

## CONSTRUCTION SPECIFICATION

### **71. WATER CONTROL GATES**

#### 1. SCOPE

The work shall consist of furnishing and installing water control gates including gate stems, hoists, lifts and other appurtenances.

#### 2. MATERIALS

The gates furnished shall conform to the requirements of Material Specifications 571, 572, and 573, as appropriate, and as specified in Section 8 of this specification and on the drawings. All gates shall be furnished complete with hoisting equipment and other specified appurtenances.

#### 3. INSTALLING GATES

The Contractor shall install the gates in a manner that will prevent leakage around the seats and binding of the gates during normal operation.

Surfaces of metal against which concrete will be placed shall be free from oil, grease, loose mill scale, loose paint, surface rust, and other debris or objectionable coatings.

Anchor bolts, thimbles and spigot frames shall be secured in true position within the concrete forms and maintained in alignment during concrete placement.

Concrete surfaces against which rubber seals will bear or against which flat frames or plates are to be installed shall be finished to provide a smooth and uniform contact surface.

When a flat frame is installed against concrete, a layer of concrete mortar shall be placed between the gate frame and the concrete.

When a gate is attached to a wall thimble, a mastic or resilient gasket shall be applied between the gate frame and the thimble, in accordance with the recommendations of the gate manufacturer.

For radial gates, wall plates, sills and pin brackets shall be adjusted and fastened by grouting and bolting after the gates have been completely assembled in place.

#### 4. INSTALLING HOISTS AND LIFTS

Gate stems, stem guides and gate lifts shall be carefully aligned so that the stem shall be parallel to the guide bars or angles on the gate frame following installation.

## 5. RADIAL GATE SEALS

The rubber seals for radial gates shall be installed so that the seals contact the walls or wall plates throughout the entire gate length when the gate is in the closed position.

## 6. OPERATIONAL TESTS

After the gate(s) and hoist(s) (or lifts) have been installed, they shall be cleaned, lubricated and otherwise serviced by the Contractor in accordance with the manufacturer's instructions. The Contractor shall test the gate and hoist by operating the system several times throughout its full range of operation. The Contractor shall make any changes and/or adjustments necessary to insure satisfactory operation of the complete gate system.

## 7. MEASUREMENT AND PAYMENT

The number of each type, size and class of gate will be counted. Payment for furnishing and installing each type, size and class of gate shall be made at the contract unit price for that type, size and class of gate. Such payment will constitute full compensation for all labor, equipment, materials and all other items necessary and incidental to the completion of the work including furnishing and installing anchor bolts and all specified appurtenances and fittings.

Compensation for any item of work described in the contract but not listed in the bid schedule will be included in the payment for the item of work to which it is made subsidiary. Such items and items to which they are made subsidiary are identified in Section 8 of this specification.