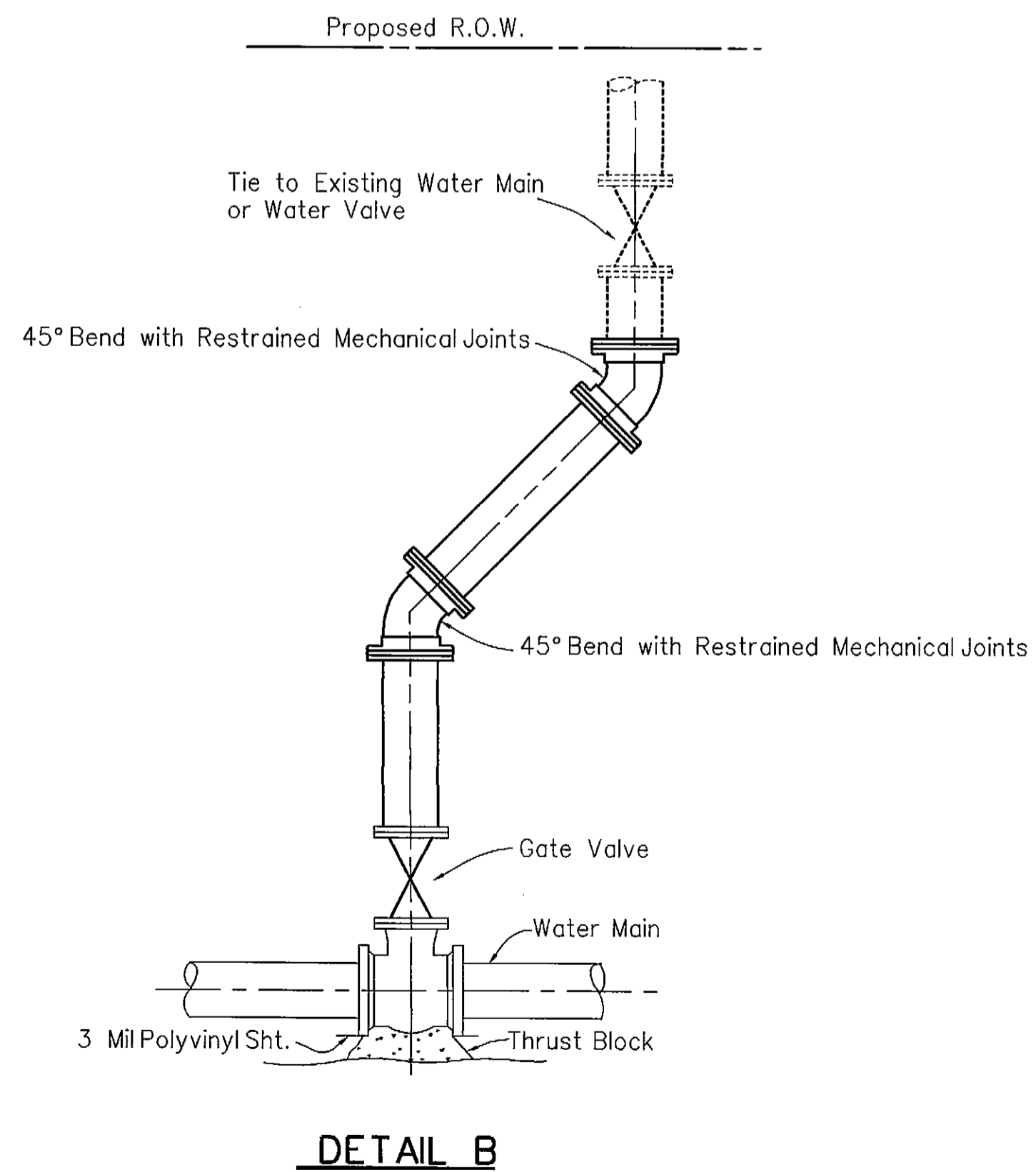


DETAIL A



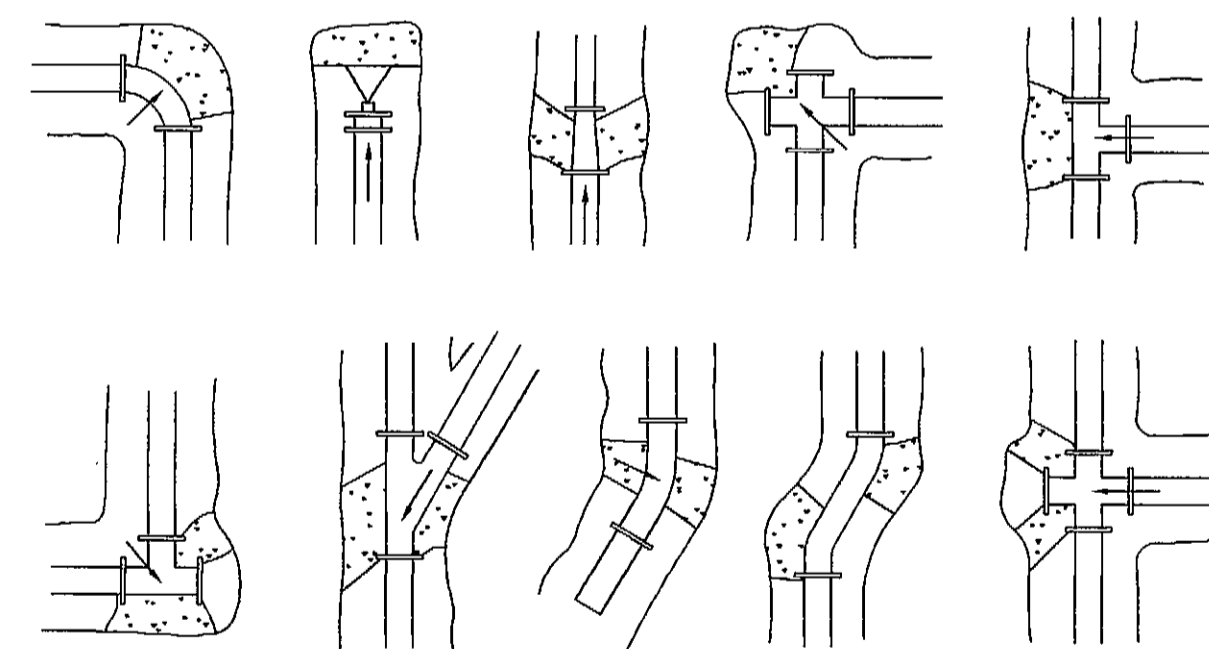
DETAIL B

HORIZONTAL BLOCKING TABLE

AREA REQUIRED (IN SQUARE FEET) BEARING AGAINST UNDISTURBED TRENCH WALL

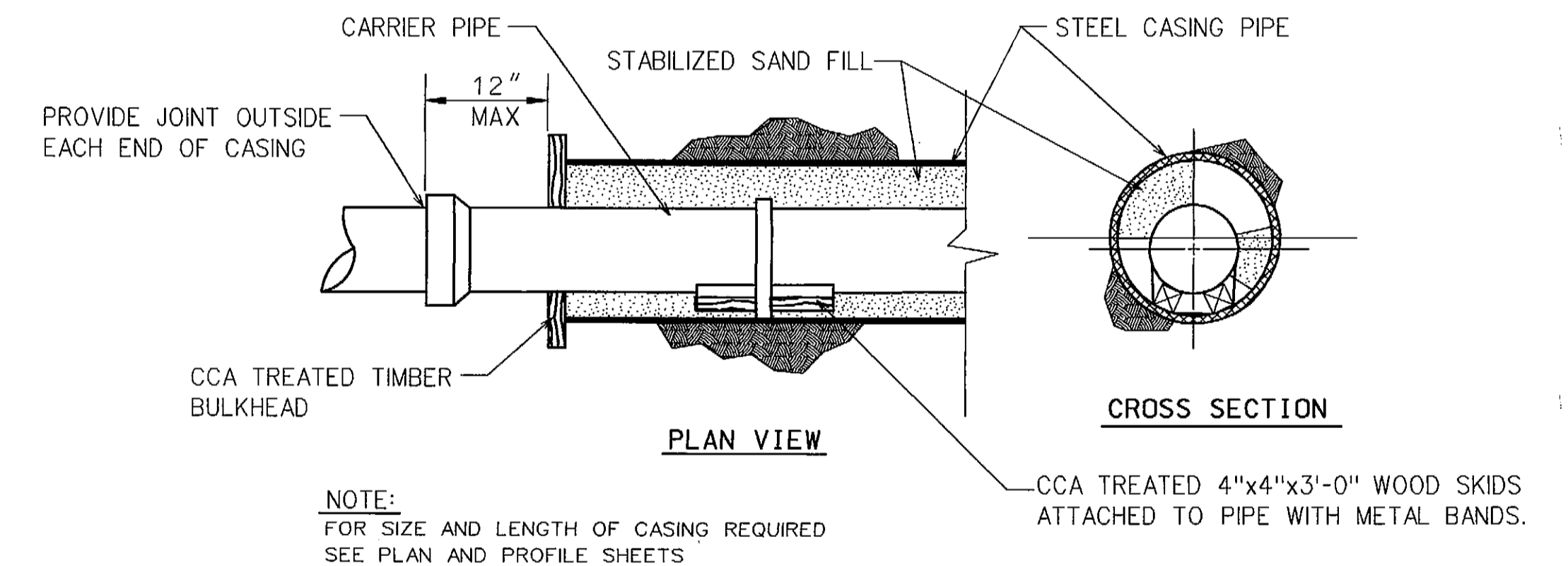
PIPE SIZE (IN.)	THRUST (POUNDS) DEAD END AND TEE	BLOCKING (SQUARE FEET)					
		DEAD END AND TEE	90° BEND	45° BEND	22-1/2° BEND	11-1/4° BEND	5° DEFLECT
4	2,450	1.23	1.73	0.94	0.50	0.50	0.50
6	5,513	2.76	3.90	2.11	1.08	0.54	0.50
8	9,802	4.90	6.93	3.75	1.91	0.96	0.50
10	15,315	7.66	10.83	5.86	2.99	1.50	0.67
12	22,054	11.03	15.59	8.43	4.30	2.16	0.96
14	30,018	15.01	21.23	11.49	5.86	2.94	1.31
16	39,207	19.60	27.73	15.01	7.65	3.84	1.71

BASED ON 2,000 P.S.F. SOIL BEARING CAPACITY AND 195 P.S.I. LINE PRESSURE (150 P.S.I. WORKING PRESSURE PLUS 30% FOR WATER HAMMER.)



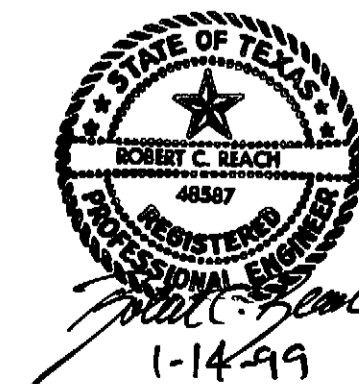
TYPICAL THRUST BLOCKING DETAILS

- NOTES:
1. The earth bearing surface shall be undisturbed material. Keep all joints free from concrete. Thrust block to be constructed of 1,500 P.S.I. (28 day) concrete and placed as shown on "Typical Blocking Details" above.
 2. It shall be the responsibility of the contractor to install adequate thrust blocking. The HORIZONTAL BLOCKING TABLE shows the minimum thrust blocking area required (in square feet) bearing against undisturbed trench wall.
 3. All fittings shall be blocked regardless of the angle or direction, except as noted in the chart.
 4. Soil bearing strength is assumed to be 2,000 P.S.F. Site conditions may vary which will require modifications to the blocking calculations.



CASING DETAIL

RECORD DRAWING
 VERIFIED BY *Thomas Linn*
 DATE *4-20-00*



CITY OF ROCKWALL
 "THE NEW HORIZON"

UTILITY RELOCATIONS
 FOR FM 740 WIDENING

STANDARD WATER DETAILS

Turner Collie & Braden Inc.
 ENGINEERS • PLANNERS • PROJECT MANAGERS

Unit: A103	Scale: N.T.S.	Date: JANUARY 1999
Designed: TCB	Checked: <i>VS.</i>	Job No. 15-97925-100
Drawn: TCB	Approved: <i>TCB</i>	SHEET 30 OF 31