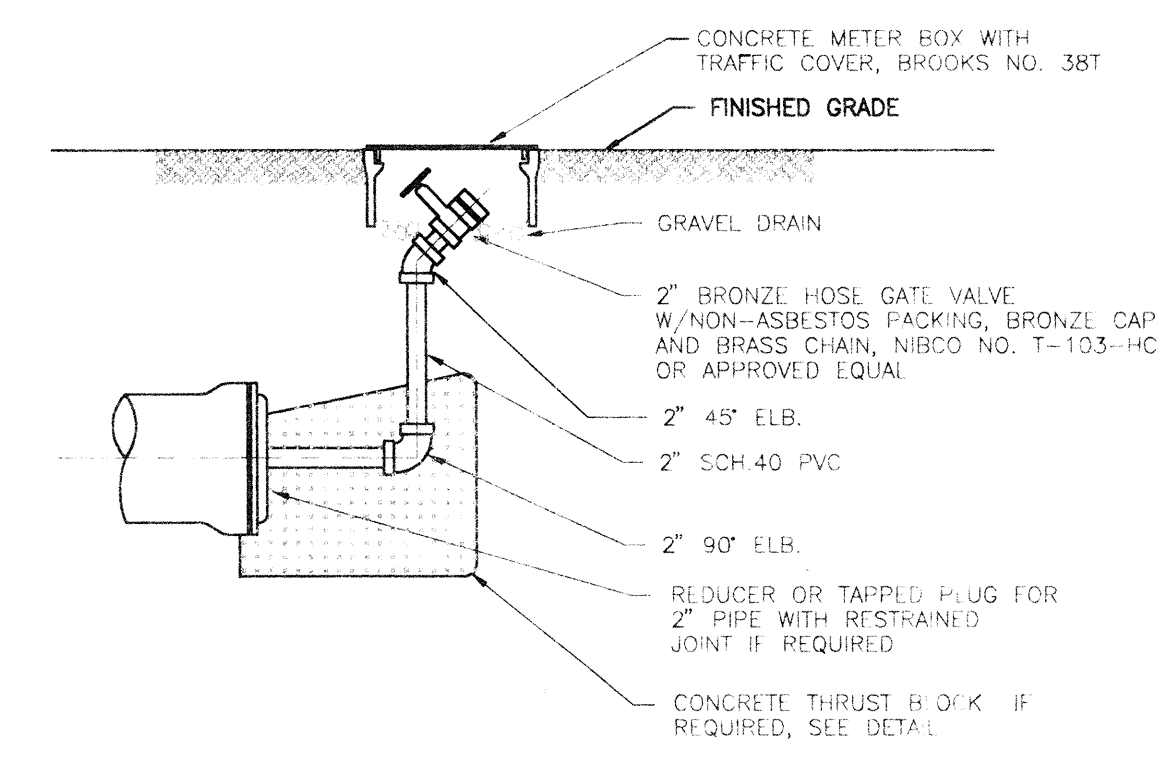
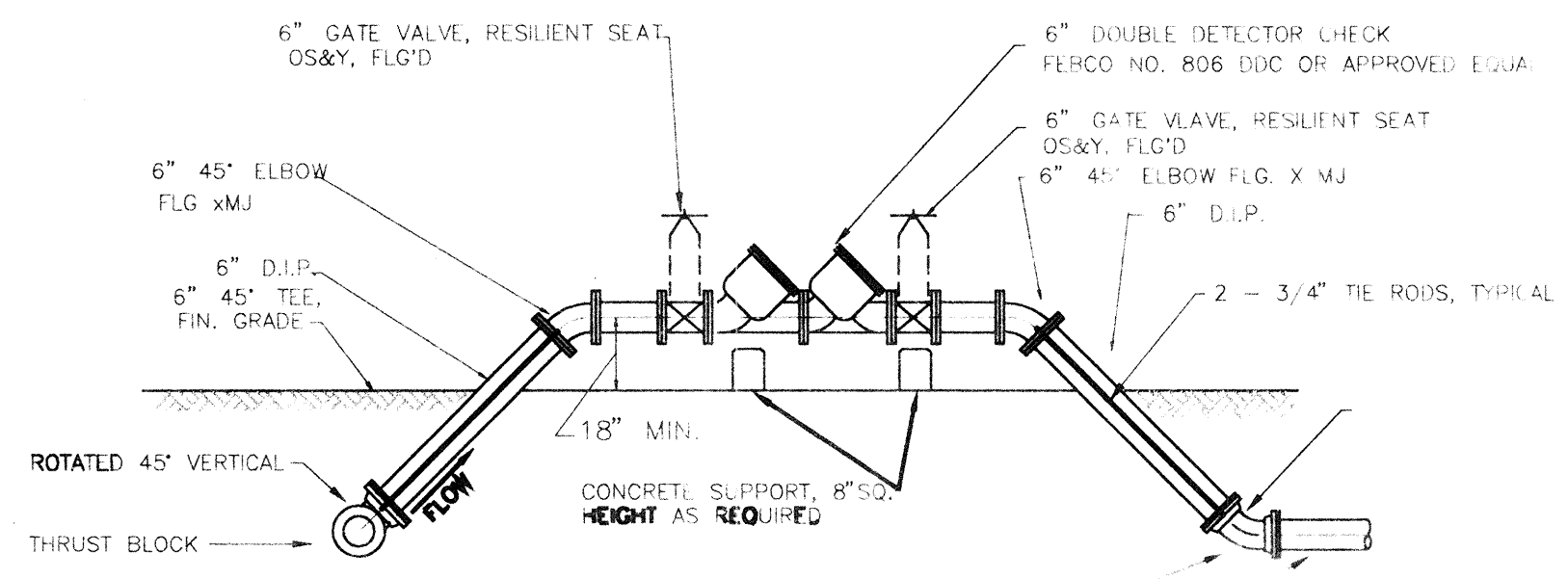


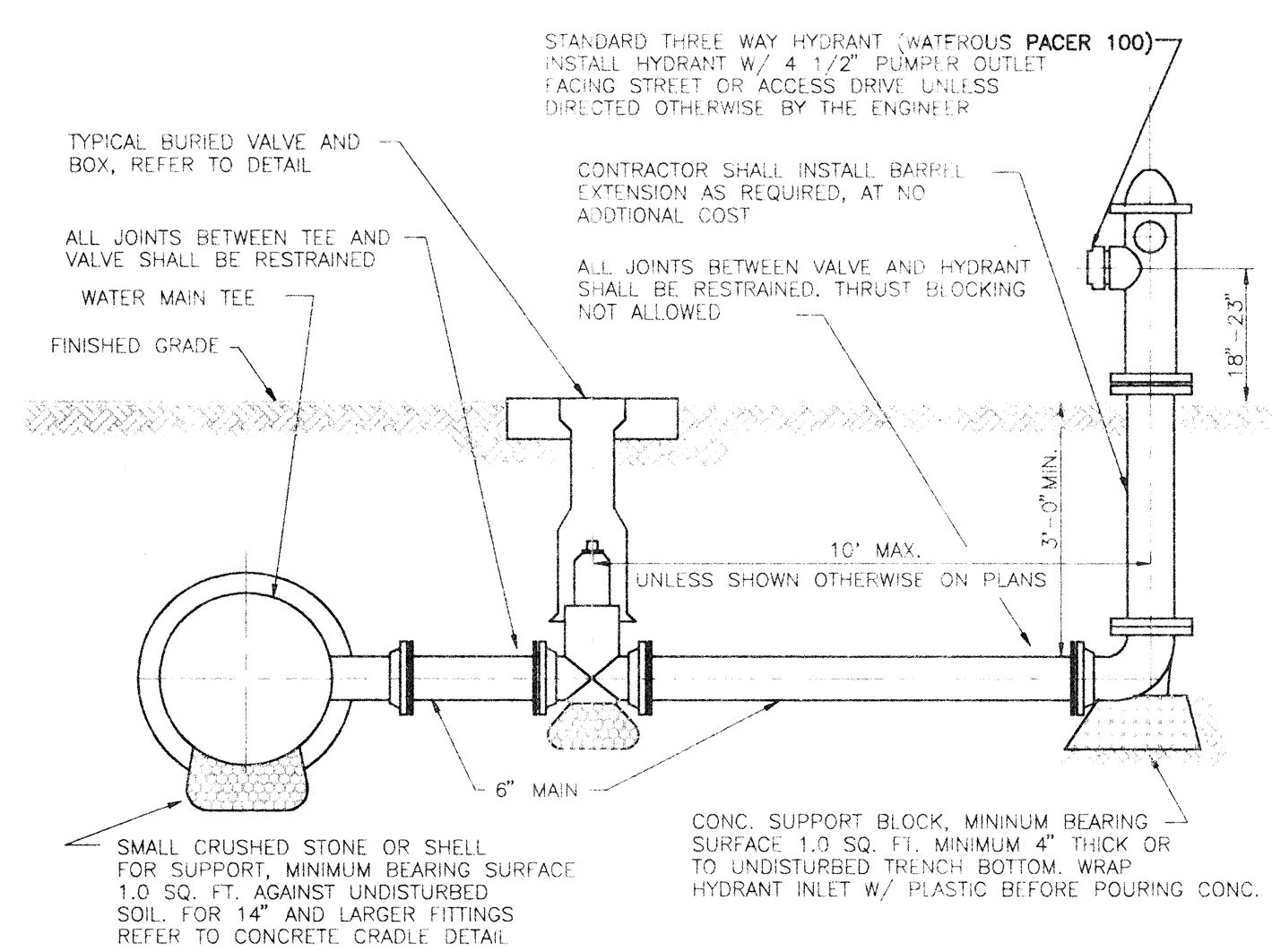
TYPICAL METERED SERVICE DETAIL



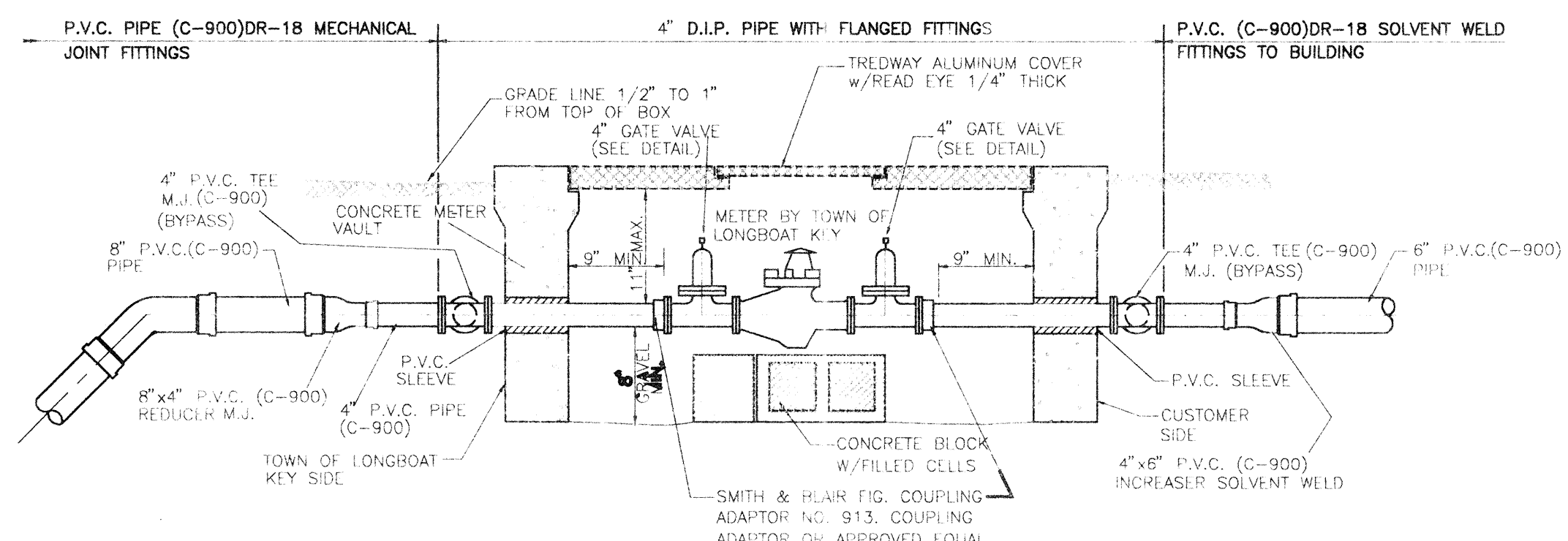
BLOWOFF ASSEMBLY DETAIL



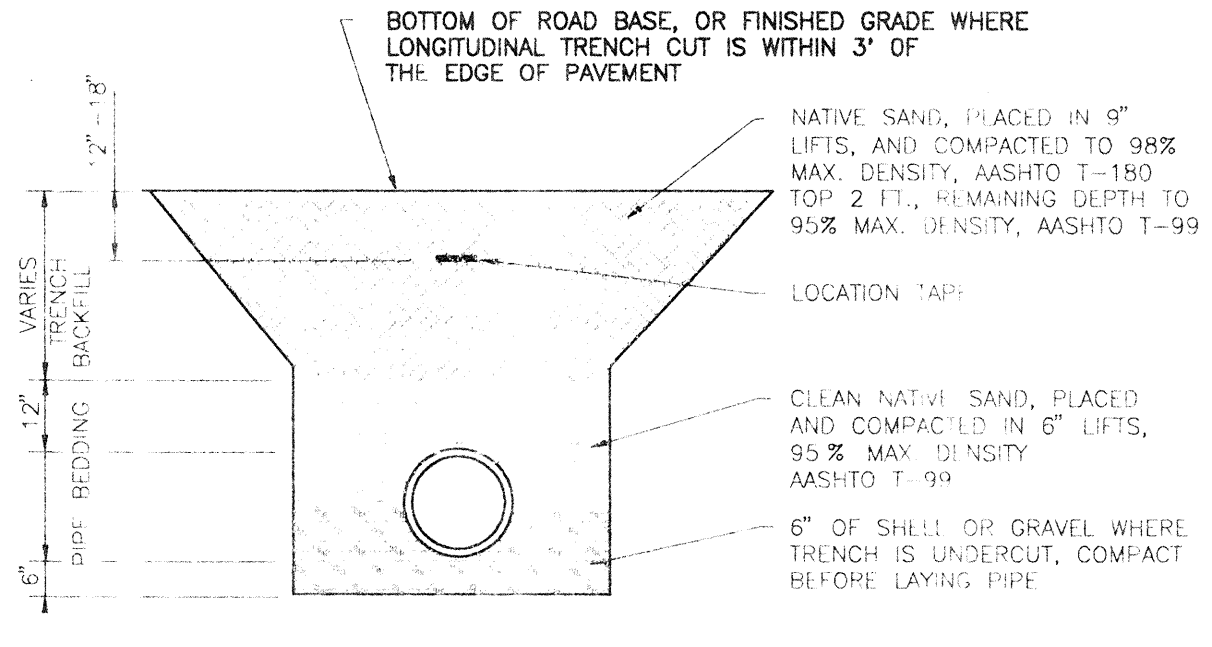
BACKFLOW PREVENTER DETAIL



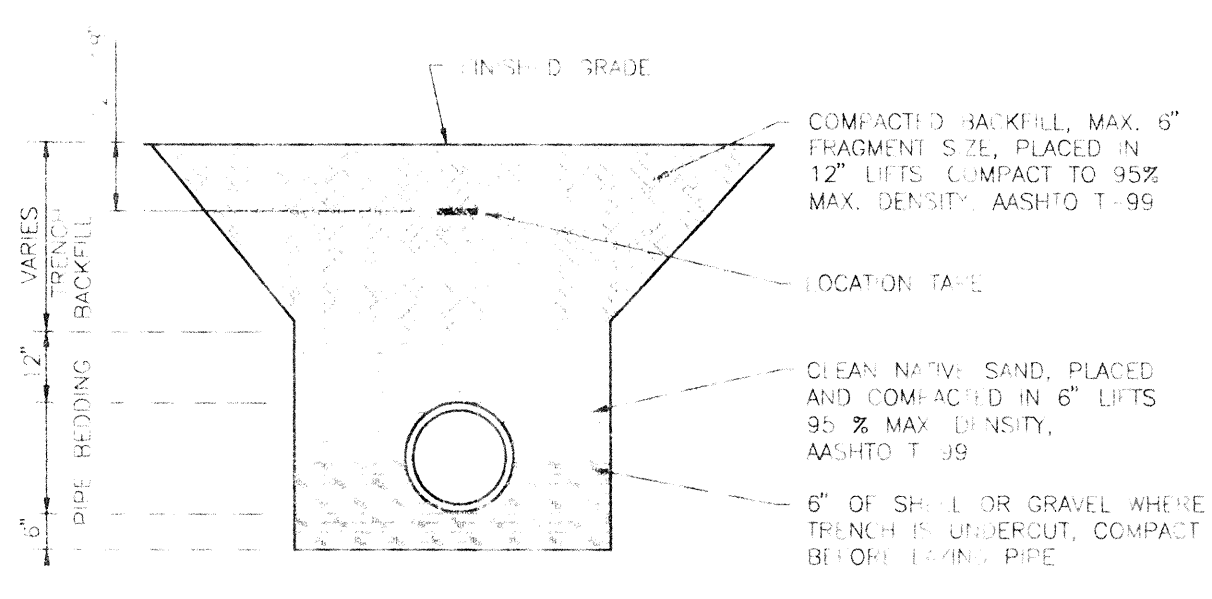
TYPICAL FIRE HYDRANT ASSEMBLY DETAIL



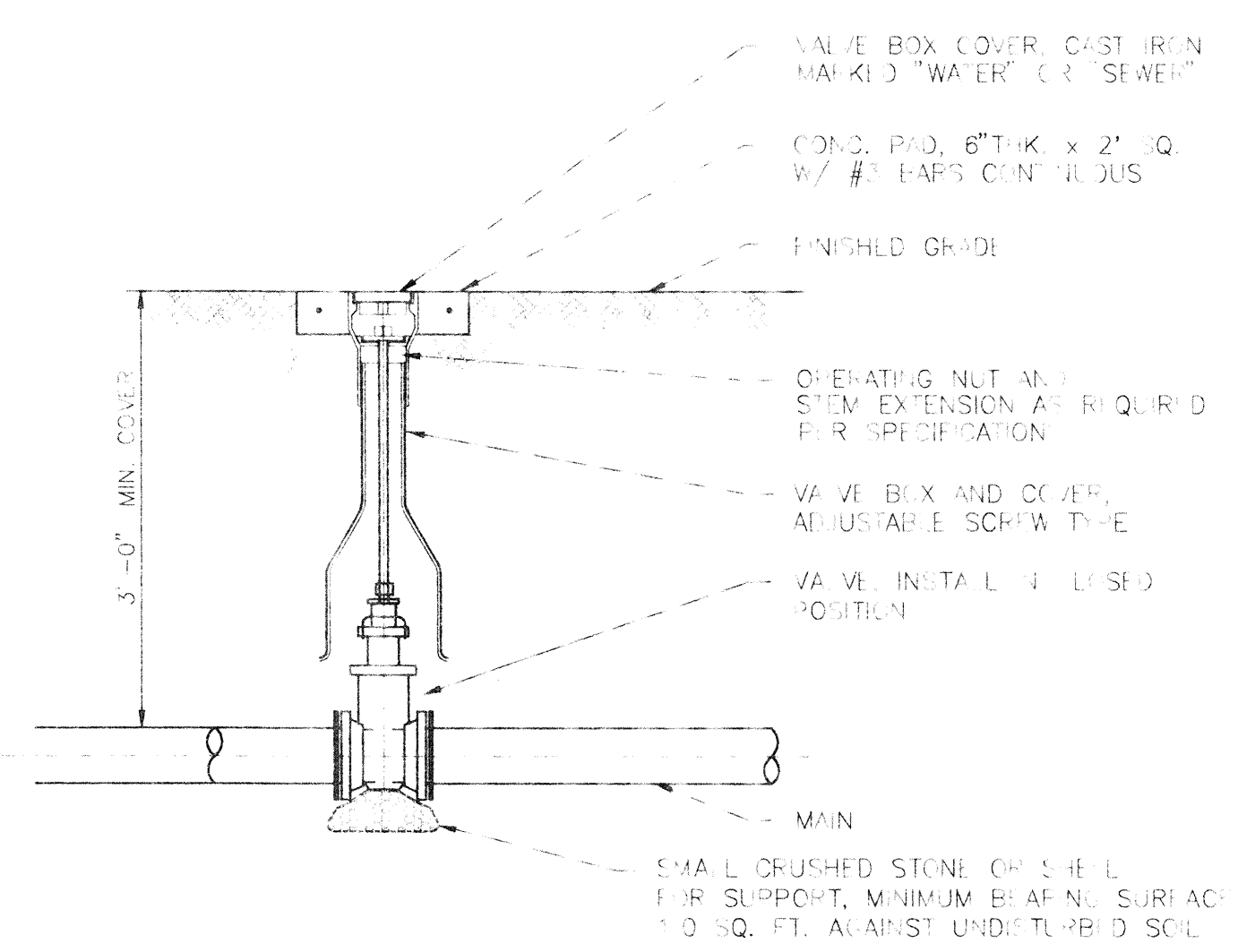
WATER METER INSTALLATION



TRENCH "A" DETAIL



TRENCH "B" DETAIL

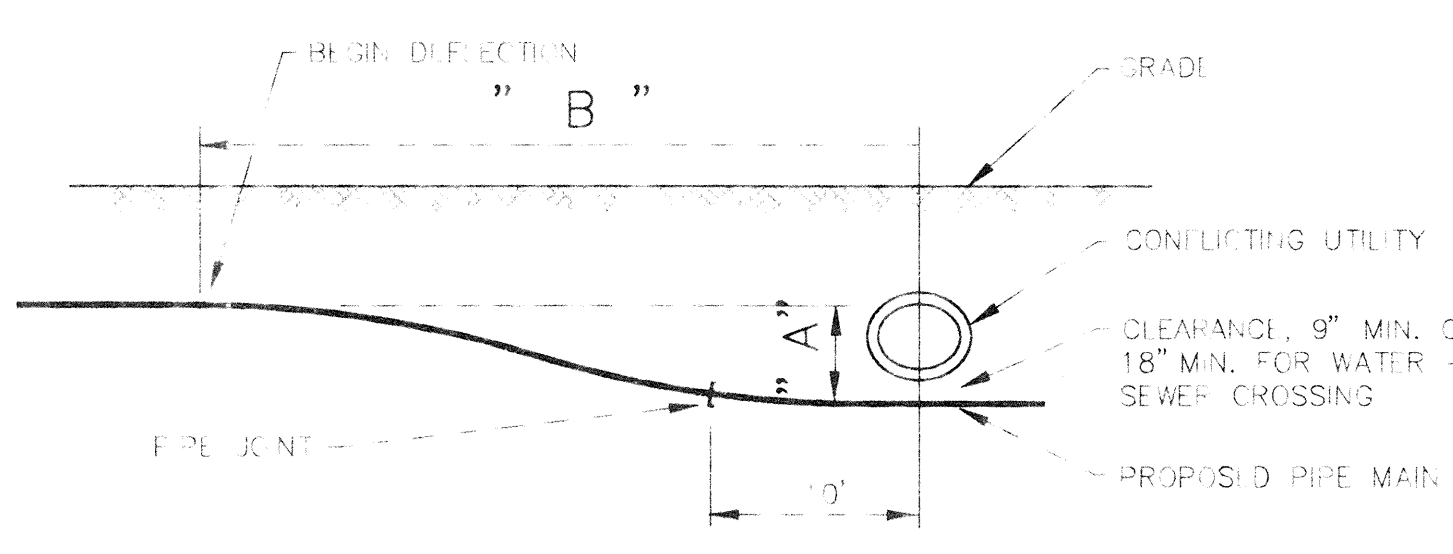


BURIED VALVE DETAIL

NOTES: PROTECTION OF WATER SYSTEMS

1. THE HORIZONTAL SEPARATION BETWEEN SANITARY SEWERS AND EXISTING OR PROPOSED WATER MAINS SHALL NOT BE LESS THAN 10 FEET. HOWEVER, SHOULD THE STIPULATED HORIZONTAL SEPARATION NOT BE POSSIBLE, THE SEWER MAIN SHALL BE COMPLETELY ENCASED IN CONCRETE (6 INCH MINIMUM), CONSTRUCTED OF DUCTILE IRON PIPE WITH PRESSURE TIGHT JOINTS OF PROTECTED BY OTHER METHODS AS APPROVED BY THE ENGINEER.
2. UNLESS SEWER MAINS CROSS BELOW WATER MAINS WITH A VERTICAL SEPARATION OF 18 INCHES BETWEEN THE BOTTOM OF THE WATER MAIN AND TOP OF THE SEWER MAIN, SPECIAL PROTECTION SHALL BE PROVIDED. SAID PROTECTION SHALL CONSIST OF COMPLETELY ENCASED THE SEWER MAIN IN CONCRETE (6 INCH MINIMUM) FOR A MINIMUM DISTANCE OF 10 FEET (UNLESS APPROVED OTHERWISE BY THE ENGINEER) EACH SIDE OF THE WATER MAIN, OR INSTALLATION OF DUCTILE IRON PIPE WITH PRESSURE TIGHT JOINTS FOR THE SAME DIMENSION.
3. IF A CROSSING WHERE THE SEWER MAIN IS LAD OVER THE WATER MAIN IS UNAVOIDABLE THEN THE ABOVE MENTIONED PRECAUTIONS SHALL BE OBSERVED REGARDLESS OF THE DISTANCE OF VERTICAL SEPARATION BETWEEN WATER MAINS AND SEWER MAINS.

ENCASEMENT DETAIL FOR WATER MAIN SYSTEMS



MINIMUM DISTANCE TO START DEFLECTION "B"

PIPE SIZE (IN.)	SPACING (FEET)										
	20	25	30	35	40	45	50	55	60	65	
4"	0.5	2.0	2.0	2.0	2.0	2.0	2.2	2.5	2.6	2.8	3.2
6"	1.0	2.0	2.0	2.0	2.2	2.8	3.2	3.5	3.7	4.0	4.6
8"	1.5	2.0	2.2	2.4	2.7	3.0	3.5	3.9	4.2	4.6	5.6
10"	2.0	2.5	2.8	3.1	3.5	4.0	4.5	4.9	5.3	5.7	6.5
12"	3.0	3.0	3.5	3.8	4.2	4.9	5.5	6.0	6.5	6.9	8.0

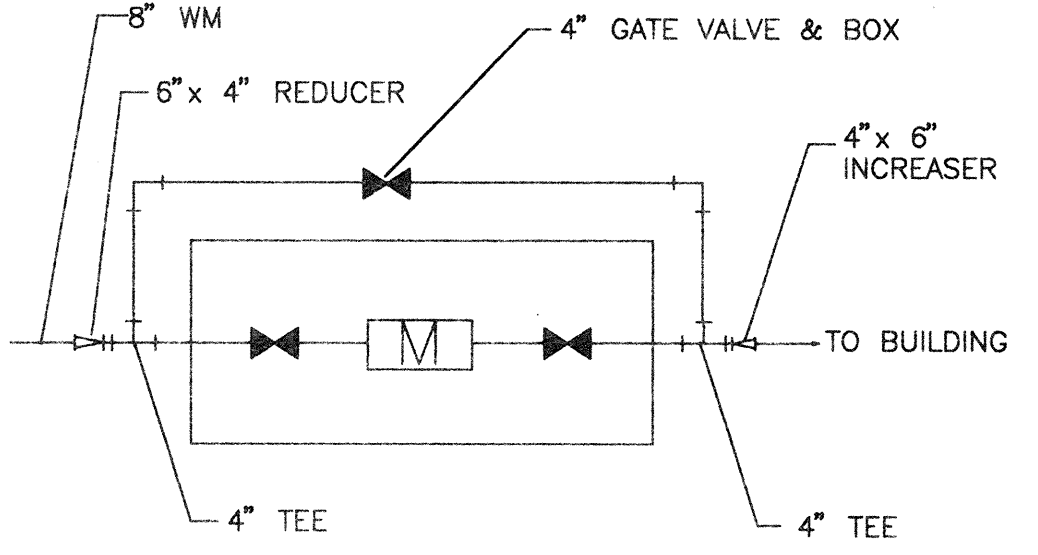
ALL VALVE BEARING RADII ARE DETERMINED FOR ACTIVE, SDR 18 AND C-900

PIPE DIAMETER (IN.)	1 1/2"	2"	2 1/2"	3"	4"	6"	8"	10"
MINIMUM BEARING SURFACE (SQ. FT.)	1.0	1.5	2.0	2.5	4.0	9.0	16.0	25.0
MINIMUM BEARING SURFACE (SQ. FT.)	1.0	1.5	2.0	2.5	4.0	9.0	16.0	25.0

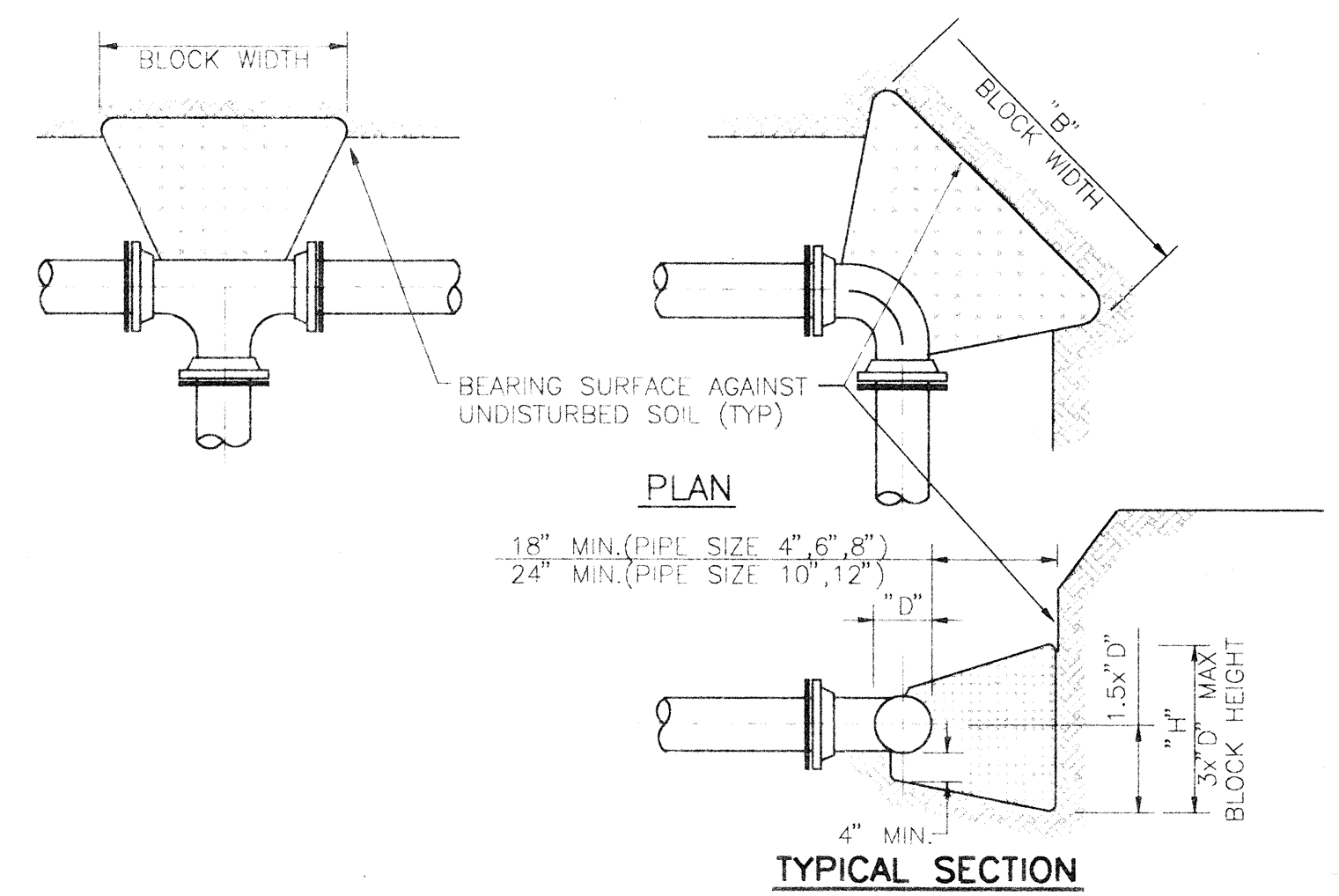
UTILITY CROSSING DETAIL

NOTES:

1. ALL P.V.C. WATERMAIN SHALL BE COLOR CODED BLUE W/CLASS DR-18(AWWA C-900), W/36" 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 RECREATION BLDG. IN ACCORDANCE W/ CONTRACT DOCUMENTS AND TOWN OF LONGBOAT KEY REGULATIONS
4. ALL IRON PIPE & FITTINGS (WATER & WASTEWATER) SHALL BE COMPLETELY WRAPPED IN 8 MIL. THICK BLACK PLASTIC FOR CORROSION PROTECTION.



METER BOX SCHEMATIC



BEARING SURFACE AREA (SQ. FT.)

PIPE SIZE	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

DESIGN PRESSURE = 150 PSI

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 "H" 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".

WATER MAIN THRUST BLOCK DETAIL

CONSTRUCTION PLANS - PH. 1

GRAND BAY
ARVIDA / JMB PARTNERS
WATER SUPPLY DETAILS

DATE	SCALE	AS NOTED	DATE	SCALE	AS NOTED

Landry & Eber
ENGINEERS SURVEYORS
150 N. Tomball Trl., Suite 501, Springdale, Florida 34256
(813)985-6004 FAX (813)985-7601

APPROVED: [Signature]
DATE: [Blank]

PROJECT: A00101-21
SHEET: 6
12