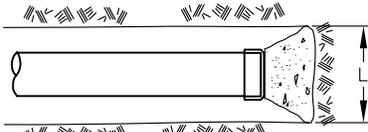
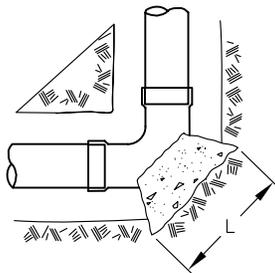


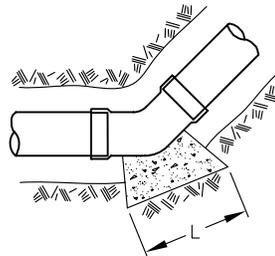
TEE



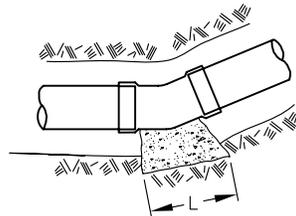
DEAD END



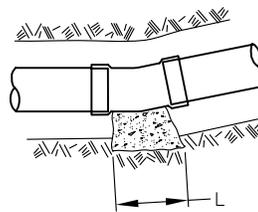
90° BEND



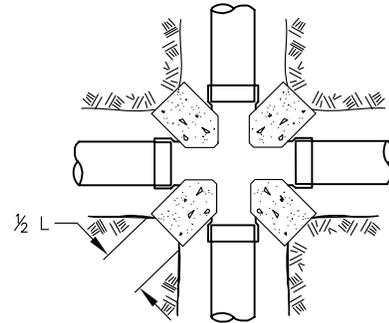
45° BEND



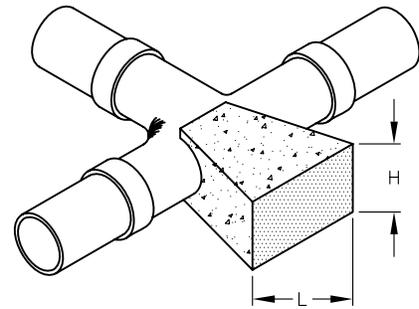
22H° BEND



11G° BEND



CROSS



TYPICAL THRUST BLOCK

**GENERAL NOTES:**

1. Force main pressure test shall be performed in accord with concrete curing requirements. Concrete shall be 560-C-3250.
2. Thrust blocks shall bear against undisturbed soil, backfill compacted to 100% relative compaction, or class 100 E 100 slurry.
3. Bearing areas L x H are computed for test pressures of 225 PSI in mains laid in a cohesionless soil (c=0) with internal angle of friction of 37°, a unit weight of 110 PCF, and at least 36" of cover.
4. Bearing areas L x H shall be approved by the engineer where mains: (A) bear against weaker soil than described above, (B) have less than 36" of cover, (C) will be tested at more than 225 PSI or (D) are not represented by a fitting or size shown hereon.
5. L is approximately equal to H for smaller thrust blocks. L is greater than H for larger thrust blocks. H shall not exceed trench height. See STD-106-L for standard trench dimensions.

**THRUST BLOCK BEARING AREA L X H IN SQUARE FEET**

<i>Fitting &amp; Size</i>	<i>Dead End</i>	<i>Tee or Cross</i>	<i>90° Bend</i>	<i>45° Bend</i>	<i>22H° Bend</i>	<i>11G° Bend</i>
4"	1.7	2.4	2.4	1.3	0.7	0.3
6"	3.7	5.3	5.3	2.9	1.5	0.7
8"	6.7	9.4	9.4	5.1	2.6	1.3
12"	15.0	21.2	21.2	11.5	5.8	2.9
16"	26.6	37.6	37.6	20.4	10.4	5.2
18"	33.7	47.6	47.6	25.8	13.1	6.6
24"	59.9	84.6	84.6	45.8	23.3	11.7
30"	93.6	132.2	132.2	71.5	36.5	18.3

CITY OF NEWPORT BEACH  
PUBLIC WORKS DEPARTMENT

**THRUST BLOCKS**

APPROVED:

RCE NO. 36106

PUBLIC WORKS DIRECTOR

Drawn: M. Elias

Scale: N.T.S.

Date: Jan. 2004

F:\USERS\PBW\Shared\CAD STD Details\2003 - Std\STD Water

DRAWING NO.

**STD-510-L-A**