

**AGENDA**  
**Board of Directors Metro Valley Study Session**

**October 13, 2022**

**\*\*\*Start Time: 9:10 AM\*\*\***

**Location**

San Bernardino County Transportation Authority  
*First Floor Lobby Board Room*  
1170 W. 3rd Street, San Bernardino, CA 92410

***Board of Directors***

**Valley Representatives**

**Study Session Chair**

Dawn Rowe, Supervisor  
Third District

**Study Session Vice-Chair**

John Valdivia, Mayor  
City of San Bernardino

Eunice Ulloa, Mayor  
City of Chino

Ray Marquez, Mayor  
City of Chino Hills

Frank Navarro, Mayor  
City of Colton

Acquanetta Warren, Mayor  
City of Fontana

Darcy McNaboe, Mayor  
City of Grand Terrace

Larry McCallon, Mayor  
City of Highland

Rhodes "Dusty" Rigsby, Council Member  
City of Loma Linda

John Dutrey, Mayor  
City of Montclair

Alan Wapner, Mayor Pro Tem  
City of Ontario

L. Dennis Michael, Mayor  
City of Rancho Cucamonga

Paul Barich, Mayor  
City of Redlands

Deborah Robertson, Mayor  
City of Rialto

Carlos A. Garcia, Council Member  
City of Upland

David Avila, Mayor  
City of Yucaipa

**Mountain/Desert Representatives**

Daniel Ramos, Mayor Pro Tem  
City of Adelanto

Art Bishop, Mayor Pro Tem  
Town of Apple Valley

Paul Courtney, Mayor  
City of Barstow

Rick Herrick, Mayor  
City of Big Bear Lake

Rebekah Swanson, Council Member  
City of Hesperia

Edward Paget, Vice Mayor  
City of Needles

Joel Klink, Council Member  
City of Twentynine Palms

Debra Jones, Mayor  
City of Victorville

Rick Denison, Mayor Pro Tem  
Town of Yucca Valley

**County Board of Supervisors**

Paul Cook, First District

Janice Rutherford, Second District

Curt Hagman, Fourth District

Joe Baca, Jr., Fifth District

*Interim Ex-Officio Member – Diane Morales, Caltrans*

*Ray Wolfe, Executive Director*

*Julianna Tillquist, General Counsel*

**San Bernardino County Transportation Authority  
San Bernardino Council of Governments**

**AGENDA**

**Board of Directors Metro Valley Study Session**

**October 13, 2022  
9:10 AM**

**Location**

**First Floor Lobby Board Room  
1170 W. 3rd Street, San Bernardino, CA 92410**

**Items listed on the agenda are intended to give notice to members of the public of a general description of matters to be discussed or acted upon. The posting of the recommended actions does not indicate what action will be taken. The Board may take any action that it deems to be appropriate on the agenda item and is not limited in any way by the notice of the recommended action.**

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 John Valdivia)

- i. Pledge of Allegiance
- ii. Attendance
- iii. Announcements
- iv. Agenda Notices/Modifications - Ashley Izard

**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.

**Presenter: Henry Stultz**

**This item is prepared for review by Board of Directors 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 - Project Delivery

2. **Construction Contract Change Orders to On-Going Construction Contracts** Pg. 12

Receive and file Change Order Report.

**Presenter: Henry Stultz**

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

## DISCUSSION ITEMS

### Discussion - Project Delivery

3. **Major Projects Status Report through September 2022** Pg. 25

Receive the Major Projects Status Report for the period through September 2022.

**Presenter: Sal Chavez**

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

4. **Interstate 10 Eastbound Truck Climbing Lane Release of Invitation for Bids No. 23-1002869** Pg. 27

That the following be reviewed and recommended for final approval by the Board of Directors, acting as the San Bernardino County Transportation Authority, at a regularly scheduled Board meeting

Authorize the Executive Director, or his designee, to release Invitation for Bids No. 23-1002869 for construction of the Interstate 10 Eastbound Truck Climbing Lane Project, subject to approval as to form by General Counsel and final approval of the Plans, Specifications, and Estimates package.

**Presenter: Khalid Bazmi**

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

5. **Release Request for Proposals for Construction Management Services for Mount Vernon Avenue Improvement Project at Interstate 10** Pg. 29

That the following be reviewed and recommended for final approval by the Board of Directors, acting as the San Bernardino County Transportation Authority, at a regularly scheduled Board meeting:

Authorize the release of Request for Proposals No. 23-1002845 for Construction Management Services for the Interstate 10 Mount Vernon Avenue Interchange Improvement Project.

**Presenter: Khalid Bazmi**

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

**Public Comment**

Brief Comments from the General Public

**Comments from Board Members**

Brief Comments from Board Members

**ADJOURNMENT**

**Additional Information**

Attendance

Pg. 66

Acronym List

Pg. 68

Mission Statement

Pg. 70

**The next Board of Directors Metro Valley Study Session is scheduled for  
November 10, 2022**

## 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 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 can be reached by phone at (909) 884-8276 or via email at [clerkoftheboard@gosbcta.com](mailto:clerkoftheboard@gosbcta.com) 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 [www.gosbcta.com/board/meetings-agendas/](http://www.gosbcta.com/board/meetings-agendas/) at least 72 hours in advance of the meeting. Staff reports related to agenda items may be reviewed online at that web address. Agendas are also posted at 1170 W. 3<sup>rd</sup> Street, 1st Floor, San Bernardino at least 72 hours in advance of the meeting.

**Agenda Actions** – Items listed on both the “Consent Calendar” and “Discussion” contain recommended 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 or unanimous vote of members present as provided in the Ralph M. Brown Act Government Code Sec. 54954.2(b).

**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 Clerk prior to the Board's consideration of the item. A "Request to Speak" form must be completed for each item 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. Members of the public requesting information be distributed to the Board of Directors must provide 40 copies of such information in advance of the meeting, except for noticed public hearings. Information provided as public testimony is not read into the record by the Clerk.

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. “Public Testimony on any Item” still applies.

**Disruptive or Prohibited 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 or prohibited conduct includes without limitation 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, bringing into the meeting any type of object that could be used as a weapon, including without limitation sticks affixed to signs, or otherwise preventing the Board from conducting its meeting in an orderly manner. Your cooperation is appreciated!

**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 or she would like to amend his or her 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 voted upon first, and if it fails, then the original motion is considered.
- 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*

*Revised May 4, 2016*



## *Minute Action*

AGENDA ITEM: 1

**Date:** *October 13, 2022*

**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 SBCTA 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:

### Consent/Discussion Calendar Items

Item No.	Contract No.	Principals & Agents	Subcontractors
2	19-1002078	Guy F. Atkinson Construction, LLC (dba Guy F. Atkinson) <i>Timothy Stroud</i>	All American Asphalt Cal Stripe, Inc. Case Pacific Company Commercial Metals Company Cooper Engineering, Inc. Coral Construction Company DeesBurke Engineering Contractors, LLC Diverscape, Inc. Dywidag Systems International USA, Inc. Ferreira Construction Company, Inc. Foundation Pile, Inc. Harber Companies, Inc. L. Johnson Construction, Inc. Maneri Traffic Control, Inc. Penhall Company Treesmith Enterprises, Inc. Universal Construction
	17-1001599	Lane-Security Paving Joint Venture <i>Giuseppe Quarta</i> <i>Joseph Ferndino</i>	Aegis Project Controls Corp. A.M. Concrete Antigo Construction Apex Logistics Arellano Associates, LLC BC Traffic Rentals Boral Resources, LLC Bridge Deck Solutions

*Entity: San Bernardino Council of Governments, San Bernardino County Transportation Authority*

<p>2 Cont.</p>			<p>C Below          CalPortland Company          Cal-Stripe          Cemex          CGO Construction          CH2M Hill Engineers, Inc.          CMC Commercial Metals          Conco Pumping          Con-Fab California          CTI Milling          CW Allied, Inc.          Diversified Landscape          Dywidag Systems          EBS General Engineering,          Inc. ECS          Euclid Chemical Company          Ferreira Construction          Fitzgerald Formliners          Fleming &amp; Sons Concrete          Forefront Deep Foundations          Foundation Pile          FPL and Associates, Inc.          Fryman Management, Inc.          2G3 Quality, Inc.          G&amp;F Concrete Cutting          Global Road Sealing          Golden State Boring &amp; Pipe          Hanes Geo Components          Harber Companies          Highlight Electric          Irvine Pipe Company          ISCO Industries          JC Supply &amp; Manufacturing          JT Construction Products,          LLC          L Johnson Construction          L.B. Foster Construction          Malcolm Drilling Company          Michael Baker International,          Inc. Miranda Logistics          Murphy Industrial Coatings          Pacific Corrugated Pipe Co.          Peri Formworks          Pipe Jacking Trenchless, Inc.          Pro-Cast Products, Inc.          PQM, Inc.</p>
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## Board of Directors Metro Valley Study Session Agenda Item

October 13, 2022

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2 Cont.			The R. J. Noble Company Rupert Construction Supply Sierra Landscape Development Skyline Steel Spartan Mat, LLC Statewide Traffic Safety and Signs, Inc. Strength Transportation Management Titan Constructor Engineering V&A, Inc. Vulcan Materials
	19-1002181	Granite Construction Company <i>Kenneth B. Olson, Vice President</i>	Alcorn Fence Company Chrisp Company Drill Tech Drilling & Shoring Ferreira Construction Co., Inc. Integrity Rebar Placers Marina Landscape Statewide Traffic & Safety Signs
	18-1001966	Traylor-Granite Joint Venture <i>Julio Chicas, Project Manager</i>	Vobecky Enterprises CPM Logistics Merrill Morris Partners High Light Electric Cogstone Morgner COWI North America, Inc.

**Financial Impact:**

This item has no direct impact on the budget.

**Reviewed By:**

This item is prepared for review by Board of Directors and Committee Members.

**Responsible Staff:**

Henry Stultz, Director of Project Delivery

Approved  
 Board of Directors Metro Valley Study Session  
 Date: October 13, 2022

Witnessed By:

San Bernardino Council of Governments  
 San Bernardino County Transportation Authority

## *Minute Action*

AGENDA ITEM: 2

***Date:*** *October 13, 2022*

***Subject:***

Construction Contract Change Orders to On-Going Construction Contracts

***Recommendation:***

Receive and file Change Order Report.

***Background:***

San Bernardino County Transportation Authority has thirteen (13) on-going construction contracts, of which four (4) have had Construction Change Orders (CCOs) approved since the last reporting to the Board of Directors Metro Valley Study Session on September 15, 2022. The CCOs are listed below.

A. Contract No. 19-1002078 with Guy F. Atkinson Construction, LLC, for the State Route 210 Lane Addition, Base Line Interchange and Pavement Rehabilitation Project: CCO No. 34, Supplement 1 (\$50,000 increase for roadway profile correction at Victoria Avenue); CCO No. 47 (\$10,000 increase to construct Soffit openings at Highland Avenue, left bridge frames 1 and 2); CCO No. 58 (\$15,000 increase for trial batch testing field qualification of Jointed Plain Concrete Pavement (JPCP)); CCO No. 70 (\$2,477 increase to close fencing gaps); CCO No. 81 (\$16,033.11 increase for Base Line Brick Color Revision); and CCO No. 83 (No Cost/No Credit to eliminate Base Line interchange milestone).

B. Contract No. 17-1001599 with Lane-Security Paving Joint Venture, for the Interstate 10 (I-10) Corridor Contract 1 Design Build Contract: CCO No. 69 (\$258,014 increase for Turner Channel drainage system improvements); and CCO No. 70 (\$61,775 for non-traffic related pull boxes 6-inches below grade).

C. Contract No. 19-1002181 with Granite Construction Company for Archibald Avenue Improvements Project at State Route 60: CCO No. 22, Supplement 1 (\$60,000 increase for pavement revisions); CCO No. 23, Supplement 1 (\$80,000 increase for pavement revisions); CCO No. 43 (\$136,660 increase for water and power lateral boring); and CCO No. 45 (\$45,962.45 increase for traffic control devices design change).

D. Contract No. 18-1001966 with Traylor-Granite Joint Venture, for the Mount Vernon Avenue Viaduct Design-Build Project: CCO No. 21 (\$107,497.50 increase for Kingman Widening).

***Financial Impact:***

This item imposes no financial impact, as all CCOs are within previously approved contingency amounts under: Task No. 0830 Interchange Projects and Task No. 0820 Freeway Projects, Sub-Task No. 0887 SR 210 Lane Addition, Sub-Task No. 0823 I-10 Corridor Contract 1, Sub-Task No. 0894 Archibald Avenue Improvements Project at SR-60, and Sub-Task No. 0827 Mount Vernon Avenue Viaduct Design-Build Project.

***Reviewed By:***

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

***Responsible Staff:***

Henry Stultz, Director of Project Delivery

*Entity: San Bernardino County Transportation Authority*

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Approved  
Board of Directors Metro Valley Study Session  
Date: October 13, 2022  
Witnessed By:

Board of Directors Metro Valley Study Session  
Construction Change Orders Log

<b>Archibald Avenue Improvements Project at SR 60 – Executed Change Orders</b>		
Number	Description	Amount
3	Maintain Traffic	\$25,000.00
4	Maintain Existing Electrical Systems	\$15,000.00
5	Staging Changes	(\$267.57)
6	Partnering	\$20,000.00
7	SWPPP Maintenance	\$25,000.00
9	Early Construction and Completion of Driveway 3	\$10,500.00
10	Removal of Man-Made-Buried-Object	\$8,500.00
11	Revised Retaining Wall Details	\$0.00
12	Modify Irrigation Removal Plan and Irrigation Details	\$77,416.59
13	Water Line Revisions	\$55,889.00
14	Conflicting Palm Trees Removal	\$10,000.00
15	Combine Stages 2 and 3 for Retaining Wall 16	\$0.00
16	Drainage Systems Modifications	\$33,942.75
18	Revised Closure Hours and Irrigation Crossover	\$9,000.00
19	Install Temporary Overhead Power Poles	\$6,000.00
20	Furnish Two Fire Hydrants	\$15,553.94
21	Provide Power to Existing Caltrans TMS Sign	\$72,750.69
22	Pavement Revisions	\$72,994.62
<b>22 S-1</b>	<b>Pavement Revisions</b>	<b>\$60,000.00</b>
23	Pavement Revisions	(\$31,247.42)
<b>23 S-1</b>	<b>Pavement Revisions</b>	<b>\$80,000.00</b>
24	Irrigation Valve Repair	\$5,000.00
25	Modify Weep Hole Elevation Walls 15 and 16	\$25,788.84
26	Removal of Conflicting Trees	\$6,720.00
27	Abandon Conflicting Weigh In Motion System	\$36,028.10
28	Modify Existing Drainage Pipe and Structures	\$34,628.10
29	Modify Drainage Systems 10 and 11	(\$14,608.45)
31	Modify Conflicted Portion of Drainage System 17	\$35,000.00
32	Modify Drainage Systems 4 and 8	\$30,000.00
32 S-1	Additional Funds to Modify Drainage Systems 4 and 8	\$32,000.00
33	Install Video Detection Signal System at Archibald and Oak Hill Intersection	\$57,432.28
34	Relocation of the Double Close Detector Assembly at the Kuzina Property	\$18,000.00
36	Revise Stage Construction and Replace Pavement Types	\$98,911.97
37	Modify Existing Non-Standard Median Bull Nose	\$6,500.00
38	Dispute Resolution – Profile Grinding Pavement	\$20,000.00
38 S-1	Extra Work on Profile Grinding Pavement	\$19,000.00
39	Extend Midwest Guardrail System 25' to Meet Safety Requirement	\$15,000.00
39 S-1	Modification to Guardrail System to Meet Safety Requirement	\$30,000.00
40	Install Minor Concrete under Bridge Center Median	\$9,566.00
41	Furnish and Install Handrail along ADA Curb	\$15,200.00
42	Test Low Point to Assure Water Flow for On and Off Ramp	\$2,456.00
<b>43</b>	<b>Water and Power Lateral Boring</b>	<b>\$136,660.00</b>
44	Remove and Replace Faulty Master Valve and Pressure Regulator	\$5,000.00
<b>45</b>	<b>Traffic Control Devices Design Change</b>	<b>\$45,962.45</b>
46	Additional Landscape	\$34,971.61
48	Modification of Double Check Detector Assembly	\$20,000.00

**Bolded** - Construction Change Orders approved since the last reporting to the Metro Valley Study Session  
Amounts shown in parentheses represent a credit to the Agency

Attachment: CCO Log (8950 : Construction Contract Change Orders MVSS2210)

49	Relocate ADA Curb Ramp	\$13,400.81
<b>CCO TOTAL</b>		<b>\$ 1,304,650.31</b>
<b>TOTAL CONTINGENCY AND SUPPLEMENTAL</b>		<b>\$2,122,333.00</b>

<b>SR 210 Lane Addition, Base Line I/C and Pavement Rehabilitation – Executed Change Orders</b>		
Number	Description	Amount
1	Maintain Traffic SR 210 Lane Addition	\$300,000.00
2	Maintain Traffic SR 210 Base Line Interchange	\$50,000.00
3	Maintain Traffic SR 210 Pavement Rehabilitation	\$150,000.00
4	Partnering	\$100,000.00
5	Dispute Resolution Board	\$50,000.00
5 S-1	Revised Dispute Resolution Board Specifications	\$0.00
6	Federal Training Program	\$50,000.00
7	Storm Water Best Management Practice Maintenance	\$100,000.00
8	Existing Roadway Repair	\$80,000.00
8 S-1	Cold Mill and Overlay Shoulders	\$160,000.00
8 S-2	Roadway Repair	\$100,000.00
9	Bird Exclusionary Devices	\$50,000.00
10	Added Environmental Requirements	\$85,491.00
12	K-rail Relocation Due to A Public Incident	\$15,000.00
13	Revised Ramp Closure Charts	\$0.00
14	Revised Pile Layout for Retaining Wall 1021	\$24,312.00
15	Revisions to Santa Ana River Bridge Abutment 7-Right	\$4,035.00
16	Removal of Buried Man-Made Objects	\$75,000.00
16 S-1	Removal Buried Man-Made Objects Additional Funds	\$30,000.00
17	Repair of Existing Irrigation Crossovers	\$20,000.00
18	Agency Provided Street Name Signs	(\$4,832.59)
19	Removal of Asbestos Shims at Sterling Ave Bridge	\$12,017.12
20	Approach Slab and Abutment Drainage Modifications	\$25,000.00
21	Deck Drain Grates	\$7,000.00
22	Remove Concrete Slab and Bollards at Gas Station	\$8,000.00
23	Added Temporary Fence	\$10,000.00
24	Maint Existing Electrical Systems	\$30,000.00
27	CIDH Foundation and Pile Quantity Adjustment	\$26,218.00
28	Revised Shop Drawings Submittal Requirements	\$0.00
29	Oil Price Fluctuation Adjustment	\$250,000.00
30	Just in Time (JIT) Training	\$5,000.00
31	Extend Irrigation Crossovers	\$127,323.00
32	Change in Treated Wood Waste Management	\$122,450.00
33	Additional Fiber Optic Pullboxes	\$127,658.33
34	Roadway Profile Correction at Victoria Avenue	\$207,906.00
<b>34 S-1</b>	<b>Roadway Profile Correction at Victoria Avenue</b>	<b>\$50,000.00</b>
35	CIDH Pile Quantity Increase	\$11,266.00
36	Deletion of RW 1033	(\$254,924.32)
36 S-1	Additional Dowel Rebar for Concrete Barrier	\$5,000.00
37	Median Edge Drain Revisions	\$89,634.57
39	Add Pile Anchors	\$35,676.22
40	Value Engineering Change Proposal – RW 1092 Deletion	(\$228,102.82)
41	Drainage System Modification	\$23,627.00
42	Removal of Thickened Asphalt Concrete	\$40,000.00

**Bolded** - Construction Change Orders approved since the last reporting to the Metro Valley Study Session  
Amounts shown in parentheses represent a credit to the Agency

43	Base Line Driveway Changes	\$15,000.00
44	Resolve Dispute – Differing Site Condition at Retaining Wall #1036	\$435,396.70
45	Up Light Spacing Conduit at Base Line	\$15,000.00
<b>47</b>	<b>Construct Soffit Openings at Highland Left Bridge Frames 1 and 2</b>	<b>\$10,000.00</b>
48	Sound wall 981 Tree Removal	\$5,995.00
49	Regrade Median Gutter	\$10,000.00
50	Differing Site Condition-Potential Claims 1, 2 and 3 Resolution	\$27,500.00
51	Settlement of Potential Claim No. 6 DSC at Plunge Creek	\$75,884.46
52	Grind Existing HMA Pavement win Median to Match Elevation at CRCP Joint	\$122,000.00
53	Landscape Irrigation Antenna Removal	\$5,000.00
54	Barrier Light Pole Support Modification	\$21,000.00
55	Additional Widening N. Side of Baseline Between Buckeye & SR210	\$69,000.47
57	Joint Seal Assembly Quantity Increase	\$19,197.00
<b>58</b>	<b>Trial Batch Testing Field Qualification of Jointed Plain Concrete Pavement (JPCP)</b>	<b>\$15,000.00</b>
59	Median Crossover Modifications	\$89,044.23
60	Hydro-seed Restoration Modifications	(\$8,252.67)
61	Additional Concrete Test Panel	\$1,541.00
61 S-1	Revised Concrete Stamp	\$3,600.00
62	NOPC No. 9 Resolution Damaged MBGR	\$50,000.00
63	Temporary K-Rail for Crossover	\$280,878.00
64	Irrigation, Trench Rock and Debris Removal	\$22,500.00
65	Revision to Sound Wall 1050 Block Face	\$48,710.82
<b>70</b>	<b>Close Fencing Gaps</b>	<b>\$2,477.00</b>
<b>81</b>	<b>Base Line Brick Color Revision</b>	<b>\$16,033.11</b>
<b>83</b>	<b>Eliminate Base Line Interchange Milestone</b>	<b>\$0.00</b>
<b>CCO TOTAL</b>		<b>\$3,492,260.63</b>
<b>TOTAL CONTINGENCY AND SUPPLEMENTAL</b>		<b>\$34,927,690.07</b>

<b>Central Avenue Improvements Project at SR 60 – Executed Change Orders</b>		
Number	Description	Amount
1	Establish and Maintain construction Field Office	\$150,000.00
2	Revise Plans – Shoulder Pavement Section	(\$21,291.00)
4	Temporary Striping	\$11,000.00
5	Maintain Traffic per Supplemental funds Provided	\$40,000.00
6	Establish Partnering per Specifications	\$20,000.00
7	Remove and Dispose of Illegal Dumping	\$20,000.00
8	Establish Dispute Review Board	\$15,000.00
10	Additional Move In for State 1 Clear and Grub	\$2,530.00
11	Maintain Electrical per Supplemental Funds Provided	\$15,000.00
12	Asbestos Abatement	\$41,185.00
13	Revise Irrigation Plans	\$0.00
14	Storm Water Protection per Supplemental Funds	\$40,000.00
15	Traffic Handling Plan Revision	\$20,000.00
17	Tree Removal	\$40,000.00
19	Soil Nail Wall Design Change	\$25,000.00
<b>CCO TOTAL</b>		<b>\$418,424.00</b>
<b>TOTAL CONTINGENCY AND SUPPLEMENTAL</b>		<b>\$2,912,039.00</b>

**Bolded** - Construction Change Orders approved since the last reporting to the Metro Valley Study Session  
Amounts shown in parentheses represent a credit to the Agency



<b>I-10 Tippecanoe Avenue Landscaping EEP – Executed Change Orders</b>		
Number	Description	Amount
1	Replace Frost Damaged Plant Material	\$796.00
2	Replace Caltrans Phase I Irrigation Controller	\$7,777.09
3	Additional Tree Replacement	\$859.86
3 S-1	Weather Damaged Plants Replacement	\$2,428.00
4	Mulch Replenishment	\$99,999.99
5	Contract Extension and Water Reimbursement	\$17,443.28
<b>CCO TOTAL</b>		<b>\$129,304.22</b>
<b>TOTAL CONTRACT AMENDMENTS, CONTINGENCY AND SUPPLEMENTAL</b>		<b>\$130,590.00</b>
<b>SR 210 Pepper Avenue Interchange EEP – Executed Change Orders</b>		
Number	Description	Amount
1	Repairs to Existing Site Irrigation	\$10,000.00
<b>CCO TOTAL</b>		<b>\$10,000.00</b>
<b>TOTAL CONTINGENCY AND SUPPLEMENTAL</b>		<b>\$31,244.80</b>

<b>I-215 Segment 1 &amp; 3 Landscape Replacement Project – Executed Change Orders</b>		
Number	Description	Amount
1	Maintain Public Traffic	\$25,000.00
2	Storm Water Shared Costs	\$25,000.00
3	Establish Dispute Resolution Advisor	\$5,000.00
4	Remove and Dispose of Rock Cobble	\$10,000.00
4 S-1	Additional Funds	\$15,000.00
4 S-2	Additional Funds	\$4,854.82
5	Cleaning of Drainage Systems	\$25,000.00
6	Removal of Dead Trees	\$10,000.00
7	Change from 15 Gallon to 5 Gallon Plant Size	(\$43,663.00)
7 S-1	Additional Funds	\$2,221.02
8	Repairs to Existing Facilities	\$3,000.00
8 S-1	Additional Funds	\$2,000.00
8 S-2	Additional Funds	\$4,500.00
8 S-3	Additional Funds	\$15,250.00
8 S-4	Additional Funds	\$3,930.65
9	Lane Closure Chart Revisions	\$0.00
9 S-1	Lane Closure Chart Revisions	\$0.00
10	PVC Ball Valve	\$0.00
11	Repair Fiber Optic Cable	\$4,070.87
12	Irrigation Water Payment	\$32,384.52
12 S-1	Additional Funds	\$8,487.04
12 S-2	Additional Funds	\$1,656.78
12 S-3	Additional Funds	\$1,634.70
12 S-4	Additional Funds	\$1,603.65
12 S-5	Additional Funds	\$5,007.79
12 S-6	Additional Funds	\$5,739.61
12 S-7	Additional Funds	\$6,753.56
12 S-8	Additional Funds	\$8,666.48

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Amounts shown in parentheses represent a credit to the Agency

12 S-9	Additional Funds	\$4,744.77
12 S-10	Additional Funds	\$5,482.89
12 S-11	Additional Funds	\$2,874.37
12 S-12	Additional Funds	\$466.51
12 S-13	Additional Funds	\$493.89
12 S-14	Irrigation Water Payment	\$719.97
13	Increase in Gravel Mulch Costs	\$158,215.90
14	Repair Damage by Others	\$6,000.00
15	Additional Electrical Work	\$976.73
16	Additional Plant Establishment Work	\$5,000.00
16 S-1	Additional Funds	\$50,000.00
17	Remove Burned Palm Tree	\$4,000.00
<b>CCO TOTAL</b>		<b>\$422,073.52</b>
<b>TOTAL CONTINGENCY AND SUPPLEMENTAL</b>		<b>\$812,748.38</b>

<b>I-215 Segment 2 Landscape Replacement Project – Executed Change Orders</b>		
Number	Description	Amount
1	Maintain Public Traffic	\$2,000.00
2	Storm Water Shared Costs	\$10,000.00
3	Establish Dispute Resolution Advisor	\$5,000.00
4	Remove and Dispose of Rock Cobble	\$10,000.00
4 S-1	Additional Funds to Remove BNSF Ballast	\$40,000.00
4 S-2	Additional Funds to Remove and Dispose of Rock Cobble	\$20,000.00
4 S-3	Additional Funds to Remove and Dispose of Rock Cobble	\$3,000.00
4 S-4	Remove Unsuitable Material	\$2,646.91
5	Cleaning of Drainage Systems	\$25,000.00
6	Removal of Dead Trees	\$10,000.00
7	Revised Special Provisions for the Cost of Water	\$0.00
7 S-1	Water Cost Adjustment	\$5,000.00
8	Irrigation Revisions	\$656.30
9	Relocate Trees and Irrigation outside of Clear Recovery Zone	\$10,000.00
9 S-1	Additional Funds	\$1,206.16
10	Service Connection for Irrigation	\$5,000.00
10 S-1	Additional Funds	\$15,000.00
11	Revised Ball Valves Specifications	\$0.00
12	Modify Plants Group/Type	(\$6,968.44)
13	Delete Work at 16 <sup>th</sup>	(\$54,250.70)
13 S-1	Salvage Irrigation Equipment	\$1,676.15
14	Revised Gravel Mulch Specifications	\$0.00
15	Added Irrigation Booster Pump	\$48,457.80
16	Added Closure Charts	\$0.00
17	Gravel Mulch Adjustment	\$187,717.00
18	Additional Gravel Mulch Quantities	\$21,508.05
<b>CCO TOTAL</b>		<b>\$362,649.23</b>
<b>TOTAL CONTINGENCY AND SUPPLEMENTAL</b>		<b>\$502,203.56</b>

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<b>I-10 Corridor Contract 1</b>		
<b>Design Build – Executed Change Orders</b>		
Number	Description	Amount
1	Establish Dispute Review Board	\$75,000.00
2	Partnering	\$90,000.00
3	100 Day Extension for Utility Information Submittal	\$0.00
4	Addition of Executed Utility Agreements to Technical Provisions	\$0.00
4 S-1	Executed / Revised Utility Agreements	\$0.00
4 S-2	Executed / Revised Utility Agreements	\$0.00
4 S-3	Executed / Revised Utility Agreements	\$0.00
4 S-4	Executed Utility Agreements	\$0.00
4 S-5	Executed Utility Agreements	\$0.00
4 S-6	Executed Utility Agreements	\$0.00
5	Overhead Sign Location Change	\$0.00
6	Modifications to Insurance and Subcontractor Requirements	\$0.00
7	Provide for CHP & Maintenance Observation/Enforcement Area	\$0.00
11	Revised Pavement Delineation Detail	\$0.00
12	Mass Concrete Specification Revision	\$0.00
13	Temporary ITS Traffic Monitoring Stations	\$0.00
14	Concurrent Closure of 6th Street and Campus Avenue Bridges	\$0.00
15	Modify Utility Relocation Work Packages	\$0.00
16	Revised Requirements for Shop Drawings Submittals	\$0.00
17	Revised Ramp Lane Closure Requirements	\$0.00
18	Revised Tech Provision 14.3.5 “Design Submittals” Requirements	\$0.00
19	Modifications to the Project Aesthetics and Landscape Master Plan	\$0.00
20	Added Pool Removal and (2) Electrical Panel Replacements	\$42,790.00
21	Revised SHOPP Pavement Rehabilitation Work Limits	\$657,200.00
22	Revised East End Ultimate Paving Limits	\$257,050.00
23	4th Street Striping	\$14,000.00
24	GAD and ROW Revisions	(\$470,125.00)
25	Deletion of Sound Wall 1190	(\$322,150.00)
26	Euclid Eastbound Exit Ramp Ground Anchor Wall Limits	\$155,400.00
27	Reduced Speed Limit Requirements	\$260,000.00
28	Additional Toll Rate Dynamic Message Signs	\$290,900.00
29	Revised Maintenance Requirements for Specific Auxiliary Lanes	\$0.00
30	Right of Way and Utility Design Revisions	\$719,277.00
30 S-1	Utility Revisions near Monte Vista Avenue	\$617,905.00
31	Additional Design Revisions for Right-of-Way Changes	\$25,767.00
32	Clearing of the TCE and Pool Mitigation Work	\$30,380.00
33	Rock Curb Extension at Euclid Avenue	\$77,892.00
34	7th Street and 2nd Avenue Sidewalk Improvements	\$79,732.00
Jan 2021	BOD approves revised funding plan with contingency reduction	(21,400,000)
35	Revised TCS CCTV Camera System	\$76,517.00
37	Partnering Facilitator Payment	\$50,000.00
38	Emergency Property Fence Fix	\$1,631.00
39	I-10/I-15 North to West Connector – 55-hour Closure	\$0.00
40	55-Hour Closure, Storm And Deck Drains	\$730,000.00
41	Recessed Pavement Markers	\$6,384.00
42	Telecommunication Conduits/ROW Support	\$111,843.48
43	Extra Maintenance for CHP Directed Closure	\$12,652.00

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Attachment: CCO Log (8950 : Construction Contract Change Orders MVSS2210)

44	Extra Maintenance for Hazardous Materials Clean Up	\$1,111.00
45	Additional Industrial Driveway on Sultana Avenue at Edison Elementary	\$10,000.00
46	Additional 55-Hour Closures on Segment 4	\$0.00
47	All Compensation for Design, Construction and all Ancillary Items to Complete Additional Work	\$900,000.00
48	DB CN 0130 and CN 1135 Additional SOW for AT&T	\$117,500.00
49	Removal of Abandoned Pipes along Monte Vista Avenue	\$85,000.00
50	Credit for the Design, Construction and all Ancillary Items to Complete Additional Work	(\$750,000.00)
51	Change Concrete Barrier Type from 736 to 836	\$3,600,000.00
52	Property Commitment at 1325 Fresno Street – Criner Property	\$41,000.00
53	Reflective Traffic Signal Backplates	\$120,000.00
54	Relocation of Ramp Meter System RMS at Vineyard WB On-Ramp DL-139	\$182,000.00
55	9222 Vernon Avenue Maki Private Property Drainage Improvement	\$16,000.00
56	Additional Work at WB I-10, East of I-10/Vineyard IC	\$345,000.00
57	Removal of Abandoned Pipelines CN 0565 & CN 0566 at Monte Vista/I-10 UC Structure	\$90,000.00
58	Holt Blvd. Off-Ramp UC LT Closure Wall Aesthetic Finish	\$35,000.00
59	Monte Vista WB On-Ramp Shoulder Pavement DL-121	\$217,500.00
60	Directive – Add “International” to Ontario Airport Signs	\$50,000.00
61	Furnish Ramp Meter Cabinets	\$210,000.00
62	Additional SHOPP Paving Archibald Ramp Pavement Rehab	\$98,500.00
63	Additional Work for MWD Encasement Extension	\$752,000.00
64	Additional SHOPP Rehab Work - Slab Repair Near I-10/Etiwanda Ave IC	\$92,500.00
66	Additional Work Mountain Ave EB On-Ramp Right-of-Way Fencing	\$10,250.00
67	SCE Profile Euclid Ave and Vineyard Ave and Asbestos Removal 6th St Bridge	\$110,655.00
<b>69</b>	<b>Turner Channel Drainage System Improvements</b>	<b>\$258,014.00</b>
<b>70</b>	<b>Non-Traffic Rated Pull Boxes 6-Inch Below Grade</b>	<b>\$61,775.00</b>
<b>CCO TOTAL</b>		<b>\$10,243,850.48</b>
<b>TOTAL CONTINGENCY AND SUPPLEMENTAL</b>		<b>\$51,369,000.00</b>

<b>Toll Service Provider – Executed Change Orders</b>		
Number	Description	Amount
1	Establish Dispute Review Board	\$75,000.00
2	Partnering	\$0.00
3	Right of Way (ROW) Revisions	\$0.00
4	Revised NTP 2 Start Date	\$0.00
6	Revised Enforcement Beacon Specifications	(\$1,952.00)
7	Added TRDMS to Two On-Ramps	\$193,850.00
<b>CCO TOTAL</b>		<b>\$266,898.00</b>
<b>TOTAL CONTINGENCY AND SUPPLEMENTAL</b>		<b>\$1,855,000.00</b>

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US 395 Phase 1 Widening Project – Executed Change Orders		
Number	Description	Amount
1	Maintain Public Traffic	\$100,000.00
2	Storm Water Shared Costs	\$25,000.00
3	Partnering	\$20,000.00
4	Establish Dispute Resolution Advisor	\$20,000.00
5	Cleaning of Drainage Systems	\$30,000.00
6	Buried Man-Made Objects	\$15,000.00
7	Maintain Existing Temporary Electrical Systems	\$15,000.00
7 S-1	Additional Funds	\$85,000.00
8	Maintain Temporary Tortoise Fence	\$15,000.00
9	Revised Temporary HMA Requirements	(\$11,000.00)
10	Revised Temporary HMA Specifications	(\$3,180.00)
11	Additional Earthwork	\$35,905.00
12	Protect Existing Drainage Systems	\$70,000.00
13	Added Saw Cut to coordinate with Kinder Morgan work	\$24,304.00
14	Provide Access to A Local Business	\$11,800.00
15	Quantity Increases; Bid Items 21, 26 & 83	\$78,780.00
15 S-1	Revised Bid Item Quantities	\$356,374.49
15 S-2	Revised Bid Item Quantities	\$34,801.30
16	Drainage System 14 Modifications	\$10,270.00
17	Removal of 31 Concrete Headwalls and Wingwalls	\$52,583.75
18	Drainage System 7 Modifications	\$31,356.00
19	Adjust Manholes to Grade	\$10,000.00
19 S-1	Additional Funds	\$5,000.00
20	Additional HMA Paving for Revised Staging	\$127,670.90
21	Modified Drainage System Opening on Retaining Wall 794	\$4,103.35
22	Revisions at North of Mojave Drive Intersection	\$150,000.00
22 S-1	Revisions at North of Mojave Drive Intersection	\$150,000.00
23	Revised Pile Cap Concrete Requirement for Sound Wall 875	\$217,665.25
25	Added curb on the Southeast Corner of Air Base Road	\$2,040.00
26	Electrical Design Changes at the Air Base Road Intersection	\$43,363.00
27	Added Hydroseed	\$35,324.00
28	Added MGS per Safety Commission	\$50,000.00
29	Additional Pavement Markings and Striping	\$50,000.00
29 S-1	Additional Funds	\$7,000.00
30	Revised Joshua Wash Bridge Wingwalls	\$50,000.00
31	Payment Adjustment for Gravel Bag Quantities	\$40,138.32
32	Additional Safety Commission Revisions	\$45,000.00
33	Installation and Testing of Additional Electronic Ball Markers	\$8,569.95
34	Stage 4 Temporary Striping	\$73,706.00
35	Seneca Interchange Revisions	\$108,331.64
<b>CCO TOTAL</b>		<b>\$2,194,906.95</b>
<b>TOTAL CONTINGENCY AND SUPPLEMENTAL</b>		<b>\$8,741,611.75</b>

Attachment: CCO Log (8950 : Construction Contract Change Orders MVSS2210)

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Monte Vista Grade Separation – Executed Change Orders		
Number	Description	Amount
1	Establish Dispute Resolution Board	\$15,000.00
1 S-1	Revise Special Provision Language	\$0.00
1 S-2	Additional Funds	\$10,000.00
2	Partnering Workshop	\$15,000.00
3	Traffic Control	\$10,000.00
3 S-1	Additional Funds	\$10,000.00
4	Federal Training Program	\$12,000.00
5	Post-Tensioning Duct Size Change	\$0.00
7	Storm Water Shared Costs	\$50,000.00
8	Relocate 8" Water Line	\$8,000.00
8 S-1	Additional Funds	\$10,386.03
9	Drainage System for Adjacent Property	\$14,925.00
10	Masonry Block Change	\$0.00
11	Sewer Lateral Piping Size Change	\$6,013.00
12	Future Electrical Conduits for Montclair	\$39,385.00
13	Change in Phasing of Work	\$0.00
14	Precast Girder Reinforcement Change	\$0.00
15	Change in Phasing of Work	\$0.00
16	Water Line Modifications	\$8,790.00
16 S-1	TRO Payment for Delays Related to CCO No. 16	\$124,800.00
16 S-2	Additional Funds	\$54,689.60
17	Modify Overhead Signs and Install Pedestrian Barricades	\$6,765.97
21	Additional Sewer Service Lateral Connections	\$10,850.00
22	Girder Reinforcement Splicing Option	\$0.00
23	Deleting Sidewalk	(\$12,540.00)
25	HMA Along Private Access Road	\$16,000.00
26	Temporary Embankment for SCE	\$15,000.00
27	Temporary Shoring for SCE	\$60,000.00
28	Modify Water Line in Conflict with SCE	\$10,000.00
29	Storm Drain Lateral Realignment	\$14,110.00
31	Driveway for Future Development	\$3,187.80
32	Potholing/Locating AT&T & Level 3 Utilities	\$60,000.00
33	Deduction for Rejected Piles	(\$10,000.00)
34	Modified Quantities Due to the Field Conditions	\$29,257.95
34 S-1	Modified Quantities Due to the Field Conditions	\$105,453.57
34 S-2	Modified Quantities Due to the Field Conditions	\$9,450.00
35	Conduit for SCE Service Connection for Traffic Signal System	\$8,000.00
36	Additional MSE Wall Drainage	\$8,000.00
37	Water Supply Modifications	\$15,000.00
38	Seal Coat Specification Change	(\$2,000.00)
39	Removal of UPRR Sign Foundations	\$5,000.00
41	Resolution of NOPC No. 3	(\$59,986.00)
42	Revised Canopy at Taxi Yard	\$0.00

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43	Landscaping Revisions	\$11,286.00
44	Added Headwall and Retaining Curb	\$10,000.00
45	Drainage Inlet Repair Damaged by Public	\$7,500.00
45 S-1	Additional Funds	\$381.43
46	Project Substantial Completion	\$0.00
47	Wire Mesh Substitution	\$15,000.00
48	Fence and Gate Revisions	\$52,336.60
49	Monument Modifications	\$6,500.00
49 S-1	Additional Monument Modifications	\$46,000.00
52	Additional work required by UPRR	\$10,577.00
53	Additional Erosion Control	\$16,000.00
54	Fence Repairs Damaged by Public	\$13,184.00
<b>CCO TOTAL</b>		<b>\$869,302.95</b>
<b>TOTAL CONTINGENCY AND SUPPLEMENTAL</b>		<b>\$2,498,958.60</b>

<b>Mount Vernon Avenue Viaduct Design-Build Project – Executed Change Orders</b>		
Number	Description	Amount
1	Added Perimeter Fence, K-rail and Signage	\$21,500.00
1 S-1	Install/Maintain Temporary Fence	\$28,670.86
2	Partnering	\$100,000.00
3	Temporary Crossing	\$700,000.00
3 S-1	Additional Funds	\$225,000.00
3 S-2	Construct Railroad Temporary Construction Crossing	\$13,889.15
3 S-3	Temporary Railroad Crossing	\$27,744.36
5	Asbestos Removal	\$100,000.00
5 S-1	Additional Funds	\$954,863.00
5 S-2	Asbestos Coating Abatement	\$429,723.86
5 S-3	Bridge Demolition Engineer – Increase Time	\$67,977.25
5 S-4	Asbestos Coating Abatement	\$159,481.26
7	Add Fire Hydrants	\$112,200.00
8	Test Unforeseen Buried Man-made object	\$1,341.55
9	Decommission/Abandon Water and Sewer Lines	\$203,852.65
10	Added Utilities Work at Kingman Street	\$377,389.28
12	Increase Contractor Overhead – Increase Time	\$208,232.35
15	Design for Additional Street Lights on Alley and Cabrera	\$15,400.00
16	Design for Bike Lanes E 2 <sup>nd</sup>	\$14,190.00
17	BNSF Fence Removal	\$12,332.14
20	North Abutment Embankment Removal	\$141,592.00
<b>21</b>	<b>Kingman Widening</b>	<b>\$107,497.50</b>
<b>CCO TOTAL</b>		<b>\$4,022,877.21</b>
<b>TOTAL CONTINGENCY AND SUPPLEMENTAL</b>		<b>\$17,230,000.00</b>

Attachment: CCO Log (8950 : Construction Contract Change Orders MVSS2210)

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Amounts shown in parentheses represent a credit to the Agency

<b>I-10 University Street Improvement Project – Executed Change Orders</b>		
Number	Description	Amount
1	Time Extension (Delay Start)	\$0.00
2	Maintain Traffic	\$10,000.00
2 S-1	Maintain Roadway and Traffic	\$15,000.00
3	Time Extension	\$20,000.00
4	Tree Removals	\$17,096.27
5	Dispute Resolution Advisor DRA	\$10,000.00
6	Replace Pavement Structural Section	\$393,852.01
6 S-1	Replace Pavement Structural Section	\$20,000.00
6 S-2	Replace Pavement Structural Section	\$11,500.00
7	WB On-Ramp Modification	\$229,391.13
8	Modify Signal Controller	(\$11,348.73)
9	Relocate Signal Push Button Pole	\$13,372.65
10	Install of Signal Conduit to Avoid Conflict	\$15,129.64
11	Differing Site Condition	\$28,061.09
12	Disposal of Fiber Optic Vault	\$4,940.41
13	Revised Elevations for Curb and Gutter	\$2,862.64
15	Payment Adjustment per Price Index due to Crude Oil Prices	\$38,500.00
16	Water Meter Revisions	\$61,564.00
17	Install Joint Sealant	\$9,433.79
18	Add Master Remote Control Valve	\$2,500.00
19	Sewer Line Repair	\$6,000.00
21	Additional Earthwork	\$7,500.00
22	Additional Push Button Pole Installation	\$7,500.00
23	Repair Electrical Line	\$8,000.00
<b>CCO TOTAL</b>		<b>\$920,854.90</b>
<b>TOTAL CONTINGENCY AND SUPPLEMENTAL</b>		<b>\$1,500,590.00</b>

<b>I-10 Alabama Street Improvement Project – Executed Change Orders</b>		
Number	Description	Amount
1	SWPPP Maintenance	\$20,000.00
2	Traffic Control Devices	\$30,000.00
3	Electrical Works Utility Modifications	\$25,000.00
4	Stage 1A Value Engineering Change Proposal (VECP) Credit	(\$20,362.87)
<b>CCO TOTAL</b>		<b>\$54,637.13</b>
<b>TOTAL CONTINGENCY AND SUPPLEMENTAL</b>		<b>\$1,338,886.33</b>

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Amounts shown in parentheses represent a credit to the Agency



## *Minute Action*

AGENDA ITEM: 3

***Date:*** *October 13, 2022*

***Subject:***

Major Projects Status Report through September 2022

***Recommendation:***

Receive the Major Projects Status Report for the period through September 2022.

***Background:***

The Major Projects Status Report for the period through September 2022, is a high-level summary of relevant project information. This information is presented to provide schedules, cost, funding, and work descriptions for current active projects being managed by the Project Delivery group. San Bernardino County Transportation Authority (SBCTA) staff also would like to highlight the following activities for this period:

**1. Interstate 10 Mount Vernon Avenue Interchange Improvement Project:**

The Interstate 10 (I-10) Mount Vernon Avenue Interchange Improvement Project (Project), in the County of San Bernardino, is ranked No. 19 in the priority list under the Measure I 2010-2040 Freeway Interchange Program. Mount Vernon Avenue is a north – south arterial in the City of Colton, and connects to I-10 via a split tight diamond configuration in the westbound direction and hook ramps in the eastbound direction. This location is experiencing high levels of traffic congestion resulting in low levels of service. The Project will replace the Mount Vernon overcrossing over I-10, which will also accommodate the future I-10 Corridor widening. The Project achieved Project Approval & Environmental Document (PA/ED) on April 19, 2022. The Project is currently at the 65% Plans, Specifications, and Estimates (PS&E) milestone, with the 95% PS&E anticipated to be submitted in November 2022, and 100% PS&E by April 2023. The Project is scheduled to be Ready to List (RTL) in the summer of 2023. The Right-of-Way (ROW) requirements maps were approved on April 11, 2022 and staff is currently in the process of preparing appraisals for the required ROW needed for the project. Construction is anticipated to start late 2023 and is anticipated to take approximately two and one-half (2 ½) years to complete. A Public Outreach program is in place and will be maintained during the ROW and construction phases.

**2. Interstate 215 University Parkway Interchange Project:**

The Interstate 215 (I-215) University Parkway Interchange Project will address traffic congestion and improve freeway access for the City of San Bernardino and the region by reconstructing the existing tight diamond interchange into a Diverging Diamond Interchange (DDI) configuration. The DDI is a new innovative concept that will improve traffic operations by reducing vehicular conflict points and traffic signal phases by diverting vehicles to the left side of the road between both ramp intersections. The 65% PS&E milestone was completed, and in August 2022, the 95% PS&E milestone was submitted to California Department of Transportation (Caltrans) for oversight review. The Construction Management Services firm has been selected and a Contract Task Order (CTO) was issued in July 2022. Acquisition of the remaining needed ROW is ongoing through the eminent domain process while staff is concurrently negotiating with

*Entity: San Bernardino County Transportation Authority*

property owners. Construction is anticipated to start in the summer of 2023 and is anticipated to take approximately one (1) year to complete.

### **3. Interstate 10 Eastbound Truck Climbing Lane Project:**

The Interstate 10 (I-10) Eastbound Truck Climbing Lane Project will improve traffic operations along a three-mile stretch of I-10 between the Sixth Street overcrossing in the City of Yucaipa through County Line Road in the City of Calimesa by adding an eastbound truck climbing lane for slow moving vehicles. This segment of freeway is on steep grade while carrying a large volume of trucks since I-10 is a critical goods movement corridor for the region and the rest of the country. The project will include widening of Oak Glen Creek Bridge, paving the median portion of the freeway, and constructing a concrete median barrier. This project will be funded with Senate Bill 1 (SB1) Transportation Corridor Enhancement Program (TCEP) funds. In April 2022, the project received ROW Certification and Design conditional approval pending receipt of the environmental regulatory permits from the California Department of Fish and Wildlife (CDFW) and the Regional Water Quality Control Board. The Construction Management firm was selected and the contract was approved by the Board in July 2022. Staff is planning to request allocation of the TCEP funds at the December California Transportation Commission (CTC) meeting so the project can be advertised in early 2023. Construction is anticipated to start in the summer of 2023 and is anticipated to take approximately one and one-half (1 ½) years to complete. Coordination with a recent Caltrans pavement rehabilitation project along the same segment of freeway resulted in cost savings for both Caltrans and SBCTA.

***Financial Impact:***

This item is consistent with the Fiscal Year 2022/2023 Budget.

***Reviewed By:***

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

***Responsible Staff:***

Sal Chavez, Project Delivery Manager

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Approved  
Board of Directors Metro Valley Study Session  
Date: October 13, 2022

Witnessed By:

## *Minute Action*

AGENDA ITEM: 4

***Date:*** *October 13, 2022*

***Subject:***

Interstate 10 Eastbound Truck Climbing Lane Release of Invitation for Bids No. 23-1002869

***Recommendation:***

That the following be reviewed and recommended for final approval by the Board of Directors, acting as the San Bernardino County Transportation Authority, at a regularly scheduled Board meeting

Authorize the Executive Director, or his designee, to release Invitation for Bids No. 23-1002869 for construction of the Interstate 10 Eastbound Truck Climbing Lane Project, subject to approval as to form by General Counsel and final approval of the Plans, Specifications, and Estimates package.

***Background:***

The Interstate 10 (I-10) Eastbound Truck Climbing Lane Project (Project) is in the San Bernardino County Measure I Freeway Program and will improve traffic operations along an approximately three-mile freeway segment by adding a truck lane along the eastbound I-10. The Project starts at 16<sup>th</sup> Street in the City of Yucaipa and will terminate around County Line Road in the City of Calimesa. The Project will add a new freeway lane to the inside of the freeway and stripe the outside lane into a truck climbing lane, pave the median, add concrete median barriers, and widen the Oak Glen Creek Bridge. The construction contract will be funded with approximately \$24 million of competitive grant funds from the Senate Bill 1 (SB1) Trade Corridor Enhancement Program (TCEP).

In March 2021, the Board of Directors (Board) approved the final design services contract for the Project, and the work to prepare and complete the final design package began shortly after. On April 22, 2022, the Project received Right-of-Way Certification, and on April 26, 2022, the Project received conditional approval of the Final 100% Plans, Specifications, and Estimates (PS&E) package. On June 1, 2022, the Board approved Construction Cooperative Agreement No. 22-1002782 with California Department of Transportation (Caltrans), defining the roles and responsibilities of each agency under the construction phase of the Project. Under this agreement, San Bernardino County Transportation Authority will lead the Advertisement, Award, and Administration (AAA) of the Project. Presently, the project team is waiting for approval of two regulatory permits, one from the California Department of Fish and Wildlife, and the other from the Regional Water Quality Control Board. Once the permits are issued and any requirements are incorporated into the project plans and specifications, staff can request the California Transportation Commission to allocate the TCEP funds for the Project.

An Invitation for Bids (IFB) has been prepared based on the conditionally approved PS&E package. Staff is recommending that the Board authorize the Executive Director, or his designee, to advertise the construction contract for the Project through the release of IFB No. 23-1002869, subject to approval as to form by General Counsel, final approval of the PS&E package, and allocation of TCEP funds. The Project can then be advertised for construction with an anticipated award of a construction contract to be brought directly to the Board for approval in early 2023 and construction can start by spring of 2023.

*Entity: San Bernardino County Transportation Authority*

Board of Directors Metro Valley Study Session Agenda Item

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**Financial Impact:**

This item is consistent with the Fiscal Year 2022/2023 Budget under Task No. 0820 Valley Freeway Projects, Sub-Task No. 0854 I-10 EB TCL.

**Reviewed By:**

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

**Responsible Staff:**

Khalid Bazmi, Construction Manager

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Approved  
Board of Directors Metro Valley Study Session  
Date: October 13, 2022

Witnessed By:

## ***Minute Action***

AGENDA ITEM: 5

***Date:*** *October 13, 2022*

***Subject:***

Release Request for Proposals for Construction Management Services for Mount Vernon Avenue Improvement Project at Interstate 10

***Recommendation:***

That the following be reviewed and recommended for final approval by the Board of Directors, acting as the San Bernardino County Transportation Authority, at a regularly scheduled Board meeting:

Authorize the release of Request for Proposals No. 23-1002845 for Construction Management Services for the Interstate 10 Mount Vernon Avenue Interchange Improvement Project.

***Background:***

In July 2018, San Bernardino County Transportation Authority awarded the design services contract to initiate the Project Approval/Environmental Document (PA/ED) and Plans, Specifications and Estimates (PS&E) phases of the Interstate 10 (I-10) Mount Vernon Avenue Interchange Improvement Project (Project). The Project will replace the existing overcrossing and improve traffic operations and bicycle & pedestrian facilities along Mount Vernon Avenue, between East Valley Boulevard and the I-10 eastbound ramps. The Project will also accommodate anticipated future I-10 improvements.

PA/ED was completed in April 2022, and in June 2022, the 65% PS&E were submitted to California Department of Transportation (Caltrans). The Project is on track for design approval early summer of 2023. To allow for constructability reviews prior to completion of the PS&E package and prior to advertisement of the Project for construction, staff is requesting authorization from the Board of Directors (Board) to release a Request for Proposals (RFP) to procure Construction Management Services. A future recommendation is anticipated to be presented to the Board in early 2023 for the award of the contract. This contract will be funded with Measure I Valley Interchange Program funds and City of Colton Development Impact Fees.

Staff is recommending authorization for the release of RFP No. 23-1002845 for Construction Management Services for the I-10 Mount Vernon Avenue Interchange Improvement Project.

***Financial Impact:***

This item is consistent with the Fiscal Year 2022/2023 Budget under Task 0830 (Interchange Projects), Sub-Task 0898 (I-10 Mt. Vernon).

***Reviewed By:***

This item is not scheduled for review by any other policy committee or technical advisory committee. SBCTA General Counsel, Procurement Manager and Risk Manager have reviewed this item and the draft RFP.

***Responsible Staff:***

Khalid Bazmi, Construction Manager

*Entity: San Bernardino County Transportation Authority*

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Approved  
Board of Directors Metro Valley Study Session  
Date: October 13, 2022  
Witnessed By:

**ATTACHMENT A - SCOPE OF WORK****RFP 23-1002845**

## INDEX

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## A. DESCRIPTION OF SERVICES

The San Bernardino County Transportation Authority (SBCTA) will utilize the services of CONSULTANT to support the construction activities for the Project. The CONSULTANT will provide construction management, materials testing, and construction surveying for the Project. A description of the Project is given below.

### **Project Description**

This project proposes to construct improvements to Mount (Mt.) Vernon Avenue at the Interstate 10 (I-10) Interchange to improve traffic operation as well as improve bicycle and pedestrian access along Mt. Vernon Avenue through the interchange. The Mt. Vernon Avenue Interchange on I-10 is in the City of Colton in San Bernardino County. The project limits along I-10 begin at the 9<sup>th</sup> Street (St.) Interchange Post Mile (PM) R22.7 to the west and end at the I-215 Interchange PM R24.3. The project area extends along Mt. Vernon Avenue approximately 540 feet north of the existing freeway centerline and approximately 640 feet south of the existing freeway centerline at the Union Pacific Railroad (UPRR) bridge overcrossing.

The existing Mt. Vernon Avenue, through the interchange has four striped lanes, which transitions to three striped through lanes north of the eastbound ramps. The Build Alternative (Preferred Alternative) will accommodate four continuous through lanes through the interchange, two additional left turn lanes in the northbound direction, and bike lanes in both directions. The Mt. Vernon Avenue overcrossing structure will be reconstructed to accommodate the widening on Mt. Vernon Avenue and the future widening of the I-10 freeway to its ultimate configuration.

The City of Colton has a separate project which will widen Mt. Vernon Avenue from two through lanes to four through lanes from the I-10 eastbound ramps to approximately 300 feet south of the intersection. This project will further widen the southern leg of the intersection to accommodate a northbound dedicated left turn lane to E. Mission Street.

North of the bridge, the existing five-leg intersection connecting Mt. Vernon Avenue and East Valley Boulevard to the I-10 westbound on-ramp, would be realigned with exclusive turn lanes, signalization, and signage improvements incorporated to improve traffic operations. The existing westbound on-ramp and eastbound off-ramp are proposed to be modified to accommodate the wider and taller bridge structure.

The project also addresses bicycle and pedestrian modes of travel. Specifically, it would upgrade bicycle access from Class III to Class II bike lane with striped buffer in each direction through the interchange. For pedestrians, it would add a sidewalk on the northeastern side of the bridge and address Americans with Disabilities Act (ADA) access with up-to-date curb ramps.

Improvements to the Mt. Vernon Avenue at the I-10 Interchange will be funded by San Bernardino County Transportation Authority (SBCTA) and the City of Colton as part of the Measure I Program. The project is part of the Valley Interchange Program identified in the Measure I Ordinance approved by San Bernardino County voters in 2004.



## Services

Services are anticipated to generally include, but are not limited to the following: participation in the evaluation of scheduling of the proposed project; constructability reviews; construction project advertising, bid analysis, and award; construction inspection; construction surveying, materials testing, source inspection, contractor interface and contract administration; office engineering; and other assorted duties as appropriate in managing construction of a Caltrans improvement project.

CONSULTANT shall assign a full-time Resident Engineer and one Structures Representative to coordinate all contract and personnel activities for all phases of construction. Other Resident Engineer(s) and inspection personnel may be assigned to direct and coordinate all project specific field activities and responsibilities as needed for satisfactory performance on the project. The Resident Engineer and Structures Representative assigned for this project shall both be licensed as a Professional Civil Engineers in the State of California at the time of proposal submittal and through the duration of the contract. The Consultant is expected to provide a Structures Representative, Survey personnel, and Materials Testing/Source Inspection personnel to administer the construction support services requested herein and to assign qualified field personnel to perform the requested services. Furthermore, the Resident Engineer shall act as the public outreach liaison to assist the Authority's Public Information Office in implementing the Public Outreach Program established for this project.

Insofar as the Consultant's approach described in the Proposal, the scope of responsibility and the total number of personnel assigned to each phase is left to the discretion of the CONSULTANT. The Proposal shall include a staffing plan, an organization chart and a resource loaded schedule that will establish the firm's ability to adequately and appropriately staff and manage the project both during pre-construction period, during the construction phase and the close-out phase. CONSULTANT will be required to provide a resource loaded staffing plan broken down for the entire duration of the project with the proposal and on a monthly basis during the course of construction showing resources and costs to SBCTA through project completion. If selected Consultant shall provide lookahead monthly updates to the aforementioned staffing plan showing cost to complete through planned project completion date.

CONSULTANT shall provide qualified construction management and inspection, materials testing and source inspection, construction surveying and public relations liaison personnel to perform a wide variety of construction management, support and contract administration duties as outlined in this Scope of Services for the Project.

The CONSULTANT shall report to and receive direction from SBCTA through the Construction Manager, or his designees. The SBCTA Construction Manager is responsible for coordination of all SBCTA construction activities and for coordinating the efforts of the total construction team. The SBCTA Construction Manager will be the main contact and primary source of information between SBCTA, cities, outside agencies, supporting consultants and the public for the construction project.

## B. PERFORMANCE REQUIREMENTS

**Construction Management:** CONSULTANT shall furnish a Project Manager to coordinate CONSULTANT operations with SBCTA. The Project Manager shall be responsible for all matters related to CONSULTANT personnel and operations. The Project Manager may also serve as the Resident Engineer.

CONSULTANT shall also furnish a Resident Engineer and a Structures Representative. The Resident Engineer shall be assigned to direct and coordinate construction activities under this contract. Other Assistant Resident Engineers and Assistant Structures Representative/Structures Inspector may be assigned to each specific project responsibilities as needed. The Resident Engineer and Structures Representative shall be a Civil Engineers registered in the State of California and shall be in responsible charge of construction management and construction activity within the Project.

The number of CONSULTANT personnel assigned to the Project will vary throughout the duration of the contract. CONSULTANT personnel will be assigned, in varying levels of responsibility, as needed by the CONSULTANT to meet the Project schedule, Project requirements, and construction activities.

Resumes of personnel must be submitted to SBCTA for review and approval prior to assignment to the Project. SBCTA and CONSULTANT will jointly determine the quality and quantity of services that are required by CONSULTANT personnel. Personnel selected for assignment by CONSULTANT shall be made available for personal interviews prior to acceptance by SBCTA. If, in the opinion of SBCTA, an individual lacks adequate experience, the individual may be rejected or may be accepted on a trial basis until such time the individual's ability to perform the required services has been demonstrated. If, at any time, the performance of CONSULTANT personnel is unsatisfactory to SBCTA, SBCTA may release him/her by written notice and may request another qualified person be assigned.

If CONSULTANT personnel are on leave of absence, the Project Manager shall provide equally qualified replacement personnel until the assigned personnel returns to the Project approved by SBCTA.

The typical workday includes all hours worked by the construction Contractor. If necessary, overtime for CONSULTANT personnel may be required. The construction Contractor's operations may be restricted to specific hours during the week, which shall become the normal workday for CONSULTANT personnel. The Project Manager, with prior concurrence from SBCTA, shall have the authority to increase, decrease, or eliminate CONSULTANT personnel work hours dependent on the schedule and requirements of the construction Contractor. All overtime required by CONSULTANT personnel shall be approved and authorized by SBCTA prior to each occurrence.

CONSULTANT personnel shall be knowledgeable of and comply with all applicable local, state, and federal regulations. CONSULTANT personnel shall cooperate and consult with SBCTA, State, and City officials during the course of the Project. CONSULTANT personnel shall perform duties as may be required to assure that construction is being performed in accordance with the Project plans and specifications. CONSULTANT personnel shall keep accurate and timely records and document all work performed by the Contractor and CONSULTANT.

CONSULTANT shall monitor for Contractor's compliance with the labor standards

provisions of the projects and the related wage determination decisions of the Secretary of Labor.

CONSULTANT personnel shall assist SBCTA and local agencies in obtaining compliance with the safety and accident prevention provisions of the Project. Local agencies will retain jurisdictional control for traffic control.

All services required herein shall be performed in accordance with California Department of Transportation guidelines, regulations, policies, procedures, manuals, and standards, except as noted in the special provisions.

**Materials Testing & Source Inspection:** The number of field testing and source inspection personnel assigned to the Project will vary throughout the duration of the construction contract. CONSULTANT certified materials testing and source inspection personnel will be assigned as needed by the Resident Engineer to meet the required numbers and frequencies of testing based on schedule of the construction contractor.

Materials Testing /Source Inspection Services will be provided on an on-call basis. The duration of assignments could vary from a minimum of a few hours to the full term of the Project. CONSULTANT personnel will be available within one (1) day of written notification by SBCTA.

It is the intent of SBCTA to maintain a consistency of material testing/source inspection quality throughout each phase of each project. CONSULTANT is therefore encouraged to provide, where ever and whenever possible, the same personnel for the duration of construction of each project.

On days when work is not performed by the construction contractor, such as rainy or unsuitable weather days, CONSULTANT will not provide services unless authorized by the SBCTA Construction Manager.

Consultant shall be responsible for finalizing a Source Inspection Quality Management Plan (SIQMP) to match the project requirements, assist SBCTA in gaining Caltrans approval, and manage the SIQMP. The SIQMP shall meet SBCTA and Caltrans requirements. Consultant shall provide Structural Materials Representative (SMR), Steel inspectors, Non-destructive Steel Inspectors, Coating Inspectors, Precast Concrete Inspectors and other source inspectors as needed.

All CONSULTANT personnel will be knowledgeable of, and comply with, all applicable local, state, and federal regulations. All personnel shall cooperate and consult with SBCTA during the course of the contract; and perform other duties as may be required to assure that the construction is being performed in accordance with the Project plans and specifications. CONSULTANT's personnel will keep records and document the work as directed by the Resident Engineer.

All services required herein will be performed in accordance with Caltrans regulations, policies, procedures, manuals, and standards.

**Construction Surveying:** CONSULTANT will furnish surveying crew(s) to perform construction surveys for the Project. The number of survey crew(s) assigned to the Project may vary throughout the duration of the construction contract to meet the Project needs. CONSULTANT personnel will be assigned as needed by the Resident Engineer to meet the schedule of the construction contractor.

Construction surveying services will be provided on an on-call basis. It is the intent of SBCTA to maintain a consistency of construction survey quality throughout each phase of each project. Therefore, CONSULTANT is encouraged to provide the same field personnel for the duration of construction. It is important that the Field Party Chief(s) assigned to a project be completely familiar with the survey requirements and the assignments for the Project.

Construction surveying will not be performed when conditions such as weather, traffic, and other factors prevent safe and efficient operation.

CONSULTANT personnel will:

- Be knowledgeable of, and comply with all, applicable local, Caltrans, state, and federal regulations.
- Cooperate and consult with SBCTA officials during the course of the contract.
- Perform duties as may be required to assure construction is performed in accordance with the Project plans and specifications.
- Keep records and document work as directed by SBCTA Construction Manager.

All services required herein will be performed in accordance with Caltrans regulations, policies, procedures, manuals, and standards.

### C. **DUTIES AND RESPONSIBILITIES**

#### 1. Pre-construction Services

##### a. Schedule

CONSULTANT shall review the proposed Project schedule, compare it to the Project plans and specifications, and provide recommendations to SBCTA, as appropriate, to ensure efficiency of Contractor and CONSULTANT operations and safe and expeditious completion of the Project.

##### b. Budget

CONSULTANT shall review the Project estimate, quantities and provide recommendations to SBCTA, as appropriate, to ensure efficient utilization of funds and control of project costs.

##### c. Constructability Review

CONSULTANT shall review Project plans and special provisions for possible errors and deficiencies and report such findings to SBCTA in a format provide by SBCTA.

##### d. Utility Relocation assistance

#### 2. Bid Process

##### a. Bid Documents

CONSULTANT shall assist SBCTA, as requested, with the following tasks:

- 1) Review of bid documents
- 2) Preparation of bid tabulations

3) Verify Design Engineer's and Independent Engineer's Estimate

b. Pre-construction Meetings

CONSULTANT shall assist SBCTA in conducting one, or more, pre-construction meetings with all involved parties on the Project. Parties may include, but are not limited to, the Contractor, design engineer, Caltrans, County and City staff, utility companies, and developers.

c. Contract Award

CONSULTANT shall assist SBCTA, as requested, with the following tasks:

- 1) Review of bid for completeness and responsiveness  
Perform bid analysis
- 2) Development of contractor payment schedules, and other procedural items.  
Checking Contractor references, licenses, insurance, and sureties.
- 3) Coordination with prospective Contractor for award of construction contract(s).

All processes will be consistent with procedures outlined by the California Department of Transportation for Special Funded Programs and Local Assistance Procedure Manuals.

3. Project Administration

- a. CONSULTANT shall administer Project construction contracts using Caltrans Construction Manual as a guideline.
- b. CONSULTANT shall conduct regular Project coordination meetings with Contractor, SBCTA, local agencies, and design engineer, as appropriate.
- c. CONSULTANT shall prepare Contractor progress payments and maintain payment records and supporting documentation. All progress payments shall be reviewed by SBCTA for approval.
- d. CONSULTANT shall provide reports as needed to comply with specific funding requirements.
- e. CONSULTANT shall establish and maintain Project records in accordance with the Caltrans Construction Manual. Project record keeping shall include, but are not limited to, correspondence, memoranda, contract documents, change orders, claims, SBCTA and engineer directives, meeting minutes, shop drawings, supplementary drawings, and requests for payment. CONSULTANT shall maintain a record of the names, addresses, and telephone and fax numbers of the Contractors, subcontractors, and principal material suppliers.
- f. CONSULTANT shall establish and maintain a filing system in hard copies files and in electronic forms for each Project using the Caltrans Construction Manual as a guideline. Electronic data documentation will be required to be uploaded monthly to the SBCTA Major Projects Portal

- g. CONSULTANT shall monitor Contractors' construction schedules on an ongoing basis and alert SBCTA to conditions that may lead to delays in completion of the Project.
  - h. CONSULTANT shall prepare and submit a monthly Activity Summary Report for the Project in a format approved by SBCTA. The activity report shall include among other items status of SWPPP issues, RFIs, contract change orders, and notice of potential claims; construction activities completed, ongoing, and upcoming; status of Project budget and schedule, and other highlights and critical issues.
  - i. CONSULTANT shall review and ensure compliance with environmental requirements.
  - j. CONSULTANT shall participate in partnering sessions with the Contractor, SBCTA, and Local Agencies, as required.
  - k. CONSULTANT shall ensure that the Project meets all provisions of the SBCTA Construction Materials Quality Assurance Program and Caltrans Quality Assurance Program Manual.
  - l. CONSULTANT shall review Contractors' certified payroll records and ensure compliance with the requirements of the construction contract.
  - m. CONSULTANT shall ensure that the Project meets all provisions of the Storm Water Pollution Prevention Plan (SWPPP).
  - n. CONSULTANT shall assure that the Project meets all applicable regulations of the Air Quality Management District (AQMD) and State Water Resource Control Board (SWRCB).
  - o. CONSULTANT shall maintain redlined as-built plans on an ongoing basis throughout the duration of the Project. Redlined plans shall show all changes made to the original contract plans, each change identified with the name of the approver, date of change approval, and CCO number, if applicable
4. Construction Coordination
- a. CONSULTANT shall provide a minimum of one qualified Resident Engineer and one Structures Representative to effectively manage the Project.
  - b. CONSULTANT Resident Engineer shall act as a prime point of contact between Contractor, Caltrans, SBCTA, CONSULTANT's construction surveyor, CONSULTANT's materials inspector, CONSULTANTS Structural Material Representative (SMR) and utility companies. CONSULTANT may, when requested by SBCTA, act as point of contact between design engineers, cities, and the public. CONSULTANT shall ensure coordination with property owners adjacent to Project right-of-way to ensure timely communication regarding property-condition survey and construction activities and scheduling.
  - c. CONSULTANT shall maintain regular contact with SBCTA's Construction Manager.



- d. CONSULTANT shall coordinate utility relocations with utility companies and their designees, as well as the utility inspector.
  - e. CONSULTANT shall proactively review Project plans and special provisions for possible errors and deficiencies prior to construction of any specific element and report such findings to SBCTA. Should SBCTA determine that changes are necessary, CONSULTANT shall assist in implementation and processing of change orders in accordance with contract documents.
  - f. CONSULTANT shall proactively review Project plans and special provisions; monitor, coordinate, and track construction progress schedule and RFIs; and communicate with various agencies prior to construction of any specific elements to ensure the Project proceeds on schedule and according to the order of work in the plans and special provisions. CONSULTANT shall expedite work, as required, to maintain schedule in conjunction with the overall construction staging program.
  - g. CONSULTANT shall coordinate review of shop drawings and Requests for Information (RFI) with the SBCTA Construction Manager. CONSULTANT shall log and track all submittals and requests.
  - h. CONSULTANT shall provide a qualified SWPPP Coordinator who along with the Resident Engineer shall review and certify contractor prepared Storm Water Pollution Prevention Plans (SWPPP) and coordinate approval with SBCTA and the State Water Resource Control Board. The SWPPP Coordinator shall be at a minimum a Qualified Storm Water Pollution Prevention Plan (SWPPP) Developer (QSD) and a Qualified SWPPP Practitioner (QSP). CONSULTANT shall provide at a minimum weekly SWPPP monitoring and shall cooperate with all monitoring agency inspections and field reviews.
  - i. CONSULTANT shall coordinate the implementation of any changes with the SBCTA Construction Manager and the design engineer.
  - j. CONSULTANT shall review and approve falsework and shoring plans.
  - k. CONSULTANT shall review and approve Traffic Control Plans and forward to SBCTA for Caltrans/City/County approvals, as necessary.
  - l. CONSULTANT shall coordinate all Project construction activities with other on-going projects within and adjacent to the Project limits.
5. Construction Inspection
- a. CONSULTANT shall coordinate all required inspections necessary for the Project. CONSULTANT shall ensure that appropriate City and local agencies are notified and present as required throughout the Project. CONSULTANT shall notify SBCTA immediately regarding any directives, recommendations, notices, etc. received from agencies other than SBCTA.

- b. CONSULTANT shall perform daily on-site observations of the progress and quality of construction to determine if the work being performed is in general conformance with the contract documents, all applicable laws, codes, and ordinances.
- c. CONSULTANT shall exercise reasonable care and diligence to discover and promptly report to SBCTA any and all defects or deficiencies in the materials or workmanship used in the Project.
- d. CONSULTANT personnel assigned to the Project shall be thoroughly familiar with Caltrans Standard Specifications, Caltrans Standard Plans, Caltrans Temporary Pedestrian Facilities Handbook, Caltrans Erosion Control and Highway Planting requirements, safety standards and State Water Resources Control Board requirements. CONSULTANT personnel shall have the ability to read and interpret construction plans and specifications. CONSULTANT personnel shall also have knowledge of State of California Construction Safety Orders (CalOSHA) and traffic control practices as specified in the Work Area Traffic Control Handbook (WATCH), Construction Policy Bulletin CPB 17-1, "Permanent Pedestrian Facilities Construction Inspection Documentation, California Manual on Uniform Traffic Control (MUTCD). In addition, CONSULTANT personnel shall be thoroughly familiar with the construction requirements of Caltrans' Storm Water Pollution Prevention Program.
- e. Assignments to be performed by CONSULTANT personnel shall include, but are not limited to, the following:
  - 1) Paving and subgrade inspection, sub-surface & finish surface drainage inspection, structures and foundation inspection, signing and striping inspection, quantity calculations, ADA certification, checking grade and alignment, construction traffic control, inspection and duties that may be required to determine that construction of the Project is being performed in accordance with the contract documents.
  - 2) Identifying actual and potential problems associated with the Project and recommending sound engineering solutions.
  - 3) Perform basic sampling of construction materials in the field per California Test Method 105 and 125 by both the prime and subconsultant personnel.
  - 4) Maintaining awareness of safety and health requirements. Monitoring Contractors' compliance with applicable regulations and construction contract provisions for the protection of the public and Project personnel.
  - 5) Preparing complete and accurate daily reports, calculations, project records, payment quantity documents, reports, and correspondence related to Project activities.
  - 6) Preparing construction sketches, drawings, and cross-sections, as necessary.



- 7) Assisting in the preparation of as-built plans.
- 8) Providing inspections for environmental compliance.
- 9) Maintaining awareness of water discharge requirements. Monitoring Contractors' compliance with applicable regulations and construction contract provisions.
- 10) Monitoring Contractors' compliance with applicable regulations required by AQMD.
- 11) Other duties as may be required or reasonably requested.

6. Project Support

a. Construction Surveys

CONSULTANT shall perform construction surveying services, field calculations, and home office calculations to support construction of the Project. CONSULTANT may be requested to review available survey data, construction plans, and right-of-way plans to confirm compatibility and to identify discrepancies prior to and during construction of proposed projects. The Resident Engineer will assign survey work to the CONSULTANT as needed by issuing a "Request for Survey Services". Requests may include, but not be limited to, the following types of surveys and related services:

1) Construction Surveys

CONSULTANT shall perform construction staking and calculations as needed.

- a) Survey calculations and adjustments shall be performed with established and computed coordinates based on the California Coordinate System.
- b) Cross-section data collection shall be performed by conventional and terrain line interpolation survey methods.
- c) Survey data will include topography, cross-section, and other survey data in computer formats compatible with the Caltrans computer survey and design systems.
- d) Prepare and maintain survey documents. Survey documents include survey field notes, maps, drawings, and other survey documents.
- e) Perform construction staking, including but not limited to:
  - i. Utility relocations
  - ii. Clearing limits
  - iii. Slope staking
  - iv. Storm drain and sanitary sewer
  - v. Drainage structures
  - vi. Curbs, gutters, and sidewalk

- vii. Horizontal and vertical control for structures and portions of structures (bents, abutments, wingwalls, etc.)
  - viii. Rough grade
  - ix. Finish grade
  - f) Monitor for settlement, if required.
  - g) Global Positioning Satellite (GPS) equipment shall be made available if required by SBCTA
- 2) Grid Grades
- Grid grade data shall provide pavement elevations at the station line, the left edge of pavement, the right edge of pavement, and the right edge of travel way at 25 foot intervals for travel lanes.
- 3) Open Ended Traverses and Profile Data Sheets
- Separate open-ended traverse calculations and point maps shall depict plan data for station lines, utility lines, wall layout lines, and abutment/bent alignment. Specific information to be shown will be part numbers, coordinates, bearings, and curve data.
- Profile data sheets are required for all profiles shown on the plans identifying vertical design elements such as grade, point of intersection (PI) location, beginning of vertical curve (BVC) location, end of vertical curve (EVC) location, and curve length.
- 4) Three Line Profiles
- Separate profile plots are required for the left edge of pavement, the right edge of pavement, and the edge of shoulder for all travel lanes.
- 5) Right of Way Lines
- Existing right of way and easements will be established from Local Agency's record information and existing monumentation.
- a) Right of way monumentation shall be renewed and restored in accordance with Section 10.4 of the Caltrans "Survey Manual" and the State of California Land Surveyor's Act.
  - b) Corner records and records of surveys shall be prepared and filed in accordance with the applicable standards and the State of California Land Surveyor's Act and the California Subdivision Map Act.
  - c) Perpetuate existing monumentation, which includes restoring, renewing, referencing, and resetting existing boundary related monumentation. In addition, stake areas where construction disturbs the existing right of way, preparing and filing required maps and records.

New right of way and easements will be established from plans, right of way maps, utility drawings, and Local Agency record information, and existing monumentation.

- a) Right of Way Surveys, which includes research and preparation filing of required maps and records. In addition, locate and set monuments for right of way and easement lines, staking for right of way and easement fences.
  - b) Final monumentation, which includes setting of centerline points of control upon completion of construction (only with written direction from SBCTA).
- 6) Special Design – Data Surveys  
Includes drainage, utility, and surveys required for special field studies.
  - 7) Control Survey  
Includes Project control surveys, aerial mapping control surveys, horizontal and vertical control surveys. In addition control surveys will include restoration, renewal, reference, relocation, and resetting of existing control monumentation. The CONSULTANT will be required to provide horizontal and vertical control at the end of each bridge.
  - 8) Topographic Surveys  
Topographic surveys will normally be compiled by ground survey methods only.  
  
CONSULTANT will provide all necessary Project related surveys and construction staking, including horizontal and vertical control, right of way, and easements. CONSULTANT shall coordinate all staking and verify accuracy. CONSULTANT shall ensure timely coordination of all staking requests from the Contractor.
- b. Materials Testing, Source Inspection and Geotechnical Services
- 1) CONSULTANT will provide experienced personnel, equipment, and facilities to perform various construction materials sampling and testing. Laboratory and field materials testing will be used to ensure that structure and roadway construction work conforms to California State Department of Transportation (Caltrans) standards, specifications, and special provisions for material quality and workmanship.
  - 2) All field and laboratory testing is to be performed in accordance with California Test Methods.
  - 3) CONSULTANT will be responsible for the accuracy and completeness of all test data compilation and results.

c. Public Outreach

**General Public Outreach Plan will be provided and administered by SBCTA.**

- 1) SBCTA's primary goal is to assure the public that SBCTA is a public agency that delivers quality transportation projects and trustworthy, accurate and timely public information.
- 2) SBCTA will provide the primary outreach effort with supplemental support as requested from CONSULTANT. This will be a targeted approach with incremental outreach based on construction schedule and staging. The primary target audiences identified for this Project include, but are not limited to:
  - a) LOCAL AGENCY
  - b) SBCTA Board
  - c) LOCAL AGENCY and area Emergency Service Providers
  - d) School Transportation Coordinator(s)
  - e) Local Business Community
    - i) Specific businesses with expanding priority based on proximity to work zone and detours
    - ii) Chamber of Commerce
  - f) Commuters
  - g) Recreational Travelers
  - h) Trucking Industry
  - i) Local media
    - i) Print
    - ii) Radio
    - iii) Television
- 3) In the weeks prior to the selection of a construction contractor, SBCTA may coordinate an Emergency Responders Project Briefing to highlight the Project details and possible access challenges for consideration by the Project team.
- 4) Following the emergency responders briefing, SBCTA may coordinate a Chamber of Commerce Project Briefing to highlight the Project benefits, possible construction schedule and traffic management plan.
- 5) Just prior to the start of field construction activities, SBCTA and CONSULTANT (includes all PR subs) may coordinate a groundbreaking media event with the LOCAL AGENCY to ceremoniously open the Project. CONSULTANT will be called up on to develop (with input from SBCTA) and maintain a task list of deliverables for this event. CONSULTANT will acquire the necessary items authorized for the event. CONSULTANT will be responsible for set up and breakdown of the event site.

- 6) Prior to construction beginning, SBCTA and CONSULTANT may coordinate a community meeting to share Project information, construction scheduling, detour information and expected challenges with the general public. CONSULTANT will be called up on to develop (with input from SBCTA) and maintain a task list of deliverables for this event. CONSULTANT will acquire the necessary items authorized for the event. CONSULTANT will be responsible for set up and breakdown of the event site. Staffing this event will be determined based on availability.
- 7) Near the completion of the construction Project, SBCTA and CONSULTANT will coordinate a ribbon-cutting media event. CONSULTANT will be called upon in a similar fashion to the groundbreaking event.
- 8) At various stages throughout the Project, SBCTA will request support from CONSULTANT for the following items:
  - a) Establish and maintain stakeholder and/or 'interested parties' list(s) – used for sharing Project updates during Project construction. May need to be filtered to specific audiences (i.e. emergency responders, city government, etc.)
  - b) Development of a Project fact sheet (include Project description, Project budget, Project schedule, SBCTA contact information, LOCAL AGENCY contact information, photos, logos, etc.)
  - c) Weekly media advisories (use SBCTA template). CONSULTANT (or sub) will make weekly contact with Project team to establish what road or lane closures (and associated detours if applicable) will be taking place, develop the advisory, send to SBCTA Public Information Office for approval, submit to webmaster for posting, distribute to appropriate media and stakeholder list.
  - d) Emergency notices – when needed.
  - e) Develop web content for project tab on SBCTA website. This page should include same elements of fact sheet with expanded detail when possible. If the information is dynamic, please provide updates to SBCTA Public Information Office for approval prior to submitting to webmaster.
- 9) All requests for speaking to government councils, boards, chambers of commerce or similar business or social groups shall be directed to the SBCTA Public Information Office before agreeing to appear.
- 10) All media inquiries shall be directed to the SBCTA Public Information Office.

d. Permits

CONSULTANT shall review the Project for permit compliance and coordinate with SBCTA and the design engineer to ensure that necessary permits are obtained. CONSULTANT shall assist SBCTA in the coordination, timely processing and verification of approval for all permits. CONSULTANT shall maintain permits and permit documentation on site.

7. Cost and Schedule

a. CONSULTANT shall monitor and track the following:

- 1) Contract pay item quantities and payments
- 2) Contract change orders
- 3) Supplemental work items
- 4) Agency furnished materials
- 5) Contingency balance
- 6) Project budget

b. CONSULTANT shall review and monitor Contractor's schedule by keeping a is own updated schedule to "shadow" that of the contractor and inform SBCTA of any significant changes or deviations in the schedule.

c. CONSULTANT shall provide and maintain a Project staffing plan of field office personnel based on the Contractor submitted baseline schedule update. In cooperation with SBCTA, the staffing plan shall be periodically updated to reflect Project progress and needs.

8. Contract Change Orders and Claims

a. CONSULTANT shall receive and evaluate requests for changes and/or substitutions by the Contractor. Contract Change Orders submitted to SBCTA shall be accompanied by CONSULTANT recommendations. Where applicable, CONSULTANT shall convey proposed changes to design engineer, or other Project consultants. If the requested changes are accepted, CONSULTANT shall negotiate and prepare appropriate Contract Change Orders.

b. CONSULTANT shall attempt to avoid unnecessary Contract Change Orders. When a Contract Change Order is necessary, CONSULTANT shall consult with SBCTA prior to its preparation. Unless directed otherwise by SBCTA, the preferred method of payment for Contract Change Orders should be as follows

- 1) Agreed Price
- 2) Adjustment in compensation to a bid item
- 3) Time and materials or Force Account

CONSULTANT shall perform force account analysis to validate cost submitted by the Contractor for contract change orders with agreed unit price, lump sum price, and adjustment in components. Analysis shall be based on realistic production and resource needs to complete the work.

- c. CONSULTANT shall attempt to identify all potential claims, track and monitor unresolved claims. The CONSULTANT shall implement appropriate claims avoidance processes where in the best interests of SBCTA as determined by SBCTA's Construction Manager.
- d. CONSULTANT shall assist SBCTA, as requested, in the identification, resolution, and final disposition of claims filed by the Contractor or third parties against SBCTA or the Project.

9. Safety

In addition to the requirements specified elsewhere in this contract, the following shall also apply:

- a. CONSULTANT shall implement and conduct a comprehensive safety program including regular tail-gate safety meetings for CONSULTANT personnel. CONSULTANT shall provide SBCTA with monthly status of safety reports.
- b. CONSULTANT shall comply with State of California Construction Safety Orders and provisions of the Caltrans Construction Manual.
- c. CONSULTANT shall provide appropriate safety training for all CONSULTANT field personnel.
- d. CONSULTANT shall provide all necessary safety equipment as required for CONSULTANT personnel.

10. Project Close Out

- a. CONSULTANT shall prepare a list of items to be completed and/or corrected by the Contractor for final completion of the Project.
- b. CONSULTANT shall collect and furnish as-built information to the design engineer for preparation of as-built drawings including pre-stress drawings and pile logs, as applicable.
- c. CONSULTANT shall review and verify completeness of as-built drawings.
- d. CONSULTANT shall conduct a final walk-through with SBCTA, Local Agencies, Contractors, and design engineers.
- e. CONSULTANT shall prepare final construction reports including the Project Completion Report.
- f. CONSULTANT shall prepare and deliver to SBCTA all Project files.
- g. CONSULTANT shall assist SBCTA and Contractor in obtaining final release of all Project permits.
- h. Project closeout services will be completed within two months of project acceptance.

**D. DELIVERABLES**

- 1. Inspector daily reports, extra work diaries and Resident Engineers' daily diaries.
- 2. Monthly Project Summary Reports and SIQMP Monthly Reports.



3. Monthly progress invoices shall include a forward looking staffing plan showing all resources, and monthly expenditure for prime consultant and subconsultants through project completion
4. A minimum of weekly uploads of all files to SBCTA Laserfiche Web Access project folder.
5. Monthly Contractor progress payments, back-up documentation, and Contractor payment records.
6. Contractor final payment documents, delivered to SBCTA no later than ten (10) working days after Acceptance by SBCTA of the completed construction Project.
7. Project Completion Report documents per Local Assistance Procedure Manual and Caltrans Construction Manual.
8. All Project files, Project reports, Record As-builts, correspondence, memoranda, shop drawings, Project logs, schedule updates, change order data, claims and claim reports, and Contractor payment records per Caltrans Construction Manual.
9. Certified payrolls and fringe benefit statements for all employees, CONSULTANT and Contractor, who are subject to the State and/or Federal prevailing wage rates.
10. American For Disabilities Act certification of project per Caltrans Standards.
11. All material test results will be provided in accordance with the applicable Standard Specifications and Special Provisions, and test methods. Failing tests will be immediately reported to the Resident Engineer or Structures Representative. All test results will be recorded on the appropriate forms. The test documents will be legible and show the identity of the tester where appropriate. A notebook containing all test results and reports will be maintained by CONSULTANT throughout the duration of the Project and delivered to SBCTA with the Project files.
12. Record of Survey and Right of Way Monumentations and recording with County (only with SBCTA written authorization).
13. Unless otherwise specified in the survey request, the deliverables shall conform to the following:
  - a. Survey points, lines, and monuments shall be established, marked, identified, and referenced as required by survey request and requirements herein.
  - b. Survey notes, drawings, calculations, and other survey documents and information shall be completed as required by the survey request and the requirements herein.
  - c. All original survey documents resulting from this contract, including original field notes, adjustment calculations, final results, and appropriate intermediate documents, shall be delivered to the Resident Engineer and shall become the property of SBCTA. A copy of all survey documents furnished by SBCTA shall be retained by CONSULTANT for future reference.

When the survey is performed with a total station survey system, the



original field notes shall be a hard copy in a readable format of the data (observations) as originally collected and submitted by the survey party. The hard copy shall be signed by the Party Chief. If the Party Chief is not licensed, the person in “responsible charge” will be required to sign.

- d. Deliverables to the Resident Engineer shall follow the format specified below:
  - 1) Horizontal Control
  - 2) Alpha numeric hard copy point listing with adjusted California Coordinate System northing and easting and the appropriate descriptions.
  - 3) Vertical Control
  - 4) Alpha numeric hard copy benchmark listing with adjusted elevations compatible with the design datum.
  - 5) Topography
  - 6) Alpha numeric hard copy listing, hard copy drawing, and computer aided drawing and design (CADD) digital drawing. The CADD drawing shall be compatible with the systems utilized by Caltrans.
- e. Data collection method used to collect cross-section data and the coding (feature description) of terrain data for cross-sections shall conform to the survey request requirements. Deliverables shall depend on the data collection method as follows:
  - 1) Conventional Cross – Sections (each cross – section):  
For each cross - section and alpha numeric listing, a hard copy drawing, and a computer formatted file compatible with the systems utilized by Caltrans.
  - 2) Terrain Line Interpolation Cross – Section Data (each terrain line interpolation survey):  
Terrain line interpolation cross – sections shall include an alpha numeric listing, a hard copy plan view drawing of the terrain lines, and a computer input file. The computer input file shall be provided in a format compatible with the systems utilized by Caltrans.
  - 3) Data Collector Data  
If specified in the survey request, the raw data from the data collector shall be provided in a format conforming to the survey request requirements.
  - 4) Other—As specified in the survey request.

**E. EQUIPMENT AND MATERIALS TO BE PROVIDED BY CONSULTANT**

1. CONSULTANT shall provide all necessary equipment including software, materials, supplies, miscellaneous tools, phones, vehicles, and safety equipment required for its personnel to perform the services accurately, efficiently, and safely. The above noted items are not to be included in Attachment B of Consultants Cost

Proposal and are part of the consultants overhead. Only those items authorized by SBCTA in Attachment B, CONSULTANT Cost Proposal, shall be reimbursed by SBCTA.

2. CONSULTANT personnel shall be provided with vehicles suitable for the location and nature of the work involved. Vehicles shall be equipped with flashing yellow lights, either permanently or temporarily affixed.
3. CONSULTANT personnel shall be provided with a mobile radio, cellular phone, or other means to assure full-time communication. If a radio system is to be used, CONSULTANT shall provide a base station at the field office.
4. CONSULTANT personnel shall be provided with all applicable standard plans, specifications, and other standards as appropriate (see item G below).
5. For Materials Testing, CONSULTANT and its staff will be fully equipped at all times to perform the services required, including but not limited to the following:
  - a. An on-site mobile laboratory or laboratory in close proximity to the Project will be required. The type and location of the lab should be such that it can meet the needs of the Project in an efficient, time effective manner. The laboratory is to be fully staffed, equipped, and supplied to conduct all required soils, materials, and concrete breaking tests in a timely manner.
  - b. Field personnel will be provided with all necessary safety equipment to permit work to be performed safely and efficiently within operating highway and construction zone environments.
  - c. All equipment to be calibrated as per Section 3-10 and 3-11 of Caltrans' Quality Assurance Program Manual.
6. For construction surveying, CONSULTANT and staff shall have adequate equipment and supplies to complete the required survey work. Equipment and supplies shall, include, but not be limited to:
  - a. Survey vehicles:
 

Survey vehicles will be suitable to perform the required work in varying terrain and conditions encountered on the Project. Vehicles shall be fully equipped with all necessary tools, instruments, supplies, and safety equipment required to perform the work accurately, efficiently, and safely. Vehicles shall be equipped with a flashing yellow beacon light.
  - b. Data Processing Systems:
 

Data processing systems shall include hardware and software to:

    - 1) Performing survey and staking calculations from the design plans and specifications;
    - 2) Reduce survey data collected with conventional and total station survey systems;
    - 3) Perform network adjustments for horizontal and vertical control surveys;

- 4) Format survey data to be compatible with the Caltrans computer survey and data system.
- c. Drafting equipment and supplies.
- d. Digital calculators.
- e. Hand tools as appropriate for the requested survey work.
- f. Traffic cones (minimum 25). Traffic cones shall be 28 inches in height (minimum).
- g. Traffic control devices as required to perform the requested survey work. Traffic control devices include signs, sign bases, flags, and hand held signs.
- h. Leveling instruments and equipment:
  - 1) Self-leveling level. Precision: Standard deviations in one mile of double run leveling 0.005 feet or less.
  - 2) Suitable level rods for the work to be performed.
- i. Distance measuring instruments and equipment:
  - 1) Electronic distance measurer (EDM). Precision: standard deviation 3 mm plus 3 PPM, or less; Range: Minimum one mile under average atmospheric conditions.
  - 2) Prisms, sufficient to perform the required work.
  - 3) Tapes; steel, cloth.
- j. Angle measuring instruments and equipment:
  - 1) Theodolite for non-control surveys; Precision: direct circle reading to three seconds, or equivalent, horizontal and vertical.
  - 2) Targets as required to perform the work.
- k. When required for efficient survey operations, total station survey systems consisting of an electronic angle measuring instrument, EDM, and electronic data collector shall be provided. The angle measuring instruments and EDM shall conform to the requirements for the equipment previously listed.
- l. Radio or cellular communications equipment for communication between field office and field crews.
- m. Caltrans manuals, standards, forms, and other policies and procedures to be followed to perform the required work.

**F. MATERIALS TO BE FURNISHED BY SBCTA**

1. SBCTA will provide three (3) copies of all Project construction documents including plans, and special provisions, and one (1) copy of all other reports, designer prepared resident engineer files, and contracts. In addition, SBCTA will provide one (1) full size (24" x 36") sets of plans for use in the construction field office as record documents.

2. SBCTA will provide copies of all previously secured permits and Project authorizations.
3. SBCTA Construction Management Forms including SBCTA Construction Materials Quality Assurance Program, sample SIQMP and appropriate forms for recording test data in accordance with Caltrans practices and procedures outlined in the “Manual of Test”.

**G. STANDARDS**

All construction inspection, surveys, materials sampling and testing, and contract administration shall be in accordance with the Project bid documents, special provisions, plans, and current Caltrans Manuals including:

1. Construction Manual and its revisions
2. Bridge Construction Records and Procedures Manual
3. Quality Assurance Program Manual
4. Manual of Traffic Controls for Construction and Maintenance Work Zones
5. Caltrans Standard Specifications and Standard Plans
6. Caltrans Storm Water Pollution Prevention Plan (SWPPP) and Water Pollution Control Program (WPCP) Preparation Manual
7. Manual of Test (3 volumes)
8. Survey Manual
9. District 8 Standard Staking Procedures Manual

Work not covered by the manuals shall be performed in accordance with accepted professional standards.

Surveys performed by CONSULTANT shall conform to the requirements of the Land Surveyor’s Act. In accordance with the Land Surveyor’s Act, “responsible charge” for the work shall reside with the Licensed Land Surveyor or a pre-January 1, 1982, Registered Professional Civil Engineer in the State of California.

Unless otherwise specified in the survey request, control surveys shall conform to second order (modified) accuracy standards as specified in the Caltrans “Survey Manual”.

Additional standards for specific survey work may be included in the applicable request for survey. Such standards supplement the standards specified herein. If additional standards conflict with the standards specified herein, the “Survey Request’s” standard shall govern.

The Resident Engineer and SBCTA will decide all questions, which may arise as to the quality or acceptability of deliverables furnished and work performed for this contract. Any CONSULTANT employee who does not perform adequately will be replaced if directed by the SBCTA Construction Manager.

**H. AVAILABILITY AND WORK HOURS**

The typical workday includes all hours worked by SBCTA’s construction Contractor including nights and weekends. The construction Contractor’s operations may be restricted to specific hours during the week, which will become the normal workday for

CONSULTANT's personnel. On days when work is not performed by the construction contractor, such as rainy or unsuitable weather days, CONSULTANT services will not be provided unless authorized by the SBCTA Construction Manager.

Unless otherwise directed by SBCTA, the normal work week will consist of 40 hours. From time to time, overtime may be required. However, overtime will be worked only when approved in writing by SBCTA.

#### **I. LIMITATIONS TO AUTHORITY**

CONSULTANT does not have the authority to:

1. Authorize deviations from the contract documents.
2. Approve substitute materials or equipment; except as authorized in writing by SBCTA.
3. Conduct or participate in tests or third party inspections; except as authorized in writing by SBCTA.
4. Assume any of the responsibilities of the Contractors, Contractors' Superintendent, or subcontractors.
5. Exercise control over or be responsible for construction means, methods, techniques, sequences, procedures, or safety precautions.
6. Communicate directly with subcontractors or material suppliers without the prior consent of the Contractor.
7. Verbally authorize or approve change orders or extra work for the Project.
8. Offer or receive incentives, inducements, or other forms of enumeration to or from the Contractor to perform services or work outside the terms of any executed contracts for this Project.

#### **J. THIRD PARTY RELATIONSHIPS**

This Contract is intended to provide unique services for a specific project. In the development of the Project, SBCTA has worked closely with various professional consultants, agencies, and others in the preparation of the construction documents and other Project related materials. SBCTA, however, is solely responsible for and will be the sole point of contact for all contractual matters related to the Project. CONSULTANT shall take direction **only** from SBCTA and shall regularly inform **only** SBCTA of Project progress, outstanding issues, and all Project related matters.

During the course of the Project, CONSULTANT may find occasion to meet with Caltrans, City or County representatives, the design engineer, Project consultants, or other third parties who have assisted with the Project. These entities may, from time to time, offer suggestions and/or recommendations regarding the Project or elements of the Project. While SBCTA enjoys a close relationship with and has considerable confidence in the capabilities of these other parties, CONSULTANT shall not act on any suggestions, solicited or unsolicited, without obtaining specific direction from SBCTA. All oral and written communication with outside agencies or consultants related to the Project shall be directed only to SBCTA. Distribution of Project related communication and information shall be at the sole discretion of SBCTA representatives.

**K. CONSTRUCTION SITE SAFETY**

In addition to the requirements specified elsewhere in this contract, the following also will apply.

1. CONSULTANT will conform to the safety provisions of the Caltrans Construction Manual.
2. CONSULTANT's field personnel will wear white hard hats with proper suspension, orange vests with reflective tape, sleeved shirt, long pants, and leather boots with ankle support and rubber soled shoes at all times while working in the field.
3. CONSULTANT will provide appropriate safety training for all CONSULTANT's personnel, including work on and near highways.
4. All safety equipment will be provided by CONSULTANT.

**L. BASIS FOR SURVEY AND MONUMENT STAKING**

SBCTA will designate the existing horizontal and vertical control monuments that are the basis of CONSULTANT performed surveys. SBCTA will provide the California Coordinate System values and/or elevation values for these monuments. CONSULTANT shall adjust CONSULTANT performed surveys to be the designated control monuments and the values.

Monuments established by CONSULTANT shall be marked by CONSULTANT with furnished disks, plugs, tags. In addition, CONSULTANT shall identify CONSULTANT established monuments by tagging or stamping the monuments with the license or registration number of CONSULTANT'S surveyor who is in "responsible charge" of the work.

**M. PERSONNEL QUALIFICATIONS AND RESPONSIBILITIES**

The quantity and qualifications of field personnel to be assigned will be determined by the scope of the Project and the degree of difficulty of required tasks to be performed. Again, all personnel and personnel assignments are subject to approval by SBCTA. While some areas of responsibility may overlap, as a guideline, CONSULTANT personnel assigned to the Project should have the following qualifications:

1. Project Manager
  - a. A minimum of six (6) years' project management experience on similar construction projects is desired.
  - b. Accessible to SBCTA at all times during normal working hours.
  - c. A thorough understanding of Caltrans construction practices and procedures.
  - d. A thorough understanding of Cal-OSHA practices and procedures.
  - e. The Project Manager will assume the following functional responsibilities:
    - 1) Review, monitor, train, and provide general direction for CONSULTANT personnel.
    - 2) Assign personnel to projects on an as-needed basis.

- 3) Administer personal leave.
- 4) Prepare monthly reports for delivery to SBCTA.

2. Resident Engineer

- a. A minimum of eight (8) years' resident engineer experience on similar construction projects is desired.
- b. Licensed Professional Civil Engineer in the State of California.
- c. Ability to work independently, make effective decisions concerning construction work in progress, and solve field problems.
- d. Accessible to SBCTA at all times including weekends and holidays.
- e. Certified as a Qualified SWPPP Developer or Practitioner is desired.
- f. A thorough understanding of Cal-OSHA practices and procedures.
- g. A thorough understanding of American with Disability Act (ADA) and Caltrans ADA requirements. Completion of Caltrans Temporary Pedestrian Facilities training within last 6 months.
- h. A thorough understanding of Caltrans field methods, practices, and construction office procedures. The Resident Engineer will assume the following functional responsibilities:
  - 1) Monitor and provide daily direction to CONSULTANT Resident Engineers and inspection personnel.
  - 2) Assign field personnel to specific project tasks.
  - 3) Monitor and track Contractor progress.
  - 4) Prepare daily, weekly and monthly reports as required.
  - 5) Coordinate utility relocations with appropriate agencies and the utility inspector.
  - 6) Act as prime field contact between various project Contractors and SBCTA's Construction Manager.

3. Assistant Resident Engineer

- a. A minimum of four (4) years' experience on similar construction projects is desired.
- b. Licensed Professional Civil Engineer in the State of California.
- c. Ability to work independently, make effective decisions concerning construction work in progress, and solve field problems.
- d. Accessible to SBCTA at all times including weekends and holidays.
- e. Certified as a Qualified SWPPP Developer or Practitioner is desired.
- f. A thorough understanding of Cal-OSHA practices and procedures.
- g. A thorough understanding of American with Disability Act (ADA) and Caltrans ADA requirements. Completion of Caltrans Temporary Pedestrian Facilities training within last 6 months.



- h. Thorough understanding of Caltrans field methods, practices, and construction office procedures. The Assistant Resident Engineer shall act under the direction of the Resident Engineer and will assume the following functional responsibilities:
- 1) Monitor and provide daily direction to CONSULTANT inspection personnel.
  - 2) Assign field personnel to specific project tasks.
  - 3) Monitor and track Contractor progress.
  - 4) Prepare daily, weekly and monthly reports as required.
  - 5) Coordinate utility relocations with appropriate agencies.

4. Lead Field Inspector

- a. A minimum of six (6) years' construction inspection experience in public works or similar projects or a four-year degree in the field of civil engineering, transportation and four years of similar construction experience is desired.
- b. A thorough understanding of Cal-OSHA practices and procedures.
- c. Knowledge of Caltrans construction practices, physical characteristics and properties of highway construction materials, and approved methods and equipment used in making physical tests of construction materials.
- d. Ability to work independently, make effective decisions concerning construction work in progress, and solve field problems.
- e. Ability to direct the efforts of subordinate inspectors.
- f. Ability to use an automatic level and transit for the purpose of verifying line and grade.
- g. Certified as a Qualified SWPPP Developer or Practitioner is desired.
- h. A thorough understanding of American with Disability Act (ADA) and Caltrans ADA requirements. Completion of Caltrans Temporary Pedestrian Facilities training within last 6 months.
- i. Understanding of Caltrans field and construction office procedures. The Lead Field Inspector will assume the following functional responsibilities:
  - 1) Assist in inspections to assure compliance with contract plans, specifications, and special provisions on all phases of construction.
  - 2) Assist in the preparation of contract change orders, contract estimates, progress pay estimates, and other documents or reports required for the Project.
  - 3) Coordinate field testing of materials to monitor compliance with Project specifications and Caltrans Quality Assurance Program.
  - 4) Maintain accurate and timely Project records. Perform quantity calculations for progress pay estimates.



- 5) Perform analytical calculations such as basic earthwork, grading, profiles, and special staking procedures.
- 6) Provide input for the redesign of facilities to fit existing field conditions.
- 7) Monitor and track Contractor progress. Prepare daily, weekly, and monthly reports as required.

5. Field Inspector

- a. Two (2) years' construction inspection experience in public works or similar projects or a four-year degree in the field of civil transportation engineering is desired.
- b. A thorough understanding of Cal-OSHA practices and procedures.
- c. Knowledge of construction practices, physical characteristics and properties of construction materials, and approved methods and equipment used in making physical tests of construction materials.
- d. Ability to work independently. Ability to make minor decisions concerning construction work in progress and to solve field and office problems.
- e. Ability to use an automatic level and transit for the purpose of verifying line and grade.
- f. Certified as a Qualified SWPPP Developer or Practitioner is desired.
- g. A thorough understanding of American with Disability Act (ADA) and Caltrans ADA requirements. Completion of Caltrans Temporary Pedestrian Facilities training within last 6 months.
- h. Understanding of Caltrans construction methods and practices. The Field Inspector will assume the following functional responsibilities:
  - 1) Assist in inspections to assure compliance with contract plans, specifications, and special provisions on all phases of project construction.
  - 2) Assist in preparation of contract change orders, contract estimates, progress pay estimates, and other documents or reports required for the Project.
  - 3) Coordinate field testing of materials to monitor compliance with Project specifications and Caltrans Quality Assurance Program.
  - 4) Perform quantity calculations for progress pay estimates and maintain Project records.
  - 5) Perform analytical calculations such as basic earthwork, grading, profiles, and special staking procedures.
  - 6) Provide input for the redesign of facilities to fit existing field conditions.
  - 7) Perform construction materials sampling.
  - 8) Perform labor compliance interviews of the Contractors' personnel.

6. Structural Representative

- a. A minimum of six (6) years' of bridge or structural construction inspection as related to major public works projects and a four-year degree in civil engineering is desired.
- b. A minimum of four (4) years as a Structural Representative on major public works projects.
- c. Licensed Professional Civil Engineer in the State of California.
- d. Knowledge of stress analysis, structural mechanics, and strength of materials.
- e. A thorough understanding of Cal-OSHA practices and procedures.
- f. Knowledge of Caltrans and Greenbook construction practices and the physical characteristics and properties of various bridge construction materials including concrete.
- g. Experience in the following areas: foundations, pile driving, concrete prestressing, bridge deck construction, cast-in-place wall construction, falsework, and shoring.
- h. Ability to work independently. Ability to perform duties in the construction field office and effectively make decisions concerning construction work in progress and solving field problems.
- i. Ability to direct the efforts of subordinate inspectors.
- j. Ability to use an automatic level and transit for the purpose of verifying line and grade.
- k. Thorough understanding of Caltrans field methods, practices, and construction office procedures. The Structural Representative shall assume the following functional responsibilities:
  - 1) Assist in inspections to assure compliance with contract plans, specifications, and special provisions on all phases of structural construction such as bridges, foundations, walls, falsework, shoring, and drainage structures.
  - 2) Make grade, alignment, quantity, falsework, and shoring calculations.
  - 3) Assist in the preparation of contract change orders, contract estimates, progress pay estimates, and other documents or reports required for the Project. Coordinate the sampling and testing of construction materials to monitor compliance with contract specifications.
  - 4) Monitor and track Contractor progress. Prepare daily, weekly, and monthly reports as required.
  - 5) Coordinate with Resident Engineer, as well as the Construction Staking and Material Testing consultants.
  - 6) Direct the daily activities of subordinate inspectors.

7. Assistant Structures Representative/Structural Inspector

- a. A minimum of four (4) years' of bridge design or structural construction inspection as related to Caltrans or major public works projects and a four-year degree in civil or structural engineering is desired.
- b. Knowledge of stress analysis, structural mechanics, and strength of materials.
- c. A thorough understanding of Cal-OSHA practices and procedures.
- d. Knowledge of construction practices and the physical characteristics and properties of various highway bridge construction materials including concrete.
- e. Experience in one or more of the following areas: pile driving, concrete prestressing, bridge deck construction, retaining wall construction, falsework, and shoring.
- f. Ability to work independently and make minor decisions concerning construction work in progress and to solve field and office problems.
- g. Ability to use an automatic level and transit for the purpose of verifying line and grade.
- h. Understanding of Caltrans construction methods and practices. The Structural Inspector will assume the following functional responsibilities:
  - 1) Assist in inspections to assure compliance with contract plans, specifications, and special provisions on all phases of structural construction such as bridges, foundation, walls, falsework, shoring, and drainage structures.
  - 2) Make grade, alignment, quantity, falsework, and shoring calculations.
  - 3) Assist in the preparation of contract change orders, contract estimates, progress pay estimates, and other documents or reports required for the Project.
  - 4) Sampling and testing of construction materials to monitor compliance with contract specifications and Caltrans Quality Assurance Program.

8. Office Engineer

- a. A minimum of two (2) years' experience as an office engineer on similar construction projects is desired.
- b. Knowledge of Caltrans Office of Highway Construction forms used to administer construction projects.
- c. Knowledge of Caltrans system of document organization.
- d. Knowledge of construction records and accounting procedures.
- e. Knowledge of documentation, procedures, and reporting for federally funded projects.

- f. Knowledge of laws and regulations governing the payment of prevailing wages.
- g. The Office Engineer will assume the following functional responsibilities:
  - 1) Process monthly progress pay estimates, monthly status reports, extra work reports, and weekly statements of working days.
  - 2) Prepare and process contract change orders.
  - 3) Monitor construction budget and schedule.
  - 4) Prepare, maintain, and/or file project documents including labor and equipment records, correspondence, memoranda, meeting minutes, claims, personnel records, labor compliance reports, and daily, weekly, and monthly reports.
  - 5) Perform routine calculations and checking of quantities.
  - 6) Coordinate all office activities and functions with SBCTA representatives.

9. Materials Testing/Source Inspection Project Manager

- a. A minimum four (4) years' project management experience on a similar highway/bridge construction project is desired.
- b. Licensed Civil Engineer in the State of California.
- c. Ability to use typical computer programs including word processing and spreadsheets.
- d. The Materials Testing/Source Inspection Project Manager will assume the following functional responsibilities:
  - 1) Review, monitor, train, and provide general direction for CONSULTANT's laboratory, field and source inspection personnel.
  - 2) Assign personnel to projects on an as-needed basis in coordination with the Resident Engineer.
  - 3) Administer personal leave, subject to approval of the Resident Engineer.
  - 4) Prepare monthly reports for delivery to the Resident Engineer.
  - 5) Provide direction, administration, and responsibility for Materials Certification per Caltrans Construction Manual, Section 8-01.
  - 6) Assist SBCTA and Resident Engineer in preparing the project specific Source Inspection Quality Management Plan (SIQMP) for Caltrans review and approval. (Reference Caltrans "Source Inspection Quality Management Plan (SIQMP Outline dated 04/17/12).
  - 7) Serve as project Structural Materials Representative (SMR) per Caltrans requirements.

- 8) Provide direction, administration, and responsibility for implementation of the approved SIQMP per Caltrans Construction Procedures Directive (CPD) 08-5 and FHWA Title 23 requirements.

Material testing/source inspection personnel will be certified by a California Registered Civil Engineer as being experienced and competent in the test procedures required for the work involved (and possess a current certificate of proficiency (Form MR-0111) in accordance with Quality Assurance Program Manual (Section 3-5). Independent certification of Caltrans test procedures may be performed at the discretion of the SBCTA Construction Manager.

10. Materials Technicians

CONSULTANT personnel provided under this contract will have a variety of skills and experience appropriate for the level of tasks to be assigned. Field personnel shall be certified by Caltrans and should have a minimum of two (2) years' experience in conducting material sampling and testing of the type required for the projects involved and possess the following additional capabilities:

- a. Have the ability to establish specific locations for appropriate tests when construction contract administration personnel are not available.
- b. Be familiar with construction practices and be fully aware of construction activities at the Project site.
- c. Have knowledge of and comply with safety and health regulations and requirements applicable to the Project.
- d. Specific qualifications for technicians are as follows:

1) CONSTRUCTION TECHNICIAN I

- a) Performs a variety of semi-skilled activities. Examples of duties assigned to this classification are:
  - i. Conducting quality control tests such as soil densities, sieve analysis tests, operation scales and inspecting spread operations.
  - ii. Sampling and transporting produced construction materials from point of application or production to testing laboratory.
- b) Knowledge and Skills Required
  - i. Knowledge of tools, equipment and vehicles utilized in construction.
  - ii. Knowledge of standard equipment and materials used for the sampling and testing of construction material.
  - iii. Knowledge of basic mathematics used in the computation of a variety of construction items.
  - iv. Knowledge of record keeping, preparing of documents and reports.

2) CONSTRUCTION TECHNICIAN II

- a) Performs a variety of skilled activities. Examples of duties assigned to this classification are:
- i. Inspecting minor construction items, sampling and inspection of steel reinforcement, sampling and inspection of concrete placing operation.
  - ii. Collect and analyze soil samples of construction materials to determine compaction and moisture content.
  - iii. Inspection and sampling of all phases of asphalt concrete and PCC paving operation, including plant inspection.
  - iv. Confers with construction engineers and contractors regarding construction in progress and is conformance to specifications and construction plans.
  - v. Answers questions and resolves problems.
  - vi. Inspects construction in progress to ensure conformance with specification, agreements, and established requirements.
  - vii. Keeps daily diary of work progress.
  - viii. Prepares reports on all field inspections and submits project quantities on a daily basis.
  - ix. Keeps accurate documentation for force accounts and possible claims.
- b) Knowledge and Skills Required
- i. All knowledge and skills required of lower classification.
  - ii. Knowledge of currently accepted methods, procedures and techniques used in highway construction inspection, survey, materials testing, and quality control equipment.
  - iii. Skill in interpersonal relations as applied to contact with contractors, representatives of other governmental jurisdictions, and other SBCTA/Caltrans staff.

3) CONSTRUCTION TECHNICIAN III

- a) Exercises considerable independent judgment within general

Caltrans standards and guidelines. Examples of duties assigned to this classification are:

- i. Inspect Project construction on an ongoing basis to assure compliance with contract and in accordance with State and local standards.
  - ii. Perform a variety of structural material tests and inspections.
  - iii. Reviews construction plans and verified that these are in accordance with designated specifications and other requirements.
  - iv. Participates in the preparation of completed work estimates, to calculate compensation due contractor.
  - v. Examines and verifies numeric data and material specifications on project cost source documents, utilizing geometry and trigonometry calculations.
  - vi. Supervises all work activities involved in construction projects, laboratory, and quality control work.
  - vii. Recommends approval of proposed Project changes.
- b) Knowledge and Skills Required
- i. All knowledge and skills required of lower classifications.
  - ii. Knowledge of the principles and practices of Civil Engineering as applied to the construction of state highways.
  - iii. Skill in analyzing and evaluating a wide variety of highly technical engineering data, including construction plans, field survey and quality control documents.
  - iv. Skill in interpreting and implementing Caltrans standards, policies, procedures and regulations.
  - v. Skill in interpersonal relations, as applied to contacts with contractors, representatives of other governmental jurisdictions, and other SBCTA/Caltrans staff.

11. Construction Surveying Project Manager

- a. A minimum four (4) years' project management experience on similar construction projects is desired.
- b. Licensed Surveyor or pre-January 1, 1982 Registered Professional Engineer in the State of California.



- c. Accessible to the Resident Engineer and SBCTA at all times during normal working hours as specified in this Scope of Services.
- d. Under the direction of the Resident Engineer, the Survey Project Manager will be responsible for:
  - 1) Review, monitor, train, and provide general direction for CONSULTANT survey personnel.
  - 2) Assign personnel to projects on an as-needed basis.
  - 3) Administer personal leave, subject to approval of the Resident Engineer.
  - 4) Prepare monthly reports for delivery to the Resident Engineer.

12. Field Party Chief(s)

- a. The person(s) holding the position of Party Chief shall meet at least one of the following licensing requirements:
  - 1) A licensed Land Surveyor in the State of California.
  - 2) A pre-January 1, 1982, Registered Professional Civil Engineer in the State of California.
  - 3) An experienced surveyor who serves as chief under the direction or supervision of a person who is a licensed Land Surveyor or pre-January 1, 1982 Registered Professional Civil Engineer in the State of California. The direction or supervision shall place the supervisor in “responsible charge” of the work. “Responsible Charge” is defined in Chapter 15 of the Business and Professions Code (the Land Surveyor’s Act) and Title 16, Chapter 5, of the California Administrative Code (regulations adopted by the Board of Registration for Professional Engineers and Land Surveyors).
- b. The Party Chief(s) should have a minimum two (2) years’ survey experience on similar construction projects and possess the following additional capabilities:
  - 1) Thorough knowledge of construction survey practices and the ability to read and interpret plans and specifications.
  - 2) Ability to make effective decisions concerning field problems and work in progress.
  - 3) Familiarity with typical coordinate geometry computer programs.
  - 4) Familiarity with safety requirements for surveying near traffic.
- c. The Party Chief(s) will assume the following responsibilities:
  - 1) Perform construction staking services for Project construction.
  - 2) Administer day to day activities for the survey party.
  - 3) Perform analytical survey calculations for items such as grading, horizontal and vertical control, right of way, and minor in-field design.



- 4) Maintain continuous communication with the Resident Engineer, field personnel, and construction administration staff.

13. Survey Crews

- a. Qualifications for survey crew members should include the following:
  - 1) A minimum of one (1) year of survey experience on similar construction projects is desired.
  - 2) Fundamental knowledge of construction survey practices and the ability to read and interpret plans and specifications.
  - 3) Ability to assist Party Chiefs and office personnel in all required surveying work.
  - 4) One survey crew member must have the ability to assume temporary leadership of the survey party in the absence of the Party Chief.
- b. Under the direction of the Resident Engineer and the Party Chief, the survey crew members will assume the following responsibilities:
  - 1) Perform basic calculations to support construction staking.
  - 2) Maintain continuous communication with Party Chiefs and office personnel.

END OF SCOPE OF WORK

## Additional Information

**BOARD OF DIRECTORS METRO VALLEY STUDY SESSION ATTENDANCE - 2022**  
**VALLEY BOARD MEMBER ATTENDANCE**

<b>Name</b>	<b>Jan</b>	<b>Feb</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sept</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>
<b>Eunice Ulloa</b> City of Chino		X	X			X		X	X			
<b>Ray Marquez</b> City of Chino Hills		X	X	X		X		X	X			
<b>Frank Navarro</b> City of Colton		X	X	X	X	X		X	X			
<b>Aquanetta Warren</b> City of Fontana		X	X			X		X				
<b>Darcy McNaboe</b> City of Grand Terrace		X	X	X	X	X		X	X			
<b>Larry McCallon</b> City of Highland		X	X	X	X	X		X	X			
<b>Rhodes 'Dusty' Rigsby</b> City of Loma Linda		X	X			X			X			
<b>John Dutrey</b> City of Montclair		X	X	X	X	X		X	X			
<b>Alan Wapner</b> City of Ontario		X	X	X	X			X	X			
<b>L. Dennis Michael</b> City of Rancho Cucamonga		X		X		X		X	X			
<b>Paul Barich</b> City of Redlands			X					X				
<b>Deborah Robertson</b> City of Rialto		X										
<b>John Valdivia</b> City of San Bernardino			X	X	X	X		X				
<b>Carlos Garcia</b> City of Upland												
<b>David Avila</b> City of Yucaipa		X	X	X	X	X		X	X			
<b>Curt Hagman</b> Board of Supervisors				X		X		X	X			

X = member attended meeting. \* = alternate member attended meeting. Empty box = Did not attend meeting. Crossed out box = not a Board Member at the time.  
 Shaded box = No meeting

Communication: Attendance (Additional Information)

**BOARD OF DIRECTORS METRO VALLEY STUDY SESSION ATTENDANCE – 2022**

**VALLEY BOARD MEMBER ATTENDANCE (Cont.)**

<b>Name</b>	<b>Jan</b>	<b>Feb</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sept</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>
<b>Dawn Rowe</b> Board of Supervisors		X	X	X	X	X		X	X			
<b>Janice Rutherford</b> Board of Supervisors		X		X		X		X				
<b>Joe Baca, Jr.</b> Board of Supervisors		X	X	X	X	X		X	X			

**MOUNTAIN/DESERT BOARD MEMBER ATTENDANCE**

<b>Daniel Ramos</b> City of Adelanto												
<b>Art Bishop</b> Town of Apple Valley		X		X	X	X		X	X			
<b>Paul Courtney</b> City of Barstow												
<b>Rick Herrick</b> City of Big Bear Lake												
<b>Rebekah Swanson</b> City of Hesperia								X				
<b>Edward Paget</b> City of Needles												
<b>Joel Klink</b> City of Twentynine Palms												
<b>Debra Jones</b> City of Victorville						X						
<b>Rick Denison</b> Town of Yucca Valley		X	X	X	X	X		X	X			
<b>Paul Cook</b> Board of Supervisors		X	X	X	X	X		X	X			

X = member attended meeting. \* = alternate member attended meeting. Empty box = Did not attend meeting. Crossed out box = not a Board Member at the time.  
 MVSSatt22 Shaded box = No meeting

Communication: Attendance (Additional Information)

This list provides information on acronyms commonly used by transportation planning professionals. This information is provided in an effort to assist Board Members and partners as they participate in deliberations at 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. 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
IEEP	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

**Acronym List**

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



## MISSION STATEMENT

Our mission is to improve the quality of life and mobility in San Bernardino County. Safety is the cornerstone of all we do.

We achieve this by:

- Making all transportation modes as efficient, economical, and environmentally responsible as possible.
- Envisioning the future, embracing emerging technology, and innovating to ensure our transportation options are successful and sustainable.
- Promoting collaboration among all levels of government.
- Optimizing our impact in regional, state, and federal policy and funding decisions.
- Using all revenue sources in the most responsible and transparent way.

Approved December 4, 2019