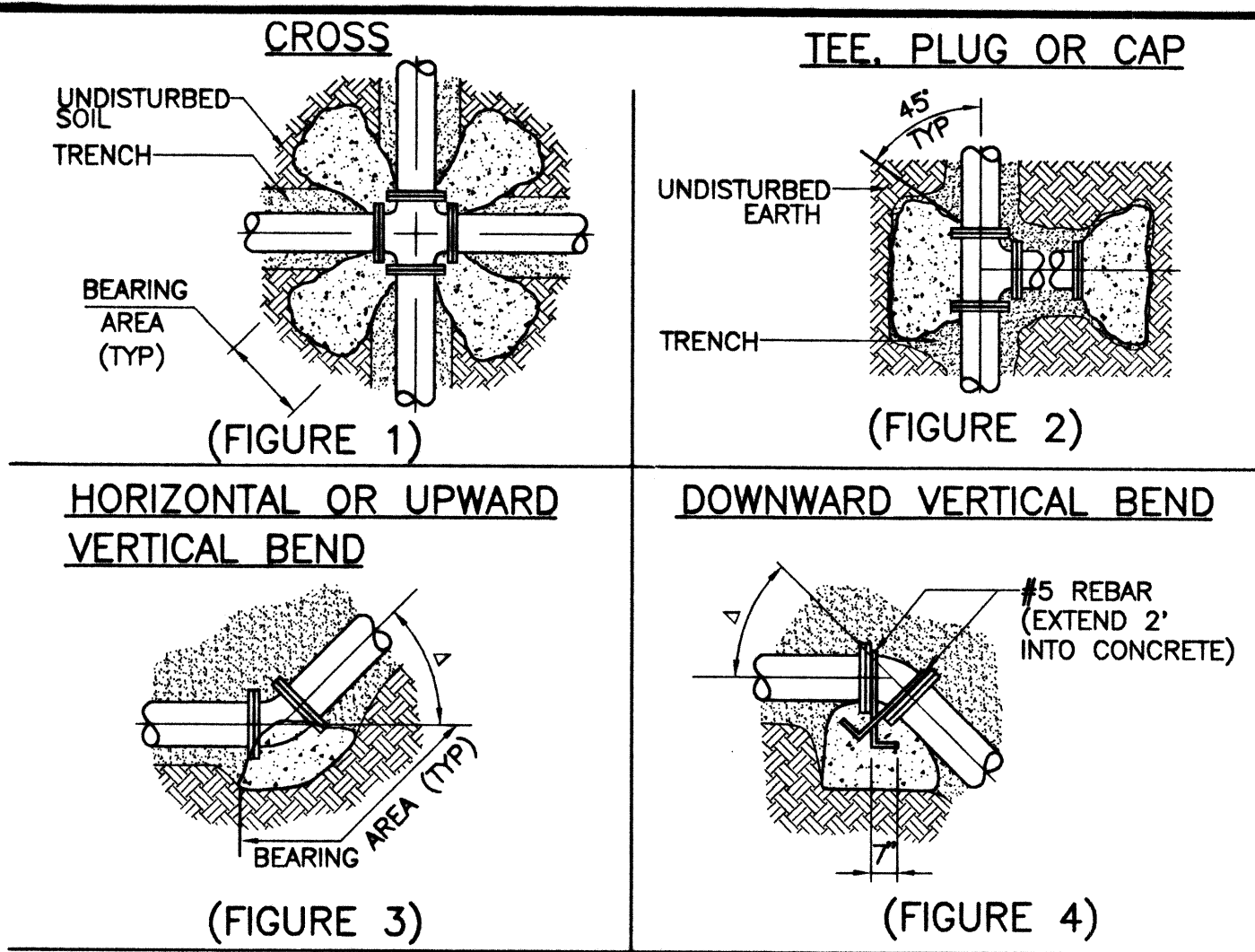




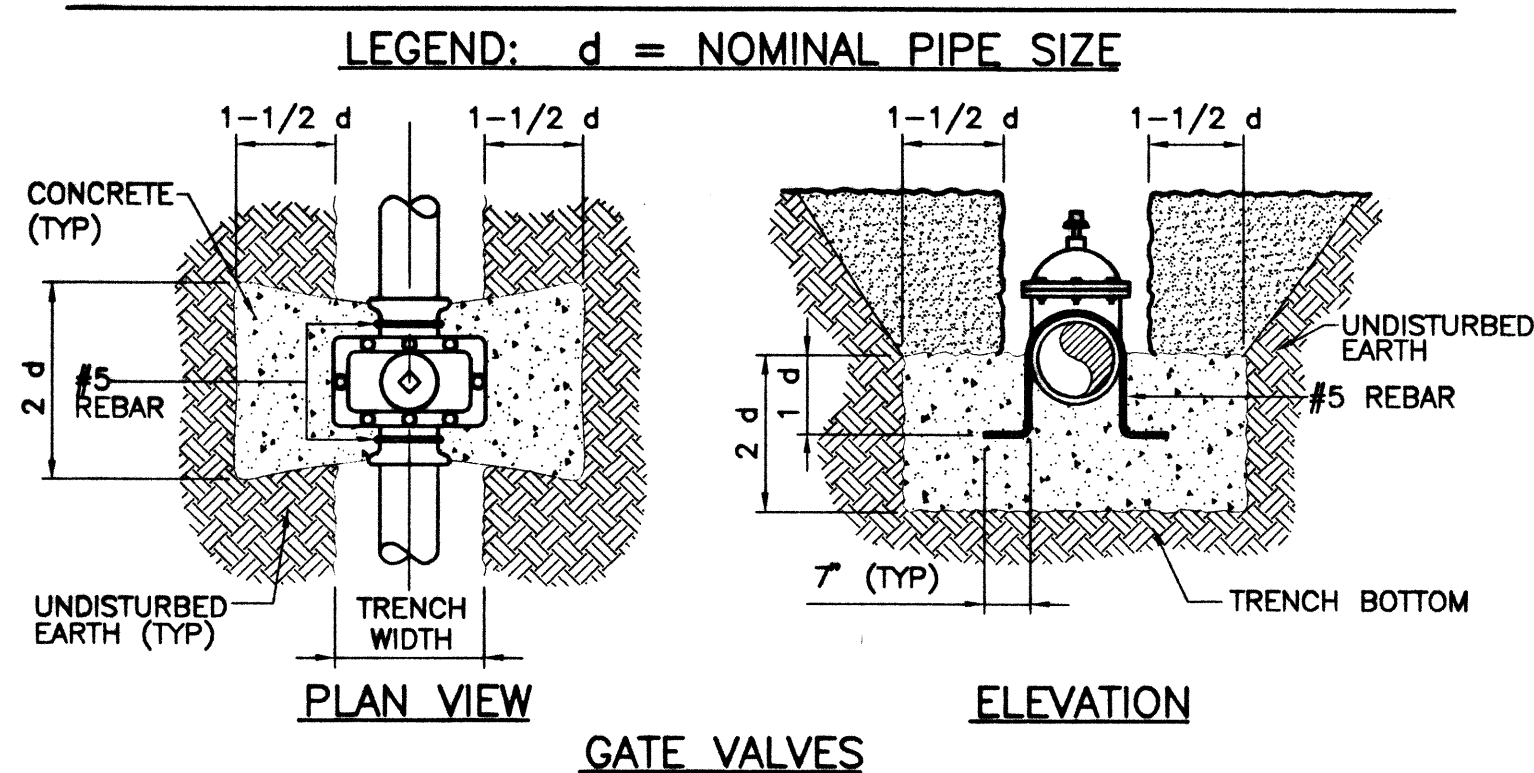
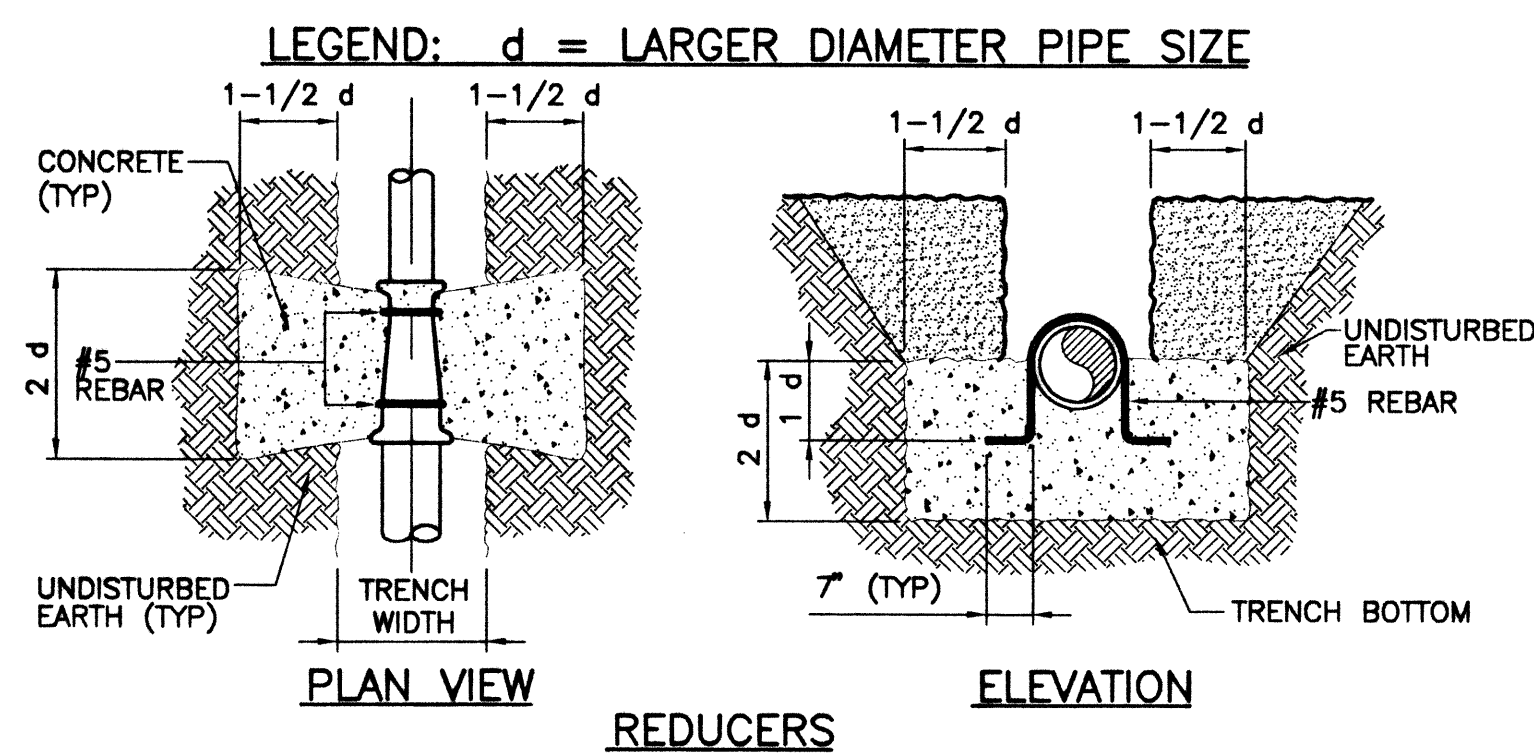
GENERAL NOTES

COAT AND WRAP ALL METAL SURFACES IN ACCORDANCE WITH SECTION 09965 OF THE LVWD SPECS. PROTECTIVE COATINGS. ALL CONCRETE SHALL BE 3000 PSI MINIMUM, 28 DAYS COMPRESSIVE STRENGTH. CONCRETE IS TO BE PLACED AGAINST UNDISTURBED EARTH. TABLE BELOW DENOTES MINIMUM BEARING AREA OR VOLUME OF THRUST BLOCK. SPECIAL DESIGN CALCULATIONS ARE TO BE SUBMITTED TO LVWD FOR APPROVAL IF ALLOWABLE SOIL BEARING CAPACITY IS LESS THAN 3000 PSF. ALL VERTICAL SURFACES NOT BEARING AGAINST UNDISTURBED EARTH SHALL BE FORMED.

PIPE ID	BEARING AREA IN SQ FT						CONC/CU YDS		
	FIGURE 1	FIGURE 2	FIGURE 3, Δ	FIGURE 3, Δ	FIGURE 3, Δ	FIGURE 3, Δ	FIGURE 4, Δ	FIGURE 4, Δ	FIGURE 4, Δ
4"	1	2	90"	45"	22 1/2"	11 1/4"	45"	22 1/2"	11 1/4"
6"	2	2	2	2	1	1	1.0	0.5	0.5
8"	2	3	4	2	1	1	1.5	1.0	0.5
10"	3	5	7	4	2	1	3.0	1.5	1.0
12"	4	8	11	6	3	2	4.0	2.5	1.5
16"	6	11	15	8	4	2	6.0	3.0	1.5
18"	10	20	28	15	8	4	10.5	6.0	3.0
20"	13	25	35	19	10	5	13.5	7.5	3.5
24"	16	31	44	24	12	6	16.0	9.0	4.5
24"	22	44	63	34	17	9	23.5	12.5	6.5

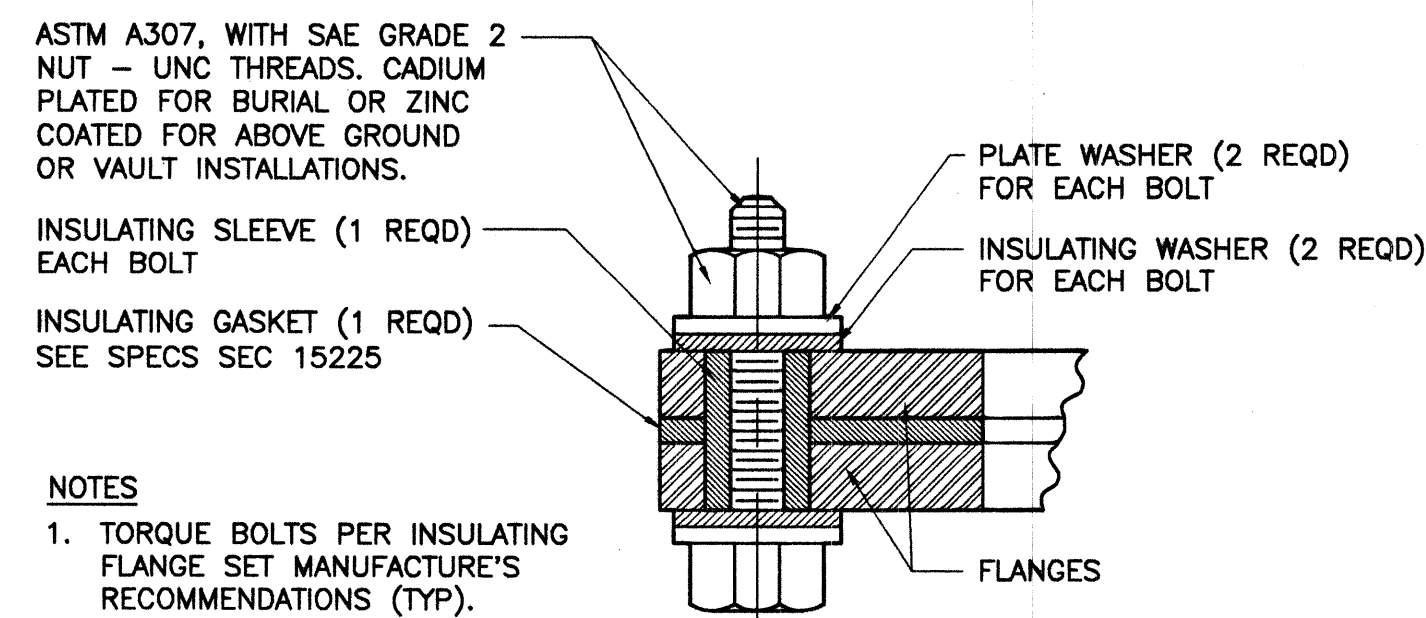
NOTE: USE OF THRUST BLOCKS FOR PIPE DIAMETERS GREATER THAN 12" REQUIRES PRIOR DISTRICT APPROVAL AND WILL BE EVALUATED ON A CASE BY CASE BASIS.

THRUST BLOCK INSTALLATION 1

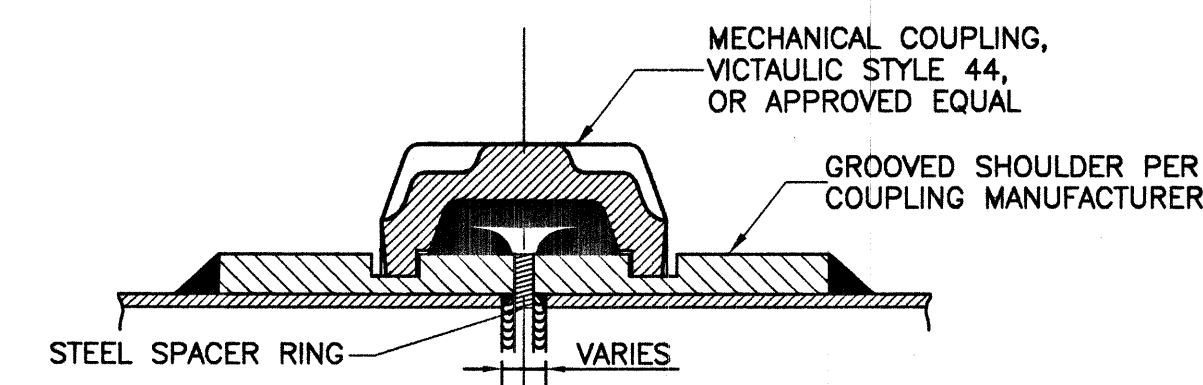


- NOTES
- ALL CONCRETE SHALL BE 3000 PSI MINIMUM 28 DAYS COMPRESSIVE STRENGTH
 - ALL VALVES AND EXPOSED REBAR TO BE COATED AND WRAPPED IN ACCORDANCE WITH SECTION 09965 OF THE LVWD SPECS, PROTECTIVE COATINGS.

ANCHOR BLOCK DETAILS FOR IN-LINE REDUCERS AND GATE VALVES 2

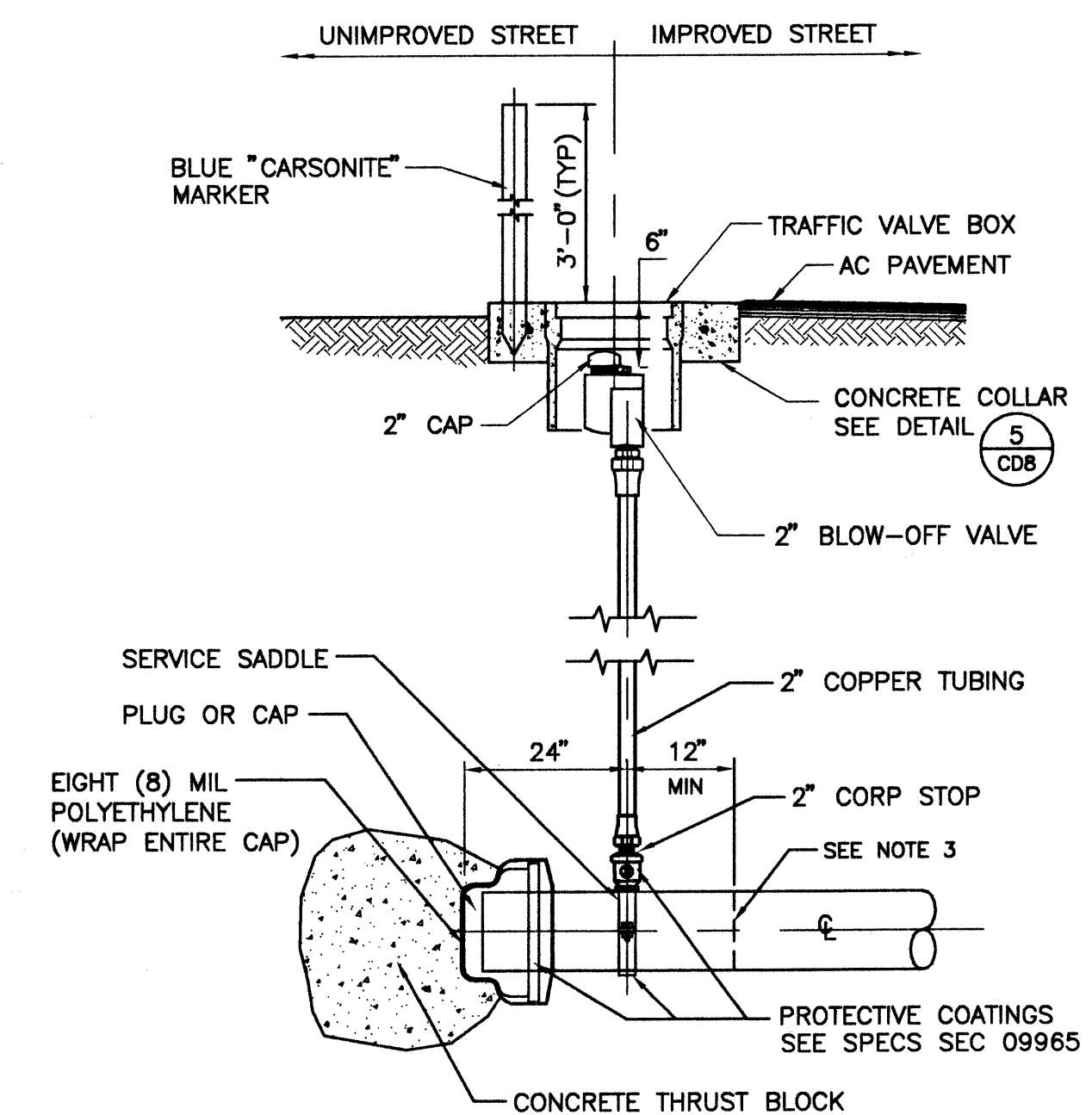


INSULATING FLANGE SET DETAIL 3 CD3 - CD12



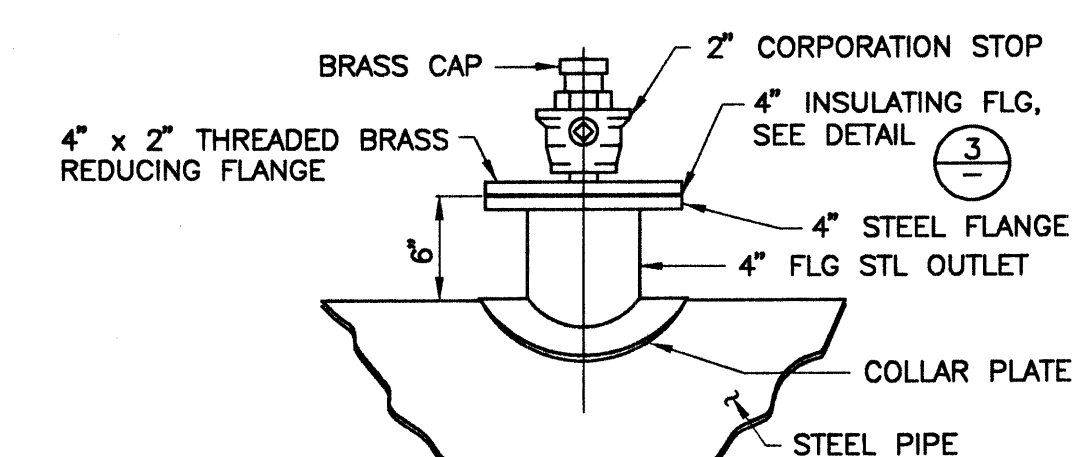
NOTE: THICKNESS OF SPACER RING TO BE EQUAL TO MAXIMUM ALLOWABLE PIPE AND SEPARATION PER COUPLING MANUFACTURER.

MECHANICAL COUPLING WITH SPACER 4



- NOTES
- ALL COPPER TUBING SHALL BE WRAPPED WITH TWO LAYERS OF SIX (6) MIL POLYETHYLENE.
 - ALL COPPER TUBING SHALL BE BACKFILLED ALL AROUND WITH 4" MINIMUM OF SAND.
 - CUT AND REMOVE EXISTING PIPE 12" MIN BEYOND EXISTING BLOW-OFF SERVICE SADDLE PRIOR TO CONNECTING TO EXISTING PIPELINES.

MANUAL AIR RELEASE ASSEMBLY 8 CD9 CD2



CORP STOP DETAIL 5 CD9 CD3

LAS VEGAS VALLEY WATER DISTRICT

CONSULTING ENGINEERS

PLANNERS

LAND SURVEYORS

vtm nevada

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PHONE (702) 873-7550 FAX (702) 382-2597

VERIFY SCALE

1/2" = 0' 1/2"

BAR REPRESENTS ONE AND ONE-HALF INCHES ON ORIGINAL

ELKHORN 2975 ZONE

RESERVOIR INLET/OUTLET PIPELINE

THRUST BLOCK DETAIL, ANCHOR BLOCK DETAIL AND MISCELLANEOUS DETAILS

SCALE: N/A

H:\5869-W\1\1123-CD09.DWG

DRAWN BY: 01/01/04

CHECKED BY: CHRISTOPHER R. GRUBBS, P.E. 01/01/04

RECOMMENDED BY: L. STEVEN ANDERSON

ACCEPTED BY: PETER J. JAUCH

DATE: DATE

PROFESSIONAL ENGINEER

CHRISTOPHER R. GRUBBS, P.E.

EXPIRES 06-30-05

CONTRACT NUMBER

C1123

DRAWING NUMBER CD9

SHEET 23 OF 26

565-414