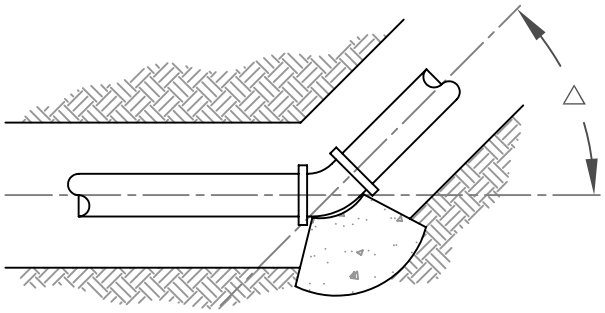
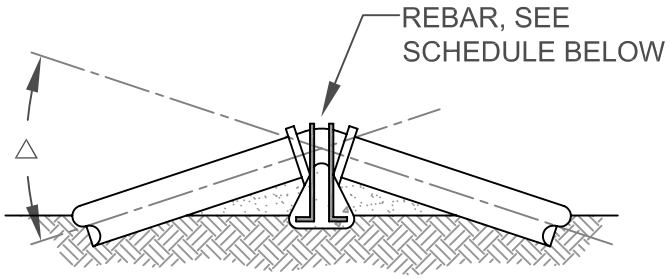


PLAN - HORIZONTAL THRUST BLOCK
NO SCALE



ELEV. - VERTICAL THRUST BLOCK
NO SCALE

PIPE DIA. (in.)	HORIZONTAL THRUST BLOCK BEARING AREA (S.F.)				VERTICAL THRUST BLOCK VOL. OF CONCRETE (C.Y.)			
	△ = 11-1/4°	△ = 22-1/2°	△ = 45°	△ = 90°	△ = 11-1/4°	△ = 22-1/2°	△ = 45°	△ = 90°
4 & 6	1.0	1.1	2.2	4.0	0.3	0.5	1.1	2.0
8	1.0	1.9	3.7	6.9	0.5	0.9	1.8	3.4
10	1.6	3.1	6.2	11.4	0.8	1.6	3.0	5.6
12	2.2	4.4	8.7	16.1	1.1	2.2	4.3	7.9
14	3.0	6.0	11.8	21.9	1.5	3.0	5.8	10.8
16	4.0	7.9	15.4	28.5	2.0	3.9	7.6	14.1
18	5.0	10.0	19.7	36.4	2.5	5.0	9.7	----
20	6.3	12.5	24.5	45.2	3.1	6.2	12.1	----
24	9.1	18.0	35.3	65.3	4.5	8.9	16.9	----
30	13.3	26.3	51.5	95.4	6.6	12.9	24.1	----

NOTES:

1. TEST PRESSURE = 150 PSI, SOIL BEARING PRESSURE = 2000 LBS/S.F.. USING HIGHER PRESSURE OR LOWER SOIL BEARING PRESSURE SHOULD BE ADJUSTED ACCORDINGLY, SUBJECT TO APPROVAL BY THE AGENCY ENGINEER.
2. THRUST BLOCKS TO BE CONSTRUCTED OF CLASS "B" CONCRETE, SUBJECT TO APPROVAL BY THE AGENCY ENGINEER.
3. THRUST BLOCKS TO BE PLACED AGAINST UNDISTURBED SOIL.
4. JOINTS, FACE OF PLUGS, NUTS AND BOLTS TO BE KEPT CLEAR OF CONCRETE AND MUST BE ABLE TO BE OPERATED WITHOUT DISTURBING THRUST BLOCK.
5. EXPOSED REBAR TO BE SHAPED WITH 90° BEND AT END, COATED WITH TWO COATS OF KOPPERS 505, TNEMEC 46-450, AMERON OR EQUAL 15 MILS EACH COAT.

N.C.S.D. UTILITIES	NORTHSTAR C.S.D.	DATE: APR. 2003	DIR.: WATER
	THRUST BLOCK DETAILS	DRAWN: JW	DWG. FILE: WO-21
		APPROVED: MS	FIGURE: 21
	908 NORTHSTAR DR. TRUCKEE, CA	SCALE: NONE	