



TYPE "C" BLOCKING FOR 11 1/4', 22 1/2', 45° AND 90° VERTICAL BENDS									
THRUST BLOCK AREA IN SQUARE FEET									
PIPE SIZE	FITTING	FIRM SILT OR FIRM SILTY SAND			COMPACT SAND			COMPACT SAND & GRAVEL	
		90° BEND	TEE, 45° BEND & DEAD END	11 1/4' & 22 1/2' BEND	90° BEND	TEE, 45° BEND & DEAD END	11 1/4' & 22 1/2' BEND	90° BEND	TEE, 45° BEND & DEAD END
4"	5.8	4.2	1.7	2.9	2.1	1.0	2.2	1.6	1.0
6"	13.3	9.4	3.8	6.7	4.7	1.9	5.0	3.5	1.4
8"	23.3	16.7	6.7	11.7	8.4	3.4	8.8	6.3	2.5
12"	53.0	37.5	15.0	26.5	18.8	7.5	20.0	14.0	5.6

AREAS CALCULATED ON 300 PSI TEST PRESSURE AND 3'-0" MIN COVER OVER WATERMAIN

NOTES:

1. LOCATION AND SIZE OF BLOCKING FOR PIPE LARGER THAN 12" DIAMETER AND FOR SOIL TYPES DIFFERENT THAN SHOWN SHALL BE DETERMINED BY THE CITY ENGINEER.
2. ALL BLOCKING FOR VERTICAL FITTINGS (POURED IN PLACE) SHALL BEAR AGAINST UNDISTURBED NATIVE GROUND.
3. ALL POURED THRUST BLOCKS SHALL BE BACKFILLED AFTER MINIMUM 1 DAY. PRESSURE TESTING SHALL OCCUR AFTER CONCRETE HAS REACHED COMPRESSIVE STRENGTH (f'c).
4. ALL BLOCKING SHALL BE CONCRETE CL 3000-1 (3000 psi).
5. AFTER INSTALLATION, SHACKLE RODS & TURNBUCKLES SHALL BE CLEANED AND COATED WITH 2 COATS OF ASPHALTIC VARNISH, ROYSTON ROYKOTE #612M OR APPROVED EQUAL.
6. SHACKLE RODS SHALL BE FUSION BONDED EPOXY COATED ROUND MILD STEEL, ASTM A 36.
7. BLOCKING AGAINST FITTINGS SHALL BEAR AGAINST THE GREATEST FITTING SURFACE AREA POSSIBLE, BUT SHALL NOT COVER OR ENCLOSE BELL ENDS, JOINT BOLTS OR GLANDS REASONABLE ACCESS TO BOLTS AND GLANDS SHALL BE PROVIDED.



APPROVED BY	L. OLIVE
DATE	07/31/2008
REF STAD SPEC	

DEPARTMENT OF PUBLIC WORKS
STANDARD DETAILS
 VERTICAL THRUST BLOCK TYPE C

STANDARD DETAIL NUMBER
W-175