Section 02210 WORK IN NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RIGHTS-OF-WAY

1. SCOPE. All work within the rights-of-way of the North Carolina Department of Transportation (DOT) shall be done in accordance with the contract documents and the DOT's requirements. Upon completion of such work and prior to final payment, the Contractor shall present to the Owner certificates in duplicate from the DOT stating that the work has been done in accordance with the DOT's requirements and is acceptable to them. Construction signing and traffic control shall conform to the "Manual on Uniform Traffic Control Devices" latest revision, as published by the State of North Carolina Department of Transportation, Division of Highways.

Contractor shall meet all requirements of the NCDOT Encroachment Agreement Special Conditions.

2. PIPE COVER. The top of the pipeline or casing shall be installed at a minimum depth of 3'0" below the surface of the pavement and 2'0" below the flow line of side ditches.

3. EXCAVATION AND BACKFILLING IN NCDOT RIGHT-OF-WAY. Excavation for the roadways, drives, and parking areas shall conform to the lines, grades, cross sections, and dimensions indicated on the drawings and shall include the excavation of all unsuitable material from the subgrade. After shaping to line, grade, and cross section, the subgrade shall be compacted to a depth of at least 12 inches to 100 percent of maximum density at a moisture content ranging from -2 to +2 percent relative to the optimum moisture content as determined by ASTM D1557. This operation shall include any reshaping and wetting or drying required to obtain proper compaction. All soft or otherwise unsuitable material shall be removed and replaced with suitable material. Compaction tests shall be taken at every 2 feet of fill.

All trenches within DOT right-of-way but not under a roadway, drive, or parking area shall be compacted for the full depth of the excavation in lifts not exceeding 6 inches to 95 percent of maximum density at optimum moisture content as determined by ASTM D698. This operation shall include any reshaping and wetting or drying required to obtain proper compaction. All soft or otherwise unsuitable material shall be removed and replaced with suitable material.

All open trenches shall be backfilled with compacted backfill at the end of each day. No trench shall remain open at the end of the day.

4. PAVEMENT REPLACEMENT. Where it is necessary to cut existing pavement in roads, the road shall be repaired with a surface of the same type as the existing unless specified otherwise. All replaced surfacing shall meet the requirements of the DOT both as to material and performance of work. If mutually satisfactory arrangements can be made with the Division Engineer through whose division the pipeline passes, pavement

may be restored by the DOT's maintenance forces with the Contractor assuming the cost of replacement.

5. INSPECTION. Before any crossing of a highway is made, written notice shall be given to the DOT's Division Engineer, 48 hours in advance so that a DOT Inspector may be assigned to the work at the Division Engineer's option. Any inspector assigned to the pipe laying operations shall have full authority to act in behalf of the DOT and to stop any work affecting highways, provided the work is not being performed in accordance with DOT's requirements. The cost of any such inspection shall be borne by the Contractor.

Contractor shall notify Owner when he is ready for final inspection.

6. MAINTENANCE. All work done in DOT's right-of-way shall be maintained by the Contractor for a period of one year after completion of the contract. The DOT shall request the Contractor to make any repairs to work not satisfactorily maintained, and if not brought up to the DOT's standard may be repaired by the DOT's forces and all cost of repairs shall be charged to the Contractor.

7. ACCIDENT PREVENTION. Barricades, signs, lights, pilot cars, flagmen, and watchmen with reflective vests shall be used where required by the Division Engineer or his representatives. All operations in the DOT's rights-of-way shall be conducted at all times in such a manner so as not to create a hazard to or impede the flow of traffic. All costs for these items shall be included in the base bid.

8. EXISTING CULVERTS. Wherever a pipeline must be installed beyond the ditch line because of the location of a box culvert, bridge pipe culvert or any other highway structure a minimum horizontal distance of 6 feet shall be maintained between the pipeline and any portion of the highway structure and the pipelines shall be installed at a minimum depth of 1 foot below the existing stream bed. When a main is buried in the fill over a culvert, it must be located at least 18 inches from the inside face of the headwall. Contractor installing water line under existing drain pipes shall maintain a minimum clearance of 1 foot between the existing pipe culvert and the water line.

9. SERVICE LINE INSTALLATION. No pipeline, including service connections, shall be installed in open trench unless actually shown on plans as open cut. All service connections shall be bored, driven, or punched under roadways maintained by the DOT. If open cutting is allowed, the pavement shall be restored by the end of the day.

10. TUNNELING AND BORING AND JACKING. Tunneling and boring and jacking shall be as specified in the tunnel excavation and boring and jacking sections.

End of Section