

**ITEM 607.3612 11 - REMOVE, STORE, REPAIR AND RESET EXISTING
STEEL FENCE PANELS**

DESCRIPTION

This work shall consist of removing, storing, repairing and resetting existing steel fence panels in accordance with the contract documents and as directed by the Engineer.

MATERIALS

Materials for this work shall meet the requirements of the New York State Steel Construction Manual and the following relevant 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.

715-02 Steel Castings.

715-05 Iron Castings.

715-06 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 50 mm (2") wide angle-style unless directed or approved by the Engineer.

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CONSTRUCTION DETAILS

General. The Contractor shall mark and obtain approval of the proposed reset fence panel alignments from the Engineer prior to proceeding with shop drawings, repair, or installation. The Contractor shall maintain reset fences panels 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 panels will be reset and shall use this information to create accurate shop drawings of the fence or gate to be reset. The Contractor shall submit two paper sets of shop drawings to the Engineer 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, repair, 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 and braces 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. 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 approved 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 construction 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 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. Following fabrication and installation of the steel fences and gates on site, all welds, bolted areas and areas where paint has been damaged shall be stripped and field-painted with the approved primer and intermediate coat. The entire structure shall then be field-painted with the approved finish coat. If the colors of the primer and/or intermediate coat show through the finish coat, additional coats of the approved finish coat paint shall be applied at no extra cost to the state until the undercoat colors are completely masked and the finish coat color matches the approved color chip.

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Installation. The Contractor shall form or drill post holes in concrete or stone footings, curbs, or walls in the approved locations and as required by the contract documents. The Contractor shall support each fence panel in a manner that will keep it plumb, smoothly aligned with the other posts, and at the elevation required by the contract documents. The space surrounding each post shall be filled to the depth shown in the details with 701-05 concrete grouting material. After the concrete grout has hardened, 721-03 epoxy polysulfide grout shall be tooled in to fill the remaining space, seal the post hole from water entry, and form a 6mm high slope away from the post. Application of both grouts shall be in strict accordance with the manufacturer's instructions.

Fence panels shall be set at slopes conforming to the slope of the finish grade beneath the fence or gate unless specifically shown otherwise in the contract documents or ordered otherwise by the Engineer.

Fences panels not set plumb and true to line and grade shall be removed and replaced at the Contractor's own expense as directed by the Engineer.

Extra Materials. For each 64 meters of 0.76 m high steel fence panel, the Contractor shall furnish and deliver a one gallon can of the approved finish coat paint in the approved color, one quart of the corresponding approved thinner, two paintbrushes, and two pairs of painting gloves to the Engineer. If less than 8 meters of 0.76 m high steel fence panels, 10 meters of 1.22 m high steel fence panels, or 5.75 meters of 2.13 m or 2.42 m high steel fence and panels are reset on the project, the Contractor shall furnish and deliver a one quart can of the approved finish coat paint in the approved color, one pint of the corresponding approved thinner, one paintbrush, and one pair of painting gloves to the Engineer.

Contractor Liability. If the Contractor damages or defaces any existing or newly installed pavements, structures or plants in the process of carrying out this work, the damaged object shall be repaired or replaced at the Contractor's own expense as required by the Engineer. All paint spatters, metal scraps, and metal fillings shall be removed from the site before the work will be accepted.

METHOD OF MEASUREMENT

This work will be measured by the number of meters of removed, stored, repaired and reset existing steel fence panels satisfactorily completed measured between the horizontal limits of the fence measured in place.

BASIS OF PAYMENT

The unit price bid shall include the cost of furnishing all labor, materials, and equipment necessary to satisfactorily complete the work.