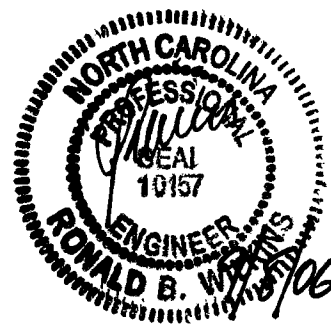


PROJECT SPECIAL PROVISIONS
Utility Construction



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 following provisions.

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 or water lines, and tie in sections of existing force main sewers or water lines, the method of anchoring pipe bends, valves, and related appurtenances will be the responsibility of the Contractor. Tying into existing force main sewers or water lines 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 the force main sewers. Concrete thrust blocking and/or thrust collars shall be installed as noted on the utility construction plans and details, and as directed by the Engineer, and shall be incidental to the pipe being anchored.

The Contractor shall be responsible for the proper removal and disposal of all raw sewage from the force main being replaced or relocated. This requirement applies only to the sewage in the line and not sewage in wet wells or pumping stations. Removal of sewage in existing force main sewer lines shall be considered incidental to the installation of new force main sewer pipe.

Owner and Owner's Requirements:

Existing water and sewer lines belong to Robeson County Public Works Department and the City of Lumberton. The contact person for the Robeson County Public Works Department is Mr. Henry Harris. Mr. Harris can be reached by telephone at (910) 671-3485. The contact person for the City of Lumberton is Mr. Dixon Ivey. Mr. Ivey can be reached by telephone at (910) 671-3851. The Contractor shall provide access for the

owner's representatives to all phases of construction. The owners shall be notified two weeks prior to commencement of any work and one week prior to service interruption.

After the installed pipe, fittings, valves, hydrants, corporation stops and end plugs are inserted and secured, the pipeline shall be subjected to a hydrostatic pressure of 200 PSI for a period of 2 hours, by pumping the section full of clean water using an approved pressure pump. Cross connection for flushing and chlorination shall be made by means of a temporary connection from the supply pipe with an approved backflow prevention device. Cross connection and blowoff piping shall be 2 inches in diameter for mains 8 inches in diameter and smaller, and 4 inches in diameter for mains greater than 8 inches but less than 16 inches in diameter. Taps for the cross connection piping shall be made to the portion of the existing water main that will be removed from service. The proposed water main shall be laid to within one pipe length of the point of final connection prior to flushing and testing. All flushing and chlorination work shall be performed in accordance with AWWA C651-99. All fittings, valves, backflow prevention devices required for chlorination and testing shall be incidental to the cost of the proposed pipe being tested.

No connection shall be made between proposed sanitary sewer force mains and water lines.

Any cracked, damaged, or defective pipe, fittings, valves, hydrants, or other attachments discovered as a result of the pressure test, shall be removed and replaced with sound material. The tests shall be repeated until test results are satisfactory.

After the pressure test is complete, the Contractor shall make a leakage test. Such leakage test shall last at least 2 hours at a pressure of 200 PSI. The pressure test and leakage test may be performed concurrently.

All valves on the lines being sterilized shall be opened and closed several times during the chlorinating period. The pipeline shall then be flushed with clean water until the residual chlorine is reduced to less than 1.0 ppm or at the same level as in the existing water mains. Samples of water shall be taken by the owner's representatives points along the pipeline in approved containers and submitted to a certified testing laboratory for bacterial and chlorine content. The respective owners will provide copies of the certified test reports to the Engineer who will in turn provide certified copies to the Contractor for his records.

Water meters that require relocation shall be relocated as shown on the utility construction plans. Relocation of the water meters shall be paid for as noted in the Standard Specifications. Should backflow prevention devices be present on the existing water meters, relocation of such devices shall be incidental.

Relocation or adjustment of sanitary sewer cleanouts shall be made such that the cleanout is at grade and as near the right of way line as possible. No payment will be made for relocation or adjustment of sanitary sewer cleanouts. Relocations and adjustments shall

be approved by the Engineer and shall be considered incidental to the installation of sanitary sewer pipe.

The owners shall be notified in advance of any interruptions of water or sewer service with ample time to make arrangements. Interruption of water service on main lines shall be limited to a maximum of 4 hours unless approved by the Engineer.

Utilities and 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. The Engineer shall be notified of the Contractor's findings regarding material type and condition as soon as this information is obtained.

Proposed water lines shown on the Utility Construction Plans shall be installed as noted, as close to the right-of-way line as possible. Lines have been shown on the plans as being nominally five feet inside the right-of-way. This dimension may vary according to field conditions. However, changes from locations noted on the plans must be specifically approved by the Engineer prior to construction.

All water lines shall be installed with a minimum of three feet of cover. Installation that requires more than six feet of fill over the proposed line shall be evaluated by the Engineer on a case by case basis.

Gate Valves and Butterfly Valves:

All butterfly valves and gate valves shall conform to the requirements of ANSI/AWWA C504 and/or ANSI/AWWA C509. The direction of rotation of the handwheel or wrench nut to open the valve shall be to the left or counterclockwise.

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 and the detail sheets which are part of the Utility Construction Plans.

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 VI". 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. STEEL ENCASEMENT PIPE:

Steel encasement pipe shall be installed in accordance with the applicable utility provisions herein, as shown on the utility plans, and/or as directed by the Engineer. Steel encasement pipe may be of the following types: spiral welded steel pipe in accordance with ASTM A211; circular black or galvanized steel pipe in accordance with ASTM A53 or A589; high strength smooth wall steel casing in accordance with API-5L, Grade B, or other grades; or other steel pipe of acceptable quality and meeting the approval of the Engineer.

Steel encasement pipe shall be installed with leak proof joints. The joints shall be butt-welded by a certified welder using approved techniques and materials.

The carrier pipe shall be installed as noted on the plans, inside the encasement pipe by use of skids or spiders appropriately spaced to support the carrier pipe from deflection. Skids or spiders shall be sized to raise the carrier pipe bells above the encasement pipe and to restrict excessive radial movement. Skids or spiders shall be securely attached to the carrier pipe and shall be approved by the Engineer.

After the carrier pipe is installed and tested, the ends of the encasement pipe shall be plugged or capped with concrete, brick or other approved materials. The plug or cap shall have a one-inch diameter weep hole at the bottom to facilitate drainage of the encasement pipe.

Steel encasement pipe, installed in accordance with the plans and provisions herein and accepted, will be measured along the pipe from end to end and paid for at the contract unit price per foot for " _____ " Steel Encasement Pipe, _____ " Thick, by Boring and Jacking", or " _____ " Steel Encasement Pipe, _____ " Thick, by Open Cut". Such prices and payments will be full compensation for all materials, excavation, equipment, labor, installation, grouting, backfilling, and incidentals necessary to complete the work as required.

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 (Transmission)
- B) Lumbee River EMC – Power (Distribution)
- C) City of Lumberton – Power (Distribution)
- D) Bell South - Telephone
- E) Piedmont Natural Gas Company – Gas
- F) Time Warner Cable – Cable

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 (Transmission)

1. Progress Energy has an existing wooden transmission H-frame structure located at approximate Station 70+50 Right. This structure will be relocated beyond the proposed right-of-way limits to clear the construction area for this project and future widening on NC 711.
2. The contact person for Progress Energy is Mr. Jamie Loy @ 919-546-6034.

B) Lumbee Power (Distribution)

1. Lumbee River EMC has an existing pole line along the south side of NC 711 from the beginning of the project at approximate Station 35+00 to Station 83+00. This line will be relocated to the back of the proposed ditch line. Adjustments will also be made from Stations 329+00 through 332+00, and Stations 336+00 through 375+00 on the north side of NC 711.

2. The contact person for Lumbee River EMC is Mr. Bernard Jones @ 910-827-2134.

C) City of Lumberton (Distribution)

1. The City of Lumberton has an existing pole line along the north side of NC 711 from approximate Station 395+00 through the end of the project. This pole line will be relocated to clear the limits of construction.
2. The contact person for the City of Lumberton is Mr. Lamar Brayboy @ 910-671-3865.

D) Bell South (Telephone)

1. Bell South has existing buried copper and fiber optic cables that will be relocated to clear the proposed ditch line, guardrails and culverts. Bell South will complete relocation of their cables January 31, 2007.
2. The contact person for Bell South is Mr. Lance Laliberte @ 910-620-3901.

E) Piedmont Natural Gas Company

1. Piedmont Natural Gas Company has an existing 4" diameter plastic gas line that will be adjusted as necessary at the proposed culvert extension at Station 403+80 Left, and the 48" diameter pipe installation at Station 373+00 Left. The Contractor is to notify Piedmont Natural Gas Company two (2) weeks prior to all pipe installations and allow two (2) weeks to make the necessary adjustments.
2. The contact person for Piedmont Natural Gas Company is Mr. Paul Johnson @ 910-308-2518.

F) Time Warner Cable

1. Time Warner has an existing fiber optic cable attached to the power poles and will coordinate with the power companies to relocate the cable at the appropriate time. Time Warner also has a buried cable from the beginning of the project through Station 80+00 and from Station 413+00 through the end of the project. The Contractor is to contact Time Warner before working in these areas and allow them to temporarily relocate this cable during construction as necessary.
2. The contact person for Time Warner is Mr. John McMillan @ 901-308-8392.