

ITEM 25603.1612 M - CORRUGATED STEEL PIPE INTERCEPTOR DRAIN, 300 mm DIAMETER, 16

GAUGE (CONCRETE ENCASEMENT)

ITEM 25603.1615 M - CORRUGATED STEEL PIPE INTERCEPTOR DRAIN 375 mm DIAMETER, 16

GAUGE (CONCRETE ENCASEMENT)

ITEM 25603.1618 M - CORRUGATED STEEL PIPE INTERCEPTOR DRAIN 450 mm DIAMETER, 16

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1. DESCRIPTION:

- 1.01 Under this Item the Contractor shall furnish and install asphalt coated and asphalt paved invert corrugated pipe drain interceptor in accordance with these Specifications and the Contract Documents.

2. MATERIALS:

- 2.01 **Round Corrugated Steel Pipe:** All provisions of Subsection 707-02 for round corrugated steel pipe shall apply with the following additions for interceptors:

The inlet capability shall be along a longitudinal axis of the wall segment. This inlet apparatus may be continuous or intermittent. The opening in the pipe wall may be fabricated in the form of continuous bar risers and spacers.

- 2.02 **Bar Riser and Spacer Type:** The bar riser, space type shall be helically corrugated pipe with a continuous welded or lock seam. Pipe ends shall have two (2) rolled annular corrugations on each end for jointing.

Riser assemblies shall be fabricated from 5 mm structural steel welded to form a 44 mm wide continuous opening and shall have solid web spacers on 150 mm centers. The height of the riser assemblies as determined from the Contract Documents shall be 150 mm minimum. The riser assemblies shall be hot dipped galvanized according to ASTM designation A-123. The assemblies shall be welded to the corrugated pipe on each side of the riser at the location of the solid web spacers. The riser shall terminate on 25 mm from the ends of each pipe length to allow clearance for single bolt coupling bands. The ends of the riser shall be closed with a suitable welded plate where solid web spacers do not come to the ends of the riser.

The maximum deviation from straight in both the vertical and horizontal plane of the riser assembly shall not exceed 19 mm in a 6 meter length.

Any fittings that may be designated in the Contract Documents shall meet the material requirements of Subsection 707-02.

- 2.03 **Backfill:** Backfill shall be Class A Portland Cement Concrete meeting the requirements of Section 501, Subsection 502-3.01 and cured with 711-05 using white pigmented compound material.

- 2.04 Elastomeric polymer sealer shall meet the physical requirements of either Federal Specification SS-S-195B or ASTM D3406 and be accepted on manufacturer's certification.

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3. CONSTRUCTION DETAILS:

- 3.01 **Excavation:** The requirements specified in Section 206, trench, culvert and structure excavation, that apply to culverts and storm drains shall govern except as modified in the Contract Documents or as directed by the Engineer.
- 3.02 **Pipe Assembly:** All interceptor drain pipe and related fittings shall be handled and assembled in accordance with the manufacturer's instructions except as modified in the Contract Documents or as directed by the Engineer.
- 3.03 **Backfill:** Class A Portland Cement Concrete shall be used for backfill to encase the interceptor drain pipe. Placement limits and details of concrete placement shall be as shown in the contract documents.

Care shall be taken in placing concrete backfill immediately adjacent to the interceptor drain pipes to avoid damage to the pipe and to prevent pipe misalignment. The concrete shall be thoroughly consolidated using internal vibrators. Sufficient hold downs shall be provided by the Contractor to prevent the interceptor drain from floating during concrete placement.

The surface of the concrete shall be sloped toward the slotted drain as detailed in the contract documents. The Contractor shall provide a suitable cover for the wall openings to prevent the concrete backfill or any other foreign debris from entering the pipe or sealing the opening during the installation and subsequent curing periods.

- 3.04 Transverse contraction joints shall be either formed or sawed in the concrete backfill at 6.1 m (20 ft.) intervals unless the concrete abuts concrete curbs. In this case the transverse joints shall be formed or sawed to match the curb joint interval. The transverse joints shall be 9.4 mm (3/8") wide and 62.5 mm (2 1/2") deep. If sawed they shall be done as soon as possible after placement within 24 hours prior to the development of shrinkage cracks. Care shall be taken not to saw into the interceptor drain pipe.

One expansion joint shall be provided in the concrete backfill for ever 151.5 m (500') of continuous interceptor drain pipe installed or, at every location where the concrete backfill abuts a drop inlet, manhole or other similar structure. This joint shall be formed for the full depth of the backfill concrete and shall be a minimum of 18.8 mm (3/4") in width.

A longitudinal joint shall be provided if the concrete backfill is placed adjacent to the concrete pavement. This joint shall be either formed or sawed 6.3 mm (1/4") wide and 62.5 mm (2 1/2") deep.

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After curing, the transverse, expansion and longitudinal joints shall be thoroughly cleaned to remove any contaminants or laitance remaining from forming or sawcutting. Before sealing, a backer rod bond breaking material such as upholstery cord or closed cell polyurethane rod shall be placed so that a sealer width to depth ratio of 1:1 will be achieved. The joints shall then be sealed with an elastomeric polymer sealer. The methods and materials used to construct the various joints shall be chosen by the Contractor subject to the approval by the Engineer.

- 3.05 Movement of construction equipment and all other vehicles and loads over and adjacent to any slotted drain pipe shall be done at the Contractor's risk. Any pipe or backfill which becomes damaged or disturbed through any cause shall be replaced or repaired as directed by the Engineer at the expense of the Contractor and at no cost to the Authority. Suitable temporary crossovers consisting of steel plate or other materials approved by the Engineer shall be employed for a minimum of 7 days following concrete backfill operations in all areas where vehicular traffic must be maintained or until such time as the pipe installation will withstand loading without damage.

4. METHOD OF MEASUREMENT:

- 4.01 Interceptor drain pipe shall be measured in linear meters along the top center-line as designated on the plans or as directed by the Engineer in writing.

5. BASIS OF PAYMENT:

- 5.01 The unit price bid per linear meter for this work shall include the cost of furnishing all labor, materials and equipment necessary to complete the work. The cost for select granular fill, asphalt concrete and trench and culvert excavation shall be paid for separately under their appropriate items.

Payment will be made under:

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>PAY UNIT</u>
25603.1612M	Corrugated Steel Pipe Interceptor Drain 300 mm Diameter, 16 Gauge	Linear Meter
25603.1615M	Corrugated Steel Pipe Interceptor Drain 375 mm Diameter, 16 Gauge	Linear Meter
25603.1618M	Corrugated Steel Pipe Interceptor Drain 450 mm Diameter, 16 Gauge	Linear Meter

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