

BART Agreement Number: 6M8149

Approval Date: 11/27/2020

Work Plan: No. B.16-01 – TCCCP West Bay TPSS Post-Design Services

Scope:

2.1 DEVELOPMENT OF CHANGE NOTICE DOCUMENTS FOR SUBSTATION MSS ISOLATION DISCONNECT SWITCH RELOCATION

Structural Design (Sheet Modifications)

- Structural support details for 34.5kV conduit and tray supports in vent shaft, muni level, and substation level
- New concrete housekeeping pad for IDS
- CMU core drill details
- Supporting Structural Calculations
- Structural cost estimate

Estimated Level of Effort: 80 hours

Architectural Design (Sheet Modifications)

- A110-MMS Demo sector plan
- A111-MMS Demo sector plan
- A160-MSS Demo reflected ceiling plan
- A161-MMS Demo reflected ceiling plan
- A211-MMS New work sector plan
- A311-MMS New work reflected ceiling plan
- A410-MMS New work longitudinal section
- Architectural cost estimate

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Estimated Level of Effort: 100 hours

Traction Power Design (New Sheets)

- TP210A-MMS Existing Equipment Plan
 - TP210B-MMS IDS Relocation Plan
 - TP310A-MMS 34.5 kV Conduit Routing Plan (Substation Level)
 - TP310B-MMS 34.5 kV Conduit Routing Section (Substation Level)
 - TP310C-MMS 34.5 kV Conduit Routing Section (Vent Shaft)
 - TP310D-MMS 34.5kV Conduit Routing Plan (Muni Level)
 - TP310E-MMS 34.5 kV Conduit Routing Section (Muni Level)
 - TP341-MSS IDS Grounding Details
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- TP00-MMS 34.5kV Splice Tray Details
- TP900-MMS Conduit and Cable Schedule

Supporting Calculations

- Coordination with 15EJ-171 contractor and designer
- Field visits and meetings
- Traction Power cost estimate

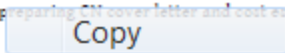
Estimated Level of Effort: 600 hours

Change Notice Documentation Administrative Tasks

Estimated Level of Effort: 24 hours

Total hours and cost

The total cost to prepare the 15EK-102 Change Notice (CN)-01 documentation including design drawings, QC, supporting calculations, and CN administrative tasks including preparing CN cover letter and cost estimate is approximately 804 hours (~\$178,216).



2.2 DESIGN SERVICES DURING CONSTRUCTION (DSDC)

During construction, the WSP team will assist with technical aspects of the construction contract management and administration, such as providing technical responses to Contractor Requests for Information; technical reviews of shop drawings, Contractor working drawings, catalog cuts, etc. for compliance with the requirements of the contract documents; participation in construction progress meetings and/or site visits as requested by the District's Resident Engineer; technical review of Contractor-initiated Requests for Change; preparation of drawings and/or technical specification revisions and/or quantity estimates for inclusion in Change Notices and Change Orders. In addition, the WSP team will prepare as-built record documents based on redlined mark-ups provided by the Resident Engineer.

Due to the nature of the work, WSP will support BART on an as-needed basis; accordingly, we have assumed a level of effort necessary for these services. For budgeting purposes, the level of effort to provide DSDC services is assumed to be 1.5 percent of the construction contract cost (~\$54.9 million), which amounts to almost \$847,000 inclusive escalation cost. We reserve the right to request additional funds beyond the estimated DSDC budget.

ASSUMPTIONS/EXCEPTIONS

- Contractor's designs, shop drawings and other submittals shall be reviewed for general conformance to dimensions, materials, layout, etc. as indicated on the contract drawings or in the contract specifications. Reviews shall exclude commentary on construction means and methods
- Except as may otherwise be provided in the Contract Documents or when direct communications have been specifically authorized, WSP shall only communicate with the Contractor through the Resident Engineer.
- In no event shall WSP make any directive or communication to the construction Contractor that will affect the means or methods, time, cost or quality of construction.

Prime: WSP

Subconsultant	Amount	DBE (Y/N)	SBE (Y/N)
SPS Engineers, Inc.	\$ 30,275	Y	Y
M Lee Corporation	\$ 36,418	Y	Y
Robin Chiang and Company	\$ 116,143	Y	Y
YEI Engineers, Inc.	\$ 41,401	Y	Y

Total Work Plan Value: \$ 1,025,197