BART Agreement Number: 6M8144 **Approval Date: 01/23/24**

Work Plan No. A.06.04 Design Services for BART Accessibility Improvement Program Phase 3 & 4 (Part 1 of 2)

Scope:

Task 1: Administration and Project Management

1.1.1 Project Setup and Coordination

The Project Manager in coordination with design leads will perform the following activities in support of the project:

- Supervise and coordinate workplan activities
- Workplan communications/meetings/record keeping
- Workplan progress reporting
- Subconsultant management

The Project Manager shall be responsible for creating and maintaining a Project Management Plan (PMP) for the purposes of documenting design policies, procedures, and responsibilities throughout the life of the design contract.

Contract administration will include the following items:

- Sub-consultant coordination
- Monthly progress reports

1.1.2 Document Control

Documents and electronic files, CAD drawings, transmittal forms, submittals, letters, correspondence, and other miscellaneous papers will be managed using ProjectWise, SharePoint and/or other appropriate formats. The Design Team may also make use of an FTP site for file transfer.

1.1.3 Monthly Progress Reports

Monthly progress reports will be provided; the report will include the following:

- Cover Letter
- Work plan invoice and billing Summary
- Work performed during this month (bulleted list)
- Consultant team members working on work plan during the month
- Any work plan concerns including recommended corrective actions
- Updated Schedule

Deliverables:

- Monthly Progress Report

1.1.4 Quality Control/Quality Assurance

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This work plan will follow the Quality Management Plan (QMP) for quality processes and documentation.

The Design Quality Manager shall provide continuous quality control documentation in accordance with the QMP as follows:

- Quality Audit Reports
- Copies of Quality Check review prints for the 30% submittal to confirm compliance with the approved QMP.
- Conduct a Document Quality Review process in accordance with the QMP and include:
  - Quality Control Review prints
  - Quality Control Certification
  - Quality Assurance Certification
- Prepare Design Milestone Checklist with input from all disciplines

Assumptions:

- Documents will be available upon BART request.
- Each submittal will include one audit.

1.2 Site Visits and Notes

Site visits will be conducted by the project team to confirm 30% design elements. It is assumed that these work activities will not affect the operation and safety of BART employees, passengers and trains. It is further assumed that no additional safety training is required, as the design team has already participated in the 4-hour safety training prior to the start of the project.

Assumptions:

- Up to twenty-four (24) site visits by the architectural design team; assume two (2) per station
- Up to twenty-four (24) site visits by the civil site design team; assume two (2) per station
- Up to twenty-four (24) site visits by the electrical design team; assume two (2) per station
- Up to four (4) site visits for lighting designer
- As needed for field survey crew

1.3 Document Review

- BART to provide complete As-Builts of the twelve existing stations
- Obtain and review available CAD files from BART's documentation against As-Builts and existing conditions
- Review AIP Evaluation (field and user survey)

1.4 Team Coordination, Progress Meetings and Technical Meetings.

The Design Team will conduct biweekly coordination meetings in person or via conference call over the approximate 38-week survey/design phase consisting of:

- 24 weeks for field investigations, survey and topographic mapping for all 12 stations

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- 28 weeks to complete a 30% design submittal consisting of plans, specification outline and preliminary estimates for all 12 stations

Deliverable:

- Meeting minutes

Task 2: Survey and Mapping Phase

2.1 Surveying and Mapping

- Provide topographic planimetric mapping (20 Scale) for exterior scoped items at:
    - Balboa Park Station, Glen Park Station, 24th Street Station, 16th Street Station, Ashby Station, El Cerrito Plaza Station and El Cerrito del Norte Station.
- Mapping shall include all necessary surface evident features for the specific civil / electrical / architectural design and shall include, at a minimum, finished grade, all grade breaks, curb, gutter, lip of gutter, flow lines, drainage inlets and manholes, light fixture foundations, landscaped areas, pavement markings, signs (indicating type), color and limits of curb painting, structures, ramps, handrails, boundaries of differing materials (asphalt, concrete, brick, etc.) and fixed furniture.
- Surveying will only be on the BART property and not adjacent streets.
- The following stations are located within the City right-of-way and will not need to be surveyed:
    - Civic Center Station, Powell Station, Montgomery Station and Embarcadero Station
- The Downtown Berkeley station does not need to be surveyed. The entire BART Plaza was reconstructed in 2017-2019 and has been designed to be ADA-compliant.
- Identify any record property / right of way lines, easements type / use, utility cuts, vent pipes, filler pipes, pipeline markers, manholes, valves, meters, transformers, pedestals, clean outs, utility poles, overhead lines and guy wires. Locate any observed survey monuments/ control markings (pk nails, disks, etc.)
- Datum to be established conforming to NAD83, NAVD88 with direct relationship to SFBARTD survey monument control in the area. Survey control to be delineated on the mapping. BART To provide latest aerial ortho imagery and survey monument control
- Provide CAD plans for platform and concourse levels
- Obtain additional mapping from Quantum Spatial to complement field surveys.

2.2 Access Compliance of ADA Parking

This task consists of:

- Performing a parking space count at each station. This will include the number of regular parking spaces, and handicap and van accessible parking spaces in the surface parking lots and parking garages
- Determine whether there are enough handicap and van accessible parking spaces at each station. This will be based on California Building Code and the Federal ADA Standards
- Provide backup documentation to BART

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If non-compliant features are identified BART will be informed. Upon request from BART, the design team will develop an additional workplan to address non-compliant features.

2.3 Conduct Field Investigations and Verify AIP Evaluations

The elements to be investigated at all stations are:

- Handrail improvements
- Courtesy phone improvements
- Lighting improvements at elevator lobbies
- Wall protrusion detection
- Curb ramp improvements
- Access ramp improvements
- Accessible path improvements
- Passenger loading slope improvements
- Bus loading slope improvements

Task 3: Preliminary Design – 30% (12 Stations)

3.1 Findings Report

This report will identify findings and options for improvements based on the field investigations described under item 2.3. All disciplines will include specific narratives of their findings.

Deliverable:

- Findings Report

3.2 Architectural Plans and Details

The following items are included in this task:

- Prepare a 30% level of design documents. Documents will include drawings and an outline specification
- Provide outline specifications which will incorporate all disciplines
- Prepare Findings Report of existing field conditions and proposed improvements with input from all disciplines
- Prepare Basis of Design with input from all disciplines
- Perform quantity take off to support the preparation of the cost estimate
- Perform a 30% level QA/QC review of the architectural work
- Coordinate plans with the team's other disciplines, as necessary
- Perform an interdisciplinary review to coordinate the work with other disciplines
- Review and respond to BART's 30% review comments

Assumptions:

- The twelve stations will be delivered as part of one overall contract package. Drawings to be included are architectural site plan, station plans, preliminary details and elevations.
- BART will provide the CAD base drawings for concourse and platform drawings. Field verification will be conducted for the elements included in the scope only.

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- Per latest BFS, BART has eliminated public telephones, TTY devices and illuminated phone cubes. Therefore, no electrical or communications engineering design will be included for these items.
- This does not include the development of survey/topo plans
- This does not include design of civil, electrical, structural, lighting and landscaping elements
- This does not include wayfinding design
- This includes a parking stall count, which does not include ADA parking design
- This does not include passenger and bus loading improvements
- This does not include photo realistic renderings and 3D renderings

Deliverable:

- Architectural Design Documents – 30%
- Findings Report – 30%
- Basis of Design

3.3 Civil Site Plans and Details

The following items are items are included in this task:

- Prepare 30% level design documents. The 30% submittal package for each station will include plans, profiles, details, and outline specifications
- Provide a 30% bid item list to be used in developing the outline specifications
- Provide outline specifications for the civil portion of the work
- Perform quantity take off to support the preparation of the cost estimate
- Perform an internal 30% level QA/QC review of the design documents prior to submission
- Coordinate plans with the team's other disciplines, as necessary
- Review and respond to BART's 30% review comments

Assumptions:

- The Basis of Design will be the BART Facilities Standards, Federal ADA Standards and the ADA provisions of the California Building Code, as applicable
- The number of sheets for each station is anticipated to range from 5 sheets to 19 sheets, depending on the number of curb ramps, linear footage of sidewalk and linear ramps to be replaced/modified. The drawings will include a site plan showing the location of curb ramps, linear ramps, and sidewalk to be replaced or modified; plan sheets showing the proposed limits of curb ramp and sidewalk removal, and the layout of the new improvements; enlarged plans for each curb ramp being replaced or modified; staging plans (if required) to ensure patron access to the station; plan sheets for linear ramps detailing the required modifications to ensure compliance; detail sheets; and typical cross sections
- All drawings will be prepared using AutoCAD Civil 3D using the site specific topographic and aerial survey information and the BART CAD drawings. MGE will only field verify the elements included in this scope of work
- Progress plan sets will be produced for QA/QC review and interdisciplinary team review

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- Should it be necessary to replace any ramp handrails, the architectural designer will provide the site/civil designer with the type of handrail and installation details to fit the site condition.

Deliverable:

- Civil Design Documents – 30%

3.4 Electrical Plans and Details

The following items are included in this task:

- Provide 30% circuiting, load calculations and panel schedules related to new lighting and courtesy phone work
- Provide power to new or relocated courtesy phones
- 30% design document for elevator lobby lighting improvements with input from Lighting Designer
- Preliminary lighting layouts for incorporation into the Architect's drawings in AutoCAD
- Preliminary lighting fixture schedule and cut sheet package

Assumptions:

- The basis for design will be the BART Facilities Standards, Federal ADA Standards and the ADA provisions of the California Building Code, as applicable.
- Existing electrical service shall remain as is.
- Upgrade of existing electrical distribution is not required for this project.
- Load monitoring of existing panels is not included in this proposal
- Design Support During Construction is not included in this proposal
- Per latest BFS, BART has eliminated public telephones, TTY devices and illuminated phone cubes. Therefore, no electrical or communications engineering design will be included for these items.

Deliverable:

- Electrical Design Documents – 30%

3.5 Structural Design

The following items are included in this task:

- Provide review and design support for structural elements such as handrail support, anchors, attachments, etc.
- Any required details to be shown on architectural plans, separate structural sheets are not anticipated or included.

3.6 Outline of Specifications

Specifications will be prepared by the Architectural designer with input from all disciplines

Deliverable:

- Specifications Outline – 30%

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3.7 Cost Estimate – Quantities and Estimate

A 30% construction cost estimate will be compiled with input from each discipline

Deliverable:

- Construction Cost Estimate – 30%

3.8 QA/QC Review and Documentation

Design team members shall submit the appropriate QA/QC documentation for the 30% design submittal and comply with the procedures outlined in Section 1.1.4 of this Work Plan.

Prime: HNTB-FMG, Joint Venture

*FMG JV is eligible for SBE credit for an amount of $ 180,440

Subconsultant	Amount	DBE (Y/N)	SBE (Y/N)
MGE	$ 156,616	Y	Y
HLB	$ 42,003	Y	Y
FWA	$ 31,100	Y	Y
Cornerstone	$ 43,411	Y	Y
Chaudhary	$ 387,006	Y	Y

Total Work Plan Value: $ 862,477