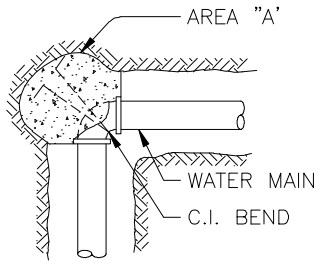
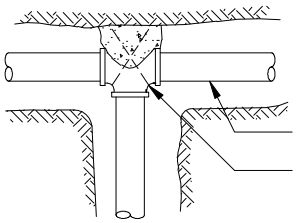
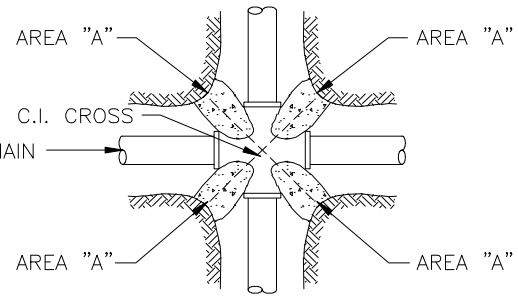


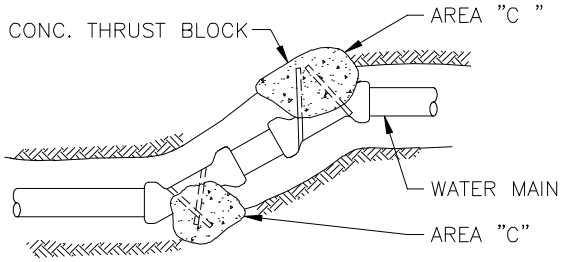
90° BEND



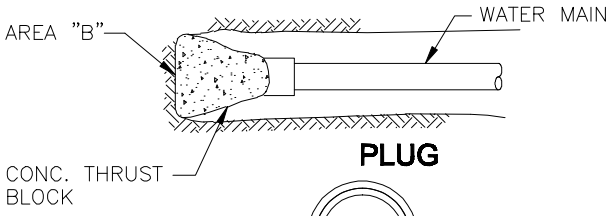
TEE



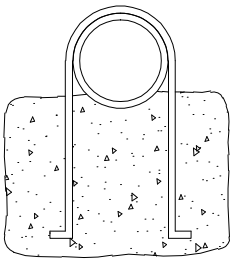
CROSS



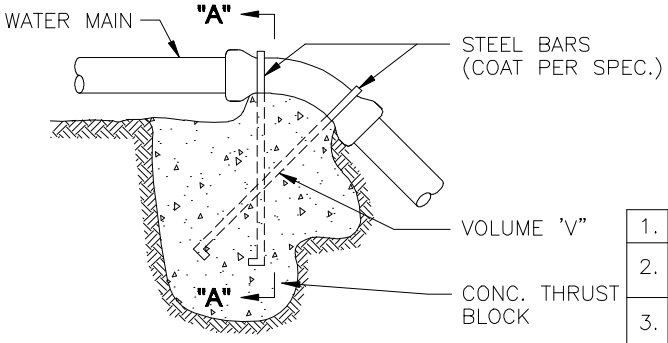
45° BEND



PLUG



SECTION "A-A"



45° VERTICAL BEND

NOTES:

1.	TYPE OF SOIL TO BE DETERMINED BY THE ENGR.
2.	ALL CONCRETE FOR THRUST BLOCKS SHALL BE CLASS B PER SECTION 4
3.	CONCRETE TO BE KEPT CLEAR OF ALL A.C. PIPE, NUTS, BOLTS & ENDS OF FITTINGS
4.	ALL BEARING AREAS TO BE AGAINST UNDISTURBED SOIL

SIZE	MINIMUM BEARING AREA (SQ.FT.)									45° VERTICAL BENDS	
TOP OF SOIL	SOFT CLAY 1,000#/SF.			MEDIUM CLAY & SAND 1900#/SF.			SAND & GRAVEL 2,000#/SF.			CONCRETE VOLUME "V" (CU.VDS)	STEEL BAR SIZE
AREA	A	B	C	A	B	C	A	B	C		
6" MAIN	9	7	5	6	4	4	5	3	3	1.2	#3
8" MAIN	16	11	9	11	8	6	8	6	4	2.2	#4
10" MAIN	25	18	14	17	12	9	13	9	7	3.4	#5
12" MAIN	36	26	20	24	17	13	18	13	10	4.8	#5
16" MAIN	64	46	36	43	30	23	32	23	18	8.5	#6
18" MAIN	81	58	46	55	36	30	40	29	23	10.8	#7

NOTE:
BEARING AREAS ARE BASED ON A TEST PRESSURE OF 225 P.S.I. THRUST BLOCKS FOR FITTINGS THAT ARE TO BE TESTED AT HIGHER PRESSURE SHALL BE INCREASED ACCORDINGLY AS APPROVED BY THE ENGINEER.

NOTES:

A	LARGER STEEL MAINS USE WELDED STEEL JOINTS AS SHOWN ON THE PLANS
B	ALL BACKFILL SHALL CONSIST OF NATIVE MATERIALS (95% REL. COMPACTION) OR C.A.B. PER STD. DWG. No. S-25 AND PER SECTION 4.8

PICO WATER DISTRICT

TYPICAL THRUST BLOCKS

APP. mjgrajeda
MARK J. GRAJEDA
GENERAL MANAGER

STANDARD DRAWING NUMBER
W-17

DATE: SEPT 2008