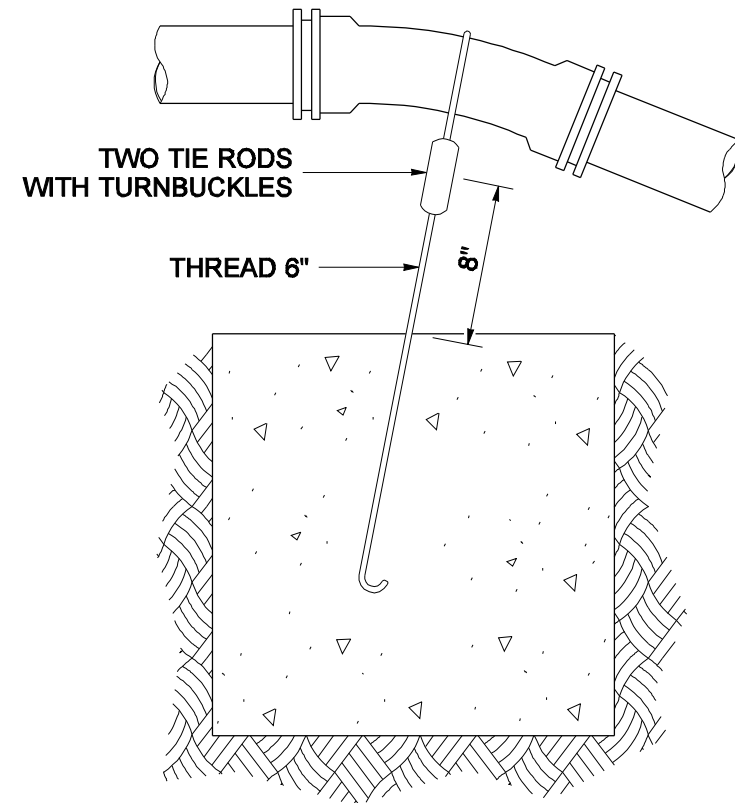
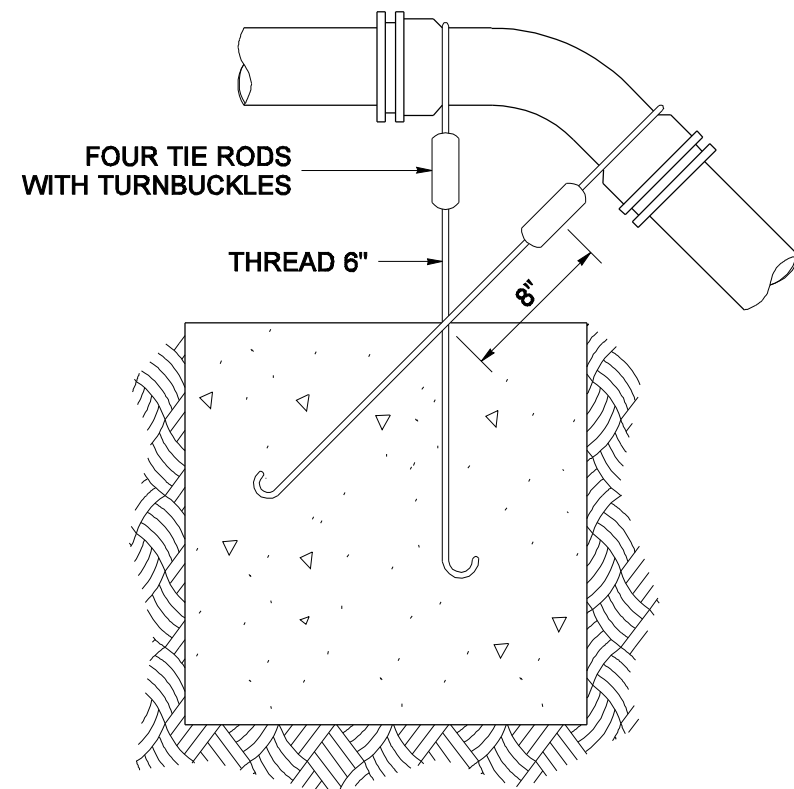


NOTE

Steel tie rods to be heavily coated with asphalt after installation.



BLOCKING FOR 11.25° OR 22.5° VERTICAL BENDS



BLOCKING FOR 45° VERTICAL BENDS

DIMENSION TABLE						
PIPE DIAM.	TEST PRESSURE (PSI)	BEND ANGLE	CONCRETE VOLUME (Ft ³)	CUBE SIZE (Ft)	TIE ROD DIAM.	TIE ROD EMBEDMENT
4"	250	11.25°	6	1.8	5/8"	17"
		22.5°	12	2.3		
		45°	22	2.8		
6"	250	11.25°	14	2.4	5/8"	17"
		22.5°	27	3.0		
		45°	50	3.7		
8"	250	11.25°	25	2.9	5/8"	17"
		22.5°	48	3.6		
		45°	89	4.5		
10"	250	11.25°	38	3.4	5/8"	17"
		22.5°	75	4.2		
		45°	139	5.2		
12"	250	11.25°	55	3.8	5/8"	17"
		22.5°	108	4.8		
		45°	200	5.8	7/8"	24"
14"	250	11.25°	75	4.2	5/8"	17"
		22.5°	147	5.3	3/4"	20"
		45°	272	6.5	1"	27"
16"	250	11.25°	98	4.6	5/8"	17"
		22.5°	192	5.8	7/8"	24"
		45°	355	7.1	1 1/8"	30"



EXPIRES JULY 1, 2007

NOTE: THIS PLAN IS NOT A LEGAL ENGINEERING DOCUMENT BUT AN ELECTRONIC DUPLICATE. THE ORIGINAL, SIGNED BY THE ENGINEER AND APPROVED FOR PUBLICATION, IS KEPT ON FILE AT THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION. A COPY MAY BE OBTAINED UPON REQUEST.

**CONCRETE THRUST BLOCK FOR CONVEX VERTICAL BENDS
STANDARD PLAN B-90.50-00**

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Harold J. Peterfeso 06-08-06
STATE DESIGN ENGINEER DATE



**SUPPLEMENTAL TO STANDARD PLAN
A-90.50-00**

Modify the Standard Plan as follows:

Notes:

1. Forms for thrust blocking must be approved by the City prior to pouring the concrete.

2. Obtain approval from the Engineer for precast thrust blocking prior to use. Submit catalog sheets and manufacturer's specifications for approval. Allow a minimum of three (3) Business Days for review of submittals.