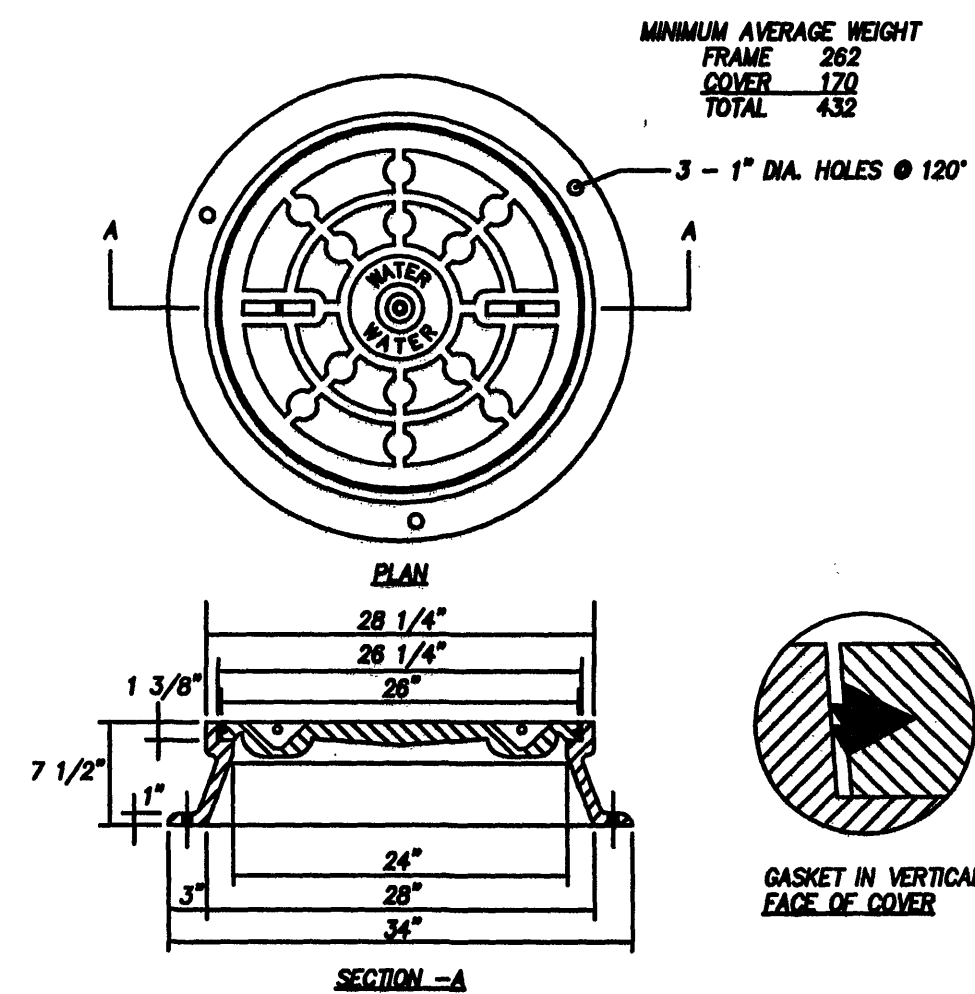
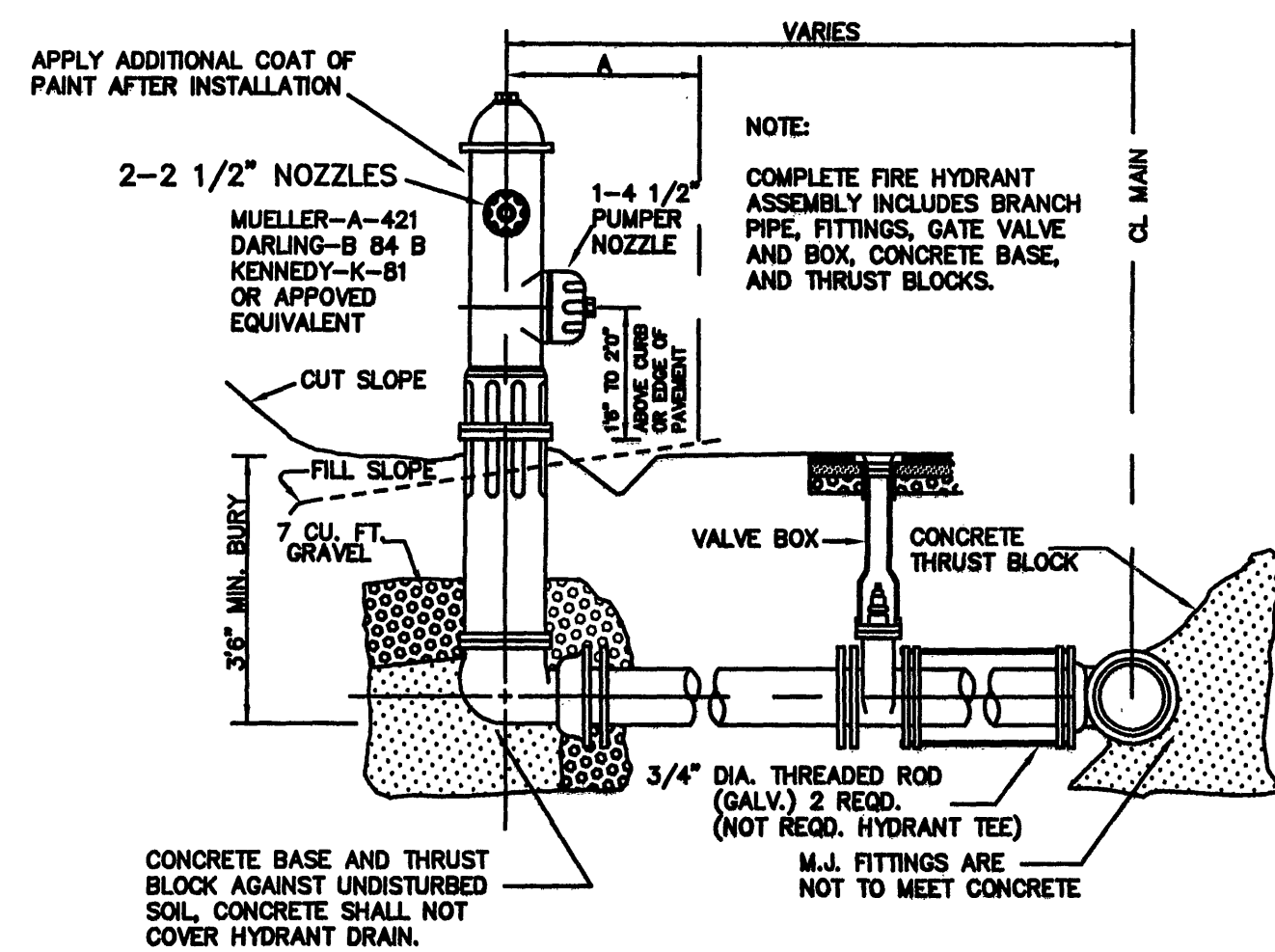


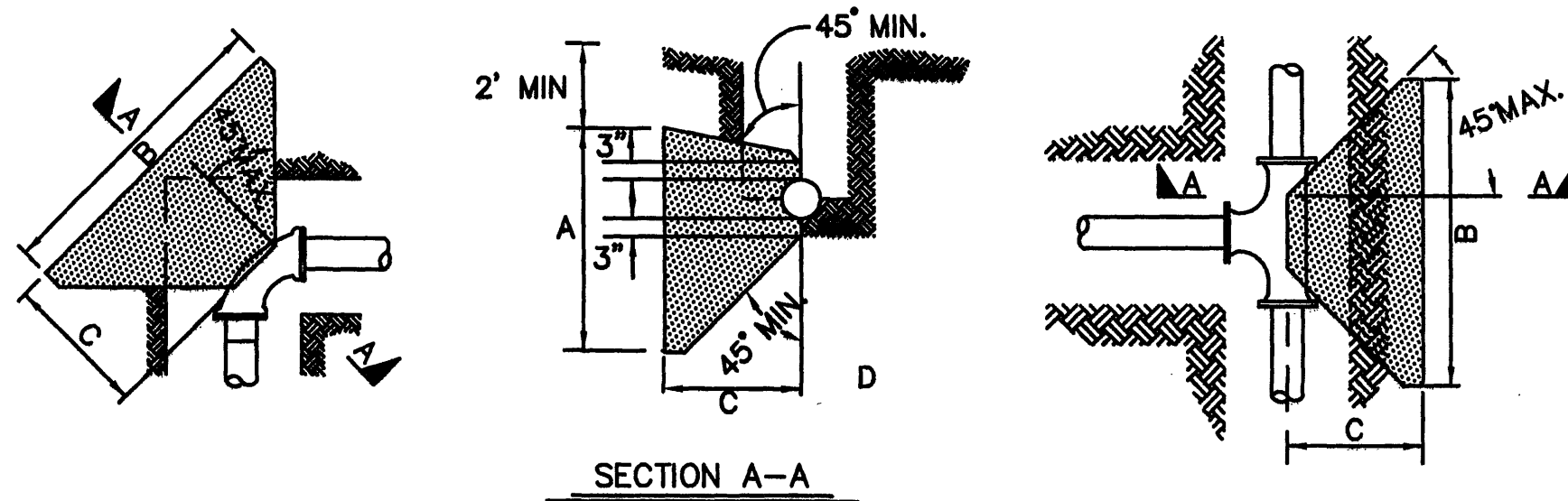


**WATER VAULT FRAME AND COVER
INSTALLATION DETAIL**

- NOTES:
- (1) MAIN BODY OF HYDRANT MUST BE PRIMED WITH ONE COAT ZINC CHROMATE PRIMER AND FINISHED WITH ALUMINUM OR SILVER PAINT. FIRE MARSHALL WILL COLOR-CODE THE CAPS AFTER FLOW TESTING.
 - (2) DISTANCE "A" WITH CURB AND CUTTER, 2' MIN., 4' MAX. FROM BACK OF CURB.
 - (3) DISTANCE "A" WITHOUT CURB AND CUTTER, 6' MIN., 12' MAX. FROM EDGE OF PAVEMENT.
 - (4) AREA AROUND HYDRANT AT A RADIUS OF 4' TO BE APPROXIMATELY LEVEL AND UNOBSTRUCTED FOR ROAD CONSTRUCTION.



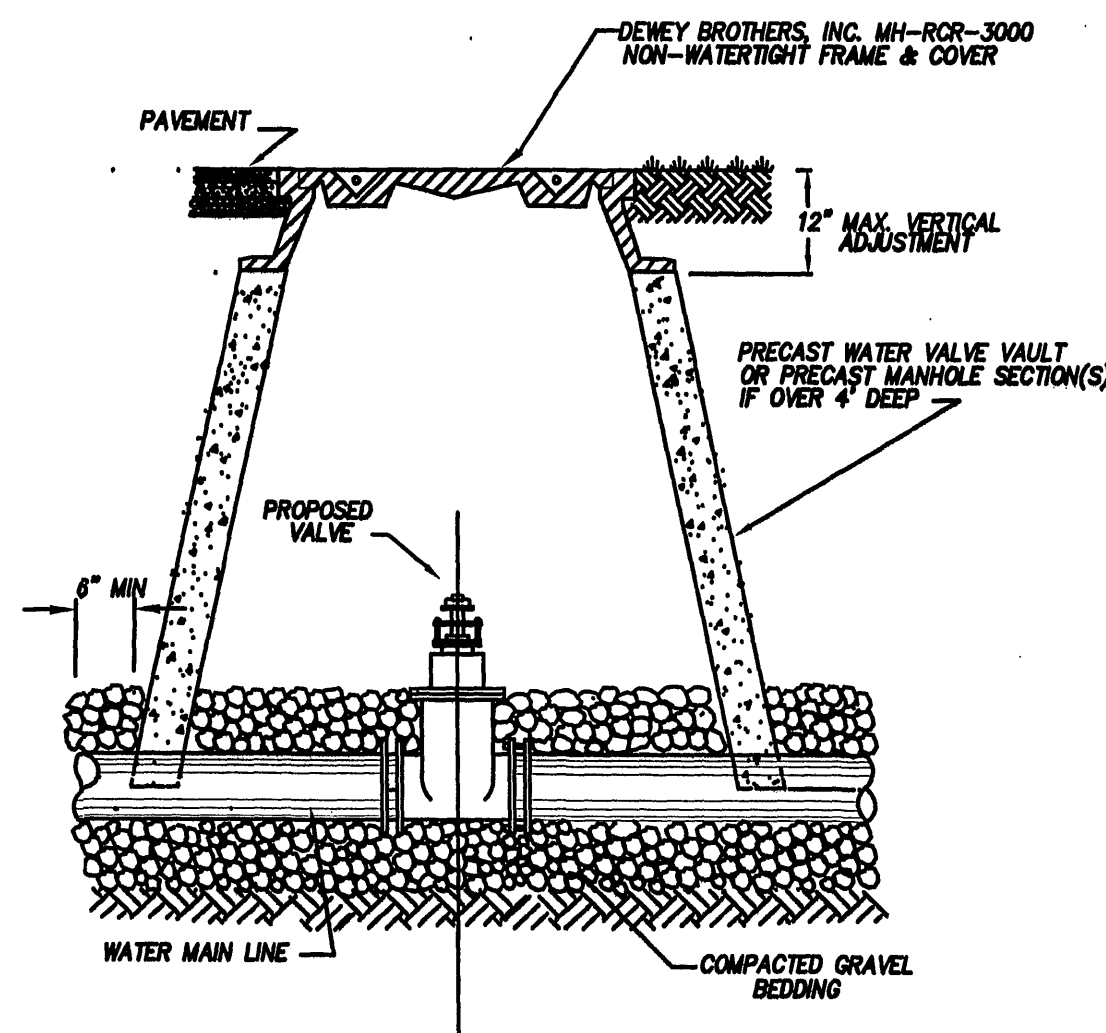
FIRE HYDRANT SETTING



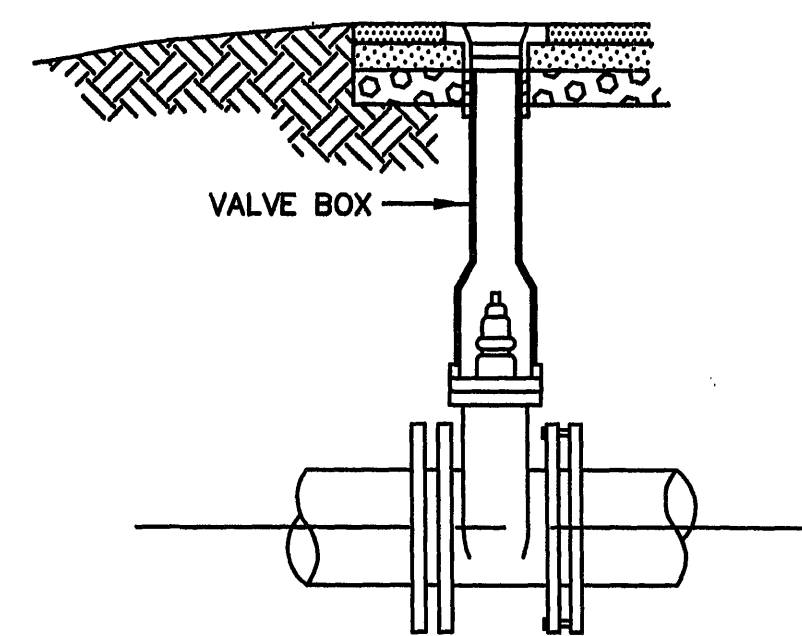
PIPE SIZE	TEE OR DEAD END	90° BEND	45° BEND	22.5° LESS BEND
8" OR LESS	1.2	3.0	1.0	1.5
10"	1.7	3.8	1.5	2.0
12"	2.0	4.5	2.0	2.5
14"	2.5	5.5	2.5	3.0
16"	3.5	7.0	3.0	4.0
24"	5.0	10.0	4.5	6.0

- NOTES:
1. THE ABOVE NOTED DIMENSIONS ARE MINIMUM BASED ON CONCRETE ANCHOR EXTENDING TO UNDISTURBED SOIL. LINE PRESSURE NOT TO EXCEED 150 PSI AND, MINIMUM SOIL BEARING CAPACITY OF 2500 PSF; UNSATISFACTORY SOIL BEARING OR EXCESS PRESSURE WILL REQUIRE ADDITIONAL DESIGN.
 2. CONCRETE SHALL NOT BE POURED ON JOINTS OR BOLTS.
 3. CONCRETE TO BE MINIMUM 3000 PSI - 28 DAY COMPRESSIVE STRENGTH.

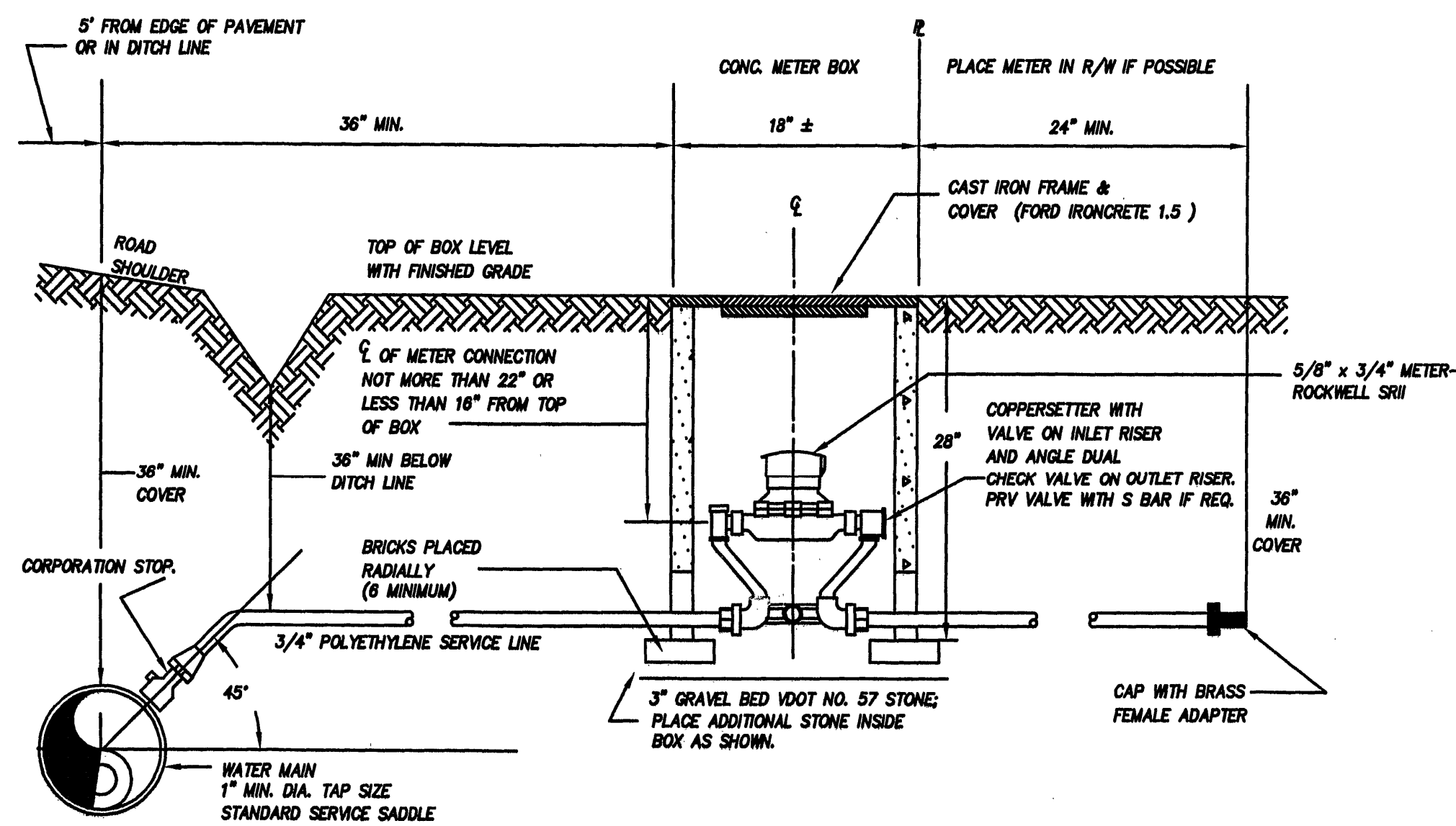
**THRUST BLOCK FOR HORIZONTAL
AND LOWER VERTICAL BENDS**



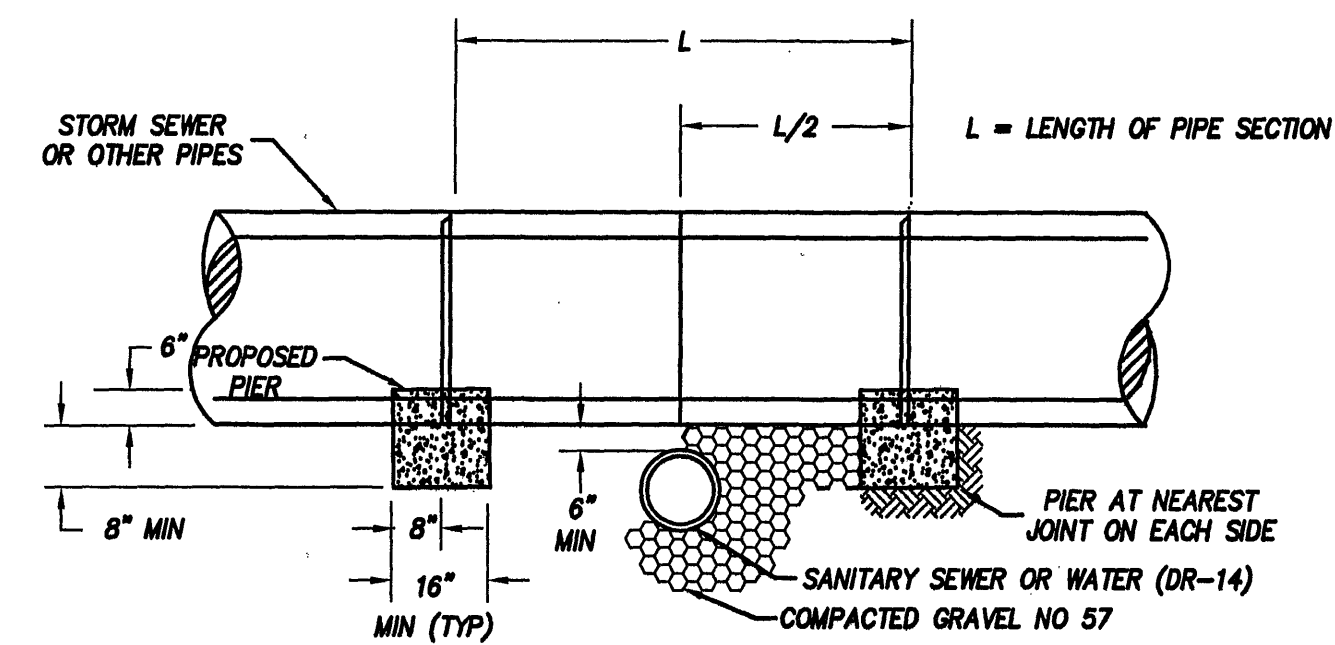
WATER LINE VALVE VAULT



WATER LINE VALVE INSTALLATION

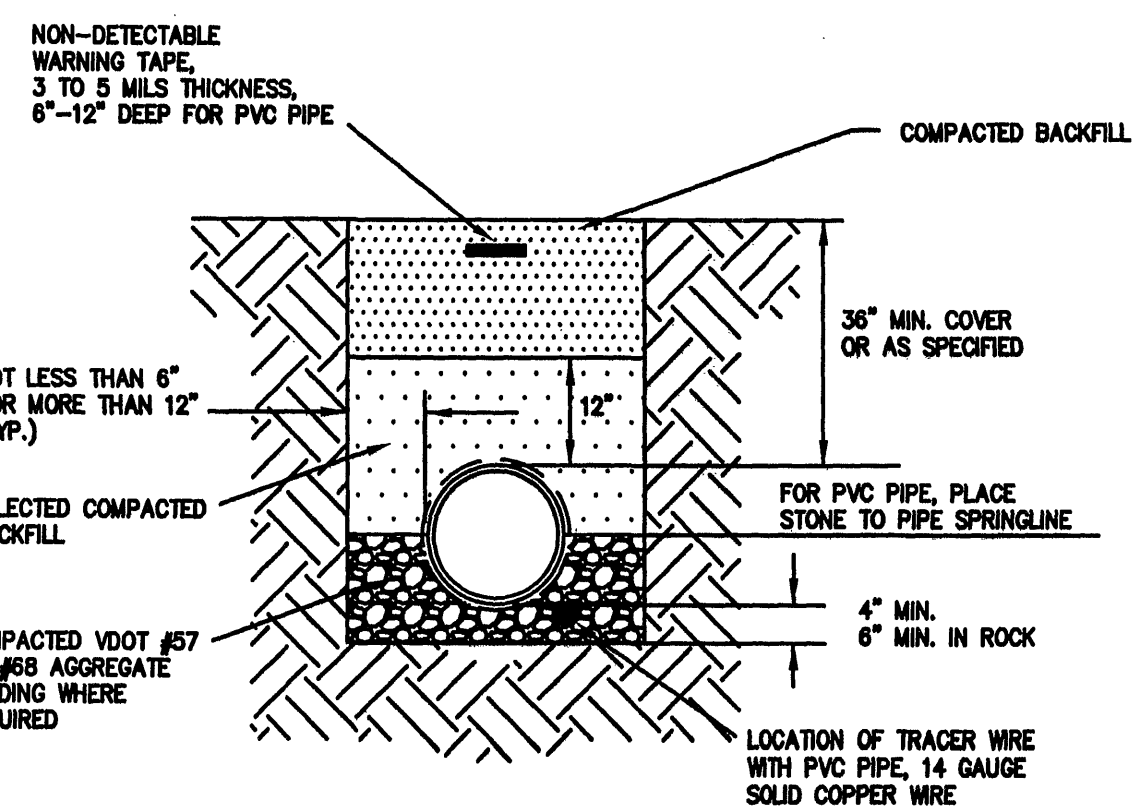


SINGLE RESIDENTIAL WATER SERVICE



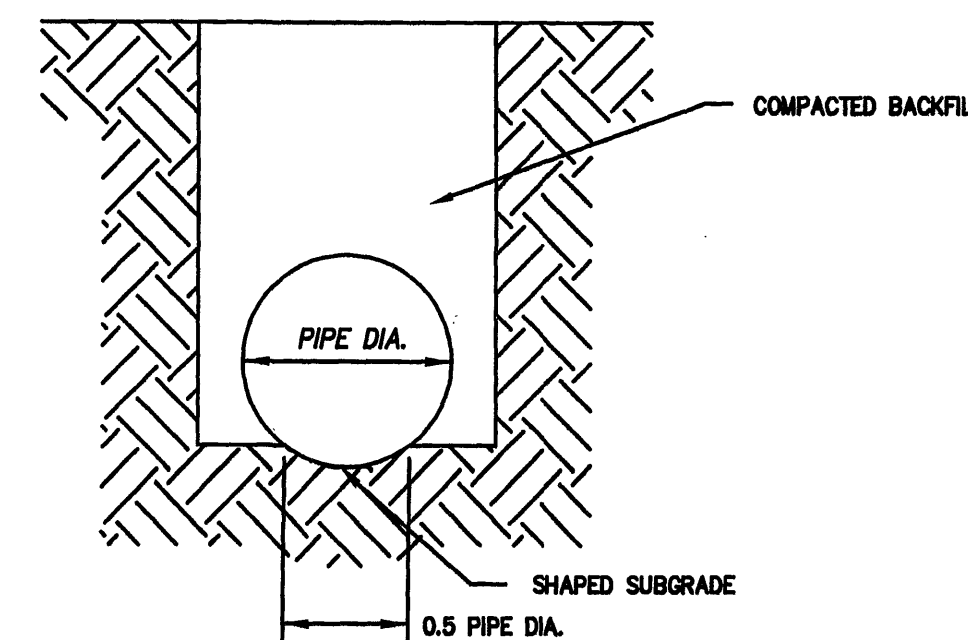
- NOTE:
1. PIER REQUIRED WHEN STORM DRAIN OR OTHER PIPES CROSSES OVER THE OTHER UTILITY WITH A VERTICAL CLEARANCE OF LESS THAN 18".
 2. PIER TO BE BUILT ON UNDISTURBED EARTH.
 3. CONCRETE TO BE READY MIX, CLASS A3.

CONCRETE PIER

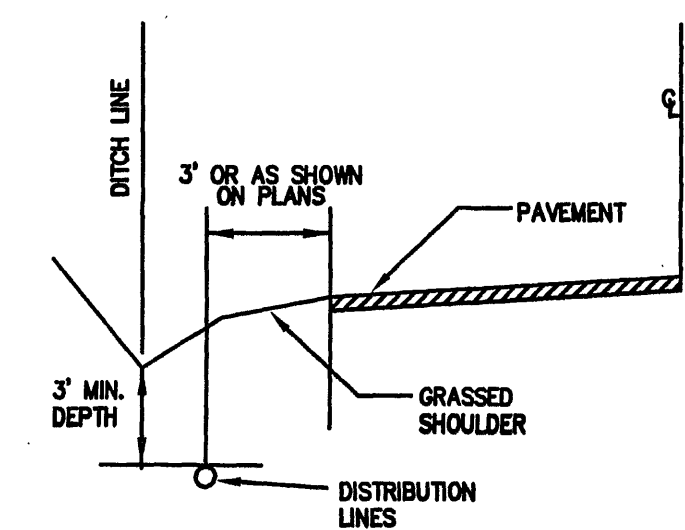


- NOTES:
1. THIS DETAIL APPLICABLE FOR DEPTHS LESS THAN 14 FEET.
 2. PROVIDE 14 GAUGE SOLID COPPER LOCATOR WIRE ALONGSIDE ALL PVC PIPE AND LOOP AROUND ALL VALVES.

PVC WATER MAIN TRENCH

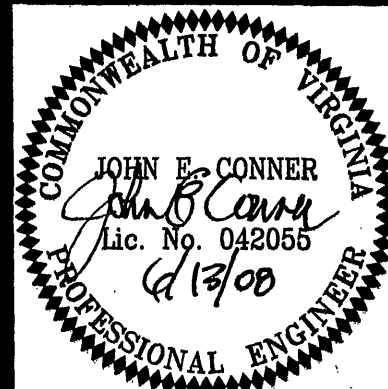
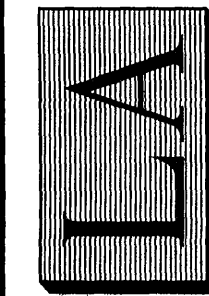


PIPE BEDDING DETAIL (CLASS 'C')



WATER LINE LOCATION

LUMSDEN ASSOCIATES, P.C.
ENGINEERS-SURVEYORS-PLANNERS
ROANOKE, VIRGINIA



**WATER
DETAILS**

SECTION No. 9
THE WATER'S EDGE
PREPARED FOR
WILLARD CONSTRUCTION OF
ROANOKE VALLEY, INC.
UNION HALL MAGISTERIAL DISTRICT
FRANKLIN COUNTY, VIRGINIA

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		

DATE: JUNE 13, 2008

SCALE: 1" = 50'

COMMISSION NO.: 2008-384

SHEET 8 OF 9