



Pipe Size in Inches	HORIZONTAL THRUST BLOCKS				VERTICAL THRUST BLOCKS		
	Tees, Wyes & Dead Ends	90° Bend	45° Bend	11 1/4° 22 1/2° Bend	45° Vertical Bend	11-1/4° 22-1/2° Vert. Bend	Restrained Valve
4 & Smaller	1.41	2.00	1.08	0.56	0.56	0.29	0.72
6	3.18	4.50	2.43	1.25	1.25	0.63	1.62
8	5.66	8.00	4.34	2.21	2.21	1.13	2.90
10	8.84	12.50	6.77	3.45	3.45	1.76	4.52
12	12.72	18.00	9.74	4.97	4.98	2.54	6.50
14	17.33	24.50	13.26	6.75	*	*	8.85
16	22.62	32.00	17.31	8.82	*	*	11.55
18	28.64	40.50	21.92	11.18	*	*	14.63
20	35.34	50.00	27.05	13.79	*	*	18.06
24	50.90	72.00	38.96	19.86	*	*	26.00

NOTES:

1. CONCRETE THRUST BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH.
2. KEEP CONCRETE CLEAR OF JOINT AND ACCESSORIES.
3. ABOVE BEARING AREA & VOLUMES ARE CALCULATED AT A SOIL BEARING CAPACITY OF 2000 PSF & A TEST PRESSURE OF 225 PSI.
4. 6 MIL. PLASTIC TO BE PLACED BETWEEN THRUST BLOCK AND FITTINGS.
5. VALVES SHALL HAVE CONCRETE RESTRAINT BLOCKS AS SPECIFIED ABOVE UNLESS THE VALVE IS FLANGED TO A TEE, CROSS OR SIMILAR FITTING OR ANOTHER METHOD OF RESTRAINT IS PROVIDED.

*NO VERTICAL BENDS WITHOUT SPECIFIC APPROVAL BY THE ENGINEER.



**THRUST
BLOCKING
DETAILS**

PUBLIC WORKS ENGINEERING

APPR. BY: PKR

DATE: 03.2018

DRAWN BY: EY

DWG: W16-A

CAD FILE: 2012_W16_03_2018