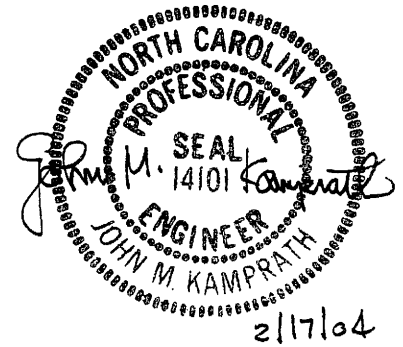


PROJECT SPECIAL PROVISIONS
Utility Construction

GENERAL CONSTRUCTION REQUIREMENTS:

Specifications:

The proposed utility construction shall meet the applicable requirements of the NC Department of Transportation's "Standard Specifications for Roads and Structures" dated January 2002 and the details as shown on the plans, as outlined in the following provisions, or as directed by the Engineer.

The Contractor is herein forewarned as to the possibility of having to vary the depth of pipeline installation to achieve minimum clearance of existing or proposed utilities or storm drainage while maintaining minimum cover specified (whether existing or proposed pipelines, conduits, cables, mains, and storm drainage are shown on the plans or not).

On new force main sewers and tie in sections of existing force main sewers, the method of anchoring pipe bends, valves, and related appurtenances will be the responsibility of the Contractor. Tying in to existing force main sewers may alter such lines to the extent that these pipelines with existing pipe bends, valves and related appurtenances may also require reaction backing; this work shall also be the responsibility of the Contractor.

The Contractor shall submit his proposed method of anchoring to the Engineer for review and approval prior to any applicable force main sewer construction. Such approval will not relieve the Contractor of his responsibility of properly anchoring force main sewers.

Pipe joint deflections shall not exceed 75% of the manufacturer's recommended maximum deflection.

Owner and Owner's Requirements:

The existing force main sewer line is owned by New Hanover County. The Contractor shall provide access for the owner's representatives to all phases of construction.

The owner shall be notified two weeks prior to commencement of any work and one week prior to service interruption. If shutdown time exceeds the holding capacity of the pump station wetwell, the contractor shall be responsible for pumping and transporting the wastewater.

Utility Locations Shown on the Plans:

The location, size, and type material of the existing utilities shown on the plans is from the best available information. The Contractor will be responsible for determining the exact location, size, and type material of the existing facilities necessary for the construction of the proposed utilities and to avoid damage to existing facilities.

COMPENSATION:

No direct payment will be made for utility construction work required by the preceding provisions, which are general requirements applying to utility construction, and all of the requirements stated will be considered incidental work, paid for at the contract unit prices of the various utility items included in the contract.

1. BEDDING MATERIAL:

Bedding material for utility lines shall be installed in accordance with the applicable utility provisions herein, as shown on the utility construction plans, and/or as directed by the Engineer.

Bedding material shall meet the requirements of Article 1016-3 of the Standard Specifications. Bedding material shall be installed in accordance with Articles 300-6 and 300-7 of the Standard Specifications.

Bedding material installed in accordance with the plans and provisions herein and accepted, will be measured and paid for at the contract unit price per ton for "Bedding Material, Utilities Class ____". Such prices and payments shall be full compensation for all materials, labor, equipment, compaction and shaping the bedding material in accordance with Article 300-4 of the Standard Specifications, and incidentals necessary to complete the work as required.

2. 8" HDPE FORCE MAIN SEWER PIPE, DR 9, 200# WP

8" High Density Polyethylene (HDPE) Force Main Sewer Pipe to be installed by directional boring in the location shown on the plans. Install force main pipe in accordance with the applicable utility provisions herein, as shown on the utility plans, and/or as directed by the Engineer.

HDPE Force Main Sewer Pipe to be 8", DR 9, 200# WP, manufactured in accordance with ANSI/AWWA C906-90. HDPE Pipe materials shall be either PE 2406, PE 3406 or PE 3408 depending upon the required pressure class and dimension ratio (SDR) specified on the plans.

Drilling fluid to be bentonite slurry. Use admixtures suitable to the site conditions.

HDPE force main sewer pipe to be fused and tested prior to placement. Join pipe segments by cutting the ends square, heating and fusing under sufficient pressure to create a single length of pipe sufficient to complete installation in one continuous pulling operation. The pipe manufacturers listing of fusion parameters validated by appropriate testing and the parameters of the contractor's fusion system shall be submitted to the Resident Engineer prior to fusing of segments of HDPE force main sewer pipe into the pipe string. Furnish connector assemblies to connect to PVC force main sewer pipe and fuse onto each end of the HDPE force main sewer pipe.

HDPE force main sewer pipe string to be tested to a hydrostatic pressure of 200 psi. in accordance with testing procedure outlined in section 1510 of the standard specifications prior to being placed.

HDPE force main sewer pipe to be installed by boring or drilling a small pilot hole along a parabolic arc beneath the installation location. Enlarge the pilot hole by use of a reamer or reamers to the desired diameter. When the bored hole is of the diameter recommended by the pipe manufacturer for the 8" HDPE force main sewer pipe, the contractor will pull the pipe string through the hole by the drill string. Cap the pipe string during the pulling operation. Pulling operation to incorporate a swivel connection to minimize torsional stress imposed upon the pipe string. Fully support the pipe string before and during pull back so that the pipe string will move freely without damage.

Locator Wire: A 10 gauge insulated copper wire shall run continuously and shall be taped securely to the force main. The locator wire shall be accessible above ground at locations shown on the construction plans and at intervals not to exceed one thousand feet (1,000) and shall be protected by a metal cleanout box or cathodic test station. Cost and installation of the locator wire shall be considered incidental to the installation of the force main pipe.

Contractor may elect to conduct reaming and pulling of the pipe string as one operation at the discretion of the engineer.

Drilling fluid to be re-circulated through use of a solids control system to remove spoil from drilling fluid surface returns. After cleaning, return the drilling fluid surface returns to the active system.

HDPE Force Main Sewer Pipe, installed in accordance with the plans and provisions herein and accepted, will be measured along the pipe from end to end, with no deductions for fittings or couplings, and paid for at the contract unit price per linear foot for "8" HDPE Force Main Sewer Pipe, DR 9, 200# WP". Such prices and payments will be full compensation for furnishing all labor, equipment, material, couplings, mechanical joint adapters and fittings, connector assemblies, reducers, excavation, installation, locator wires, testing, backfilling, and incidentals necessary to complete the work as required.

3. FORCE MAIN LOCATOR WIRE BOX.

Force main locator wires shall include valve boxes installed at the locations as shown on the plans. Valve boxes shall be cast iron screw-type adjustment type with flare base. The word "SEWER" shall be cast in the cover. The boxes shall be of such length as will be adapted, without full extension, to the depth of cover required over the pipe. Valve boxes shall conform to ASTM A48 grey iron castings, class 303.

The force main locator wire box, installed in accordance with the plans and provisions herein and accepted, will be paid for at the contract unit price per each for "Force Main Locator Wire Box". Such prices and payments will be full compensation for furnishing all labor, equipment, and materials and incidentals to complete the work as required.

County: New Hanover
Project: B-3496

PROJECT SPECIAL PROVISIONS
Utility

UTILITIES BY OTHERS:

General:

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

- A) Progress Energy – Power (Distribution)
- B) Bellsouth - Telephone
- C) City of Wilmington – Water Main

The conflicting facilities of these concerns will be adjusted prior to the date of availability, unless otherwise noted 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 owner. 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) Progress Energy – Power (Distribution)

- 1. See Utilities By Others Plans for Details.

B) Bellsouth – Telephone

- 1. See Utilities By Others Plans for Details.

C) City of Wilmington – Water Main

- 1. A new water main shall be installed at locations as shown on the Utilities By Others plans.
The water main shall be installed prior to the date of availability.
- 2. See Utilities By Others Plans for Details.