

ITEM 603.9810--25 - GRATE SYSTEM FOR SPANNING DEPRESSIONS

1. DESCRIPTION:

- 1.01 This work shall consist of furnishing and installing Grate System(s) for Spanning Depressions of the sizes shown and at the locations indicated in the Contract Documents.

2. MATERIALS:

- 2.01 The steel used for the fabrication of the grate system shall be [REDACTED]. It shall be galvanized according to [REDACTED]. [REDACTED] The grate system, finished and installed, shall be capable of supporting [REDACTED].
- 2.02 Anchor rods, nuts and washers shall conform to [REDACTED] the Standard Specifications. Anchor bolts shall be [REDACTED] in diameter.
- 2.03 All fabrication and welding shall be in accordance with the New York State Steel Construction Manual.
- 2.04 Damage to the galvanized surface of any steel, as a result of field welding, drilling, etc. shall be repaired according to the repair methods listed in Section 719-01 of the Special Specifications.
- 2.05 Concrete shall be Class A meeting the requirements of Section 555 of the Standard Specifications, Structural Concrete.
- 2.06 Stone Filling (Light), Item 620.03, shall be used to line the depression(s) to the extent and depth shown on the plans.
- 2.07 Geotextile Slope Protection, Item 207.13, shall be installed under the light stone filling as shown on the plans.

3. CONSTRUCTION DETAILS:

- 3.01 The grate panel shall be fabricated of steel bearing bars, connecting cross bars and end band bars as indicated below. The bearing bars shall be spaced at a maximum of 2 1/4" on center and welded or riveted to the connecting cross bars at the Contractor's option. Maximum spacing between connecting cross bars shall be five (5) inches.
- 3.02 The area to receive the grate system shall be excavated, if required and existing pipes shall be extended, if necessary. The geotextile slope protection shall be installed and the light stone fill placed over the geotextile as indicated in the Contract Plans. Footing holes shall be drilled to a minimum depth of five (5) feet and to the elevations required to position the top of the grate flush with the final elevation of the adjacent ground. In the event rock is encountered before a depth of [REDACTED] is drilled, anchor rods shall be installed in the rock to anchor the concrete columns. [REDACTED] in diameter sona tube type forms shall be placed in the drilled holes and filled with concrete. Tops of all concrete columns shall be at the same elevation. Anchor rods shall be set into the concrete so that they project [REDACTED] above the top of the concrete column and be [REDACTED] into the concrete.
- 3.03 [REDACTED] shall be cut to the lengths shown on the Contract Plans and shall have [REDACTED] end caps welded to both ends. These angles shall be field drilled in locations to receive the anchor bolts from the concrete columns. Diameter of the holes to be drilled shall be a maximum size of one (1) inch. The hole areas shall be field galvanized.

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3. CONSTRUCTION DETAILS: (cont'd)

- 3.04 The angles shall be positioned over the anchor rods and secured with washers and nuts. The grate panel shall lay flat on the angle. The Contractor shall perform any necessary final slope shaping and grade to ensure smooth uniform slopes in the area surrounding the grate system. See attached detail.

4. METHOD OF MEASUREMENT:

- 4.01 Grate systems for spanning depressions will be measured as the number of square feet of grate systems furnished and installed. The area of the grate system shall be computed as the product of its length and width (i.e., the outside measurement of the grate panel including the end band bars). The area shall be rounded to the nearest tenth of a foot.

5. BASIS OF PAYMENT:

- 5.01 The unit price bid per square foot of grate system shall include all labor, materials and equipment necessary to complete the work except that Geotextile slope protection and light stone fill shall be paid for under their respective items.