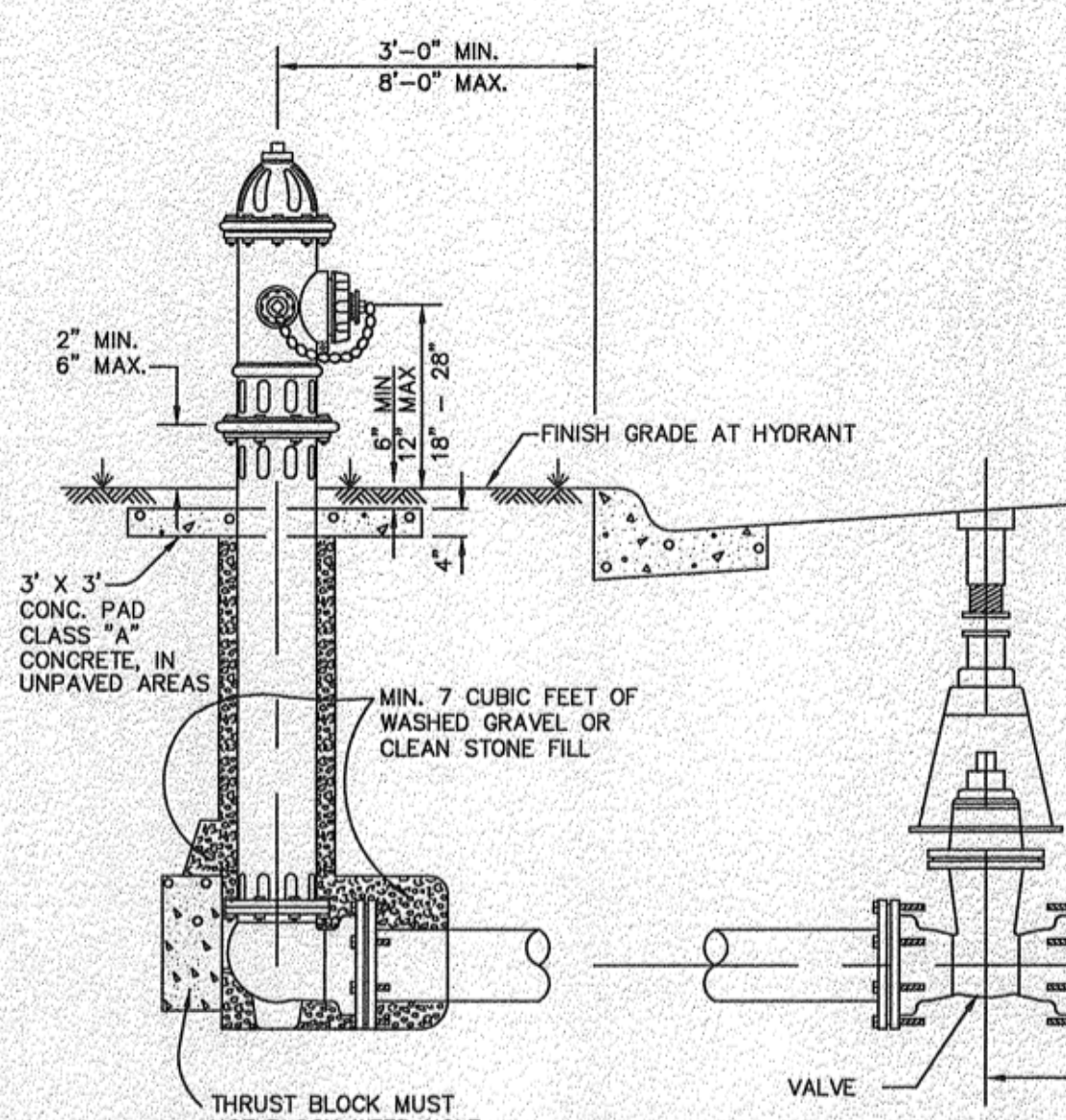
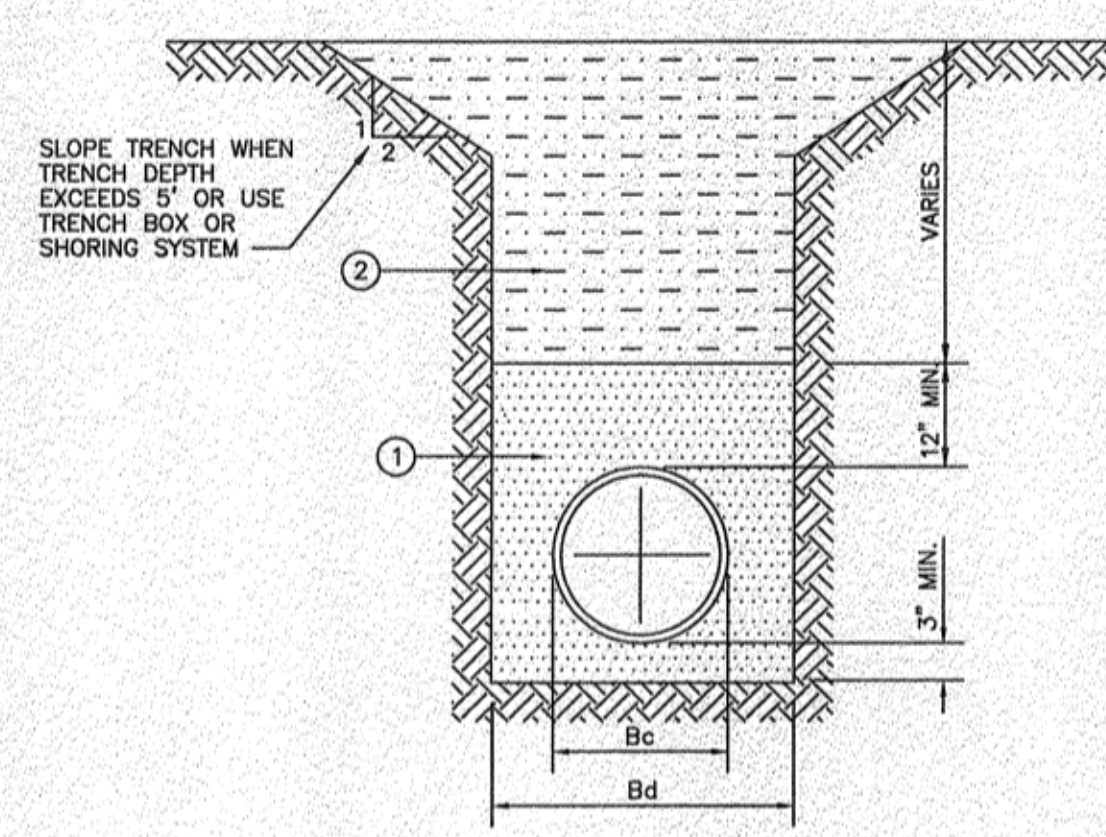




FIRE HYDRANT
INSTALLATION

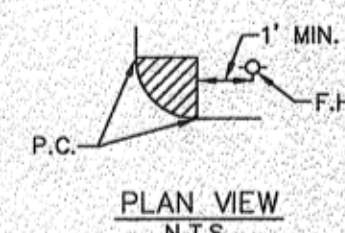


- GRANULAR MATERIAL (SAND) COMPACTED TO 95% STANDARD PROCTOR DENSITY. IN AREAS UNDER PAVEMENT SAND WILL NOT BE ALLOWED. USE COMPACTED CRUSHED STONE.
- SELECT MATERIAL FREE OF ROCKS, CLUMPS OR DEBRIS LARGER THAN 6" IN GREATEST DIMENSION. COMPACT TO 95% STANDARD PROCTOR DENSITY. UNDER STRUCTURES, ROADWAYS AND PAVEMENT, EXCLUDE MATERIAL WITH LL > 50 COMPACT TO 95% STANDARD PROCTOR DENSITY. GRANULAR MATERIAL MUST BE WELL GRADED.

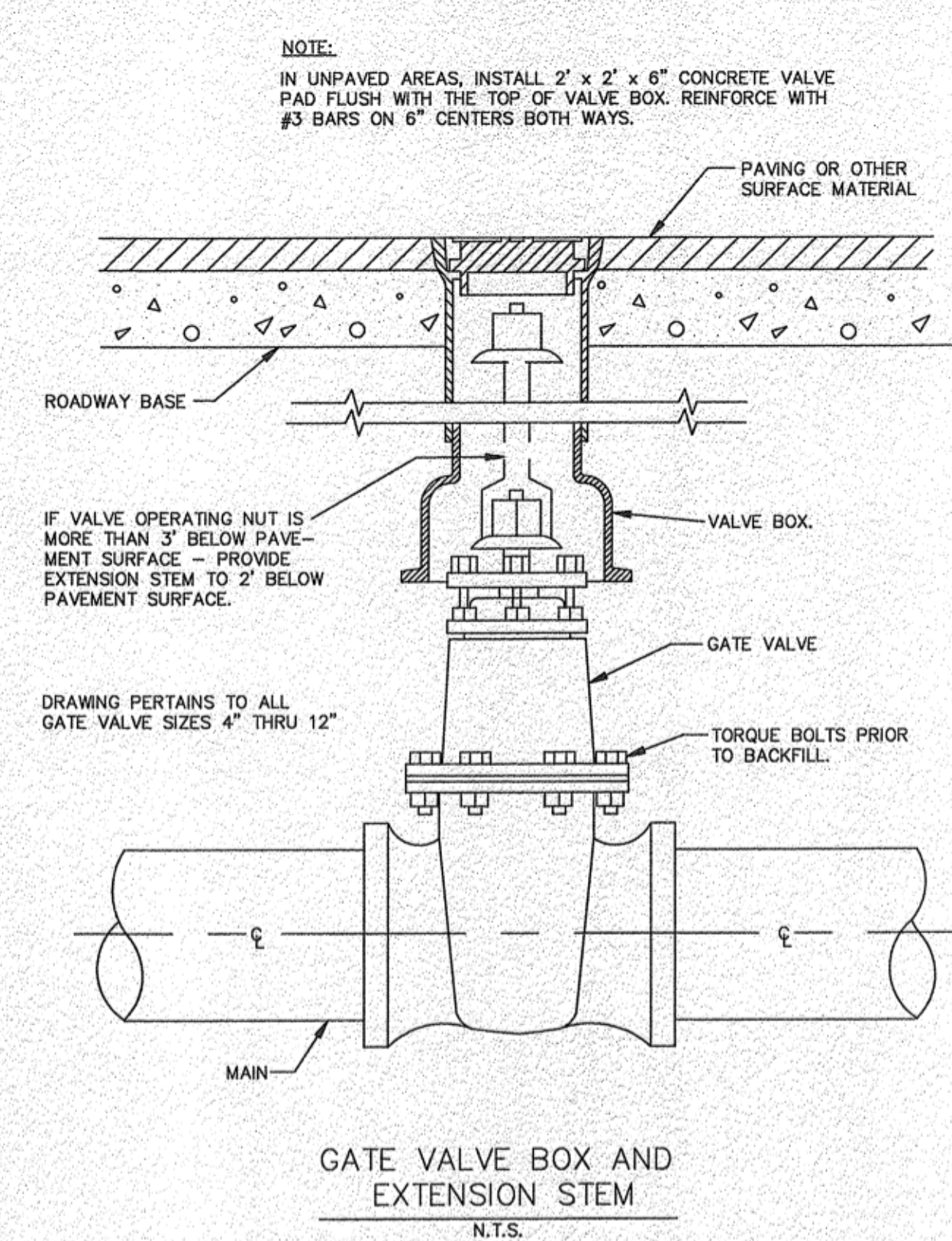
SIZE OF PIPE IN INCHES DIA.	KIND OF PIPE	EXTERNAL DIA. (Bc) IN INCHES	TRENCH WIDTH (Bd) IN INCHES
6"	PVC WATER PIPE	6.28	24
8"	PVC WATER PIPE	8.16	24
10"	PVC WATER PIPE	10.2	26

WATER EMBEDMENT
CLASS "B-3"

- NOTES:
- IN GENERAL, ALL FIRE HYDRANTS SHALL CONFORM TO AWWA STANDARD SPECIFICATIONS FOR FIRE HYDRANTS FOR ORDINARY WATER WORKS SERVICE, C-502. FIRE HYDRANTS SHALL HAVE A 5 1/4" MIN. VALVE OPENING AND A BARREL APPROXIMATELY 7" INSIDE DIAMETER. ALL HYDRANTS SHALL BE EQUIPPED WITH A BREAKAWAY FLANGE.
 - ALL JOINTS SHALL BE RESTRAINED MEGA-LUG.
 - TYPICAL VALVE: ACTUAL VALVE LOCATION WILL DEPEND ON LOCATION OF WATER MAIN.
 - F.H. NO CLOSER THAN 18" TO EXISTING OR PROPOSED SIDEWALKS. (USUAL)
 - STANDARD BURY DEPTH 5' FEET
 - SET FIRE HYDRANT ON THE LOT LINE EXTENDED WHEN POSSIBLE.
 - F.H. SHALL BE LOCATED MINIMUM 1 FT. OUTSIDE OF THE AREA BETWEEN THE P.C.'S OF THE CORNER TURNING RADI AT INTERSECTIONS. (SEE PLAN VIEW)



PLAN VIEW
N.T.S.

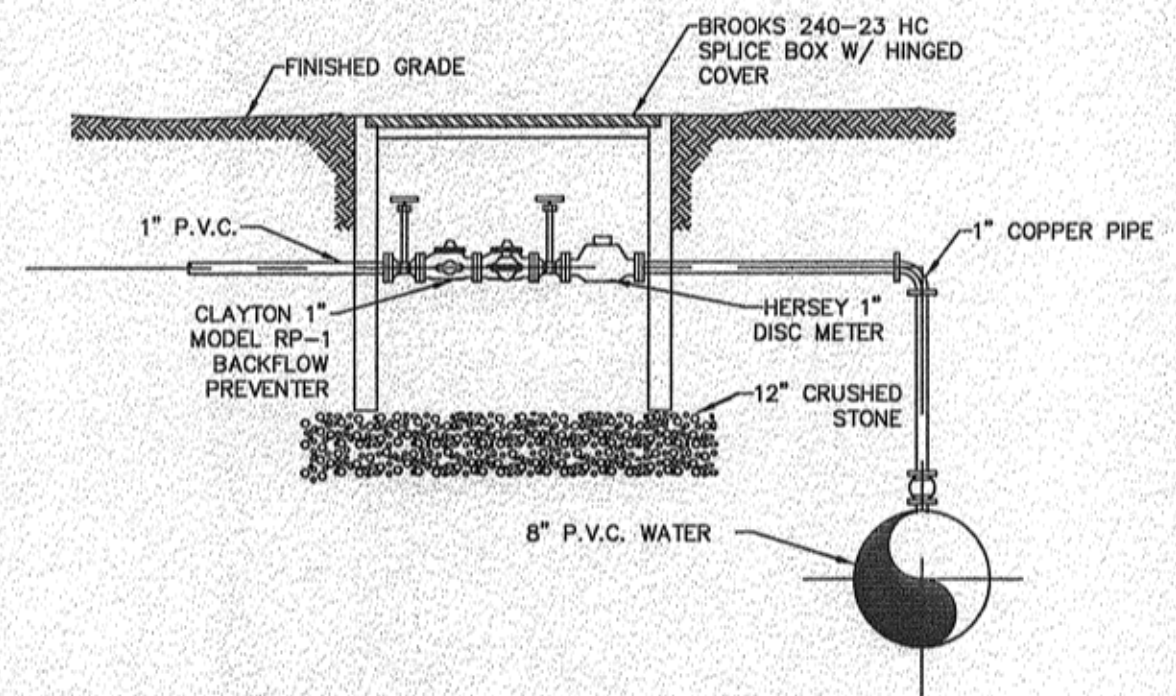


GATE VALVE BOX AND
EXTENSION STEM
N.T.S.

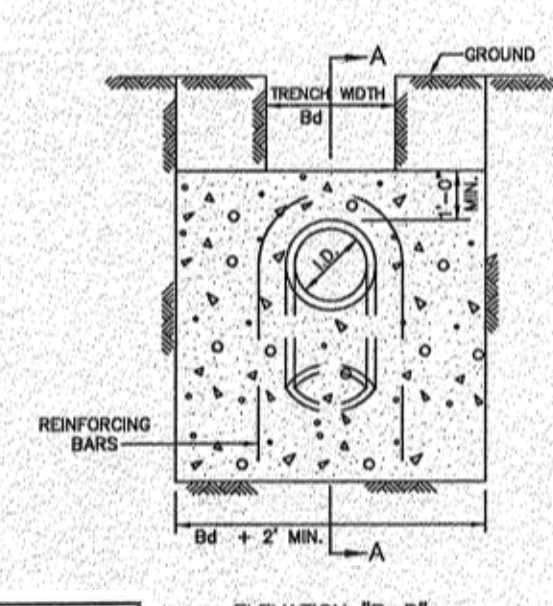
GENERAL NOTES FOR ALL THRUST BLOCKS:

- CONCRETE FOR BLOCKING SHALL BE CLASS "B".
- ALL CALCULATIONS ARE BASED ON INTERNAL PRESSURE OF 200 PSI FOR P.V.C. AND CONCRETE PIPE. (NO DUCTILE IRON PIPE ALLOWED)
- VOLUMES OF THRUST BLOCKS ARE NET VOLUMES OF CONCRETE TO BE FURNISHED. THE CORRESPONDING WEIGHT OF THE CONCRETE (CLASS "B") IS EQUAL TO OR GREATER THAN THE VERTICAL COMPONENT OF THE THRUST ON THE VERTICAL BEND.
- WALL THICKNESS (T) ASSUMED HERE FOR ESTIMATING PURPOSES ONLY.
- POUR CONCRETE FOR BLOCK AGAINST UNDISTURBED EARTH.
- DIMENSIONS MAY BE VARIED AS REQUIRED BY FIELD CONDITIONS WHERE AND AS DIRECTED BY THE ENGINEER. THE VOLUME OF CONCRETE BLOCKING SHALL NOT BE LESS THAN SHOWN HERE.
- THE SOIL BEARING PRESSURES ARE BASED ON 1000 LBS./S.F. IN SOIL AND 2000 LBS./S.F. IN ROCK.
- USE POLYETHYLENE WRAP OR EQUAL BETWEEN CONCRETE AND BEND, TEE, OR PLUG TO PREVENT THE CONCRETE FROM STICKING TO IT.
- CONCRETE SHALL NOT EXTEND BEYOND JOINTS.

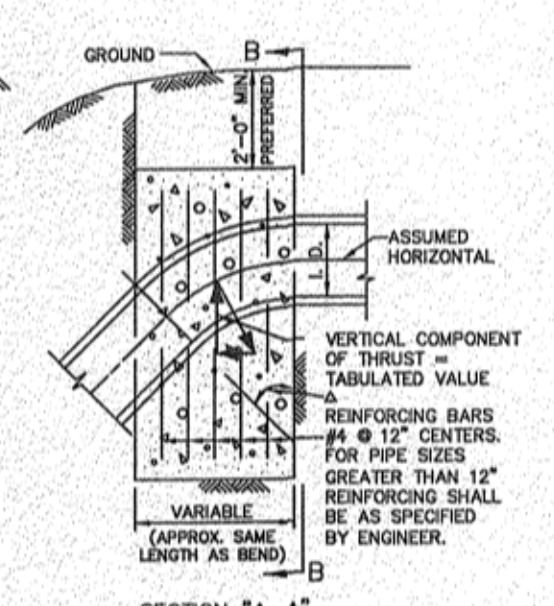
I.D. (IN.)	G. THRUST (T) (T)	EARTH				ROCK			
		A	B	VOL. (C.Y.)	WGT. (LBS.)	A	B	VOL. (C.Y.)	WGT. (LBS.)
4.6.8	0.4	1.0	1.5	0.1	1.0	1.5	0.1	1.0	1.5
10.12	0.6	2.2	1.5	0.1	1.0	1.5	0.1	1.0	1.5
16.18	0.8	5.0	2.0	0.3	1.5	2.0	0.2	1.6	1.8
20	0.9	6.2	2.0	0.3	1.5	2.0	0.2	1.6	1.8
24	1.1	8.9	3.0	0.5	1.5	3.0	0.3	2.4	2.2
30	1.4	10.4	3.0	0.5	1.5	3.0	0.3	2.4	2.2
36	1.7	15.0	3.5	0.6	2.0	4.0	0.5	3.6	3.3
42	1.9	20.4	4.5	0.8	2.5	5.0	0.8	4.2	3.8
48	2.2	26.6	4.5	0.8	2.5	5.0	0.8	4.2	3.8
54	2.5	33.7	6.0	1.0	3.0	6.0	1.0	5.4	4.9
60	2.7	41.6	6.0	1.0	3.0	6.0	1.0	5.4	4.9
66	3.0	50.3	6.5	1.0	3.0	6.0	1.0	5.4	4.9
72	3.3	59.9	7.5	1.0	3.0	6.0	1.0	5.4	4.9
78	3.6	70.2	8.0	1.0	3.0	6.0	1.0	5.4	4.9
84	3.8	81.5	8.5	1.0	3.0	6.0	1.0	5.4	4.9
90	4.1	93.5	9.5	1.0	3.0	6.0	1.0	5.4	4.9
96	4.4	106.4	10.0	1.0	3.0	6.0	1.0	5.4	4.9



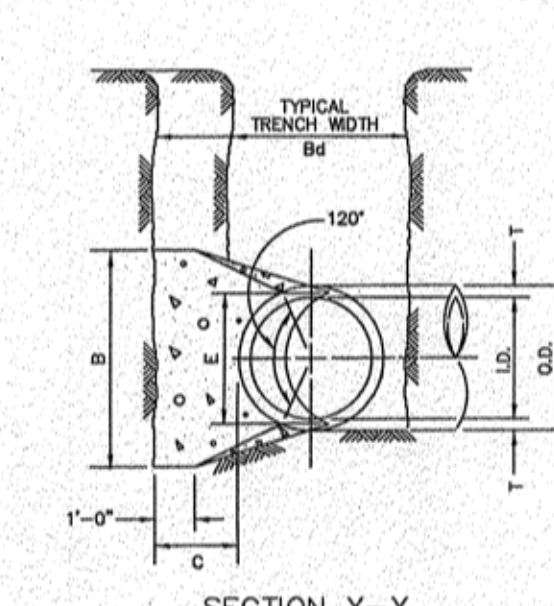
BACKFLOW PREVENTER DETAIL
NO SCALE



ELEVATION "B-B"
N.T.S.



SECTION "A-A"
N.T.S.



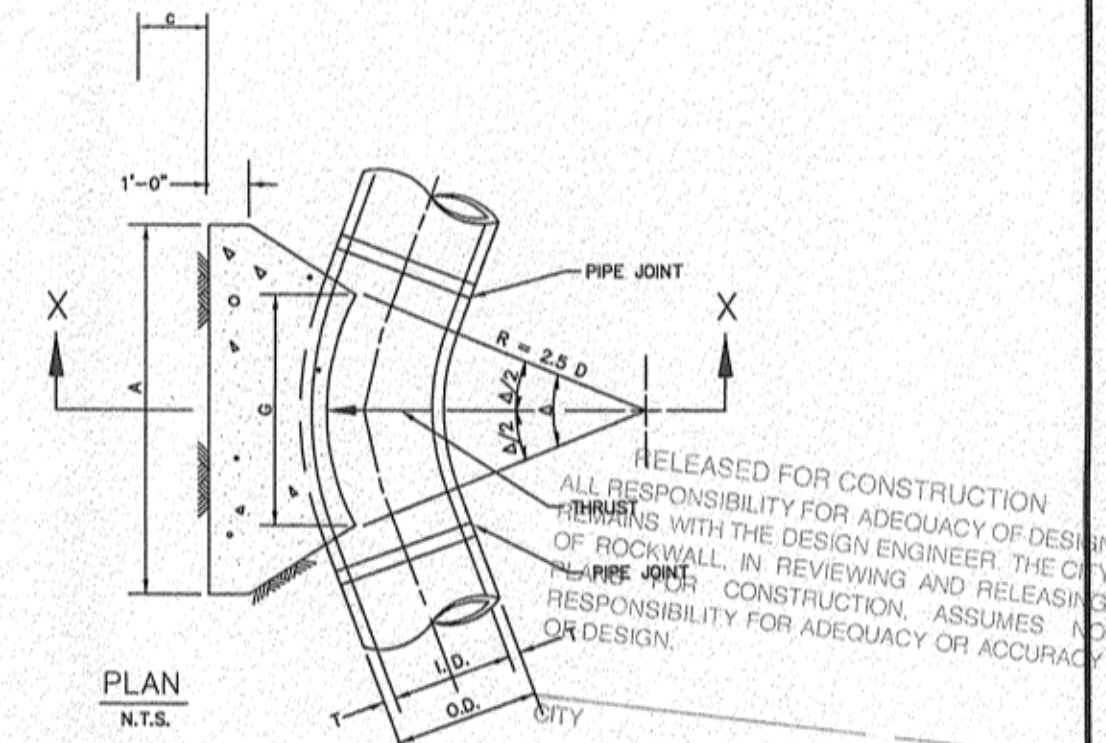
SECTION X-X
N.T.S.

TABLES OF DIMENSIONS AND QUANTITIES

I.D. (IN.)	G. THRUST (T) (T)	EARTH				ROCK			
		A	B	VOL. (C.Y.)	WGT. (LBS.)	A	B	VOL. (C.Y.)	WGT. (LBS.)
4.6.8	0.4	1.0	1.5	0.1	1.0	1.5	0.1	1.0	1.5
10.12	0.6	2.2	1.5	0.1	1.0	1.5	0.1	1.0	1.5
16.18	0.8	5.0	2.0	0.3	1.5	2.0	0.2	1.6	1.8
20	0.9	6.2	2.0	0.3	1.5	2.0	0.2	1.6	1.8
24	1.1	8.9	3.0	0.5	1.5	3.0	0.3	2.4	2.2
30	1.4	10.4	3.0	0.5	1.5	3.0	0.3	2.4	2.2
36	1.7	15.0	3.5	0.6	2.0	4.0	0.5	3.6	3.3
42	1.9	20.4	4.5	0.8	2.5	5.0	0.8	4.2	3.8
48	2.2	26.6	4.5	0.8	2.5	5.0	0.8	4.2	3.8
54	2.5	33.7	6.0	1.0	3.0	6.0	1.0	5.4	4.9
60	2.7	41.6	6.0	1.0	3.0	6.0	1.0	5.4	4.9
66	3.0	50.3	6.5	1.0	3.0	6.0	1.0	5.4	4.9
72	3.3	59.9	7.5	1.0	3.0	6.0	1.0	5.4	4.9
78	3.6	70.2	8.0	1.0	3.0	6.0	1.0	5.4	4.9
84	3.8	81.5	8.5	1.0	3.0	6.0	1.0	5.4	4.9
90	4.1	93.5	9.5	1.0	3.0	6.0	1.0	5.4	4.9
96	4.4	106.4	10.0	1.0	3.0	6.0	1.0	5.4	4.9

I.D. (IN.)	G. THRUST (T) (T)	EARTH				ROCK			
		A	B	VOL. (C.Y.)	WGT. (LBS.)	A	B	VOL. (C.Y.)	WGT. (LBS.)
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10.12	0.6	2.2	1.5	0.1	1.0	1.5	0.1	1.0	1.5
16.18	0.8	5.0	2.0	0.3	1.5	2.0	0.2	1.6	1.8
20	0.9	6.2	2.0	0.3	1.5	2.0	0.2	1.6	1.8
24	1.1	8.9	3.0	0.5	1.5	3.0	0.3	2.4	2.2
30	1.4	10.4	3.0	0.5	1.5	3.0	0.3	2.4	2.2
36	1.7	15.0	3.5	0.6	2.0	4.0	0.5	3.6	3.3
42	1.9	20.4	4.5	0.8	2.5	5.0	0.8	4.2	3.8
48	2.2	26.6	4.5	0.8	2.5	5.0	0.8	4.2	3.8
54	2.5	33.7	6.0	1.0	3.0	6.0	1.0	5.4	4.9
60	2.7	41.6	6.0	1.0	3.0	6.0	1.0	5.4	4.9
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90	4.1	93.5	9.5	1.0	3.0	6.0	1.0	5.4	4.9
96	4.4	106.4	10.0	1.0	3.0	6.0	1.0	5.4	4.9

TABLES OF DIMENSIONS AND QUANTITIES



PLAN
N.T.S.

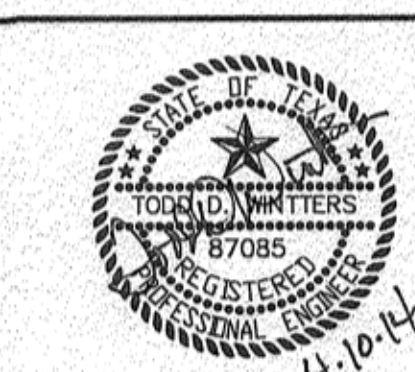
RECORD DRAWINGS
To the best of our knowledge Engineering Concepts & Design, L.P., hereby states that this plan is As-Built. This information provided is based on surveying at the site and information provided by the contractor.
TODD WINTERS 7-14-14
DATE

REVISIONS:
DRAWN: JIM
CHECKED: TW
PROJECT NO.: 3551
DWG FILE NAME:
DATE: April 10, 2014

ENGINEERINGCONCEPTS
& DESIGN, L.P.
ENGINEERING / PROJECT MANAGEMENT /
CONSTRUCTION SERVICES - FIRM REG. #F-001145
201 WINDCO CIR, STE 200, WYLIE, TX 75098
972-941-8400 FAX: 972-941-8401 WWW.ECDLP.COM

BENCHMARK:
"X" CUT IN CURB 23'± SOUTH OF EAST DRIVE APPROACH
OF EXISTING RAYBURN COUNTRY ELECTRIC BUILDING.

THIS DOCUMENT IS RELEASED FOR THE
PURPOSE OF CONSTRUCTION.



WATER DETAILS
RCEC OFFICE BUILDING
LOT 2, BLOCK 1, RAYBURN COUNTRY ADDITION
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

SHEET
7
OF
8