



PUBLIC WORKS
Engineering

DATE: September 22, 2025

TO: PAUL ZACHARY,
PUBLIC WORKS DEPUTY
DIRECTOR

FROM: ^{HAS} H. SOMDECERFF,
PUBLIC WORKS DESIGN
MANAGER

The Specification Review Committee recommends and asks the Public Works Deputy Director to approve the following:

1. Approve Modification to Division 205.1 - Reinforced Concrete Pipe and Fittings for Water.
Summary of change: To update AWWA, ANSI, ASTM, and ASME references.

Please call Marqua Jimmerson at (918) 596-7355 If you have any questions.

Thank you,

APPROVED:


Paul Zachary, Deputy Director


Date

Cc: Public Works Engineering Services Specification Review Committee

PART 205 – CONCRETE PIPE AND FITTINGS

205.1 CONCRETE PIPE AND FITTINGS FOR WATER

- 205.1.1 Where concrete pipe and fittings are specified or required for water, it shall be designed, manufactured, and tested in accordance with the current edition of ANSI/AWWA 301, Prestressed Concrete Pressure Pipe, Steel-Cylinder Type; and the current edition of ANSI/AWWA C304, Design of Prestressed Concrete Cylinder Pipe. All prestressed concrete cylinder pipe (PCCP) shall be manufactured by an established manufacturer who has had at least three years of experience in successfully building this type of pipe. All specials and fittings shall be built to the details furnished by the manufacturer and approved by the Engineer. Each special and each length of straight pipe shall be plainly marked to indicate the head for which the pipe is designed and to indicate where the pipe will be used by reference to the layout drawings. All closure fittings shall be furnished with a 24-inch flanged access manway with a 24-inch steel blind flange. 6-inch screw type hand hole fittings will not be permitted.
- 205.1.2 All concrete or mortar substrates must be sweep-abrasive grit blasted to create adequate profile then made dust free. All surfaces to be lined must be free of any oil, grease, or other deleterious materials. The surface must be dry to the touch (no standing water) but can have some surface discoloration due to moisture.
- 205.1.3 PCCP and fittings for water lines shall be designed for the following conditions (minimum): Normal operating pressure equal to 150 psi plus 50% for surge pressure plus earth load resulting from actual backfill depth, but not less than 8 feet plus external live load equal to AASHTO HS 20 loading. The thickness of the mortar coating shall provide a minimum cover of 1 inch over the reinforcing steel.
- 205.1.4 Prestressed concrete cylinder pipe and fittings for water lines shall be joined according to AWWA C301 and C304, as well as the current edition of AWWA Manual M9, Concrete Pressure Pipe.
- 205.1.5 Where AWWA C301, PCCP is to be tapped, the tapping saddle shall be fabricated in accordance with the current edition of AWWA Manual M9 and as recommended by manufacturers of Concrete Pressure Pipe. Saddle shall provide grout gaskets and grout opening to enable filling the wall space between saddle and pipe wall with grout, to assure complete protection of the steel pipe wall. The saddle shall also provide gland assembly, including gasket and flange, to insure a tight seal.
- 205.1.6 Openings of the sizes shown on the drawings shall be furnished with steel blind flanges of proper strength to withstand the working pressure of the line where no other provisions are made for closing the openings. Blind flanges shall be fabricated from material as specified under AWWA C207. All bolts shall be carbon steel ASTM A307, Grade A only, in accordance with AWWA C207.

205.2 CONCRETE PIPE AND FITTINGS FOR STORMWATER