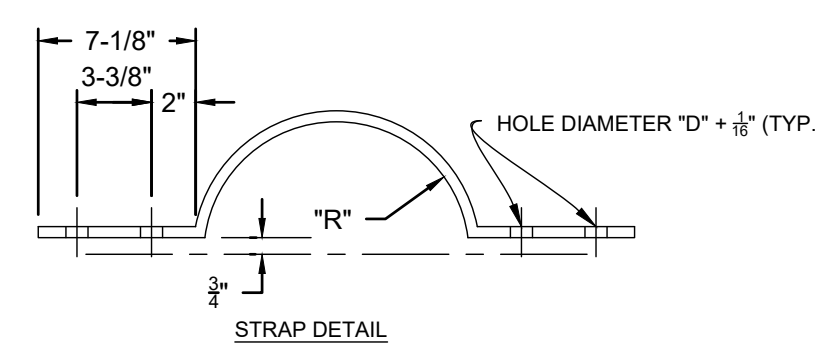


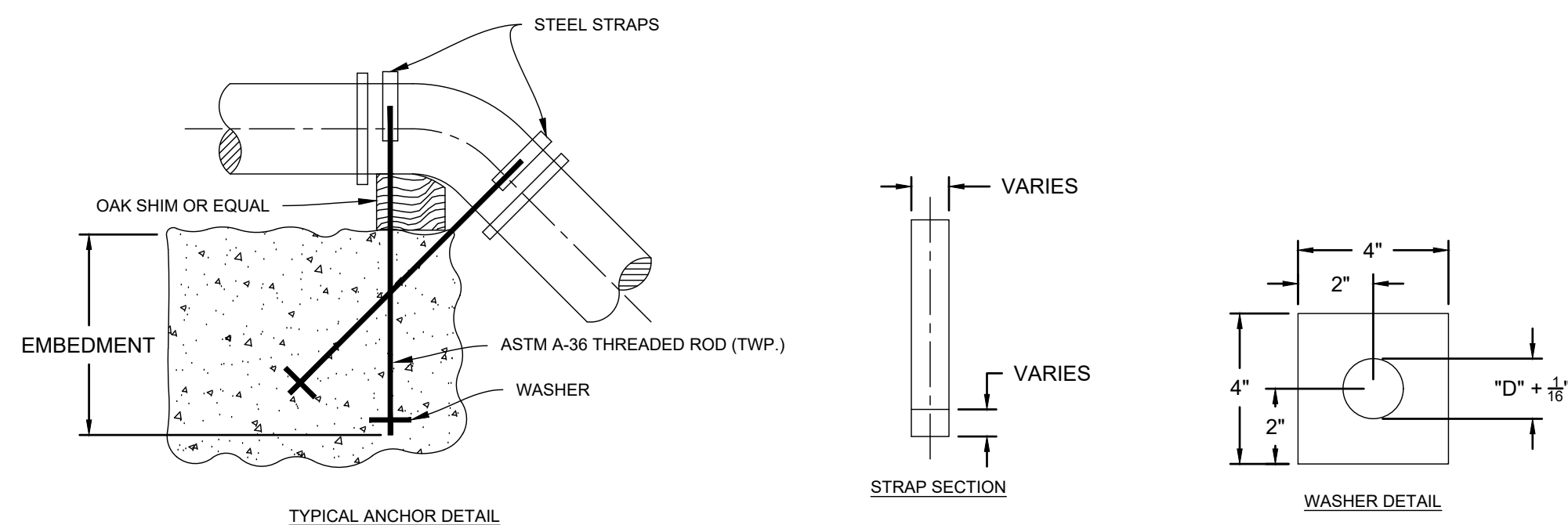
FIRE HYDRANT DETAIL
NOT TO SCALE

KEY	PIPE DIAMETER	PRESSURE (P.S.I.)	BEND ANGLE	CONCRETE REQUIRED (CU. YD.)	STEEL STRAP SIZE	"R" STRAP RADIUS	ANCHOR BOLT DIAMETER "D" AND NUMBER REQUIRED PER STRAP	EMBEDMENT LENGTH
A	6"	0-100	ALL	1.0	1/4" x 2 1/2"	3 5/8"	(2) 3/4"	24"
A-1	6"	101-150	ALL	2.5	1/4" x 2 1/2"	3 5/8"	(2) 1"	36"
B	8"	0-100	ALL	2.0	3/8" x 3"	4 3/4"	(2) 1"	36"
B-1	8"	101-150	45°	3.0	3/8" x 3"	4 3/4"	(2) 1"	36"
B-2	8"	101-150	90°	4.0	3/8" x 3"	4 3/4"	(4) 1"	36"
C	12"	0-100	ALL	4.5	1/2" x 3"	6 3/4"	(4) 1"	36"
C-1	12"	101-150	45°	6.0	(2) 1/2" x 3"	6 3/4"	(4) 1"	36"
C-2	12"	101-150	90°	8.5	(2) 1/2" x 3"	6 3/4"	(4) 1"	36"

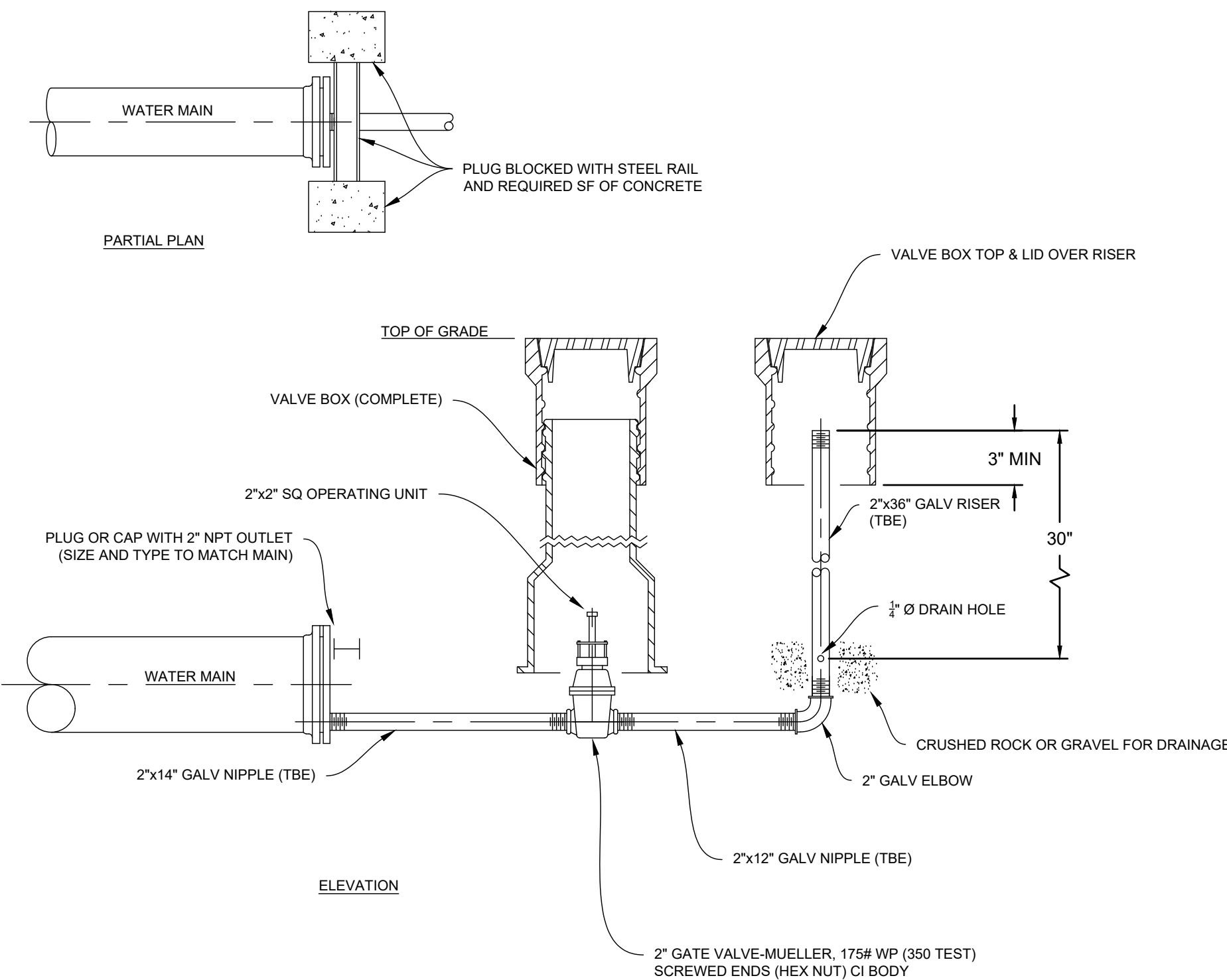
* - WHERE (2) 1" DIAMETER BOLTS ARE REQUIRED (4) 1/2" DIAMETER BOLTS MAY BE USED



- NOTES:
- ALL STEEL SHALL CONFORM TO ASTM A-36
 - (2) STRAPS ARE REQUIRED, EACH WITH (4) 1" DIAMETER ANCHOR BOLTS FOR CASES C-1 AND C-2
 - REFER TO AQUA DRAWING E-4453 FOR USE AS POPE AND VALVE CLAMP
 - CONTRACT ENGINEERING DEPARTMENT FOR DESIGN ON PRESSURE EXCEEDING 200 P.S.I. OR OF PIPE SIZE IS LARGER THAN 12"
 - COAT ALL EXPOSED METAL WITH 12 MILS OF ROSSKOTE
 - BOLT LENGTH WILL EQUAL "EMBEDMENT LENGTH + SHIM + 1/2" O.D. OF PIPE + 3/4"



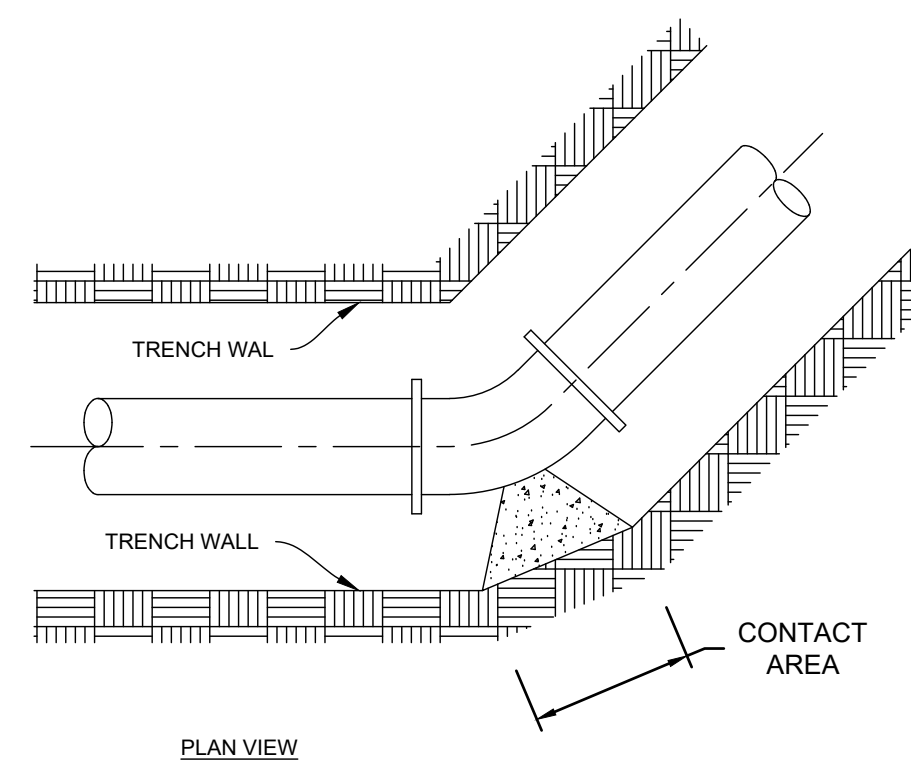
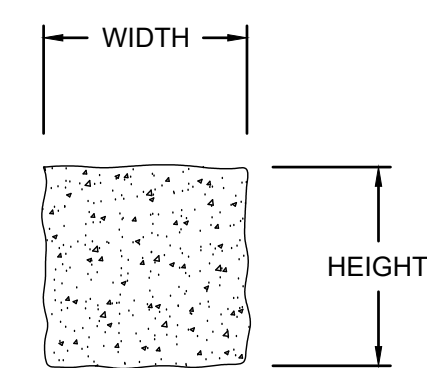
MINIMUM CONCRETE VOLUMES AND STEEL STRAP SIZES REQUIRED FOR BLOCKING 6", 8", & 12" VERTICAL BENDS
NOT TO SCALE



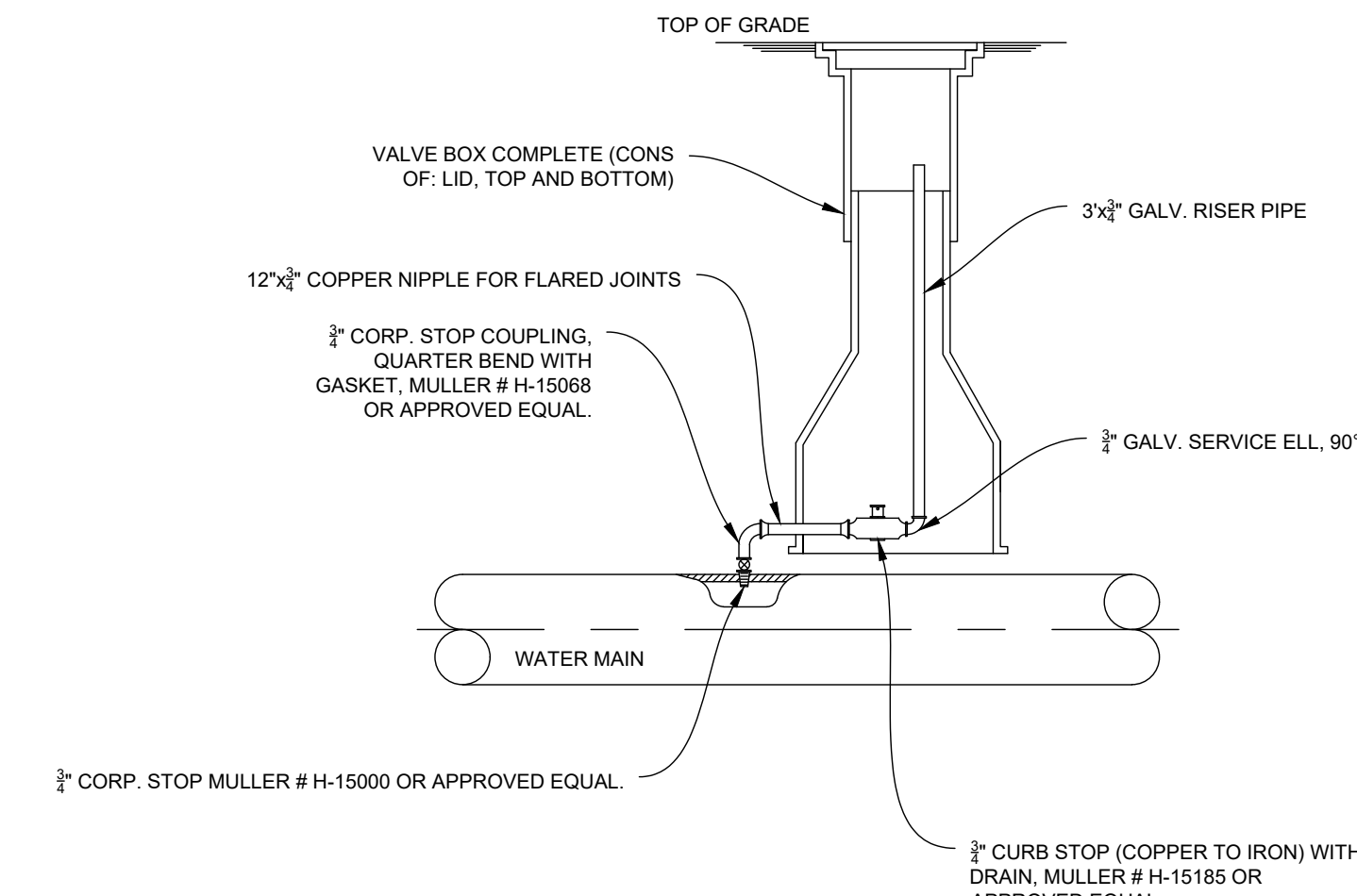
STANDARD 2" BLOW-OFF
NOT TO SCALE

PIPE DIAMETER (INCHES)	HYDRANTS, TEES & BLOW-OFFS			90° BENDS			45° BENDS			11 1/4" & 22 1/2" BENDS		
	0-100 P.S.I.	101-150 P.S.I.	151-200 P.S.I.	0-100 P.S.I.	101-150 P.S.I.	151-200 P.S.I.	0-100 P.S.I.	101-150 P.S.I.	151-200 P.S.I.	0-100 P.S.I.	101-150 P.S.I.	151-200 P.S.I.
6	3	4	5	3	5	6	2	3	4	1	2	2
8	4	6	8	6	8	11	3	5	6	2	3	3
12	9	13	17	12	18	24	7	10	13	4	5	7
16	15	23	30	21	32	43	12	17	23	6	9	12

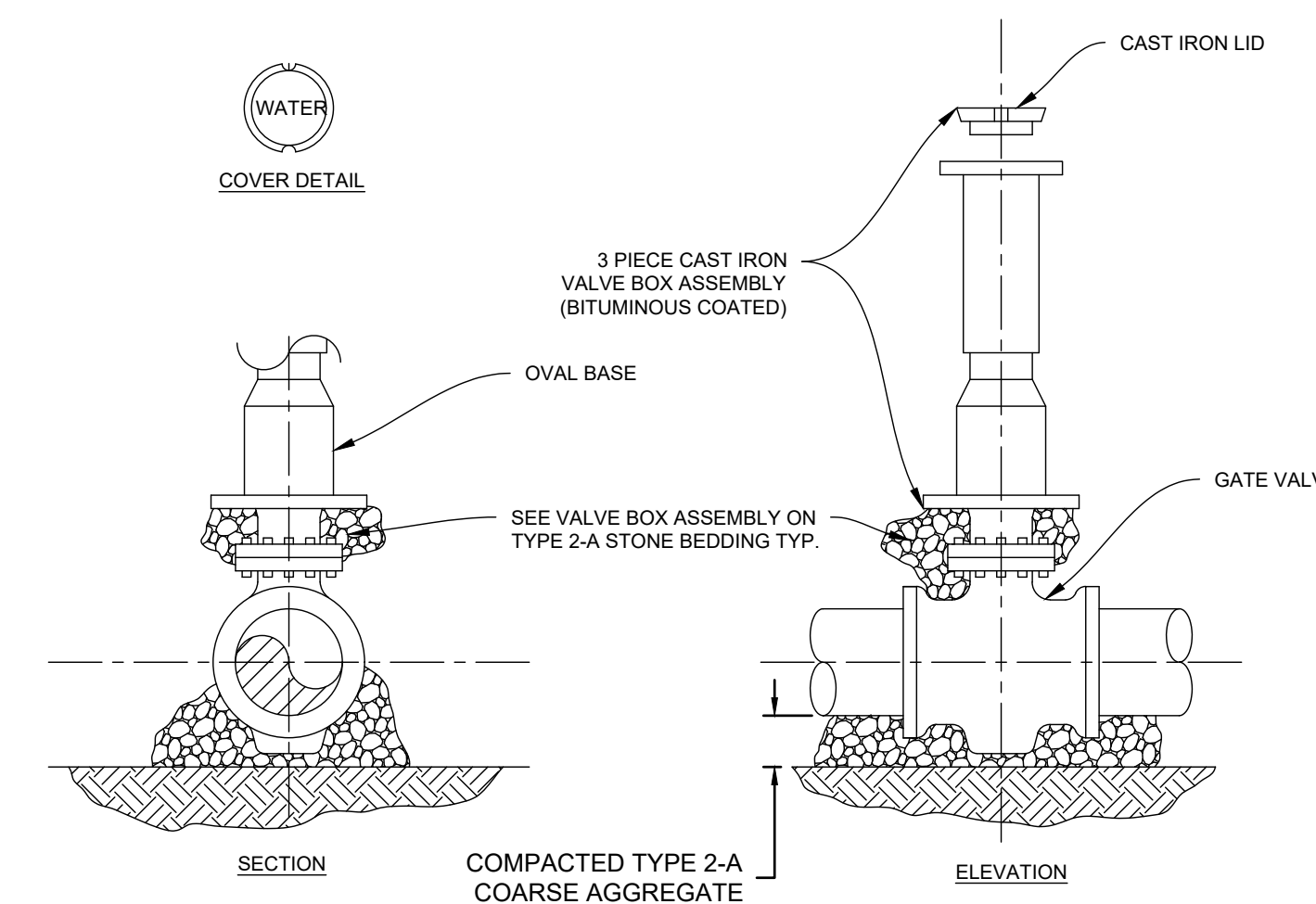
NOTE: REFER TO ENGINEERING DEPT. FOR ALL VERTICAL BENDS AND HORIZONTAL BENDS HAVING ANGLES, PRESSURES OR PIPE DIAMETERS NOT LISTED ABOVE.



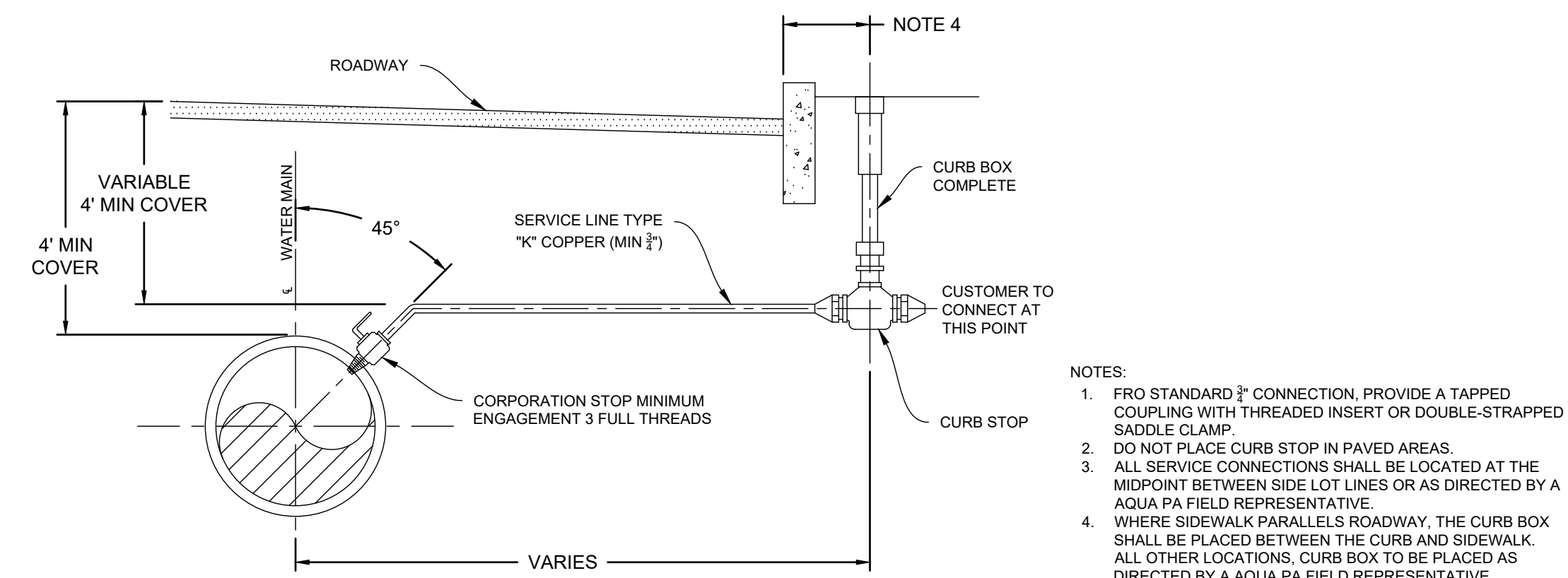
MINIMUM THRUST BLOCK AREAS REQUIRED (SQUARE FEET OF CONTACT SURFACE AREA ALONG TRENCH WALL)
NOT TO SCALE



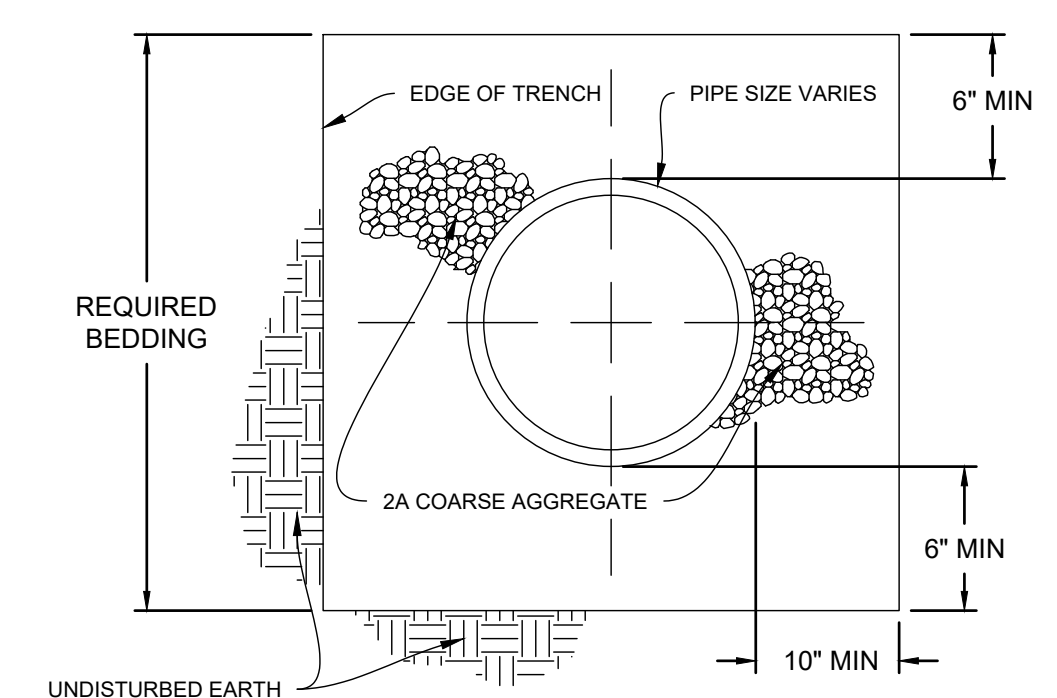
STANDARD 3/4" M.A.V. & CL2 ASSEMBLY
NOT TO SCALE



STANDARD GATE VALVE AND VALVE BOX ASSEMBLY DETAIL
NOT TO SCALE



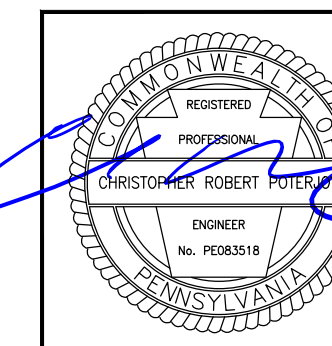
STANDARD SERVICE CONNECTION
NOT TO SCALE



STANDARD PIPE BEDDING DETAIL
NOT TO SCALE



CALL BEFORE YOU DIG
BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA
CALL 1-800-242-1776
PA ACT 287 OF 1974 REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL OR BLAST PENNSYLVANIA ONE-CALL SYSTEM, INC.
SERIAL NUMBER: 2018110305-000



Pennoni
PENNONI ASSOCIATES INC.
One South Church Street, 2nd Floor
West Chester, PA 19382
T 610.429.8907 F 610.429.8918

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES. AN OWNER SHALL IDENTIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING IN CONNECTION WITH THE REUSE OF ANY OF THESE DOCUMENTS.

PRJ #	REV	COMPANY	INITIALS	DATE	DESCRIPTION
1		PENNONI	AT	08/31/18	REVISED PER TWP COMMENTS

LONGWOOD GARDENS NURSERY GREENHOUSE
P.O. Box 501
Kennett Square, PA
19348-0501
Ph: (610)388-1000
F: (610)388-5497

WATER DETAILS
DRAWING ORIGINATOR: PENNONI ASSOCIATES INC.
ONE SOUTH CHURCH STREET, 2ND FLOOR
T 610.429.8907 F 610.429.8918
DRAWN BY: AT
CHECKED BY: MK
DATE: 2018-06-08
SCALE: AS NOTED
DRAWING NUMBER: NURSGRNH027
SHEET # 27 OF 41

