

## **SUPPLEMENTAL TECHNICAL SPECIFICATION**

### **SECTION 1507**

#### **MATERIALS TESTING AND QUALITY ASSURANCE**

##### **1507.1 GENERAL**

- A. This Section includes testing and quality control measures required on this project. The Section is additional to requirements specified for testing and quality assurance in the standard specifications and other supplemental specifications.
- B. Materials and equipment are subject to inspection, sampling, and testing before acceptance of the work.

##### **1507.2 RELATED WORK**

- A. General and Supplemental General Conditions of the Contract.

##### **1507.3 REFERENCES AND DEFINITIONS**

- A. All materials and equipment shall be tested, by the CONTRACTOR, pursuant to their technical specification (unless otherwise specified herein) and the manufacturer's recommendations.
- B. Structure shall include but is not limited to: parking lots, pavement, sidewalk, curb and gutter, foundations, structural concrete, piping, wet-wells, manholes, retaining walls, junction boxes, and buildings.

##### **1507.4 SUBMITTALS**

- A. Test Reports from tests performed by independent testing firm: Submit for acceptance, complete test reports from approved independent testing laboratories certifying that product conforms to performance characteristics and testing requirements specified herein and in other supplemental/standard specifications. Independent firm to submit reports to the ENGINEER and CONTRACTOR, in duplicate, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.
- B. Test Reports from tests performed by CONTRACTOR: Submit for acceptance, complete test reports from CONTRACTOR certifying that product conforms to performance characteristics and testing requirements specified herein and in other supplemental/standard specifications.

##### **1507.5 QUALITY ASSURANCE**

- A. Quality Assurance/Control of Installation – The CONTRACTOR shall:
  - 1. Comply fully with manufacturers' instructions, including each step in sequence.

2. Request clarifications from ENGINEER before proceeding should manufacturers' instructions conflict with Contract Documents.
3. Request clarification from ENGINEER before proceeding should specified reference standards conflict with Contract Documents. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.
4. Comply with specified standards as a minimum quality for the work except when more stringent specified tolerances, codes, or requirements indicate higher standards or more precise workmanship are required.
5. Make sure work is performed by qualified persons.
6. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement.

B. Testing Laboratory Services

1. Reports will be submitted by the independent firm to the ENGINEER and CONTRACTOR, in duplicate, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.

### **1507.6 TESTING METHODS**

Testing methods shall comply with ASTM Standards and as specified in the technical specifications for the project.

### **1507.7 EXECUTION**

A. Testing Laboratory Services

1. The CONTRACTOR will employ and pay for services of an independent testing firm to perform testing.
2. The independent firm will perform tests and other services specified in individual Specification Sections and as required by the OWNER.
3. CONTRACTOR shall:
  - a) Cooperate with independent firm; furnish samples of materials, design mix, equipment, tools, storage and assistance as requested.
  - b) Notify ENGINEER and independent firm 8 hours prior to expected time for operations requiring services.
  - c) Make arrangements with independent firm and pay for additional samples and tests required for CONTRACTOR'S use.

B. Retesting required because of non-conformance to specified requirements shall be performed by the same independent firm on instructions by the ENGINEER. No additional payment will be made for retesting due to failing tests.

### **1507.8 TESTING FREQUENCY AND TYPE OF TESTING**

Frequency and type of testing shall be per the requirements listed in the specifications for each type of Work. The Engineer may increase and/or add testing for any Work items. The Testing Allowance will be adjusted for increases in testing by Section 1507.9.D.

### **1507.9 MEASUREMENT AND PAYMENT**

Testing shall be paid for as an allowance on a Lump Sum basis. The Contractor may request percent of LS cost payments during construction, however, the Contractor shall provide actual testing lab invoices as back-up for the percent complete that is being requested in a Pay Application.

Testing allowances are provided as part of the project and invoiced for testing will be paid for through this allowance.

Costs included in testing price include:

- A. Cost of engaging an independent testing firm, execution of tests by the testing firm, and reporting results by the testing firm.
- B. Costs of incidental labor and facilities required to assist testing firm.
- C. Costs of testing laboratory services used by CONTRACTOR separate from Contract Document requirements
- D. Costs of re-testing due to failure of previous tests will be included in the cost for testing and no additional payment will be made for this work.

The CONTRACTOR shall submit two copies of the testing firm's invoice to OWNER with Pay Application. Reimbursement to the Contractor will be for actual invoiced costs and no mark-up will be added to this invoice. The Contractor shall receive reimbursement for actual invoice of testing firm upon certification that payment has been made to the testing laboratory. Payment will be made at the next application for payment from OWNER.

**END OF SECTION**