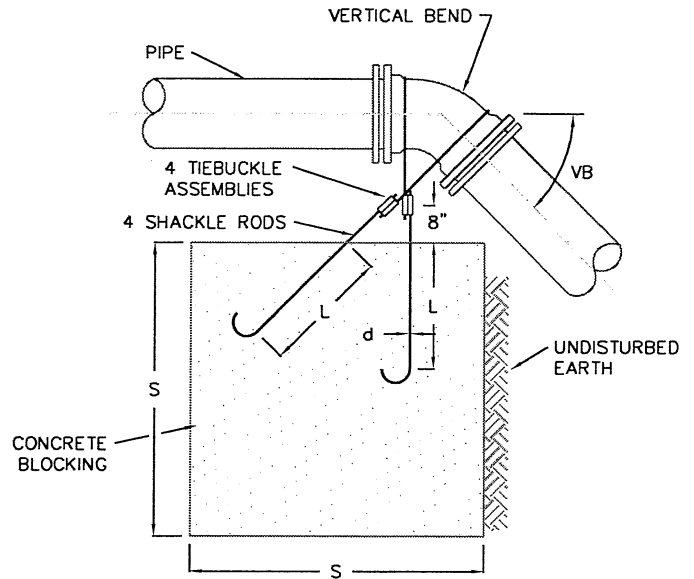
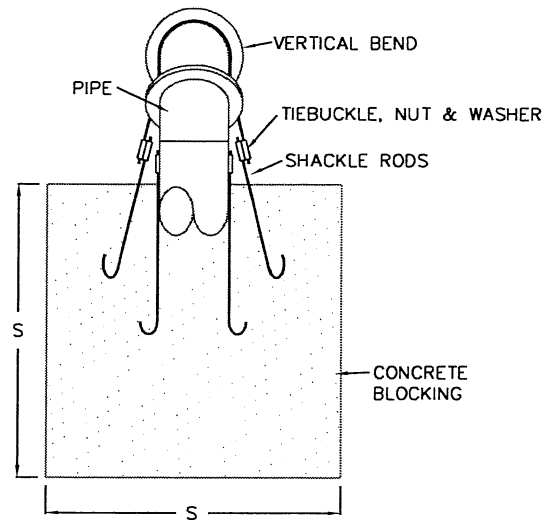


VERTICAL THRUST BLOCKING FOR 11 1/4°, 22 1/2°, AND 45° BENDS							NUMBER OF TIE ROD SETS (2 EMBEDDED RODS PER SET)
PIPE SIZE NOM. DIAMETER - INCHES	TEST PRESSURE PSI	VB VERTICAL BEND DEGREES	AMOUNT CONCRETE BLOCKING - CU FT	S LENGTH OF SIDE FEET	d SHAKLE ROD DIA. INCHES	L DEPTH OF ROD IN CONCRETE INCHES	
3"	300	11 1/4	3.4	1.5	5/8	12"	2
		22 1/2	5.4	1.75	5/8	12"	2
		45	11.4	2.25	5/8	12"	2
4"	300	11 1/4	5.4	1.75	5/8	12"	2
		22 1/2	11.4	2.25	5/8	12"	2
		45	20.8	2.75	5/8	12"	2
6"	300	11 1/4	11.4	2.25	5/8	12"	2
		22 1/2	27.0	3.0	5/8	12"	2
		45	42.9	3.5	5/8	12"	2
8"	300	11 1/4	20.8	2.75	5/8	12"	2
		22 1/2	42.9	3.5	5/8	12"	2
		45	76.8	4.25	5/8	12"	2
10"	300	11 1/4	34.3	3.25	5/8	12"	2
		22 1/2	64.0	4.0	5/8	12"	2
		45	125	5.0	3/4	24"	2
12"	300	11 1/4	42.9	3.5	5/8	12"	2
		22 1/2	91.1	4.5	5/8	12"	2
		45	166	5.5	5/8	12"	4
14"	250	11 1/4	52.7	3.75	5/8	12"	2
		22 1/2	107	4.75	3/4	24"	2
		45	190	5.75	3/4	24"	4
16"	225	11 1/4	64.0	4.0	5/8	12"	2
		22 1/2	125	5.0	5/8	12"	4
		45	216	6.0	5/8	12"	6
18"	200	11 1/4	64.0	4.0	3/4	24"	2
		22 1/2	145	5.25	3/4	24"	4
		45	244	6.25	3/4	24"	6



**BLOCKING FOR VERTICAL BENDS**

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



**VERTICAL THRUST BLOCKING**

**WATER STANDARD DETAIL**  
**SNOQUALMIE PASS**  
**UTILITY DISTRICT**

FILE	SCALE	DATE
SPUDTW13	NTS	7/22/04