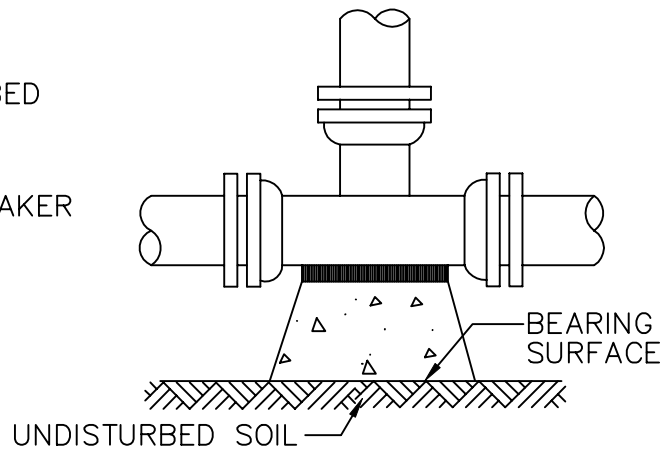
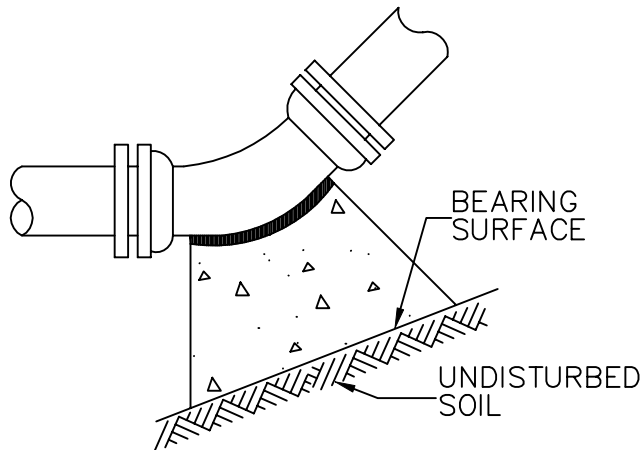


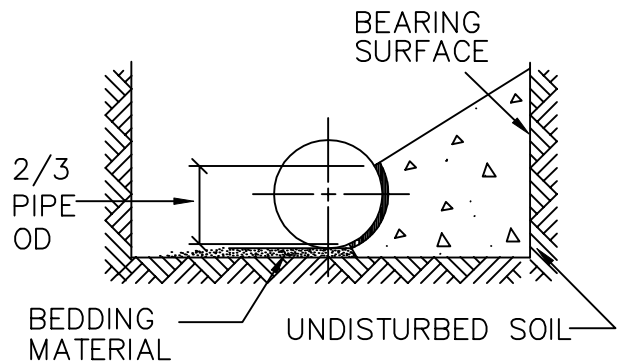
DEAD END



TEE



11 1/4°, 22 1/2°, 45° AND 90° BENDS



TYPICAL CROSS SECTION

NOTES:

1. BASED ON 250 PSI MAXIMUM PRESSURE AND 2000 LBS/FT² BEARING CAPACITY.
2. ALL FITTINGS MUST BE WRAPPED WITH POLYETHYLENE TO PREVENT CONCRETE FROM ADHERING TO BOLTS OR PIPES.
3. MAXIMUM JOINT DEFLECTION WITHOUT REACTION BLOCK IS 1+1/2°.
4. CONCRETE SHALL DEVELOP 3,000 PSI AT 28 DAYS.
5. JOINTS AND BOLTS SHALL BE ACCESSIBLE FOR REPAIRS.

MINIMUM BEARING SURFACE AREA IN SQUARE FEET

SIZE	TEE AND PLUG	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
4"	2.0	2.5	1.5	1.0	1.0
6"	4.0	5.5	3.0	1.5	1.0
8"	6.5	9.0	5.0	2.5	1.5
10"	10.0	14.0	7.5	4.0	2.0
12"	14.0	20.0	11.0	5.5	3.0
14"	19.0	27.0	14.5	7.5	4.0
16"	25.0	35.0	19.0	10.0	5.0
18"	31.5	44.5	24.0	12.5	6.5
20"	38.0	54.5	29.5	15.0	7.5
24"	55.5	78.5	42.5	22.0	11.0

DRAWN BY: JSH

CHECKED BY: RJH

APPROVED BY:
DIRECTOR OF PUBLIC WORKS

CITY OF BOULDER, COLORADO

HORIZONTAL
THRUST BLOCK

ISSUED: JULY 2, 1998

REVISED: OCT. 17, 2000

DRAWING NO.

5.14