



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 (see note 5)
4 & Smaller	0.94	1.33	0.72	0.37	0.37	0.19	0.48
6	2.12	3.00	1.62	0.83	0.83	0.42	1.08
8	3.77	5.33	2.89	1.47	1.47	0.75	1.93
10	5.89	8.33	4.51	2.30	2.30	1.17	3.01
12	8.48	12.00	6.49	3.31	3.32	1.69	4.33
14	11.55	16.33	8.84	4.50	4.51	2.30	5.90
16	15.08	21.33	11.54	5.88	5.90	3.01	7.70
18	19.09	26.99	14.61	7.45	7.46	3.80	9.75
20	23.56	33.32	18.03	9.19	9.21	4.70	12.04
24	33.93	47.98	25.97	13.24	13.27	6.76	17.33

NOTES:

1. Concrete thrust blocking to be poured against undisturbed earth.
2. Keep concrete clear of joint and accessories.
3. Above bearing areas and volumes are calculated at a soil bearing capacity of 2000 PSF and a test pressure of 150 PSI.
4. Thrust blocks for vertical upward bends shall be the same as for horizontal bends.
5. When called for on the construction drawings or contract special provisions, 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 acceptable to the engineer is provided.

THRUST BLOCK DETAILS



**CITY OF
WEST RICHLAND**

DRAWN BY: AFW
CHECKED BY: HLM

DATE: 8/06
REVISION: 8/09

4-6

DRAWING NO.