydraulic model from FEMA and SBCFCD. CONSULTANT will confirm that the existing bridge is modeled correctly in the effective model. CONSULTANT will next revise the effective model to create revised existing model.

##### Task 15.2.3.2 River Crossing Review

Utilizing the proposed rail alignment and bridge design, the CONSULTANT will evaluate potential impacts as a result of the proposed bridge improvements. CONSULTANT will confirm the design criteria for bridge. CONSULTANT will evaluate the river hydraulics for compliance to design criteria. For the purpose of this scope, it is assumed that the proposed bridge improvements will result in no net rise to the 100-year water surface elevation. If there is a resultant rise, then a Conditional Letter of Map Revision (CLOMR) would be needed (see Optional Task 15.3). A summary of the analysis and results will be provided in the form of a technical memorandum.

#### **Deliverables:**

- Task 15.2.3 – Draft Flood Plan Evaluation – Santa Ana River (SAR), Bridge 3.4
- Task 15.2.3 – Final Floodplain Evaluation – Santa Ana River (SAR), Bridge 3.4

## Task 15.2.4 Mission Zanja Channel

Mission Zanja Channel (MZC) runs parallel to the rail line from the Santa Ana River (SAR) to approximately California Street where it diverges from the railroad. The creek rejoins the railroad further east, as the Mill Creek Zanja, at approximate milepost 9.4 (Bridge 9.4) where it passes under the railroad just west of the I-10 overcrossing. Owned by SBCFCD, MZC is mostly improved as a trapezoidal earthen channel with some segments including wire revetment. The creek is vegetated from the SAR outlet to Gage Canal. The capacity of the open channel ranges from 4,300 cfs to 16,000 cfs, but the road bridges limit the flow-carrying capacity to about 2,200 cfs in several places (USACE Reconnaissance Study, Mission Zanja Channel, dated February 1994). Based on the results of the Flood Risk Assessment (Task 15.1), a detailed analysis of the floodplain impacts of the preferred alternative will be prepared as follows:

### Task 15.2.4.1 Effective Model

The CONSULTANT will obtain the effective hydraulic model for this creek from FEMA and SBCFCD. CONSULTANT will confirm that the existing bridge(s) and railroad is modeled correctly in effective model and update/correct the effective model to create revised existing model as a basis for the remaining analysis.

### Task 15.2.4.2 Longitudinal Encroachment Zone A

As with Twin Creek, a length of the rail alignment runs parallel to Mission Zanja Channel. The CONSULTANT will evaluate potential impacts of proposed rail improvements on the Zone A areas of Mission Zanja Channel, located west of Milepost 5.6 (I-10 overcrossing). The Team will assist in the development of final design solutions for the project with respect to longitudinal flood plain locations (Zone A) and scour protection. A summary of the analysis and results will be provided in the form of a technical memorandum.

### Task 15.2.4.3 Longitudinal Encroachment Zone AO (1' depth)

East of the I-10 overcrossing, the rail alignment runs parallel to Mission Zanja Channel and/or within Zone AO (1' depth) through to the point of divergence of the creek and the railroad west of California Street. The CONSULTANT will evaluate potential impacts of project on the Zone AO areas of Mission Zanja Channel. CONSULTANT will assist in the development of design criteria for the project with respect to longitudinal flood plain locations (Zone AO – 1' depth). A summary of the analysis and results will be provided in the form of a technical memorandum.

#### **Deliverables:**

- Task 15.2.4 - Draft Flood Plan Evaluation – Mission Zanja Channel
- Task 15.2.4 - Final Floodplain Evaluation – Mission Zanja Channel

## Task 15.3 CLOMR/LOMR Processing – OPTIONAL SERVICES

Although it is anticipated that a Conditional Letter of Map Revision (CLOMR) or Letter of Map Revision (LOMR) will be required for the Project (i.e. no adverse impacts to mapped floodplain/floodway), this task is included as an optional item should SANBAG, the County or the City request a CLOMR/LOMR be submitted. The purpose of the CLOMR would be for FEMA

to “pre-approve” impacts to the mapped floodplains and/or to expedite final LOMR approval once construction is completed. It is anticipated that the reports generated in Task 15.2 will be submitted, along with the appropriate MT-2 forms and mapping exhibits. It is not anticipated that any public outreach or notification will be required.

## Task 15.4 Scour Analyses

Task 15.4.1.1 Bridge Foundation Scour Analysis at SAR

Task 15.4.1.2 Bridge related scour will be evaluated at the Santa Ana River Bridge foundations based on the 5th edition of HEC-18, including scour projections for the 100-, 200-, and 500-year events. Final scour design event (e.g. 100-, 200- or 500-year) will be determined in conjunction with SANBAG.Mission Zanja Channel Scour Protection

Channel embankment related scour will be evaluated along the Mission Zanja Channel based on the results of the Task 15.1.3 FLOOD RISK ASSESSMENT MODEL DEVELOPMENT AND ALTERNATIVES ANALYSIS, above, the 5th edition of HEC-18, including scour projections for the 100-, 200-, and 500-year events. Final scour design event (e.g. 100-, 200- or 500-year) will be determined in conjunction with SANBAG based on the flood risk assessment. Recommendations for embankment “hardening” or other alternatives will be provided in the technical study included in Task 15.1.5.

## TASK 16 PROJECT DRAINAGE STUDY

### Task 16.1 Project Local Drainage Study Updates

CONSULTANT shall review and update the Draft Redlands Passenger Rail Project Preliminary Hydrology and Hydraulics Study Report dated December 17, 2012 to incorporate updates to local stakeholder drainage master plan as well as recent improvements to adjacent properties since completion of the draft report. The review and updates will also include adjustment of the existing drainage area layout and hydrologic calculations based on the above-noted master plan updates and drainage improvements.

The subtask will provide for a review and update of the proposed hydrologic drainage area layout and hydrologic calculations in addition to ditch sizing calculations and hydraulic analyses for storm sewers, underdrains and culverts resulting from advancement of the project final design to the 60% design milestones.

#### Assumptions

- No existing condition assessment will be performed for culverts.

#### Deliverables

- Task 16.1 - Updated Existing Storm Drain Base map
- Task 16.1 - 60% Draft Redlands Passenger Rail Project Hydrology and Hydraulics Study

## TASK 17 STRUCTURES – PROJECT ALTERNATIVES REPORTS

### Task 17.1 Structure Type Selection

The replacement structures are selected from the Bridge Alternative Analysis Report prepared during the preliminary engineering phase of RPRP. The selected alternatives for bridges and pier protection walls will be advanced through 60%, 90%, and final design (IFB). The design will accommodate staged construction and incorporate construction of 4 new bridges and 1 demolition and/or rehabilitation of existing bridges. The design will also include a cellular concrete plug solution for replacing the existing timber bridge over the Gage Canal at MP 3.9.

### Task 17.2 Red-Dot Method Check of Bridges and Structures

CONSULTANT shall undertake a Red-Dot Method check of the bridge design. The Red-Dot Method check shall be based on the 60% submittal package. Between the 60% and 90% design submittal, the Red-Dot Method check team will develop comments of discrepancies or deviations and corroborate with the design team to concur to a single design solution.

- Red-Dot Method check shall be performed based on the 60% submittal package and will include a check of the superstructure design, substructure design, seismic design, and staging.
- The Red-Dot Method check will include a separated set of design calculations and quantity calculations.
- The check will include a review of the cost estimate and proposed specifications.

#### **Deliverables**

- Task 17.2 - Draft RPRP Red-Dot Method check set of Calculations at 90% Submittal
- Task 17.2 - Final RPRP Red-Dot Method check set of Calculations at 100% Submittal

### Task 17.3 Retaining Wall Design Type Selection

CONSULTANT will prepare a wall type selection report identifying potential wall types to be used at the Santa Ana River Trail crossing. (See Task 2.17)

#### **Assumptions**

- All walls will be less than 6 feet height except at the SAR Trail. No type selection report will be prepared for walls less than 6 feet in height; Caltrans Type 1 walls will be assumed.

#### **Deliverables**

- Task 17.3 – Retaining Wall Type Selection Report

## TASK 18 CONSTRUCTION STAGING AND PHASING APPROACH

During Preliminary Engineering a technical memorandum was prepared discussing the Construction Staging and Sequencing approach. This memorandum and its accompanying exhibits will be updated to reflect the current project features and freight rail traffic needs along the corridor. CONSULTANT will meet with SANBAG to discuss the results of the updated analysis. Upon approval of a construction staging and phasing approach, CONSULTANT will provide a final Construction Staging and Phasing Approach memorandum for SANBAG's use in securing Memoranda of Understanding with the affected parties along the corridor.

### **Assumptions**

- Since the decision on staging and phasing will directly affect key design elements this study will be done before 60% submittal started.
- The updated memorandum will focus on helping SANBAG reach a decision on the rail construction staging and phasing..
- Securing of agreements with 3<sup>rd</sup> parties to enable the selected staging and phasing approach will be performed by SANBAG or their Program Management Consultant.

### **Deliverables**

- Task 18 - Final Technical Memorandum on Construction Staging and Sequencing Approach

## PART V PROGRAM MANAGEMENT SUPPORT

### TASK 19 AUTOMATED FARE COLLECTION SYSTEM

CONSULTANT will support SANBAG and their PMC with the review and analysis of the automated fare collection system for the project. Supporting work may include participating in meetings, peer review of alternative analyses, and general consulting.

CONSULTANT will support SANBAG and the PMC by providing technical support and coordination of specific issues associated with the development of construction documents (plans and technical specifications) or in support of the design services during construction of the project. This work may include meetings, phone/email communication support to produce documentation for decisions and tracking of issues specific to Metrolink or Omnitrans and their systems.

Two scenarios were identified:

- Use Metrolink’s new system (and back office) which is still to be defined, or
- Use OmniTrans sbX system (Genfare) and back office.

#### **Assumptions**

- The base design services presented in PART VI – FINAL DESIGN ENGINEERING assumes either system would be implemented and the level of effort to design the project and for system integration, physical attachments, TVM and other equipment placement, network connectivity, etc. are already included in the related elements of work.
- The level of effort and support provided will be commensurate with the available budget for this task.

### TASK 20 CORRIDOR WI-FI MEMO

CONSULTANT will develop, with SANBAG and PMC, a concept of operations (CONOPS) for the Wi-Fi network communications for the passenger rail system. The system will be capable of providing Wi-Fi capability to stakeholders such as passengers, rail operators, and station personnel as appropriate for the full functionality of the passenger railroad in relation to Wi-Fi access locations including trains, stations, and parking lots. The system will provide private and public Wi-Fi accessibility at appropriate locations including stations, railroad signal instrument houses, antenna locations and other data sources and recipient locations.

The concept of operations document will consist of a narrative, tables and/or diagrams to convey the physical and functional characteristics of the network and the systems that need to communicate over the network. The CONOPS will address data security, integrity and reliability requirements, connectivity to other systems, internal and external to the system and recommendations for network configuration including sub-networks or other functional approaches. The CONOPS will address Wi-Fi operation and maintenance costs and appropriate funding sources to account for free and/or paid Wi-Fi access for users. Block diagrams, tables

or other graphic methods of presentation shall be used to convey the concept of operations to SANBAG and other users of the document.

A DRAFT version of the document will be prepared and submitted to SANBAG for review and comment. Within three weeks of submittal, a comment review meeting will be held to review the document and plan for the network followed by additional meetings and coordination, etc. as required to resolve the comments. Upon resolution of review comments, the document will be finalized, submittal for final acceptance by SANBAG, incorporated into the Basis of Design by reference and used in the development of the construction drawings and specifications.

### **Deliverables**

- Task 20 - Draft CONOPS for Wi-Fi network communications
- Task 20 - Final CONOPS for Wi-Fi network communications

### **Assumptions**

- SANBAG and PMC will support and assist designer with coordination of Wi-Fi network communications requirements between or with Metrolink and Omnitrans systems as applicable.
- No work shall be proposed on existing Metrolink and Omnitrans systems. CONSULTANT, with coordination from SANBAG and PMC, shall evaluate the existing systems and provide recommendations on modifications of the systems to provide connectivity and functional operation.

## **TASK 21 CONCEPT OF OPERATIONS FOR SECURITY**

CONSULTANT will support SANBAG and their PMC with the development of the concept of operations (CONOPS) for security for the project. Supporting work may include participating in meetings, peer review of alternative analyses, and general consulting.

### **Assumptions**

- The level of effort and support provided will be commensurate with the available budget for this task.

## **TASK 22 CENTRALIZED TRAIN CONTROL AND DISPATCH (CTC)**

CONSULTANT will support SANBAG and their PMC with the review and analysis of the centralized train control and dispatching solution for the new passenger rail service. Supporting work may include participating in meetings, peer review of alternative analyses, and general consulting.

### **Assumptions**

- The level of effort and support provided will be commensurate with the available budget for this task.

- Assume that Metrolink is the likely dispatcher for the service and that the support and coordination is related to assistance with negotiating the best operating agreement possible for SANBAG.

## **TASK 23 POSITIVE TRAIN CONTROL (PTC) SYSTEM SELECTION AND IMPLEMENTATION**

CONSULTANT will support SANBAG and their PMC with the review and analysis of a positive train control solution for the new passenger rail service. Supporting work may include participating in meetings, peer review of alternative analyses, and general consulting.

### **Assumptions**

- The level of effort and support provided will be commensurate with the available budget for this task.
- Assume that Metrolink's PTC system will be extended to the RPRP. The support and coordination is related to assistance with negotiating the best agreement possible for SANBAG.

## **TASK 24 RAIL OPERATIONS – NOT INCLUDED**

This work removed during negotiations.

## **TASK 25 VEHICLE PROCUREMENT SUPPORT**

This work removed during negotiations.

## **TASK 26 SAFETY AND SECURITY PROGRAM PLAN SUPPORT**

CONSULTANT will support SANBAG and their PMC with the development of a safety and security program for the project. Supporting work may include participating in meetings, peer review of program documents, technical support of safety program related issues and general consulting.

### **Assumptions**

- The level of effort and support provided will be commensurate with the available budget for this task.
- It is critical that the SANBAG complete the hazards analysis and fire life safety analysis of station and other facilities as soon as possible in the design process to limit the cost of rework for changes resulting from these analyses after the design has progressed. For example, the station platform size, layout and emergency egress routes must be resolve prior to the 60% design submittal.

## **TASK 27 PROGRAM AND DOCUMENT MANAGEMENT SOFTWARE – NOT INCLUDED**

No work to be done. Document control software solution to be provided by PMC.

## **TASK 28 PROJECT FUNDING AND FINANCIAL PLAN SUPPORT**

### **Task 28.1 Update to Cost and Schedule Risk Analysis**

#### **Task 28.1.1 Update Cost Risk Model**

As a continuation of the Cost and Schedule Risk Analysis effort completed during the preliminary engineering phase of the project, CONSULTANT will perform up to three updates to the cost risk model and incorporate updates to the current risk elements as a part of the current cost risk model for the project delivery.

#### **Task 28.1.2 Risk Management Plan and Monitoring**

CONSULTANT will support the on-going Risk Management tracking and review for the project delivery. It is understood that this effort will be lead by the PMC team. CONSULTANT shall assist in updating the status of elements in the risk register as well as recommending new items to be added to the registry or identifying risk elements that may be recognized or retired based on the progress of the project.

#### **Assumptions:**

- For scope and fee development, it is assumed that the risk management tracking meetings will be held once per month through the currently anticipated mid-point of construction (June 2019).

## **TASK 29 OPERATOR PROCUREMENT SUPPORT**

This work removed during negotiations. It is assumed that SANBAG and the PMC will perform all work associated with this item.

## **TASK 30 MAINTENANCE OF WAY PROCUREMENT SUPPORT**

This work removed during negotiations. It is assumed that SANBAG and the PMC will perform all work associated with this item.

## **TASK 31 QUIET ZONE IMPLEMENTATION SUPPORT**

Two Quiet Zones are required for the Project: one for each roadway jurisdiction. The Program Management Consultant (PMC) Team is tasked with preparing documentation for each jurisdiction to submit to the Federal Railroad Administration (FRA) and facilitating any meetings regarding the quiet zone implementation process.

For each submittal regarding the San Bernardino Quiet Zone and the Redlands Quiet Zone, the CONSULTANT will support the PMC Team's efforts by providing exhibits developed in support of Task 2.15.1, Grade Crossing Modification Requests (GO 88-B) and attending onsite meetings.

### **Assumptions**

- A maximum of two quiet zone submittals will be supported under this Task: one for the City of San Bernardino and one for the City of Redlands.
- Number of crossings: 11 in the San Bernardino Quiet Zone and 14 in the Redlands Quiet Zone.
- PMC Team will prepare the following:
  - Updated the USDOT Grade Crossing Inventory Form before and after Supplemental Safety Measures (SSMs) are installed.
  - Quiet Zone Calculation results.
  - Quiet Zone Notices: Notice of Intent and Notice of Establishment.
  - Correspondence with the FRA regarding the City's quiet zone applications.
- PMC Team will coordinate and schedule onsite diagnostic meetings with the FRA, CPUC, City and SANBAG, and the Designer including preparation of diagnostic forms and meeting notes.
- PMC Team will coordinate final inspection of each crossing upon completion of SSM installations.
- Traffic studies, such as queuing analyses and pre-emption calculations are provided under Task 14 - Traffic Operations Analysis for Signals with RR preemption.
- Exhibits are provided as a part of Task 2.15.1, Grade Crossing Modification Requests (GO 88-B)

### **Deliverables**

None.

## PART VI FINAL DESIGN ENGINEERING DOCUMENTS

### TASK 32 EARLY UTILITY RELOCATION PACKAGE

The purpose of this task is to create a separate, early PS&E package to provide opportunity for SANBAG procure a utility relocation contractor before the rest of the design is finalized, allowing utility relocation construction to occur before the primary construction effort for the Project begins. This work will focus on relocating utilities that are presently in known conflict with the proposed improvements. New services and other elements that will be more efficiently constructed coincident with the main construction effort will not be included in this package.

It is assumed that this package will be provided to SANBAG and the applicable utility owners for review at a 60%, 90%, and 100% level of design. One final IFB submittal incorporating comments from the 100% review cycle will be provided.

#### Task 32.1 Incorporate Final Design Potholing into Utility Base Mapping

The CONSULTANT will update/modify the utility base map to reflect the pothole data provided by SANBAG. The CONSULTANT will review the updated utility base map for revisions to relocation/reconstruction determinations.

#### Task 32.2 Update to Utility Base Mapping

The CONSULTANT will update the existing utility base mapping using the information obtained in Task 7.

#### Task 32.3 General Plans and Survey Control

The CONSULTANT will produce general plan sheets and survey control sheets required for a stand-alone early utility relocation plan set.

#### Task 32.4 Utility Disposition Plans

The plan set will include utility disposition sheets showing the locations of the utilities revealed in our research. Utility dispositions will be labeled to show limits of relocation or protection.

Notice to owners will be provided as presented in Task 38.11

#### Task 32.5 Utility Relocation Plans

Plan sheets will be prepared to define the location, limits, and type of work required to relocate the utility lines.

#### Assumptions

- Separate sheets will be created for respective utility relocation types, up to approximately 100 sheets.
- Each plan will be drafted according to either SANBAG's or the approving agency's CADD standards.

## Task 32.6 Civil Plans

Civil plans will be prepared to describe the reconstruction or improvements prompted by the relocation of existing utility lines. These plans may include sidewalks, paving, striping, fencing to create a site condition acceptable to the authorities having jurisdiction over the site following the completion of the utility relocations.

### Assumptions

- Civil improvement plans will only cover areas directly affected by the utility relocation work which is the focus of this separate PS&E set.

### Deliverables

- Task 32.6 – 60% Early Utility Relocation Plans
- Task 32.6 – 90% Early Utility Relocation Plans
- Task 32.6 – 100% Early Utility Relocation Plans
- Task 32.6 – Final/IFB Early Utility Relocation Plans

## Task 32.7 Specifications

### Task 32.7.1 Project Technical Specifications

CONSULTANT shall prepare Project Specifications to support the design and construction of the Early Utility Relocation Package. The documents shall follow the Construction Specification Institute's (CSI) Master Format style and shall use, as a basis, the Project Specifications (Conformed) used in SANBAG's most recent railroad construction project, the Downtown San Bernardino Passenger Rail Project.

Specifications for off-site work to be performed in the public (street) R/W will follow the above mentioned CSI format but will reference Greenbook (current edition) specifications or local Agency standards, and be contained within the Project Specifications document. Also, Water District specifications will be included as appendices within the main Project Specification document and referenced within the technical sections.

- Develop List of Technical Specifications.

At the 60% submittal CONSULTANT will prepare only a specification Table of Contents (TOC) containing a list of specification sections anticipated to be used in the project based on the 60% design drawings.

- Assemble Standard Technical Specifications.

At the 90%, 100% and IFB submittals, CONSULTANT will assemble a compilation of standard specifications.

### Task 32.7.2 Prepare Project Specific Specifications

At the 90%, 100% and IFB submittals, CONSULTANT will assemble/update a compilation of both modified standard specifications based on Metrolink Standard Specifications (2013 ed.) and supplemental, non-standard specifications, also in CSI format, to fill in or provide missing sections not covered under the standard specifications where needed.

### Task 32.7.3 Division 0 and Division 1 Specifications

CONSULTANT will review the Project Technical Specifications against the Division 0 and Division 1 sections and lead the editing of these front-end documents.

### Task 32.7.4 Coordinate Plans and Specifications

After compiling the Project Specifications CONSULTANT will review the design shown on the plans with the project specifications so that the two documents are in concert and to avoid duplication of direction or conflicting data presentation.

#### **Assumptions:**

- CONSULTANT to take lead on editing front-end documents.
- CONSULTANT to prepare any Special Conditions document as required by the Project.
- CONSULTANT take the lead with SANBAG to prepare the front end documents including the invitation for bid (IFB); bidding instructions and forms, construction contract, general contract provisions.

#### **Deliverables**

- Task 32.7 - 60% Project Specifications (TOC only) - Early Utility Relocation
- Task 32.7 – 90% Project Specifications - Early Utility Relocation
- Task 32.7 – 100% Project Specifications - Early Utility Relocation
- Task 32.7 – Final/IFB Project Specifications - Early Utility Relocation

### Task 32.7.5 Bid Item List Development

CONSULTANT will lead development of the Bid Item List with the support and participation of the PMC/CM in the development of the Bid Item List

#### **Assumptions:**

- Measurement and Payment approach for the various elements of construction for the project shall be established and finalized by CONSULTANT with participation and support of SANBAG's PMC/CM teams for implementation in the documents in time to be incorporated into the 90% submittal.

#### **Deliverables**

- Task 32.7.5 60% Bid Item List - Early Utility Relocation

- Task 32.7.5 90% Bid Item List - Early Utility Relocation
- Task 32.7.5 100% Bid Item List - Early Utility Relocation
- Task 32.7.5 Final/IFB Bid Item List - Early Utility Relocation

## Task 32.8 Cost Estimates

The CONSULTANT will prepare an Estimate of Probable Construction Costs based on the drawings prepared for the Early Utility Relocation Package and using recent SANBAG, Metrolink, local agency and local railroad (and non-railroad) construction and project bid records. The estimate will be categorized by functional area and include backup information on the development of unit and lump sum costs. Sources for values used will be cited wherever possible. The costs will be provided in Year 2015 dollars unless otherwise shown. Construction costs estimates will be prepared for the 60% submittal and updated for the 90%, 100%, and IFB submittals.

### *Deliverables*

- Task 32.8 – 60% Engineer's Estimate of Probable Construction Costs
- Task 32.8 – 90% Engineer's Estimate of Probable Construction Costs
- Task 32.8 – 100% Engineer's Estimate of Probable Construction Costs
- Task 32.8 – Final/IFB Engineer's Estimate of Probable Construction Costs

## Task 32.9 Bid Support, Conformed Drawings, Construction Support, As-Builts and Close-Out

The scope of work for these tasks is further described in Task 39, Task 40 and Task 41, respectively.

### Task 32.9.1 IFB Document Preparation Support

CONSULTANT will assist SANBAG with their preparation of the IFB document through providing requested project information including an updated bid item list.

### *Deliverables*

- Task 32.9.1 - Email responses to requests by SANBAG for information or documentation in support of the development of the IFB document.

### Task 32.9.2 Pre-bid Meeting

CONSULTANT assumes that a half-day pre-bid meeting will be conducted on behalf of SANBAG to disseminate project specific information.

### *Deliverables*

- Task 32.9.2 - Exhibits, plans, agendas and meeting minutes for pre-bid meeting

### Task 32.9.3 Responses to Bidder Questions

CONSULTANT will assist SANBAG in responding to design-related questions, clarifications or approved equal requests, including questions that could not be addressed at the Pre-Bid meeting.

#### Assumptions

- All questions submitted by qualified bidders will initially be submitted in writing to SANBAG.
- Procurement approx. 6 weeks.
- The burden of proof as to the suitability, equality and compatibility rests solely with the Bidder.

#### Deliverables

- Task 32.9.3 - Responses to design-related questions, clarifications or approved equal requests received from bidders, including questions that could not be addressed at the Pre-Bid meeting.

### Task 32.9.4 IFB Document Addenda

CONSULTANT will assist SANBAG in amending or revising the IFB documents by composing written addendum to the IFB package.

#### Deliverables

- Task 32.9.4 - Written addenda to the IFB package

### Task 32.9.5 Support Bid Evaluation

CONSULTANT will assist SANBAG in reviewing bids for conformance with the project documents. CONSULTANT will identify observed irregularities in the bids and assist the preparation of the bid tabulations.

#### Assumptions

- CONSULTANT will not be responsible for evaluating whether or not a Contractor possesses the required license class at the time of award through Contract acceptance. In addition, CONSULTANT will not be responsible for ensuring that subcontractors comply with the appropriate licensing requirements as identified in the State of California Public Contract Code Section 20103.5.
- CONSULTANT will not be responsible for ensuring that each Bid is accompanied by a Bid guarantee.
- CONSULTANT will not be responsible for ensuring that the successful Bidder furnishes a Payment and Performance Bond.

- CONSULTANT will not be responsible for evaluating contractor compliance with conditions of the Davis-Bacon Act (40 U.S.C. 276a) and the Labor Code of the State of California.
- CONSULTANT will not be responsible for ensuring that Bidders list only one subcontractor for each portion of work as identified in its Bid.
- CONSULTANT will not be responsible for ensuring that the Bidder perform work equivalent to a minimum of the total amount of the work with its own forces as prescribed by SANBAG.
- CONSULTANT will not be responsible for determining contractor conformance with Title 49 CFR, Part 26, which dictates SANBAG's project specific goal for Underutilized Disadvantaged Business Enterprise (UDBE).

### **Deliverables**

- Task 32.9.5 - Bid examination input in the form of email correspondence
- Task 32.9.5 - Bid tabulations if requested

### **Task 32.9.6 Conformed Documents**

CONSULTANT will prepare conformed documents incorporating changes made to the bid documents during the bid period through issued addenda and responses to bidder questions.

### **Deliverables**

- Task 32.9.6 - Conformed documents

### **Task 32.10 Design Services During Construction (DSDC)**

CONSULTANT will support SANBAG's Construction Manager during the construction of the early utilities relocation improvements by performing site visits, reviewing submittals, responding to RFIs, attending construction meetings, issuing design revisions, supporting construction contract change order negotiations and assisting with punchlist development and resolution all as further described in Task 40, Design Services During Construction (DSDC).

### **Task 32.11 As-built Drawings**

As-built drawings for the Public Agency owned utilities (water, sewer, etc.) plan sheets will be provided to each respective agency for their records.

### **Assumptions**

- Only plans originally signed by the CONSULTANT as engineer of work included in this Task will be provided.
- The plan sheets will not be reformatted to comply with City CADD/drafting standards that may have changed since their original issuance.
- Electronic files will be provided in PDF format.

## Deliverables

- Task 32.11 As-built Drawings (1 hard copy and 1 electronic copy)

## TASK 33 133 S. E STREET BUILDING DEMOLITION PACKAGE

CONSULTANT will prepare a separate PS&E package for the demolition of the existing building at 133 South E Street. This package will be prepared for early release, to allow demolition to occur prior to the main construction effort for the project.

- Assumes two (2) submittals (100% and Final/IFB) and two (2) review cycles for each.
- Assumes any necessary permits to be pulled by PMC or contractor.

### Task 33.1 Demolition Plans

Demolition plans will be prepared which indicate the items at the 133 S. E Street property that will need to be demolished and those that will need to be protected in place. The proposed site condition at the conclusion of demolition work will also be indicated on the Demolition Plans.

#### Task 33.1.1 100% Submittal

Assumes the PS&E package will be prepared to a 100% level and submitted to SANBAG and the City of San Bernardino for permitting and approval. Comments or permitting requirements will be incorporated into the PS&E for the final IFB submittal.

#### Task 33.1.2 Final/IFB Submittal

CONSULTANT will incorporate comments from the 100% review and prepare Final/IFB document.

CONSULTANT will coordinate and support PMC with regard to pulling of permits.

### Task 33.2 Project Specifications

#### Task 33.2.1 Project Technical Specifications

CONSULTANT shall prepare Project Specifications to support the design and execution of the 133 S. E Street Building Demolition Package. The documents shall follow the Construction Specification Institute's (CSI) Master Format style and shall use, as a starting point, the Project Specifications (Conformed) used in SANBAG's most recent railroad construction project, the Downtown San Bernardino Passenger Rail Project.

Specifications for off-site work to be performed in the public (street) R/W will follow the above mentioned CSI format but will reference Greenbook (current edition) specifications or local Agency standards, and be contained within the Project Specifications document. Also, Water District specifications will be included as appendices within the main Project Specification document and referenced within the technical sections.

#### Task 33.2.1.1 Assemble Standard Technical Specifications

At the 100% and IFB submittals, CONSULTANT will assemble a compilation of standard specifications using CSI formatted Standard Specifications.

#### Task 33.2.1.2 Prepare Project Specific Specifications

At the 100% and IFB submittals, CONSULTANT will assemble/update a compilation of both technical specifications and applicable special provisions in CSI format.

#### Task 33.2.1.3 Division 0 and Division 1 Specifications

SANBAG's PMC will provide CONSULTANT with the SANBAG standard boilerplate front end documents including the invitation for bid (IFB); bidding instructions and forms, construction contract, general contract provisions. CONSULTANT will coordinate with and support the PMC in the editing of these front-end documents.

#### **Assumptions:**

- CONSULTANT to take lead on editing front-end documents.
- CONSULTANT to prepare Special Conditions document as required by the Project.

#### Task 33.2.1.4 Coordinate Plans and Specifications

After compiling the Project Specifications CONSULTANT will review the design shown on the plans with the project specifications so that the two documents are in concert to avoid duplication of direction or conflicting data presentation.

### **Task 33.3 Estimate of Probable Construction Costs**

The CONSULTANT will prepare an Estimate of Probable Construction Costs based on the drawings prepared for the project and using recent SANBAG, Metrolink, local railroad and local agency construction project unit cost bid records. The estimate will be categorized by functional area and include backup information on the development of unit and lump sum costs. Sources for values used will be cited wherever possible. The costs will be provided in Year 2015 dollars unless otherwise shown.

#### **Task 33.3.1 Prepare Bid Item List**

CONSULTANT will develop the Bid List with PMC and CM support and participation.

#### **Assumptions:**

- Measurement and Payment approach for elements of construction for the project shall be established and finalized by SANBAG's PMC staff for implementation in the documents in time to be incorporated into the 100% submittal.

## Task 33.4 Bid Support

### Task 33.4.1 IFB Document Preparation Support

CONSULTANT will assist SANBAG with their preparation of the IFB document through providing requested project information including an updated bid item list.

### Task 33.4.2 Pre-bid Meeting and Field Walk

A project field walk will be scheduled and performed by SANBAG, CONSULTANT, and the CM CONSULTANT in order to introduce Bidders to the Project. CONSULTANT will use the field walk to disseminate key proposed design elements within the context of the existing built environment along the rail corridor. CONSULTANT also assumes that a half-day pre-bid meeting will be conducted on behalf of SANBAG to disseminate project specific information that is not suitable to be discussed in the field.

### Task 33.4.3 Responses to Bidder Questions

CONSULTANT will assist SANBAG in responding to design-related questions, clarifications or approved equal requests, including questions that could not be addressed at the Pre-Bid meeting.

#### **Assumptions**

- All questions submitted by qualified bidders will initially be submitted in writing to SANBAG.
- Procurement period will be 6 weeks in duration.
- CONSULTANT is not responsible for failure to respond to a written request that was not clearly labeled and/or received after the published deadline.
- Any request for an approved equal will be fully supported with technical data or other relevant information as evidence of support that the substitute meets or exceeds the current specification requirements.
- The burden of proof as to the suitability, equality and compatibility rests solely with the Bidder. CONSULTANT will provide input to SANBAG as to the suitability, equality and compatibility of the proposed equal.

### Task 33.4.4 IFB Document Addenda

CONSULTANT will assist SANBAG in amending or revising the IFB documents by composing written addendum to the IFB package.

### Task 33.4.5 Support Bid Evaluation

CONSULTANT will assist SANBAG in reviewing bids for conformance with the project documents. CONSULTANT will present observed irregularities in the bids and assist the preparation of the bid tabulations.

### Assumptions

- CONSULTANT will not be responsible for evaluating whether or not a Contractor possesses the required license class at the time of award through Contract acceptance. In addition, CONSULTANT will not be responsible for ensuring that subcontractors comply with the appropriate licensing requirements as identified in the State of California Public Contract Code Section 20103.5.
- CONSULTANT will not be responsible for ensuring that each Bid is accompanied by a Bid guarantee.
- CONSULTANT will not be responsible for ensuring that the successful Bidder furnishes a Payment and Performance Bond.
- CONSULTANT will not be responsible for evaluating contractor compliance with conditions of the Davis-Bacon Act (40 U.S.C. 276a) and the Labor Code of the State of California.
- CONSULTANT will not be responsible for ensuring that Bidders list only one subcontractor for each portion of work as identified in its Bid.
- CONSULTANT will not be responsible for ensuring that the Bidder perform work equivalent to a minimum of the total amount of the work with its own forces as prescribed by SANBAG.
- CONSULTANT will not be responsible for determining contractor conformance with Title 49 CFR, Part 26, which dictates SANBAG's project specific goal for Underutilized Disadvantaged Business Enterprise (UDBE).

### Task 33.4.6 Conformed Documents

CONSULTANT will prepare conformed documents incorporating changes made to the bid documents during the bid period through issued addenda and responses to bidder questions.

#### Deliverables

- Task 33.1.2 - Final/IFB Demolition Plans 133 E Street
- Task 33.2 – 100% Project Specifications 133 E Street
- Task 33.2 – Final/IFB Project Specifications 133 E Street
- Task 33.3 - 100% Engineer's Estimate of Probable Construction Costs
- Task 33.3 - Final Engineer's Estimate of Probable Construction Costs
- Task 33.3.1 – 100% Bid Item List 133 E Street
- Task 33.3.1 – 100% Plans
- Task 33.3.11 – Final/IFB Bid Item List 133 E Street
- Task 33.4 - Email responses to requests by SANBAG for information or documentation in support of the development of the IFB document.
- Task 33.4 - Exhibits, plans, agendas and meeting minutes for use during the field walk and pre-bid meeting

- Task 33.4.3 - Responses to design-related questions, clarifications or approved equal requests received from bidders, including questions that could not be addressed at the Pre-Bid meeting.
- Task 33.4.4 - Written addenda to the IFB package
- Task 33.4.5 - Bid examination input in the form of email correspondence
- Task 33.4.5 - Bid tabulations if requested
- Task 33.4.6- Conformed documents

### **Task 33.5 Design Services During Construction (DSDC)**

CONSULTANT will support SANBAG's Construction Manager during the demolition of the building and site improvements at 133 S E Street by performing site visits, reviewing submittals, responding to RFIs, attending construction meetings, issuing design revisions, supporting construction contract change order negotiations and assisting with punchlist development and resolution all as further described in Task 40, Design Services During Construction (DSDC).

### **Task 33.6 As-built Drawings**

As-built drawings for the Public Agency owned utilities (water, sewer, etc.) plan sheets will be provided to each respective agency for their records.

#### **Assumptions**

- Only plans originally signed by the CONSULTANT as engineer of work included in this Task will be provided.
- The plan sheets will not be reformatted to comply with City CADD/drafting standards that may have changed since their original issuance.
- Electronic files will be provided in PDF format.

#### **Deliverables**

- Task 33.6 As-built Drawings (1 hard copy and 1 electronic copy)

## **TASK 34 PREPARE 60% MAINLINE PS&E**

The Mainline PS&E's for the Project will be broken down into four (4) scheduled milestone submittals that will include both paper and electronic (PDF) files. The first submittal, this Task, (Task 34) will reflect the intermediate or 60% design development level, followed by an intermediate or 90% design development submittal (Task 35), which will be followed by a pre-final or 100% design development submittal (Task 36) and lastly a final or IFB package (Task 37) containing bid-ready Contract Documents. A list of the deliverables and timing of the submittal of each item is outlined in the Table of Deliverables herein.

The goals of each of these milestone submittals are to advance the level of design completion towards IFB-level documents, to provide opportunity for stakeholder input as the design progresses, and to track anticipated construction cost of the project as designed.

At the 60% level of design, proposed rail and roadway centerlines will be engineered and described. The design will reflect the project footprint to show right-of-way impacts of the design. All major project elements will be included, though details and construction notes may not be fully defined. The 60% design will identify conflicts, but may not yet provide engineered solutions.

### **General Assumptions for Mainline PS&E Submittals**

#### **CONSULTANT:**

- Consultant will prepare the design as a continuous effort. Work will continue coincident with the progress submittal review process. (Applies to 90% and 100% submittals as well.)
- Will submit Contract Documents (PS&E's) (4 copies) to SANBAG/PMC.
- Will submit Plans and Specifications (4 copies) to City of San Bernardino (over-the-counter).
- Will submit Plans and Specifications (4 copies) to City of Redlands (over-the-counter).
- Will submit Plans and Specifications (2 copies) to Metrolink.
- Assumes interagency agreements completed prior to 60% submittal. Agreements will define roles and responsibilities for review of SANBAG design.
- Assumes one review cycle for all submittals (submit, receive/address comments, continue to next progress submittal).
- Will champion submittals through outside agency plan-check and processing/reviews.
- Assumes four (4) weeks for total combined stakeholder reviews.
- Assumes 3 full days of meetings to review technical review comments by all reviewers.
- All review comments will be compiled by the Program Management Consultant and SANBAG within 10 days of completion of the 4 week review.
- Assumes no demolition plans will be prepared or submitted except for 133 S. E Street.
- Assumes City title block will be inserted on SANBAG border for City submittals.
- Assumes County title block will be inserted on SANBAG border for County submittals (County Public Works Yard).

### **Task 34.1 60% General Plans**

CONSULTANT will prepare General Plans for the 60% submittal of RPRP. The following plan sheets will be included: Title Sheet, Sheet Index, General Notes, Legend and Abbreviations, Standard Symbols and Patterns, Track Schematic, Horizontal Curve Geometry, and Survey Control.

CONSULTANT will prepare construction control plan sheets that depict the control survey based on control established during Preliminary Engineering. It will depict the construction centerline data dimensions and mainline track stationing as prepared by CONSULTANT with tie-lines to said centerline. It is the intention of this exhibit to allow a contract surveyor to stake this project for construction.

### Assumptions

- See General Assumptions above.
- General Notes from stakeholders (SANBAG, Metrolink, cities, etc.) will be included in separate sections on the General Notes sheet.

## Task 34.2 60% Track Design and Associated Plans

CONSULTANT will advance the rail design shown in the 30% plans to a 60% level which will include the elements listed in the subtasks below.

### Task 34.2.1 Track Construction Documents

The following plan types will be included:

- Track Geometry Tables
- Track Material Tables
- Track Plan and Profiles
- Track Typical Sections
- Track Cross Sections

### Assumptions

- Design will accommodate a Metrolink express train at the Downtown Redlands Station.
- Design will follow the standards and design criteria set forth in the RPRP Basis of Design Report prepared during the preliminary engineering phase.
- Level boarding will be provided at all stations.
- Layover facility design - NOT INCLUDED.
- Layover facility connection(s) - NOT INCLUDED.
- Design will generally follow the track alignment reflected in the 30% Preliminary Engineering Plans prepared during the PE Phase. Track will be single-track through the corridor, with one passing siding of approximately 2 miles in length.
- No industry siding connections will be modified beyond (outside of) the SANBAG right-of-way.
- The 60% track alignment, incorporating agreed up review comments, will be “locked down”. Applies to track typical section including rail weight, ballast depth, tie-type, etc.

### Task 34.2.2 Wayside Signage and Markers – NOT INCLUDED at 60%

### Task 34.3 60% Utilities Engineering

The CONSULTANT will prepare utility plans for new services and those utilities requiring relocation or modification as a result of the Project but not included in the Early Utility Relocation Package. These plans will advance the design shown in the 30% plans.

#### Task 34.3.1 Updated Utility Disposition Plans

CONSULTANT will update the RPRP utility plans to reflect those utilities designed as part of the Early Utility Relocation Package.

#### Task 34.3.2 Additional Utilities Relocation Design

CONSULTANT will review comments received from respective utilities owners and incorporate the comments into the 60% utility design. Once comments are addressed CONSULTANT will return the revised sheets to respective utility owners for back-check and approval.

CONSULTANT will coordinate with the local agencies with regard to street addresses for relocated utility services impacting private property.

#### Task 34.3.3 Develop New Utility Services Requirements

CONSULTANT will prepare new service requests to be sent to respective utility service providers based on the project design or resulting from R/W actions to accommodate the project design. Where necessary, requests will include completing and processing water service applications.

CONSULTANT will coordinate with the local agencies with regard to street addresses for new utility services.

#### Assumptions

- New electric services will be required at each passenger rail station, railroad signal control point/intermediate signal and at each signalized grade crossing location along the project corridor.
- Fire water service will not be required at the stations due to their open nature and canopy design.
- Up to two new telephone/cable connections will be required for the project at yet to be determined locations.
- Up to four new electric services may be required at unique locations to support for irrigation controllers, antennae or other improvements.
- New street lighting required as a part of the project will be installed on existing circuits or by means of unmetered connections. CONSULTANT will coordinate the new lighting circuit connections with SCE or the existing owners of street lighting (City of Redlands, City of San Bernardino) but new service requests will not be required.

- No new gas services will be required.

#### **Task 34.3.4 Design New Utility Services**

CONSULTANT will provide final designs for those utilities not being designed by their respective owners. New utility services based on standards and requirements of the agency having jurisdiction.

CONSULTANT will contact utility providers to finalize utility service requirements.

#### **Assumptions**

- Following construction of the Early Utility Relocation Package, the RPRP Utility Disposition plans will be updated to reflect the utilities constructed/relocated with the Early Utility Relocation Package. This Early Utilities Package will be shown as an as-built (existing) condition. This update will only be reflected in progress submittals following the relocation of those utilities.
- It is assumed that utility relocation plans prepared by the franchise utilities will be referenced on the plans and in the conflict matrices, but said information will not be reproduced in the utility plans.
- The project's environmental footprint has been established and is assumed to be as defined in the FEIR/EIS.

#### **Task 34.4 60% Street Modification Plans**

The CONSULTANT will develop civil engineering design drawings for the proposed street modifications required for the implementation of RPRP. The plans will address civil improvements required to modify each at-grade crossing and roadway improvements including roadway paving, curb, gutter sidewalk, drainage, signage, and striping. Additionally, the design will consider other existing conditions that may require modifications as a result of the planned improvements. These items may include relocation or addition of street lighting, relocation of existing utilities, adjustment of surface features of existing utilities to grade and the design of new medians, closure or relocation of driveways along the corridor and the development of new driveways or access points for access from public roadways to the railroad right-of-way.

#### **Task 34.4.1 Rail Related Crossing Improvements**

The grade crossing improvement plans will include existing and proposed warning devices, crossing panel improvements, railroad signal equipment location, instrument house location, and power supply and the approach to track panel drainage to be used at each crossing.

Where required, CONSULTANT will provide pedestrian crossing design to reflect either traditional in-station at-grade crossing or “pedestrian crossing only” outside of station. Designs will include provision for switchbacks in pedestrian crossing approach walkways and/or warning barriers as agreed to through the field diagnostic meeting and review process (Task 2.15.1, Task 14.4).

#### Task 34.4.1.1 SAR Trail At-grade Crossing

See Task 2.17 - Santa Ana River Trail

#### Task 34.4.1.2 Esri In-station Pedestrian Crossing – NOT INCLUDED

#### Task 34.4.1.3 Downtown Redlands In-station Pedestrian Crossing

Includes coordination with historic brick walkway.

#### Task 34.4.1.4 Mill Creek Zanja Trail/Crossing

This work eliminated during negotiations.

#### Task 34.4.1.5 University of Redlands In-station Pedestrian Crossing

No in-station pedestrian crossing is planned for this station. North-South connection will be made at the public street crossing at University Street or east of the limits of track and bumping post, east of the station.

### **Assumptions**

- No pedestrian overpass bridges or under-crossings will be designed as part of RPRP.
- After the County of San Bernardino obtains an affirmative decision from the CPUC for a new at-grade trail crossing at MP 3.5 between Bridge 3.4 and the Greenbrier industry spur, CONSULTANT will develop construction drawings for those elements of work of the Santa Ana River Trail (SAR) at-grade crossing that must be constructed coincident with the railroad project due to phasing, safety and integration among other cost and schedule benefits. Connections between the existing SAR Trail at either side of the railroad and the new at-grade crossing outside the limits of the improvements included herein will be designed by others.
- The in-station crossing at University of Redlands will be across the tracks proposed tracks.

### **Task 34.4.2 Street Related Crossing Improvements**

The 60% grade crossing improvement plans will advance the design initiated during the previous phase and will further develop street related improvements proposed to be implemented with the project. These include but are not limited to pavement removal and replacement, warping and other modifications to the street typical section to blend the roadway improvements to (and across) the at-grade crossing. Additionally, the street related crossing improvements may include new or modified medians, modifications to curb, gutter and sidewalk, additional of detectable warnings on pedestrian surfaces, potential channelization features to safely route pedestrians around warning devices and over the track(s), and pedestrian gates where deemed necessary through site diagnostic meetings. A street centerline profile will be prepared to confirm the design of a smooth transition of the roadway across each at-grade crossing.

### Task 34.4.3 Traffic Related Crossing Improvements

#### Task 34.4.3.1 Railroad Preemption of Signalized Intersections within 200' of a Crossing

CONSULTANT will implement design modifications to the eight (8) signalized locations with railroad preemption as agreed upon in Task 14.

CONSULTANT will prepare signal modification plans and details to the 60% level of completion showing the implementation of infrastructure modifications to accommodate the preemption sequencing agreed upon.

#### Assumptions

- For purposes of design fee estimating, the following configuration has been used:

Grade Crossing Street	Intersecting Street	Approx. Clear Storage Distance	Modifications
South E St.	W. Rialto Ave	320'	Preemption circuitry, timing, sequencing changes only; no new signal heads
Tippecanoe	E Victoria Ave	230'	Preemption circuitry, timing, sequencing changes only; no new signal heads
California St.	I-10 EB Ramps	100'	NB California Street to receive new pre-signals south of tracks; Add illuminated no right turn indication on EB I-10 Off-ramp poles; preemption circuitry, timing and sequencing changes; Pavement markings, signage and striping changes
Alabama St.	Redlands Blvd	160'	SB Alabama Street to receive new pre-signals north of tracks; Add illuminated no right turn indication on Redlands Blvd signal poles; preemption circuitry, timing and sequencing changes; Pavement markings, signage and striping changes
Alabama St.	Industrial Park Ave	280'	Preemption circuitry, timing, sequencing changes only; no new signal heads
Colton Ave.	Redlands Blvd	40'	SB Colton Ave to receive new pre-signals north of tracks; Add illuminated no right turn indication on Redlands Blvd signal poles; preemption circuitry, timing and sequencing changes; Pavement markings, signage and striping changes

Grade Crossing Street	Intersecting Street	Approx. Clear Storage Distance	Modifications
Tennessee Ave.	Redlands Blvd	40'	SB Tennessee Ave to receive new pre-signals north of tracks; Add illuminated no right turn indication on Redlands Blvd signal poles; preemption circuitry, timing and sequencing changes; Pavement markings, signage and striping changes
<b>N. Eureka St.</b>	Oriental Ave	150'	Preemption circuitry, timing, sequencing changes only; no new signal heads
<b>Orange St.</b>	W. Stuart Ave.	180'	Preemption circuitry, timing, sequencing changes only; no new signal heads
<b>University St.</b>	I-10	500'	Review for preemption requirements.

- Refer to Task 2.14.2 for Caltrans Encroachment Permit for work in Caltrans right-of-way at California Street and I-10 EB Ramps.

#### Task 34.4.3.2 Traffic Signal Programming Design

CONSULTANT will design the traffic signal programming for each traffic signal. This task will provide operational design consistent with the modified signals and operations related to preemption. This includes program charts for each intersection taking into consideration existing timing, current standards, and new preemption and other non-preempt timing.

#### Task 34.4.4 Traffic Signage and Striping/Pavement Markings at Railroad Crossings

CONSULTANT will develop signage and striping plans for modification of at-grade crossings and in coordination with the agreed upon crossing warning device and traffic signal preemption configurations developed during the work performed in Task 14 and resulting from the field diagnostic meetings coordinated by the PMC. The design will be advanced during 60% design effort and completed as a part of the 90% submittal to the extent that the field diagnostic meetings and crossing modification approval process (GO-88) has advanced.

CONSULTANT will develop signage and striping related to project modifications to the public street network as a result of the Project. Additionally, CONSULTANT will show the location and placement for wayfinding signage in the community to direct system users to station locations. Wayfinding signage will incorporate system branding design (to be developed by others).

#### Task 34.4.5 At-Grade Crossing Closures

During the PE and Environmental phase several grade crossings were identified for closure by CPUC with concurrence from the local agency having jurisdiction. CONSULTANT will prepare designs for terminating the streets (shown below) at the railroad right-of-way. Designs will be

advanced for full street closures with vacations, partial street closures (with barricades, turn-arounds or cul-de-sacs) consistent with the preliminary engineering design.

- D Street (San Bernardino)
- Caliber Collision (private)
- Stuart Ave (Redlands)
- 7<sup>th</sup> Street (Redlands)
- 9<sup>th</sup> Street (Redlands)

#### **Task 34.4.6      Stuart Avenue Street Improvements – NOT INCLUDED**

See Task 2.22.6.

#### **Task 34.4.7      Fencing Plan**

To address safety concerns raised by stakeholders and regulatory agencies, fencing plans were prepared during preliminary engineering phase and shown and quantified on the Roadway Improvement Plans. Final design plans will continue the fencing design started during preliminary engineering and will provide a balanced approach to fencing the right-of-way in areas of high pedestrian activity, historic trespassing uses, and security of key infrastructure of the railroad. Different fence types were identified during the previous phase at various locations based on the purpose and need of the fencing (e.g. – inter-track fence, right-of-way fence, pedestrian channelization, security fencing, etc.). This fencing plan will be incorporated into other drawings and presented in the final design package.

#### ***Assumptions***

- R/W fencing between highway-rail grade crossings will be shown and quantified on the Grading and Drainage Plans.

#### **Task 34.5      60% Grading and Drainage**

##### **Task 34.5.1      Rail Corridor Grading, Wayside Drainage and Cross Drainage**

CONSULTANT will advance the grading and drainage design completed during Preliminary Engineering including wayside drainage, detailed grading of signal house berms, detailed grading within the railroad right-of-way not otherwise defined, culvert plan/profile, and ditch details for surface drainage as required. The subtask will also include advancing the design of drainage improvements parallel to the track alignment such as underdrains, storm drains and drainage structures such as cleanouts, junction structures, and manholes. Design of culvert crossings will be implemented where wayside drainage and surface runoff is collected and must cross under track infrastructure.

Grading and Drainage plans will display contours, limits of grading; cut and fill lines, drainage ditches; sizes, location and elevations of underdrains; sizes, location and elevations of drainage improvements including cleanouts, junction structures, manholes, connections to structures drainage including bridges and retaining walls.

Storm Sewer/Culvert Plan and Profiles will reflect existing and proposed ground profiles, sizes, locations, elevations, hydraulic grade lines, design flows and details necessary for construction of underground storm systems and culvert crossings within the railroad right-of-way.

### **Task 34.5.2 Offsite Grading and Drainage Improvements**

CONSULTANT will advance the off-site grading and drainage design completed during Preliminary Engineering including detailed site grading, grading and drainage details, offsite storm drain plans and profiles for connection to public storm systems, surface drainage ditch details as required.

Offsite (public) Grading and Drainage plans will display contours, limits of grading; cut and fill lines, drainage ditches; sizes, location and elevations of underdrains; sizes and location of drainage improvements including cleanouts, junction structures, manholes. Grading and drainage within the public (street) R/W will be designed per local agency (City) standards and specifications.

Offsite (public) Storm Sewer Plan and Profile will provide existing and proposed ground/street profiles, sizes, locations, elevations, hydraulic grade lines, design flows and details necessary for construction of underground storm systems and culvert crossings. Public Storm Sewer Plan and Profile will be designed per local agency standards and specifications.

Offsite (private) drainage improvements will be displayed in plan view only (no profiles) and will include elevations, structures, conduit sizes, flows and horizontal control.

### **Task 34.5.3 Right-of-Way Requirements Coordination**

CONSULTANT will coordinate with the Right-of-Way Task Lead (refer to Task 38.1 Finalize Right-of-Way Requirements) with regard to private properties impacted by drainage improvements designed with the Project. Coordination will include preparation of necessary exhibits.

### **Task 34.5.4 Right-of-Way Fencing and Signage**

Right-of-Way Fencing and Signage designed to control access to the railroad right-of-way between the highway-rail grade crossings will be reflected on the Grading and Drainage Plans.

### **Task 34.5.5 Mission Zanja Channel Improvements**

For the portion of the Mission Zanja Channel beginning at the Santa Ana River crossing and extending south and eastward to Bryn Mawr Avenue; depending on the results of the flood risk assessment in Task 15.1, and Task 15.4.1.2.

Mission Zanja Channel Scour Protection, the CONSULTANT will prepare a grading and channel improvement design to repair/reconstruct the north bank of the Mission Zanja Channel and properly convey runoff as resolve by Task 15.1.

## Assumptions

- Hydrologic, hydraulic and water quality calculations and analyses and the associated deliverables are described in Task 16.1, Project Local Drainage Study Updates .
- Proposed Grading and Drainage Improvements within the Mission Zanja Channel will be based on reports prepared/updated under Task 15.1 Modified Flood Risk Assessment for Mission Zanja Channel.
- Water Quality calculations and BMP design will be addressed in Task 10.2.4, Water Quality Management Plan (MM HWQ-6) of this scope of work.
- Structures (bridge and retaining wall) drainage to be shown on Structures Plans.
- Design of roadway bridge modifications to the existing roadway bridges across the Mission Zanja Channel are not specifically included and would be considered additional services

## Task 34.6 60% Structures

This subtask includes the submittal packages (excluding design calculations) for the RPRP project based on the Bridge Alternative Analysis Report. Each submittal will include plans, quantities, cost estimates, and specifications.

### General Assumptions:

- The RPRP Project Geotechnical Report with design recommendations and Log of Test Borings will be finalized before commencing design of bridges.
- The Draft Bridge Hydraulics Report and the Foundation Scour Analysis at the SAR is completed before commencing design of bridges.

## Task 34.6.1 Bridge Engineering Design Drawings

### Task 34.6.1.1 Bridge 1.1 – Warm Creek Crossing

Provide general arrangement plans for the bridge replacement. This will include complete general arrangement, typical sections, removal plan, structural and construction notes, construction sequence, foundation plan, pile details, layout, boring logs, calculations, and checking the calculations.

### Task 34.6.1.2 Bridge 2.2 – Twin Creek Crossing

Provide general arrangement plans for the Improvement of the existing bridge. This will include complete general arrangement, typical sections, removal plan, structural and construction notes, construction sequence, calculations, and checking the calculations.

### Task 34.6.1.3 Bridge 3.4 – Santa Ana River Crossing

Provide general arrangement plans for the bridge replacement. This will include complete general arrangement, typical sections, removal plan, structural and construction notes, construction sequence, foundation plan, pile details, layout, boring logs, calculations, and checking the calculations.

#### Task 34.6.1.4 Bridge 3.9 – Gage Canal

The preferred alternative consists of plugging a portion of the Gage Canal with cellular concrete fill over a length that spans two tracks. Design will accommodate new utility casings installed inside the canal (embedded in the cellular concrete) for future use. Design documentation will include general arrangement, typical sections, structural and construction notes, construction sequence, calculations, and checking the calculations.

#### Task 34.6.1.5 Bridge 9.4 – Mill Creek-Zanja Crossing

Provide general arrangement plans for the bridge replacement. This will include complete general arrangement, typical sections, removal plan, structural and construction notes, construction sequence, foundation plan, pile details, layout, boring logs, calculations, and checking the calculations.

### Task 34.6.2 Pier Protection Engineering Design Drawings

#### Task 34.6.2.1 Pier Protection Wall at I-10 (MP 5.65)

Provide general arrangement plans for the Pier Protection Wall construction. This will include complete general arrangement, typical sections, structural and construction notes, construction sequence, foundation plan, pile details, layout, boring logs, calculations, and checking the calculations.

#### Task 34.6.2.2 Pier Protection Wall at I-10 (MP 9.48)

Provide general arrangement plans for the Pier Protection Wall construction. This will include complete general arrangement, typical sections, structural and construction notes, construction sequence, foundation plan, pile details, layout, boring logs, calculations, and checking the calculations.

### Task 34.6.3 Retaining Walls and Miscellaneous Structures

This subtask includes the submittal packages for 26 walls and miscellaneous structures that will accommodate the proposed track infrastructure along the project limits. Each submittal will include plans, quantities, QA/QC, cost estimates, and update to specifications.

Activities include advancement of calculations, plans, elevations/profiles, typical sections and details and exhibits necessary for construction.

Retaining wall designs will be continued for the wall locations originally presented in the 30% Plans prepared during Preliminary Engineering.

Miscellaneous structure design includes those structures not otherwise defined by railroad engineering standards or public agency standard plan or standard drawing, i.e. transit station platforms, platform amenities (canopies, etc.), miscellaneous drainage structures including those that will have to accommodate railroad loading (E80), utility and equipment pads, etc.

**Assumptions:**

- USACE Section 408 permit and associated coordination with the City and/or USACE are not required.
- Design calculations for structures will not be part of the Task deliverable.
- The Red-Dot Method check of the structures design is included and addressed in Task 17.2.
- Design of temporary works necessary for construction are not included and are assumed to be designed by contractor.
- Retaining walls are assumed to be cast-in-place (CIP) cantilever type design.

**Task 34.7 60% Passenger Station Design****Task 34.7.1 Standard Station Design Elements**

Station design for each station will include the following standard elements and features, except as noted in the subtasks for each individual station:

Civil – Design of grading and drainage for the immediate areas around the station platform environment including an accessible path of travel to/from the public right-of-way. Civil design will include the development of potable water supply to the platform for maintenance (wash-down of platform) and irrigation service as applicable (refer to individual station specific design elements).

Architectural – Design of the concrete boarding platform layout and horizontal dimensions and level boarding solutions (refer to individual station specific design elements). The architectural design also includes platform canopies and site furnishings such as benches and trash receptacles. Design will also include establishing common placement of EPIS, fare collection equipment, signage and platform lighting. The architectural design also includes placement of detectable warnings, handrails and other ADA features.

Structural – Design will include design of the platform structure/foundation, canopy members and foundation, equipment pads and integrated retaining structures associated with the platform area. Design may also include level boarding equipment solutions.

Electrical – Design will include power distribution conduit pathways to and within/under the platform and related areas for automated fare collection equipment and lighting and to power EPIS and network communications equipment as necessary. Design may also include power supply to in-station pedestrian crossing equipment houses where present.

Security and Communications – Design will include the placement of video cameras on platform and storage devices in cabinets or communications bungalows as applicable. Design includes coordinated layout of conduit pathways to and within/under the platform and related areas as a part of the station local area network for connecting EPIS, security, fare collection, communications and related station equipment and devices.

Landscaping – The standard station design does not include planting or irrigation.

As a part of the “base” design, CONSULTANT will finalize the “standard” canopy design. Plan and elevations will be prepared and presented to SANBAG for approval prior to the 60% drawing set development. The submittal will include one colored rendering of typical station shelter/shade structure and platform in context.

### **Assumptions**

- The standard platform canopy design will be substantially based on one of the three concepts developed during the preliminary engineering phase.
- Up to four (4) meetings will be held with SANBAG staff to finalize the “standard” canopy design to be implemented with the project.

### **Task 34.7.2 Unique Station Improvements**

The following unique elements will be incorporated in each of the stations:

#### **Task 34.7.2.1 San Bernardino Transit Center Station (SBTC)**

Civil – Unique on-site improvements at SBTC site will include coordinating platform and pedestrian access from the proposed platform extension on the south side of Platform TC-“C” at the SBTC out to E Street and the Omnitrans sbX Transit Station.

The design will also include rework of the frontage improvements along E Street that will be required as a result of the addition of the RPRP station track and turnout through and to the west of E Street. Roadway reconstruction is described in Task 34.4 - 60% Street Modification Plans. Architectural – CONSULTANT will design a custom platform extension from Platform TC-“C” with minimal amenities for a DMU vehicle consistent with the preliminary engineering design. Platform design will consider the new platform and accommodations recently constructed or planned to be built as part of the Downtown San Bernardino Passenger Rail Project (DSBPRP) and adjacent SBTC.

Structural – Design will include doweling or similar details to connect the platform extension to the existing Platform TC-“C.”

Electrical – Design will include conduit pathway and distribution from the existing main distribution panel or dedicated subpanel constructed as a part of the DSBPRP to the platform.

Security and Communications – Design will include connection to the security/communications room constructed in the crew building as a part of the DSBPRP.

Landscaping – Design will include restoration planting and irrigation to the frontage improvements of E Street. No service points of connection will be required.

### **Assumptions**

- It is assumed that the RPRP platform will utilize the wash-down water located on the adjacent Platform C at the SBTC. No additional water utilities are anticipated.
- No new canopies are planned to be constructed on the platform at this station.

- It is assumed that level boarding will be provided by direct access at train floor height from the platform.

#### Task 34.7.2.2 Waterman Station

Civil – CONSULTANT will provide site grading and drainage as required accommodating an accessible path of travel to the public right-of-way and maintenance connectivity to Waterman Avenue or Park Center Circle within an access easement. CONSULTANT will also include design for maintenance access to signal improvements west of the station between the platform and Waterman Avenue.

Architectural – No special features anticipated at Waterman Station. This is a “standard” station.

Structural – No special features anticipated at Waterman Station. This is a “standard” station.

Electrical – No special features anticipated at Waterman Station. This is a “standard” station.

Security and Communications – No special features anticipated at Waterman Station. This is a “standard” station.

Landscaping – No special features anticipated at Waterman Station. This is a “standard” station.

#### Task 34.7.2.3 New York Street Station (Esri) – NOT INCLUDED

Final Design not included. See Task 2.23.

#### Task 34.7.2.4 Downtown Redlands Station

Civil – CONSULTANT will provide site grading and drainage as required accommodating the platforms planned (below) and an accessible path of travel to the public right-of-way and maintenance connectivity to the planned surface lot along West Stuart Avenue (See Task 2.22.6 - West Stuart Avenue – Frontage Improvements and Interim Parking). CONSULTANT will also include design for an accessible path of travel to and across an in-station pedestrian crossing and to the public right-of-way south of the planned station platform (See Task 34.4.1.3 - Downtown Redlands In-station Pedestrian Crossing). Consideration will be made for restoration and/or integration of the historic brick walkway at the Redlands Depot in accordance with Task 10.3.2 - Historic Structural Evaluations (MM CUL-1).

Architectural – Design of the concrete boarding platform layout and horizontal dimensions shall support use by the Project Trains and Metrolink Trains. CONSULTANT shall design to provide level boarding solutions for both types of trains (see Task 2.2.1 - Level Boarding).

Structural – Design will consider the unique elements of a dual use platform design including accommodation for level boarding solutions for both types of train as developed above.

Electrical – Design will include power distribution conduit pathways to accommodate the dual use platform.

Security and Communications – Design will include power distribution conduit pathways to accommodate the dual use platform. A junction box or handhole will be included to

accommodate future connectivity to the “Park Once” parking garage (City of Redlands Future project) or to the City constructed surface parking on West Stuart Street.

Landscaping – No landscaping anticipated at Downtown Redlands Station.

#### Task 34.7.2.5 University of Redlands Station

Civil – CONSULTANT will provide site grading and drainage as required accommodating one side platform sized long enough to accommodate a special four car “event train” (Metrolink locomotive and coaches) and located on the north side. The station design will be for a two track terminal station including an accessible path of travel to the public right-of-way on Park Avenue immediately adjacent to the platform. Site civil engineering will include a path of travel to/from the station platform to a crew relief building site in the immediate location of the station platform and to be located during the 60% design. Site design will also include development of a suitable equipment building pad for the instrument houses and antenna pad associated within the terminal station control point, communications link and grade crossing at University Street.

CONSULTANT will also include design for an accessible path of travel from the platform to the public right-of-way at the intersection of Park Avenue and University Street.

CONSULTANT will provide site wet utility design for water and sewer services to the proposed crew relief building and an on-platform water supply for wash down along with landscaping for the frontage of the station on Park Avenue.

Architectural – Design of the platform will be sized for a special four car “event train” and accommodate the dual use by both types of trains. This platform will incorporate unique level boarding solutions for both types of trains. The platform will include “standard” canopies.

CONSULTANT shall design a crew relief building (less than 200 sq. ft.) providing the minimum relief facilities for train crews in the immediate location of the station platform and to be located during the 60% design. The facility will provide a single uni-sex accessible bathroom.

Structural – Design will consider the unique elements of a longer platform. CONSULTANT will develop the additional building and foundation design for the crew relief building in the area of the station.

Electrical – Design will include power supply for lighting, single point electric tankless hot water heater and exhaust fan to the crew relief building.

Security and Communications – Design will include the connection between the platform video cameras and the University of Redlands security control center on campus.

Landscaping – No landscaping anticipated at University of Redlands Station.

## Task 34.8 60% Landscaping Design – OPTIONAL SERVICES

### Task 34.8.1 San Bernardino Transit Center Station

#### Task 34.8.1.1 Pedestrian and Bike Amenities and Furnishings Plan

CONSULTANT will provide 60% pedestrian amenities and furnishings that will include the specification and location of site furnishings, bicycle racks, non-lighted bollards and raised planters not on the platform. The plan will also include the paving required to provide American with Disabilities Access (ADA) to the above items. Site paving finish, color and score joint layouts will also be included.

#### Task 34.8.1.2 Planting Plan

CONSULTANT will provide 60% planting plans that will include a tree and plant material identification list, tree locations, general shrub and ground cover locations, landscape edging and inorganic and/or organic mulch specification. The landscape planting will be California native or native-adaptive, drought tolerant plants. Where necessary, CONSULTANT will specify screening shrubs to visually protect the adjacent properties per the Environmental Requirements. The planting plan will also include erosion control planting areas and the recommended seed mixes.

#### Task 34.8.1.3 Irrigation Plan

CONSULTANT will provide 60% irrigation plans that will show each hydrozone and type of irrigation system at each planting area. An irrigation material legend describing the equipment will also be provided. The irrigation system will be designed to meet the State's Landscape Water Efficiency Model Ordinance (AB1881).

### Task 34.8.2 Waterman Station

#### Task 34.8.2.1 Pedestrian and Bike Amenities and Furnishings Plan

CONSULTANT will provide 60% pedestrian amenities and furnishings that will include the specification and location of site furnishings, bicycle racks, non-lighted bollards and raised planters not on the platform. The plan will also include the paving required to provide American with Disabilities Access (ADA) to the above items. Site paving finish, color and score joint layouts will also be included.

#### Task 34.8.2.2 Planting Plan

CONSULTANT will provide 60% planting plans that will include a tree and plant material identification list, tree locations, general shrub and ground cover locations, landscape edging and inorganic and/or organic mulch specification. The landscape planting will be California native or native-adaptive, drought tolerant plants. Where necessary, CONSULTANT will specify screening shrubs to visually protect the adjacent properties per the Environmental Requirements. The planting plan will also include erosion control planting areas and the recommended seed mixes.

### Task 34.8.2.3 Irrigation Plan

CONSULTANT will provide 60% irrigation plans that will show each hydrozone and type of irrigation system at each planting area. An irrigation material legend describing the equipment will also be provided. The irrigation system will be designed to meet the State's Landscape Water Efficiency Model Ordinance (AB1881).

### Task 34.8.3 New York Street Station (Esri) – NOT INCLUDED

Final Design not included. See Task 2.23.

### Task 34.8.4 Downtown Redlands Station

#### Task 34.8.4.1 Pedestrian and Bike Amenities and Furnishings Plan

CONSULTANT will provide 60% pedestrian amenities and furnishings that will include the specification and location of site furnishings, bicycle racks, non-lighted bollards and raised planters not on the platform. The plan will also include the paving required to provide American with Disabilities Access (ADA) to the above items. Site paving finish, color and score joint layouts will also be included.

#### Task 34.8.4.2 Planting Plan

CONSULTANT will provide 60% planting plans that will include a tree and plant material identification list, tree locations, general shrub and ground cover locations, landscape edging and inorganic and/or organic mulch specification. The landscape planting will be California native or native-adaptive, drought tolerant plants. Where necessary, CONSULTANT will specify screening shrubs to visually protect the adjacent properties per the Environmental Requirements. The planting plan will also include erosion control planting areas and the recommended seed mixes.

#### Task 34.8.4.3 Irrigation Plan

CONSULTANT will provide 60% irrigation plans that will show each hydrozone and type of irrigation system at each planting area. An irrigation material legend describing the equipment will also be provided. The irrigation system will be designed to meet the State's Landscape Water Efficiency Model Ordinance (AB1881).

### Task 34.8.5 University Station (University of Redlands)

#### Task 34.8.5.1 Pedestrian and Bike Amenities and Furnishings Plan

CONSULTANT will provide 60% pedestrian amenities and furnishings that will include the specification and location of site furnishings, bicycle racks, non-lighted bollards and raised planters not on the platform. The plan will also include the paving required to provide American with Disabilities Access (ADA) to the above items. Site paving finish, color and score joint layouts will also be included.

### Task 34.8.5.2 Planting Plan

CONSULTANT will provide 60% planting plans that will include a tree and plant material identification list, tree locations, general shrub and ground cover locations, landscape edging and inorganic and/or organic mulch specification. The landscape planting will be California native or native-adaptive, drought tolerant plants. Where necessary, CONSULTANT will specify screening shrubs to visually protect the adjacent properties per the Environmental Requirements. The planting plan will also include erosion control planting areas and the recommended seed mixes.

### Task 34.8.5.3 Irrigation Plan

CONSULTANT will provide 60% irrigation plans that will show each hydrozone and type of irrigation system at each planting area. An irrigation material legend describing the equipment will also be provided. The irrigation system will be designed to meet the State's Landscape Water Efficiency Model Ordinance (AB1881).

## Task 34.9 60% Required Landscaping

### Task 34.9.1 Tree Removal and Planting along Right-of-Way

CONSULTANT will provide a 60% tree placement plan that will show the location of replacement trees and associated irrigation including the irrigation main, point-of-connection equipment and controller.

#### Task 34.9.1.1 Mitigation Planting and Irrigation Plan of Historic Orange Grove at California Street

CONSULTANT will provide planting and irrigation plans that show the location of the replacement Citrus Trees within the Redlands Historical Preserve of Citrus as described in Task 10.6.3.2, Conceptual Tree Replacement Plan. The irrigation plan will show the type of irrigation used for the trees, the location of the mainline, the point-of-connection equipment and the controller. If an existing controller has stations available, the irrigation plan will show the existing controller location and the specific station(s) to be used for the newly planted replacement trees.

#### Task 34.9.1.2 Private Property Owner Trees – OPTIONAL SERVICES

Consultant will coordinate key property owners with trees of significance on or along the railroad right-of-way and that will be affected by the project construction. Where appropriate and agreed to by SANBAG, CONSULTANT will create up to five separate planting and irrigation plans at physically separate locations for the planting of new or replacement trees. CONSULTANT will incorporate landscape ideas including tree variety and location with consideration for railroad safety and maintenance of way.

## Task 34.9.2 Restoration Planting along Corridor

### Task 34.9.2.1 Restoration or visual mitigation planting

CONSULTANT will provide a planting and irrigation plan for the restoration of landscaped areas on private property adjacent to the railroad and impacted by the project construction or for visual mitigation where required by SANBAG. Restoration planting will match existing planting to the extent practicable. Visual mitigation planting will be native or native-adaptive drought tolerant plants and will have an efficient irrigation system that meets the State's Landscape Water Efficiency standards. Planting and irrigation plans will also be provided for the area near the Redlands Lawn Bowling Club portion of Sylvan Park and/or the Second Baptist Church as described in the MMRP and directed by SANBAG.

## Task 34.9.3 Erosion Control Planting

CONSULTANT will provide Erosion Control Planting Plans that will show the location and type of erosion control seeding or planting as required by the Civil Engineer. If temporary or permanent irrigation is deemed to be required by the design team, irrigation plans showing the system will be included. The irrigation plan will show irrigation head layout, mainline location, point-of-connection equipment and the controller location. An irrigation material list will also be included.

### Assumptions

- All plancheck fees, connection and/or capacity fees and private or public property owner inspection costs associated with planting and irrigation construction or irrigation water service shall be paid for directly by SANBAG and are NOT INCLUDED.

## Task 34.10 60% Private Property Improvements

### Task 34.10.1 County of San Bernardino Public Works Yard

The project proposes to close the driveway accessing the County of San Bernardino Public Works Yard located on the SW quadrant of S. Sierra Way and the railroad right-of-way to provide a safer condition for the crossing at S Sierra Way.

CONSULTANT will provide a design for site improvements on the County property to include, but not be limited to, adjust/relocate or provide new yard or site fencing and gate, paving improvements, accessibility, adjust/relocate or provide new signage, new parking and aisle-way striping, minor grading and drainage improvements, relocate or new site light poles. Design will also consider utility service interruptions or new utility service connections as required by the project.

### Task 34.10.2 Reagent Chemical Corporation Industry Siding Improvements

CONSULTANT will include trackwork, grading, and drainage required for connection to Reagent Chemical Corporation Industry sidings from the mainline up to the SANBAG right-of-way line only. See Task 34.2.

### Task 34.10.3 Auto Body Shop (Along Redlands Blvd)

There is an existing private at-grade crossing at MT STA 467+50 which is east of Tennessee St along Redlands Blvd. The crossing serves as the only access to a landlocked property where an auto-body business is located. This private crossing will be impacted by construction of the mainline track through this area.

CONSULTANT's track design will show the removal of the existing private crossing to allow construction of the mainline.

#### Assumptions

- Property owner will acquire independent of SANBAG or its consultants, alternative legal and physical access to this property. This action may require and includes a minimal amount of support from CONSULTANT.

### Task 34.11 60% Construction Staging and Phasing Engineering and Plans

#### Task 34.11.1 60% Construction Sequencing Plans

CONSULTANT will develop final design construction sequencing plans that will show construction staging and sequencing scenario for the Project. These plans will include proposed track alignments, R/W lines, limits of grading and construction for each phase, components of proposed infrastructure to be constructed during each phase, construction phasing notes, proposed laydown areas, and components of existing infrastructure to be protected in place, relocated, removed, salvaged, or demolished.

Plans and specifications will be prepared assuming temporary construction elements will be engineered and detailed by the contractor, including: temporary structures; repairs to access ways required for construction access; and temporary shoring systems.

#### Task 34.11.2 Traffic Control and Detour Plans – NOT INCLUDED

See Task 10.4.1 - Traffic Management Plan (MM TR-1) and Traffic Management for Caltrans and the Cities of San Bernardino and Redlands (Task 2.14.2.4, Task 2.20.3 and Task 2.22.3).

### Task 34.12 60% Electrical Design

CONSULTANT will provide electrical plans for the project addressing lighting, power, and communications (low voltage) design for locations requiring these electrical systems.

#### Task 34.12.1 Electrical Power

Electric Power Design will include the complete design of the power distribution system from the service point to the point of use/load. The design will include resolution of the power load requirements, phasing, breakers, sizing and type identification of conduits, pullboxes or handholes, main and subpanels, grounding and other associated infrastructure required for the power distribution to the following locations and uses. New meter pedestals with distribution panel will be designed for each location and meeting Southern California Edison requirements:

### Task 34.12.1.1 Grade Crossings

CONSULTANT will develop 60% electrical design to supply power to railroad signal instrument houses at crossing locations for distribution to automatic warning devices, flashing lights and components related to the crossing warning system as described in Task 34.12.

#### **Assumptions**

- New electric services (or upgrades to existing services) will be required at each crossing location with automatic warning devices.

### Task 34.12.1.2 Wayside Signal Power

CONSULTANT will develop 60% electrical design to supply power to railroad signal instrument houses at control points, intermediate railroad signal houses and wayside railroad communications shelters/antennae locations.

#### **Assumptions**

- New electric services will be required at each new instrument house.
- The number of instrument houses will be the same as presented in the Preliminary Engineering Drawings.

### Task 34.12.1.3 Stations

CONSULTANT will develop 60% electrical design to supply power to each station location and to supply the following systems at each station:

#### Boarding Platform Electrical

Design will provide power supply to platform and canopy lighting, equipment such as ticket vending machines, video surveillance cameras, and electronic passenger information equipment including changeable message signs, public address system and related items (if not powered directly by network connection).

#### **Assumptions**

- It is assumed that power supply to in-station pedestrian crossings anticipated at Downtown Redlands and the Univ. of Redlands stations will be supplied from the adjacent public roadway crossings at Orange Avenue and University Avenue respectively.

#### Other Power Consuming Equipment at Stations

Design will be developed to supply power to other power consuming equipment at the stations including security systems and alarms, irrigation controllers and other off-platform devices.

Electrical Site plans will be developed and for each station and at other locations where the electric service and conduit routing/pathways cannot be shown clearly on the proposed utility drawings and need to be separated.

## Task 34.12.2 Network and Low Voltage Communications

Based on the CONOPS developed in Task 12.1.1, CONSULTANT will develop construction drawings to the 60% level of completion for network and low voltage communications for the project. The following tasks are anticipated and expected based on typical passenger rail systems in place in the United States.

### Task 34.12.2.1 Backbone Fiber Optic Communications

CONSULTANT will design to 60% level of completion a backbone fiber optic communications system for placement trackside. The communications backbone will have pullboxes, handholes, shelters and other types of enclosures in support of the construction, use, maintenance and inspection of equipment and devices as well as the functional testing of the fiber optic cabling for the system.

### Task 34.12.2.2 Local Area Network Communications

CONSULTANT will design to 60% level of completion local area network system and physical cable pathways from the backbone fiber optic communications system to the various devices and equipment at stations, railroad instrument houses, communications shelters and other infrastructure as required and as presented in the Final CONOPS developed in Task 12.1.1.

### Task 34.12.2.3 Wi-Fi Network Communications – OPTIONAL SERVICES

Based on the CONOPS developed in Task 20, CONSULTANT will develop construction drawings to the 60% level of completion for Wi-Fi network communications for the project. The following tasks are anticipated and expected based on typical passenger rail systems in place in the United States.

#### Wi-Fi Network Communications Design Plans – OPTIONAL SERVICE

CONSULTANT will design to 60% level of completion for a Wi-Fi network system including equipment, radios, antennae, switches, shelters, and other required infrastructure as required and as presented in the Final CONOPS developed in Task 20. The Wi-Fi network system will be utilized to provide passengers and rail employees wireless internet access at stations and at continuously along the passenger rail system. A public and private Wi-Fi system will be developed as determined in the Final CONOPS.

#### On Board Wi-Fi Connectivity – OPTIONAL SERVICE

CONSULTANT will design to 60% level of completion for an on board Wi-Fi network system including on board radio, antenna, power, and PoE switches to provide local Wi-Fi access for patrons in each railcar. Additionally, the on board Wi-Fi system will be able to bridge to wayside network equipment via radio.

#### Wayside Wi-Fi Connectivity – OPTIONAL SERVICE

CONSULTANT will design to 60% level of completion for a wayside Wi-Fi network system including pole locations with radio, antenna, power, and fiber optic connectivity features to provide wayside Wi-Fi access for users of the rail system including passengers. Considerations

in design will be made to wireless line of sight and communication pole spacing to provide appropriate connectivity along the rail system.

#### Station Wi-Fi Connectivity – OPTIONAL SERVICE

CONSULTANT will design to 60% level of completion for station Wi-Fi network system including radio, antenna, power, and PoE switch kits to provide local Wi-Fi access for station patrons.

#### Cellular Network Interface – OPTIONAL SERVICE

CONSULTANT will design to 60% level of completion for a cellular network interface to each Wi-Fi network including on board, wayside, and station networks. The cellular network will be analyzed to determine appropriate network speeds and bandwidth requirements to properly handle the anticipated Wi-Fi network use.

#### Fiber Optic Interface – OPTIONAL SERVICE

CONSULTANT will design to 60% level of completion for a Wi-Fi network system that interfaces with the fiber optic communication backbone to form a redundant network system. The fiber optic system ties into the Wi-Fi network at stations and wayside communication poles. It is anticipated that the fiber optic will be utilized to provide power over ethernet to the radios attached to the communication poles for the wayside communication system.

#### Control Center Coordination – OPTIONAL SERVICE

CONSULTANT will coordinate the delivery and use of Wi-Fi network signal and data at control center(s) owned and operated by others (Metrolink, Omnitrans, other agency/entity) to allow for a fully functional passenger rail system with internet access.

#### End User Applications – OPTIONAL SERVICE

CONSULTANT will coordinate the delivery for software application related to on-board and end user device agreements. The applications will provide for acceptance of use of the Wi-Fi system by the end user.

#### **Assumptions**

- CONSULTANT will not prepare construction documents for the modification of other agency control centers.
- SANBAG and PMC will support and facilitate CONSULTANT in the coordination and communication of Wi-Fi system integration with others (Metrolink, Omnitrans, Esri, University of Redlands, other agency/entity).
- The CONSULTANT will coordinate with the PMC and SANBAG to incorporate the operational features of the proposed system into the plans.

#### Task 34.12.2.4 Radio Communications

CONSULTANT will design to 60% level of completion voice and data radio systems including equipment, antennae, shelters and other required infrastructure using radio spectrums in the 160-161 MHz bands (per AAR channels) and 220 MHz ranges for railroad voice

communications and positive train control data communications systems respectively. Refer to Task 34.13.1 Railroad and Signal Communications below.

#### Task 34.12.2.5 Electronic Passenger Information System

CONSULTANT will design to 60% level of completion the electronic passenger information system as required and as presented in the Final CONOPS developed in Task 12.1.2.

#### Task 34.12.2.6 Control Center Coordination

CONSULTANT will coordinate the delivery and use of network signal and data at control center(s) owned and operated by others (Metrolink, Omnitrans, Esri, University of Redlands, other agency/entity) to allow for a fully functional passenger rail system with network, voice and data communications, railroad signal/dispatch functionality, electronic passenger information system and security camera and other security system data as described in the preceding and following scope elements.

#### **Assumptions**

- CONSULTANT will not prepare construction documents for the modification of other agency control centers.
- SANBAG and PMC will support and facilitate CONSULTANT in the coordination and communication of system integration with others (Metrolink, Omnitrans, Esri, University of Redlands, and other agency/entity).

### **Task 34.13 60% Railroad Systems – Signal and Communications Plans**

#### **Task 34.13.1 Railroad Signal and Communications**

This task includes beginning the design of the new and modified railroad signal and communication systems in conjunction with this project. The design will consider future Positive Train Control (PTC) wayside systems interfacing with the Metrolink PTC System. CONSULTANT will begin development of track plan & profile drawings, aspect charts, detailed location drawings, radio licensing, tower analysis, fiber optic network equipment design and ATCS data radio path analysis. In addition, the task will include close coordination with Station designers to check that planned communication conduits are placed in the station.

#### **Assumptions**

- CONSULTANT will show placement of railroad signal equipment on civil plans.
- Railroad signal and communication Microstation files are subject to FRA software configuration management requirements and will become the property of the Rail Operator and will not be distributed unless ordered by SANBAG.
- Railroad Signal and Communication plans shall utilize the “Red = In Yellow = Out” convention for new equipment and removal of existing equipment at existing locations.
- Railroad Signal and Communication plans will be presented in color for existing locations where construction shall take place.

- CONSULTANT shall be provided access to all existing railroad communication and signal facilities.
- CONSULTANT assumes permits are not required for the RR Signal and Communications scope of work.
- CONSULTANT shall be involved in the field diagnostic meetings or other meetings with the CPUC concerning new crossings or modifications to existing crossings.
- CONSULTANT shall be involved in the field diagnostic meetings or other meetings regarding Quiet Zones on the project.
- CONSULTANT shall be involved in the field or other meetings with electrical service provider regarding Meter Services related to railroad signal systems on the project.

### Task 34.14 60% System Security Engineering – Video Surveillance

The CONSULTANT will design a video surveillance system for the passenger stations and rail corridor. The technical requirements for this system and the overall system security plan will be prepared by SANBAG's Program Management Consultant (PMC) under a separate contract. CONSULTANT will design the video surveillance system to support the operational requirements of the system security plan developed by the PMC.

- San Bernardino Transit Center Station
- Waterman Station
- New York Street Station – NOT INCLUDED
- Downtown Redlands Station
- University Station
- Corridor Security

The security system currently envisioned includes HD IP-based video cameras routed to a central station that will monitor and display the imagery captured by the video cameras. However, the system will be further defined prior to the 90% design and may include the one or more of the following features and component systems:

- Network Video Recorders and associated storage – capable of recording and storing up to 30 days of video data for each camera
- Network switch(es)
- Fiber switch(es)
- Converters and adapters
- Camera infrastructure
- Rack(s) system(s)
- Uninterruptable power supply (UPS) to support the above Security Office(s) including the following:

- Sufficient video monitors to display video imagery of a useable size from each of the cameras at each station. A common approach to this is the use of a ‘video monitor wall’.
- Camera Control Software and video imagery control to modify the display location or parameters of video imagery on each monitor
- Video Management Software running independently on the same security client workstation and compatible with the video monitor wall controller (assumes video wall). The workstation should allow control of the video monitor wall and allow for the management of the equipment, monitoring of devices, setup display arrangements, and remote access for vendor support.
- Management workstation capable of running the aforementioned and related software packages required to control the associated systems and run a local area (communications) network to support the above. It is assumed that the local network will be independent of the network devices installed and maintained by SCRRA.
- Uninterruptable power supply (UPS) to support the above.
- Coordination of an outside subscriber line connection to the “public cloud” for external communications by various means.

To resolve and solidify the security component of the project, the 60% submittal will include:

- Narrative report of security system design including a description of the function and features of each component as it relates to overall system
- Station local network communications block diagram
- Conceptual layouts of each Security Office showing the location and set up of the security workstation
- Platform equipment location drawing
- Site drawings showing the placement of video surveillance cameras
- Field of view of each camera location

Prior to the 60% submittal, meetings will be held to review various opportunities and constraints to the security component of the design. These will most likely be one item on the regular PDT Meeting agenda but may include two or three separate, focused discussions specific to this topic. Separate Meeting Notes will be prepared for the separate meetings.

- Following the 60% Design submittal, a design review meeting will be held to validate and confirm the design or modify it accordingly prior to entering the 90% design phase.
- The CONSULTANT will be closely involved in the management and oversight of the integrated system vendor to support its installation and start-up.

### **Assumptions**

- The video surveillance system will utilize the fiber backbone of the rail system for data transfer along the corridor.
- As a part of the railroad signal design for the Project, a fiber optic communications backbone will be constructed along the right-of-way to support the transfer of data (in

support of or related to signal aspects, track occupancy and other non-vital train control data) to a central dispatch and communications facility.

- The system will include cameras at each station, as well as and at the grade crossings.
- In addition to connection with a system central dispatch and communications facility, the cameras at the New York Street (Esri) and University of Redlands stations will need to connect to the local security facility at each of these stations.
- The PMC will develop the overall system security plan and CONOPS. The CONSULTANT will coordinate with the PMC and SANBAG to incorporate the operational features of the proposed system into the plans.

## Task 34.15 60% Project Specifications

### Task 34.15.1 Project Technical Specifications

Consultant shall prepare Project Specifications to support the design and construction of the Project. The documents shall follow the Construction Specification Institute's (CSI) Master Format style and shall use, as a starting point, the Project Specifications (Conformed) used in SANBAG's most recent railroad construction project, the Downtown San Bernardino Passenger Rail Project.

Specifications for off-site work to be performed in the public (street) R/W will follow the above mentioned CSI format but will reference Greenbook (current edition) specifications or local Agency standards, and be contained within the Project Specifications document. Also, Water District specifications will be included as appendices within the main Project Specification document and referenced within the technical sections.

#### Task 34.15.1.1 Develop List of Technical Specifications

At the 60% submittal CONSULTANT will prepare a specification Table of Contents (TOC) containing a list of specification sections anticipated to be used in the project based on the 60% design drawings.

Task 34.15.1.2 Assemble Standard Technical Specifications – SEE 90% MAINLINE PS&E

Task 34.15.1.3 Prepare Project Specific Specifications - SEE 90% MAINLINE PS&E

Task 34.15.1.4 Division 0 and Division 1 Specifications – SEE 90% MAINLINE PS&E

Task 34.15.1.5 Coordinate Plans and Specifications – SEE 90% MAINLINE PS&E

#### **Assumptions:**

- Only Specifications Table of Contents (TOC) containing applicable specification sections will be provided at the 60% PS&E Submittal

### Task 34.15.1.6 Bid Item List Development

Measurement and Payment approach for elements of construction for the project shall be established by CONSULTANT and reviewed by PMC and CM staff for implementation in the documents in time to be incorporated into the 90% submittal (after the 60% submittal)..

### Task 34.16 60% Estimate of Probable Construction Costs

The CONSULTANT will prepare an Estimate of Probable Construction Costs based on the drawings prepared for the project and using recent SANBAG, Metrolink, and local railroad construction project unit cost bid records. The estimate will be categorized by functional area and include backup information on the development of unit and lump sum costs. Sources for values used will be cited wherever possible. The costs will be provided in Year 2015 dollars unless otherwise shown. Construction costs estimates will be prepared for the 60% submittal and updated for the 90%, 100%, and IFB submittals.

At the 100% level of design a construction cost estimate will be developed by CONSULTANT's cost estimating group. This estimate will be developed independently from the Engineer's Estimate. The approach to developing this estimate will be from the perspective of a contractor bidding on the project.

#### *Deliverables (summary of 60% Design Deliverables)*

- Task 34.1 to 34.14 - 60% Mainline Plans
- Task 34.15.1.1 - 60% Project Specifications (TOC only)
- Task 34.16 - 60% Estimate of Probable Construction Costs
- Task 34.15.1.6 - 60% Bid Item List
- Task 34 - 60% Response to comments

### TASK 35 PREPARE 90% MAINLINE PS&E

The 90% PS&E will incorporate review comments received from the 60% PS&E submittal and will continue to develop the design to approximately a 90% level of completion. The design will now implement solutions to issues identified through design up to the 60% level. Details for design elements will be included. Task deliverables and assumptions are the same as those stated for the 60% PS&E except as noted below.

#### Task 35.1 90% General Plans

CONSULTANT will advance the General Plans shown in the 60% plans to a 90% level.

#### Task 35.2 90% Track Design and Associated Plans

CONSULTANT will advance the Track design shown in the 60% plans to a 90% level.

### **Task 35.2.1 90% Wayside Signage and Markers**

The CONSULTANT will develop a complete wayside signage and marker design that includes all necessary signs for compliance with regulations, operating rules including the General Code of Operating Rules and practices of adjacent and operating railroads in territory as applicable. These are signs that are not already included or required under the MUTCD or roadway traffic related. CONSULTANT will coordinate the number type and location of signs with the PMC who is responsible for developing the operating plan and rules for the passenger rail operations. At a minimum, the signs anticipated would include but not be limited to: milepost markers, whistle boards/quiet zones, speed limit signs, control point names, special trackwork designations (i.e. permanent derail), no trespassing and cab spot assist signage for stations.

### **Task 35.3 90% Utilities Engineering**

CONSULTANT will advance the Utilities design shown in the 60% plans to a 90% level.

### **Task 35.4 90% Street Modification Plans**

CONSULTANT will advance the Grade Crossing and Street Modification design shown in the 60% plans to a 90% level.

### **Task 35.5 90% Grading and Drainage**

CONSULTANT will advance the Grading and Drainage design shown in the 60% plans to a 90% level.

### **Task 35.6 90% Structures**

CONSULTANT will advance the Structures design shown in the 60% plans to a 90% level.

### **Task 35.7 90% Passenger Station Design**

CONSULTANT will advance the Passenger Station design shown in the 60% plans to a 90% level.

### **Task 35.8 90% Landscaping Design – OPTIONAL SERVICES**

Refer to Task 34.8 - 60% Landscaping Design – OPTIONAL SERVICES for a description of this task.

### **Task 35.9 90% Required Landscaping**

CONSULTANT will advance the Required Landscaping design shown in the 60% plans to a 90% level.

## **Task 35.10 90% Private Property Improvements**

### **Task 35.10.1 County of San Bernardino Public Works Yard**

CONSULTANT will advance the County of San Bernardino Public Works Yard design shown in the 60% plans to a 90% level.

### **Task 35.10.2 Reagent Chemical Corporation Industry Siding Improvements**

CONSULTANT will advance the Reagent Chemical Corporation Industry Siding Improvements design shown in the 60% plans to a 90% level.

### **Task 35.10.3 Auto Body Shop (Along Redlands Blvd)**

CONSULTANT will advance the Auto Body Shop (Along Redlands Blvd) design shown in the 60% plans to a 90% level.

## **Task 35.11 90% Construction Staging and Phasing Engineering and Plans**

CONSULTANT will advance the Construction Phasing and Staging design shown in the 60% plans to a 90% level.

## **Task 35.12 90% Electrical Design**

CONSULTANT will advance the Electrical design shown in the 60% plans to a 90% level.

## **Task 35.13 90% Railroad Systems – Signal and Communications Plans**

CONSULTANT will advance the RR Signals and Communications Plans shown in the 60% plans to a 90% level.

## **Task 35.14 90% System Security Engineering – Video Surveillance**

CONSULTANT will advance the System Security – Video Surveillance design shown in the 60% plans to a 90% level.

## **Task 35.15 90% Project Specifications**

### **Task 35.15.1 Project Technical Specifications**

Task 35.15.1.1 Develop List of Technical Specifications – COMPLETED at 60%

Task 35.15.1.2 Assemble Standard Technical Specifications

Consultant will assemble a compilation of standard specifications from applicable Metrolink Standard Specifications and other sources.

### Task 35.15.1.3 Prepare Project Specific Specifications

CONSULTANT will assemble/update a compilation of both modified standard specifications based on previous SANBAG Rail Projects, Metrolink Standard Specifications and supplemental, non-standard specifications, also in CSI format, to fill in or provide missing sections not covered under the standard specifications where needed.

### Task 35.15.1.4 Division 0 and Division 1 Specifications

CONSULTANT will edit as necessary Division 0 and Division 1 (the front-end documents) for compatibility with the Project Technical Specifications.

#### **Assumptions:**

- CONSULTANT will compile the list of submittals for CM review. CONSULTANT will provide support and will coordinate with the CM team/PMC in their review of the list.

### Task 35.15.1.5 Coordinate Plans and Specifications

After compiling the Project Specifications, CONSULTANT will review the design shown on the plans with the project specifications so that the two documents are in concert and to avoid duplication of direction or conflicting data presentation.

#### **Assumptions:**

- CONSULTANT will take the lead on editing front-end documents; PMC and CM will support CONSULTANT in development
- CONSULTANT will prepare Special Conditions document for the Project; PMC and CM will support CONSULTANT in development
- PMC will provide CONSULTANT with the SANBAG standard boilerplate front end documents including the invitation for bid (IFB); bidding instructions and forms, construction contract, general contract provisions. CONSULTANT will lead project specific modifications to the document with support from the PMC and CM

### Task 35.15.1.6 Bid Item List Development

CONSULTANT will continue to develop the Bid List with PMC and CM support.

#### **Assumptions:**

- Measurement and Payment approach for elements of construction for the project shall be established and finalized by PMC staff for implementation in the documents in time to be incorporated into the 90% submittal effort.

## **Task 35.16 90% Estimate of Probable Construction Costs**

CONSULTANT will advance/update the Estimate of Probable Construction Costs shown in the 60% submittal to align with the 90% level of completion of the design.

## **Task 35.17 Re-design of Project Features to Match Metrolink Standards – NOT INCLUDED**

The SANBAG directed project design (as of the initiation of final design) proposes to continue project development based on constructing the project with only partial adherence to Metrolink Design Criteria and as described in detail in the Basis of Design Report developed during Preliminary Engineering. Task 2.12 Metrolink (SCRRRA) – Implementation Strategies Support Services allows for CONSULTANT to support the decision-making effort by SANBAG of which additional system design criteria, if any, to adhere to in the final design. No work or fee is included in this task. Should the determination be made that additional design changes should be made to accommodate additional Metrolink criteria; a contract amendment will be executed to accommodate the addition scope and effort to make the necessary changes.

## **TASK 36 PREPARE 100% MAINLINE PS&E**

The 100% PS&E will address review comments received from the 90% PS&E submittal and will continue to develop the design to approximately a 100% level of completion. The design will now implement solutions to the issues identified through design up to the 90% level. Complete design showing required details and fully developed technical specifications will be included in the 100% Mainline PS&E deliverables. Task deliverables and assumptions are the same as those stated for the 90% PS&E except as noted below.

### **Task 36.1 100% General Plans**

CONSULTANT will advance the General Plans shown in the 90% plans to a 100% level.

### **Task 36.2 100% Track Design and Associated Plans**

CONSULTANT will advance the Track design shown in the 90% plans to a 100% level.

#### **Task 36.2.1 100% Wayside Signage and Markers**

The CONSULTANT will advance the Wayside Signage and Marker design from the 90% to a 100% level.

### **Task 36.3 100% Utilities Engineering**

CONSULTANT will advance the Utilities design shown in the 90% plans to a 100% level.

### **Task 36.4 100% Street Modification Plans**

CONSULTANT will advance the Grade Crossing and Street Modification design shown in the 90% plans to a 100% level.

### **Task 36.5 100% Grading and Drainage**

CONSULTANT will advance the Grading and Drainage design shown in the 90% plans to a 100% level.

### **Task 36.6 100% Structures**

CONSULTANT will advance the Structures design shown in the 90% plans to a 100% level.

### **Task 36.7 100% Passenger Station Design**

CONSULTANT will advance the Passenger Station design shown in the 90% plans to a 100% level.

### **Task 36.8 100% Landscaping Design – OPTIONAL SERVICES**

#### **Task 36.9 100% Required Landscaping**

CONSULTANT will advance the Required Landscaping design shown in the 90% plans to a 100% level.

### **Task 36.10 100% Private Property Improvements**

#### **Task 36.10.1 County of San Bernardino Public Works Yard**

CONSULTANT will advance the County of San Bernardino Public Works Yard design shown in the 90% plans to a 100% level.

#### **Task 36.10.2 Reagent Chemical Corporation Industry Siding Improvements**

CONSULTANT will advance the Reagent Chemical Corporation Industry Siding Improvements design shown in the 90% plans to a 100% level.

#### **Task 36.10.3 Auto Body Shop (Along Redlands Blvd)**

CONSULTANT will advance the Auto Body Shop (Along Redlands Blvd) design shown in the 90% plans to a 100% level.

### **Task 36.11 100% Construction Staging and Phasing Engineering and Plans**

CONSULTANT will advance the Construction Phasing and Staging design shown in the 90% plans to a 100% level.

### **Task 36.12 100% Electrical Design**

CONSULTANT will advance the Electrical design shown in the 90% plans to a 100% level.

### **Task 36.13 100% Railroad Systems – Signal and Communications Plans**

CONSULTANT will advance the RR Signals and Communications Plans shown in the 90% plans to a 100% level.

## Task 36.14 100% System Security Engineering – Video Surveillance

CONSULTANT will advance the System Security – Video Surveillance design shown in the 90% plans to a 100% level.

## Task 36.15 100% Project Specifications

### Task 36.15.1 Project Technical Specifications

Task 36.15.1.1 Develop List of Technical Specifications – COMPLETED at 60%

Task 36.15.1.2 Assemble Standard Technical Specifications

Consultant will assemble a compilation of standard specifications using applicable Metrolink Standard Specifications.

Task 36.15.1.3 Prepare Project Specific Specifications

CONSULTANT will assemble/update a compilation of both modified standard specifications based on Metrolink Standard Specifications and supplemental, non-standard specifications, also in CSI format, to fill in or provide missing sections not covered under the standard specifications where needed.

Task 36.15.1.4 Division 0 and Division 1 Specifications

CONSULTANT will edit as necessary Division 0 and Division 1 (the front-end documents) for compatibility with the Project Technical Specifications.

#### **Assumptions:**

- CONSULTANT will compile the list of submittals for CM review. CONSULTANT will provide support and will coordinate with the CM team/PMC in their review of the list.

Task 36.15.1.5 Coordinate Plans and Specifications

After compiling the Project Specifications CONSULTANT will review the design shown on the plans with the project specifications so that the two documents are in concert and to avoid duplication of direction or conflicting data presentation.

#### **Assumptions:**

- PMC to take lead on editing front-end documents.
- PMC to prepare Special Conditions document as required by the Project.
- PMC will provide CONSULTANT with the SANBAG standard boilerplate front end documents including the invitation for bid (IFB); bidding instructions and forms, construction contract, general contract provisions.

### Task 36.15.1.6 Bid Item List Development

CONSULTANT will continue to develop the Bid List with PMC and CM support.

#### **Assumptions:**

- Measurement and Payment approach for elements of construction for the project shall be established and finalized by PMC staff for implementation in the documents in time to be incorporated into the 90%, 100, and IFB (Final) submittals.

### **Task 36.16 100% Estimate of Probable Construction Costs**

CONSULTANT will advance/update the Estimate of Probable Construction Costs shown in the 90% PS&E's to the 100% level.

At the 100% level of design a construction cost estimate will be developed by CONSULTANT's cost estimating group. This estimate will be developed independently from the Engineer's Estimate. The approach to developing this estimate will be from the perspective of a contractor bidding on the project.

#### **Deliverables (summary of 100% Design Deliverables)**

- Task 36.1 through 36.14 - 100% Mainline Plans
- Task 36.15 - 100% Project Specifications
- Task 36.15.1.6 - 100% Bid List
- Task 36.16 - 100% Estimate of Probable Construction Costs
- Task 36.16 - Independent Cost Estimate
- Task 36 - 100% Response to comments

## **TASK 37 FINAL ISSUED FOR BID DOCUMENTS (IFB)**

The IFB PS&E will address review comments received from the 100% PS&E submittal and will continue to develop the design to approximately a Final (IFB) level of completion. The design will be refined by implementing solutions to remaining issues identified through design up to the 100% level. Complete design showing required details and fully developed technical specifications will be included in the Final (IFB) PS&E's. The IFB deliverables will be signed and sealed by the appropriate professionals and no longer marked "NOT FOR CONSTRUCTION." Task deliverables and assumptions are the same as those stated for the 100% PS&E except as noted below.

### **Task 37.1 IFB General Plans**

CONSULTANT will advance the General Plans shown in the 100% plans to a Final level completion.

## **Task 37.2 IFB Track Design and Associated Plans**

CONSULTANT will advance the Track design shown in the 100% plans to a Final level of completion.

### **Task 37.2.1 IFB Wayside Signage and Markers**

The CONSULTANT will advance the Wayside Signage and Marker design from the 100% to a Final level of completion.

## **Task 37.3 IFB Utilities Engineering**

CONSULTANT will advance the Utilities design shown in the 100% plans to a Final level of completion.

## **Task 37.4 IFB Street Modification Plans**

CONSULTANT will advance the Grade Crossing and Street Modification design shown in the 100% plans to a Final level of completion.

## **Task 37.5 IFB Grading and Drainage**

CONSULTANT will advance the Grading and Drainage design shown in the 100% plans to a Final level of completion.

## **Task 37.6 IFB Structures**

CONSULTANT will advance the Structures design shown in the 100% plans to a Final level of completion.

## **Task 37.7 IFB Passenger Station Design**

CONSULTANT will advance the Passenger Station design shown in the 100% plans to a Final level of completion.

## **Task 37.8 IFB Landscaping Design – OPTIONAL SERVICES**

### **Task 37.9 IFB Required Landscaping**

CONSULTANT will advance the Required Landscaping design shown in the 100% plans to a Final level of completion.

## **Task 37.10 IFB Private Property Improvements**

### **Task 37.10.1 County of San Bernardino Public Works Yard**

CONSULTANT will advance the County of San Bernardino Public Works Yard design shown in the 100% plans to a Final level of completion.

### **Task 37.10.2 Reagent Chemical Corporation Industry Siding Improvements**

CONSULTANT will advance the Reagent Chemical Corporation Industry Siding Improvements design shown in the 100% plans to a Final level of completion.

### **Task 37.10.3 Auto Body Shop (Along Redlands Blvd)**

CONSULTANT will advance the Auto Body Shop (Along Redlands Blvd) design shown in the 100% plans to a Final level of completion.

### **Task 37.11 IFB Construction Staging and Phasing Engineering and Plans**

CONSULTANT will advance the Construction Phasing and Staging design shown in the 100% plans to a Final level of completion.

### **Task 37.12 IFB Electrical Design**

CONSULTANT will advance the Electrical design shown in the 100% plans to a Final level of completion.

### **Task 37.13 IFB Railroad Systems – Signal and Communications Plans**

CONSULTANT will advance the RR Signals and Communications Plans shown in the 100% plans to a Final level of completion.

### **Task 37.14 IFB System Security Engineering – Video Surveillance**

CONSULTANT will advance the System Security – Video Surveillance design shown in the 100% plans to a Final level of completion.

### **Task 37.15 IFB Project Specifications**

#### **Task 37.15.1 Project Technical Specifications**

Task 37.15.1.1 Develop List of Technical Specifications – COMPLETED at 60%

Task 37.15.1.2 Assemble Standard Technical Specifications

Consultant will assemble a compilation of standard specifications using applicable Metrolink Standard Specifications and other sources as appropriate.

Task 37.15.1.3 Prepare Project Specific Specifications

CONSULTANT will assemble/update a compilation of both modified standard specifications based on Metrolink Standard Specifications (2013 ed.) and supplemental, non-standard specifications, also in CSI format, to fill in or provide missing sections not covered under the standard specifications where needed.

#### Task 37.15.1.4 Division 0 and Division 1 Specifications

CONSULTANT will edit as necessary Division 0 and Division 1 (the front-end documents) for compatibility with the Project Technical Specifications.

**Assumptions:**

- CONSULTANT will compile the list of submittals for CM review. CONSULTANT will provide support and will coordinate with the CM team/PMC in their review of the list.

#### Task 37.15.1.5 Coordinate Plans and Specifications

After compiling the Project Specifications CONSULTANT will review the design shown on the plans with the project specifications so that the two documents are in concert and to avoid duplication of direction or conflicting data presentation.

**Assumptions:**

- PMC to take lead on editing front-end documents.
- PMC to prepare Special Conditions document as required by the Project.
- PMC will provide CONSULTANT with the SANBAG standard boilerplate front end documents including the invitation for bid (IFB); bidding instructions and forms, construction contract, general contract provisions.

#### Task 37.15.1.6 Bid Item List Development

CONSULTANT will continue to develop the Bid List with PMC and CM support.

**Assumptions:**

- Measurement and Payment approach for elements of construction for the project shall be established and finalized by PMC staff for implementation in the documents in time to be incorporated into the 90%, 100, and IFB (Final) submittals.

### Task 37.16 IFB Estimate of Probable Construction Costs

CONSULTANT will advance/update the Estimate of Probable Construction Costs shown in the 100% PS&E's to the Final level of completion.

**Deliverables**

- Task 35.1 – 35.16 - IFB Mainline Plans
- Task 35.15.1 - IFB Project Specifications
- Task 35.16 - IFB Estimate of Probable Construction Costs
- Task 35 - Response to 100% Review Comments

## TASK 38 RIGHT-OF-WAY ACQUISITION SUPPORT

This task includes assisting SANBAG to acquire the additional right-of-way and temporary and permanent easements needed to accommodate the improvements for this Project.

### *Assumption*

- The preliminary right-of-way requirements show a total of 195 separately defined property right acquisitions from an estimated 120 unique parcels will be required for the project based on the preliminary right-of-way requirements for the project.

**This scope assumes that 20 additional unique parcels can be eliminated from the right-of-way requirements through engineering of walls, reducing the footprint, etc. Fee has been based on 100 unique properties and 170 separately defined right-of-way acquisitions.**

- This task includes the appraisals, acquisitions/negotiations, condemnation, right-of-way and utility certification, and right-of-way management system. CONSULTANT will act as an agent in representing SANBAG. The activities will be approved by SANBAG prior to execution.

### Task 38.1 Finalize Right-of-Way Requirements

CONSULTANT will review the project footprint based on stakeholder input and negotiations to determine whether proposed design changes during final design will prompt changes in the right-of-way requirements for the Project.

#### *Deliverables*

- [Task 38.1 - Final Design right-of-way footprint](#)

### Task 38.2 Updated Inventory of Affected Parcels

Based on the Final Design right-of-way footprint, CONSULTANT will update the database of affected parcels to include each affected parcel number.

### Task 38.3 Preliminary Title Reports

CONSULTANT will order preliminary title reports on adjoining land ownerships to obtain legal descriptions of boundaries and easements and for future use in acquisition.

CONSULTANT will review preliminary title reports, with copies of vesting deeds, easements, leases, and other referenced documents for each of the acquisition parcels identified in the previous project plans and reports.

#### *Assumptions*

- ROW Team requires approximately 100 Preliminary Title Reports, and will work with a title company to obtain them.

## Task 38.4 Legal Descriptions and Plat Exhibits

Prepare legal descriptions and plats for property acquisition (Fee), Street Vacation/License Termination, Permanent Easement, Temporary Construction Easement (TCE) and Right-of-Entry (ROE) Permits.

## Task 38.5 Cost Estimate Revisions

CONSULTANT will continue to refine project Right-of-Way cost estimates as necessary to support revised Right-of-Way requirements.

### Assumptions

- One hundred (100) properties have been identified which will be included in the right-of-way data sheets for the preferred project alternative.

### Deliverables

- [Task 38.5 - Revised right-of-way cost estimate and data sheet\(s\)](#)

## Task 38.6 Rights of Entry

CONSULTANT will obtain from private landowners Rights-of-Entry (ROE) Permits or other written permission for entry onto their property for the purpose of performing geotechnical, environmental or other investigations, surveys or project requirements to be conducted on those parcels identified as necessary to achieve the goals of this project.

### Assumptions

- Contact and obtain ROE Permits/Permission up to 40 owners as required for the project.

### Deliverables

- [Task 38.6 - Right of Entry Permits/Permission to enter](#)

## Task 38.7 Appraisals for Additional Ownerships

CONSULTANT will assign real property, fixture and equipment, and goodwill appraisers and will coordinate obtaining appraisals properties or property rights to be acquired for the project.

### Assumptions

- 146 Simple appraisals, 25 moderate appraisals, 2 complex appraisals, 2 dual appraisals and eight appraisal reviews.
- Currently the only property that would require building, FF&E and goodwill appraisal support is 133 S. E Street, which is being address directly by SANBAG or others and is not included in this scope.

### **Deliverables**

- Task 38.7 - NOI to appraise letters
- Task 38.7 - Written appraisals for each property
- Task 38.7 - Appraisal review recommending just compensation

## **Task 38.8 Acquisitions/Negotiations**

Upon approval by SANBAG, a Purchase Offer package will be prepared for each landowner containing an offer letter and the accompanying regulatory statements and documents. Ideally, the acquisition agent will meet in person with the landowners and present the offer package and explain the acquisition process. The property owner will be given a detailed explanation of the interest being acquired and the proposed construction detail as it affects the property. The agent will answer questions or concerns that the owner may have. Typically, 30 to 45 days are allowed for negotiations.

Good faith negotiations will be documented (including the date, place, and names) and maintained in the parcel file throughout the acquisition process. Successful negotiations will result in the execution of a Purchase Agreement. Purchase agreements will be delivered to title and escrow subconsultants who will perform title clearance activities and follow-up.

### **Assumptions**

- 100 unique parcels, including up to 3 encroachment permits from Caltrans.

### **Deliverables**

- Task 38.8 - Purchase Agreements
- Task 38.8 - Closed Escrow Documents
- Task 38.8 - Title Insurance
- Task 38.8 - Closed Acquisition Files, including recorded deeds, temporary and permanent easements

## **Task 38.9 Encroachment Resolution**

CONSULTANT will support SANBAG in the resolution of existing encroachments in the railroad right-of-way (existing or proposed). Encroachments will be identified then described and documented as a part of Task 5.4.3 - Encroachment Surveys.

## **Task 38.10 Relocation Assistance – OPTIONAL SERVICES**

Most of the acquisitions for the Project are partial acquisitions that do not appear to substantially impact the parcel. We do not anticipate that this project will require tenant/owner/business relocation assistance. Should the need for these services arise, CONSULTANT is prepared to offer these services as described below.

CONSULTANT will provide relocation assistance for parcels with businesses or residents as follows.

### Task 38.10.1 Business Relocation

CONSULTANT will coordinate potential relocations for businesses not previously identified during the preliminary engineering phase.

### Task 38.10.2 Residential Relocation

CONSULTANT will coordinate potential relocations for residences not previously identified during the preliminary engineering phase.

#### **Deliverables**

- [Task 38.10.2 - Relocation Assistance File](#)

### Task 38.11 Utility Relocation Responsibility Coordination

This task will be performed in support of the utility relocation efforts needed for the Project. CONSULTANT will prepare and deliver Notices to Owners of utility lines which will need to be relocated or modified as part of the Project.

CONSULTANT will research and determine which party will be responsible for bearing the cost of each required utility line relocation. The results of this investigation will be included in the Project utility relocation matrix, and supporting documentation will be kept in the project files.

#### **Assumptions**

- Up to 30 utilities requiring relocation.

#### **Deliverables**

- [Task 38.11 - Notices to Owners](#)
- [Task 38.11 - Franchise, easement, license agreement or other documentation demonstrating relocation responsibility](#)

### Task 38.12 Condemnation Support

CONSULTANT will coordinate the Resolution of Necessity notice and hearing. A letter of impasse will be issued to landowner. CONSULTANT will assist assigned legal counsel with backup information for use in court filings, service, and motions. CONSULTANT will provide good faith and valuation testimony. The condemnation process for acquiring the property will run in parallel with the negotiation process.

#### **Assumptions**

- 40% of 170, or sixty eight (68) acquisitions, will require condemnation action.

#### **Deliverables**

- [Task 38.12 - Court Orders of Possession](#)

➤ Task 38.12 - Title Insurance

### Task 38.13 Right-of-Way Certification – OPTIONAL SERVICES

We do not anticipate that this project will require right of way certification services. Should the need for these services arise, CONSULTANT is prepared to offer these services as described below.

Prior to applying for certification, CONSULTANT will conduct a quality control review of the files following the Caltrans review checklist. A submittal package to the regulatory agency(ies) will include the certification forms and the necessary backup documents including:

- Deeds
- Resolutions of necessity
- Final orders of condemnation
- Access agreements
- Cooperative agreements
- Utility relocation agreements

Follow up will be conducted to facilitate certification.

#### **Deliverables**

- Task 38.13 - Right-of-way certification form and backup documents
- Task 38.13 - Certification Grant

### Task 38.14 Right-of-Way Management System

CONSULTANT proposes to utilize the CONSULTANT's project tracking system combining interactive mapping software with a database capable of generating tailored land investigation reports, acquisition/relocation status, and financial summary reports including costs-to-date, current schedule, and forecasted activities.

Based on the revised right-of-way requirements, GIS staff will modify the existing project overview map showing parcel-specific details such as land ownership, acquisition status, and other property details pulling from the project-tracking database.

#### **Deliverables**

- Task 38.14 - Additional customization of the web-based right-of-way management system and interactive map

#### **Assumptions**

- Database, GIS and workspace set-up for 170 separately defined acquisitions, monthly tracking and separate reports for: ROE, Title, Appraisal, Acquisition, Relocation, Condemnation, Financials and Schedule.

## PART VII BID SUPPORT SERVICES

### TASK 39 BID SUPPORT SERVICES

#### Task 39.1 Bid Support Services

##### Task 39.1.1 IFB Document Preparation Support

CONSULTANT will assist SANBAG with their preparation of the IFB document through providing requested project information including an updated bid item list .

##### **Deliverables**

- ▶ [Task 39.1.1 - Email responses to requests by SANBAG for information or documentation in support of the development of the IFB document.](#)

##### Task 39.1.2 Attend pre-bid meeting

CONSULTANT assumes that a half-day pre-bid meeting will be conducted on behalf of SANBAG to disseminate project specific information.

##### **Deliverables**

- Exhibits, plans, agendas and meeting minutes for use during pre-bid meeting

##### Task 39.1.3 Responses to Bidder Questions

CONSULTANT will assist SANBAG in responding to design-related questions, clarifications or approved equal requests, including questions that could not be addressed at the Pre-Bid meeting.

##### **Assumptions**

- All questions submitted by qualified bidders will initially be submitted in writing to SANBAG.
- Bid period will be 8 weeks in duration.
- CONSULTANT is not responsible for failure to respond to a written request that was not clearly labeled and/or received after the published deadline.
- Any request for an approved equal will be fully supported with technical data or other relevant information as evidence of support that the substitute meets or exceeds the current specification requirements.
- The burden of proof as to the suitability, equality and compatibility rests solely with the Bidder. CONSULTANT will provide input to SANBAG as to the suitability, equality and compatibility of the proposed equal.

### **Deliverables**

- Task 39.1.3 - Responses to design-related questions, clarifications or approved equal requests received from bidders, including questions that could not be addressed at the Pre-Bid meeting.

### **Task 39.1.4 IFB Document Addenda**

CONSULTANT will assist SANBAG in amending or revising the IFB documents by composing written addendum to the IFB package.

### **Deliverables**

- Written addenda to the IFB package

### **Task 39.1.5 Support Bid Evaluation**

CONSULTANT will assist SANBAG in reviewing bids for conformance with the project documents. CONSULTANT will present observed irregularities in the bids and assist the preparation of the bid tabulations.

### **Assumptions**

- CONSULTANT will not be responsible for evaluating whether or not a Contractor possesses the required license class at the time of award through Contract acceptance. In addition, CONSULTANT will not be responsible for ensuring that subcontractors comply with the appropriate licensing requirements as identified in the State of California Public Contract Code Section 20103.5.
- CONSULTANT will not be responsible for ensuring that each Bid is accompanied by a Bid guarantee.
- CONSULTANT will not be responsible for ensuring that the successful Bidder furnishes a Payment and Performance Bond.
- CONSULTANT will not be responsible for evaluating contractor compliance with conditions of the Davis-Bacon Act (40 U.S.C. 276a) and the Labor Code of the State of California.
- CONSULTANT will not be responsible for ensuring that Bidders list only one subcontractor for each portion of work as identified in its Bid.
- CONSULTANT will not be responsible for ensuring that the Bidder perform work equivalent to a minimum of the total amount of the work with its own forces as prescribed by SANBAG.
- CONSULTANT will not be responsible for determining contractor conformance with Title 49 CFR, Part 26, which dictates SANBAG' s project specific goal for Underutilized Disadvantaged Business Enterprise (UDBE).

### **Deliverables**

- Task 39.1.5 - Bid examination input in the form of email correspondence

- [Task 39.1.5 - Bid tabulations](#)

## **Task 39.2 Conformed Documents**

CONSULTANT will prepare conformed documents incorporating changes made to the bid documents during the bid period through issued addenda and responses to bidder questions.

### ***Deliverables***

- [Task 39.2 - Conformed documents](#)

## PART VIII DESIGN SERVICES DURING CONSTRUCTION (DSDC)

### TASK 40 DESIGN SERVICES DURING CONSTRUCTION (DSDC)

#### Task 40.1 Site Visits

CONSULTANT will visit the site to observe construction or review a field condition that may require a design change. If requested, CONSULTANT will attend a project walk through after construction of major design features.

CONSULTANT'S observation or monitoring portions of the work performed under construction contracts shall not relieve construction contractor(s) from responsibility for performing work in accordance with applicable contract documents. Consultant shall not control or have charge of, and shall not be responsible for, construction means, methods, techniques, sequences, procedures of construction, health or safety programs or precautions connected with the work and shall not manage, supervise, control or have charge of construction. CONSULTANT shall not be responsible for the acts or omissions of construction contractor(s) or other parties on the project.

#### **Assumptions**

- Assumes construction duration of 32 months.
- Assumes one senior and one junior engineer making one visit per week during construction period.
- Assumes 30 mile round trip.

#### Task 40.2 Submittal and Shop Drawing Reviews

CONSULTANT will review contractor-prepared shop drawings, product submittals and certificates of compliance and make a recommendation for action. Review action will conform to the project special provisions. The review performed by the design team will be only for general conformance with the information given in the Contract Documents and approvals or other actions suggested by CONSULTANT staff will not extend to means, methods, techniques, equipment choice and usage, sequences, schedules, or procedures of construction or to related safety precautions and programs.

Submittals reviewed by CONSULTANT and returned to the CM will be marked according to the action categories stated in the project special provisions with an inked stamp, signature of the reviewer and the date of submittal review.:

- Conforms.
- Conforms as Noted.
- Make Corrections As Noted.
- Revise and Resubmit.
- Rejected.

- Submit Specified Item.
- No action taken.

CONSULTANT will review submittals, recommend submittal action and return submittals to the CM within fifteen (15) working days. CONSULTANT will retain one (1) copy of each submittal for its records.

### **Assumptions**

- 700 submittals, 1 person for 8 hours per submittal on average.

### **Task 40.3 RFIs**

CONSULTANT will review and respond to RFI's forwarded from PMC/CM. CONSULTANT will review each RFI and provide a response to the PMC/CM within five (5) working days. If requested, CONSULTANT will use the software system provided by SANBAG to respond to RFI's electronically.

### **Assumptions**

- The level of effort and support provided will be commensurate with the available budget for this task.
- 500 RFIs, 1 person for 8 hours per RFI on average.

### **Task 40.4 Attend Construction Meetings**

CONSULTANT will participate in weekly construction coordination meetings with SANBAG/PMC and the CM Consultant in person or via teleconference. CONSULTANT will also be available to attend more focused meetings in person or via teleconference for a specific discipline as requested by SANBAG or the CM. The design team will also attend the pre- construction meeting.

CONSULTANT will visit the site to observe construction or review a field condition that may require a design change. If requested, CONSULTANT will attend a project walk through after construction of major design features.

### **Assumptions**

- CONSULTANT will have two representatives (one senior, one mid-level or junior) attend the CM lead weekly construction progress meetings for the life of the construction contracts (32 months for main construction package and a total of 12 additional months for the utilities and demolition contracts).

### **Task 40.5 Issue Design Revisions**

CONSULTANT will prepare revisions to design plans and technical specifications as directed by SANBAG/PMC or the CM. Such design revisions may be in response to action required by an RFI, an unforeseen site condition, value-engineering, etc. Design revisions will be prepared in an expeditious manner so as not to cause an abnormal delay to the Contractor's

construction sequencing and revisions will be annotated in a manner directed by the CM. Design revisions will be transmitted in PDF file format to the SANBAG/PMC and the CM.

### **Assumptions**

- The level of effort and support provided will be commensurate with the available budget for this task.

## **Task 40.6 Support Contract Change Order Negotiations**

CONSULTANT will support construction contract change order negotiations when requested.

### **Assumptions**

- Basis of fee assumes support of four (4) changes of 40 person-hours per change.

## **Task 40.7 Review Value Engineering Proposals**

### **Assumptions**

- Review of four (4) individual proposals, 40 person-hours for each proposal.

## **Task 40.8 Geotechnical Field Observations**

CONSULTANT will observe geotechnical conditions during construction to verify that site conditions are as anticipated, or to provide revised design recommendations, if required. This will include observation of the excavations for the piles and remedial removals within building and track areas.

### **Assumptions**

- The construction manager will perform daily observations of excavations and construction, including structural excavation and foundation construction.
- CONSULTANT will respond to site specific construction situations requiring designer participation.
- Assumes 20 person-days of direct field observation.

## **Task 40.9 Systems Testing Support**

### **Task 40.9.1 Railroad Communications and Signal Support**

CONSULTANT will provide field acceptance testing support of railroad communications and signal systems including the following:

- Review Contractor's communications and signals interim test, and final in-service test submittals
- Vital logic controller (VHLC) and Electrocode software development and configuration management for affected control points

- Rack test VHLC and Electrocode software with Contractor's signal engineer
- Obtain ATCS data radio license for new control points
- Coordinate dispatch system changes
- On-site technical support during cutovers

### **Task 40.9.2 Traffic Signal and Communications Support**

#### **Task 40.9.2.1 Preemption Bench Demonstration**

CONSULTANT will coordinate with each of the three agencies and set up a schedule for traffic signal preemption demonstrations. The bench demonstration will take place at the agencies traffic signal shop on the hardware and software platform specific to the agency. The demonstration will present system wiring, controllers, programming, and operations necessary for agency staff to become familiar and properly operate and maintain the system. The tests will replicate the field condition. Issues or preferences that come-up during the demonstration will be readily addressed and/or noted for further resolution.

#### **Task 40.9.2.2 Traffic Signal Preemption Acceptance Test Plan**

CONSULTANT will develop Acceptance Test Plan for the designed traffic signal program to validate the operation of the new preemption operation. The test procedures will detail the inputs, sequence, and program action. Operation will be verified through a series of checks and noted as pass or fail.

### **Task 40.9.3 Acceptance Test Plan (Network Equipment)**

The CONSULTANT shall develop Acceptance Test Plan and oversee acceptance tests for the Network Low Voltage Communications and Electronic Passenger Information Systems. The objective of the acceptance test plan is to confirm that the equipment furnished under this contract meets the requirements specified in the plans and specifications.

The CONSULTANT shall prepare a test plan which will govern the conduct of activity, oversight, direction, and methods of observing and recording the pertinent data. At least the following elements shall be included in the test plan:

- Dates, times and locations of testing
- Support and calibration tools and instrumentation to be used
- Technical publications to be referenced
- Spares and consumables to be available
- Maintenance facilities needed
- Staffing requirements to be met
- Scheduling of personal
- The format and specific data to be collected during the test period together with the method used to report the test results

- Preventive maintenance tasks to be performed during the test

The CONSULTANT shall prepare a test plan in IEEE format or an approved equivalent. It shall include, as a minimum, the following requirements:

- Objective of test
- Test environmental conditions
- Detailed description of test specimens including drawings, part numbers, inspection and test records, maintenance records, and calibration records
- Detailed procedure of test
- Test equipment to be used. Include measuring equipment and/or equipment aiding in the performance of the tests
- The level and schedule of preventive maintenance during the test
- Pass/Fail Criteria
- Retest procedure
- Test data sheet format
- Test Notification to engineer
- Test reports
- Test failure resolution

The test plan shall describe the process to be followed for the resolution of test problems, failure recurrence control, and general test conduct ground rules.

### **Deliverable**

- [Task 40.9.3 – Acceptance Test Plan \(Network Low Voltage and EPIS\)](#)

### **Task 40.9.4 Construction Engineering, Integration and Acceptance Testing Support**

Following the installation of the Network Low Voltage Communications, Electronic Passenger Information Systems, and Intertie system, CONSULTANT will provide construction engineering support to the Contractor and PMC so that field communication equipment is properly configured, tested, and integrated for a fully operational communication system between network elements and devices.

The CONSULTANT will develop an IP scheme, confirmed with SANBAG's IT department, and provide to the Contractor for implementation on devices being installed. Once the Contractor has properly installed all equipment, testing will commence and each device will be verified through settings and network communications from the Metrolink and/or Omnitrans Control Center to the corridor. The testing effort will be recorded, documented, and a report will be presented to SANBAG confirming proof of total connectivity. CONSULTANT will confirm network security requirements configuration per the PMC Security Concept of Operations.

## **Task 40.10 Punchlist Support**

CONSULTANT will participate in a job walk following Substantial Completion of construction of the Project. A construction close-out punchlist will be prepared by the Construction Management Team with support by CONSULTANT if requested.

### ***Assumptions***

- The punchlist will be prepared SANBAG’s Construction Manager.
- The job walks will be broken out into discipline or stakeholder specific meetings. CONSULTANT attendance will be determined based on the subject matter of each meeting.
- CONSULTANT will participate in up to 10 punchlist meetings with an average of no more than 4 CONSULTANT team members at each meeting.

## PART IX PROJECT CLOSEOUT

### TASK 41 AS-BUILTS AND GIS FILES

Upon completion of the project construction, CONSULTANT will provide “as-built” record drawings of the project and the geographic information systems database files.

#### Task 41.1 As-Built Drawings to SANBAG

As-built drawings for the Project will be provided to SANBAG for their records.

##### **Assumptions**

- CONSULTANT will receive substantially complete redline mark-ups from both the construction manager and the contractor to use in the development of as-builts.
- Electronic files will be provided in PDF and native formats.

##### **Deliverables**

- [Task 41.1 Final As-Built Drawings for SANBAG \(1 hard copy and 1 electronic copy\)](#)

#### Task 41.1.1 As-Built Drawings to City of San Bernardino

As-built drawings for the City-signed plan sheets will be provided to the City for their records.

##### **Assumptions**

- Only plans originally signed by the City of San Bernardino will be provided.
- The plan sheets will not be reformatted to comply with City CADD/drafting standards that may have changed since their original issuance.
- Electronic files will be provided in PDF format.

##### **Deliverables**

- [Task 41.1.1 Final As-Built Drawings for San Bernardino \(1 hard copy and 1 electronic copy\)](#)

#### Task 41.1.2 As-Built Drawings to City of Redlands

As-built drawings for the City-signed plan sheets will be provided to the City for their records.

##### **Assumptions**

- Only plans originally signed by the City of Redlands will be provided.
- The plan sheets will not be reformatted to comply with City CADD/drafting standards that may have changed since their original issuance.
- Electronic files will be provided in PDF format.

### **Deliverables**

- Task 41.1.2 Final As-Built Drawings for Redlands (1 hard copy and 1 electronic copy)

### **Task 41.1.3 As-Built Drawings to Metrolink**

Metrolink may request as-built drawings for the portions of the project which are directly related to their operations. At SANBAG's request, CONSULTANT will provide them with these relevant plans.

#### **Assumptions**

- Only plans directly related to Metrolink operations and maintenance will be provided.
- The plan sheets will not be reformatted to comply with CADD/drafting standards that may have changed since their original issuance.
- Electronic files will be provided in PDF and native formats.

### **Deliverables**

- Task 41.1.3 Final As-Built Drawings for Metrolink (1 hard copy and 1 electronic copy)

### **Task 41.2 GIS files to SANBAG**

The project GIS data (shape files, etc.) will be provided to SANBAG for their records in accordance with Task 8.

#### **Assumptions**

- Electronic files will be provided in native formats.

### **Deliverables**

- Task 41.2 GIS Files for SANBAG (electronic only)

### **Task 41.3 Track Charts (PTC)**

CONSULTANT will provide post-construction track charts, aerial maps, and corridor maps to reflect PTC infrastructure updates implemented during construction of the RPRP and as required by Metrolink.

#### **Assumptions**

- Assumes using Metrolink's Back Office.
- The track charts and aerial maps will match the current Metrolink content style, level of detail, drafting standard, etc. at the time of award and execution of this contract.

### **Deliverables**

- Task 41.3 Up to 20 Track Chart Drawings

- Task 41.3 Up to 40 Composite Maps
- Task 41.3 Updated Track and Signal Assets Spreadsheets

## **TASK 42 POST PROJECT PROPERTY TRANSFERS**

### **Task 42.1 Post-Construction Record of Survey (RS)**

Refer to Task 5.8.

### **Task 42.2 Post Project Public Right-of-way Property Transfers – NOT INCLUDED**

Not included.

#### ***Assumption***

- The final number and type of public property transfers is unknown. It is assumed that this work can be done by an on-call consultant such as the on-call railroad right-of-way manager.

## **TASK 43 PERMIT CLOSEOUT ASSISTANCE**

CONSULTANT will assist SANBAG with the closing-out or handing-off of the permits that CONSULTANT assisted with obtaining for the project. Permits requiring a long term mitigation success criteria extending more than six months after substantial completion of the construction associated with the permit are not included in this task. These permits will be closed out by SANBAG or others.

CONSULTANT will assist in developing the scope of work to hand-off permits that extend beyond six months before eligible for close-out during the six month period identified herein.

#### ***Assumptions***

- Permits included herein will be closed out within six months of substantial completion of construction work in the areas where permits were obtained. Permits with continuing monitoring or success criteria lasting greater than six months after substantial completion will be closed out by an on-call consultant to SANBAG.

## **TASK 44 OPTIONAL SERVICES**

### **Task 44.1 Reagent Chemical Corporation Industry Siding Improvements – OPTIONAL SERVICES**

During construction, SANBAG is considering employing temporary track outages (freight embargoes) to facilitate construction of the bridges, track, and grade crossings west of Tippecanoe Ave. One of the options being considered is delivering to the freight customers a 4 – 8 week (or longer) supply of inventory to allow uninterrupted bridge and track construction through the freight territory. One of the customers impacted by this outage would be Reagent

Chemical's White Flyer Clay Pigeon San Bernardino facility at MP 4.1. The following improvements may be considered in addition to the improvements shown within the railroad right-of-way.

CONSULTANT will provide a design for site improvements on the subject property to include, but not be limited to, replace entire industry spur up to R/W (track plan/profile/drainage/details), replace yard gate at R/W, replace yard track and OTM, replace/rehabilitate existing product off-loading system, replace/rehabilitate existing rail car spotting system (winch and cable), yard fencing, paving improvements, grading and drainage, and other site improvements as negotiated.

Design will also consider utility service interruptions or new utility service connections as required by the design and provisions for temporary utilities service during construction.

### **Task 44.2 7<sup>th</sup> Street Remain Open – OPTIONAL SERVICES**

CONSULTANT will design improvements to allow the 7<sup>th</sup> Street vehicular at-grade crossing to remain open. Improvements may include a reconstructed vehicular at-grade crossing with appropriate warning devices, electrical service point, and miscellaneous site improvements as required.

CONSULTANT will provide construction cost estimate for the reconstructed vehicular at-grade crossing.

CONSULTANT will provide Design Services During Construction related to the reconstruction of the 7<sup>th</sup> Street vehicular at-grade crossing.

#### **Assumptions**

- Direction to keep 7th Street open will be provided during the comment/review period of the 60% design submittal.

### **Task 44.3 9<sup>th</sup> Street Remain Open – OPTIONAL SERVICES**

CONSULTANT will design improvements to allow the 9<sup>th</sup> Street vehicular at-grade crossing to remain open. Improvements may include a reconstructed vehicular at-grade crossing with appropriate warning devices, electrical service point, and miscellaneous site improvements as required.

CONSULTANT will provide construction cost estimate for the reconstructed vehicular at-grade crossing.

CONSULTANT will provide Design Services During Construction related to the reconstruction of the 9<sup>th</sup> Street vehicular at-grade crossing.

#### **Assumptions**

- Direction to keep 9<sup>th</sup> Street open will be provided during the comment/review period of the 60% design submittal.

#### **Task 44.4 Private At-Grade Crossing, MP 7.97 Remain Open – OPTIONAL SERVICES**

CONSULTANT will provide design of a reconstructed private at-grade crossing with appropriate warning devices, electrical service point, and miscellaneous site improvements as required by installation of the reconstructed private at-grade crossing at MP 7.97.

CONSULTANT will provide construction cost estimate for the reconstructed private at-grade crossing at MP 7.97.

CONSULTANT will provide Design Services During Construction related to the reconstruction of the private vehicular at-grade crossing at MP 7.97.

##### **Assumptions**

- Direction to keep the private at-grade crossing at MP 7.97 open will be provided during the comment/review period of the 60% design submittal.

#### **Task 44.5 Other Private Property Plans (TBD in Right-of-Way Negotiations) – OPTIONAL SERVICES**

At SANBAG's direction, CONSULTANT will provide design to restore or improve private properties adjacent to the project based on the results of Right-of-Way negotiations. These improvements may include revised driveway approaches, sidewalks, retaining walls, fencing and landscaping improvements.

Example locations for these improvements include the private properties along Julia Street and Dorothy Way adjacent to the Sierra Way grade crossing, adjacent to Bridge 1.1, at D Street where a cul-de-sac is proposed, Redlands Historic Depot, between 7<sup>th</sup> and 9<sup>th</sup> Street, Redlands Foothill Growers Packing House, leaseholder apartment complex in the southwest quadrant of the University Street at-grade crossing.

#### **Task 44.6 System Branded Canopy Design – OPTIONAL SERVICES**

CONSULTANT will develop up to three alternative canopy designs beyond the original three developed during the preliminary engineering phase and that incorporate visual and/or thematic elements of the system branding when that branding has been approved. The three alternatives will be presented as conceptual sketches/low resolution colored renderings including details as necessary to convey the concept to staff and to the Branding Consultant.

Upon selection by others, CONSULTANT will replace the “standard canopy design” elements in the station design submittal packages incorporating necessary design details, foundation design and other elements required for construction.

##### **Assumptions:**

- Service Branded Canopy design changes shall be implemented between the 60% and 90% progress submittals and in sufficient time to be able to fully integrate changes to the 90% progress submittal.

## **Task 44.7 Low Flows for Contractor in SAR – OPTIONAL SERVICES**

Based on our experience, we anticipate that the Contractor may request frequent return interval storm flow rates for the Santa Ana River to help them evaluate their means and methods for construction in the river bottom. Due to the limited hydrology available for the SAR, Consultant will extrapolate and/or estimate flow rates below the 25-year storm and from available data and provide the rates to SANBAG. The level of effort is based on developing three (3) storm return intervals using the return intervals requested by the Contractor. Consultant will not model proposed temporary conditions associated with the Contractor's means and methods.

## *Minute Action*

AGENDA ITEM: 8

**Date:** *September 10, 2015*

**Subject:**

Award Contract 15-1001301 for Public Outreach and Branding Services for the Redlands Passenger Rail Project

**Recommendation:**

That the Committee recommend the Board, acting in its capacity as the San Bernardino County Transportation Authority, approve Contract No. 15-1001301 with Thomas Communications Group for a four year term with one one-year option in an amount not-to-exceed \$500,000 for the Public Outreach and Branding Services for the Redlands Passenger Rail Project.

**Background:**

On June 3, 2015, the San Bernardino Associated Governments (SANBAG) Board of Directors authorized the advertisement of Request for Proposals (RFP) 15-1001301 for Public Outreach and Service Branding for the Redlands Passenger Rail Project. The scope of work for the RFP as described in Exhibit A of the Contract includes providing community briefings, grassroots canvassing, project impact mitigation, safety awareness campaigns, service branding, and general project and service awareness.

RFP 15-1001301 was released on June 10, 2015 and posted on SANBAG's website. The RFP was sent electronically to approximately ninety-five (95) consultants registered on Planet Bids. The solicitation was issued in accordance with current SANBAG policies and procedures for procurement of professional services.

A pre-proposal meeting was held on June 24, 2015 and was attended by SANBAG staff and thirteen (13) other attendees representing nine (9) consulting firms. Addendum No. 1 was issued on June 25, 2015 which posted the pre-proposal meeting sign-in sheet and questions and answers discussed at the pre-proposal meeting. Addendum No. 2 was issued on July 2, 2015 which posted all RFP questions received prior to the questions deadline and their respective answers.

Seven (7) proposals were received by the date and time specified in the RFP. A responsiveness review was conducted by the Procurement Analyst and found all seven (7) proposals to be responsive.

An Evaluation Committee consisting of three SANBAG representatives and one Riverside County Transportation Commission representative evaluated the proposals based on the following criteria and weight:

- Qualifications of the Firm (20%)
- Proposed Staffing and Project Organization (20%)
- Technical Approach/Work Plan (40%)
- Cost (20%)

*Entity: CTA*

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The weight of each of these criteria was identified in the RFP. The RFP identified that overall scoring would weigh an interview as 60% and the technical proposal as 40%, for a maximum possible score of 100%. On August 4, 2015, the Evaluation Committee members met and discussed each proposal according to the evaluation criteria, including the proposals' strengths and weaknesses. The firms were ranked in order of technical merit and a short-list was developed. The firms short-listed and invited to interviews were Thomas Communications Group, Arellano and Associates, and Simon Wong Engineering.

On August 19, 2015, the Evaluation Committee served as the interview panel for the short-listed firms. Representatives from the Cities of San Bernardino and Redlands, as well as a SANBAG Public Affairs staff member, observed the interviews as non-scoring participants to the process. Following the interviews, the Evaluation Committee ranked Thomas Communications Group as the highest ranked firm due to their demonstrated skills and strategy in the areas of outreach to underserved communities, detailed branding approach, innovative use of communication tools in both digital and direct public engagement, and an in-depth understanding of public safety awareness programs.

Staff recommends award of Contract No. 15-1001301 to Thomas Communications Group in an amount not-to-exceed \$500,000 over a four-year term, to be funded with Measure I Metrolink/Passenger Rail Program funds.

***Financial Impact:***

This item is consistent with the SANBAG Fiscal Year 2015/2016 Budget.

***Reviewed By:***

This item is not scheduled for review by any other policy committee or technical advisory committee. SANBAG General Counsel and Procurement Manager have reviewed this item and the draft contract.

***Responsible Staff:***

Tim Watkins, Chief of Legislative and Public Affairs

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Approved  
Commuter Rail & Transit Committee  
Date: September 10, 2015

Witnessed By:

**Contract Summary Sheet**

**General Contract Information**

Contract No: 15-1001301 Amendment No.: \_\_\_\_\_ Vendor No.: 03167  
 Vendor/Customer Name: Thomas Communication Group Sole Source?  Yes  No  
 Description: Public Outreach and Branding for Redlands Passenger Rail Project  
 Start Date: 10/07/2015 Expiration Date: 10/31/2019 Revised Expiration Date: \_\_\_\_\_  
 Has Contract Term Been Amended?  No  Yes - Please Explain \_\_\_\_\_  
 List Any Related Contracts Nos.: \_\_\_\_\_

Dollar Amount			
Original Contract	\$ 500,000.00	Original Contingency	\$ -
Revised Contract (Inclusive of Prior Amendments)	\$ -	Revised Contingency (Inclusive of Prior Amendments)	\$ -
Current Amendment	\$ -	Contingency Amendment	\$ -
<b>TOTAL CONTRACT VALUE</b>	<b>\$ 500,000.00</b>	<b>TOTAL CONTINGENCY VALUE</b>	<b>\$ -</b>
		<b>TOTAL DOLLAR AUTHORITY (Contract Value and Contingency)</b>	<b>\$ 500,000.00</b>

**Contract Authorization**

Executive Director Date: \_\_\_\_\_  
 Executive Director Action: \_\_\_\_\_  
 Board of Directors Date: 10/07/2015  
 Board of Directors Action: Approve contract 15-1001301 with Thomas Communication Group

**Contract Management: Payable/Miscellaneous**

Invoice Warning: 20% Renewals: \_\_\_\_\_ Type:  Capital  PAA  Other  
 Retention: \_\_\_\_\_ % Maximum Retention: \$ \_\_\_\_\_  
 Services:  Construction  Intrgrnt/MOU/COOP  A & E Services  Other Professional Services  
 Disadvantaged Business Enterprise (DBE) Goal \_\_\_\_\_ %

**Contract Management: Receivable**

E-76 and/or CTC Date \_\_\_\_\_ (Attach Copy)  Program Supplement No.: \_\_\_\_\_  
 Finance Letter  Reversion Date: \_\_\_\_\_  EA No.: \_\_\_\_\_

**All of the above MUST be submitted to FINANCE including originals, amendments and miscellaneous transaction changes**

**Additional Information**

Project Manager: \_\_\_\_\_

Attachment: RPRP CSS - 15-1001301 [Revision 1] (2212 : Public Outreach & Branding Services RPRP)

**EXHIBIT A – “SCOPE OF WORK”**

## 1.0 SCOPE

The scope of services to be provided under this contract includes the necessary tasks and activities that are required to provide a comprehensive public outreach effort during the Final Design, Construction, start-up and testing, and initial revenue service of the Redlands Passenger Rail Project (RPRP). Services will also include the branding effort in preparation for revenue service.

CONSULTANT shall coordinate with project stakeholders, who include: the Cities along the RPRP corridor, SANBAG, Esri, the University of Redlands and other consultants under contract to SANBAG supporting the RPRP. Additionally, CONSULTANT shall coordinate with any freight rail providers or shippers as necessary.

Some of the listed tasks have been initiated under an earlier public outreach contract, and the CONSULTANT shall work to transition and continue these tasks in a seamless manner.

## 2.0 BACKGROUND INFORMATION

San Bernardino Associated Governments, acting as the San Bernardino County Transportation Authority (SANBAG) are entering into the two significant stages of project delivery for the Redlands Passenger Rail Project. Community involvement is paramount in the ongoing delivery of this project to provide education about the project and ultimate service, understanding of the activities associated with construction, awareness of safety both during and after construction, and establishing a brand for the new commuting option.

The outreach actions should be accomplished through the use of conventional techniques, including public briefings, town hall meetings, educational forums, workshops, and mailers and flier distribution. This outreach should be augmented by a robust social media/electronic technology element which, at its center, will highlight a Web page that includes a variety of digital engagement elements.

### 2.1 Project Information

The RPRP encompasses an approximately nine-mile corridor extending east from the City of San Bernardino to the City of Redlands within the southwestern corner of County of San Bernardino, California. The Project extends along an existing railroad right-of-way owned by SANBAG and commonly referred to as the Redlands Corridor. The Project proposes the operation of passenger rail service between E Street in the City of San Bernardino and the University of Redlands, in the City of Redlands. Passenger rail service would be facilitated via five station stops. Four new station stops would be constructed in conjunction with the Project. These include the possibility of one station located at Tippecanoe Avenue or Waterman Avenue within the City of San Bernardino and New York Street, Orange Street, and University Street within the City of Redlands. The fifth station would be constructed at E Street and is associated with a different project—the Downtown San Bernardino Passenger Rail Project. A separate project is under consideration at California Street. SANBAG also proposes the replacement of the existing railroad tracks and ties, reconstruction or rehabilitation of existing bridge structures, construction of a new train layover

facility, and auxiliary improvements such as at-grade roadway crossings and safety improvements, new parking facilities, and improvements to pedestrian access.

## 2.2 Need for Outreach

While commuter rail (Metrolink) is not new to San Bernardino County, the addition of this system creates new considerations for the communities that it will travel through. During development of the environmental document, small groups within the cities of San Bernardino and Redlands showed some resistance to the consideration of the new service. Outreach will be a critical part of the transition and necessary to gain consensus, to educate the communities of the changes, to provide safety awareness during construction and service, and to enhance system success.

## 3.0 TASKS

CONSULTANT shall work closely with SANBAG staff and the Redlands Passenger Rail Project consultant teams to facilitate community engagement throughout the remaining project delivery process. The public outreach program shall contain the key elements outlined below.

### 3.1 Public Outreach Plan

CONSULTANT shall submit Public Outreach Plan, which create an identity for the project and describes the CONSULTANT's approach to the tasks and activities that will be performed during the performance of the WORK.

The Public Outreach Plan should identify the key members of the public outreach team, with an organization chart, and an anticipated schedule for the performance of tasks listed herein. The Public Outreach Plan should also include CONSULTANT's internal Quality Control review process, which should include how deliverables will be delivered and reviewed by members of the CONSULTANT team, as well as a detailed understanding of public engagement rules and regulations as it applies to the various engagement opportunities involving a public entity or agent thereof.

CONSULTANT responsibilities shall include:

- Submit Public Outreach Plan for SANBAG review and approval within 45 days of award of contract, and review and update plan annually or as required by significant projects changes or changes in public outreach approach.

### 3.2 Briefings

Briefings are an opportunity-based approach to grassroots outreach with target stakeholder groups. The objective of the briefings is to foster awareness of the projects and encourage the stakeholder groups to distribute project information and future public involvement opportunities to their constituencies. Briefing opportunities with key stakeholders will be coordinated with local governments (including elected officials and City staff, such as City Managers), boards, committees, community-based groups, and other entities. These briefings will allow SANBAG an opportunity to educate organized stakeholder groups on the Redlands

Passenger Rail Project. The briefings will be scheduled to inform and provide status updates on the projects to interested stakeholder groups. Consultant shall expect to arrange and prepare for at least 20 briefings per year.

SANBAG will participate and present at briefings, and will review and approve briefing materials. CONSULTANT responsibilities shall include:

- Arrange and coordinate the execution of briefings
- Coordinate the preparation of collateral materials/informational packets with SANBAG staff
- Prepare and facilitate all logistics for the briefings, in coordination with SANBAG
  - Identify briefing opportunities
  - Coordinate scheduling of briefings and other related logistics
  - Meeting format such as formal presentations, open house, other
  - Speakers/presenters
  - Content of presentation material

### 3.3 Grassroots Canvassing

CONSULTANT shall lead a Grassroots Canvassing effort to reach members in the communities that may not otherwise be reached via conventional and electronic outreach methods. The objective of the canvassing efforts is to distribute general project information and collect additional stakeholder data that would otherwise not be available. Each community located along the Redlands Passenger Rail Project shall be canvassed by physically visiting the major centers within the respective communities. Grassroots Canvassing shall be targeted prior to key project milestones and decision points. All information that is collected through the canvassing exercise will be documented in the existing stakeholder database and will be used to generate a digital map with the exact locations that the team has visited.

CONSULTANT responsibilities shall include:

- Investigate key destination points and community centers located throughout the subject project corridors
- Coordinate and prepare flyers, project business cards, and other collateral materials
- Conduct canvassing activities for each community
- Document all of the information collected throughout the corridor
- Develop canvassing map with markers for each site canvassed

### 3.4 Project Hotline

Establish a Redlands Passenger Rail Project Helpline which allows stakeholders to listen to a brief status update on the project and record a voicemail with their questions and/or comments. This toll-free number will be featured in most collateral materials and will be posted on all electronic communication (i.e., Website, social media, E-blast messages). The helpline number is offered in English and Spanish, which are the two most common languages in the project area.

To keep the helpline active and updated, CONSULTANT shall perform the following tasks:

- Regularly update outgoing bilingual (English/Spanish) messages
- Provide basic study information and allow callers to leave a voice message
- Monitor telephone messages left on the telephone helpline on a daily basis
- Maintain a call log, update the stakeholder database, and respond to helpline inquiries within one business day
- Send documented comments to SANBAG for review and response
- Ensure that all comments have received responses from SANBAG
- Notify project management of key issues

### 3.5 Media Relations

Media relations tasks are intended to maximize positive coverage in the mass media without utilizing direct advertising. These efforts should focus on identifying opportunities for media coverage on positive developments throughout the delivery of the Redlands Passenger Rail Project. The anticipated media relations tasks include public service announcements (PSAs), opinion editorials (op-eds), as well as mailings and paid advertising of activities and status of the project.

As part of these efforts, CONSULTANT shall prepare a media package that can be made readily accessible to media outlets. The media package may include fact sheets, project information, and overview of the project delivery process, and public involvement opportunities. All information generated for these efforts will be incorporated into the project web page, newsletter, and other forms of electronic communication. Media opportunities will be coordinated through SANBAG's Public Affairs Office.

CONSULTANT shall perform the following tasks:

- Develop PSAs/ press releases and media advisories
- Develop initial media package
- Update media package as required
- Provide mailings and paid advertising as required to support the project's delivery process
- All media relations deliverables shall be approved by SANBAG's Public Affairs Office prior to release

### 3.6 Newsletters

CONSULTANT shall prepare an electronic newsletter, which shall be disseminated to the Project stakeholders monthly during construction via email and other forms of electronic communication, including the Project website and project-specific social media channels. The newsletters are intended to provide general Project status updates and an overview of past and upcoming public involvement opportunities.

These newsletters may also feature pertinent op-ed articles that were prepared for the Redlands Passenger Rail Project media package.

CONSULTANT shall perform the following tasks:

- Develop newsletters
- Disseminate newsletters electronically
- SANBAG shall assist with the development of contents for the newsletter, and shall review and approve content.

### 3.7 Electronic Communication

Email communication, or e-blasts, shall be utilized to quickly distribute electronic information to a large number of target stakeholders. This effective, low-cost option allows the immediate dissemination of general project updates as well as information on upcoming public involvement opportunities. E-blasts will also be utilized for the distribution of newsletters, project materials and other general Project announcements.

CONSULTANT shall perform the following tasks:

- Identify contents that must be distributed electronically
- Develop e-blast messages
- Disseminate e-blast messages to stakeholder database
- Document e-blast messages and share replies with SANBAG staff

### 3.8 Social Media

CONSULTANT shall coordinate with existing SANBAG social media accounts, as appropriate, to enhance the distribution of information to project stakeholders and to offer an additional platform for two-way communication with project stakeholders. CONSULTANT shall create additional social media accounts as appropriate to maintain communication with the public. CONSULTANT shall assist with the monitoring of comments on project-specific social media sites for the Redlands Passenger Rail Project. CONSULTANT shall monitor other social media environments for mentions of the Redlands Passenger Rail Project.

CONSULTANT shall perform the following tasks:

- Develop contents for posting on social media accounts
- Coordinate with SANBAG Public Affairs for posting to social media accounts
- Coordinate all social media activities with SANBAG Public Affairs
- Develop project-specific digital engagement tools as necessary
- Provide regular analytical measurements during key project events

### 3.9 Project Website

Develop an official Redlands Passenger Rail Project website to provide a dynamic platform to share the latest project information and encourage two-way communication with project stakeholders. CONSULTANT shall maintain, update and expand the Redlands Passenger Rail Project website as necessary. The websites should include but are not limited to: general project information, project newsletters

and videos, community updates, events calendar, online surveys, links to project cities and stakeholder groups, and contact information.

CONSULTANT shall perform the following tasks:

- Establish and maintain and update Redlands Passenger Rail Project website contents for the duration of the Project

### 3.10 Stakeholder Database

CONSULTANT shall ensure that all communication with stakeholders is organized and easily accessible. CONSULTANT shall maintain a comprehensive stakeholder database. SANBAG has established an initial stakeholder database during the development of the initial public outreach process. CONSULTANT shall review, update, and maintain the database as additional stakeholders are identified throughout the extent of the Redlands Passenger Rail Project.

CONSULTANT shall perform the following tasks:

- Maintain and update Redlands Passenger Rail Project stakeholder database

### 3.11 Safety Education

CONSULTANT shall coordinate Operation Lifesaver education programs within various communities along the new alignment to help neighbors of the new system understand risks with rail operations. Construction related safety programs shall also be included in this program. In addition, rider education on system use and system safety will also be required during the final year of construction leading up to and during initial revenue service.

CONSULTANT shall perform the following tasks:

- Coordination of the Operation Lifesaver educational workshops
- Development of support material for construction and operational safety
- Coordination of the rider training
- Development of collateral material for rider training

### 3.12 Service Branding

CONSULTANT shall execute a brand development exercise to establish and develop the brand for the ultimate service the Redlands Passenger Rail Project. This exercise should consider in depth analysis of the region, perception of service, intermodal connectivity, agency integration, and potential for growth. Appropriate research, positioning, definition, and artwork should play a significant role in this development. BRAND should include a logo, tag line, messaging, theme, and launch strategy.

CONSULTANT shall perform the following tasks:

- Conduct internal/external focus groups
- Develop associated artwork, tag line, and messaging
- Develop a style guide for logo/branding usage
- Develop/implement launch strategy

## *Minute Action*

AGENDA ITEM: 9

**Date:** September 10, 2015

**Subject:**

Fiscal Year 2015/2016 Operator Allocations and Budget Amendments

**Recommendation:**

That the Commuter Rail and Transit Committee recommend the Board, acting as the San Bernardino County Transportation Commission:

A. Allocate an additional \$14,285 of State Transit Assistance Funds to Morongo Basin Transit Authority and \$500,000 of State Transit Assistance Funds to Victor Valley Transit Authority.

B. Approve a budget amendment to SANBAG 2015/2016 budget to increase Task No. 0310 Transit Operating with Measure I 1990-2010 Elderly and Handicapped Transit funds from the following subareas:

- i. Victor Valley - \$307,802.29
- ii. North Desert - \$89,172.30
- iii. Colorado River - \$9,387
- iv. Morongo Basin - \$90
- v. Mountains - \$27,335.55

**Background:**

Staff is requesting an additional allocation of \$14,285 of State Transit Assistance Funds to Morongo Basin Transit Authority (MBTA). During this fiscal year (FY) MBTA will be updating their Short Range Transit Plan (SRTP) and this funding will assist in covering the cost of the consultant needed to complete this project. MBTA requested this funding prior to the July SANBAG Board approval for the operators allocation; however, this amount did not get included during that allocation approval. Table 1 shows the minor change to the funding allocation.

**Table 1 – Revised Allocation to the MBTA**

<b>Fund Source</b>	<b>Original Allocation</b>	<b>Supplemental Allocation</b>	<b>Revised Allocation</b>
Local Transportation Fund	\$3,326,390		\$3,326,390
State Transit Assistance - Op	\$20,715		\$20,715
State Transit Assistance - Pop	\$191,181	\$14,285	\$205,466
LCTOP - Op	\$5,352		\$5,352
Prop 1B Security	\$4,888		\$4,888
Measure I SD	\$108,690		\$108,690
FTA Section 5311	\$302,531		\$302,531
CMAQ	\$672,785		\$672,785
<b>Total Allocation</b>	<b>\$399,357</b>	<b>\$14,285</b>	<b>\$413,642</b>

Entity: CTC

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Staff is also requesting an additional allocation of \$500,000 of State Transit Assistance Funds to Victor Valley Transit Authority (VVTA). Beginning in July 1, 2015 the City of Barstow Transit merged to become a part of VVTA. However, during FY2014/2015 VVTA began providing transit service on behalf of the City prior to the actual merger. It was at that time, VVTA staff did a needs assessment and it was determined that Barstow was in need of a maintenance and operation facility. The contractor had been doing maintenance in spaces it should not have and additionally this will help VVTA limit the amount of deadhead time as well as limit the need to send vehicles outside to be serviced. Table 2 shows the change to the funding allocation.

**Table 2 – Revised Allocation to the VVTA**

<b>Fund Source</b>	<b>Original Allocation</b>	<b>Supplemental Allocation</b>	<b>Revised Allocation</b>
Local Transportation Fund	\$17,100,788		\$17,100,788
State Transit Assistance - Op	\$115,796		\$115,796
State Transit Assistance - Pop	\$724,961	\$500,000	\$1,224,961
LCTOP - Op	\$29,912		\$29,912
PTMISEA	\$1,529,000		\$1,529,000
Prop 1B Security	\$18,692		\$18,692
Measure I SD	\$1,217,202		\$1,217,202
Measure I - PDTMS	\$127,523		\$127,523
FTA Section 5307	\$3,500,245		\$3,500,245
FTA Section 5339	\$367,411		\$367,411
FTA Section 5311	\$235,099		\$235,099
CMAQ	\$86,067		\$86,067
<b>Total Allocation</b>	<b>\$25,052,696</b>	<b>\$500,000</b>	<b>\$25,552,696</b>

Additionally, SANBAG provides financial estimates to the transit operators annually. Typically, the actuals are identified during the fiscal year and any differences are revised and reflected in the following fiscal year for the operators to use. However, staff recently realized that this reconciliation with actuals did not occur with the balance of Measure I 1990-2010 Elderly and Handicapped Transit funds. The available balances were included in the Fiscal Year 2015/2016 Operator Allocations, but that occurred after submittal of the budget. Staff is requesting a budget amendment to increase Task No. 0310 by \$433,787.14 for the following transit operators as outlined in Table 3 to be consistent with the Operator Allocations.

**Table 3 – Measure I 1990-2010 Elderly & Handicapped Transit Fund Balances**

<b>Measure I E &amp; H Subarea</b>	<b>Balance</b>
City of Needles – Colorado River	\$9,387.00
MARTA – Mountains	\$27,335.55
MBTA – Morongo Basin	\$90.00
VVTA – North Desert	\$89,172.30
VVTA – Victor Valley	\$307,802.29
<b>Total Amendment</b>	<b>\$433,787.14</b>

**Financial Impact:**

Commuter Rail & Transit Committee Agenda Item  
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This item is not consistent with the Fiscal Year 2015/2016 adopted budget. A Budget amendment has been requested in Recommendation B.

***Reviewed By:***

This item is not scheduled for review by any other policy committee or technical advisory committee.

***Responsible Staff:***

Nancy Strickert, Management Analyst III

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Approved  
Commuter Rail & Transit Committee  
Date: September 10, 2015

Witnessed By:

## *Minute Action*

AGENDA ITEM: 10

**Date:** *September 10, 2015*

**Subject:**

Fiscal Year 2015/2016 Low Carbon Transit Operations Program - Population Share

**Recommendation:**

That the Commuter Rail and Transit Committee recommend the Board, acting in its capacity as the San Bernardino County Transportation Commission:

A. Approve a Low Carbon Transit Operations Program – Population Share Apportionment for Fiscal Year 2015/2016 of \$2.7 million be apportioned to the Valley and the Mountain/Desert Areas based on the 2015 California Department of Finance Population Data as follows:

- i. Valley Fiscal Year 2015/2016 Apportionment: \$1,961,550
- ii. Mountain/Desert Fiscal Year 2015/2016 Apportionment: \$738,450

B. Allocate \$2.7 million of Low Carbon Transit Operations Program – Population Share funding to the following projects:

- i. Transit Marketing and Fare Subsidies for Mountain/Desert Transit Operators - \$642,667
- ii. Victor Valley Transit Authority Bus Stop and Transfer Center Enhancements and Improvements - \$282,148
- iii. Omnitrans Route 290 Pilot Program Expansion - \$440,000
- iv. Omnitrans Freeway Express Pilot Program serving Yucaipa, Redlands, Hospitality Lane and San Bernardino Transit Center - \$300,000
- v. Ontario Airport Shuttle Service Pilot Program - \$1,035,185

C. Adopt Resolution No. 16-004 Authorization for the Execution of the Certifications and Assurances for the Low Carbon Transit Operations Program.

**Background:**

The Low Carbon Transit Operations Program (LCTOP), established by the California Legislature in 2014 by Senate Bill 862, is one of several programs that are part of the Transit, Affordable Housing, and Sustainable Communities Program. The LCTOP was created to provide transit operating and capital assistance to eligible project sponsors in an effort to reduce greenhouse gas emissions and improve mobility, with a priority on serving disadvantaged communities. This program is funded by auction proceeds from the California Air Resources Board (CARB) Cap-and-Trade Program where proceeds are deposited into the Greenhouse Gas Reduction Fund (GGRF). Although the California State Controller's Office has not released the final apportionment amounts as of the preparation of this agenda item, the LCTOP is estimated to receive \$2.7 million this fiscal year and 5 percent of the annual proceeds deposited in the GGRF will be continuously appropriated annually in future years.

*Entity: CTC*

## Commuter Rail &amp; Transit Committee Agenda Item

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Eligible projects funded by the LCTOP include new or expanded bus or rail services, expanded intermodal transit facilities, and may include equipment acquisition, fueling, maintenance and other costs to operate those services or facilities, with each project required to reduce greenhouse gas emissions. For agencies whose service area includes a Disadvantaged Community (DAC), at least 50 percent of the total moneys received shall be expended on projects that will benefit the DAC.

As with State Transit Assistance (STA) Funds, LCTOP funding is allocated pursuant to California Public Utilities Code (CPUC) Sections 99313 and 99314. A County Transportation Commission (CTC), such as SANBAG, that is eligible to receive STA funds per CPUC Section 99313 is eligible to receive LCTOP funds by formula based on the ratio of the population of the area under the CTC's jurisdiction to the total population of the state. A transit operator that is eligible to receive STA funds per CPUC Section 99314 is eligible to receive LCTOP funds by formula based on the ratio of the revenue of the transit operator's jurisdiction to the total revenue of all operators in the state. The transit operators receiving LCTOP funds per CPUC Section 99314 work directly with Caltrans to receive their LCTOP funds. In San Bernardino County that includes Morongo Basin Transit Authority (MBTA), Mountain Area Regional Transit Authority (MARTA), Victor Valley Transit Authority (VVTA), Omnitrans, and Southern California Regional Rail Authority (SCRRA).

The State Controller's Office is expected to prepare a list of eligible project sponsors and the formulaic share of funds each is to receive for Fiscal Year 2015/2016 in accordance with CPUC Sections 99313 and 99314 by September 1, 2015. Based on initial estimates, SANBAG is expecting to be allocated \$2.7 million under CPUC Section 99313.

As is done for STA funds SANBAG receives per CPUC Section 99313 and in accordance with LCTOP allocation principles adopted by the SANBAG Board in July 2015, staff is recommending that LCTOP funds received under the population formula be further apportioned to the Valley and Mountain/Desert based on population as shown in Table 1.

Fiscal Year 2015/2016 LCTOP Funds Per CPUC Section 99313			Formula Share <sup>1</sup>		
Apportionment Area	Population <sup>2</sup>	Percentage	Fiscal Year 2015/2016 Apportionment	Fiscal Year 2014/2015 Allocation Adjustment	Fiscal Year 2015/2016 Available For Allocation
Valley	1,528,823	72.65%	\$1,961,550	\$(186,365)	\$1,775,185
Mountain/Desert	575,468	27.35%	\$738,450	\$186,365	\$924,815
Total	2,104,291	100.00%	\$2,700,000		\$2,700,000

<sup>1</sup>Formula Share amount determined by the State Controller's Office.

<sup>2</sup>Population Source: California Department of Finance January 2015.

Because the Valley was allocated in excess of its apportionment in Fiscal Year 2014/2015, the Mountain/Desert Transit Operators have a carry-over apportionment of \$186,365. For this reason, a total of \$924,815 will be allocated to the Mountain/Desert Area and a total of \$1,775,185 will be allocated to the Valley Area.

SANBAG staff requested that the Transit Operators develop and submit to SANBAG a list of potential projects for the LCTOP 2015/2016 grant cycle. SANBAG received nominations from VVTA and Omnitrans as described below. Other operators expect to have projects eligible for LCTOP in the future but are not ready to submit project applications at this time. In accordance with the LCTOP allocation principles approved by the SANBAG Board in July 2015, staff is recommending \$2,700,000 be allocated to the following projects:

Transit Marketing and Fare Subsidies for Mountain/Desert Transit Operators - \$642,667

This project entails the development of a “tool kit” that provides a menu of marketing strategies (template campaigns, social media, slogans, flyers, materials) to be customized to each transit agency. This “tool kit” would be beneficial to the smaller agencies, providing guidance in tailoring strategies to their communities and consistent, countywide, public communications would assist in reaching multi-transit jurisdiction commuters. Additionally, the SANBAG County-wide Transit Efficiency Study identified this project as offering potential to improve transit services and operations.

VVTA Bus Stop and Transfer Center Enhancements and Improvements - \$282,148

VVTA will utilize the LCTOP funds to enhance transfer centers and bus stops in the VVTA service area. It is anticipated that enhancing bus stops and transfer centers will increase ridership and promote mode share. VVTA’s next Comprehensive Operations Analysis will include an analysis of transfer centers and bus stops in order to determine which locations are most in need of improvement.

Omnitrans Route 290 Pilot Program Expansion – \$440,000

This program is currently funded with Local Transportation Funds and Omnitrans’ Fiscal Year 2014/2015 LCTOP funds. This is a pilot program, implemented in September 2015. With additional LCTOP funding, Omnitrans will be able to increase the number of weekday trips on Route 290, adding a total of eight trips earlier and later in the day.

Omnitrans Freeway Express Pilot Program serving Yucaipa, Redlands, Hospitality Lane and San Bernardino Transit Center – \$300,000

Following an analysis conducted by Omnitrans staff, the Yucaipa, Redlands, Hospitality Lane and San Bernardino Transit Center Freeway Express Route was ranked the next highest priority freeway express project. The analysis was based on ridership potential, service duplication, and fit of the route into the overall network. With an allocation of LCTOP funding, Omnitrans will implement this route as a pilot program.

Ontario Airport Shuttle Service Pilot Program - \$1,035,185

The Ontario Airport Shuttle Service involves partnership with Ontario area hotels and may serve both Haven Avenue and Milliken Avenue with high-quality and high-frequency transit. The shuttle service will be developed to meet the needs of Metrolink, the Ontario Airport, and area hotels, and is expected to run with a 20 – 30 minute frequency between the hours of 5:00am and 11:00pm. The service may be utilized by tourists, travelers, local residents, and employees. Omnitrans will utilize LCTOP funds to procure four vehicles initially needed for this service and to begin operation of the service following local control of the Ontario Airport. The annual operating cost of the shuttle service is estimated at \$1.5 million and will be eligible for future LCTOP allocations.

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The following projects were submitted to SANBAG but are not recommended for funding:

Omnitrans Mobile Phone Ticketing (Seek Partnerships with VVTA, MARTA and Omnitrans on hardware and software to accept Mobile Phone based Payment) – This project is currently not funded and partnerships have not yet been initiated with VVTA or MARTA. This was identified as a lower priority for Omnitrans. SANBAG staff recommends this be delayed until coordination can also occur with Metrolink.

Omnitrans Employer Pass/Corporate Pass Pilot Program – This program is not recommended for funding due to the fact that SANBAG, as a sub-recipient of the Southern California Association of Governments, received a Federal Transit Administration (FTA) Section 5304 grant award in April 2015 to fund a Customer-based Ridesharing and Transit Interconnectivity Study. The objectives of the study include identifying employers and activity centers that may benefit from improved interconnectivity; documenting service gaps and inefficiencies; and identifying costs, funding opportunities, and a funding strategy for improving services to employers and activity centers. SANBAG staff recommends waiting to fund an Employer Pass or Corporate Pass Pilot Program until the conclusion of the study is available for review. It is anticipated that the Request for Proposals to conduct the study will be released in September 2015.

Omnitrans Conversion of Access Vehicles to CNG – This project is currently funded with FTA Section 5307, 5339, and Congestion Mitigation and Air Quality Improvement (CMAQ) Program funds. This was identified as a lower priority for Omnitrans, and due to the availability of multiple funding sources for this project, SANBAG staff recommends funding projects with greater needs for funding.

VVTA Service Expansion – SANBAG staff does not recommend this project for funding at this time. VVTA currently returns surplus Local Transportation Funds to the cities for local streets and roads purposes. Before using LCTOP for service expansion, SANBAG staff recommends VVTA analyze the impact sustaining the services will have on their use of Local Transportation Funds should LCTOP funds not be available for allocation in the future.

Caltrans requires an executed “Certifications and Assurances” with project applications, which outlines special requirements with which grantees must comply in order to receive the LCTOP funds. A sample is included as Attachment 1. Additionally, Caltrans requires that SANBAG submit an authorizing resolution from its governing board that approves the submission of the Certifications and Assurances, authorizes SANBAG to accept the LCTOP funds and authorizes SANBAG’s Executive Director to execute the Certifications and Assurances, future funding agreement(s) and other relevant documents necessary for funding and completing the LCTOP-funded projects. Caltrans has not yet made the LCTOP resolution template available for Fiscal Year 2015/2016; Resolution 16-004 that is presented to the Board for adoption may have to be revised after approval by the Commuter Rail and Transit Committee in order to remain consistent with the resolution template required by Caltrans.

Project applications for Fiscal Year 2015/2016 LCTOP funding are due to Caltrans on November 1, 2015. Any change in the final apportionment amount will be reflected in the Board agenda item.

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***Financial Impact:***

This item is consistent with the adopted SANBAG Fiscal Year 2015/2016 Budget.

***Reviewed By:***

This item is not scheduled for review by any other policy committee or technical advisory committee. SANBAG General Counsel has reviewed this item.

***Responsible Staff:***

Vanessa Jezik, Transportation Programming Analyst

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Approved  
Commuter Rail & Transit Committee  
Date: September 10, 2015

Witnessed By:

## Low Carbon Transit Operations Program (LCTOP)

### Certifications and Assurances

**Project Sponsor:** \_\_\_\_\_  
**Agency Name:** \_\_\_\_\_

**Effective Date of this Document:** \_\_\_\_\_

The California Department of Transportation (Department) has adopted the following certifications and assurances for the Low Carbon Transit Operations Program. As a condition of the receipt of LCTOP funds, project sponsors (both Project Lead and Contributing Sponsors) must comply with these terms and conditions.

#### A. General

- (1) The project sponsor agrees to abide by the current LCTOP Guidelines and applicable legal requirements.
- (2) The project sponsor must submit to the Department a signed Authorized Agent form designating the representative who can submit documents on behalf of the project sponsor and a copy of the board resolution appointing the Authorized Agent.

#### B. Project Administration

- (1) The project lead certifies that required environmental documentation is complete before requesting an allocation of LCTOP funds. The project lead assures that projects approved for LCTOP funding comply with Public Resources Code § 21100 and § 21150.
- (2) The project lead certifies that when LCTOP funds are used for a transit capital project, that the project will be completed and remain in operation for its useful life.
- (3) The project lead certifies that it has the legal, financial, and technical capacity to carry out the project, including the safety and security aspects of that project.
- (4) The project lead certifies that they will notify the Department of pending litigation, dispute, or negative audit findings related to the project, before receiving an allocation of funds.
- (5) The project lead must maintain satisfactory continuing control over the use of project equipment and facilities and will adequately maintain project equipment and facilities for the useful life of the project.
- (6) Any interest the project lead earns on LCTOP funds must be used only on approved LCTOP projects.

- (7) The project lead must notify the Department of any changes to the approved project with a Corrective Action Plan (CAP).
- (8) Under extraordinary circumstances, a project lead may terminate a project prior to completion. In the event the project lead terminates a project prior to completion, the project lead must (1) contact the Department in writing and follow-up with a phone call verifying receipt of such notice; (2) pursuant to verification, submit a final report indicating the reason for the termination and demonstrating the expended funds were used on the intended purpose; (3) submit a request to reassign the funds to a new project within 180 days of termination.
- (9) Funds must be encumbered and liquidated within the time allowed.

### C. Reporting

- (1) The project lead must submit the following LCTOP reports:
  - a. Semi-Annual Progress Reports by February 15<sup>th</sup> and August 15<sup>th</sup> each year.
  - b. A Final Report within six months of project completion.
  - c. The annual audit required under the Transportation Development Act (TDA), to verify receipt and appropriate expenditure of LCTOP funds. A copy of the audit report must be submitted to the Department within six months of the close of the year (December 31) each year in which LCTOP funds have been received or expended.
- (2) Other Reporting Requirements: ARAB is developing funding guidelines that will include reporting requirements for all State agencies that receive appropriations from the Greenhouse Gas Reduction Fund. Caltrans and project sponsors will need to submit reporting information in accordance with ARAB's funding guidelines, including reporting on greenhouse gas reductions and benefits to disadvantaged communities.

### D. Cost Principles

- (1) The project lead agrees to comply with Title 2 of the Code of Federal Regulations 225 (2 CFR 225), Cost Principles for State and Local Government, and 49 CFR, Part 18, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments.
- (2) The project lead agrees, and will assure that its contractors and subcontractors will be obligated to agree, that:
  - a. Contract Cost Principles and Procedures, 48 CFR, Federal Acquisition Regulations System, Chapter 1, Part 31, et seq., shall be used to determine the allowability of individual project cost items and
  - b. those parties shall comply with Federal administrative procedures in accordance with 49 CFR, Part 18, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments. Every sub-recipient receiving LCTOP funds as a contractor or sub-contractor shall comply with Federal administrative procedures in accordance with 49

CFR, Part 18, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments.

- (3) Any project cost for which the project lead has received funds that are determined by subsequent audit to be unallowable under 2 CFR 225, 48 CFR, Chapter 1, Part 31 or 49 CFR, Part 18, are subject to repayment by the project lead to the State of California (State). All projects must reduce greenhouse gas emissions, as required under Public Resources Code section 75230, and any project that fails to reduce greenhouse gases shall also have its project costs submit to repayment by the project lead to the State. Should the project lead fail to reimburse moneys due to the State within thirty (30) days of demand, or within such other period as may be agreed in writing between the Parties hereto, the State is authorized to intercept and withhold future payments due the project lead from the State or any third-party source, including but not limited to, the State Treasurer and the State Controller.

#### **E. Record Retention**

- (1) The project lead agrees, and will assure that its contractors and subcontractors shall establish and maintain an accounting system and records that properly accumulate and segregate incurred project costs and matching funds by line item for the project. The accounting system of the project lead, its contractors and all subcontractors shall conform to Generally Accepted Accounting Principles (GAAP), enable the determination of incurred costs at interim points of completion, and provide support for reimbursement payment vouchers or invoices. All accounting records and other supporting papers of the project lead, its contractors and subcontractors connected with LCTOP funding shall be maintained for a minimum of three (3) years from the date of final payment and shall be held open to inspection, copying, and audit by representatives of the State and the California State Auditor. Copies thereof will be furnished by the project lead, its contractors, and subcontractors upon receipt of any request made by the State or its agents. In conducting an audit of the costs claimed, the State will rely to the maximum extent possible on any prior audit of the project lead pursuant to the provisions of federal and State law. In the absence of such an audit, any acceptable audit work performed by the project lead's external and internal auditors may be relied upon and used by the State when planning and conducting additional audits.
- (2) For the purpose of determining compliance with Title 21, California Code of Regulations, Section 2500 et seq., when applicable, and other matters connected with the performance of the project lead's contracts with third parties pursuant to Government Code § 8546.7, the project sponsor, its contractors and subcontractors and the State shall each maintain and make available for inspection all books, documents, papers, accounting records, and other evidence pertaining to the performance of such contracts, including, but not limited to, the costs of administering those various contracts. All of the above referenced parties shall make such materials available at their respective offices at all reasonable times during the entire project period and for three (3) years from the date of final payment. The State, the California State Auditor, or any duly authorized representative of the State, shall each have access to any books, records, and documents that are pertinent to a project for audits, examinations, excerpts, and transactions, and the project lead shall furnish copies thereof if requested.
- (3) The project lead, its contractors and subcontractors will permit access to all records of employment, employment advertisements, employment application forms, and other pertinent data and records by the State Fair Employment Practices and Housing Commission, or any other

agency of the State of California designated by the State, for the purpose of any investigation to ascertain compliance with this document.

**F. Special Situations**

The Department may perform an audit and/or request detailed project information of the project sponsor's LCTOP funded projects at the Department's discretion at any time prior to the completion of the LCTOP.

I certify all of these conditions will be met.

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AUTHORIZING OFFICER, Title  
Unit/Department/Agency

**RESOLUTION NO. 16-004**

**RESOLUTION OF THE SAN BERNARDINO COUNTY TRANSPORTATION  
COMMISSION DESIGNATING ITS AUTHORIZED AGENT AND AUTHORIZING  
THE EXECUTION OF THE CERTIFICATIONS AND ASSURANCES AND OTHER  
DOCUMENTS FOR THE LOW CARBON TRANSIT OPERATIONS PROGRAM  
(LCTOP)**

**WHEREAS**, the San Bernardino County Transportation Commission (SANBAG) is an eligible project sponsor and may receive state funding from the Low Carbon Transit Operations Program (LCTOP) now or sometime in the future for transit projects; and

**WHEREAS**, the statutes related to state-funded transit projects require a local or regional implementing agency to abide by various regulations; and

**WHEREAS**, Senate Bill 862 (2014) named the Department of Transportation (Department) as the administrative agency for the LCTOP; and

**WHEREAS**, the Department has developed guidelines for the purpose of administering and distributing LCTOP funds to eligible project sponsors (local agencies); and

**WHEREAS**, SANBAG wishes to designate the SANBAG Executive Director as its Authorized Agent to act on behalf of SANBAG and to delegate authority to execute these documents and any amendments thereto to the Executive Director; and

**WHEREAS**, SANBAG is programming LCTOP funds as follows:

Transit Marketing and Fare Subsidies for Mountain/Desert Transit Operators - \$642,667

This project entails the development of a “tool kit” that provides a menu of marketing strategies (template campaigns, social media, slogans, flyers, materials) to be customized to each transit agency. This “tool kit” would be beneficial to the smaller agencies, providing guidance in tailoring strategies to their communities and consistent, countywide, public communications would assist in reaching multi-transit jurisdiction commuters.

VVTA Bus Stop and Transfer Center Enhancements and Improvements - \$282,148

VVTA will utilize the LCTOP funds to enhance transfer centers and bus stops in the VVTA service area. It is anticipated that enhancing bus stops and transfer centers will increase ridership and promote mode share.

Omnitrans Route 290 Pilot Program Expansion – \$440,000

This is a pilot freeway express program, implemented in September 2015. With additional LCTOP funding, Omnitrans will be able to increase the number of weekday trips on Route 290, adding a total of eight trips earlier and later in the day.

Omnitrans Freeway Express Pilot Program serving Yucaipa, Redlands, Hospitality Lane and San Bernardino Transit Center – \$300,000

This is a freeway express pilot program, serving Yucaipa, Redlands, Hospitality Lane and San Bernardino Transit Center. This freeway express route was ranked the next highest priority freeway express project based on ridership potential, service duplication, and fit of the route into the overall network. With an allocation of LCTOP funding, Omnitrans will implement this route as a pilot program.

Ontario Airport Shuttle Service Pilot Program - \$1,035,185

The Ontario Airport Shuttle Service involves partnership with Ontario area hotels and may serve both Haven Avenue and Milliken Avenue with high-quality and high-frequency transit. The shuttle service will be developed to meet the needs of Metrolink, the Ontario Airport, and area hotels, and is expected to run with a 20 – 30 minute frequency between the hours of 5:00am and 11:00pm. The service may be utilized by tourists, travelers, local residents, and employees. Omnitrans will utilize LCTOP funds to procure four vehicles initially needed for this service and to begin operation of the service following local control of the Ontario Airport.

**NOW, THEREFORE, BE IT RESOLVED** by the San Bernardino County Transportation Commission (Commission), as follows:

Section 1. The fund recipient, SANBAG, agrees to comply with all conditions and requirements set forth in the Certifications and Assurances document and applicable statutes, regulations and guidelines for all LCTOP funded transit projects.

Section 2. The SANBAG Executive Director is designated as SANBAG's Authorized Agent, who is authorized to execute the Certifications and Assurances, all required documents of the LCTOP program, and any Amendments thereto with the California Department of Transportation.

Section 3. This resolution shall take effect immediately upon its adoption.

PASSED AND ADOPTED at a meeting of the San Bernardino County Transportation Commission held on October 7, 2015.

\_\_\_\_\_  
Ryan McEachron  
Commission Chairperson

ATTEST:

\_\_\_\_\_  
Clerk of the Commission

## *Minute Action*

### AGENDA ITEM: 11

**Date:** *September 10, 2015*

**Subject:**

Memorandum of Understanding Between Omnitrans and SANBAG

**Recommendation:**

That the Commuter Rail and Transit Committee recommend the Board, acting in its capacity as the San Bernardino County Transportation Commission, approve Memorandum of Understanding (MOU) 15-1001289 between Omnitrans and SANBAG outlining the sub-recipient responsibilities and payments for work completed for each agency.

**Background:**

Omnitrans is the designated FTA (Federal Transit Administration) grantee for the San Bernardino Valley. Although San Bernardino Associated Governments (SANBAG), acting as the County Transportation Commission, has the authority to allocate federal funds to agencies, it does not have the ability to receive funds directly from FTA for SANBAG-sponsored projects and must coordinate with a grantee for that purpose. SANBAG can coordinate with Omnitrans, Victor Valley Transit Authority (VVTA), and Metrolink as all these agencies are FTA grantees; however, SANBAG has coordinated with Omnitrans on several FTA projects which have been successfully completed.

This MOU outlines future project management costs for Omnitrans to assist SANBAG in receiving FTA funding. Although Omnitrans has the ability to charge up to 4% of the total federal share for managing and monitoring of subrecipient agreements, Omnitrans has agreed to only charge the actual cost incurred for this service. Additionally the MOU sets the framework for the federal requirements that SANBAG must meet, including reporting requirements, and mutually indemnifies all parties.

All future Omnitrans/SANBAG projects will have their own individual subrecipient agreements; however, this MOU will be used as the basis for those agreements.

**Financial Impact:**

This item is consistent with the SANBAG Fiscal Year 2015/2016 Budget.

**Reviewed By:**

This item is not scheduled for review by any other policy committee or technical advisory committee. SANBAG General Counsel and Procurement Manager have reviewed this item and MOU.

**Responsible Staff:**

Nancy Strickert, Management Analyst III

*Entity: CTC*

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Approved  
Commuter Rail & Transit Committee  
Date: September 10, 2015  
Witnessed By:

Contract Summary Sheet

General Contract Information

Contract No: 15-1001289 Amendment No.: Vendor No.: 1568
Vendor/Customer Name: Omnitrans Sole Source? [X] Yes [ ] No
Description: MOU Between Omnitrans and SANBAG Future Project Management
Start Date: 10/07/2015 Expiration Date: 06/30/2020 Revised Expiration Date:
Has Contract Term Been Amended? [X] No [ ] Yes - Please Explain
List Any Related Contracts Nos.:

Table with 4 columns: Dollar Amount, Original Contract, Revised Contract, Current Amendment, TOTAL CONTRACT VALUE, Original Contingency, Revised Contingency, Contingency Amendment, TOTAL CONTINGENCY VALUE, TOTAL DOLLAR AUTHORITY. All values are \$ 0.00.

Contract Authorization

[ ] Executive Director Date:
Executive Director Action:
[X] Board of Directors Date: 10/07/2015
Board of Directors Action: Approve MOU

[X] Contract Management: Payable/Miscellaneous

Invoice Warning: 20% Renewals: Type: [ ] Capital [ ] PAA [ ] Other
[ ] Retention: % Maximum Retention: \$ -
Services: [ ] Construction [X] Intrgrnt/MOU/COOP [ ] A & E Services [ ] Other Professional Services
[ ] Disadvantaged Business Enterprise (DBE) Goal %

[ ] Contract Management: Receivable

[ ] E-76 and/or CTC Date (Attach Copy) [ ] Program Supplement No.:
[ ] Finance Letter [ ] Reversion Date: [ ] EA No.:

All of the above MUST be submitted to FINANCE including originals, amendments and miscellaneous transaction changes

Additional Information

Project Manager: Nancy Strickert

Attachment: CSS MOU 15-1001289 (1785 : Omnitrans MOU)

**MOU 15-1001289**  
**Between**  
**Omnitrans**  
**and**  
**San Bernardino Associated Governments**

This Memorandum of Understanding (MOU) is made and entered into by and between Omnitrans, a joint powers authority (OMNITRANS) and San Bernardino Associated Governments, acting in its capacity as the San Bernardino County Transportation Commission, (SANBAG) to outline future project management costs for Omnitrans to assist SANBAG in receiving Federal Transit Administration (FTA) for future projects.

WHEREAS, OMNITRANS is an eligible direct recipient of FTA funds and processes grant applications through FTA on an annual basis; and

WHEREAS, SANBAG will use federal funding for delivery of various projects in the San Bernardino Valley subarea under the jurisdiction of FTA; and

WHEREAS, SANBAG is not an eligible direct recipient of FTA funding and needs assistance to receive this funding; and

WHEREAS, OMNITRANS, as an FTA Grantee, has the staff and other resources to provide such assistance to SANBAG.

NOW THEREFORE, in consideration of the foregoing recitals and the terms and conditions herein, SANBAG and OMNITRANS agree as follows:

- I. TERM. This MOU shall be effective for five years from the date approved by the last party, but may be terminated earlier or extended by mutual consent.
- II. SANBAG RESPONSIBILITIES:
  - A. SANBAG will notify OMNITRANS on a project-by-project basis of the need for assistance in receiving FTA funding and provide the required project information.
  - B. SANBAG will prepare project-specific subrecipient agreements for review and approval by both SANBAG and OMNITRANS that are consistent with the parameters of this MOU.
  - C. SANBAG will work with OMNITRANS to prepare a transfer request if such funding needs to be transferred from the Federal Highway Administration (FHWA) to the FTA.
  - D. SANBAG shall reimburse OMNITRANS for the actual cost of managing and monitoring subrecipient agreements and federal grant funding as identified on project-specific invoices.

E. SANBAG shall comply with all requirements of the FTA Master Agreement that coincides with the year of grant submittal.

F. SANBAG shall submit to OMNITRANS on a quarterly basis reports that document the status of the project, including task completion status and budget status as needed by FTA.

G. SANBAG shall conduct itself so that any aspect of OMNITRANS' participation in this MOU and the actions required of it hereunder will be in compliance with the terms of the grant that is being sought and with applicable law.

### III. OMNITRANS RESPONSIBILITIES

A. OMNITRANS will review project-specific subrecipient agreements for approval by both SANBAG and OMNITRANS that are consistent with the parameters of this MOU.

B. OMNITRANS, as the FTA Grantee, will submit grant applications to the FTA to obtain funding for SANBAG.

C. OMNITRANS will work with SANBAG to prepare a transfer request if such funding needs to be transferred from the Federal Highway Administration (FHWA) to the FTA.

D. OMNITRANS agrees to charge SANBAG only for actual costs incurred for managing and monitoring subrecipient agreements. Federal grant funding will not include a deduction for OMNITRANS' flat Cost Allocation Plan (CAP) fee. OMNITRANS will submit invoices to SANBAG for actual costs incurred.

E. OMNITRANS shall comply with all requirements of the FTA Master Agreement that coincides with the year of grant submittal.

F. OMNITRANS shall conduct itself so that any aspect of SANBAG's participation in this MOU and the actions required of it hereunder will be in compliance with the terms of the grant that is being sought and with applicable law.

### IV. THE PARTIES MUTUALLY AGREE:

A. That this MOU and its content will be used in creating subrecipient agreements between OMNITRANS and SANBAG.

B. Neither SANBAG, nor any related entity, officer, director, member, employee or contractor thereof is responsible for any injury, damage or liability occurring or arising by reason of anything done or omitted to be done by OMNITRANS in connection with the ongoing program or in connection with any work SANBAG delegated to OMNITRANS under this Contract. It is understood and agreed that, pursuant to Government Code Section 985.4, OMNITRANS shall fully defend, indemnify and save harmless SANBAG, its related entities, officers, directors, members, employees and

contractors from all claims, suits or actions of every name, kind and description brought for or on account of injury (as defined by Government Code Section 810.8) or damage occurring by reason of anything done or omitted to be done by OMNITRANS in connection with any work SANBAG delegated to OMNITRANS under this Contract. OMNITRANS's indemnification obligation applies to SANBAG's passive negligence but does not apply to SANBAG's, "sole negligence" or "willful misconduct" within the meaning of Civil code Section 2782.

Neither OMNITRANS, nor any officer, director, employee or contractor thereof is responsible for any injury, damage or liability occurring or arising by reason of anything done or omitted to be done by SANBAG in connection with the ongoing program or in connection with any work under this Contract. It is understood and agreed that, pursuant to Government Code Section 985.4, SANBAG shall fully defend, indemnify and save harmless OMNITRANS, its officers, directors, employees and contractors from all claims, suits or actions of every name, kind and description brought for or on account of injury (as defined by Government Code Section 810.8) or damage occurring by reason of anything done or omitted to be done by SANBAG in connection with any work under this Contract. SANBAG's indemnification obligation applies to OMNITRANS's passive negligence but does not apply to OMNITRANS's "sole negligence" or "willful misconduct" within the meaning of Civil code Section 2782

#### V. NOTICES

When notices are required, such notices shall be provided in writing, sent by mail to the appropriate address listed below:

OMNITRANS: P. Scott Graham  
Chief Executive Officer/General Manager  
700 W Fifth Street  
San Bernardino, CA 92411

SANBAG: Ray Wolfe  
Executive Director  
1170 West Third Street, Second Floor  
San Bernardino, CA 92410-1715

#### VI. INVALID CONDITIONS:

If any one or more terms, conditions or promises of this MOU shall to any extent be judged invalid, void, voidable or unenforceable by a court of competent jurisdiction, the remaining terms shall not be affected and shall be valid and enforceable to the fullest extent permitted by law.

#### VII. LEGAL FEES

In the event of any contract dispute hereunder, each party to this MOU shall bear its own attorney's fees and costs regardless of who prevails in the outcome of the dispute.

VIII. CONCLUSION

- A. This MOU constitutes an integrated agreement, expressing the understanding of the parties concerning the subject matter of this agreement, and it supersedes all prior understandings, whether oral or written, express or implied.
- B. This MOU may be executed in counterparts. When executed by all parties, each counterpart shall be deemed an original irrespective of the date of execution and shall together constitute one and the same MOU.

**IN WITNESS THEREOF**, the authorized parties have signed below:

**SAN BERNARDINO  
ASSOCIATED GOVERNMENTS**

**OMNITRANS**

\_\_\_\_\_  
Ryan McEachron  
President

\_\_\_\_\_  
Sam Spagnolo  
Chair

Date: \_\_\_\_\_

Date: \_\_\_\_\_

Approved as to Form:

Approved as to Form:

\_\_\_\_\_  
Eileen Monaghan Teichert  
SANBAG General Counsel

\_\_\_\_\_  
Carol Greene  
OMNITRANS Legal Counsel

Attachment: MOU - Project Management Costs-081315 [Revision 2] (1785 : Omnitrans MOU)

## COMMUTER RAIL AND TRANSIT POLICY COMMITTEE ATTENDANCE RECORD – 2015

Name	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
<b>Paul Eaton</b> City of Montclair	X	X	X	X	X	X		X				
<b>James Ramos</b> County of San Bernardino	X	X	X	X	X	X		X				
<b>Jon Harrison</b> City of Redlands	X	X	X	X*	X	X		X				
<b>Bill Jahn</b> City of Big Bear Lake	X	X	X	X	X	X		X				
<b>Mike Leonard</b> City of Hesperia	X	X	X									
<b>Larry McCallon</b> City of Highland	X			X				X				
<b>L. Dennis Michael</b> City of Rancho Cucamonga	X		X	X	X							
<b>Ray Musser</b> City of Upland		X	X	X	X	X		X				
<b>Richard Riddell</b> City of Yucaipa	X	X	X	X	X	X		X				
<b>Alan Wapner</b> City of Ontario		X	X	X	X			X				
<b>Deborah Robertson</b> City of Rialto	X	X		X	X	X		X				

X = Member attended meeting.

\* = Alternate member attended meeting

Empty box = Member did not attend meeting.

Crossed out box = Not a member at the time.

*San Bernardino Associated Governments (SANBAG) is a council of governments formed in 1973 by joint powers agreement of the cities and the County of San Bernardino. SANBAG is governed by a Board of Directors consisting of a mayor or designated council member from each of the twenty-four cities in San Bernardino County and the five members of the San Bernardino County Board of Supervisors.*

*In addition to SANBAG, the composition of the SANBAG Board of Directors also serves as the governing board for several separate legal entities listed below:*

***The San Bernardino County Transportation Commission**, which is responsible for short and long range transportation planning within San Bernardino County, including coordination and approval of all public mass transit service, approval of all capital development projects for public transit and highway projects, and determination of staging and scheduling of construction relative to all transportation improvement projects in the Transportation Improvement Program.*

***The San Bernardino County Transportation Authority**, which is responsible for administration of the voter-approved half-cent transportation transactions and use tax levied in the County of San Bernardino.*

***The Service Authority for Freeway Emergencies**, which is responsible for the administration and operation of a motorist aid system of call boxes on State freeways and highways within San Bernardino County.*

***The Congestion Management Agency**, which analyzes the performance level of the regional transportation system in a manner which ensures consideration of the impacts from new development and promotes air quality through implementation of strategies in the adopted air quality plans.*

*As a **Subregional Planning Agency**, SANBAG represents the San Bernardino County subregion and assists the Southern California Association of Governments in carrying out its functions as the metropolitan planning organization. SANBAG performs studies and develops consensus relative to regional growth forecasts, regional transportation plans, and mobile source components of the air quality plans.*

*Items which appear on the monthly Board of Directors agenda are subjects of one or more of the listed legal authorities. For ease of understanding and timeliness, the agenda items for all of these entities are consolidated on one agenda. Documents contained in the agenda package are clearly marked with the appropriate legal entity.*

This list provides information on acronyms commonly used by transportation planning professionals. This information is provided in an effort to assist SANBAG Board Members and partners as they participate in deliberations at SANBAG Board meetings. While a complete list of all acronyms which may arise at any given time is not possible, this list attempts to provide the most commonly-used terms. SANBAG staff makes every effort to minimize use of acronyms to ensure good communication and understanding of complex transportation processes.

AB	Assembly Bill
ACE	Alameda Corridor East
ACT	Association for Commuter Transportation
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
APTA	American Public Transportation Association
AQMP	Air Quality Management Plan
ARRA	American Recovery and Reinvestment Act
ATMIS	Advanced Transportation Management Information Systems
BAT	Barstow Area Transit
CALACT	California Association for Coordination Transportation
CALCOG	California Association of Councils of Governments
CALSAFE	California Committee for Service Authorities for Freeway Emergencies
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CMAQ	Congestion Mitigation and Air Quality
CMIA	Corridor Mobility Improvement Account
CMP	Congestion Management Program
CNG	Compressed Natural Gas
COG	Council of Governments
CPUC	California Public Utilities Commission
CSAC	California State Association of Counties
CTA	California Transit Association
CTC	California Transportation Commission
CTC	County Transportation Commission
CTP	Comprehensive Transportation Plan
DBE	Disadvantaged Business Enterprise
DEMO	Federal Demonstration Funds
DOT	Department of Transportation
EA	Environmental Assessment
E&D	Elderly and Disabled
E&H	Elderly and Handicapped
EIR	Environmental Impact Report (California)
EIS	Environmental Impact Statement (Federal)
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FSP	Freeway Service Patrol
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
GFOA	Government Finance Officers Association
GIS	Geographic Information Systems
HOV	High-Occupancy Vehicle
ICTC	Interstate Clean Transportation Corridor
IIEP	Inland Empire Economic Partnership
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
IIP/ITIP	Interregional Transportation Improvement Program
ITS	Intelligent Transportation Systems
IVDA	Inland Valley Development Agency
JARC	Job Access Reverse Commute
LACMTA	Los Angeles County Metropolitan Transportation Authority
LNG	Liquefied Natural Gas
LTF	Local Transportation Funds

MAGLEV	Magnetic Levitation
MARTA	Mountain Area Regional Transportation Authority
MBTA	Morongo Basin Transit Authority
MDAB	Mojave Desert Air Basin
MDAQMD	Mojave Desert Air Quality Management District
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
MSRC	Mobile Source Air Pollution Reduction Review Committee
NAT	Needles Area Transit
NEPA	National Environmental Policy Act
OA	Obligation Authority
OCTA	Orange County Transportation Authority
PA&ED	Project Approval and Environmental Document
PASTACC	Public and Specialized Transportation Advisory and Coordinating Council
PDT	Project Development Team
PNRS	Projects of National and Regional Significance
PPM	Planning, Programming and Monitoring Funds
PSE	Plans, Specifications and Estimates
PSR	Project Study Report
PTA	Public Transportation Account
PTC	Positive Train Control
PTMISEA	Public Transportation Modernization, Improvement and Service Enhancement Account
RCTC	Riverside County Transportation Commission
RDA	Redevelopment Agency
RFP	Request for Proposal
RIP	Regional Improvement Program
RSTIS	Regionally Significant Transportation Investment Study
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agencies
SB	Senate Bill
SAFE	Service Authority for Freeway Emergencies
SAFETEA-LU	Safe Accountable Flexible Efficient Transportation Equity Act – A Legacy for Users
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCRRA	Southern California Regional Rail Authority
SHA	State Highway Account
SHOPP	State Highway Operations and Protection Program
SOV	Single-Occupant Vehicle
S RTP	Short Range Transit Plan
STAF	State Transit Assistance Funds
STIP	State Transportation Improvement Program
STP	Surface Transportation Program
TAC	Technical Advisory Committee
TCIF	Trade Corridor Improvement Fund
TCM	Transportation Control Measure
TCRP	Traffic Congestion Relief Program
TDA	Transportation Development Act
TEA	Transportation Enhancement Activities
TEA-21	Transportation Equity Act for the 21 <sup>st</sup> Century
TMC	Transportation Management Center
TMEE	Traffic Management and Environmental Enhancement
TSM	Transportation Systems Management
TSSDRA	Transit System Safety, Security and Disaster Response Account
USFWS	United States Fish and Wildlife Service
VCTC	Ventura County Transportation Commission
VVTA	Victor Valley Transit Authority
WRCOG	Western Riverside Council of Governments

*San Bernardino Associated Governments*



**MISSION STATEMENT**

To enhance the quality of life for all residents, San Bernardino Associated Governments (SANBAG) will:

- Improve cooperative regional planning
- Develop an accessible, efficient, multi-modal transportation system
- Strengthen economic development efforts
- Exert leadership in creative problem solving

To successfully accomplish this mission, SANBAG will foster enhanced relationships among all of its stakeholders while adding to the value of local governments.

Approved June 2, 1993  
Reaffirmed March 6, 1996