



Design Standard

Underground Piping Installations

PART 1 GENERAL

Texas A&M University requires the use of Extra High Molecular Weight (EHMW Plus) High Density Polyethylene (HDPE) pipe for potable water conveyance, chilled water (CHW) systems and sanitary sewer systems. For heating hot water (HHW) and Domestic Hot Water (DHW) systems, ductile iron or HDPE manufactured with the DOW INTREPID 2499 NT resin per the specification in Appendix A are acceptable. Specifications for HDPE and ductile iron pipe are contained in Appendices B and C respectively. Any deviations from these specifications must be approved in writing by the UES Manager for Engineering and Project Management.

For campus buildings served by TAMU central thermal distribution systems, supply and return lines typically have piping with identical size and material for each system - chilled water (CHW), heating hot water (HHW), and domestic hot water (DHW). Because these thermal distribution lines are identical in size and appearance for each thermal system, there is the potential for cross-connection between supply and return. To avoid possible cross-connection of supply and return lines, design engineers shall require field verification in construction documents and contractors shall field verify the configuration of supply and return lines, using an appropriate temperature sensing device and adequate system flow, before making building connections. Any discrepancy between construction documents and field verification should be promptly reported to the project A/E and the Owner's representative before completing piping installation, so proper piping configuration can be verified.

An isolation valve shall be installed on any lateral feeding a building so that the building can be isolated without bringing down adjacent buildings. The valve shall be a direct buried gate valve.

Victaulic products for HDPE pipe may be used only as a replacement for necessary flanges not as replacement for fusion in pipe runs that can be fused. HDPE products are rated to pressures equal to the pipe with which they are used. (The pipe manufacturer's listing is dependent upon wall thickness, pipe composition and temperature.) Victaulic couplings, transition couplings, and pipe flange adaptors may be used. Where possible use Victaulic installation-ready design which permits direct "stab" installation without prior disassembly of the couplings. Gaskets shall be molded and produced by the coupling manufacturer and suitable for intended service. Assembly of HDPE couplings and flange adapters shall be in accordance with latest published specifications.

Mineral powder insulation and pre-insulated pipe are acceptable. See the Underground Piping System Insulation Design Standard for insulation requirements.



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APPENDIX A
INTREPID 2499 NT TECHNICAL INFORMATION



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APPENDIX B

High Density Polyethylene (HDPE) Pipe and Fittings



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APPENDIX C

Ductile Iron Pipe