



PROJECT SPECIAL PROVISIONS
Utility Construction

Revise the 2012 Standard Specifications as follows:

Utility Owners' Contact Information:

Page 15-1, Subarticle 1500-2 Cooperation with the Utility Owner, paragraph 2, add the following sentences:

The 6" force main is owned by the Town of Windsor. The contact person is William Coburn, Public Works Director (252-794-3121). The 8" force main is owned by the Town of Askewville. The contact person is Mr. Shelby Castelloe, System Collector Operator (252-794-4427). The water line is owned by Bertie County Water Department. The contact person is Mr. Ricky Spivey, Water Superintendent (252-794-5350).

The Contractor shall provide access for the owner's representatives to all phases of construction and keep all manholes and valves accessible during construction. A preconstruction meeting shall be held with all owners and the NCDOT prior to beginning any work. The tie-ins for relocated sewer lines may need to be accomplished during nights or weekends with scheduling for this work to be coordinated with utility owners. The Contractor shall notify utility owners two weeks before commencement of any work and three weeks before service interruption.

The Contractor shall provide a set of as-built plans to all owners after all the work shown on the Utility Construction Plans is completed.

Water Line Testing

Page 15-6, 1510-3(B) Subarticle Construction Methods, after line 21, replace the allowable leakage formula with the following:

$$W=LD(\sqrt{P})\div 148,000$$

Page 15-6, 1510-3(B) Subarticle Construction Methods, line 32, delete "concurrently or".

1. INSERT GATE VALVE

Install insert gate valves and valve boxes in accordance with the applicable utility provisions herein, as shown on the utility plans, and/or as directed by the Engineer

The Ductile Iron 250 p.s.i.g. Insert Valve shall be a Resilient Wedge Gate Valve designed for use on force main sewage systems. The design will allow the valve to be installed into an existing pressurized pipeline while maintaining constant pressure and service as usual. The pressure rating markings must be cast into the body of the insert valve.

The ductile iron body, bonnet and wedge provide strength and a pressure rating that meets or exceeds the requirements of AWWA C515. Insert Valve shall be ductile iron construction meeting ASTM A536 Grade 65-45-12. Heavy-duty ductile iron construction for maximum toughness and strength.

Sizes 12" and smaller must be capable of working on steel, PVC, C900, CI, and DI without changing either top or bottom portion of split valve body.

Resilient Wedge shall comply with AWWA C509 requirements.

The ductile iron wedge shall be fully encapsulated with EPDM rubber by a high pressure and high temperature compression or injection mold process. This will assure the ductile gate is fully coated with molded rubber – no exposed iron.

The resilient wedge shall seat on the valve body and not the pipe to obtain the optimum seating and flow control results. The resilient wedge shall be totally independent of the carrier pipe.

The resilient wedge shall not come into contact with the carrier pipe or depend on the carrier pipe to create a seal. Abrasion results thus shorting the life and quality of the shut down if the wedge contacts the pipe.

Pressure equalization on the down or upstream side of the closed wedge shall not be necessary to open the valve.

The wedge shall be symmetrical and seal equally well with flow in either direction.

The Resilient wedge must ride inside the body channels to maintain wedge alignment throughout its travel to achieve maximum fluid control regardless of high or low flow pressure or velocity. The resilient wedge must have more support than the operating stem as the resilient wedge enters and exits the water (fluid) way.

Oversized flow way. Unobstructed to provide optimum flow.

The insert valve is fully epoxy coated on the interior and the exterior. The fusion-bonded coating is applied prior to assembly so that even the bolt holes and body-to-bonnet flange surfaces are fully epoxy coated.

Valve and tapping sleeve shall be coated with a minimum of 8 mils epoxy in compliance with AWWA C550 and certified to ANSI/NSF-61.

This insert valve features triple O-Ring stem seals. Two O-Rings are located above, and one O-Ring is located below the thrust collar.

The lower two O-Rings provide a permanently sealed lubrication chamber that will make the valve easier to operate over a longer period of time. The upper O-Ring ensures that sand, dirt or grit cannot enter the valve to cause damage to the lower O-Rings. This is especially important for buried and sewage service applications.

Side flange seals shall be of the O-Ring type of either round, oval, or rectangular cross-sectional shape.

The gate valve stem and wedge nut shall be copper alloy in accordance with Section 4.4.5.1 of the AWWA C515 Standard.

The NRS stem must have an integral thrust collar in accordance with Section 4.4.5.3 of AWWA C515 Standard. Two-piece stem collars are not acceptable. The wedge nut shall be independent of the wedge and held in place on three sides by the wedge to prevent possible misalignment.

Two thrust washers are used. One is located above, and one is located below the stem thrust collar. Two thrust washers ensure easy operation at all times.

NRS with AWWA standard turns.

Operated by 2" square wrench nut according to ASTM A126 CL.B – open left or open right. The owner will specify which way the valve will open.

Bolting materials shall develop the physical strength requirements of ASTM A307 with dimensions conforming to ANSI B18.2.1.

After the installation of the insert valve body on to the existing pipe a pressure test of 1.1 times that of the contents shall sustained for 15 minutes. Once the pressure test is effectively achieved the insert valve body must not be moved in accordance with AWWA Standards. If the insert valve is moved the pressure test must be completed again. The insert valve must not be moved or repositioned once the pressure test is achieved.

Install insert gate valves with an approved valve box set flush with the ground. Valve boxes shall be of the screw or slip type with a base to fit the valve yoke and removable plug cap with the word "Sewer" cast therein. Install cast iron valve boxes conforming to ASTM A48, Class 30, unless otherwise shown on the utility plans and/or as directed by the Engineer.

The quantity of insert gate valves and valve boxes, installed in accordance with plans and provisions herein and accepted, will be measured and paid for at the contract unit price per each for "___" Insert Gate Valve." Such prices and payments will be full compensation for all materials, labor, excavations, installation, sterilization, pressure testing, valve box installation with the necessary extension pieces, stone bedding, backfilling, and incidentals necessary to complete the work as required.

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PROJECT SPECIAL PROVISIONS
Utilities by Others

General:

The following utility companies have facilities that will be in conflict with the construction of this project.

- A. Telephone (CenturyLink)
- B. Gas (Piedmont Natural Gas)

The conflicting facilities of these concerns will be adjusted prior to the date of availability unless noted otherwise and are therefore listed in these special provisions for the benefit of the Contractor. All utility work listed herein will be done by the utility owners. All utilities are shown on the plans from the best available information.

The Contractor's attention is directed to Article 105.8 of the Standard Specifications.

Utilities Requiring Adjustment:

A. CenturyLink (Telephone)

1. CenturyLink is requiring the rough grading be completed in the areas where their aerial facilities are being relocated. CenturyLink shall be notified two weeks prior to rough grading being completed and allowed forty five days to complete the work.

See "Utilities By Others Plans" for details
Contact person: Rod Medlin (252-413-7711)

B. Piedmont Natural Gas (Gas)

1. The gas line relocation will be completed by October 1, 2013.

See "Utilities By Others Plans" for details
Contact person: Mr. Chris Albers (704-731-4269)