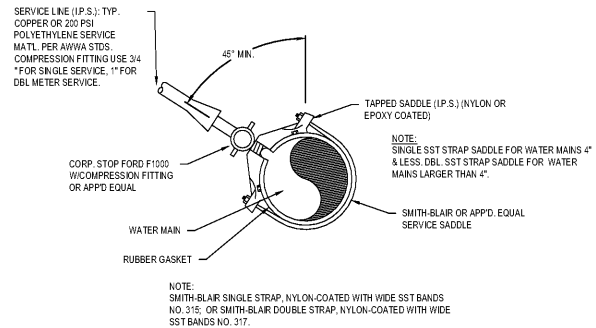


BACKFLOW PREVENTION ASSEMBLY
NOT TO SCALE



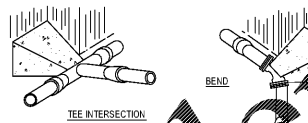
SERVICE TAP
NOT TO SCALE

REACTION BEARING AREAS FOR HORIZONTAL WATER PIPE BENDS
BASED ON TEST PRESSURE OF 150 PSI

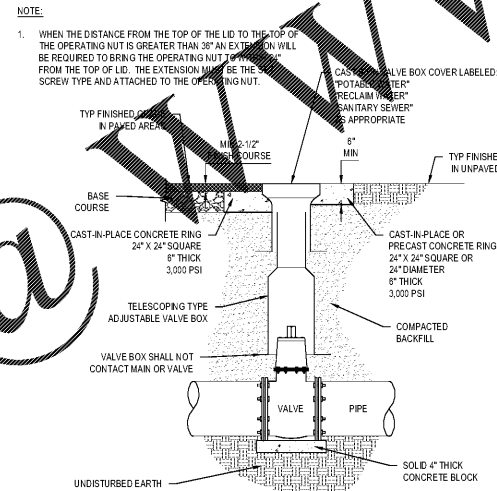
ALL AREAS GIVEN IN SQUARE FEET

SIZE OF BEND	DEGREE OF BEND	90°	ALL AREAS GIVEN IN SQUARE FEET											
			11 1/4"	22 1/2"	45°	90°	PLUG	4"	11 1/4"	22 1/2"	45°	90°	PLUG	
11 1/4"	93	0.14	0.09	0.07	0.03	0.03	0.02	0.02	0.01					
22 1/2"	184	0.28	0.17	0.14	0.07	0.07	0.03	0.03	0.03					
45°	380	0.54	0.34	0.27	0.14	0.14	0.07	0.07	0.05					
90°	686	1.00	0.62	0.50	0.25	0.25	0.12	0.12	0.10					
PLUG	471	0.71	0.44	0.36	0.18	0.18	0.08	0.08	0.07					
4"														
11 1/4"	389	0.55	0.35	0.28	0.14	0.14	0.07	0.07	0.08					
22 1/2"	735	1.10	0.69	0.55	0.28	0.28	0.14	0.14	0.11					
45°	1,442	2.18	1.35	1.08	0.54	0.54	0.27	0.27	0.22					
90°	2,685	4.00	2.50	2.00	1.00	1.00	0.50	0.50	0.40					
PLUG	1,884	2.83	1.77	1.41	0.71	0.71	0.35	0.35	0.28					
8"														
11 1/4"	831	1.25	0.78	0.62	0.31	0.31	0.16	0.16	0.12					
22 1/2"	1,654	2.48	1.55	1.24	0.62	0.62	0.31	0.31	0.25					
45°	3,244	4.97	3.04	2.43	1.22	1.22	0.61	0.61	0.48					
90°	5,895	9.00	5.62	4.50	2.25	2.25	1.12	1.12	0.90					
PLUG	4,239	6.38	3.97	3.18	1.59	1.59	0.79	0.79	0.64					

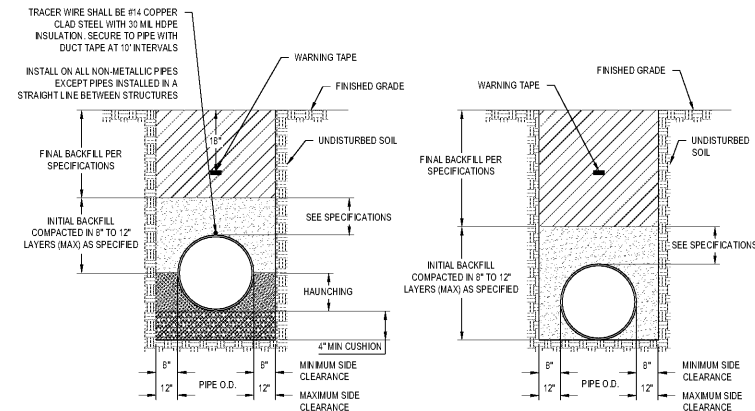
- NOTES:
1. CONCRETE SHALL BE 3,000 PSI
 2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.
 3. ALL BENDS AND INTERSECTIONS SHALL HAVE CONCRETE THRUST BLOCKING.
 4. TRENCH SIDE TO BE AT AN ANGLE OF 90° TO THE THRUST VECTOR.



CONCRETE THRUST BLOCKING 150 PSI
NOT TO SCALE



VALVE & VALVE BOX
NOT TO SCALE



PIPE TRENCH
NOT TO SCALE

SHEET ISSUE NO.	DATE	DESCRIPTION	BY
1	9/2/2020	ISSUE FOR BID + PERMIT	WR



PRINCIPAL IN CHARGE: GARY WARNER
PROJECT ARCHITECT: WR
DRAWN BY: WR

UTILITY DETAILS

SHEET NO. PRJ. NO. 02-191340

C3.2