

**815 - CATCH BASINS, INLETS, OUTLETS, MANHOLES, JUNCTION BOXES &
OTHER EXISTING STRUCTURES**

SECTION 815

**CATCH BASINS, INLETS, OUTLETS, MANHOLES, JUNCTION BOXES AND
OTHER EXISTING STRUCTURES**

815.1 DESCRIPTION

Install catch basins, inlet, outlets, manholes and junction boxes as shown in the Contract Documents.

<u>BID ITEMS</u>	<u>UNITS</u>
Catch Basin*	Each
Inlet*	Each
Outlet*	Each
Manhole*	Each
Junction Box	Each
*Type	

815.2 MATERIALS

Provide materials that comply with the applicable requirements.

Concrete and Mortar	DIVISION 400
Reinforcing Steel	DIVISION 1600
Gray Iron Castings	DIVISION 1600
Steel Castings	DIVISION 1600
Structural Steel	DIVISION 1600
Brick	DIVISION 1300
Manhole Steps	DIVISION 1700

815.3 CONSTRUCTION REQUIREMENTS

a. Excavation. Comply with **SECTION 204**.

b. Concrete. Comply with **DIVISION 700** for concrete form work, placing, curing and protection. Use Grade 3.0 concrete, unless shown otherwise in the Contract Documents.

c. Masonry. If shown in the Contract Documents, brick masonry or concrete masonry units may be used in place of concrete for the walls of catch basins, manholes or curb inlets. Masonry manholes may be constructed circular with an inside diameter equal to the greater of the inside dimensions indicated in the Contract Documents for the concrete manhole.

When masonry is used in place of concrete for square or rectangular structures, use the inside dimensions of the structure shown in the Contract Documents.

Use mortar for masonry as specified in **DIVISION 400**. Lay the brick or concrete masonry units with full mortared joints and with sufficient header courses to tie the masonry together properly.

d. Reinforcement. Comply with **DIVISION 700**.

e. Placing Castings. Set castings in full mortar beds or as shown in the Contract Documents. Mix mortar for setting castings as specified in **DIVISION 400**. Set castings to correct elevation so no adjustment is required.

f. Backfilling. Comply with **SECTION 204**.

g. Cleaning. Clean all catch basins, manholes, inlets, outlets, etc. from any accumulation of silt and debris.

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h. Painting. Paint structural steel cover plates with 1 shop coat of an approved primer, 1 field coat of aluminum paint (tinted) and 1 field coat of aluminum paint. Perform painting as specified in **SECTION 714**. Painting of castings is not required unless shown in the Contract Documents.

i. Pre-Cast Units. Use pre-cast units when shown in the Contract Documents. If the Contract Documents do not contain fabrication details for the pre-cast unit, submit 6 copies of shop drawings (**subsection 105.10**) to the Engineer for approval.

815.4 MEASUREMENT AND PAYMENT

The Engineer will measure each catch basin, inlet, outlet manhole and junction box.

Masonry and pre-cast units will not be measured or paid for as a separate item but will be paid for as the completed unit as provided above.

Payment for "Catch Basins", "Inlets", "Outlets", "Manholes" and "Junction Boxes" at the contract unit prices is full compensation for the specified work, however the unit bid price will be adjusted according **TABLE 815-1** for increases and decreases in the height indicated in the Contract Documents.

TABLE 815-1: CHANGE IN HEIGHT PAYMENT ADJUSTMENTS		
Change in Height (feet)	Increment of Increases or Decreases in Unit Bid Price	Total Increase or Decrease
0 to 0.49	None	None
0.50 to 1.00	7.5%	7.5%
1.01 to 2.00	10.0%	17.5%
2.01 to 3.00	12.5%	30.0%

For change in height of more than 3.00 feet, the increment of increase or decrease is 15% for each foot or fraction over 3.00 feet.

OSHA requires different construction procedures and safety requirements when excavated depths reach 5.0 feet or greater. In consideration of this, if a plan height of less than 5.0 feet is adjusted to a height of 5.0 feet or greater, or a plan height of 5.0 feet or greater is adjusted to a height of less than 5.0 feet, an additional 25% of the unit price will be added or deducted from the bid price. This is in addition to normal correction applied from the **TABLE 815-1**.