

## **SECTION 1.06 CONTROL OF MATERIALS**

**1.06.01--Source of Supply and Quality:** The Contractor must obtain the Engineer's approval of the source of supply of each of the materials specified in the Contract before delivery of such materials to the Project site is started. If, at any time, it is found by the Department that sources of supply which have been approved do not furnish a uniform product, or if the product from any source proves unacceptable to the Engineer, the Contractor shall furnish approved materials from other approved sources. Only materials conforming to the requirements of these specifications and approved by the Engineer shall be used in the work. No material which, after approval, has in any way become unfit for use shall be used in the work.

All permanently incorporated steel (and iron) used in the construction of the Project shall be produced and fabricated in the United States. It is the express intent of this specification to require that all manufacturing processes for all steel (and iron) materials and products, including the coating of steel and iron, occur within the United States, with the following exceptions:

The Contractor may request, in accordance with Section 635.410(b)(4) of Title 23 CFR, approval to include a minimal amount of foreign steel in the Project. This amount is defined as one-tenth of one percent (0.1 percent) of the total contract cost or \$2,500.00, whichever is greater. The cost of the foreign steel or iron is defined as its value delivered to the Project.

Additionally, the FHWA has granted a nationwide waiver of the requirements of 23 CFR 635.410, Buy America requirements, for the production of pig iron and processed, pelletized, and reduced iron ore. Items not specifically included in the waiver remain subject to the Buy America requirements. The Contractor may request the Engineer to seek from the FHWA a further waiver of said requirements, but it shall be in the sole discretion of the Engineer whether or not to seek such a waiver.

When the Contractor proposes to use materials from a source not currently approved by the Engineer, the Contractor shall submit as a prerequisite to consideration for source approval such evidence as the Engineer may request, showing that the materials from the proposed source meet the Contract requirements and will be available to the Contractor in sufficient quantity to assure continuous and satisfactory progress of the work.

Should it become necessary after award of the Contract for the Contractor to obtain materials from sources other than those indicated in the statement on materials sources furnished prior to award, the Contractor shall furnish a supplementary statement and required samples of materials to the Engineer not less than ten (10) calendar days prior to placing an order for any such material.

For any material that requires more than one month for delivery, the Contractor shall provide the Engineer with documentary proof that said material has been ordered in sufficient time to complete the work as planned. Failure to produce such documentary proof will result in a denial of any claim for a time extension based on late delivery of such material.

Where one manufacturer's product is specified in the Contract, it shall be understood that this represents the standard required, but that a comparable product of another manufacturer may be considered as a satisfactory equal and approved, unless the plans or special provisions indicate that no equal shall be allowed. Should a Contractor desire to use a product which he considers equal or superior to the one material specified, the Contractor shall submit a complete description of the item, together with seven (7) copies of shop drawings, cuts and other descriptive literature which completely illustrates such item presented for formal approval. Such approval shall not change any Contract requirements for a certified test report and materials certificate.

**1.06.02--Samples and Test:** The Contractor must obtain the Engineer's approval of all materials to be incorporated into the work in advance of such work. Approval of materials may be by certification accepted by the Engineer, written permission of the Engineer, or prior test and/or inspection by the Department. Any work in which materials are used without (1) approved certification accepted by the Engineer, (2) prior test and/or inspection and approval by the Department, or (3) written permission of the Engineer, may be considered unauthorized and therefore not paid for.

Materials tests and/or inspection, when required, will be made by and at the expense of the Department unless otherwise noted in these specifications.

Certification will be used as the basis of approval for such material as the Contract documents may specify or the Engineer may designate. For such materials, the Contractor shall furnish the Engineer a Certified Test Report and Materials Certificate, conforming to Article 1.06.07, as may be required for each type of material.

Any cost involved in furnishing the certificate shall be borne by the Contractor.

If the Contractor has materials purchased for use on a previous Department contract which have never been used and which comply with the required Contract specifications, those materials, with the approval of the Engineer, may be furnished and used, provided the Contractor, acting as the materials supplier, submits a related Materials Certificate conforming to Article 1.06.07. This Materials Certificate shall further identify the contract for which the material was originally purchased and shall be accompanied by a copy of the original certification.

The Department will also maintain a current list of approved materials and approved suppliers of those materials.

Sampling will be as shown in the latest edition of the "Schedule of Minimum Requirements for Sampling Materials for Test," and tests will be made in accordance with the latest revision of the standard method of AASHTO, ASTM, or other standards accepted by the Department which are in effect at the time of bidding, unless otherwise specified on the plans or in the special provisions. Any items not covered in the "Schedule of Minimum Requirements for Sampling Materials for Test," special provisions, or plans shall be sampled and tested or certified, as directed by the Engineer.

Representative preliminary samples of the material proposed for use shall be submitted for examination, without charge by the Contractor or producer. Samples submitted shall be taken by a representative of the Department or a commercial laboratory approved by the Engineer. All materials are subject to inspection, testing or re-testing at the Engineer's direction at any time during their manufacturing, fabrication or use.

The Contractor shall furnish required samples without charge, and provide secure facilities for their storage. The Contractor shall provide means for, and shall assist in, the verification of all scales, measures and other devices which it operates.

Materials will be rejected by the Engineer whenever, in his judgment, they fail to meet the requirements of the Contract.

The Engineer may accept a material or combination of materials and therefore waive non-complying test results, provided that all of the following conditions are met:

1. Results of prior and subsequent series of tests of the material or materials from the same source or sources are found satisfactory.
2. The incidence and degree of non-conformance with the Contract requirements are, in the Engineer's judgment, within reasonable limits.
3. The Contractor, in the Engineer's judgment, had diligently exercised material controls consistent with good practices.
4. No adverse effect on the value or serviceability of the completed work could result.

The Engineer may at his discretion waive testing of minor quantities of material when such material is obtained from sources which have previously provided supplies of that material which have consistently met Department testing standards.

**1.06.03--Storage:** The Contractor shall store all materials for the Project in a way which ensures that their quality and fitness for the work will be preserved, and that the Engineer may have easy and prompt access to them for inspection purposes. Materials shall be kept on wooden platforms or on other hard, clean surfaces and not on the ground. When so directed by the Engineer, the Contractor shall store materials in a weatherproof building.

The Contractor shall not store materials in any way which will lead to a violation of Section 1.10 of these specifications.

Stored materials, even if they have been approved by the Engineer prior to their storage, must be inspected and must meet all pertinent Contract requirements immediately prior to the Contractor's use of those materials on the Project.

**1.06.04--Defective Materials:** All materials not incorporated in the work and not conforming to the requirements of the Contract shall be considered as defective and shall be rejected and, unless otherwise permitted by the Engineer, shall be removed immediately from the site of the work. If deemed necessary by the Engineer, materials previously tested, approved and incorporated in the work may be re-tested, and if found not to conform to the Contract may, with the approval of the Engineer, be left in place providing an equitable adjustment in payment is made. No rejected material, the defects of which have been subsequently corrected, shall be used until approval for such use has been given by the Engineer. Should the Contractor fail to comply with any order of the Engineer made under the provisions of this article, the Engineer shall have authority to remove and replace defective material, and to deduct the cost of such removal and replacement from any money due or to become due the Contractor.

When a material is fabricated or treated with another material, or when any combination of materials is assembled to form a product, any or all of which are covered by specifications, the failure of any components of the product to comply with the designated specification may be sufficient cause for the rejection of the whole.

The Engineer may accept a material or a combination of materials and therefore waive non-complying test results, as provided for under Article 1.06.02.

Materials shipped from approved deposits or sources of supply which are found to be defective upon arrival at destination shall not be used.

**1.06.05--Shipping Material:** Deliver and handle products according to the manufacturer's recommendations. Schedule delivery to prevent overcrowding of construction spaces. Coordinate delivery with installation time to assure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses. Deliver products to the site in an undamaged condition in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing. The Contractor shall inspect products upon delivery to ensure compliance with the Contract, and to ensure that products are undamaged and properly protected.”

#### **1.06.06--Vacant**

**1.06.07--Certified Test Reports and Materials Certificates:** For such items and materials as the Contract documents may specify, or the Engineer may designate during the preconstruction meeting or prior to delivery at the Project site, the Contractor shall furnish a certified test report and a materials certificate.

The certified test report and materials certificate shall be forwarded to the Engineer; and, in addition, a copy of the certified test report and materials certificate shall be forwarded to the Department's inspector at the Project site.

Materials which require such documentation may be conditionally incorporated in the work prior to receipt by the inspector of a certified test report and a materials certificate; however, payment for such incorporated material will not be made prior to receipt of a certified test report and materials certificate which show that the material meets the requirements of the Contract.

If the certified test reports and material certificates show that the material conditionally incorporated in the work does not meet the requirements of the Contract, such material shall be removed and replaced by the Contractor with material which does meet the requirements.

Final acceptance of the material shall be subject to the requirements of Article 1.08.14.

The certified test report is a document containing a list of the dimensional, chemical, metallurgical, electrical and physical results obtained from an actual test of the materials involved, and shall certify that the materials meet the requirements of the Contract, and shall also include the following information:

- (1) Item number and description of material.
- (2) Date of manufacture.
- (3) Date of testing.
- (4) Name of organization to which the material is consigned.
- (5) Quantity of material represented, such as batch, lot, group, etc.
- (6) Means of identifying the consignment, such as label, marking, lot number, etc.
- (7) Date and method of shipment.
- (8) Name of organization performing tests.

The certified test report shall be signed by an authorized and responsible agent for the organization manufacturing the material, and it shall be notarized.

A materials certificate is a document certifying that the materials, components and equipment furnished conform to all requirements of the plans and specifications. The document shall also include the following information:

- (1) Project to which the material is consigned.
- (2) Name of Contractor to which material is supplied.
- (3) Item number and description of material.
- (4) Quantity of material represented by the certificate.
- (5) Means of identifying the consignment, such as label, marking, lot numbers, etc.
- (6) Date and method of shipment.

The materials certificate shall be signed by an authorized and responsible agent for the organization supplying the material, and shall be notarized.

The Contractor shall be responsible for any testing, materials certificates, and inspections required under individual sections of the Special Provisions.

**1.06.08--Warranties, Guarantees and Instruction Sheets:** Manufacturers' warranties and guarantees furnished for materials used in the work and instruction sheets and parts lists supplied with material shall be delivered to the Engineer prior to acceptance of the Project. Each warranty or guaranty so furnished shall indicate its expiration date.