

ITEM 18603.980142 M - SMOOTH INTERIOR POLYETHYLENE CULVERT AND STORM DRAIN PIPE 1050 mm DIAMETER

ITEM 18603.980148 M - SMOOTH INTERIOR POLYETHYLENE CULVERT AND STORM DRAIN PIPE 1200 mm DIAMETER

DESCRIPTION: The work shall consist of furnishing and installing smooth interior polyethylene pipe for drainage in accordance with this specification, the contract plans and the Standard Sheet titled "Installation Details For Corrugated Metal and Structural Plate Pipe and Pipe-Arches".

MATERIALS: The smooth lined polyethylene pipe shall conform to the requirements of AASHTO MP6-95, Provisional Specification for Corrugated Polyethylene Pipe 1050 mm and 1200 mm Diameter. In addition when checked with a 300 mm straight edge the smoothness of the interior liner shall not deviate more than 6 mm.

END SECTIONS: End Sections shall be galvanized steel conforming to Subsection 707-10, Galvanized Steel End Sections, of the Standard Specification.

CONSTRUCTION DETAILS:

Excavation. The requirements specified in §206, Trench, Culvert and Structure Excavation, that apply to culverts and storm drains shall govern, except as modified herein. Width of excavation at trench bottom shall be measured as the lesser of (three (3) times the nominal inside diameter) plus (twice the pipe wall thickness) or the nominal outside pipe diameter plus 1.2 m.

Laying Pipe. All pipe shall be laid in reasonably close conformity to line and grade and shall have a full, firm and even bearing at each joint and along the entire length of pipe. Joint misalignment shall not result in offsets, in the interior smooth liner, greater than 6 mm. Pipe laying shall begin at the downstream end and progress upstream or as ordered by the Engineer. Any single run of pipe, excluding end sections, shall consist wholly of the same type material unless otherwise directed by the Engineer.

Handling and Assembly of Pipe. Joint assembly shall be made with manufactured ends. Field cuts shall be permitted only at the terminal ends and shall result in a minimum pipe length of 900 mm. Joint assemblies shall provide separations no greater than 13 mm between adjoining sections of pipe. Lateral connections shall be made with appropriate fittings, supplied by the manufacturer and approved by the Engineer. For basin connections, installations shall be in accordance with the standard sheet titled " Drainage Structure Details " except that the pipe end shall protrude 50 mm into the basin interior to provide for a 45° battered grout seal, The battered grout seal shall be applied to both interior and exterior faces of the basin.

Bedding and Backfilling Pipe. When using Smooth Interior Polyethylene Culvert and Storm Drain pipe, the type of materials to be used in bedding and backfilling at culverts and pipes and the procedure for placement shall conform to the provisions of §203-3.15, Fill and Backfill at Structures, Culverts, Pipes, Conduits and Direct Burial Cables. Installation shall be in accordance with the Standard Sheet titled Installation Details for Corrugated Metal and Structural Plate Pipe and Pipe-Arches" and as modified in this specification. After installation the pipe shall have a maximum deflection of 5% of its nominal inside diameter. Based on a field inspection the Engineer may order the Contractor to perform mandrel testing to determine the 5% compliance.

Damage. Pipe that is damaged or disturbed prior to acceptance of the contract, shall be replaced or realigned as directed by the Engineer and at the Contractor's expense. Pipe that is defective from any cause, including damage caused by handling, will be unacceptable for installation and will be replaced as directed by the Engineer at no cost to the State. Pipe with damaged ends may be incorporated into the work at terminal locations and only if the damaged portion is totally removed by the field cut. Repair or replacement of pipe that is disturbed, damaged or misaligned shall provide the same product as a new pipe installation, as determined by the Engineer.

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BASIS OF ACCEPTANCE:

Acceptance of this material will be based on the manufacturer's name appearing on the Department's Approved List of Materials and Equipment for Use on New York State Department of Transportation Projects Section [24], SMOOTH INTERIOR CORRUGATED POLYETHYLENE PIPE (706-12), the manufacturers certification of compliance to AASHTO MP6-95 and the establishment of stock lots in accordance with the procedural directives of the Materials Bureau.

The supplier shall provide two copies of approved Materials Details for 300 mm through 900 mm diameters to be referenced for handling, storage and installation guidelines

METHOD OF MEASUREMENT:

This work shall be measured as the number of meters of pipe installed. Measurement shall be made along the bottom center of the pipe.

BASIS OF PAYMENT:

End sections, Excavation, granular fill and backfill will be paid for separately under their appropriate items in sections 203 and 206 as applicable.

The requirements of §603-5.01 shall apply.

Payment will be made under:

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