

## **SECTION 01 40 00 – QUALITY REQUIREMENTS**

### **PART 1 - GENERAL**

#### **1.1 SUMMARY**

- A. This Section specifies administrative and procedural requirements for quality control services.
- B. Quality control services include inspections and tests and related actions including reports, performed by independent agencies, governing authorities, and the Contractor. They do not include Contract enforcement activities performed by the Architect or Construction Manager. Inspections and tests will include, but not limited to:
  - 1. Soil analysis.
  - 2. Foundation subgrade compaction.
  - 3. Concrete reinforcing.
  - 4. Concrete strength.
  - 5. Structural steel bolting, shear bolts, welding.
  - 6. Backfill compaction.
  - 7. Roadway subgrade compaction.
  - 8. Asphalt.
  - 9. Fireproofing
- C. Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve the Contractor of responsibility for compliance with Contract Document requirements.
- D. Requirements of this Section relate to customized fabrication and installation procedures, not production of standard products.
  - 1. Specific quality control requirements for individual construction activities are specified in the Sections that specify those activities. Those requirements, including inspections and tests, cover production of standard products as well as customized fabrication and installation procedures.
  - 2. Inspections, test and related actions specified are not intended to limit the Contractor's quality control procedures that facilitate compliance with Contract Document requirements.

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3. Requirements for the Contractor to provide quality control services required by the Architect, Construction Manager or Owner, or authorities having jurisdiction are not limited by provisions of this Section.

### 1.2 RESPONSIBILITIES

- A. Contractor Responsibilities: The Owner shall provide inspections, tests and similar quality control services, specified in individual Specification Sections and required by governing authorities, except where they are specifically indicated to be the Contractor's responsibility, or are provided by another identified entity; these services include those specified to be performed by an independent agency and not by the Contractor.
1. The Owner shall employ and pay an independent agency, to perform specified quality control services.
  2. Retesting: The Contractor is responsible for retesting costs where results of required inspections, tests or similar services prove unsatisfactory and do not indicate compliance with Contract Document requirements, regardless of whether the original test was the Contractor's responsibility.
    - a. Cost of retesting construction revised or replaced by the Contractor is the Contractor's responsibility.
  3. Associated Services: The Contractor shall cooperate with agencies performing required inspections, tests and similar services and provide reasonable auxiliary services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include but are not limited to:
    - a. Providing access to the Work and furnishing incidental labor and facilities necessary to facilitate inspections and tests.
    - b. Taking adequate quantities of representative samples of materials that require testing or assisting the agency in taking samples.
    - c. Providing facilities for storage and curing of test samples, and delivery of samples to testing laboratories.
    - d. Security and protection of samples and test equipment at the Project site.
- B. Duties of the Testing Agency: The independent testing agency engaged to perform inspections, sampling and testing of materials and construction specified in individual Specification Sections shall cooperate with the Construction Manager and Contractor in performance of its duties, and shall provide qualified personnel to perform required inspections and tests.
1. The agency shall notify the Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
  2. The agency is not authorized to release, revoke, alter or enlarge requirements of the Contract Documents, or approve or accept any portion of the Work.
  3. The agency shall not perform any duties of the Contractor.

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- C. Coordination: The Contractor and each agency engaged to perform inspections, tests and similar services shall coordinate the sequence of activities to accommodate required services with a minimum of delay. In addition the Contractor and each agency shall coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.
  - 1. The Contractor is responsible for scheduling times for inspections, tests, taking samples and similar activities.

### 1.3 SUBMITTALS

- A. The Construction Manager shall submit a certified written report of each inspection, test or similar service, to the Contractor, in duplicate, unless the Contractor is responsible for the service. If the Contractor is responsible for the service, submit a certified written report of each inspection, test or similar service through the Contractor, in duplicate.
  - 1. Submit additional copies of each written report directly to the governing authority, when the authority so directs.
  - 2. Report Data: Written reports of each inspection, test or similar service shall include, but not be limited to:
    - a. Date of issue.
    - b. Project title and number.
    - c. Name, address and telephone number of testing agency.
    - d. Dates and locations of samples and tests or inspections.
    - e. Names of individuals making the inspection or test.
    - f. Designation of the Work and test method.
    - g. Identification of product and Specification Section.
    - h. Complete inspection or test data.
    - i. Test results and an interpretation of test results.
    - j. Location of sample or test in project.
    - k. Ambient conditions at the time of sample-taking and testing.
    - l. Comments or professional opinion as to whether inspected or tested Work complies with Contract Document requirements.
    - m. Name and signature of laboratory inspector.
    - n. Recommendations on retesting.

### 1.4 QUALITY ASSURANCE

- A. Qualification for Service Agencies: The Owner will engage inspection and testing service agencies, including independent testing laboratories, which are prequalified as complying with "Recommended Requirements for Independent Laboratory Qualification" by the American Council of Independent Laboratories, and which specialize in the types of inspections and tests to be performed.
  - 1. Each independent inspection and testing agency engaged on the Project shall be authorized by authorities having jurisdiction to operate in the State in which the Project is located.

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### **1.5 TRADESMEN & WORKMANSHIP**

- A. Ensure that tradesmen performing work at site are skilled and knowledgeable in methods and craftsmanship needed to produce required quality levels for workmanship in completed work. Remove and replace work which does not comply with workmanship standards as specified and as recognized in the construction industry for applications indicated. Remove and replace other work damaged or deteriorated by faulty workmanship or its replacement.

### **1.6 REPAIR AND PROTECTION**

- A. General: Upon completion of inspection, testing, sample-taking and similar services, repair damaged construction and restore substrates and finishes to eliminate deficiencies, including deficiencies in visual qualities of exposed finishes. Comply with Contract Document requirements for "Cutting and Patching."
- B. Protect construction exposed by or for quality control service activities, and protect repaired construction.
- C. Repair and protection is the Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing or similar services.

### **1.7 REPLACEMENT OF WORK**

- A. Within 24 hours after rejection of work pursuant to the General Conditions, remove all materials and equipment so rejected and immediately replace work, at the Contractor's cost, to the satisfaction of the Architect and Construction Manager. Should the work of the Owner or other Contractors be damaged by such removal or replacement, the Contractor shall reimburse the Owner or other Contractors for all costs incurred for correcting damage.

**- END OF SECTION 01 40 00 -**