

ITEM 607.0701 11 - VARIABLE HEIGHT STEEL FENCE

DESCRIPTION

This work shall consist of fabricating, installing, and painting a Variable Height Steel Fence as described in the contract documents, in the locations indicated on the plans or where directed by the Engineer in Charge. In addition, the Contractor shall furnish extra paint, thinner, paintbrushes, and painting gloves to the Engineer as described in this specification.

MATERIALS

Materials for this work shall meet the requirements of the New York State Steel Construction Manual and the following subsections of NYSDOT Standard Specification Section 700- Materials:

701-05 Concrete Grouting Material.

708-01 Paints-General. Paint shall consist of flat primer, low luster intermediate coat, and glossy finish coat. Color of the finish coat shall be as specified in the contract documents. All paints and thinners used shall be selected from N.Y.S.D.O.T.'s approved list, "Moisture-Curing Urethane Paint Systems." All coats of paint used on any one structure shall be produced by the same manufacturer. Selection of undercoat colors is left to the discretion of the contractor except that each single paint coat shall be a color different from the others and shall be approved by the Engineer.

715-01 Structural Steel. Certified copies of the results of tests conducted by the manufacturer shall be furnished to the Engineer in accordance with this specification.

715-02 Steel Castings.

715-05 Iron Castings.

715-02 Steel Forgings.

715-09 Malleable Iron Castings.

715-14 High Strength Bolts, Nuts and Washers.

721-03 Epoxy Polysulfide Grout.

Additional materials needed include the following:

Painting gloves. Painting gloves shall be a heavy puncture and chemical resistant material that will not dissolve when in contact with the specified paints or their thinners. Sizes shall be as required by property maintenance personnel and as directed by the Engineer.

Paintbrushes. Paintbrushes shall have wood handles and natural bristles (for use with the specified finish coat of paint) and shall be 50mm (2") wide angle-style unless directed or approved otherwise by the Engineer.

CONSTRUCTION DETAILS

General. The Contractor shall mark and obtain approval of the proposed fence alignments from the Regional Landscape Architect prior to proceeding with shop drawings, fabrication, or installation. The Contractor shall maintain installed fences and gates during the life of the contract and shall repair and replace all members that are disturbed, damaged, or destroyed.

Shop Drawings. The Contractor shall measure the actual space where the fence will be located and shall use this information to create accurate shop drawings of the fence to be installed. The Contractor shall submit two paper sets of shop drawings to the Regional Landscape Architect for approval before starting work. If revisions are required, two paper sets of all required revised drawings must be submitted for approval. Upon approval, the contractor shall submit four additional paper copies of the approved drawings to the Engineer.

Fabrication. All structural steel work including, but not limited to, fabrication, inspection, transportation and erection shall be done in accordance with the provisions of the New York State Steel Construction Manual. Plates, castings, pickets, posts, and rails shall be formed into panels of the sizes and shapes shown on the approved shop drawings. Panels shall be curved as required by the work. Joints shall be completely welded with welds of proper size and shape as required by New York City Parks and Recreation Standard Specification, "Materials and Methods of Construction," Section B. All welds shall be ground smooth to a neat finish. The Contractor shall submit finished sample fence parts to the Engineer for approval. The workmanship and finish of the final product shall be equal to the approval samples.

Pickets shall be truly vertical (plumb). Rails and bars shall be parallel to grade unless specifically shown otherwise in the construction documents. Connections between panels and posts shall be provided as indicated in the contract documents.

Preparation for Painting shall be done in accordance with NYSDOT Standard Specification Section 572 - 3.01 "Cleaning" except that sandpaper, power sanders, hand scrapers, hand or power impact tools, hand or power wire brushes, and/or grinders may be used to remove scale and rust to achieve a sound substrate.

Painting shall be done in accordance with NYSDOT Standard Specification Section 572 - "Structural Steel Paint System: Shop Applied."

The Contractor shall submit duplicate paint chips to the Regional Landscape Architect and the Engineer for approval prior to starting painting work. Paint shall be applied in accordance with Standard Specification Section 740-01, Painting Metal Structures. All steel members shall be shop painted with the approved primer and intermediate coats prior to delivery to the construction site.

METHOD OF MEASUREMENT

Variable Height Steel Fence will be measured by the actual number of square meters installed to the nearest square meter of finished fence.

BASIS OF PAYMENT

The price, bid per square meter, shall include the cost of all labor, materials (including extra materials), equipment, and incidentals necessary to furnish, install, and paint the fence in accordance with the plans and specifications and to the satisfaction of the Engineer.

The bid price shall include all of the following work outlined in NYSDOT Standard Specification subsection 564-5.02, Additional Work:

- A. Shop Drawings, Including Paper Prints and Reproducible Prints.
- C. Inspection of Bolted Connection.
- D. Qualification Test for Welders, Welding Procedures, and Electrode and Flux Combinations.
- E. Radiographic Inspection
- F. Ultrasonic Inspection
- G. Magnetic Particle Inspection
- H. Repair of Defects in Welds and Base Metal
- I. Field Inspection of Rejected Material and Material Note Offered for Shop Inspection even though Required to be Shop Inspected by the Contract Documents
- J. Straightening Bent Material and Correcting Camber Deficiencies
- K. Field Repair, Reaming and Drifting of Holes
- O. Photographs
- P. Testing of Stock Steel
- Q. Heat-Curving and Cambering

Concrete and excavation will be paid for separately under their respective Items.