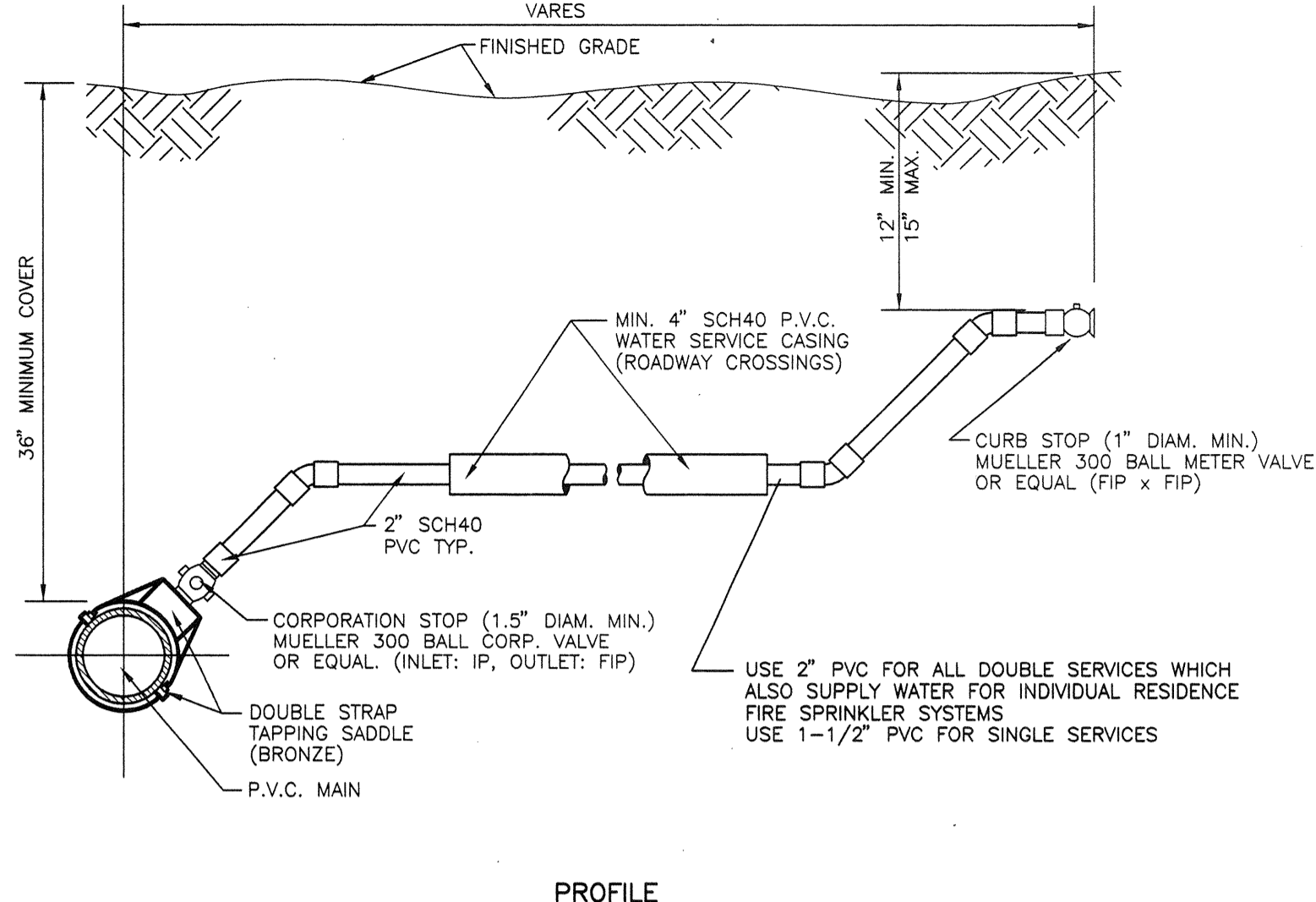


- NOTE:  
 1) SERVICES TO BE LOCATED AT PROPERTY LINE.  
 2) TO BE USED ONLY WITH PRIOR APPROVAL OF THE T.L.B.K. DISTRIBUTION SECTION.  
 3) METER BOXES NOT TO BE SET IN DRAINAGE SWALES.

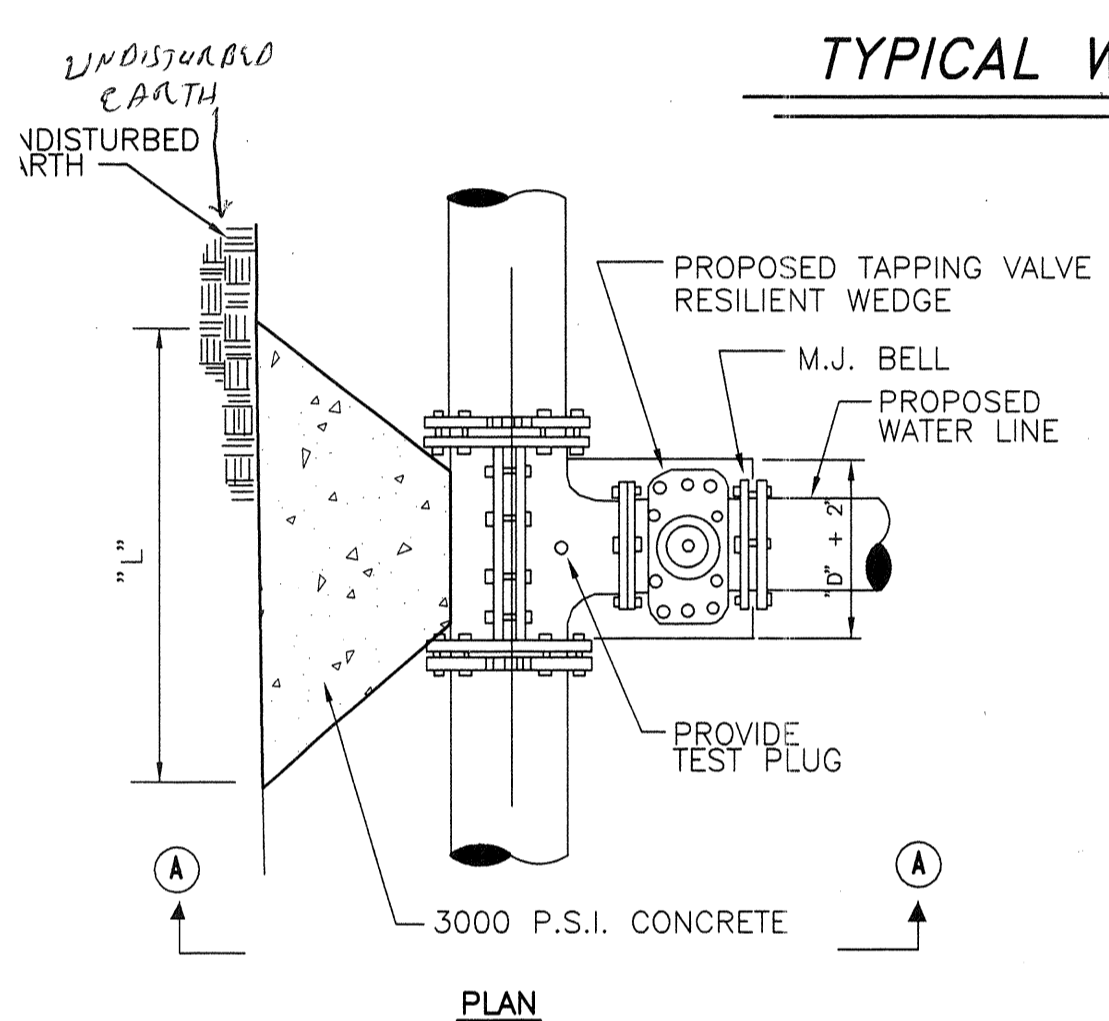
- NOTE:  
 ALL BUILDING STRUCTURES CONSTRUCTED AS PART OF THIS SUBDIVISION TO HAVE FIRE SPRINKLER SYSTEMS INSTALLED AS APPROVED BY LOCAL FIRE DISTRICT.



- NOTE:  
 FIRE MARSHALL TO VERIFY METER AND SERVICE LEAD TO BLDG. ARE OF SUFFICIENT SIZE TO ACCOMMODATE FIRE SPRINKLER SYSTEM FOR THE SPECIFIC BLDG FOR WHICH IT WAS DESIGNED.

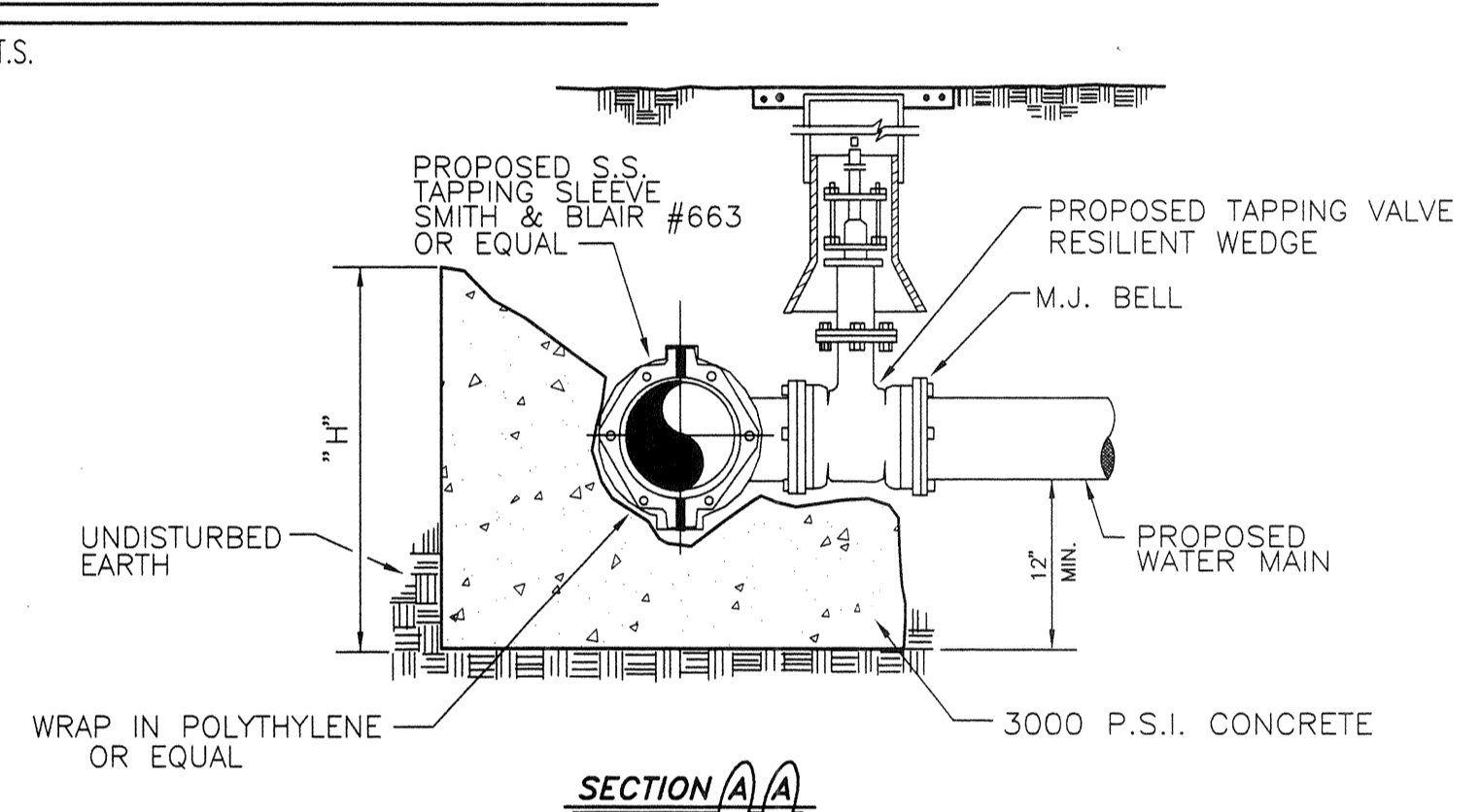
- NOTE:  
 ALL SERVICE TAPS TO BE LOCATED IN FIELD. TAPS SHALL BE NO CLOSER THAN 2'-0" INTERVALS OR WITHIN 2'-0" FROM BEEL OR SPIGOT ENDS.

**TYPICAL WATER SERVICE CONNECTION**



- NOTE:  
 STEEL WILL BE USED AS REQUIRED BY THE ENGINEER.

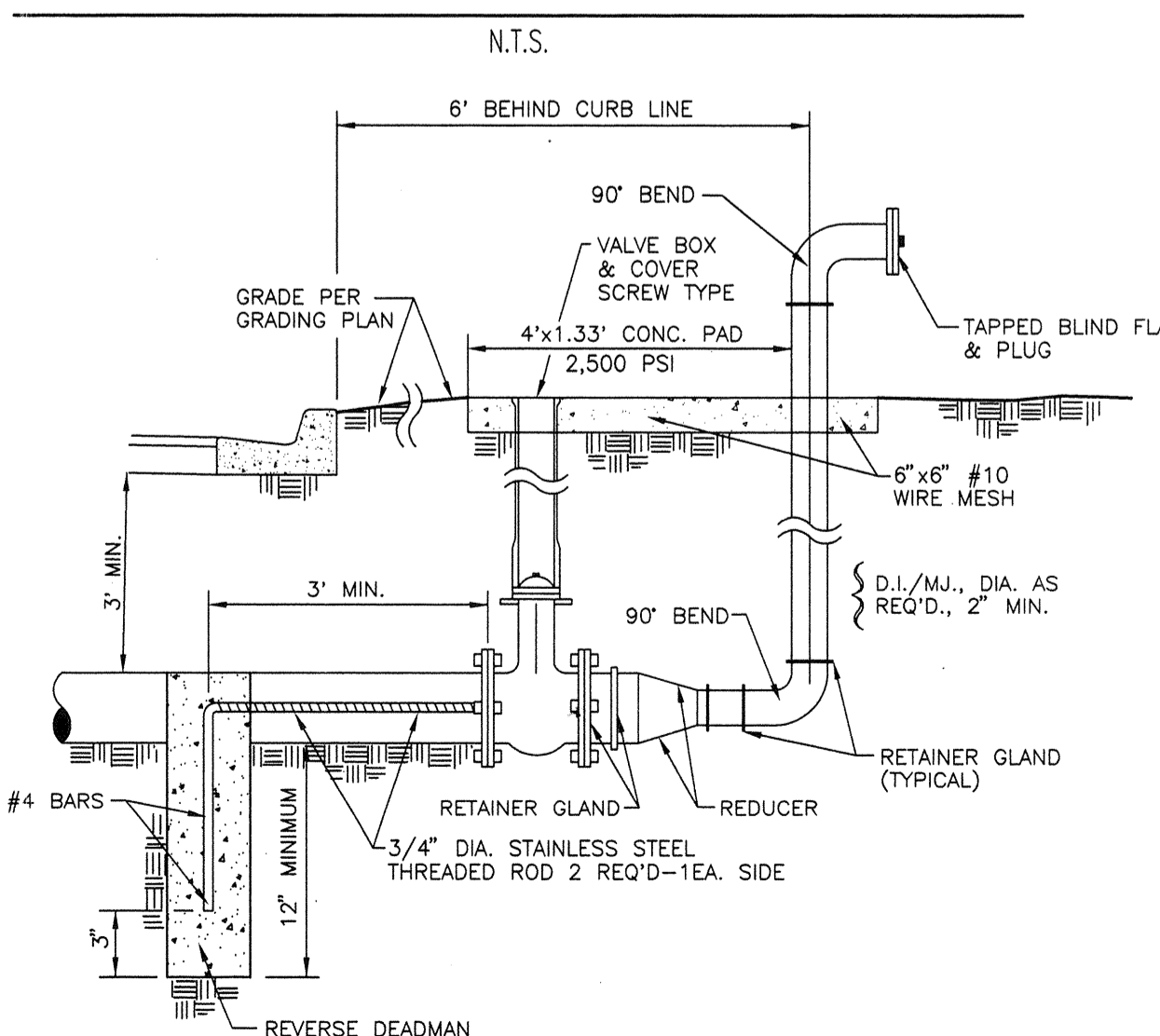
- NO CUT SHALL BE MADE BEFORE  
 (A) A TEST OF 150 P.S.I. FOR 60 MINUTES IS MADE AND  
 (B) THE CONCRETE BLOCK HAS CURED FOR 48 HOURS



RUN	BRANCH											
	4"		6"		8"		10"		12"		16"	
	L"	H"	L"	H"	L"	H"	L"	H"	L"	H"	L"	H"
4"	15	20										
6"	15	20	23	30								
8"	15	20	23	30	31	39						
10"	15	20	23	30	31	39	40	48				
12"	15	20	23	30	31	39	40	48	48	57		
16"	15	20	23	30	31	39	40	48	48	57	62	78
18"	15	20	23	30	31	39	40	48	48	57	62	78
20"	15	20	23	30	31	39	40	48	48	57	62	78
24"	15	20	23	30	31	39	40	48	48	57	62	78
30"	15	20	23	30	31	39	40	48	48	57	62	78

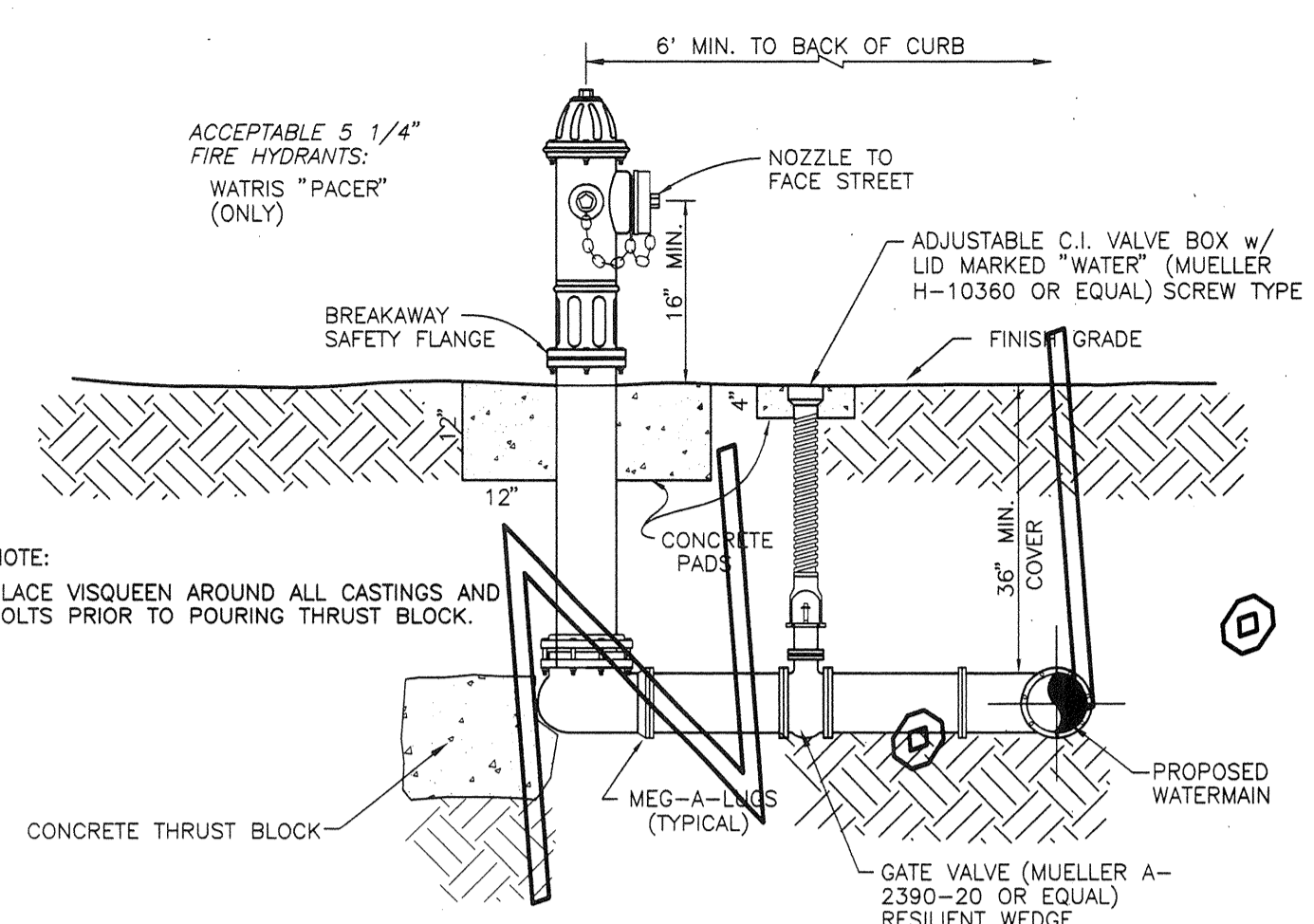
NOTE: "L" & "H" DIMENSIONS ARE IN INCHES.

**TAPPING SLEEVE & VALVE DETAIL**



**BLOW OFF VALVE**

N.T.S.



**FIRE HYDRANT & GATE VALVE DETAIL**

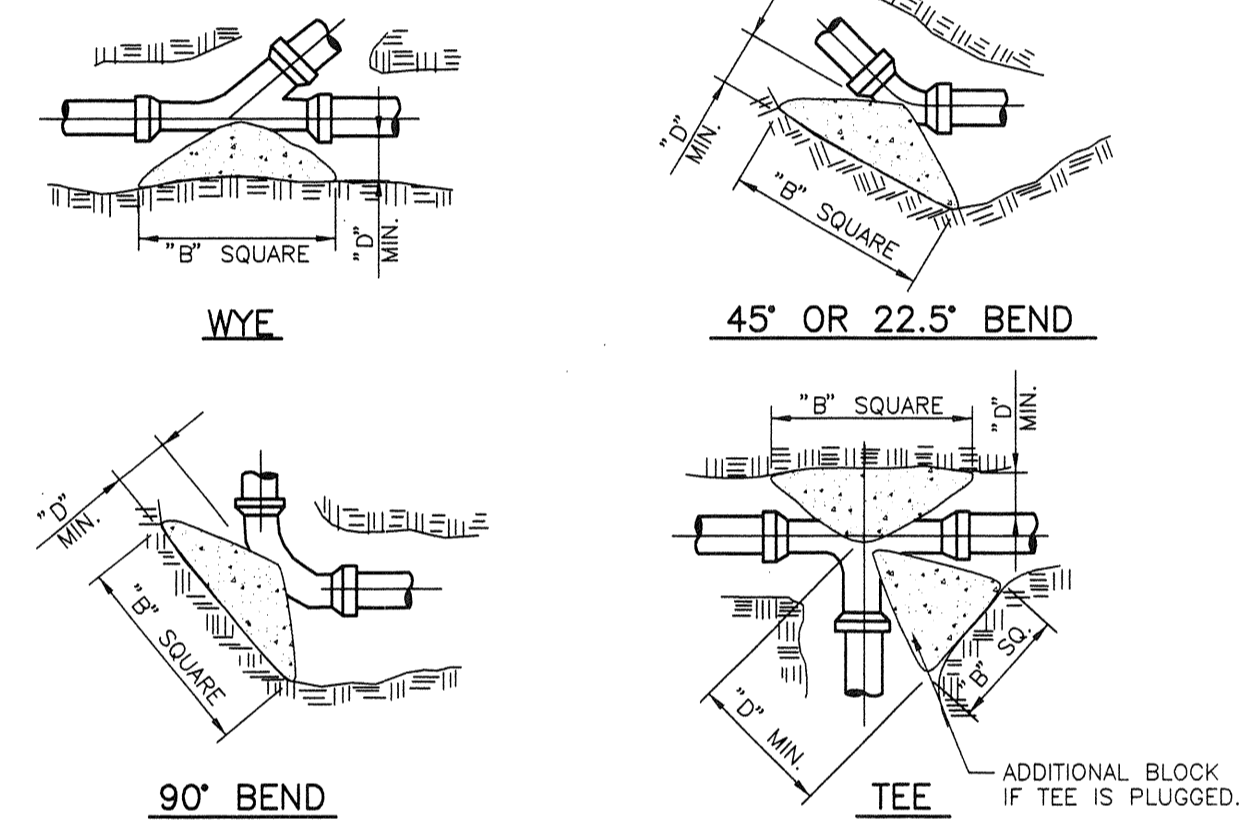
N.T.S.

**FIRE HYDRANT SPECIFICATIONS**

- 1.) SHALL CONFORM TO AWWA C-502
- 2.) PAINT - ONE PRIMER COAT. ONE EXTERIOR OR FINISH COAT, SAFETY YELLOW.
- 3.) NOZZLES - "TREE WAY" - (2) 2 1/2" NOZZLE, (1) 4 1/2" NOZZLE. NST. MADE OF BRONZE NOZZLE WILL SCREW INTO OR TURN LOCK INTO BARREL SEALING AGAINST A GASKET OR "O" RING.
- 4.) BARREL ROTATION - UPPER BARREL ROTATION OF 360° RADIUS WITHOUT THE NEED TO REMOVE ANY BOLTS. TRAFFIC MODEL BREAKAWAY DESIGN NOT USING MACHINED OR UNDERCUT BOLTS AS THE BREAKAWAY DESIGN.
- 5.) DRAIN HOLES TO BE PLUGGED.
- 6.) VALVE AND SEAT - 5 1/4" VALVE OPENING, BRONZE SEAT RING (THREADIN) WITH "O" RING SEAL.
- 7.) SHOE CONNECTION - 6" MJ.
- 8.) HYDRANT FLOW - HEAD LOSS OF 3 P.S.I. OR LESS OR A FLOW OF 1000 GPM THROUGH A 1 1/2" NOZZLE.

PIPE SIZE (IN.)	THRUST BLOCK DIMENSIONS (FEET)											
	90° BEND		45° BEND		22.5° BEND		11.25° BEND		DEAD END		TEE/WYE	
	"B"	"D"	"B"	"D"	"B"	"D"	"B"	"D"	"B"	"D"	"B"	"D"
4	1.5	0.5	1.0	0.5	1.0	0.5	0.5	0.5	0.5	0.5	1.0	0.5
6	2.0	0.5	1.5	0.5	1.0	0.5	1.0	0.5	2.0	0.5	2.0	0.5
8	2.5	0.5	2.0	0.5	1.5	0.5	1.0	0.5	2.0	1.0	2.0	0.5
10	3.0	0.5	2.5	1.0	2.0	0.5	1.0	0.5	3.0	1.0	3.0	0.5
12	4.0	1.0	3.0	1.0	2.0	0.5	1.5	0.5	3.0	1.0	3.0	0.5
14	4.5	1.0	3.0	1.0	2.5	0.5	2.0	0.5	4.0	1.5	4.0	1.0
18	5.0	1.5	4.0	1.0	3.0	1.0	2.0	0.5	4.5	1.5	4.5	1.0
18	5.7	1.7	4.2	1.4	3.1	1.4					6.9	1.7
24	7.7	1.7	5.6	1.4	4.1	1.4					9.1	2.1
30	9.3	2.1	7.0	1.7	5.1	1.4					11.3	2.4
36	11.5	2.4	8.4	1.8	6.0	1.7					13.6	2.5

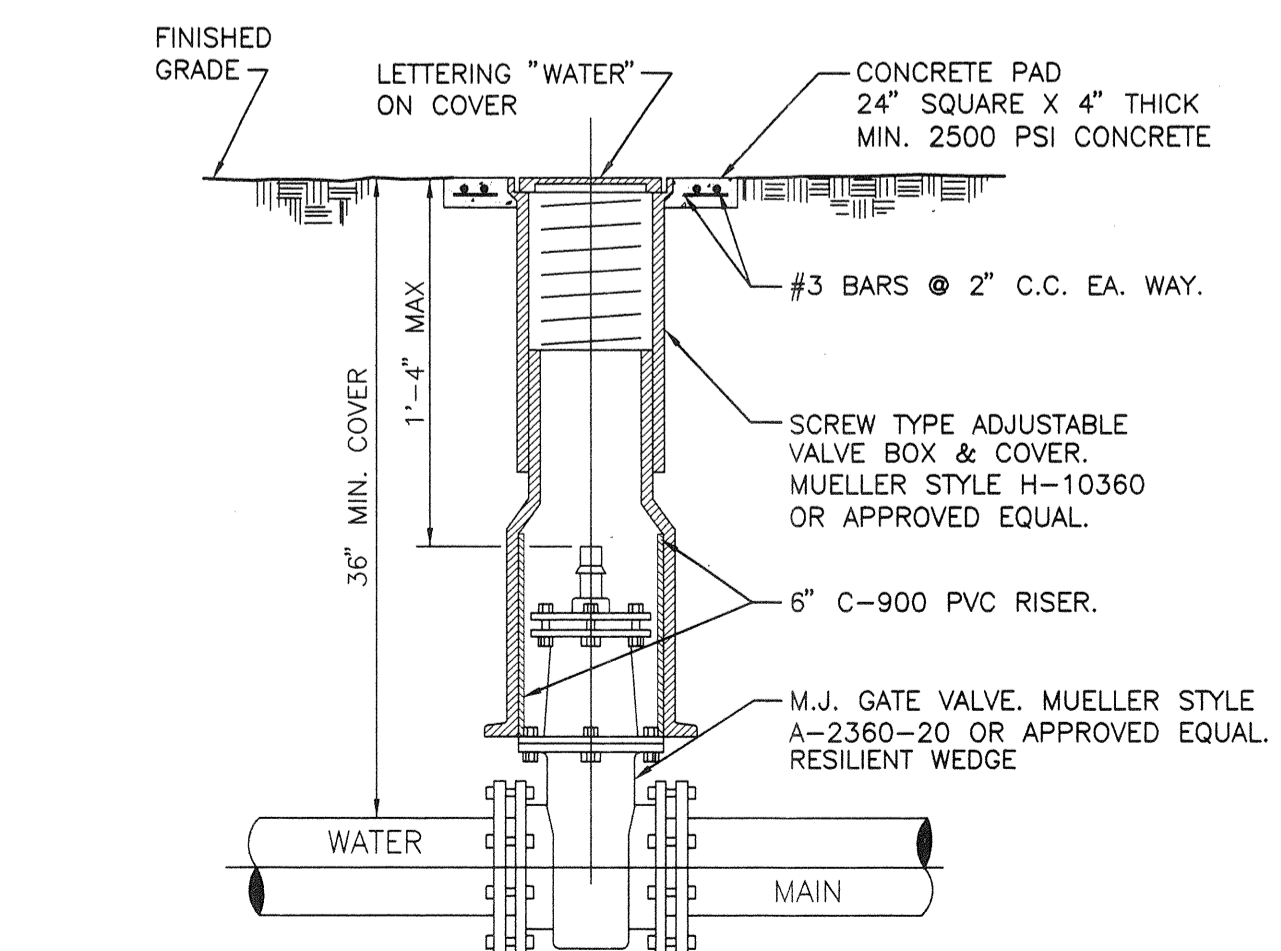
- THRUST BLOCK NOTES:  
 THRUST BLOCK BEARING AREAS SHALL BE POURED AGAINST UNDISTURBED MATERIAL WHERE TRENCH WALLS HAVE BEEN DISTURBED, EXCAVATE ALL LOOSE MATERIAL AND EXTEND TO UNDISTURBED MATERIAL.  
 EXTEND THRUST BLOCK FULL LENGTH OF FITTINGS. PUT BOARD IN FRONT OF PLUG BEFORE POURING CONCRETE. JOINT FITTINGS SHALL NOT BE COVERED BY THRUST



- ROUGH BLOCKING FORMS SHALL BE USED ALONG SIDES OF THRUST BLOCKS. THRUST BLOCKS SHALL BE USED IN COMBINATION, AS REQUIRED TO SUIT THE SPECIFIC FITTING ARRANGEMENT.  
 WHERE THRUST BLOCK IS NOT PRACTICAL DUE TO SOIL CONDITIONS, A HARNESING DETAIL SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL.

**WATER MAIN THRUST BLOCK DETAILS**

N.T.S.



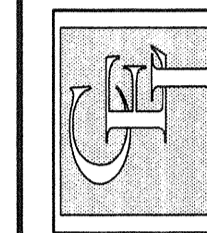
**TYP. GATE VALVE & VALVE BOX DETAIL**

N.T.S.

**NOTES TO CONTRACTOR**

- 1.) ALL WATER LINES WITH OVER THREE FEET OF COVER MUST HAVE DEPTH SHOWN ON AS-BUILT.
- 2.) RECORD DATA: ALL FITTING LOCATIONS MUST BE RECORDED ON THE AS-BUILTS.
- 3.) CULVERTS MUST BE INSTALLED FOR FIRE HYDRANT PROTECTION IF HYDRANT WATER LINE CROSSES A SWALE.
- 4.) INSTALL 4 INCH SLEEVE FOR SERVICES THAT CROSS THE ROADWAY. SLEEVE SHALL BE SCHEDULE 40 P.V.C.
- 5.) IF WATER LINES ARE TO BE DEDICATED TO THE T.L.B.K. ALL WATER METER BOXES MUST BE SET TO GRADE PRIOR TO THIS OFFICE ISSUING FINAL CONSTRUCTION APPROVAL UNLESS OTHER ARRANGEMENTS HAVE BEEN MADE WITH THE T.L.B.K.
- 6.) WATER MAIN SHALL BE C-900, DR 18 P.V.C. OR 150 P.S.I. CLASS 52 DUCTIBLE IRON PIPE.
- 7.) 2" ALUMINIUM DISC (BLUE) SHALL BE PLACED ON CURB WITH FOOTAGE TO EACH WATER SERVICE.
- 8.) ALL D.I. PIPE AND/OR FITTINGS SHALL BE WRAPPED W/ 8 MIL BLACK VISQUEEN FOR CORROSION PROTECTION.
- 9.) T.L.B.K. DENOTES: TOWN OF LONGBOAT KEY.

**CYRIX ENGINEERING, INC.**  
 Engineers & Surveyors  
 5887 Whitfield Avenue  
 Sarasota, Fla 34243



PROJECT NO. 396030	DRAWN BY L.D.M.
CHECKED BY J.M.P.	DATE 01 JUN 95
REVISIONS	DATE
REVISED SERVICE LEAD DETAIL PER FIRE DEPT 12/27/98	L.D.M.
REVISED PER PUBLIC WORKS COMMENTS 10/17/98	L.D.M.

SEAL:  
 J. Mark Privette PE  
 JUN 14 2000  
 Date

**CONRAD BEACH SUBDIVISION CONSTRUCTION PLANS**

POTABLE WATER CONSTRUCTION DETAILS

SHEET 9 OF 10