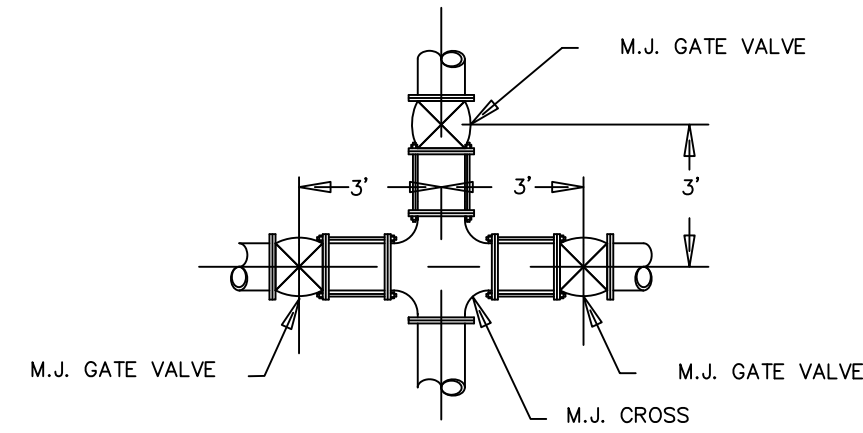
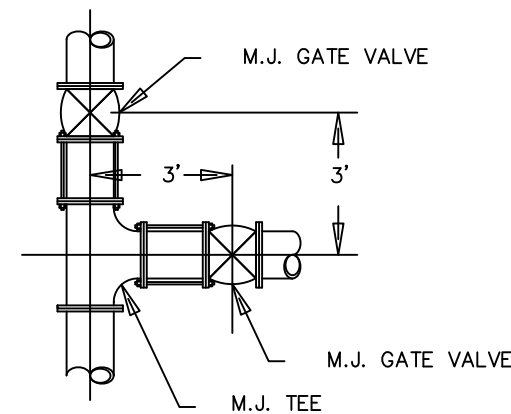


Revision 3/10/99: As an alternate "SwivelX" or approved equal fitting may be used provided the indicated dimensions are maintained.



VALVE LOCATIONS @ CROSS

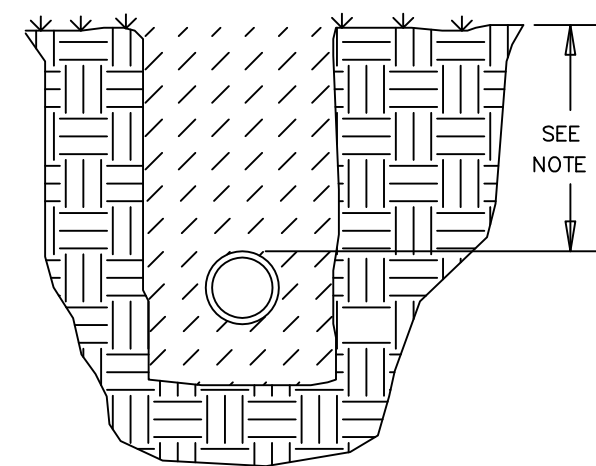
NOTE: In locations where the valve or valve and cap are likely to be disturbed or are for a temporary dead end the use of "all thread" as shown in the Fire Hydrant detail will be required by the City of Maryville.



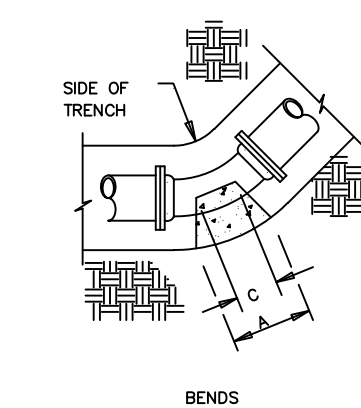
VALVE LOCATIONS @ TEE

PIPE BEDDING - A continuous and uniform bedding shall be provided in the trench for all buried pipe.

PIPE COVER - All distributor mains shall be provided with sufficient earth or other suitable cover to prevent freezing and provide protection to the pipe. The cover shall not be less than 36 inches for 6-inch and 8-inch pipe and 42-inches for 10-inch and 12-inch pipe measured above the top of the pipe. Reference the minimum depth notes "Water System Special Notes"



MLDI WATER LINE TRENCH DETAILS

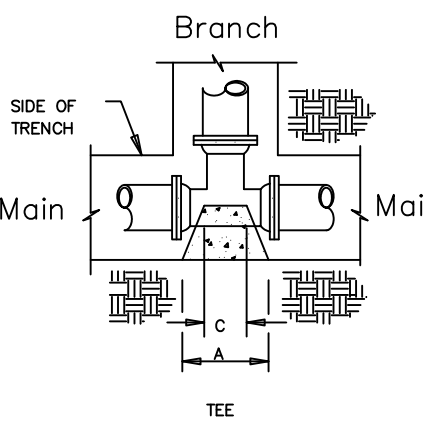


90 degree BENDS

SIZE	2"	4"	6"	8"	10"	12"	18"
A	9"	18"	24"	32"	40"	46"	68"
B	9"	18"	24"	32"	40"	46"	68"
C	9"	9"	12"	12"	15"	16"	22"
D	8"	8"	12"	16"	20"	25"	24"

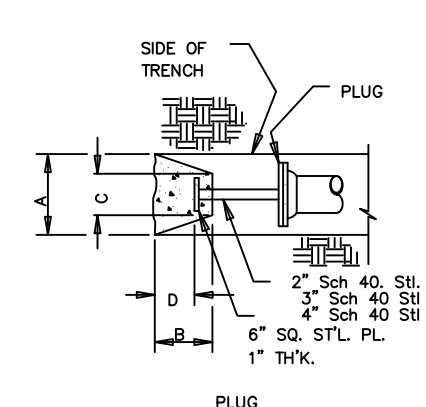
22 1/2 degree BENDS

SIZE	2"	4"	6"	8"	10"	12"	18"
A	9"	9"	13"	18"	21"	24"	36"
B	9"	9"	13"	18"	21"	24"	36"
C	8"	8"	10"	12"	14"	16"	15"
D	4"	4"	6"	9"	11"	13"	16"



TEE

MAIN	2"-6"	8"-12"	8"-10"	12"	12"	12"	18"
BRANCH	2"-6"	2"-6"	8"-10"	2"-6"	8"-10"	12"	16"-18"
A	20"	20"	33"	20"	33"	39"	57"
B	20"	20"	33"	20"	33"	39"	57"
C	12"	12"	12"	12"	12"	12"	30"
D	13"	13"	21"	13"	21"	26"	24"



PLUG

SIZE	2"	4"	6"	8"	10"	12"	18"
A	12"	14"	20"	27"	33"	38"	56"
B	12"	14"	20"	27"	33"	38"	56"
C	12"	12"	12"	12"	12"	12"	30"
D	11"	11"	15"	22"	32"	32"	32"

Thrust blocks for plugs shall be the wider of
1. the dimension shown above or
2. the width of the trench plus 2 inches
measured at the soil bearing surface.

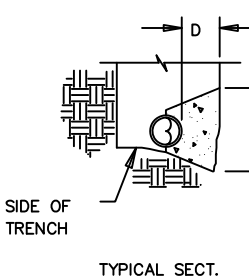
THRUST BLOCK DETAILS

45 degree BENDS

SIZE	2"	4"	6"	8"	10"	12"	18"
A	9"	13"	18"	24"	29"	34"	50"
B	9"	13"	18"	24"	29"	34"	50"
C	8"	8"	10"	12"	14"	16"	14"
D	6"	6"	9"	12"	15"	18"	18"

11 1/4 degree BENDS

SIZE	2"	4"	6"	8"	10"	12"	18"
A	9"	9"	9"	12"	15"	18"	26"
B	9"	9"	9"	12"	15"	18"	26"
C	8"	8"	10"	12"	14"	16"	15"
D	4"	4"	5"	6"	8"	9"	16"



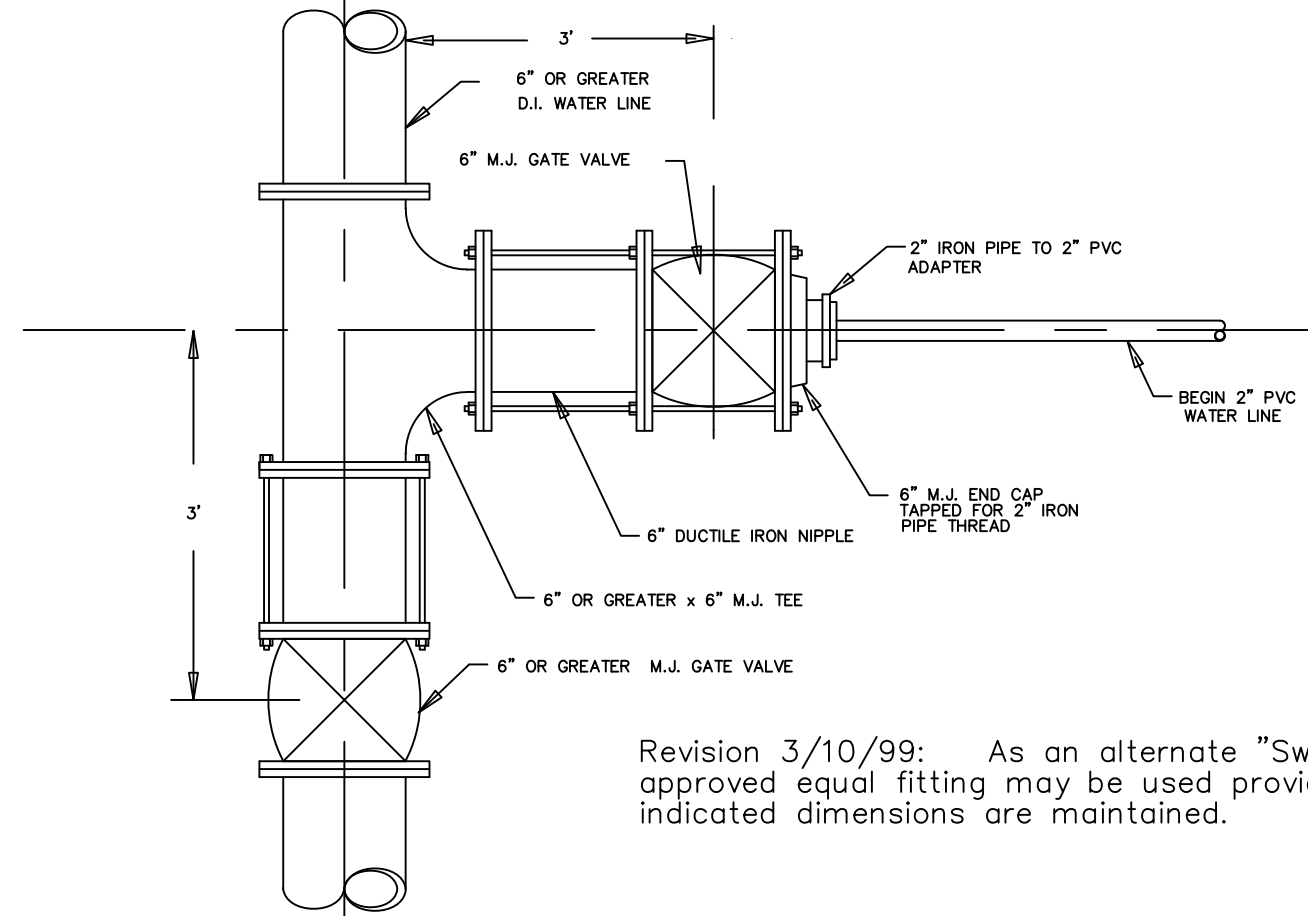
The minimum thrust block dimensions in contact with the bearing soil shall be 9 inches by 9 inches

These dimensions are minimums based on 100 psi working line pressures and 2000 psf soil bearing capacity. For other working pressure and/or different soil bearing capacity the dimensions shall be recalculated by the engineer.

Where a two inch water meter is to be installed --

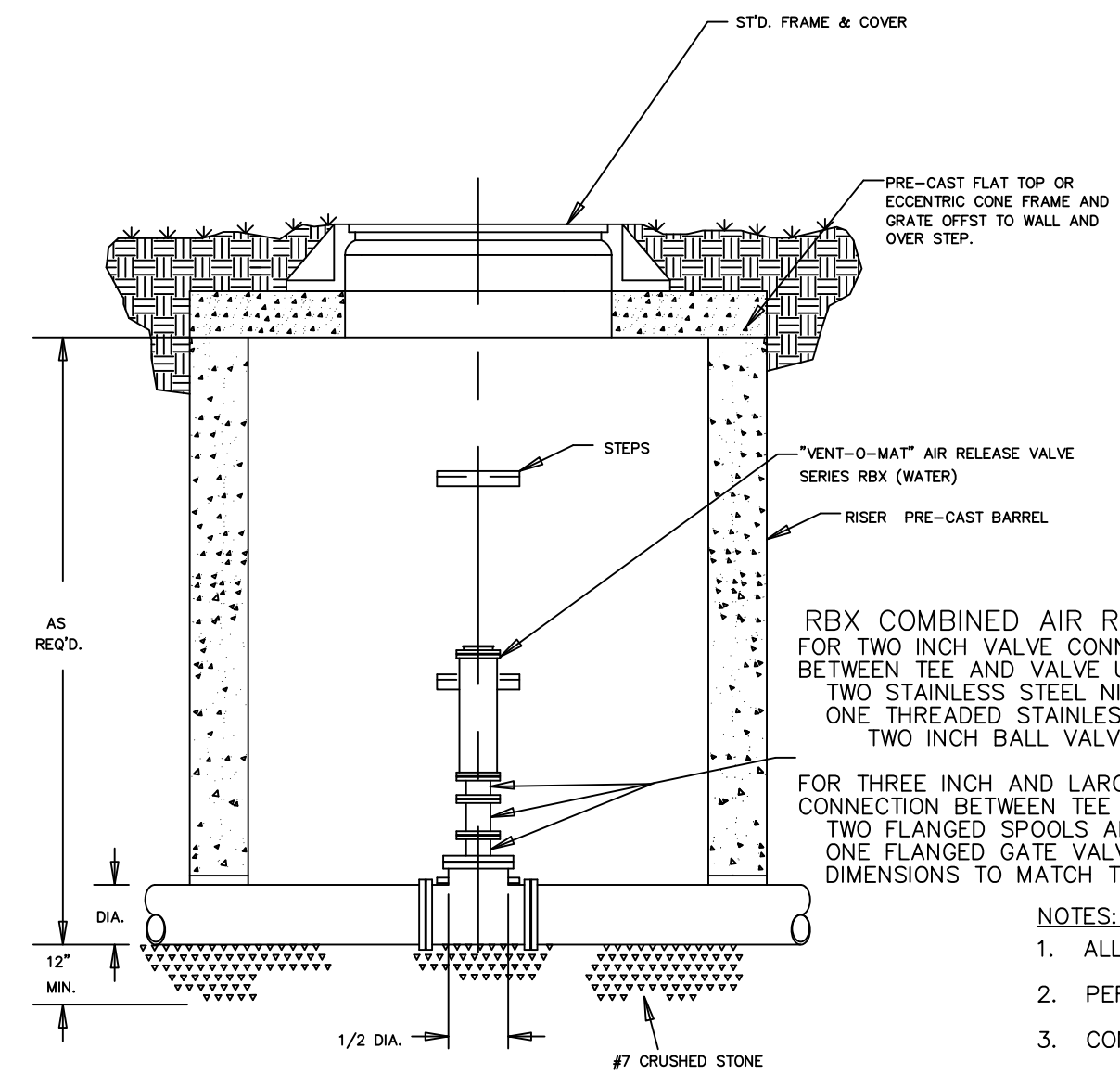
1. The appropriate sized tee.
2. The six inch gate valves may be eliminated and the tapped end cap (plug) placed directly on the tee.
3. A twelve inch brass nipple - the nipple shall be installed level.
4. A two inch wheel valve
5. The two inch valve shall be installed in either a valve box or meter box.

The City of Maryville will provide the twelve inch brass nipple and the two inch wheel valve.



TIE-IN FOR 2" PVC WATER LINE TO 6" OR LARGER MAIN WATER LINE

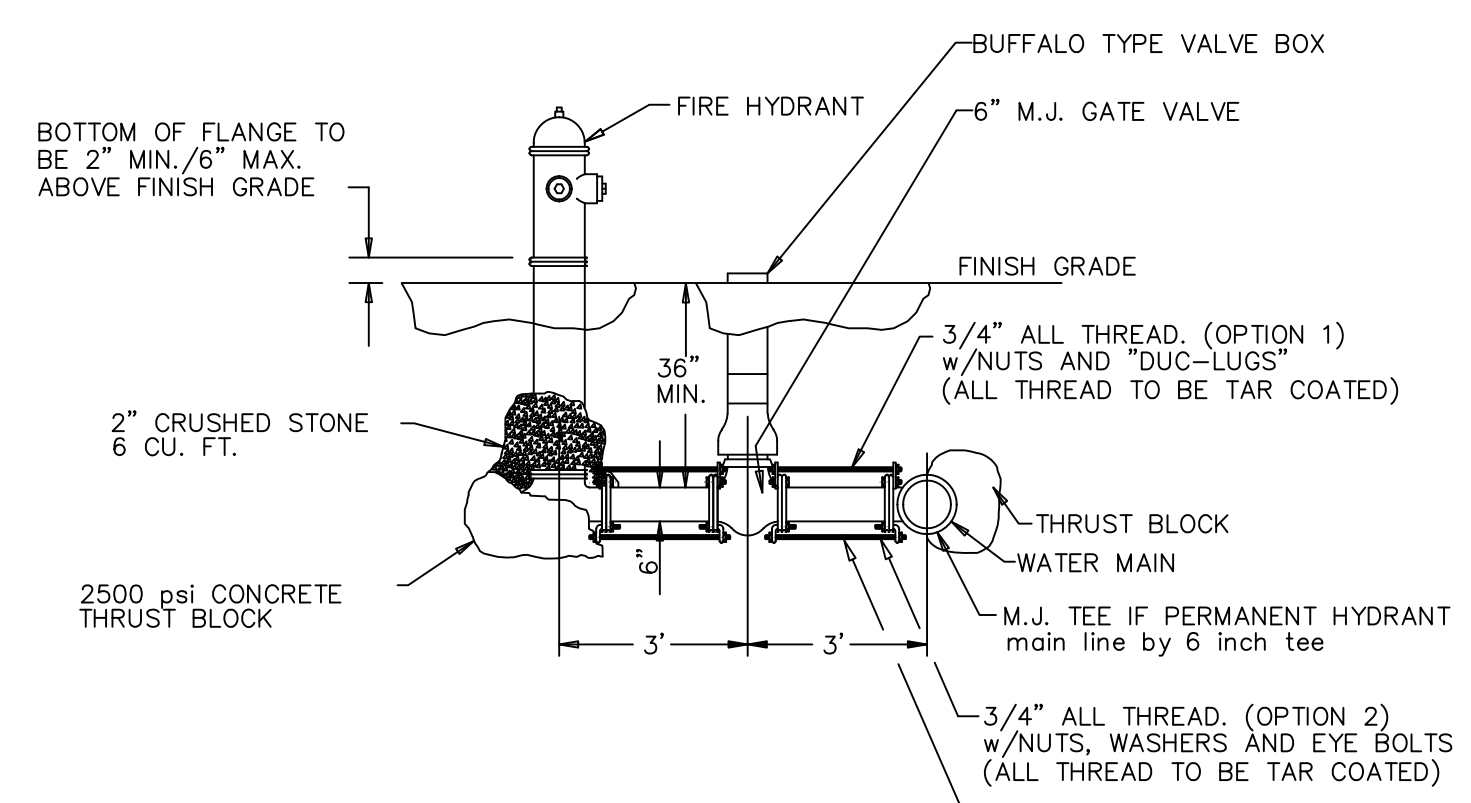
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WATER LINE COMBINED AIR RELEASE VALVE

- NOTES:
1. ALL MANHOLE PARTS TO MEET C.O.M. STANDARDS
 2. PERFORATED COVER MAY BE USED IN LIEU OF VENTS WITH C.O.M. APPROVAL
 3. CONTRACTOR TO VERIFY ADEQUATE CLEARANCES INSIDE OF MANHOLE FOR VALVE USED.
 4. LINE DEPTH MUST BE ADEQUATE TO ALLOW VALVE AND VALVE MANHOLE TO BE BELOW GROUND SURFACE...
 5. VERIFY PROPOSED TOP ACCESS MATERIALS AND OPENING SIZE WITH WATER QUALITY CONTROL DEPT. (WQC) PRIOR TO ORDERING MATERIALS. OPENING MUST MEET WQC REQUIREMENTS FOR ACCESS WHICH MAY VARY WITH SIZE OF AIR RELEASE VALVE, TRAFFIC CONDITIONS, DEPTH OF LINE, AND OTHER ON SITE CONDITIONS.
 6. GENERALLY A STD. FRAME AND GRATE, OR BILCO TYPE HATCH WITH A 24"x24" OR LARGER OPENING WILL BE REQUIRED. VERIFY TYPE OF ACCESS, OPENING SIZE, AND MATERIAL WITH WQC PRIOR TO ORDERING THE PRECAST FLAT TOP. UNAPPROVED ACCESS MAYBE REJECTED BY THE CITY OF MARYVILLE.

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TYPICAL FIRE HYDRANT INSTALLATION

NOTE: The valve shall be connected to the tee and hydrant using one of the three alternatives shown. A minimum of two (2) three quarter inch (3/4) diameter rods shall be used for each tee to valve or tee to hydrant attachment for Option 1 & 2.

CITY OF MARYVILLE WATER SYSTEM SPECIAL NOTES:

Depth - All water lines shall be installed a sufficient depth to provide for minimum cover of not less than 36 inches for 6" and 8" diameter pipes, 42 inches for 10", 12" and 14" pipe. COVER IS TO BE MEASURED FROM THE SUBGRADE ELEVATION AT THE CURB LINE OF THE ROAD ADJACENT TO THE PIPE LINE OR THE EXISTING GROUND AT THE TIME OF CONSTRUCTION OR THE FINISH GRADE DIRECTLY OVER THE PIPE, WHICHEVER IS LOWER. No pipe is to be laid so that a driveway will create a situation that will violate the minimum cover requirements.

MATERIALS - All materials used in the project shall be acceptable to the COM, Water & Sewer Department. All water lines greater than 2 inches in diameter shall be class 51 cement mortar lined ductile iron.

PRESSURE AND FLOW CONTROL - Pressure and flow reducing valves shall be installed in each house or at each connection to a structure to maintain domestic pressure at or below 80 psi unless the pipe system has been specifically designed to handle pressures in excess of 80 psi and permission is obtained from the COM, Water & Sewer Department.



WATER & SEWER DEPARTMENT CITY OF MARYVILLE MARYVILLE, TENNESSEE

DRAWN BY: _____	TITLE: STANDARD DETAIL DWGS. WATER	SCALE: NONE
APP'D BY: JG		SHEET 1 of 1
DATE: _____		

DESCRIPTION: