

**Supplemental Specification  
2017 Standard Specification Book**

**SECTION 01455**

**MATERIAL QUALITY ASSURANCE**

**Delete Section 01455 in its entirety and replace with the following:**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Materials Quality Assurance
- B. Buy America

**1.2 RELATED SECTIONS- Not Used**

**1.3 REFERENCES**

- A. UDOT Materials Manual of Instruction
- B. UDOT Minimum Sampling and Testing Requirements
- C. Code of Federal Regulations (CFR)

**1.4 DEFINITIONS**

- A. Authorized Products List (APL) – A listing of manufactured products that have been verified as meeting the requirements in the standard specifications.

**1.5 SUBMITTALS**

- A. Permission agreements for storing materials on private property.
- B. Certifications of Compliance for all steel and iron products used on federal-aid projects demonstrating compliance with Buy America requirements for approval before delivery to project site.
  - 1. Refer to this Section, Article 1.11 for Buy America requirements.
  - 2. Include at least the following for domestic steel and iron products:
    - a. Signed mill test report.

- b. Signed certification by each Fabricator and Manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States.
    - c. Material descriptions, quantities, and means of material identification such as heat numbers, lot numbers, and other industry identification markings for each process the material underwent so the final product can be tracked through a step process from smelting to final product.
  - 3. Tracking quantities is not required for coating operations and for mill certifications.
- C. Cost documentation for use of foreign steel or iron on federal-aid projects for approval before payment and incorporation into the project, when applicable.
  - 1. Include at least the following:
    - a. Documentation that tracks the use of permanent foreign steel incorporated into the project.
    - b. Material invoices documenting the material cost to the Contractor from the supplier as delivered to the site, not the Contractor's bid price.
    - c. Total cost and percent of total contract amount showing that the cost of the foreign steel and iron does not exceed Buy America requirements

## **1.6 MATERIALS QUALITY ASSURANCE**

- A. Prequalification of Suppliers
  - 1. Use a Department pre-qualified supplier according to the Quality Management Plans (QMP) listed for the following materials:
    - a. Cement – QMP 502
    - b. Reinforcing Steel Epoxy – QMP 503
    - c. Reinforcing Steel – QMP 504
    - d. Precast / Prestressed Concrete Structures – QMP 505
    - e. Ready Mix Concrete – QMP 506
    - f. Flyash and Pozzolan – QMP 507
    - g. Asphalt Emulsion – QMP 508
    - h. Asphalt Binder – QMP 509
    - i. Hydrated Lime – QMP 510
    - j. Reinforcing Steel Galvanized Coating – QMP 512
    - k. Pavement Marking Paint – QMP 513
    - l. Hot Mix Asphalt – QMP 514
  - 2. Products delivered by suppliers who are not qualified or who lose qualification during the project will be rejected.

B. Authorization of Materials Before Use Based on Manufacturer Information.

1. The contract designates manufactured materials that can be incorporated in the work when authorized before use based upon manufacturer information.
  - a. The manufacturer information required for authorization is specified in the technical specifications as submittals.
  - b. APL Compliance Form
    - 1) Manufactured materials can be incorporated in the work only if listed on the APL when the APL Compliance Form is listed as a submittal in the technical specifications. The APL Compliance Form and application to submit products for placement on the APL can be found on the UDOT website.
    - 2) Materials not listed on the APL when the technical specifications list the APL Compliance Form as a submittal will not be authorized for use.
  - c. Certificates of Compliance
    - 1) Manufactured materials and assemblies can be incorporated in the work if accompanied by a manufacturer's Certificate of Compliance when a Certificate of Compliance is listed as a submittal in the technical specifications. Includes the following:
      - a. Project number and description, location, and Contractors' name;
      - b. Manufacturer's name, along with the material source location and point of manufacture or assembly;
      - c. Identification of the party the material was sold or supplied to;
      - d. Lot identification or manufacturer's identification of the certified materials or assemblies delivered to the project;
      - e. Reference to the technical section or requirement of the contract specifications fulfilled through certification along with test reports, when applicable; and
      - f. Statement that the materials or assemblies comply with the particular requirements of the contract cited above and signed by a manufacturer's representative in a position to legally bind the manufacturer.

- 2). The Department may sample and test materials or assemblies used on the basis of Certificates of Compliance and reject if determined not to meet contract requirements.
- d. Manufacturer's product data sheets and installation instructions
  - 1). Materials may be incorporated into the project based on information provided through manufacturer's product data sheets and installation instructions when listed as a submittal in the technical specifications..
  - 2). Provide sufficient information to demonstrate conformance with product requirements before incorporating the product into the work.
  - 3). Installation instructions supplement Part 3 Execution requirements of technical Sections; in case of conflict, the more stringent requirements apply.
  - 4). APL Compliance Form may be submitted in lieu of product data sheets and installation instructions if the product is listed in the Department's APL.

C. Verification

1. Inspection
  - a. The Department field verifies material properties and their incorporation into the project as required in the technical specifications.
2. Sampling and Testing
  - a. The Department verifies certain properties of work for acceptance using sampling and testing.
  - b. Only those properties determined by a certain test are considered accepted by that test.
  - c. The UDOT Minimum Sampling and Testing Requirements and the UDOT Materials Manual of Instruction define procedures for anyone performing tests for verification.
  - d. The Department does not allow contract time extension for or as a result of testing.
  - e. The Department may deduct from payment due the costs for retesting of materials made necessary by the Contractor's activities.
  - f. Laboratories and technicians must be qualified according to the requirements of the UDOT Materials Manual of Instruction to perform materials sampling and testing.

- D. Other
  - 1. Materials and products of work where method for authorization or verification is not defined in the technical specification may be verified for conformance by any of the methods listed in this Article as determined by the Engineer.

## **1.7 SUPPLY SOURCE AND QUALITY REQUIREMENTS**

- A. Notify the Engineer of the proposed source of materials to be used before their delivery.
- B. The Department encourages the re-use of industrial byproducts that meet contract requirements.
  - 1. Use new materials for the work in cases where industrial byproducts do not meet contract requirements.
- C. Required testing for aggregate sources will be deemed invalid unless testing occurred within a year of submittal.

## **1.8 PLANT INSPECTION**

- A. The Department may inspect and test materials at the acquisition, manufacturing, or supplying source for compliance with specified manufacturing methods.
- B. Cooperate fully and assist the Engineer during the inspection and testing.
  - 1. Allow the Engineer full access to all parts of the plant used to manufacture or produce materials.
  - 2. Provide and maintain adequate safety measures.
  - 3. Provide mechanisms for providing samples during inspections.
    - a. Equip crushing or screening facilities with automatic or semiautomatic mechanical sampling devices.

## **1.9 MATERIAL STORAGE AND HANDLING**

- A. Store and handle materials according to manufacturer requirements.
- B. Transport bulk materials in a manner to prevent loss or segregation after loading and measuring.
- C. Store materials so they can be easily inspected and tested.
- D. Restore storage and plant sites to their original condition.

- E. Do not store materials and equipment on bridge decks and in areas that add loads to bridge elements.

#### **1.10 DEPARTMENT FURNISHED MATERIALS**

- A. Schedule, pickup, and deliver Department furnished materials to install at the specified site.
  - 1. Receive, inventory, store, protect, distribute and install at site as specified.
- B. Contractor is responsible for all materials received. The Department deducts from money due the Contractor for the following:
  - 1. Shortages, deficiencies, and damage that may occur to the material after physical transference from the Department.
  - 2. The demurrage charges resulting from failure to accept the material at the designated time and point of delivery.
- C. The terms Department furnished, State furnished, and owner furnished are used interchangeably throughout the contract documents to mean components for specific use in the project that are provided by an entity other than the Contractor.

#### **1.11 BUY AMERICA**

- A. Federal-aid projects are subject to Title 23 CFR Part 635.410, Buy America requirements.
  - 1. All products manufactured from steel and iron must be manufactured in the United States to be considered domestic.
    - a. All manufacturing processes of the steel and iron material in a product such as melting, rolling, extruding, machining, bending, grinding, drilling, and coating must occur within the United States.
    - b. Coating includes all processes that protect or enhance the value of the material to which the coating is applied. The material applied as a coating is not subject to Buy America requirements.
  - 2. The above requirement does not preclude a minimal use of foreign steel or iron, provided the cost of the steel or iron used does not exceed one tenth of one percent (0.1 percent) of the total contract amount or \$2,500, whichever is greater.
    - a. Track the use of all permanent foreign steel incorporated in the project.
  - 3. The following are exempt from Buy America except as noted:
    - a. Temporary steel or iron materials.
    - b. Materials left in place for the Contractor's convenience that could be removed without damaging the completed work.

- c. Items such as nuts, bolts, washers, screws, concrete chairs, spacers, mailboxes, and other steel or iron parts that may be considered miniscule or non-structural to the whole of the project.
- d. Fencing stays, clips, staples, or other miscellaneous fencing components.
- e. Manufactured assemblies that are less than 51 percent by weight steel or iron content when they are delivered to the job site for installation.
  - 1) Precast items such as pipe, manholes, and drainage boxes must meet the Buy America requirements.
- f. The major steel and iron components of the following and other similar assemblies must meet the Buy America requirements:
  - 1) Guardrail, guardrail posts, end sections, terminals, cable barrier, steel or iron pipe, conduit, grates, manhole covers and risers, mast arms, poles, standards, trusses, supporting structural members for signs, luminaires, and traffic control systems.

**1.12 CONVICT PRODUCED MATERIALS**

- A. Federal-aid projects are subject to Title 23, Code of Federal Regulations, CFR Part 635.417, Convict Produced Materials.
  - 1. Materials produced after July 1, 1991, by convict labor may only be incorporated in a Federal-aid highway construction project if such materials have been:
    - a. Produced by convicts who are on parole, supervised release, or probation from a prison.
    - b. Produced in a qualified prison facility and the cumulative annual production amount of such materials for use in Federal-aid highway construction does not exceed the amount of such materials produced in such facilities for use in Federal-aid highway construction during the 12-month period ending July 1, 1987.

**PART 2      PRODUCTS      Not Used**

**PART 3      EXECUTION      Not Used**

END OF SECTION