

BART Agreement Number: 6M8145

Approval Date: 03/22/2021

Work Plan: No. B.17-02 – Modernization of the HVAC Systems at the Lake Merritt Administration (LMA)

Scope:

1. RSE Solution / Methodology/ Schedule/ Cost

1.1 Project Management

Provide project management and contract administration to include:

- Scheduling and Planning
- Project Coordination and Oversight
- Project Progress Reporting and Invoicing
- QA/QC of Deliverables

1.2 3-D Scan Survey Services

Provide laser scanning services for the modernization of the HVAC Systems Project at the LMA Complex. The laser scanning will cover the areas outlined in the attached plans and include the following approximate areas:

- Platform Level
 - 30,000 SF
- Concourse Level
 - 14,500 Square Feet – Data/Train Control Area
 - 8,000 Square Feet – Central Train Control
 - 23,600 Square Feet – Area C
- Laser Scan Deliverables
 - Point Cloud Data Files (.LAS) for both platform and concourse levels
 - 2D CAD Drawings to show layouts and sections of each room and HVAC Systems
 - 3D Building Information Modeling (BIM Models or .RVT/DWG format) for both platform and concourse levels
 - 360 video of the interiors of the LMA Complex

1.3 Work Plan

Once the work is authorized by BART, RSE will coordinate with BART to obtain existing as-built drawings and review the layouts of all of the rooms and equipment. In addition, RSE will prepare an SSWP to obtain work plan approval and file support from BART. The work plan will include the following steps:

- Obtain as-built drawings
- Review as-built drawings and outline a plan for scanning
- Prepare SSWP and scan schedule
- Coordinate with BART to obtain field support and work windows for scanning operations
- Perform pre-scan site inspection to identify tight spacing areas, critical locations and pertinent equipment parts required for the HVAC renovation
- Prepare a step by step schedule and setups for scanning of each room, hallway, and critical transition areas

- One day prior to scanning, check and calibrate scanning equipment
- Perform 3-D scan
- Perform QC review and clean up point cloud files
- Conduct meeting with BART to go over point cloud files and prepare a list of deliverables
- Prepare deliverables

1.4 Personnel

The personnel will include:

- Contract management personnel
- Survey field Crew
- Architect
- 3D CAD drafter

Skills needed

- Familiarity and prior experience with the BART Facilities Standards, code interpretation, design drawings, and technical specifications
- Ability to conduct 3-D scan and convert to functional 3D BIM Model
- Ability to conduct design work in 3D CAD environment and convert to 2D drawings for contract documents
- Ability to obtain SSI clearance

1.5 Schedule

New tasks will be scheduled to fit existing schedule of WP B.17-01. Work anticipated to occur Jan 2021 to Dec 2021.

1.5 Cost

See attached Form 60

2. Jacobs Solution / Methodology/ Schedule/ Cost

1.1 Project Management

Provide project management and contract administration to include:

- Project Coordination and Oversight

1.2 Work Plan

Once the work is authorized by BART, RSE will coordinate with BART and RSE to facilitate scheduling and documentation for areas to be scanned. Assist with coordination drawings for documentation required to setup scanning locations.

1.3 Personnel

The personnel will include:

- Architectural Lead 12 hours
- Architectural Designer 60 hours

1.4 Schedule

Detail TBD after award of the work plan.

Prime: Jacobs

Subconsultant	Amount	DBE (Y/N)	SBE (Y/N)
Rail Surveyors Engineering, Inc.	\$ 95,705	N	Y

Total Work Plan Value: \$ 111,160