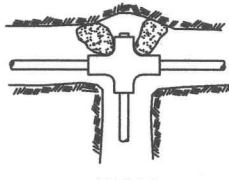
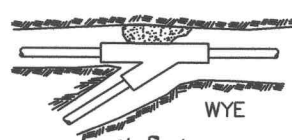


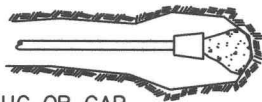
TEE



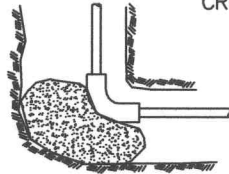
CROSS



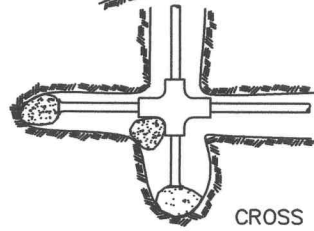
WYE



PLUG OR CAP

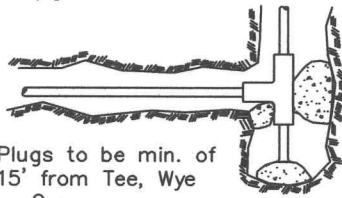


BEND



CROSS

1/4" plywood over face of bolts.

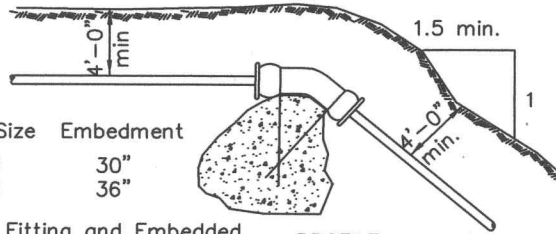


Plugs to be min. of 15' from Tee, Wye or Cross.

TEE

Fitting Size	Rod Size	Embedment
12" & less	#8	30"
14"-24"	#8	36"

Galv. Rods Over Fitting and Embedded in Concrete



PROFILE

Fitting Size	BEARING AREA OF THRUST BLOCKS IN SQ. FT.				
	Tee, Wye, Plug or Cap	90° Bend Plugged Cross; Tee	45° Bend	22 1/2° Bend	11 1/4° Bend
4	1.0	1.4	1.0	--	--
6	2.1	3.0	1.6	1.0	--
8	3.8	5.3	2.9	1.5	1.0
10	5.9	8.4	4.6	2.4	1.2
12	8.5	12.0	6.6	3.4	1.7
14	11.5	16.3	8.9	4.6	2.3
16	15.0	21.3	11.6	6.0	3.0
18	19.0	27.0	14.6	7.6	3.8
20	23.5	33.3	18.1	9.4	4.7
24	34.0	48.0	26.2	13.6	6.8

Fitting Size	VOLUME OF THRUST BLOCK IN CU.YD.			
	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
4	--	--	--	--
6	1.3	--	--	--
8	2.3	1.1	--	--
10	3.7	1.8	--	--
12	5.5	2.8	1.2	--
14	7.6	3.9	1.7	--
16	9.9	5.1	2.3	0.9
18	--	6.3	3.2	1.4
20	--	7.7	4.0	1.8
24	--	11.1	5.7	2.6

NOTE:

Above volumes based on test pressure of 150 p.s.i. & the weight of concrete = 4050 lbs./cu.yd. To compare volumes for different test pressures use the following equation:

$$\text{VOLUME} = (150 \text{ p.s.i. test pressure}) \times (\text{table value}).$$

Thrust blocks for vertical up-bends shall be the same as for horizontal bends.

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NOTES:

- Bearing areas based on test pressure of 150 p.s.i. & soil bearing stress of 2,000 lbs. per sq.ft. To areas for different test pressure & soil bearing stresses, following equation: BEARING AREA = (150 p.s.i. test pressure)x(2000 lbs soil bearing stress)x(table value).
- Concrete thrust blocking to be placed against undisturbed earth.
- Keep concrete clear of joint and accessories.
- The required thrust bearing areas for special connections are shown encircled on the plans; e.g. 15 indicates 15 sq. ft. bearing area required.
- If not shown on plans, required bearing areas at fittings shall be as indicated above, adjusted if necessary, to conform to the test pressure(s) & allowable soil bearing stress(es) stated in the Special Specifications.
- Bearing areas & special blocking details shown on plans take precedence over bearing areas & blocking details shown on this standard detail.
- Concrete Compressive Strength shall be 2,500 p.s.i. minimum.
- Concrete will be allowed 48 hrs. to set if high early yield concrete is used, otherwise, 7 days curing will be required.

**CITY OF LEWISTON, IDAHO  
PUBLIC WORKS DEPARTMENT**

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**THRUST BLOCKING  
DETAIL**

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APPROVED FOR PUBLICATION City Engineer	DWG. NO. 4-4 11-9-09 Date
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