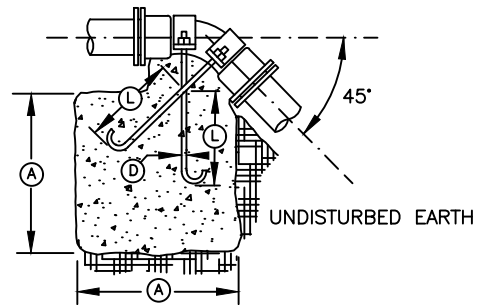


**BLOCKING FOR 11-1/4", 22-1/2" & 30° VERTICAL BENDS**



**BLOCKING FOR 45° VERTICAL BENDS**

**VERTICAL BLOCKING**

PIPE SIZE	VERT. BEND	CU.FT.	(A)	(D)	(L)
4"	11-1/4"	8	2.0'	3/4"	1.5'
	22-1/2"	11	2.2'	3/4"	2.0'
	30°	17	2.6'	3/4"	2.0'
	45°	30	3.1'	3/4"	2.0'
6"	11-1/4"	11	2.2'	3/4"	2.0'
	22-1/2"	25	2.9'	3/4"	2.0'
	30°	41	3.5'	3/4"	2.0'
	45°	68	4.1'	3/4"	2.0'
8"	11-1/4"	16	2.5'	3/4"	2.0'
	22-1/2"	47	3.6'	3/4"	2.5'
	30°	70	4.1'	3/4"	2.5'
	45°	123	5.0'	3/4"	2.0'
12"	11-1/4"	32	3.2'	3/4"	2.0'
	22-1/2"	88	4.5'	7/8"	3.0'
	30°	132	5.1'	7/8"	2.5'
	45°	232	6.1'	3/4"	2.5'
16"	11-1/4"	70	4.1'	7/8"	3.0'
	22-1/2"	184	5.7'	1-1/8"	4.0'
	30°	275	6.5'	1-1/4"	4.0'
	45°	478	7.8'	1-1/8"	4.0'
20"	11-1/4"	91	4.5'	7/8"	3.0'
	22-1/2"	225	6.1'	1-1/4"	4.0'
	30°	330	6.9'	1-3/8"	4.5'
	45°	560	8.2'	1-1/4"	4.0'
24"	11-1/4"	128	5.0'	1"	3.5'
	22-1/2"	320	6.8'	1-3/8"	4.5'
	30°	480	7.9'	1-5/8"	5.5'
	45°	820	9.4'	1-3/8"	4.5'

**NOTES:**

1. CONCRETE BLOCKING AREA IS BASED ON 250 PSI WATER PRESSURE AND 2,500 PSI CONCRETE STRENGTH.
2. HARDWARE EMBEDDED IN CONCRETE SHALL BE CLEANED AND COATED WITH COAL TAR EPOXY OR APPROVED BITUMINOUS COATING EQUIVALENT PRIOR TO INSTALLATION. HARDWARE NOT EMBEDDED IN CONCRETE SHALL BE CLEANED AND COATED AFTER INSTALLATION. ALL BOLTS, ALL-THREAD, AND HARDWARE TO BE ZINC COATED OR APPROVED EQUAL.
3. POLYETHYLENE WRAP NOT SHOWN FOR CLARITY.
4. HARDWARE SHALL BE TWO CARBON STEEL HALF BANDS (5/8" THICK) EQUAL TO 595 SOCKET CLAMP FROM ANVIL INTERNATIONAL. RODS SHALL BE ALL-THREAD, BENT AT THE ENDS OR ALL-THREAD WITH BOLTS AND WASHERS AT END, OR BENT ANCHOR BOLTS. RODS/BOLTS SHALL HAVE 12" MIN. EMBEDMENT FOR INLINE VALVES, OR AS SHOWN ON VERTICAL BLOCKING TABLE.

**CONCRETE BLOCKING - VERTICAL**

NOT TO SCALE

**DETAIL APPROVALS**  
**EDITOR** TMC  
**MANAGER** EM

**NORTHSHORE UTILITY DISTRICT**  
 2024 STANDARD WATER DETAILS