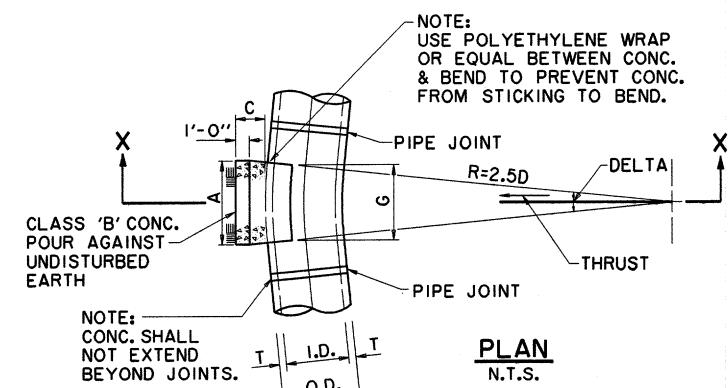
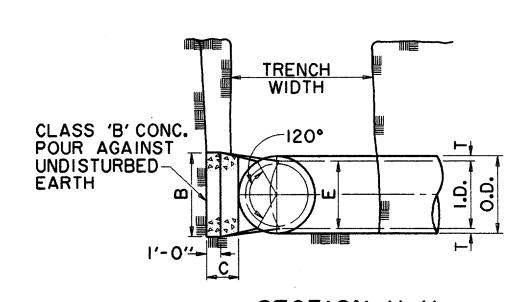


PLAN OF PLUG THRUST BLOCK

PLAN	OF	TEE	THRUST	BLOCK
		N.	T.S.	

			EA	RTH	R	OCK
I.D. (IN.)	THRUST TONS	C. FT.	A. FT.	VOL.	A. FT.	VOL.
4, 6, 8	5.1	1.5	2.5	0.3	2.0	0.2
10, 12	11.3	1.5	3.5	0.6	2.5	0.3
16, 18	25.5	2.0	5.5	1.6	4.0	0.9
24	45.2	2.5	7.0	3,1	5.0	1.7





SECTION X-X

HORIZONTAL BENDS

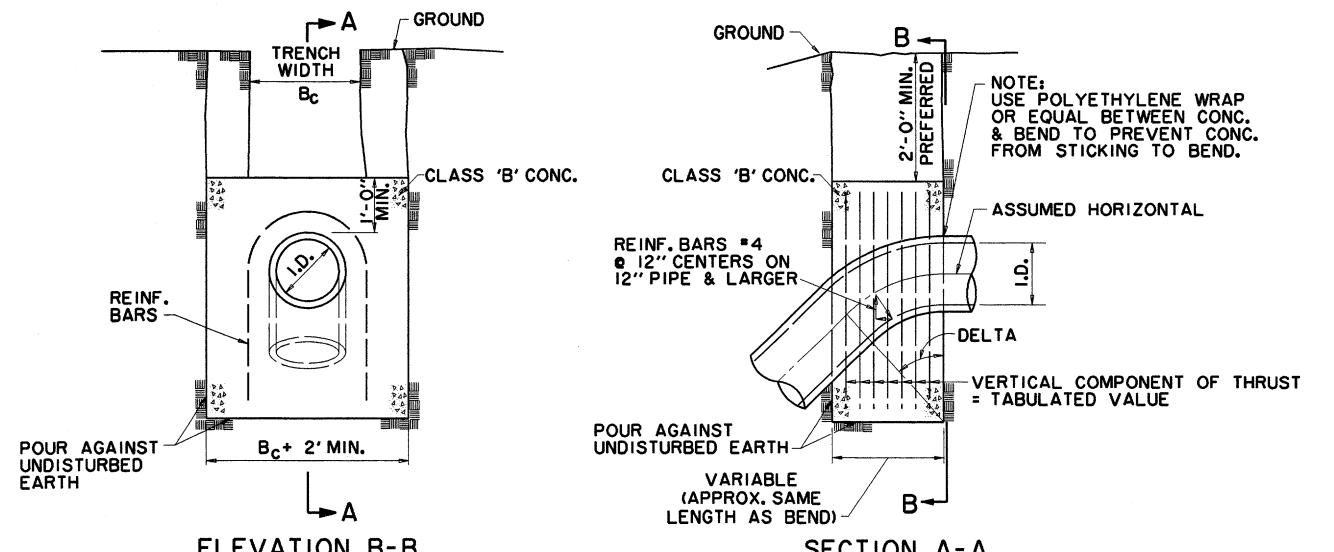
I.D. (IN.)	T.	C II.25° FT.	C 22.50°+ FT.	E. FT.
4, 6, 8	0.4	1.5	1.5	0.9
10, 12	0.5	1.5	1.5	1.2
16, 18	0.6	1.5	1.5	1.6
24	0.9	1.5	1.5	2.1

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DELTA				11.25	5°							22.5	0°				DELTA
				EARTH			ROCK					EARTH			ROCK		
1.D. (IN.)	G. FT.	THRUST TONS	A. FT.	B. FT.	VOL.	A. FT.	B. FT.	VOL. C.Y.	G. FT.	THRUST TONS	A. FT.	B. FT.	VOL. C.Y.	A. FT.	B. FT.	VOL. C.Y.	I.D. (IN.)
4, 6, 8	0.4	1.0	1.0	1.5	0.1	1.0	1.0	0.1	0.8	2.0	1.5	1.5	0.1	1.0	1.0	0.1	4, 6, 8
10, 12	0.6	2.2	1.5	1.5	0.1	1.0	1.5	0.1	1.1	4.4	2.0	2.5	0.3	1.5	1.5	0.1	10, 12
16, 18	0.8	5.0	2.0	2.5	0.3	1.5	2.0	0.2	1.6	9.9	3.0	3.5	0.6	2.0	2.5	0.3	16, 18
24	1.1	8.9	3.0	3.5	0.5	1.5	3.0	0.3	2.2	17.7	4.0	4.5	1.0	3.0	3.5	0.5	24
DELTA	45°					90°					DELTA						
4, 6, 8	0.4	3.9	2.0	2.0	0.2	1.5	1.5	0.1	0.4	5.0	5.0	1.5	0.4	2.0	2.0	0.2	4, 6, 8
10, 12	0.5	8.7	3.5	2.5	0.5	2.0	2.5	0.3	0.5	6.5	6.5	2.5	1.0	3.5	2.5	0.5	10, 12
16, 18	0.6	19.5	4.5	4.5	1.2	3.0	3.5	0.6	0.6	9.0	9.0	4.0	2.4	4.5	4.0	1.0	16, 18
24	0.9	34.6	8.0	4.5	2.3	4.5	4.0	1.1	0.9	14.5	14.5	4.5	5.0	8.0	4.0	2.1	24

GENERAL NOTES

- I. UNPLASTICIZED POLYVINYL CHLORIDE (PVC) WATER PIPE SHALL MEET OR EXCEED REQUIREMENTS OF AWWA C909 PVC PIPE WITH CAST IRON OUTSIDE DIMENSIONS. PIPE SHALL BE LISTED BY UNDERWRITER LABORATORIES AND SHALL BE APPROVED FOR USE IN CITIES AND TOWNS OF THE STATE OF TEXAS BY THE STATE BOARD OF INSURANCE.
- 2. PVC WATER PIPE SHALL BE FURNISHED WITH A RUBBER RING AT EACH JOINT AND AN INTEGRAL THICKENED BELL AS A PART OF EACH JOINT. THE PIPE CLASS SHALL BE MINIMUM CLASS 150 DR 18 WHICH REFERS TO THE MAXIMUM HYDROSTATIC PRESSURE IN NORMAL OPERATIONS. LAYING LENGTHS SHALL BE 20 FEET+/-. PIPE AND FITTINGS MUST BE ASSEMBLED WITH A NONTOXIC LUBRICANT.
- 3. FITTINGS FOR PVC WATER PIPE SHALL BE GRAY IRON OR DUCTILE IRON OF THE BELL AND SPIGOT, OR MECHANICAL JOINT TYPE AND SHALL BE CLASS 250 IN ACCORDANCE WITH AWWA C110-77 (ANSI.10).
- 4. UNLESS OTHERWISE SPECIFIED ON PLANS OR SHOWN IN PROFILES, PVC WATER PIPE SHALL BE INSTALLED TO CLEAR ALL UTILITY LINES AND SHALL HAVE A MINIMUM COVER OF 36 INCHES BELOW THE LOWEST GRADE OF THE STREET AS PER CITY CODE.
- 5. 4''-12'' R S GATE VALVES SHALL BE IN ACCORDANCE WITH AWWA STANDARD C-500.
- 6. A PERMANENTLY ATTACHED VALVE EXTENSION STEM SHALL BE REQUIRED FOR ANY VALVE WHOSE OPERATING NUT IS LOCATED IN EXCESS OF 4 FEET BELOW THE TOP OF VALVE BOX. THIS EXTENSION SHALL BE OF SUFFICIENT LENGTH TO INSURE THAT ITS TOP IS WITHIN 4' OF VALVE BOX LID.
- BOX CASTING. DUCTILE IRON OR C-900 PVC PIPE SHALL BE USED FOR VALVE STACKS WITH VALVE
 - 8. ALL ANCHOR BOLTS SHALL BE GALVANIZED.
- 9. ALL WATEWR MAINS WILL BE INSTALLED WITH A LOCATION WIRE PER THE TOWN OF ADDISON REQUIREMENTS.
- 10. POLYWRAP ALL IRON FITTINGS AND VALVES.



ELEVATION B-B

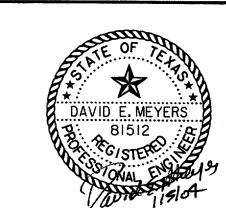
SECTION A-A

N.T.S. VERTICAL BENDS 11.25° 30° 67.50° 22.50° 45° 90° VOL. C.Y. THRUST VOL. TONS C.Y. THRUST VOL. TONS C.Y. THRUST VOL. HRUST VOL. C.Y. THRUST | VOL. TONS TONS TONS C.Y. 1.0 2.5 4.6 2.3 5.0 2.8 4.0 5.2 2.2 4.3 2.2 5.7 8.0 11.3 5.7 | 10, 12 23.5 2.5 12.7 6.4 9.0 9.7 25.5 11.8 12.7 | 16, 18 8.7 22.6 11.3 32.0 16.0 41.9 20.9 45.2 22.6

GENERAL NOTES FOR ALL THRUST BLOCKS

- 1. ALL CALCULATIONS ARE BASED ON INTERNAL PRESSURE OF 200 P.S.I. FOR 24'' I.D. PIPE AND SMALLER AND 150 P.S.I. ON 30'' I.D. AND LARGER.
 2. VOLUMES OF VERTICAL BEND THRUST BLOCKS ARE NET VOLUMES OF CONCRETE TO BE FURNISHED. THE CORRESPONDING WEIGHT OF THE CONCRETE (CLASS F) IS EQUAL TO OR GREATER THAN THE VERTICAL COMPONENT OF THRUST ON THE VERTICAL BEND.

 3. WALL THICKNESS (T) ASSUMED HERE FOR ESTIMATING PURPOSES ONLY.
- 4. CONCRETE FOR BLOCKING SHALL BE CLASS B CONCRETE.
 5. DIMENSIONS MAY BE VARIED AS REQUIRED BY FIELD CONDITIONS AND AS DIRECTED BY THE
- ENGINEER. THE VOLUME OF CONCRETE BLOCKING SHALL NOT BE LESS THAN SHOWN HERE. 6. CONCRETE BLOCKING SHALL BE IN PLACE A MINIMUM OF 4 DAYS PRIOR TO TESTING THE PIPELINE.



		yar	11
DATE	DESCRI	PTION	REF NO.
1.05.40.4			
1/05/04	ISSUED FOR CONSTRUCT	ION	
11/07/03	ISSUED FOR BID		
	WATER	DETAILS	
SPE	CTRUM DR	IVE EXTE	ENSION
	TOWN OF AD	DISON, TEXA	45
	Huitt - Zi 3131 Mckinnev Ave., Suite	ollars, Inc. e 600. Dallas. TX 75204	
	Phone (214) 871-331	/Fax (214) 871-0757	

DESIGN | DRAWN | APPR. | SCALE | DATE | PROJECT NO.

N.T.S.

DEM

HZI

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