Steel 300

Service Pipe:
Carbon steel service pipe shall be standard weight A53 ERW or A106 seamless, beveled for welding. Condensate return piping shall be Schedule 80. Stainless Steel piping shall be Type 304L or 316L. ASTM A312/A312M. All joints for pipe 2½" and larger in size shall be butt-welded. Sizes 2" and smaller shall be socket welded. Straight lengths of piping will be supplied with 6" of piping exposed at each end for field joint fabrication. Pipe lengths to be supplied in 21-42 ft. lengths.

Insulation: *
The insulation shall be a foamed-in-place closed-cell polyisocyanurate which completely fills the annular space between the carrier pipe and the exterior casing. The insulation shall have the following physical properties:

Minimum Density (lb./cu. ft.) 2.6 ASTM D-1622

94-96 % Closed Cell ASTM D-6226

"K" Factor BTU/Hr. sq. ft. °F/in. . . . **.175** ASTM C-518

Exterior Casing: **
The exterior casing shall be High Density Polyethylene (H.D.P.E.) ASTM D-1248 with the following physical properties:

ASTM D-3350…Resin Type III, Grade P34

ASTM D-638…Ultimate Elongation 850%

ASTM D-638…Tensile Yield Strength 3300 psi

ASTM D-790…Tangent Flexural Modules 175,000 psi

No polyethylene tape casings will be allowed.

Sub-Assemblies:
All fittings, anchors, end seals, and other accessories shall be prefabricated or field-fabricated, dependent upon the engineer's option and/or site conditions. Fittings 2-1/2" and larger to be butt weld conforming to ASTM A234 WPB & ASME B 16.9

Fittings 2” and smaller to be socket weld conforming to ASME B 16.11. All factory-fabricated fittings shall be welded to

B 31-1.

Field Joints:
After welding and hydrostatic testing, HDPE jackets will use polyisocyanurate foam to the specified thickness and a heat-shrinkable sleeve.

Expansion Compensation:
Expansion and contraction within the piping system shall be accommodated with factory prefabricated external flexible foam bolsters for expansion elbows, z-bends, expansion loops, and anchors specifically designed for each application.

Leak Detection:
The system can be made leak detection-ready. This is accomplished by installing a bare copper wire between the carrier pipe and the HDPE jacket at the factory. The wire will be embedded in the foam insulation and incorporated into each piece of pre-insulated pipe and fittings. Contractor shall check continuity and electrical isolation of each piece of insulated pipe and fittings with a standard ohmmeter. Copper wires are to be connected together at each field joint with an insulated jumper cable as provided by Tricon.

Installation:
No Piping shall be installed in standing water. **Trenches shall be maintained dry until final field closure is complete.**
The installing contractor shall handle the piping system in accordance with the directions furnished by the manufacturer and as approved by the architect and engineer. The carrier piping shall be hydrostatically tested to 1-1/2 times the operating pressure, or as specified in the contract documents. The test shall be maintained for a minimum time of 1 hour. ***EXERCISE DUE CARE WHEN INSTALLING AND TESTING THE PIPING SYSTEM.***