

BART Agreement Number: 6M8142

Approval Date: 12/01/2020

Work Plan: No. A.02-02 – Additional Design Services During Construction

Scope:

1. PROJECT MANAGEMENT

The purpose and objectives of this task is to provide coordination for keeping project participants informed of progress, technical issues, and planned activities and events; and to verify that the Scope of Services (SOS) outlined herein will be completed on time, within budget, and reflect the standards of quality required by BART.

AECOM will manage the base schedule with the goal of meeting its target. Please note, however, that delays beyond our control may cause adjustments of the base schedule, which might increase the scope and fees. AECOM will seek approval from BART for any additional scopes and fees that arise. The following Subtasks will be carried under this:

- A. Prepare for and attend up to 10 project bi-weekly meetings as needed.
- B. Prepare monthly invoices and progress reports
- C. Maintain project files

Deliverables:

- Monthly progress reports
- Meeting agendas and minutes

2. DESIGN SERVICES DURING CONSTRUCTION

Provide design services during construction. These tasks include the following:

- A. Provide engineering design support for up to 100 responses to requests for information (RFI's).

- B. Review up to 100 Submittals which may include; shop drawings, field inspections, reports, material submittals and requests for substitutions.
- C. Prepare up to 2 Contract Change Notices (CN's) as needed.
- D. Provide a field engineer available on-site up to two (2) days per week to coordinate and attend regularly construction meetings on site.
- E. Prepare record drawings (as-built record drawings) at the completion of construction based on redlines provided by the Resident Engineer and/or Contractor. The AECOM Team will also provide an electronic copy of the as-built record set CADD files for BART Document Control Group archiving. (Note: The majority of these drawings were originally prepared using REVIT prior to BART developing any REVIT CADD standards. It is assumed that these files will be converted to AutoCAD and may not meet current BFS CAD standards. Requiring these exports to be brought to current BFS CAD standards would require significantly more effort.)
- F. Support for miscellaneous grant applications as needed. (up to 120 hours)

Deliverables:

- Response to RFIs
- Submittal reviews
- Change Notices
- Record drawings

3. ASSET MANAGEMENT

Prepare a list of assets to be tracked and input into MAXIMO.

Criteria/Assumptions

- AECOM will coordinate with BART asset management group to define the assets to be tracked in a spreadsheet.
 - Include assets in asset type list within V11 Maximo Asset Management Template provided by BART.
 - Include assets pertaining to safety (fire extinguishers, seismic shut off valves, etc.).
 - Update certain asset types per relevant change notices.
 - Contractor will assist AECOM in identifying make and model of assets, as well as assist in up to 3 days of site visits to verify make and model information.
 - Contractor and / or BART will provide Shop Drawings and Operation and Maintenance manuals for each asset upon request
 - BART will provide standard procedure on determining replacement / renewal costs, Useful life, and Soft Cost estimates for Assets.
 - Excluded functional departments per coordination with BART asset management;
 - Automatic Fare Collection (AFC)
 - Civil Engineering (CIVIL ENG)
 - Computer Systems Engineering (CS ENG)
 - Integration Engineering (INT ENG)
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- Train Control Engineering (TC ENG)
 - Communications Engineering (COMM ENG)
 - Electrical Engineering (ELECTRICAL ENG)
 - Mechanical Engineering (MECH ENG)
 - Traction Power Engineering (TP ENG)
 - Construction Engineering (CONSTRUCT ENG)

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- Fare Collection Engineering (FC ENG)
 - Structural Engineering (STRUCTURAL ENG)
 - Track Engineering (TRACK ENG)
 - Mech ROW
 - Power
 - Structures – except items provided by Anthony Manlutac
 - Train Control
 - Track
 - Capital Prog

Deliverables:

- Asset management spreadsheet

4. GRANT FUNDING SUPPORT

Provide support to grant funding application for rainwater or sustainable energy.

Deliverables:

- Exhibits for grant funding application

Prime: AECOM

Subconsultant	Amount	DBE (Y/N)	SBE (Y/N)
YEI	\$ 163,955	Y	Y
Haygood & Associates	\$ 25,631	Y	Y
OPAC	\$ 38,642.00	Y	Y

Total Work Plan Value: \$ 480,665