

ITEM 15603.98 M - CULVERT END SAFETY GRATE

DESCRIPTION

This work shall consist of furnishing and installing culvert end safety grates of the sizes shown and at locations indicated in the contract documents.

MATERIALS

The materials used for the fabrication of culvert end safety grates shall conform to Section 709-01 Bar Reinforcement, Grade 420 of the Standard Specifications. All individual bars shall be full length with no splices or butt welds.

“J” bar hooks shall be fabricated from reinforcing bar and shall be galvanized in accordance with Section 719-01 Galvanized Coatings and Repair Methods, Type I.

Welding shall conform to the requirements of welding as specified in the New York Steel Construction Manual with the exception that radiographic inspection will not be required.

CONSTRUCTION DETAILS

Safety grates shall be fabricated of steel reinforcing bars as indicated in the contract documents. The bars shall be spaced 300 mm on center and welded at each intersection with either 4 tack welds or a double flare bevel groove weld at the contractor's option. The grate shall lay flat on the embankment slope and overlap the opening on each side and at the top as indicated in the contract documents. The contractor shall perform any necessary final slope shaping and grading to ensure proper grate support and smooth uniform slopes in the area surrounding the grate.

“J” bar hooks shall be installed on each side of the grate and driven full depth into the soil as detailed in the contract documents.

METHOD OF MEASUREMENT

Culvert end safety grates will be measured as the number of square meters of grate furnished and installed. The area of a culvert end safety grate shall be computed as the product of its overall length and width. The area shall be rounded to the nearest 0.1 square meter.

BASIS OF PAYMENT

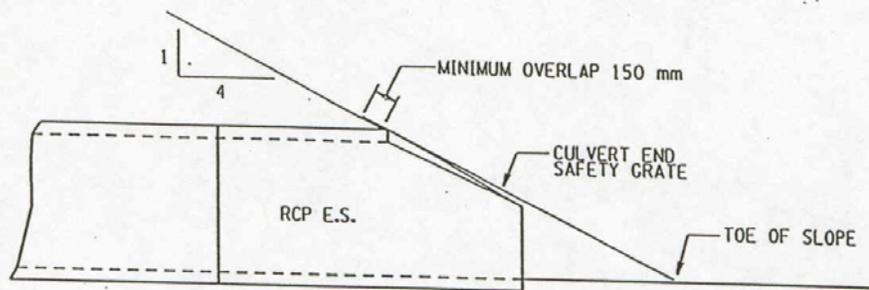
The unit price bid shall include all labor, materials and equipment necessary to complete the work.

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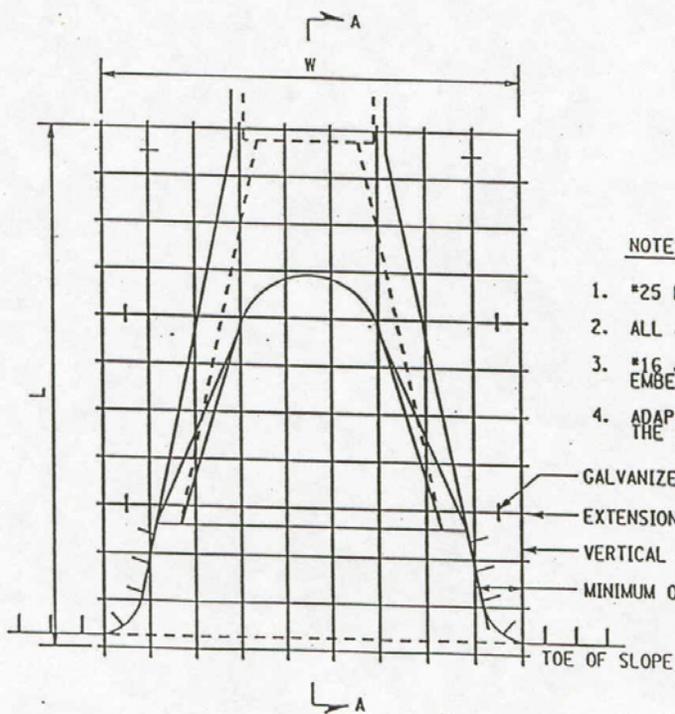
CULVERT END SAFETY GRATE ITEM 15603.98 M
ILLUSTRATIONS TO BE INCLUDED ON PLANS

CULVERT END SAFETY GRATE DIMENSIONS				
DS-NO.	L	W	PAYMENT	J HOOKS
128	1.5	2.1	3.2 SQ. M	4 EA.
155	3.0	3.3	9.9 SQ. M	8 EA.

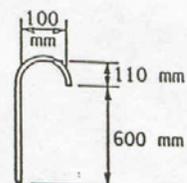
SAMPLE TABLE



SAMPLE SECTION A-A



SAMPLE PLAN VIEW



#16 BAR GALVANIZED
PAYMENT INCLUDED
UNDER THIS ITEM.

J-HOOK BAR DETAIL

NOTES

1. #25 REBARS, 300 mm O.C.
2. ALL JOINTS SPOT WELDED
3. #16 J-HOOK BARS 600 mm MIN. EMBEDMENT, HOOK DEPTH 100 mm
4. ADAPTATIONS MAY BE NECESSARY IN THE FIELD TO MEET EXISTING CONDITION.

- ← GALVANIZED J HOOK BAR
- ← EXTENSIONS: 0 TO 75 mm MAX.
- ← VERTICAL BARS ON TOP
- ← MINIMUM OVERLAP 150 mm