

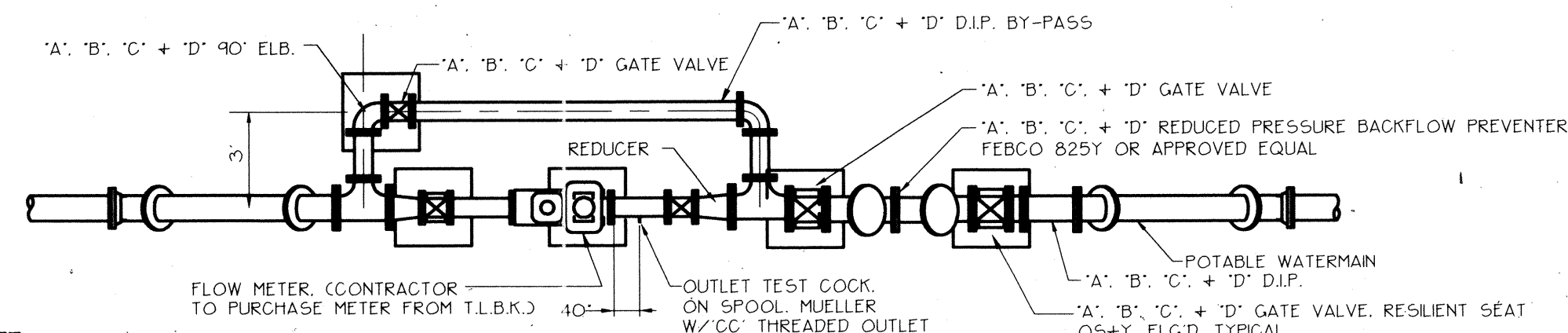
CARRIER PIPE NOMINAL SIZE	CASING PIPE SIZE-ROAD		CASING PIPE SIZE-RAILROAD	
	MIN. O.D.	MIN. WALL THK.	MIN. O.D.	MIN. WALL THK.
4"	12"	0.250"	12"	0.250"
6"	14"	0.250"	14"	0.281"
8"	16"	0.250"	16"	0.281"
10"	20"	0.250"	20"	0.344"
12"	22"	0.250"	22"	0.375"
14"	24"	0.250"	24"	0.406"
16"	26"	0.312"	26"	0.438"
18"	28"	0.312"	28"	0.469"
20"	30"	0.312"	30"	0.469"
24"	36"	0.375"	36"	0.562"
30"	42"	0.500"	42"	0.562"
36"	48"	0.500"	48"	0.688"
42"	56"	0.500"	56"	0.875"
48"	60"	0.500"	60"	0.875"

CASING/CARRIER PIPE JACK AND BORE DETAIL

N.T.S.

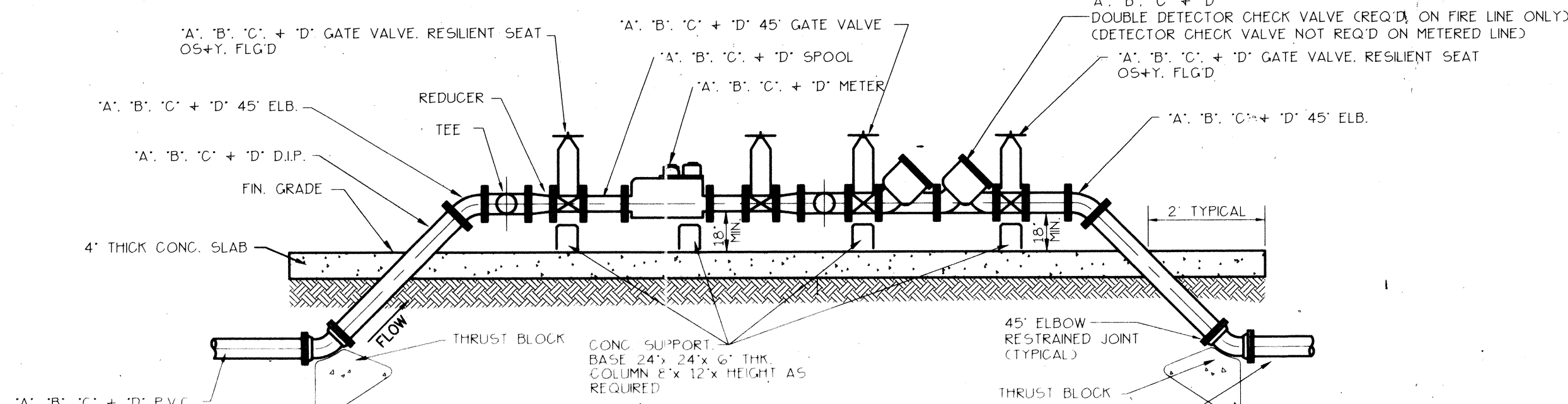
NOTES:

- 14" AND LARGER CARRIER PIPES REQUIRE 4"x4" WOOD SKIDS PER SET, SPACED AS SHOWN ABOVE.
- 12" AND SMALLER CARRIER PIPES REQUIRE ONLY 2"x4" WOOD SKIDS PER SET, SPACED 30" AWAY FROM THE BOTTOM OF THE CARRIER.
- SKID SIZES MAY VARY WITH LARGER SIZE CARRIER PIPES.
- MINIMUM CASING SIZE BASED ON STANDARD PUSH-ON JOINT PIPE. CONTRACTOR SHALL VERIFY MINIMUM CLEARANCE REQUIREMENTS FOR THE TYPE OF CARRIER PIPE SPECIFIED AND INSTALL LARGER THAN MINIMUM CASING SIZE FOR REQUIRED CLEARANCE, AT NO ADDITIONAL COST.



NOTE: SEE WATER METER/BACKFLOW PREVENTER TABLE FOR PIPE SIZE INFORMATION

PLAN

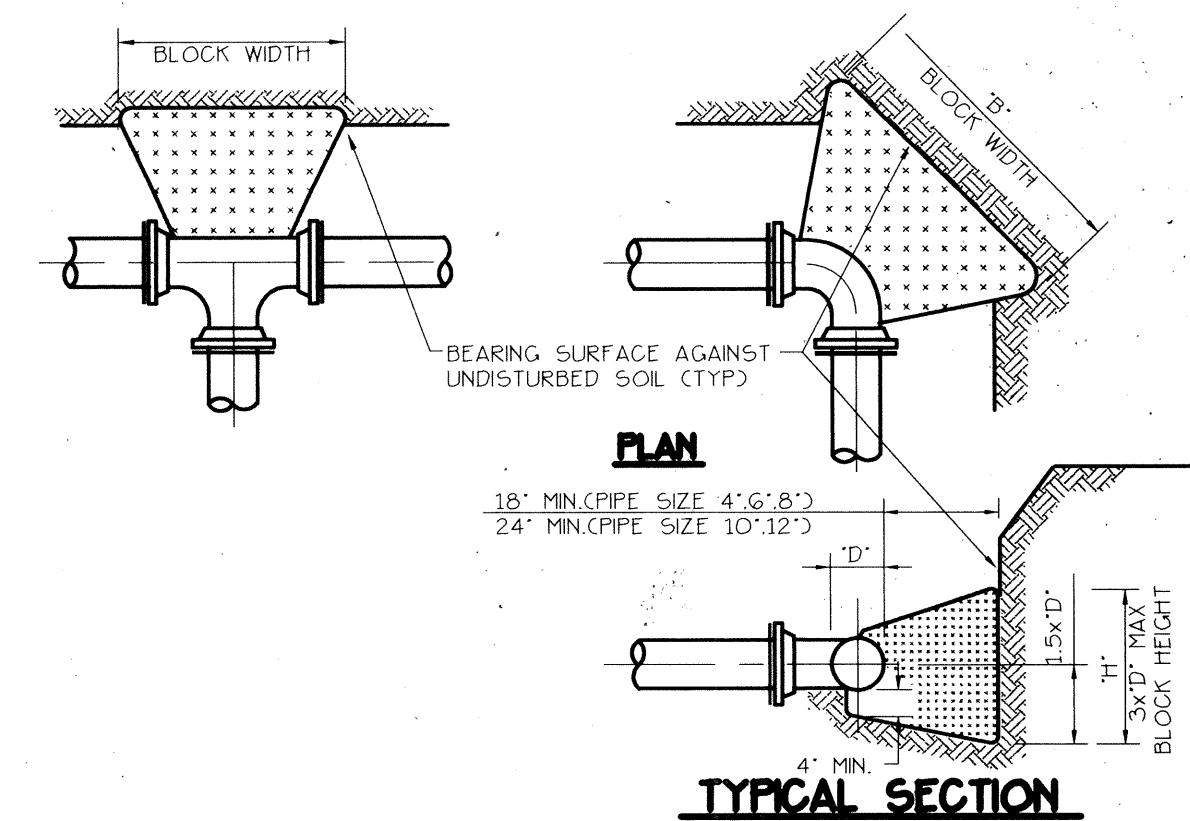


WATER METER AND BACKFLOW PREVENTER DETAIL

N.T.S.

NOTES:

1. ALL P.V.C. WATERMAN SHALL BE COLOR CODED BLUE W/CLASS DR-18(CAWWA C-900), W/3/16" COVER AND DETECTABLE TAPE.
2. CONTRACTOR TO CONTACT TOWN OF LONGBOAT KEY UTILITIES DIRECTOR FOR CHANGE OF MATERIALS.
3. CONTRACTOR SHALL USE 2" PVC SCH-40 FOR WATER SERVICE METER, AND RESPECTIVE FITTINGS TO UNITS IN ACCORDANCE W/ CONTRACT DOCUMENTS AND TOWN OF LONGBOAT KEY REGULATIONS.



TYPICAL SECTION

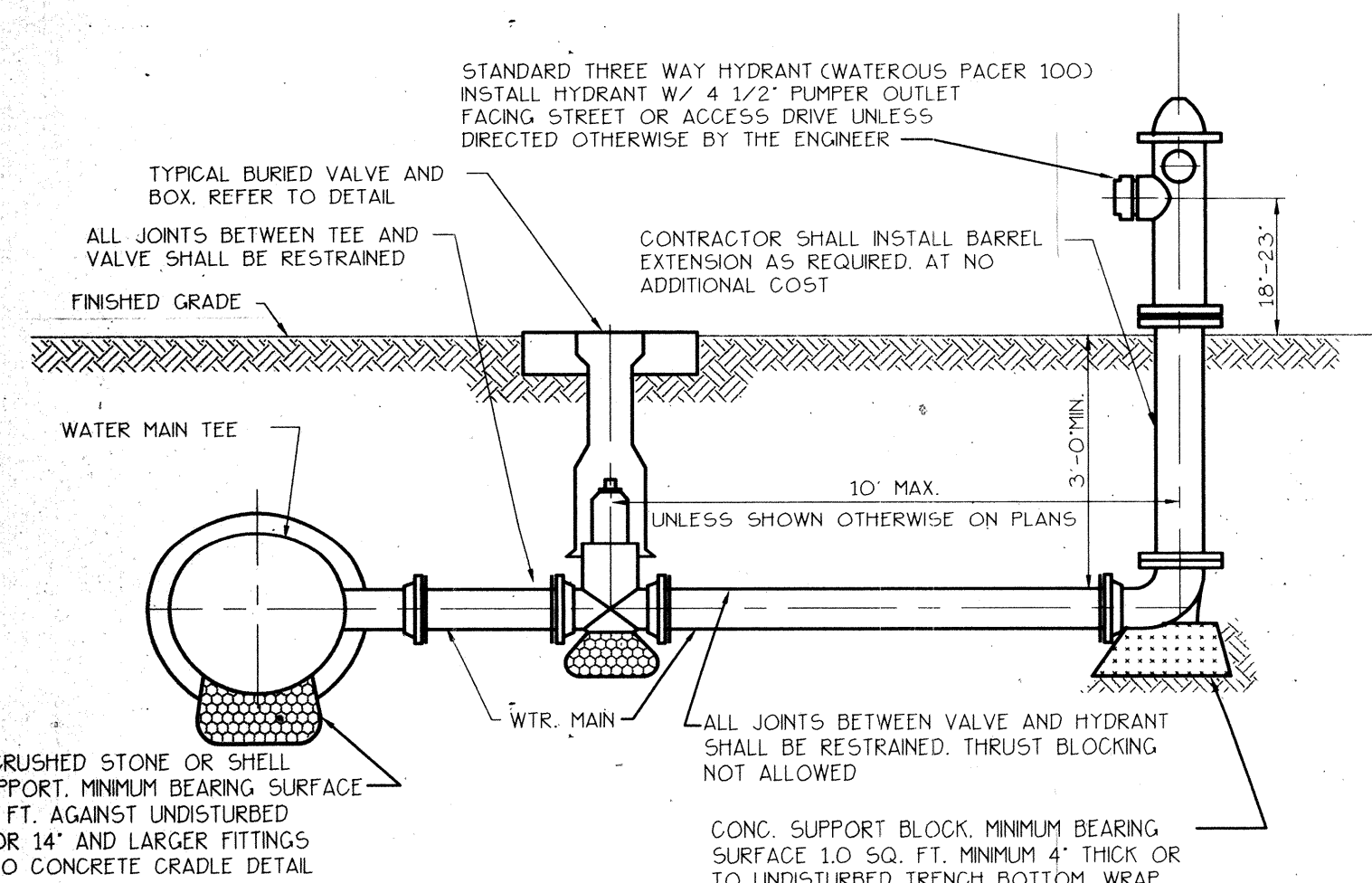
PIPE SIZE	BEARING SURFACE AREA (SQ. FT.)			
	90° ELB	45° ELB	22 1/2° ELB	TEE OR PLUG
4"	2.0	1.1	1.0	1.4
6"	4.5	2.4	1.2	3.2
8"	8.0	4.3	2.2	5.7
10"	12.5	6.8	3.5	8.8
12"	18.0	9.7	5.0	12.7

NOTES:

1. THRUST BLOCK BEARING AREA BASED ON 2000 PSF SAFE SOIL BEARING. IF ACTUAL SOIL BEARING IS LESS THAN 2000 PSF, CONTRACTOR SHALL BE REQUIRED TO PLACE ADDITIONAL THRUST BEARING AS DETERMINED BY THE ENGINEER, AT NO ADDITIONAL COST.
2. THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED SOIL.
3. CONCRETE SHALL BE KEPT CLEAR OF 1" BOLT AND PLACED BENEATH FITTINGS AS SHOWN OR SUPPORT WRAP ALL FITTINGS WITH PLASTIC BEFORE POURING THRUST BLOCK CONCRETE.
4. BEFORE POURING CONCRETE, PLUGS SHALL BE WRAP WITH PLASTIC AND A PRESSURE TREATED BOARD PLACED BETWEEN IT AND THE CONCRETE.
5. 'B' SHALL NOT EXCEED 2 x 'H'.
6. ALL IRON PIPE AND FITTINGS SHALL BE WRAPPED IN 8 MIL BLACK PLASTIC FOR CORROSION PROTECTION.

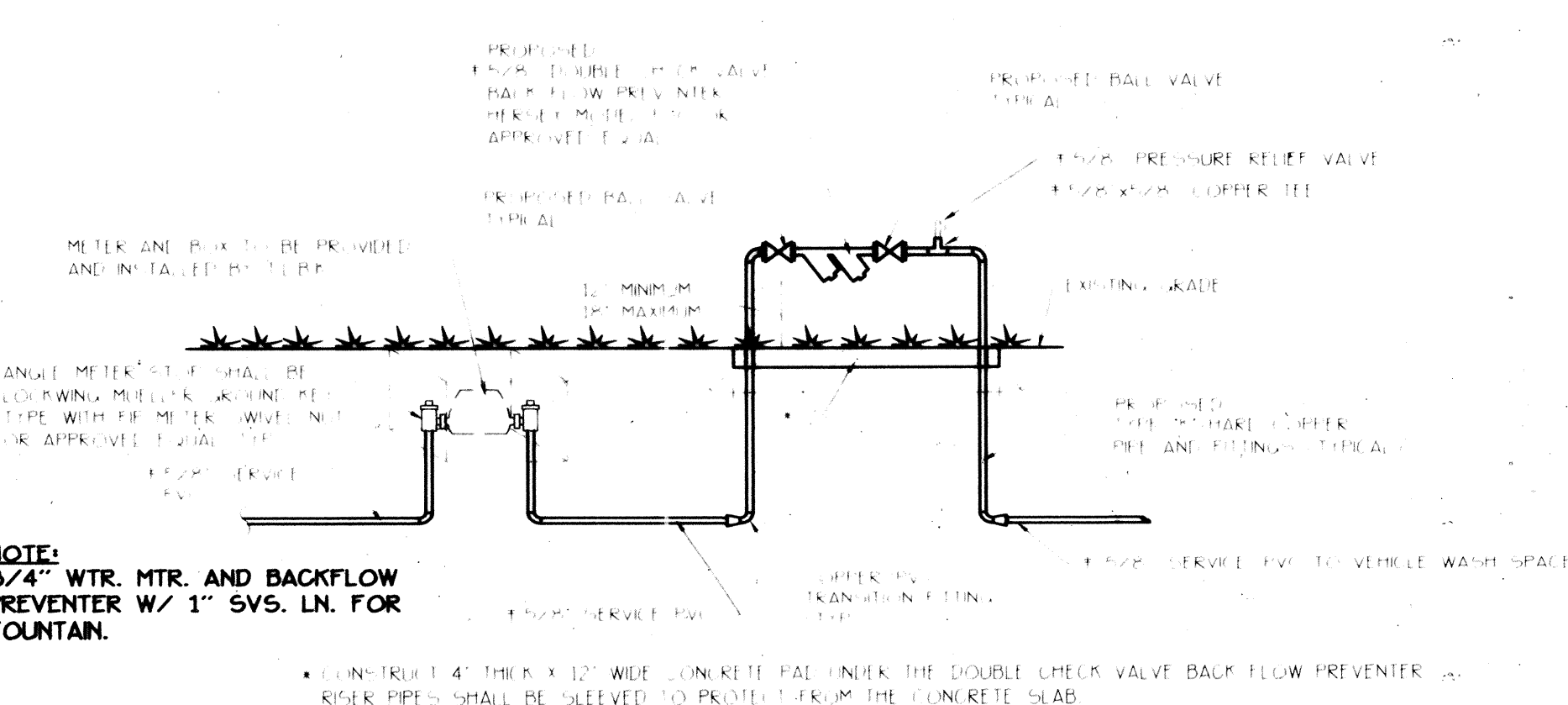
WATER MAIN THRUST BLOCK DETAIL

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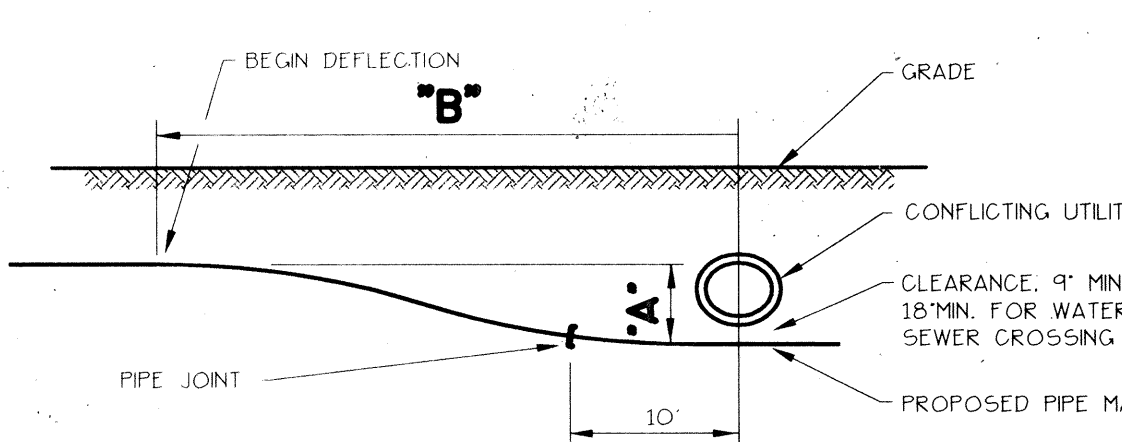
TYPICAL FIRE HYDRANT ASSEMBLY DETAIL

N.T.S.



WATER SERVICE FOR VEHICLE WASH SPACE AND WATER FOUNTAIN

N.T.S.



MINIMUM DISTANCE TO START DEFLECTION 'B'

BENDING RADIUS OF PIPE	TOTAL DEFLECTION (FT.)																								
	70	80	100	120	150	200	250	300	350	400	500	550	70	80	100	120									
10"	20	20	20	22	22	28	32	35	37	40	46	49	15	20	22	24	27	30	35	39	42	46	49	56	60
20"	24	25	28	31	35	40	45	49	53	57	65	70	30	30	31	35	38	42	48	55	60	65	69	80	85

ALLOWABLE BENDING RADIUS DETERMINED FOR ASTM D2241 SDR 18 AND C-900

PIPE DIAMETER	1 1/2"	2"	2 1/2"	3"	4"	6"	8"	10"
ALLOWABLE BENDING RADIUS (FT.)	SDR 21	70	80	100	120	150	220	360
C-900	—	—	—	—	200	300	400	475

UTILITY CROSSING DETAIL

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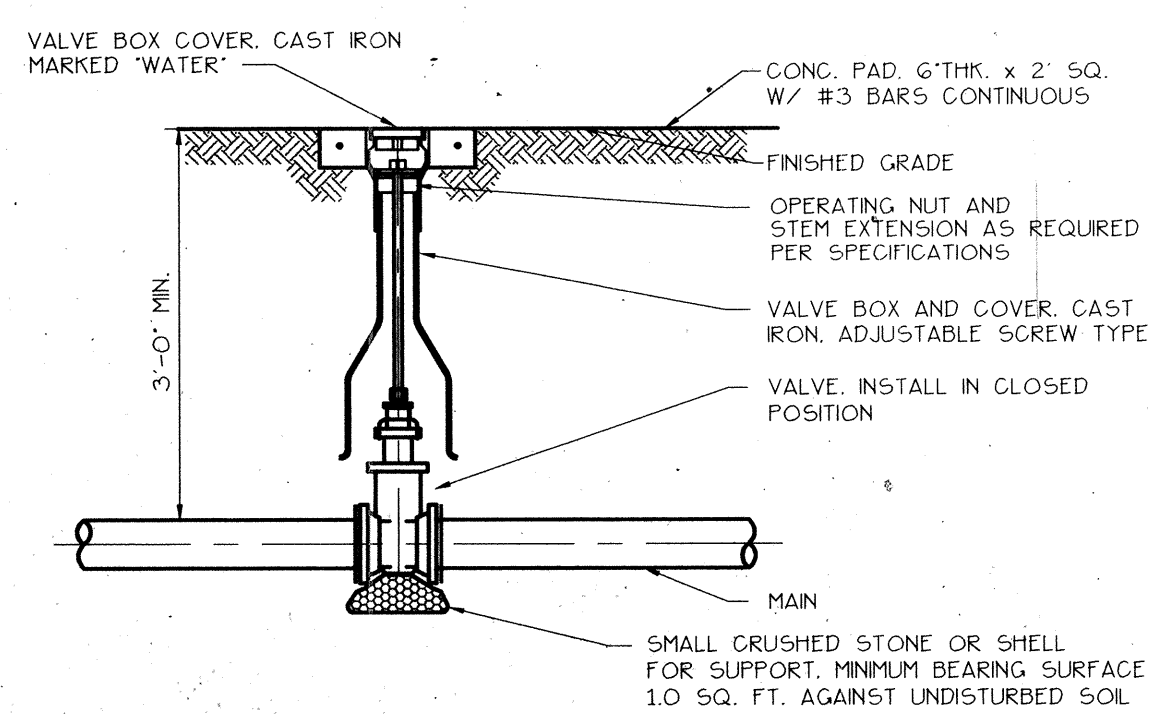
NOTE:

ALL BURIED DUCTILE IRON PIPE AND FITTINGS SHALL RECEIVE 8 MIL POLYWRAP

NOTE: THE PROJECT HAS BEEN CONSTRUCTED IN COMPLIANCE WITH THE APPROVED PLANS

RECORD DRAWINGS

WATER METER / BACKFLOW PREVENTER DIMENSION TABLE	
DETAIL DESIGNATION	PIPE SIZE (DIAMETER)
"A"	3"
"B"	2"
"C"	1-1/2"
"D"	1"



BURIED VALVE DETAIL

N.T.S.

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REVISED	BY	DATE	D.C.	DATE	DESCRIPTION

REVISED	BY	DATE	D.C.	DATE	DESCRIPTION
	RPA	12-07-94		12-07-94	NOTE 6-2 WATER METER NOTES (CLBK)
	RPA	12-20-95		12-20-95	SPECIFIED LOGGING - PULLER AND METER STOP (CLBK)
	RPA	8-1-95		8-1-95	WATER METER / BACKFLOW PREVENTER SIZE MODIFICATIONS
	RPA	10-20-95		10-20-95	ELIMINATED DETECTOR CHECK VALVE ON METERED LINE (CLBK)

TASK	INITIALS	DATE
DESIGN	M.M.H.	9/30/94
DRAWN	R.P.A.	9/30/94
CHECKED		
QUALITY CHK		
DATE SCALE		
VERT. SCALE		

SEAL	ENGINEER OR SURVEYOR OF RECORD	DATE