



PIPE SIZE IN	SOIL TYPE	ALLOWABLE BEARING PRESSURE PSF	REQUIRED DIMENSIONS IN INCHES					
			TEES DEAD ENDS A	TEES CROSSSES B	90° BEND C	45° BEND C	22.5° BEND C	
4	SOFT CLAY	1000	18	13	25	14	7	
4	SAND	2000	9	6	13	7	4	
4	SAND, GRAVEL & CLAY	4000	5	3	6	3	2	
4	SHALE OR ROCK	10000	2	1	3	1	1	
6	SOFT CLAY	1000	41	29	57	31	16	
6	SAND	2000	20	14	29	16	8	
6	SAND, GRAVEL & CLAY	4000	10	7	14	8	4	
6	SHALE OR ROCK	10000	4	3	6	3	2	
8	SAND	2000	36	25	51	28	14	
8	SAND, GRAVEL & CLAY	4000	18	13	25	14	7	
8	SHALE OR ROCK	10000	7	5	10	3	3	
10	SAND	2000	56	40	80	43	22	
10	SAND, GRAVEL & CLAY	4000	28	20	40	22	11	
10	SHALE OR ROCK	10000	11	8	16	9	4	
12	SAND	2000	81	57	115	62	32	
12	SAND, GRAVEL & CLAY	4000	41	29	57	31	16	
12	SHALE OR ROCK	10000	16	11	23	12	6	
14	SAND, GRAVEL & CLAY	4000	55	39	78	42	22	
14	SHALE OR ROCK	10000	22	16	31	17	9	
16	SAND, GRAVEL & CLAY	4000	72	51	102	55	28	
16	SHALE OR ROCK	10000	29	20	41	22	11	
18	SAND, GRAVEL & CLAY	4000	91	64	129	70	36	
18	SHALE OR ROCK	10000	36	26	52	28	14	

THRUST BLOCK BEARING AREAS BASED ON STATIC PRESSURE OF 150 PSI

NOTES:

- SEE MNWD SPECIFICATION C-3 FOR CONCRETE REQUIREMENTS. PLACE CONCRETE AGAINST UNDISTURBED SOIL. ALL CONCRETE TO BE KEPT CLEAR OF VALVE AND FITTING ENDS FOR REPAIR REMOVAL. CONCRETE SHALL NOT EXTEND ONTO ADJOINING PIPE.
- FOR TRENCH SECTION REFER TO MNWD STD.1
- FOR USE WITH UNRESTRAINED PIPE.
- A MINIMUM OF 24 HOURS CURING TIME REQUIRED FOR CONCRETE THRUST BLOCKS BEFORE ANY WATER IS INTRODUCED INTO THE PIPELINE. A MINIMUM OF 3 DAYS CURING TIME IS REQUIRED PRIOR TO PRESSURE TESTING.
- WRAP EXPOSED REBAR WITH TAPE.

NORTH MARIN WATER DISTRICT
NOVATO, CALIFORNIA

CONCRETE THRUST BLOCKING

APPROVED	DATE	REV.	STD. NO.
	8/2/02	1	3

THIS STANDARD REPLACES MNWD STD-A-3 AND A-4