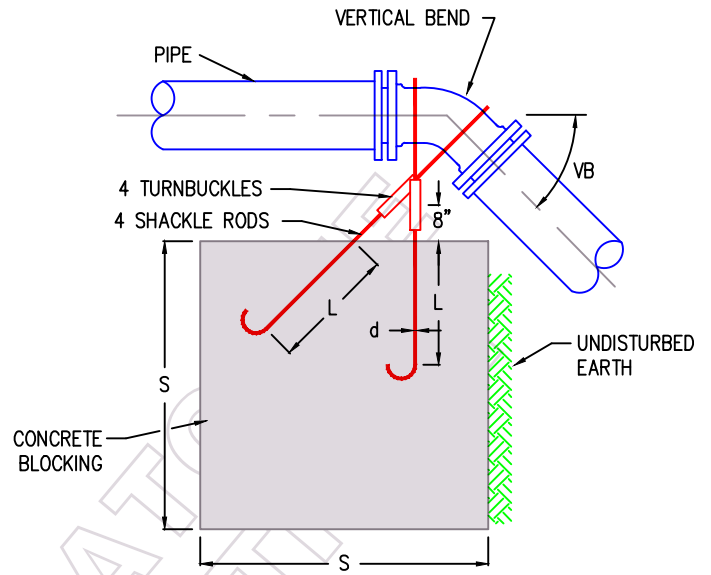
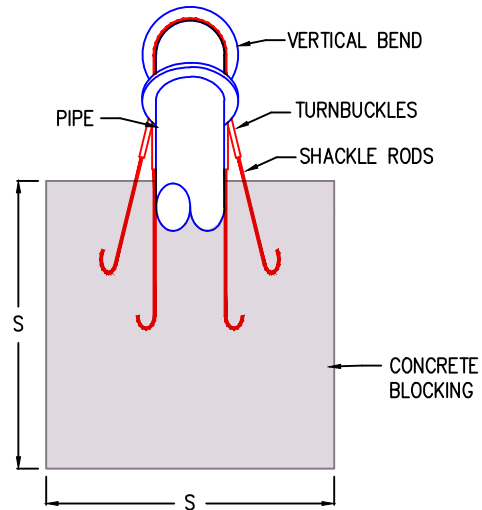


VERTICAL THRUST BLOCKING FOR 11.25°, 22.5°, AND 45° BENDS								NUMBER OF TIE ROD SETS (2 EMBEDDED RODS PER SET)
PIPE SIZE NOM. DIAMETER - INCHES	TEST PRESSURE PSI	VB VERTICAL BEND DEGREES	AMOUNT CONCRETE BLOCKING - CU FT	S LENGTH OF SIDE FEET	d SHACKLE ROD DIA. INCHES	L DEPTH OF ROD IN CONCRETE INCHES		
3"	300	11 1/4	5.8	1.8	5/8	12"	2	
		22 1/2	11.5	2.3	5/8	12"	2	
		45	22.6	2.8	5/8	12"	2	
4"	300	11 1/4	8.5	2.0	5/8	12"	2	
		22 1/2	17.0	2.6	5/8	12"	2	
		45	33.2	3.2	5/8	12"	2	
6"	300	11 1/4	17.6	2.6	5/8	12"	2	
		22 1/2	35.0	3.3	5/8	12"	2	
		45	68.7	4.1	5/8	12"	2	
8"	300	11 1/4	30.3	3.1	3/4	12"	2	
		22 1/2	60.2	3.9	3/4	12"	2	
		45	118	4.9	3/4	12"	4	
10"	300	11 1/4	45.5	3.6	3/4	12"	2	
		22 1/2	90.6	4.5	3/4	12"	2	
		45	178	5.6	3/4	24"	4	
12"	300	11 1/4	64.4	4.0	3/4	12"	2	
		22 1/2	128	5.1	3/4	12"	4	
		45	251	6.3	3/4	12"	6	
14"	250	11 1/4	86.5	4.4	3/4	12"	2	
		22 1/2	172	5.6	3/4	24"	4	
		45	338	7.0	1"	24"	6	
16"	250	11 1/4	112	4.8	3/4	12"	3	
		22 1/2	223	6.1	3/4	12"	6	
		45	436	7.6	1"	12"	6	
18"	250	11 1/4	141	5.2	3/4	24"	4	
		22 1/2	280	6.5	1"	24"	4	
		45	549	8.2	1-1/4"	24"	6	



BLOCKING FOR VERTICAL BENDS



VERTICAL THRUST BLOCKING

1. RESTRAINED JOINTS ARE PREFERRED OVER VERTICAL THRUST BLOCKING UNLESS RESTRAINTS ARE NOT PRACTICAL.

2. CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI.

3. SHACKLE RODS PER STANDARD DETAIL W-07.

**East Wenatchee
Water District**



WATER SYSTEM STANDARD DETAIL

VERTICAL THRUST BLOCKING