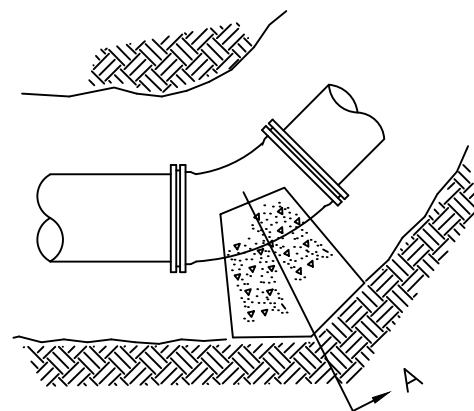
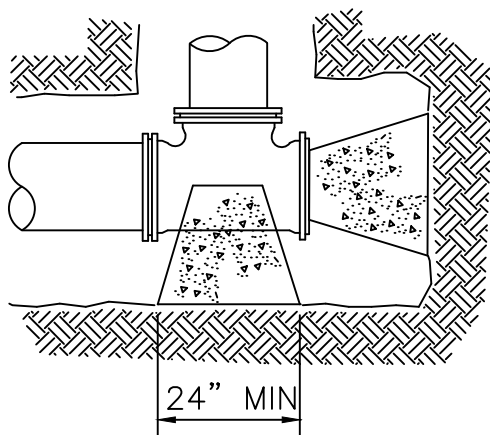
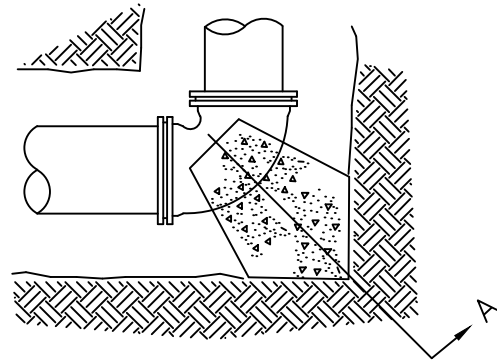
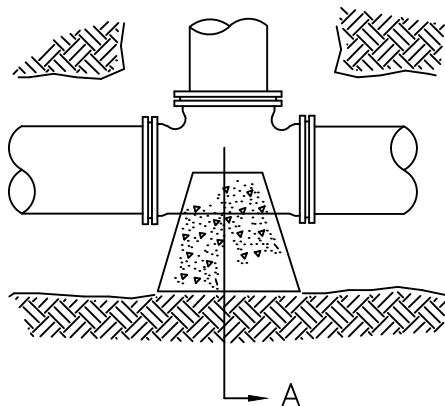
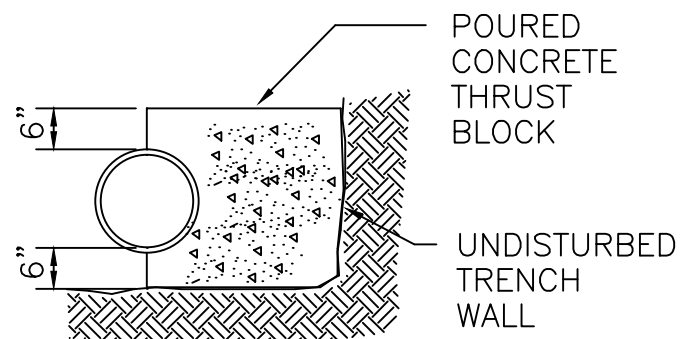


THRUST BLOCK INSTALLATION



MINIMUM SQ. FT. AREA OF VERTICAL CROSS SECTION AGAINST 2000 PSF UNDISTURBED EARTH

| | 6" | 8" | 10" | 12" |
|-------------|-----|-----|------|------|
| 90° BEND | 5.5 | 9.4 | 15.4 | 21.8 |
| 45° BEND | 3.0 | 5.1 | 8.4 | 11.9 |
| 22.5° BEND | 1.5 | 2.6 | 4.3 | 6.1 |
| 11.25° BEND | 1.5 | 2.6 | 4.3 | 6.1 |
| TEE | 3.9 | 6.7 | 10.9 | 15.5 |



THRUST BLOCKING TO PREVENT MOVEMENT OF LINES UNDER PRESSURE AT BENDS, TEES, CAPS, VALVES, HYDRANTS AND AT POINTS SPECIFIED BY THE ENGINEER SHALL BE CLASS "X" CONCRETE, A MINIMUM OF 12" THICK, PLACED BETWEEN SOLID GROUND AND FITTING, AND SHALL BE ANCHORED IN SUCH A MANNER THAT PIPE AND FITTING WILL BE ACCESSIBLE FOR REPAIRS. THRUST BLOCKS SHALL BE PLACED AT BENDS OF 11-1/4 DEGREES OR MORE. RETAINER GLANDS MAY BE USED IN PLACE OF THRUST BLOCKS. THE COST OF THRUST BLOCKS OR RETAINER GLANDS SHALL BE INCLUDED IN THE COST OF THE FITTING.