

NOTES:

- 1. ALL JOINTS AT VALVES, TEES, Y-BRANCHES, BENDS, AND PLUGS SHALL BE RESTRAINED UTILIZING RESTRAINED JOINTS AS SPECIFIED IN THE DUCTILE IRON PIPE SECTION.
- 2. ALL BELL_AND_SPIGOT OR ALL_BELL TEES, Y_BRANCHES, BENDS DEFLECTING 11_1/4 DEGREES OR MORE, VALVES, AND PLUGS WHICH ARE INSTALLED IN PIPING SUBJECTED TO INTERNAL HYDROSTATIC HEADS IN EXCESS OF 30 FEET SHALL BE PROVIDED WITH SUITABLE REACTION BLOCKING, ANCHORS, JOINT HARNESS, OR OTHER ACCEPTABLE MEANS FOR PREVENTING MOVEMENT OF THE PIPE CAUSED BY INTERNAL PRESSURE. REGARDLESS OF THE RESTRAINING SYSTEM PROVIDED, ALL VALVES, TEES, Y-BRANCHES, BENDS, AND PLUGS SHALL BE RESTRAINED UTILIZING RESTRAINED JOINTS AS SPECIFIED IN THE DUCTILE IRON PIPE SECTION.
- 3. CONCRETE BLOCKING SHALL EXTEND FROM THE FITTING TO SOLID UNDISTURBED EARTH AND SHALL BE INSTALLED SO THAT ALL JOINTS ARE ACCESSIBLE FOR REPAIR. THE DIMENSIONS OF CONCRETE REACTION BLOCKING SHALL BE AS INDICATED ON THE DRAWINGS OR AS DIRECTED BY THE ENGINEER. IF ADEQUATE SUPPORT AGAINST UNDISTURBED GROUND CANNOT BE OBTAINED, METAL HARNESS ANCHORAGES CONSISTING OF JOINT CLAMPS OR TIE ROD AND CLAMP SYSTEMS ACCEPTABLE TO THE ENGINEER SHALL BE INSTALLED TO PROVIDE THE NECESSARY THRUST RESISTANCE. IF THE LACK OF SUITABLE SOLID VERTICAL EXCAVATION FACE IS DUE TO IMPROPER TRENCH EXCAVATION, ACCEPTABLE METAL HARNESS ANCHORAGES SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- 4. REACTION BLOCKING, ANCHORAGES, OR OTHER SUPPORTS FOR FITTINGS INSTALLED IN FILLS OR OTHER UNSTABLE GROUND SHALL BE PROVIDED AS REQUIRED BY THE DRAWINGS OR AS DIRECTED BY THE ENGINEER.
- 5. ALL STEEL CLAMPS, RODS, BOLTS, AND OTHER METAL ACCESSORIES USED IN TAPPING SADDLES OR REACTION ANCHORAGES SUBJECT TO SUBMERGENCE, OR IN CONTACT WITH EARTH OR OTHER FILL MATERIAL, AND NOT ENCASED IN CONCRETE SHALL BE PROTECTED FROM CORROSION BY TWO COATS OF COAL TAR PAINT APPLIED TO CLEAN, DRY METAL SURFACES. THE FIRST COAT SHALL BE DRY AND HARD BEFORE THE SECOND COAT IS APPLIED

•	Concord NOATH CAROLINA			STANE T	CITY OF CONCORD STANDARD DETAIL TYPICAL BACKSIDE TAP			
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