S-1 (2501) POLYPROPYLENE PIPE CULVERTS

This work consists of furnishing and installing polypropylene (PP) dual-wall pipe culverts and fittings in accordance with the Plans, the MnDOT Standard Specifications, Section 12 of the AASHTO LRFD Bridge Design Specifications, and the following:

S-1.1 Provide corrugated polypropylene (PP) dual-wall pipe with couplings and fittings meeting the requirements of the following:

(1) AASHTO M330 dual wall Type "S" pipe, and
(2) Section 12 of the AASHTO LRFD Bridge Design Specifications, and
(3) Gasketed integral bell and spigot joint meeting the requirements of ASTM F2881, for respective diameters, and
(4) Water tight joints that meet a 10.8 psi laboratory test per ASTM D 3212 with a gasket that meets the requirements of ASTM F 477 and
(5) Protect polypropylene compounds from ultraviolet (UV) degradation with UV stabilizers or carbon black meeting the requirements and testing in AASHTO M330 and ASTM D3895.

S-1.2 Provide laboratory certification that the pipe connection for each size of pipe meets or exceeds these requirements. Submit shop drawings of each pipe coupler and any additional mechanical connections required by the plans. Mitered end sections are not to be constructed of polypropylene.

S-1.3 Provide polypropylene (PP) pipe and fittings manufactured from high-density polypropylene (PP) virgin compounds. May use clean, reworked PP materials from the manufacturer's own production, if the pipe and fittings produced meet the requirements of this section.

S-1.4 Store and handle polypropylene (PP) pipe as recommended by the manufacturer. Provide pipe manufactured no more than six months prior to installation. Do not use damaged pipe.

S-1.5 Polypropylene (PP) pipe is considered to be plastic pipe and must be installed according to MnDOT 2501.3.C.4 and must pass deflection testing for acceptance.

S-1.6 Submit a manufacturer's Certificate of Compliance with each pipe shipment including date manufactured, nominal and actual inside pipe diameters.

S-1.7 Polypropylene (PP) manufacturing facilities are required to participate and be in compliance with AASHTO's National Transportation Product Evaluation Program (NTPEP) for producers of AASHTO M330 polypropylene (PP) pipe. The engineer confirms the plant where the pipe is manufactured is in compliant status by checking the NTPEP website, a link is provided through the Approved Products List.