



**NOTES:**

1. ALL CONCRETE SHALL HAVE A MIN. COMPRESSIVE STRENGTH OF 2500 P.S.I.
2. ALL FITTINGS AND JOINTS SHALL BE COVERED WITH POLYETHYLENE FILM BEFORE PLACING CONCRETE.
3. PAINT ALL EXPOSED STEEL WITH TWO COATS OF VALDURA PAINT OR APPROVED EQUAL.
4. FOR THE REQUIRED BEARING SURFACE SEE STANDARD DETAIL.

BEARING SURFACE REQUIRED - SQ. FT. HORIZONTAL THRUST BLOCKING AND VERTICAL THRUST DOWNWARD 100 P.S.I. WORKING PRESSURE																
PIPE SIZE	6" & 8"				10" & 12"				16" 18" 20"				24"			
	DEGREE OF BEND OR DEFLECTION															
TYPE OF BEARING MATERIAL AND ALLOWABLE LOAD	22.5°	45°	90°	D.E.	22.5°	45°	90°	D.E.	22.5°	45°	90°	D.E.	22.5°	45°	90°	D.E.
SAND 0.75 TON/SQ. FT.	3.4	6.0	11.0	6.4	6.7	12.8	23.4	14.2	14.8	28.8	52.9	34.4	26.1	48.3	89.7	64.0
SOFT CLAY 1 TON/SQ. FT.	2.6	4.6	8.2	4.8	5.0	9.6	17.5	10.7	11.2	21.7	39.7	28.2	19.6	36.3	67.3	48.0
SAND & GRAVEL 2 TON/SQ. FT.	1.3	2.3	4.1	2.4	2.5	4.8	8.8	5.3	5.6	10.8	20.0	14.1	9.8	13.1	33.6	24.0
CLAY 4 TON/SQ. FT.	1.0	1.2	2.1	1.3	1.3	2.4	4.4	2.7	2.8	5.4	10.0	7.2	4.9	9.1	16.8	12.0
SOFT ROCK 5 TON/SQ. FT.	1.0	1.0	1.6	1.0	1.0	1.9	3.5	2.2	1.6	4.4	8.0	5.7	3.9	7.3	13.5	9.6
ROCK 15 TON/SQ. FT.	-	-	1.0	0.4	-	1.0	1.2	0.8	1.0	1.4	2.6	1.9	1.3	2.4	4.5	3.2

**TYPICAL SECTION**  
**VERTICAL THRUST DOWNWARD**  
NOT TO SCALE

REVISED 5/13/2025



**PENNONI ASSOCIATES INC.**  
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**DOWNWARD THRUST BLOCK**  
PREPARED FOR:  
**PERKASIE REGIONAL AUTHORITY**

DESIGNED BY:	JAR
CHECKED BY:	SRT
DATE:	4/08/96
DRAWING NO.	PRA-W06