

October 30, 2023

**SUBJECT: ADDENDUM NO. 2 TO REQUEST FOR PROPOSAL (RFP) 23-1002960  
CONSTRUCTION MANAGEMENT SERVICES FOR I-10 CORRIDOR FREIGHT  
AND EXPRESS LANES PROJECT - CONTRACT 2**

This letter and attachments comprise Addendum No. 2 to the above subject RFP issued by the San Bernardino County Transportation Authority, (hereinafter referred to as “Authority”). Proposers are advised of the following changes:

1. Proposers are advised of the updated Attachment A Scope of Work.

Proposers are reminded to acknowledge receipt of this Addendum No. 2 in their cover letter, which must accompany the proposal package.

All other terms and conditions remain unchanged.

Please direct all questions regarding this Addendum No. 2 in writing to Satasia Brown, Procurement Analyst II, at SBrown@gosbcta.com.

Respectfully,

*Satasia Brown*

Satasia Brown  
Procurement Analyst II

**ATTACHMENT A – “SCOPE OF WORK”**

## INDEX

- A. DESCRIPTION OF SERVICES
- B. PERFORMANCE REQUIREMENTS
- C. DUTIES AND RESPONSIBILITIES
  - 1. Pre-construction Services
  - 2. Bid Process
  - 3. Project Administration
  - 4. Construction Coordination
  - 5. Construction Inspection
  - 6. Project Support
  - 7. Cost and Schedule
  - 8. Change Orders and Claims
  - 9. Safety
  - 10. Toll System Construction Oversight
  - 11. Project Close Out
- D. DELIVERABLES
- E. EQUIPMENT AND MATERIALS TO BE PROVIDED BY CONSULTANT
- F. MATERIALS TO BE FURNISHED BY CONSULTANT
- G. MATERIALS TO BE FURNISHED BY SBCTA
- H. AVAILABILITY AND WORK HOURS
- I. STANDARDS
- J. LIMITATIONS TO AUTHORITY
- K. THIRD PARTY RELATIONSHIPS
- L. CONSTRUCTION SITE SAFETY
- M. BASIS FOR SURVEY AND MONUMENT MARKING
- N. PERSONNEL QUALIFICATIONS AND RESPONSIBILITIES

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, construction surveying and source inspection, landscape inspection and assist in public outreach for the Project. A description of the Project is given below. Reference Project Environmental Reports on the SBCTA website for more detail information:

<https://www.gosbcta.com/wp-content/uploads/2019/09/I-10-CP-FinalEIR-EIS.pdf>

**Project General Description:**

The San Bernardino County Transportation Authority (“SBCTA”) is seeking professional services for the construction management for the Interstate 10 (I-10) Corridor Freight and Express Lanes Project – Contract 2 (“Project”) which would extend from Interstate 15, in the City of Ontario to Pepper Avenue, in the City of Colton, a length of 11 miles connecting to the I-10 Corridor Contract 1 express lanes currently under construction. SBCTA Sales Tax Measure I funds, State Transportation Improvement Program (STIP) will be used to cover the cost of this work. It is anticipated that the construction phase will be split in two contract phases 2A and 2B as follows:

2A I-15 to Sierra Avenue ; 2B from Sierra Avenue to Pepper Avenue

The Project will provide one express lane in each direction in the median from Interstate 15 (I-15), in the City of Ontario to Pepper Avenue, in the City of Colton.

The project will improve eastbound acceleration lanes between Cherry Avenue and Citrus Avenue; and Sierra Avenue to Cedar Avenue and add auxiliary lanes in both directions from Riverside Avenue to Pepper Avenue.

The Project includes interchange ramp modifications at Etiwanda Avenue, Cherry Avenue, Citrus Avenue, Sierra Avenue, Cedar Avenue, Riverside and Pepper Avenue.

The Project will include structure widening, replacement, or abandonment at Day Creek Channel ( widen); Etiwanda Wash ( widen); Valley Blvd exit ramp undercrossing(widen); Etiwanda-San Sevaine Channel (widen); Etiwanda-San Sevaine Channel Ramp (replacement); Kaiser Spur Overhead(widen); San Sevaine Creek(abandonment);and Mulberry Creek( abandonment)

This Project will include both the roadway work as well as toll collection system layout and infrastructure. The toll collection system design requirements will be prepared by the SBCTA toll system provider (TSP); however, extensive coordination will be required with the TSP, and the toll collection system design will be incorporated into the final design plans developed under the design contract.

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 review; construction Project advertising, bid analysis, and award; construction inspection; construction surveying, materials testing, landscape inspection, contractor interface and contract administration; office engineering; and other assorted duties as appropriate in managing construction of a Caltrans and city roadway improvement project.

It is expected that the Consultant will assign a full-time Resident Engineer to coordinate all contract and personnel activities for all phases of construction. Other Assistant 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 assigned for this Project shall be licensed as a Professional Civil Engineer in the State of California at the time of proposal submittal through the duration of the contract. The Consultant is expected to provide a Structures Representative, Assistant Structures Representative, Structures Inspectors, Survey Project Manager, Materials Testing/Source Inspection Project Manager, and Landscape Architect to administer the construction support services requested herein and to assign qualified field personnel to perform the requested services.

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 establish the firm's ability to adequately and appropriately staff and manage the Project.

CONSULTANT shall provide qualified construction management and inspection, materials testing, construction surveying and public relations 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 SBCTA Director of Project Delivery has designated a Construction Manager to coordinate all construction activities.

SBCTA anticipates that the contract duration will be approximately 30 months plus six months for close out for each of the phases. Preconstruction services for contract 2A and 2B anticipated to start in June 2024 and December 2024 respectively. Construction for phases 2A and 2B is anticipated to start in June 2025 and December 2025 respectively.. The estimated construction capital cost of the project for both phases is approximately \$637 million.

**Mr. Khalid Bazmi, Construction Manager**

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 Projects.

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 Resident Engineer(s) and Structures Representative(s) and supporting teams for both phases of the Project.. The Resident Engineer shall be assigned to direct and coordinate construction activities under this contract. Other Assistant Resident Engineers may be assigned to each specific Project responsibilities as needed. The Resident Engineer shall be a Civil Engineer 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 level of 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. 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 worked by CONSULTANT personnel shall be approved and authorized, in writing, by SBCTA prior to each occurrence. Overtime authorization shall be attached to the invoice in which the overtime is billed.

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 shall follow the latest State Highway Procedures DBE Commercially Useful Function (CUF) Compliance and monitoring guide requirements per link below:

<https://dot.ca.gov/-/media/dot-media/programs/construction/documents/labor-compliance/dbe-cuf-compliance-and-monitoring-guide-a11y.pdf>

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.

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 and recommendation(s)

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
- 2) Perform bid analysis
- 3) Development of contractor payment schedules, and other procedural items.
- 4) Checking Contractor references, licenses, insurance, and sureties.
- 5) 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 weekly to SBCTA. Laserfiche Repository per SBCTA IS Instruction 1004. Instructions, account and training will be provided by SBCTA.
- g. CONSULTANT shall provide a technical review of the Contractors' CPM construction schedules, within 5 days of Contractor's submittal, on an ongoing basis, alert SBCTA to conditions that may lead to delays in completion of the Project, and advise SBCTA of the necessary corrections or revisions for contract compliance.
- 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 monitor and track DBE Commercially Useful Function requirements per Caltrans requirements stated under "Performance Requirements" of this RFP
- n. CONSULTANT shall ensure that the Project meets all provisions of the Storm Water Pollution Prevention Plan (SWPPP).
- o. CONSULTANT shall assure that the Project meets all applicable regulations of the Air Quality Management District (AQMD) and State Water Resource Control Board (SWRCB).
- p. 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 to effectively manage the Project.
- b. CONSULTANT Resident Engineer shall act as a prime point of contact between Contractor, SBCTA, CONSULTANT's construction surveyor, CONSULTANT's materials inspector, 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, and shall provide

daily reports, with photos, 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 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). 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:
  - i. Paving and subgrade inspection, sub-surface & finish surface drainage inspection, structures and foundation inspection, electrical inspection for traffic, ramp meter and irrigation control equipment, signing and striping inspection, quantity calculations, checking grade and alignment, construction traffic control inspection, soil amendments and plant material identification & quality control, hardscape inspection, trenching & irrigation inspection and duties that may be required to determine that construction of the Project is being performed in accordance with the contract documents.
  - ii. Identifying actual and potential problems associated with the Project and recommending sound engineering solutions.
  - iii. Identifying common plant diseases and/or pests together with their respective eradication techniques, directing of plant adaptability requirements along with proper planting & pruning techniques, and avoiding potential problems associated with the Project by recommending sound engineering solutions.
  - iv. Perform basic sampling of construction materials in the field per California Test Method 105 and 125 by both the prime and subconsultant personnel.
  - v. 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.
  - vi. Preparing complete and accurate daily reports, calculations, Project records, payment quantity documents, reports, and correspondence

- related to Project activities.
- vii. Preparing construction sketches, drawings, and cross-sections, as necessary.
- viii. Assisting in the preparation of as-built plans.
- ix. Providing inspections for environmental compliance as well as ECR tracking.
- x. Maintaining awareness of water discharge requirements. Monitoring Contractors' compliance with applicable regulations and construction contract provisions.
- xi. Monitoring Contractors' compliance with applicable regulations required by AQMD.
- xii. 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 as directed by Resident Engineer, including but not limited to:
  - i. Utility relocations
  - ii. Clearing limits
  - iii. Slope staking
  - iv. Storm drain, sanitary sewer, and irrigation systems
  - 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.
  - d) 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.
  - e) 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.
  - f) Final monumentation, which includes setting of centerline points of control upon completion of construction.
- 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.
- 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 may coordinate a groundbreaking media event with the LOCAL AGENCY to ceremoniously open the Project. CONSULTANT may be called upon to assist in acquiring the necessary items authorized for the event.

- 6) Prior to construction beginning, SBCTA may coordinate a community meeting to share Project information, construction scheduling, detour information and expected challenges with the general public. CONSULTANT may be needed to help staff the event as a subject matter expert.
- 7) Near the completion of the construction Project, SBCTA may 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:
  - i. Provide details related to construction activities for use in public notices.
  - ii. Provide details for development of a Project fact sheet.
  - iii. Provide details for development of Emergency notices – when needed.
  - iv. Provide details for development and maintenance of web content for Project tab on SBCTA website.
- 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 analyze, monitor and report on the Contractors Primavera schedule updates by comparing monthly progress to previous schedule updates and progress against the approved baseline schedule. This analysis should include a detailed review of the critical path and near critical path (20 days), changes to logic, relationships and activities. A schedule technical review should also be done to identify issues like but not limited to constrained or open ended activities, out of sequence work and added or deleted activities, and adherence to contract specifications. Results of the analysis should be used to develop schedule reporting deliverables.

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. 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. Toll System Construction Oversight

The CONSULTANT shall:

- Monitor the overall construction of tolling systems civil construction activities to identify critical milestones and priorities;
- Coordinate and conduct pre-construction and pre-activity meetings with the CONTRACTOR and Toll System Provider (TSP);
- Provide engineering assessment of plans for adequacy of design, particularly with respect to suitability to actual field conditions;
- Ensure compliance with the plans, specifications shop drawings, and material data submittals by the CONTRACTOR for the Toll Collection System (TCS) civil infrastructure; recommend, modify, interpret, and edit special provisions and prepare modification estimates; and keep necessary records pertaining to construction progress, and budget performance;
- Monitor compliance of CONTRACTOR and TSP safety plans and note concerns or deficiencies immediately to CONTRACTOR or TSP for their implementation of corrective measures;
- Provide construction oversight of the delivery of the TCS civil infrastructure by the CONTRACTOR. Validate/confirm the CONTRACTOR work, in coordination with the TSP, is correct per the design and technical requirements. This includes validating and testing power and communications conduit duct banks, gantries, CMS and camera pole installation;
- Perform oversight and review of laboratory, shop, and mill test reports of materials and equipment, as needed; and
- Monitor test and inspection records and noncompliance reports for satisfactory resolution of noncompliant work.

It should be noted that CM service excludes oversight of the installation of TSP work.

11. Project Close Out

- a. When the Contractor approaches substantial completion milestone or at the direction of SBCTA Construction Manager , 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 within 45 days of achieving the full Relief From Maintenance.
- 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. Weekly update of all files to SBCTA Portal.
- 4. Monthly Contractor progress payments, back-up documentation, and Contractor payment records.
- 5. Contractor final payment documents, delivered to SBCTA no later than ten (10) working days after Acceptance by SBCTA of the completed construction Project.
- 6. Project Completion Report documents per Local Assistance Procedure Manual and Caltrans Construction Manual.
- 7. 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.
- 8. Certified payrolls and fringe benefit statements for all employees, CONSULTANT and Contractor, who are subject to the State and/or Federal prevailing wage rates.
- 9. American For Disabilities Act certification of Project per Caltrans Standards.

10. 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. CONSULTANT shall provide the material certification at the end of the project.
11. Record of Survey and Right of Way Monumentations and recording with County.
12. 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.

### 13. Risk Register

- a. obtain and review all available risk assessment information, including the risk register already developed by SBCTA and Caltrans that identifies risks, probability and severity of risk occurrence, proposed mitigation strategies, responsible parties, and mitigation timing.
- b. Perform ongoing Project risk identification and management activities by working with the various Project work groups.
- c. Provide quarterly updates of the risk register showing resolution and mitigation of defined Project risks, identification of new risks, and required mitigation measures; and
- d. Provide all necessary reports and actions requested by SBCTA to support requests of Caltrans, or others in documenting adherence to all risk management requirements and practices.
- e. Provide a Sequential list of activities during Preconstruction, Construction, Post Construction and Close out showing person responsible for each activity.
- f. Provide a “monthly staffing plan showing proposed expenditures plan through completion” (cost to complete the project) showing all CM personnel and subconsultants estimated billable hours and ODC’s. This document should also show planned vs actual charges from contract start date to current month expenditures.



14. Schedule and Schedule Related Reporting

- a. Consultant will develop a Level 3 Primavera project schedule and will submit for SBCTA review along with the constructability review package.
- b. On or before the 1<sup>st</sup> day of each month, Consultant shall facilitate a monthly schedule meeting with the contractor to review progress and changes to the project schedule.
- c. Consultant shall develop with the monthly reporting a schedule summary report that includes but is not limited to the following elements:
  - i. Major milestone updates, summary discussion of the schedule critical path, and look-ahead schedule
  - ii. Use and reporting of SPI (Schedule Performance Index) and any other applicable KPI (Key Performance Indicators)
  - iii. Discussion of any logic or critical or near critical (20 days) activity changes
  - iv. List and discussion of potential impacts to critical path or near critical path (20 days) and list of activities tracking impacts
  - v. List of any open ended or constrained activities and a brief associated explanation
  - vi. List of month to month changes in started activities, durations or changes in actuals

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 CONSULTANT

- 1. Consultant 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, Consultant will provide one (1) full size (24" x 36") sets of plans for use in the construction field office as record documents.

G. MATERIALS TO BE PROVIDED BY SBCTA

- 1. SBCTA will provide copies of all previously secured permits and Project authorizations.
- 2. 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".

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. This written authorization must be attached to the invoice where the overtime is billed.

## I. 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.

J. 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.

K. 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.

L. 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, safety vests per current OSHA standards, 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.

M. BASIS FOR SURVEY AND MONUMENT MARKING

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.

N. 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 Americans 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. 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) 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

- ix. project quantities on a daily basis.  
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

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

It is expected that the Consultant will assign a full-time Resident Engineer to coordinate all contract and personnel activities for all phases of construction. Other Assistant 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.

2

The Resident Engineer assigned for this Project shall be licensed as a Professional Civil Engineer in the State of California at the time of proposal submittal through the duration of the contract. The Consultant is expected to provide a Structures Representative, Assistant Structures Representative, Structures Inspectors, Survey Project Manager, Materials Testing/Source Inspection Project Manager, and Landscape Architect 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 establish the firm's ability to adequately and appropriately staff and manage the Project.

CONSULTANT shall provide qualified construction management and inspection, materials testing, construction surveying and public relations 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 SBCTA Director of Project Delivery has designated a Construction Manager to coordinate all construction activities.

SBCTA anticipates that the contract duration will be approximately 30 months plus six months for close out for each of the phases. Preconstruction services for contract 2A and 2B anticipated to start in June 2024 and December 2024 respectively. Construction for phases 2A and 2B is anticipated to start in June 2025 and December 2025 respectively.. The estimated construction capital cost of the project for both phases is approximately \$637 million.

**Mr. Khalid Bazmi, Construction Manager**

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

2

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.

2

Consultant shall follow the latest State Highway Procedures DBE Commercially Useful Function (CUF) Compliance and monitoring guide requirements per link below:

<https://dot.ca.gov/-/media/dot-media/programs/construction/documents/labor-compliance/dbe-cuf-compliance-and-monitoring-guide-all.pdf>

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

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.

2

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.
- 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 may coordinate a groundbreaking media event with the LOCAL AGENCY to ceremoniously open the Project. CONSULTANT may be called upon to assist in acquiring the necessary items authorized for the event.

2

- 6) Prior to construction beginning, SBCTA may coordinate a community meeting to share Project information, construction scheduling, detour information and expected challenges with the general public. CONSULTANT may be needed to help staff the event as a subject matter expert.
- 7) Near the completion of the construction Project, SBCTA may 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:
  - i. Provide details related to construction activities for use in public notices.
  - ii. Provide details for development of a Project fact sheet.
  - iii. Provide details for development of Emergency notices – when needed.
  - iv. Provide details for development and maintenance of web content for Project tab on SBCTA website.
- 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

2

b. CONSULTANT shall analyze, monitor and report on the Contractors Primavera schedule updates by comparing monthly progress to previous schedule updates and progress against the approved baseline schedule. This analysis should include a detailed review of the critical path and near critical path (20 days), changes to logic, relationships and activities. A schedule technical review should also be done to identify issues like but not limited to constrained or open ended activities, out of sequence work and added or deleted activities, and adherence to contract specifications. Results of the analysis should be used to develop schedule reporting deliverables.

c. CONSULTANT shall provide and maintain a Project staffing plan of field office personnel based on the Contractor submitted baseline schedule update.

2

## ATTACHMENT A – “SCOPE OF WORK”

2

### D. DELIVERABLES

#### 14. Schedule and Schedule Related Reporting

- a. Consultant will develop a Level 3 Primavera project schedule and will submit for SBCTA review along with the constructability review package.
- b. On or before the 1<sup>st</sup> day of each month, Consultant shall facilitate a monthly schedule meeting with the contractor to review progress and changes to the project schedule.
- c. Consultant shall develop with the monthly reporting a schedule summary report that includes but is not limited to the following elements:
  - i. Major milestone updates, summary discussion of the schedule critical path, and look-ahead schedule
  - ii. Use and reporting of SPI (Schedule Performance Index) and any other applicable KPI (Key Performance Indicators)
  - iii. Discussion of any logic or critical or near critical (20 days) activity changes
  - iv. List and discussion of potential impacts to critical path or near critical path (20 days) and list of activities tracking impacts
  - v. List of any open ended or constrained activities and a brief associated explanation
  - vi. List of month to month changes in started activities, durations or changes in actuals

2