

SUPERSEDED BY
EB 15-031
EFFECTIVE 9/28/15



New York State
Department of
Transportation
**ENGINEERING
INSTRUCTION**

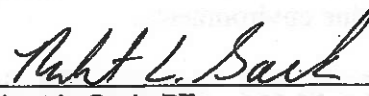
EI
14-005

**Title: NEW STANDARD SPECIFICATION §706-08 POLYPROPYLENE PIPE AND REVISION TO
STANDARD SPECIFICATION SECTION 603 – CULVERTS AND STORM DRAINS**

Target Audience:

- | | |
|--|--|
| ☐ Manufacturers (18) | ☐ Surveyors (33) |
| ☒ Local Govt. (31) | ☒ Consultants (34) |
| ☒ Agencies (32) | ☒ Contractors (39) |
| | ☐ _____ () |

Approved:


Robert L. Sack, PE
Deputy Chief Engineer, Research

1 Dec 14
Date

ADMINISTRATIVE INFORMATION:

- This Engineering Instruction (EI) is effective beginning with projects submitted for the letting of 05/07/2015.
- Superseded Issuances: None.
- Disposition of Issued Materials: The revisions to the Standard Specifications issued with this EI will be incorporated into a future update of the Standard Specifications.

PURPOSE: This EI issues a new Standard Specification §706-08 Polypropylene Pipe and a revision to Standard Specification Section 603 – Culverts and Storm Drains.

TECHNICAL INFORMATION:

- Design Guidance is provided in a concurrently issued EB 14-013 Highway Design Manual Revision No. 81 – Chapter 8 – Highway Drainage, and is in line with AASHTO LRFD Bridge Design Specifications, Section 12 and AASHTO LRFD Bridge Construction Specifications, Section 30.
- Cost Impact is yet unknown but it is expected to result in savings when this item is used in appropriate locations and as per the Design and Construction guidelines issued by AASHTO and the Department.
- This EI also modifies Standard Specification Section 603 to introduce this item.

IMPLEMENTATION:

- Main Office Design Quality Assurance Bureau will insert the standard specification revision into contract proposals beginning with projects submitted for the letting of 05/07/15.
- Disapproved Specifications: None.
- New Specifications: 706-08 Polypropylene Pipe.

USC

Item No.	Item	Pay Unit
603.7802xx	Polypropylene Pipe (Optional) Type S, Type D	Foot

Metric

Item No.	Item	Pay Unit
603.7802xx	Polypropylene Pipe (Optional) Type S, Type D	Meter

TRANSMITTED MATERIALS: Both USC and Metric versions of New Standard Specification §706-08 Polypropylene Pipe and revisions to Standard Specification Section 603 Culverts and Storm Drains are attached.

BACKGROUND: Polypropylene Pipe is reported to be a strong and durable material in abrasive as well as highly acidic and/or alkaline environments.

REFERENCES: AASHTO M 330 "Standard Specification for Polypropylene Pipe, 300 to 1500 mm (12 to 60 in.) Diameter" and ASTM D 4101 "Standard Specification for Polypropylene Injection and Extrusion Materials".

CONTACT: For any questions on this EI please contact the Materials Bureau at (518) 457-3240.

Make the following changes to the Standard Specifications (US Customary) dated May 1, 2008:

Section 603-2.01 General. Add "Polypropylene Pipe 706-08".

Section 603-3.02 Laying Pipe, *F. Polyethylene Pipe*. Amend the title "*F. Polyethylene Pipe*" to read "*F. Polyethylene and Polypropylene Pipe*".

Section 603-3.04 *D. Polyethylene Pipe*. Amend the title "*D. Polyethylene Pipe*" to read "*D. Polyethylene and Polypropylene Pipe*". Also, remove the first three words in the description, "Polyethylene Pipe with" and capitalize the first letter of the next word.

Section 603-3.06 *E. Polyethylene Pipe Connections*. Amend the title "*E. Polyethylene Pipe Connections*" to read "*E. Polyethylene and Polypropylene Pipe Connections*".

Section 603-5 BASIS OF PAYMENT. Add the following entry to the table

Payment will be made under:

Item No.	Item	Pay Unit
"603.7802xx xx= 12, 15, 18, 24, 30, 36, 42, 48, 60 (denoting pipe diameter in inches)"	Polypropylene Pipe (Optional) -Type S, or Type D	Foot

Delete "706-08 (VACANT)" and replace it with the following:

"706-08 POLYPROPYLENE PIPE

SCOPE. This specification covers the material and quality requirements for polypropylene pipe (PP) and fittings.

GENERAL. The corrugated polypropylene pipe covered by this specification is classified as follows:

1. Type S- This pipe shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations shall be annular.
2. Type D- This pipe shall consist of an essentially smooth waterway braced circumferentially or spirally with projections or ribs joined to an essentially smooth outer wall. Both walls shall be fused to, or continuous with, the internal supports.

MATERIAL REQUIREMENTS. The polypropylene material for the pipe and fittings shall meet the requirements of AASHTO M330, Type S or Type D, and be in accordance with "Materials Method 30". When checked with a 12 inch straight edge the smoothness of the interior liner shall not deviate more than 1/4 inch.

BASIS OF APPROVAL. Application for approval shall be submitted to the Materials Bureau by the manufacturer, accompanied by independent lab test results in accordance to this specification or in conjunction with the National Transportation Product Evaluation Program (NTPEP), and certification that the product conforms to this specification. Approval and continued residence on the Approved List will also be subject to the requirements of "Materials Method 30".

BASIS OF ACCEPTANCE. Polypropylene pipe will be accepted on the basis of the manufacturer's name and location appearing on the Department's Approved List. The approved Materials Details will be posted on the Department's Approved List."

Make the following changes to the Standard Specifications (Metric) dated May 4, 2006:

Section 603-2.01 General. Add "Polypropylene Pipe 706-08".

Section 603-3.02 Laying Pipe, *F. Polyethylene Pipe*. Amend the title "*F. Polyethylene Pipe*" to read "*F. Polyethylene and Polypropylene Pipe*".

Section 603-3.04 *D. Polyethylene Pipe*. Amend the title "*D. Polyethylene Pipe*" to read "*D. Polyethylene and Polypropylene Pipe*". Also, remove the first three words in the description, "Polyethylene Pipe with" and capitalize the first letter of the next word.

Section 603-3.06 *E. Polyethylene Pipe Connections*. Amend the title "*E. Polyethylene Pipe Connections*" to read "*E. Polyethylene and Polypropylene Pipe Connections*".

Section 603-5 BASIS OF PAYMENT. Add the following entry to the table

Payment will be made under:

Item No.	Item	Pay Unit
"603.7802xx xx = 12, 15, 18, 24, 30, 36, 42, 48, 60 (denoting 300, 375, 450, 600, 750, 900, 1050, 1200, 1500 mm diameter pipes)"	Polypropylene Pipe (Optional) - Type S, or Type D	Meter

Delete "706-08 (VACANT)" and replace it with the following:

"706-08 POLYPROPYLENE PIPE

SCOPE. This specification covers the material and quality requirements for Polypropylene Pipe (PP) and fittings.

GENERAL. The corrugated polypropylene pipe covered by this specification is classified as follows:

1. Type S- This pipe shall have a full circular cross section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations shall be annular.
2. Type D- This pipe shall consist of an essentially smooth waterway braced circumferentially or spirally with projections or ribs joined to an essentially smooth outer wall. Both walls shall be fused to, or continuous with, the internal supports.

MATERIAL REQUIREMENTS. The polypropylene material for the pipe and fittings shall meet the requirements of AASHTO M 330, Type S or Type D, and be in accordance with "Materials Method 30". When checked with a 300 mm straight edge the smoothness of the interior liner shall not deviate more than 6 mm.

BASIS OF APPROVAL. Application for approval shall be submitted to the Materials Bureau by the manufacturer, accompanied by independent lab test results in accordance to this specification or in conjunction with the National Transportation Product Evaluation Program (NTPEP), and certification that the product conforms to this specification. Approval and continued residence on the Approved List will also be subject to the requirements of "Materials Method 30".

BASIS OF ACCEPTANCE. Polypropylene pipe will be accepted on the basis of the manufacturer's name and location appearing on the Department's Approved List. The approved Materials Details will be posted on the Department's Approved List."