

**Work Plan No B.40-01 Quality Assurance Support for Transbay Corridor Core Capacity Project**

**Scope:**

The Quality Assurance personnel will be based at 2150 Webster Street, Oakland, California, and will report there unless otherwise directed by the Supervisor. The Quality Assurance Personnel will work full-time, 40 hours per week, and will report to BART's Quality Manager, who is part of the Innovation and Standards group and reports to the Office of Infrastructure Delivery (OID). The scope of duties for which the Quality Assurance Personnel will be responsible includes the following:

**GENERAL**

- Monitor adherence of the Core Capacity quality program to BART's Quality Management System
- Assist with updates to the Core Capacity Quality Management Plan and Procedures, as required
- Monitor implementation of the Core Capacity Quality Management Plan across all participating divisions of BART, including Design, Procurement and Construction and Operations
- Review contract documents to verify quality requirements are included
- Review process control for estimating, scheduling and change control
- Participate in program and project element meetings and lead discussion of quality related items
- Provide update to the TCCCP monthly project report, FTA quarterly reports, and any other ad hoc reporting as needed.
- Participate in TCCCP monthly and quarterly review meetings

**SECTION 3.1 – QUALITY ASSURANCE OVERSIGHT / REVIEW OF DESIGN**

Quality Assurance Oversight / Review shall be performed at conceptual design, preliminary design, intermediate design, pre-final design, and final design. Oversight / Review may also consist of reviewing and coordinating the finalization of the contract documents consisting of specifications and drawings. The Core Capacity Quality Assurance Personnel shall review, and monitor design consultant team's QA/QC procedures and activity for the following:

- Design Control, Design interfaces and design verification
  - Software quality assurance and control
  - Configuration control during design and construction related services
  - Corrective and preventive action plan
  - Maintaining of quality records
  - Deliverables and document control
  - Monitoring of design consultant schedules, QA/QC compliance, and Consultant internal audits
- 
- Monitoring compliance with procedures established in the BART Design Scoping Documents and Design Deliverables Guidelines

### **SECTION 3.2 – QUALITY ASSURANCE OVERSIGHT / REVIEW OF SPECIFICATIONS**

The Core Capacity Quality Assurance Personnel shall review, research, develop, standardize, and augment the QA/QC requirements to be compliant with FTA, State and Local guidelines. The tasks shall include, but are not limited to, the following:

- Review existing QA/QC and testing requirements specified in contract specifications,
- Create performance related and result-oriented hold points for effective monitoring of the quality assurance specified per individual contract sections.

### **SECTION 3.3 – QUALITY ASSURANCE OVERSIGHT / REVIEW OF PROCUREMENTS**

The Core Capacity Quality Assurance Personnel shall review, and monitor quality assurance and quality control plans, procedures, and activity of the following:

- Equipment manufacturers, vendors, and their subcontractors
- In-plant, on-site inspections of manufacturers / fabricators quality records
- Reviewing tests and monitoring compliance with contract specifications
- Quality review of equipment design and fabrication
- Control of O & M manuals, As-builts and configuration management
- Review of contract training requirements
- Monitor coordination of the BART procurement activity

### **SECTION 3.4 – QUALITY ASSURANCE OVERSIGHT / REVIEW OF CONSTRUCTION**

The Core Capacity Quality Assurance Personnel shall perform the following:

- Review and implement QA/QC requirements in contract specifications
- Review and approve the Contractors QA / QC program plans.
- Monitor implementation of approved CQC Plan by the Contractor & subcontractors
- Review, inspect and monitor contractor's inspection and test plan, incoming material inspection data, product identification and traceability, equipment calibration records document control, records of non-conforming products and corrective/preventive action, sub-contractor records and internal audit reports
- Monitor project specific quality control measures and data records maintained by BART inspectors
- Monitor inspection oversight and co-ordinate with third party oversight (FTA I PMOC)
- Monitor testing, training, commissioning, and turnover
- Monitor recording and maintenance of as-built drawings, data, and quality records

### **SECTION 3.5 – QUALITY ASSURANCE OVERSIGHT / REVIEW OF START UP & COMMISSIONING**

The Core Capacity Quality Assurance Personnel shall monitor the procurement, installation, testing, commissioning and turnover of the furnished equipment, operating systems and support systems. They will monitor adherence and compliance with specified requirements which include, but are not limited to, the following:

- Review of specifications and critical interfaces
- Monitor conformance with procedures established per Systems Start Up Plan submittals
- Implement and monitor QA/QC program requirements throughout start up and commissioning
- Monitor recording and maintenance of as-built drawings, data, and quality records
- Monitor project specific quality control measures and data records maintained by BART inspectors

**SECTION 3.6 – VERIFICATION AND MONITORING OF TEST EQUIPMENT**

The Core Capacity Quality Assurance Personnel will monitor contractor procedures for ensuring the following:

- Status of the test equipment utilized in performing the tests and measurements and the conformance with national standards to ensure accuracy and to demonstrate the conformance of work to specified requirements
- Calibration records for ensuring the accuracy of the test and measuring equipment and relevant records

**SECTION 3.7 – DOCUMENT CONTROL**

The Core Capacity Quality Assurance Personnel will support for establishing and monitoring the following:

- Develop the formats for the quality records needed to ensure procedural, instructional compliance with documentation
- Procedures for maintaining effective control of project documents comprised of specifications, drawings, project records, audits, surveillances, inspection and test reports. Updates to project documents will also follow change control procedures
- Develop procedures to maintain QA/QC records and assure quick retrievability

**SECTION 3.8 – QUALITY AUDITS**

The Core Capacity Quality Assurance Personnel will conduct quality audits and quality surveillances to monitor QA/QC compliance of the following:

- Design consultant's QA/QC program and compliance with Core Capacity QMP requirements
- Resident Engineers compliance with the procedures per Resident Engineers Manual
- Design Build Oversight Manager's compliance with procedures per the Design-Build Oversight Manual
- Testing records and other data conducted by Contractor and/or Inspection agency,
- Document Control policies and procedures
- QA/QC Plan compliance by Contractors, subcontractors, manufacturers, fabricators, vendors and their suppliers

**Prime: Jacobs**

<b>Subconsultant</b>	<b>Amount</b>	<b>DBE (Y/N)</b>	<b>SBE (Y/N)</b>
Quality Engineering, Inc. (QEI)	\$ 627,708	Y	Y

**Total Work Plan Value: \$ 685,534**