

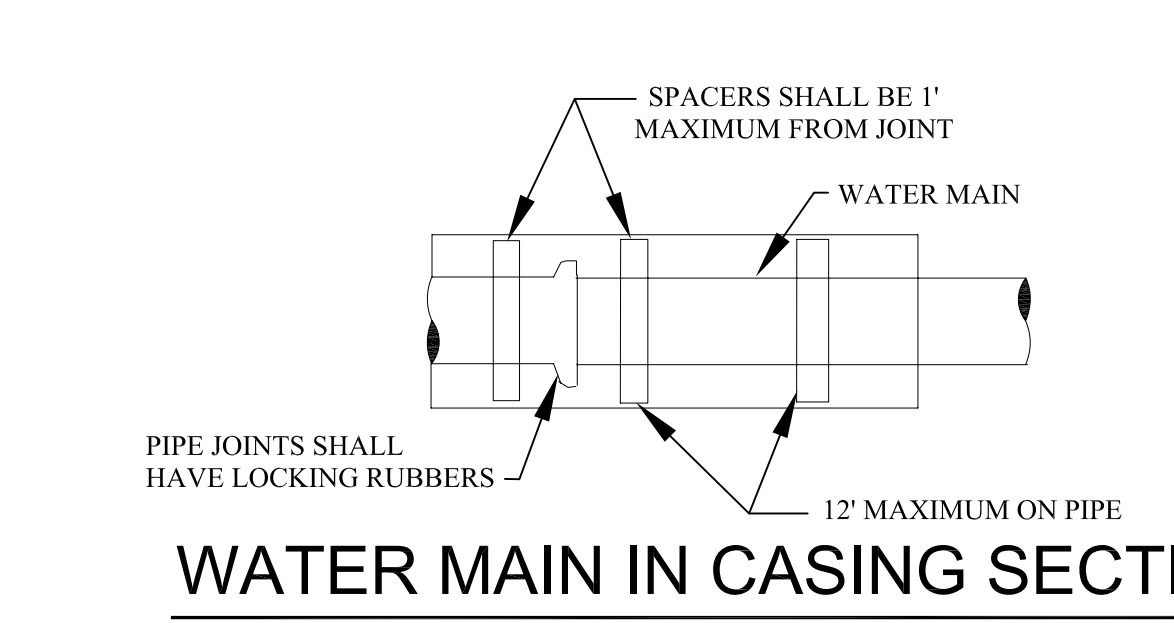
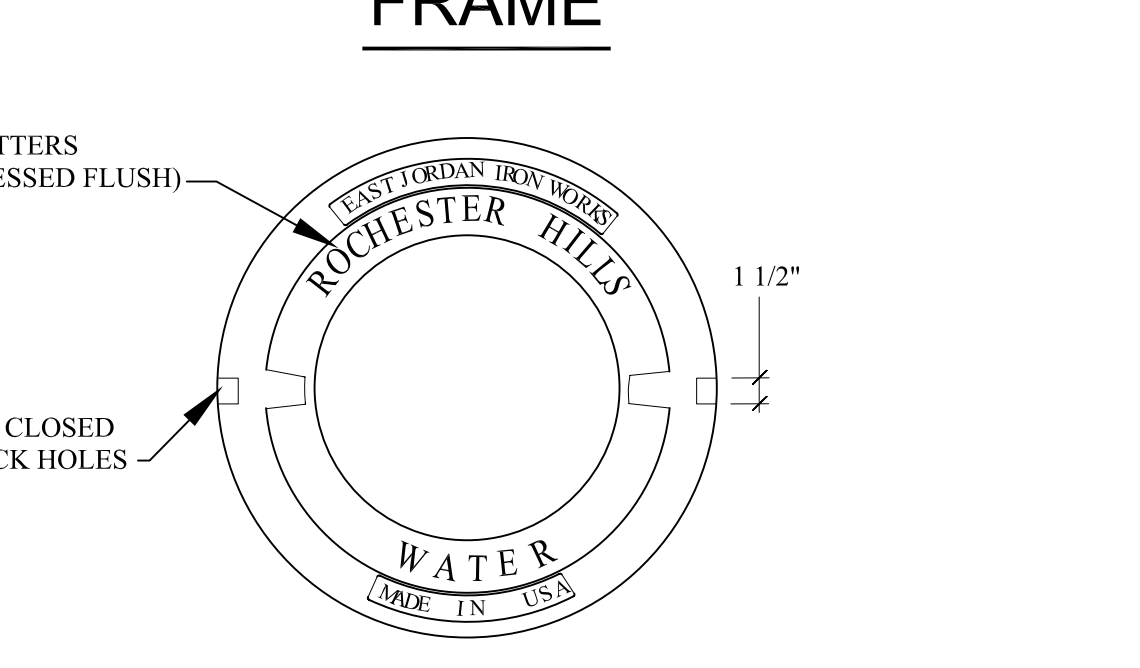
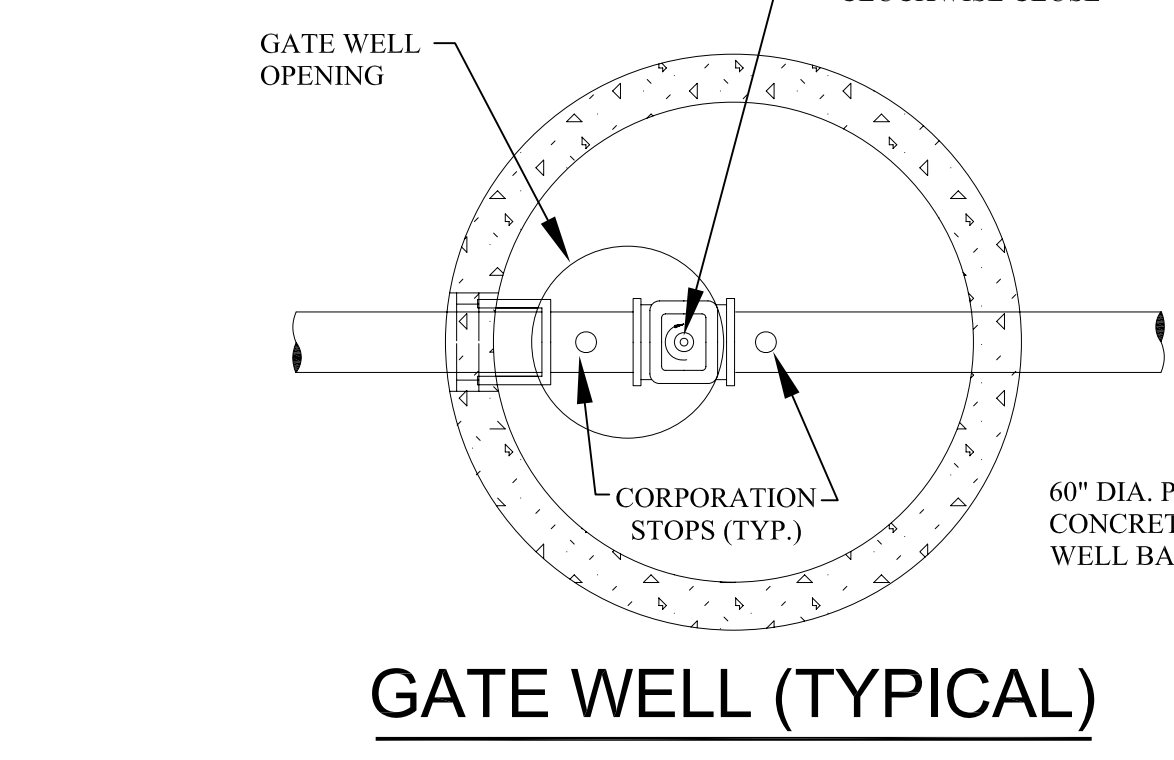
MANHOLE STEPS TO BE PLASTIC COATED STEEL MEETING THE REQUIREMENTS IN ASTM D 2146, TYPE II, GRADE 49108. MA. INDUSTRIES P.S.I. POLYPROPYLENE OR APPROVED EQUAL. STEPS TO BE INSTALLED DURING MANHOLE MANUFACTURE, PLACED AT 16" C. TO C.

ALL VALVES SHALL BE CLOCKWISE CLOSE

GATE WELL OPENING

CORPORATION STOPS (TYP.)

60" DIA. PRECAST CONCRETE GATE WELL BASE SECTION,



UNLESS OTHERWISE SPECIFIED, MINIMUM CASING PIPE SHALL BE ASTM A-139 GRADE B, WALL THICKNESS AS FOLLOWS:

NOMINAL SIZE	MINIMUM WALL THICKNESS
8"- 42"	0.375
48"- 60"	0.500

CASING SHOULD BE A MINIMUM OF 1 1/2 TIMES THE PIPE SIZE

WOOD OR POLYETHYLENE RUNNER (TYP.)

TO BE BULKHEADED AT THE ENDS

WATER PIPE REQUIRED QUANTITY OF RUNNERS IN ACCORDANCE WITH SIZE

TO 14" DIA.	3 RUNNERS
16" TO 36" DIA.	6 RUNNERS
38" TO 48" DIA.	8 RUNNERS

PRE-MANUFACTURED SPACER OR MANUFACTURED WOOD SPACER



DETAIL OF 4" BLOWOFF

2x2' CONCRETE

PROVIDE CLOW SOLID PLUG #F-1159 (AS SHOWN), MECH JOINT #F-1035 OR APPROVED EQUALS

MARKER

4" FERRO TO PVC WITH CAP

VALVE BOX

4" D.I. PIPE

REDUCER

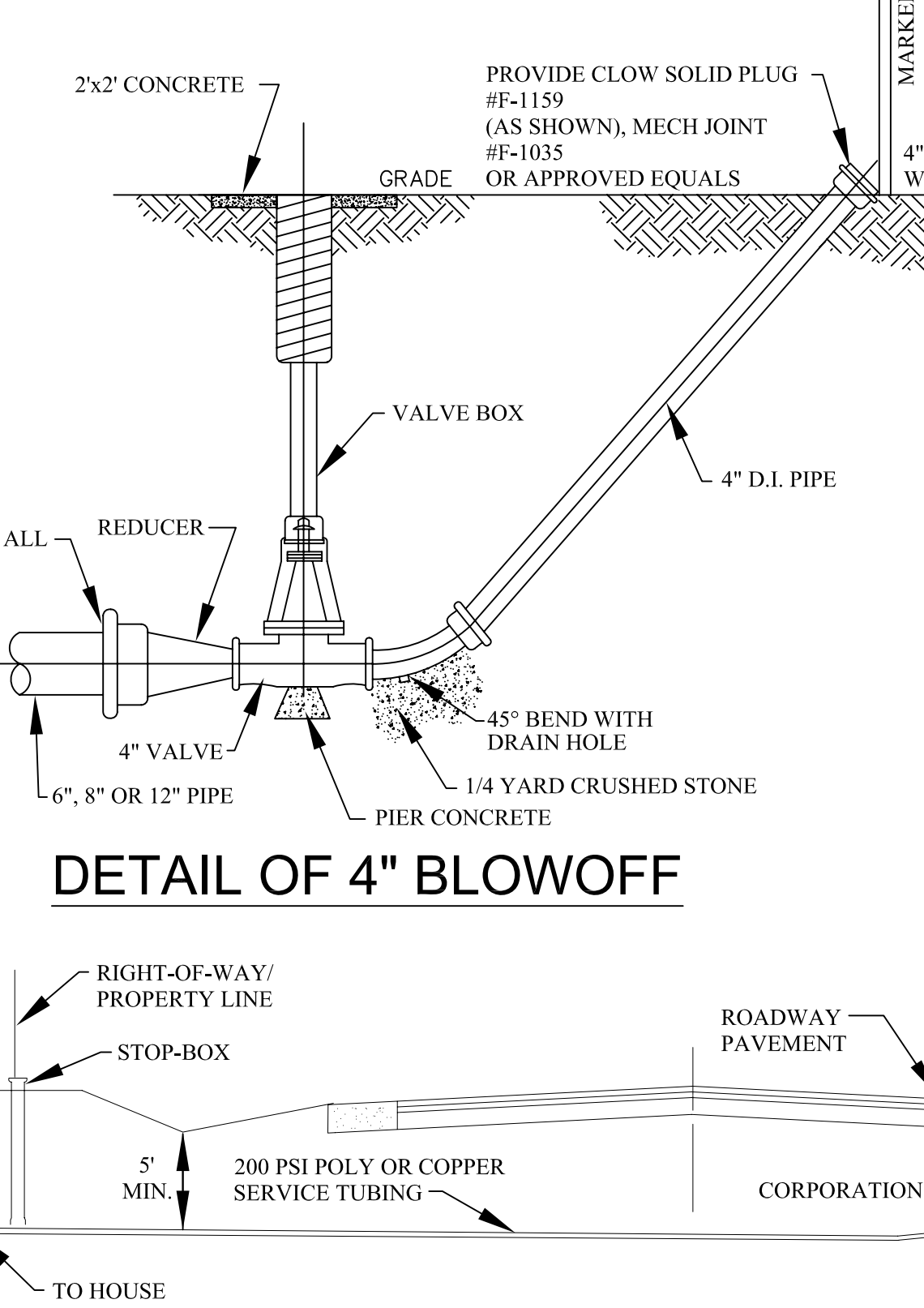
4" VALVE

6", 8" OR 12" PIPE

45° BEND WITH DRAIN HOLE

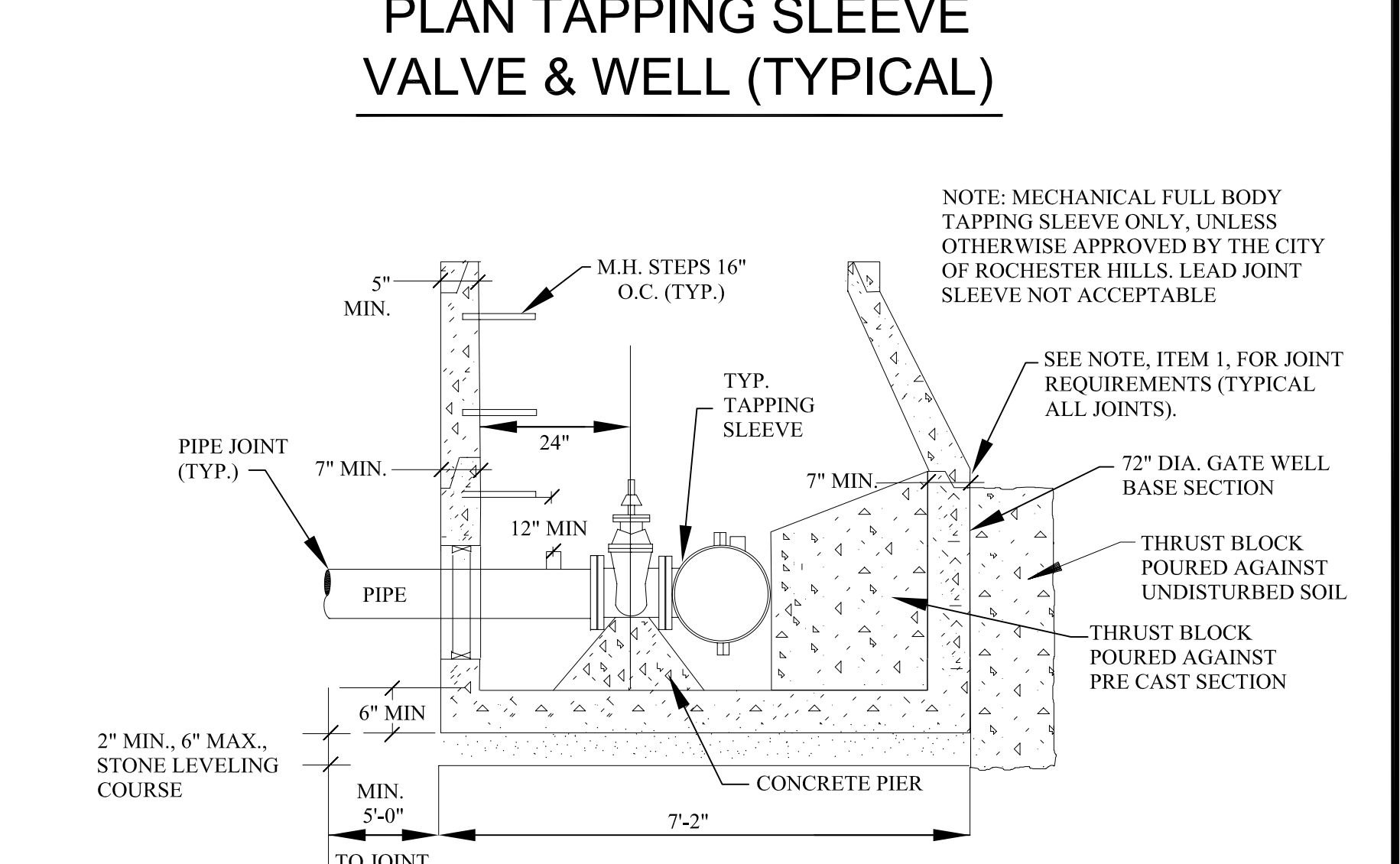
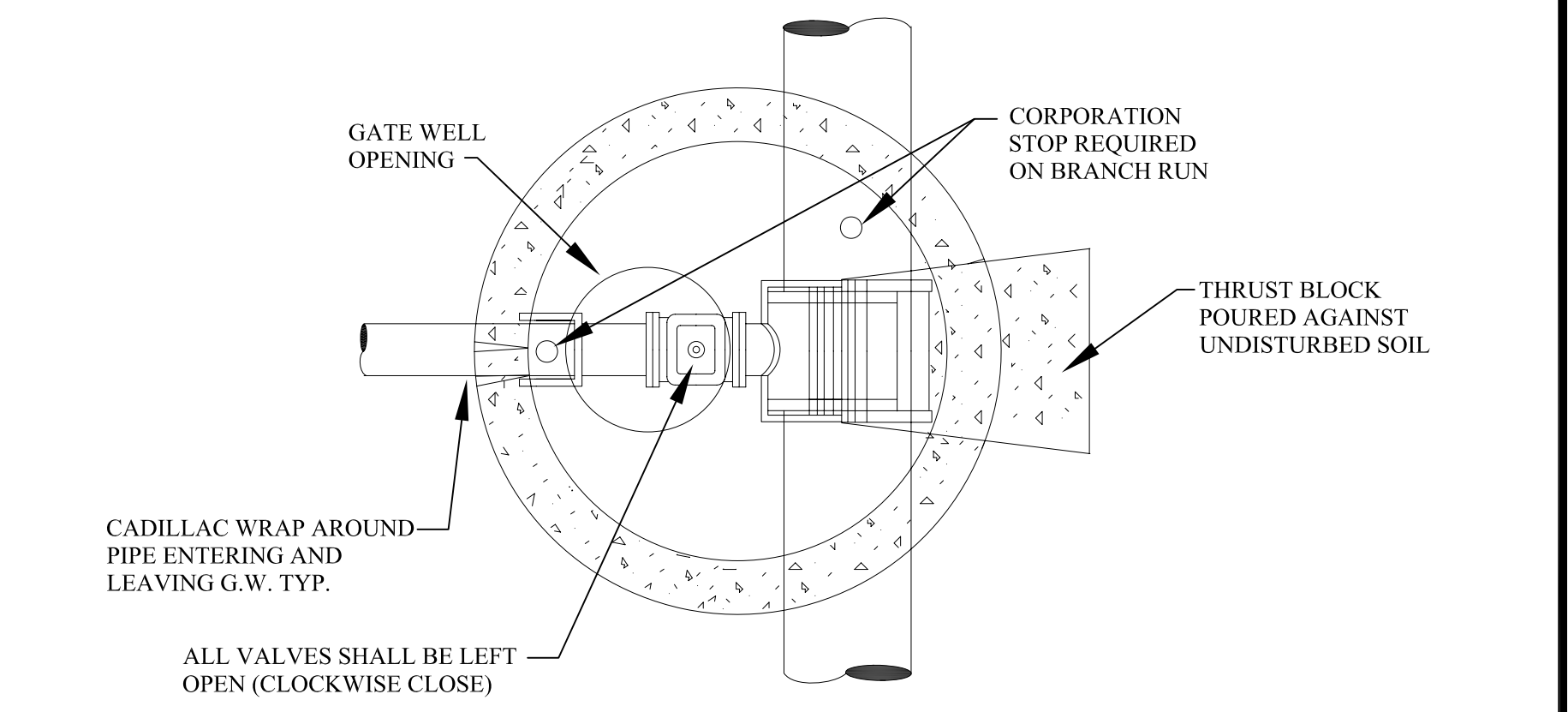
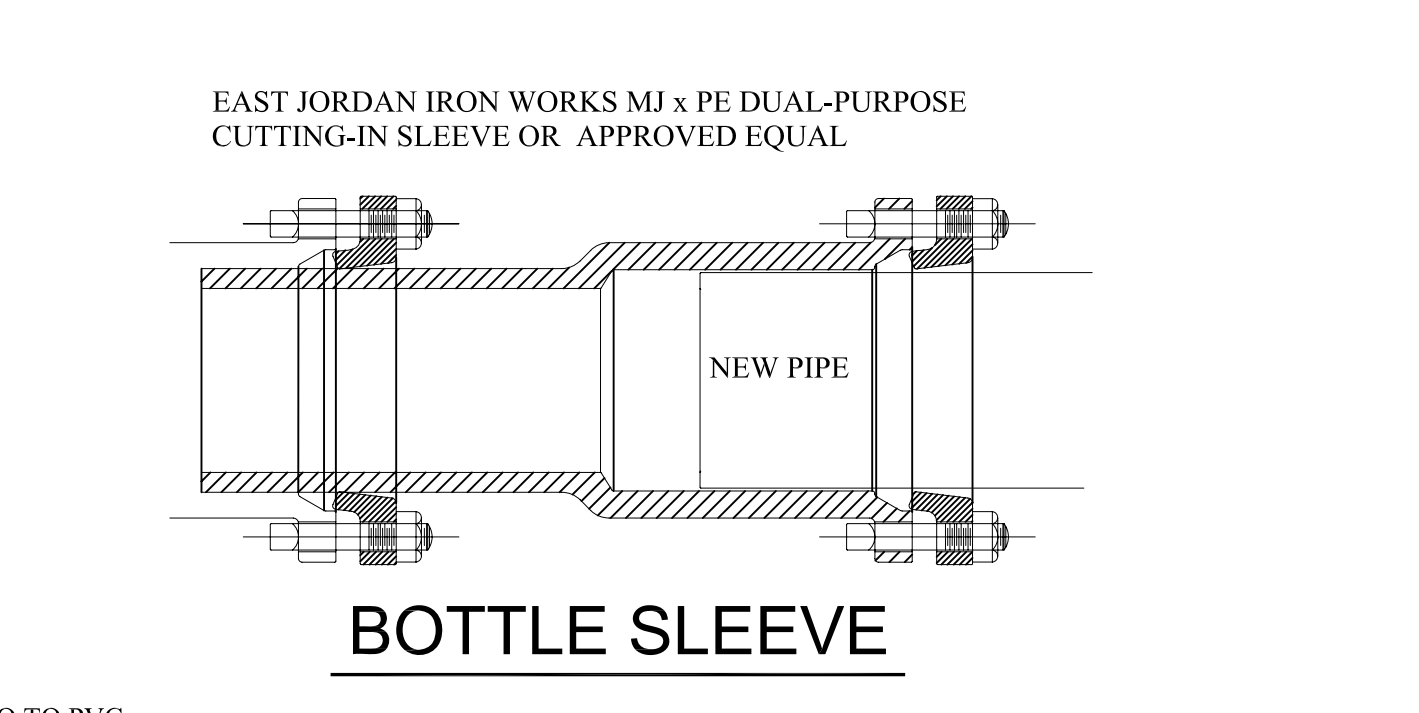
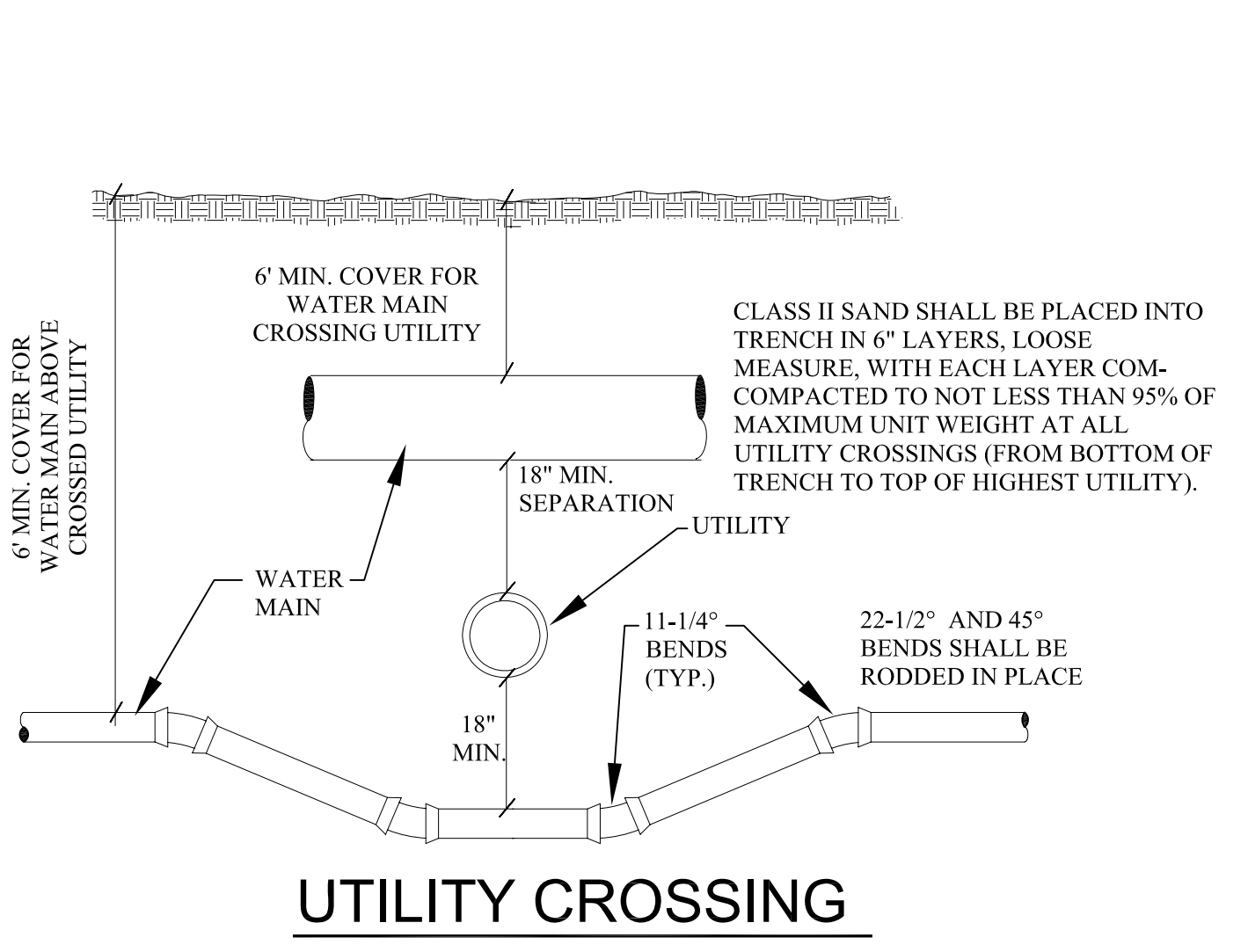
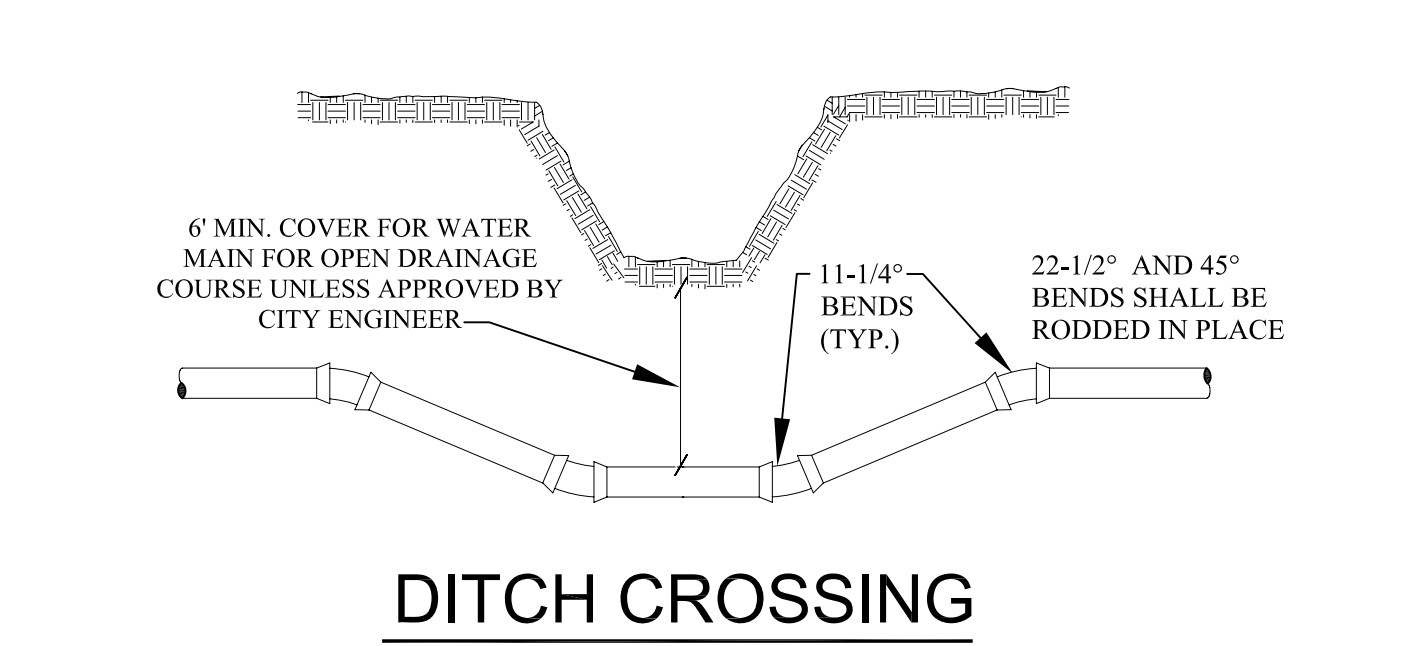
1/4 YARD CRUSHED STONE

PIER CONCRETE



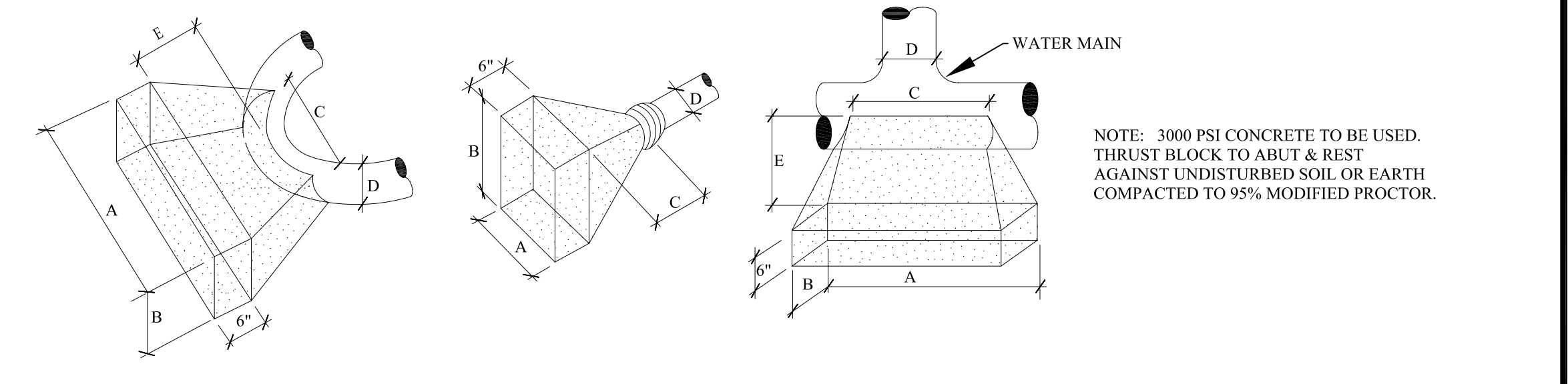
NOTES:

1. WATER SERVICE SHUT-OFF TO BE PLACED AT PROPERTY LINE.
2. LATERAL LOCATION SHALL BE AS REQUESTED BY THE ABUTTING PROPERTY OWNER.
3. ROCHESTER HILLS DPW PERFORMS SERVICE LEAD TAPS UP TO 2" DIAMETER.



NOTES:

1. ALL PRECAST CONCRETE GATE WELL SECTIONS SHALL BE MANUFACTURED TO CONFORM WITH A.S.T.M. C478. STANDARD SPECIFICATIONS FOR PRECAST REINFORCED CONCRETE MANHOLE SECTIONS, EXCEPT WALL THICKNESS SHALL BE AS SHOWN ON THESE DETAILS. ALL JOINTS FOR PRECAST CONCRETE GATE WELL SECTIONS SHALL BE "MODIFIED GROOVE TONGUE" WITH GASKET MANUFACTURED TO CONFORM WITH A.S.T.M. C 443. STANDARD SPECIFICATION FOR JOINTS FOR CIRCULAR CONCRETE SEWER AND CULVERT PIPE USING RUBBER GASKETS.
2. CONTRACTOR SHALL INSTALL VALVES, TAPPING SLEEVES AND GATE WELL STRUCTURES IN STRICT COMPLIANCE WITH MEASUREMENTS PROVIDED ON SHEET 16.e. 2'-0" BETWEEN GATE WELL WALL & CENTERLINE OF OPERATING NUT) TO ALLOW PROPER OPERATION OF VALVE THROUGH GATE WELL OPENING. FAILURE TO DO SO WILL REQUIRE CONTRACTOR TO CORRECT AT HIS EXPENSE.
3. TAPPING SLEEVES SHALL BE MANUFACTURED BY ROMAC INDUSTRIES; MUELLER; EAST JORDAN; SMITH-BLAIR OR APPROVED EQUAL AND APPROVED BY THE CITY OF ROCHESTER HILLS. FULL BODY SLEEVES MUST BE USED EXCEPT FOR REINFORCED CONCRETE PRESSURE PIPE OR A.C. PIPE.
4. FOR ALL PIPE USE A 1" CORPORATION STOP. NO CORPS SHALL BE USED IN CONCRETE PRESSURE PIPE.
5. RUBBER O-RINGS SHALL NOT BE USED IN PAVEMENT.



FOR 90° BENDS OR SMALLER

D	A	B	C	E MIN.
20"	8"	6.5"	3.5"	2.5'
16"	6"	4"	2.5"	2'
12"	4"	3"	2"	1.75'
10"	3"	3"	2"	1.75'
8"	3"	2"	2"	1.5'
6"	2"	1.5"	2"	1.25'

FOR PLUGS

D	A	B	C MIN.
20"	7"	5"	2.5'
16"	4'-10"	4'-10"	2'
12"	4'-4"	3"	1'-9"
10"	3'	2'	1'-6"
8"	2'-10"	2'-6"	1'-6"
6"	1'-6"	1'-6"	3'

FOR TEES

D	A	B	C	E MIN.
20"	6.5"	4.5"	3.5"	3'
16"	4'-8"	4'-8"	2.5"	2.75'
12"	4'	3'	2.5"	2.5'
10"	3'	2'	2'	2.25'
8"	2'-6"	2'	2'	2.25'
6"	2'	2'	2'	2.25'

