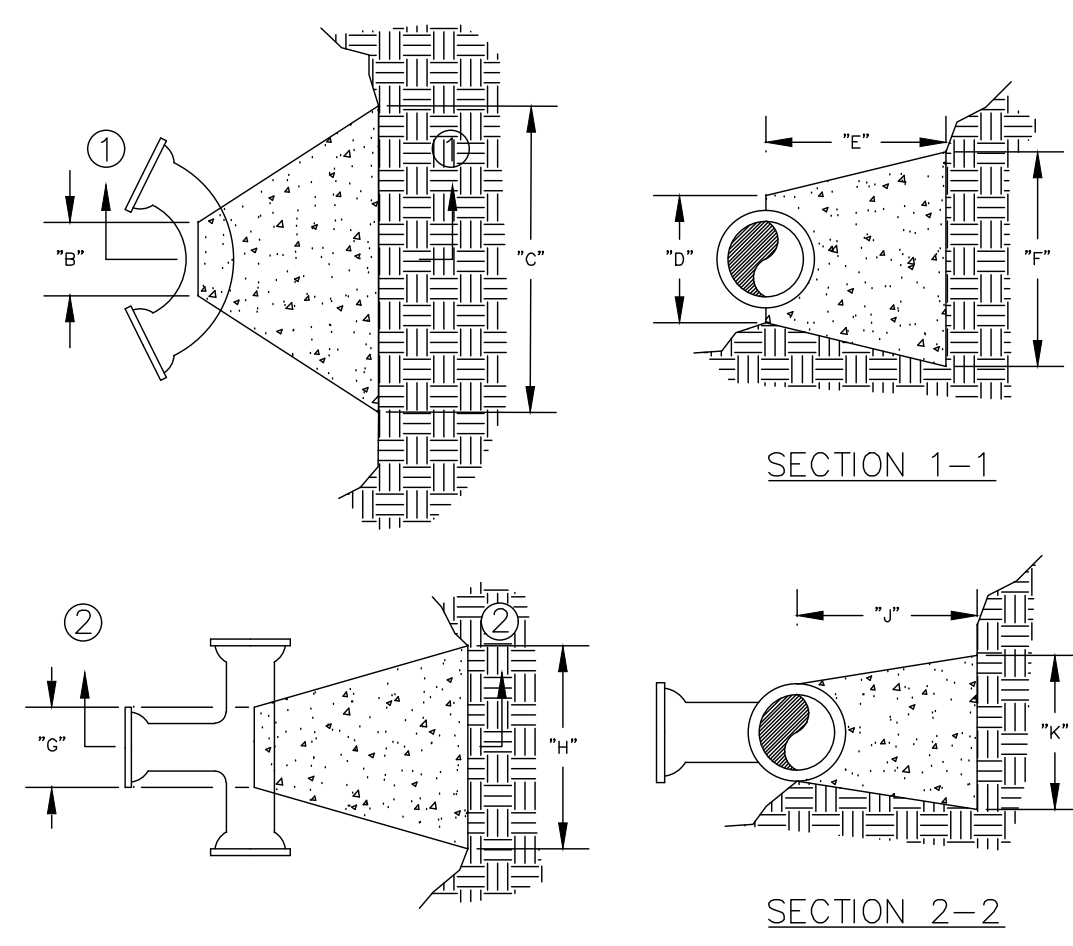


BENDS	"b"	"c"	"d"	"e"	"f"
6"-11 1/4"	8"	15"	12"	24"	10"
6"-22 1/2"	8"	19"	12"	24"	13"
6"-45"	8"	30"	12"	24"	16"
6"-90"	8"	30"	12"	24"	28"
8"-11 1/4"	8"	20"	12"	24"	10"
8"-22 1/2"	8"	22"	12"	24"	18"
8"-45"	8"	31"	12"	24"	24"
8"-90"	8"	38"	12"	24"	36"
12"-11 1/4"	8"	30"	12"	24"	15"
12"-22 1/2"	8"	35"	12"	24"	25"
12"-45"	8"	40"	12"	24"	31"
12"-90"	8"	60"	12"	24"	52"
16"-11 1/4"	TL	28"	20"	24"	28"
16"-22 1/2"	TL	39"	20"	24"	39"
16"-45"	TL	50"	20"	24"	50"
16"-90"	TL	91"	20"	24"	60"
20"-11 1/4"	TL	34"	24"	26"	28"
20"-22 1/2"	TL	48"	24"	26"	39"
20"-45"	TL	74"	24"	26"	60"
20"-90"	TL	136"	24"	26"	60"
24"-11 1/4"	TL	40"	28"	28"	40"
24"-22 1/2"	TL	56"	28"	28"	56"
24"-45"	TL	101"	28"	28"	60"
24"-90"	TL	186"	28"	28"	60"
30"-11 1/4"	TL	49"	34"	30"	49"
30"-22 1/2"	TL	79"	34"	30"	60"
30"-45"	TL	154"	34"	30"	60"
30"-90"	TL	285"	34"	30"	60"

TEES	"c"	"d"	"e"	"f"
8"x8"x8"	12"	24"	24"	18"
8"x8"x8"	12"	24"	24"	18"
8"x8"x8"	12"	27"	24"	27"
12"x12"x8"	12"	24"	24"	18"
12"x12"x8"	12"	27"	27"	27"
12"x12"x12"	12"	38"	24"	38"
24"x24"x18"	16"	35"	28"	51"

NOTES:
 1. 2" & 4" FITTINGS EQUIVALENT TO 6" FITTINGS.
 2. TAPPING SLEEVES TO HAVE BACKING BLOCKS SAME SIZE AS REQUIRED FOR TEES.
 3. "L" = TOTAL LENGTH OF FITTING MINUS CLEARANCE FOR BELLS.



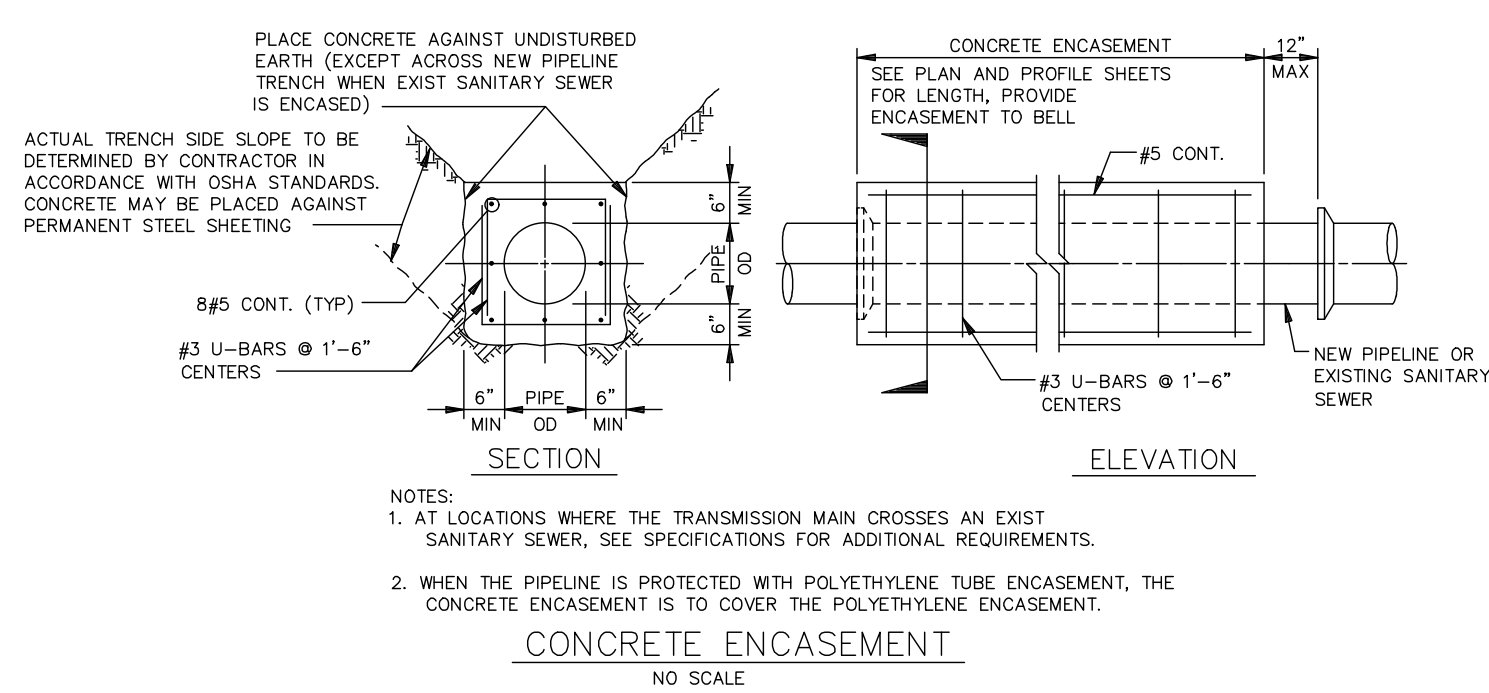
INTERNAL WATER PRESSURE 6" through 12"=200 psi
 INTERNAL WATER PRESSURE 16" through 30"=210 psi
 BEARING PRESSURE OF SOIL=2000 psi

BACKING BLOCKS

NOT TO SCALE

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 ENGINEERING DEPARTMENT
 O'FALLON, MISSOURI

**BACKING BLOCK
 DETAILS AND LOCATIONS**



PLACE CONCRETE AGAINST UNDISTURBED EARTH (EXCEPT ACROSS NEW PIPELINE TRENCH WHEN EXIST SANITARY SEWER IS ENCASED)

ACTUAL TRENCH SIDE SLOPE TO BE DETERMINED BY CONTRACTOR IN ACCORDANCE WITH OSHA STANDARDS. CONCRETE MAY BE PLACED AGAINST PERMANENT STEEL SHEETING

CONCRETE ENCASEMENT
 SEE PLAN AND PROFILE SHEETS FOR LENGTH, PROVIDE ENCASEMENT TO BELL

NEW PIPELINE OR EXISTING SANITARY SEWER

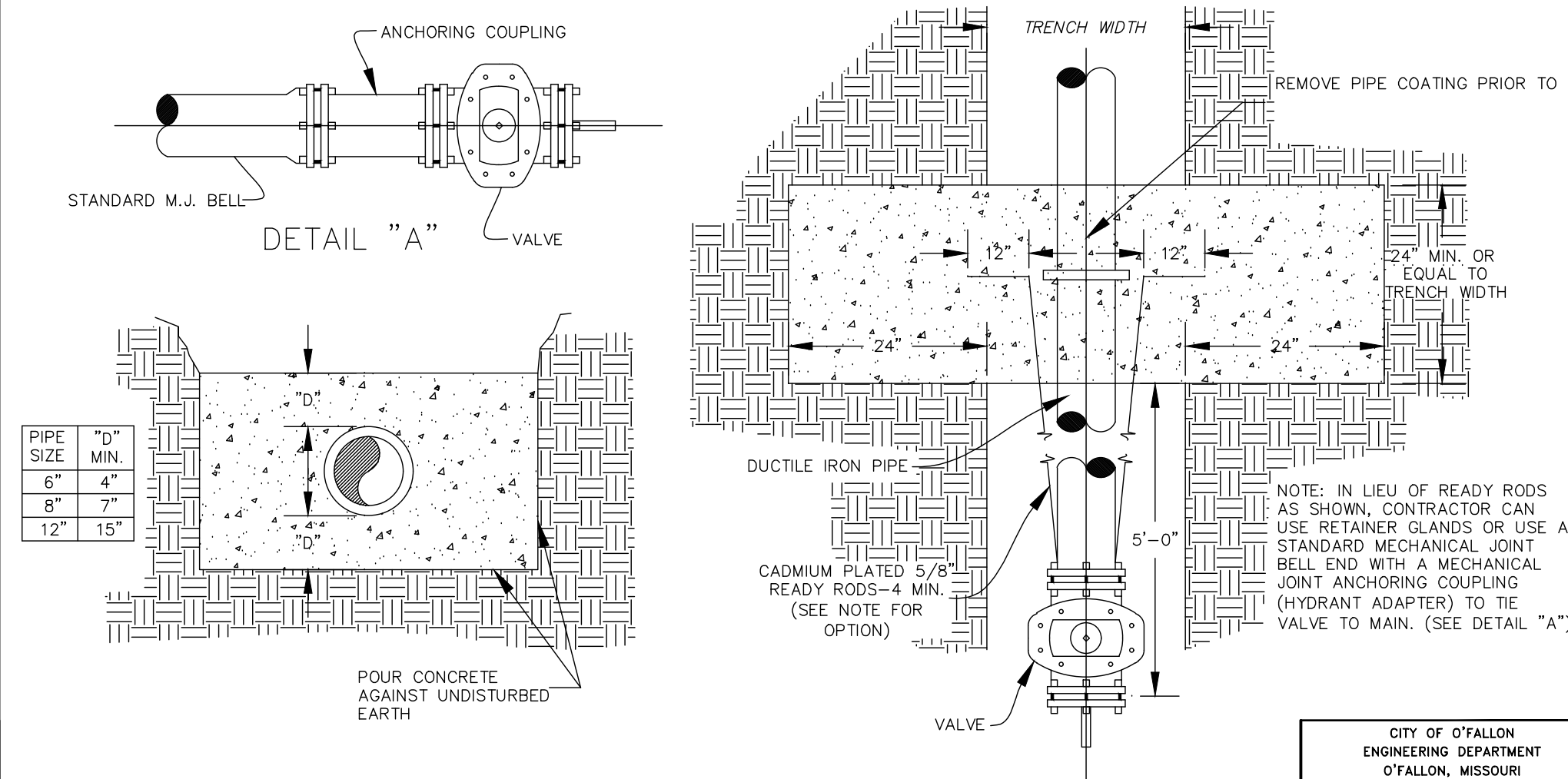
NOTES:
 1. AT LOCATIONS WHERE THE TRANSMISSION MAIN CROSSES AN EXIST SANITARY SEWER, SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
 2. WHEN THE PIPELINE IS PROTECTED WITH POLYETHYLENE TUBE ENCASEMENT, THE CONCRETE ENCASEMENT IS TO COVER THE POLYETHYLENE ENCASEMENT.

CONCRETE ENCASEMENT

NO SCALE

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 O'FALLON, MISSOURI

**CONCRETE ENCASEMENT
 DETAILS**



ANCHORING COUPLING
 STANDARD M.J. BELL
 VALVE

DETAIL "A"

TRENCH WIDTH
 REMOVE PIPE COATING PRIOR TO

DUCTILE IRON PIPE
 CADMIUM PLATED 5.0%
 READY RODS-4 MIN.
 (SEE NOTE FOR OPTION)

VALVE

NOTE: IN LIEU OF READY RODS AS SHOWN, CONTRACTOR CAN USE RETAINER GLANDS OR USE A STANDARD MECHANICAL JOINT BELL END WITH A MECHANICAL JOINT ANCHORING COUPLING (HYDRANT ADAPTER) TO TIE VALVE TO MAIN. (SEE DETAIL "A")

STRADDLE BLOCK DETAIL

NOT TO SCALE

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 ENGINEERING DEPARTMENT
 O'FALLON, MISSOURI

**STRADDLE BLOCK
 DETAILS**

PROJECT TITLE
**IMPROVEMENT PLANS
 MIDWAY TRAILERS INC DBA
 MISSOURI GREAT DANE**

DETAILS

PFS No. 90056.MOCD.00F
 TASK 001

St. Peters
 22 Richmond Center Court
 St. Peters, MO 65276
 Phone (636) 397-1211
 Fax (636) 397-1104
 www.prs8.com

**Pickett
 Ray & Silver**
 Civil Engineering
 & Land Surveying
 Beyond Standard

ENGINEERS AUTHENTICATION
 THE RESPONSIBILITY FOR PROFESSIONAL ENGINEERING LIABILITY ON THIS PROJECT IS HEREBY LIMITED TO THE SET OF PLANS AUTHORIZED BY THE SEAL, SIGNATURE, AND DATE HEREON ATTACHED. RESPONSIBILITY IS DISCLAIMED FOR ALL OTHER ENGINEERING PLANS INVOLVED IN THIS PROJECT AND SPECIFICALLY EXCLUDED HEREON AFTER THIS DATE UNLESS REAUTHENTICATED.

**POCKETT, RAY & SILVER, INC. MO
 LICENSE #00000000**

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 O'FALLON, MISSOURI

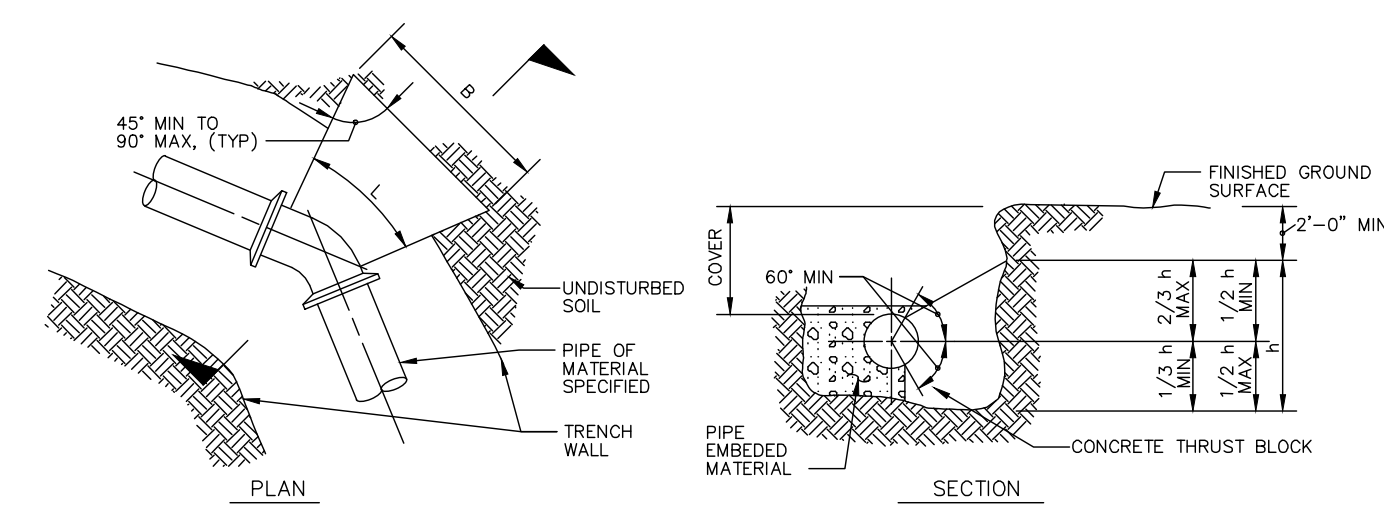
WATER VALVE DETAIL

KARL A. SCHENKE, P.E.
 PROFESSIONAL ENGINEER LICENSE 2003015039

Developer / Owner Information
STEVE + PATTI JONES
 PO BOX 275
 Benton, Missouri 63796

P+Z No. 17-012024
 City No. 18-006464
 DETAILS

Page No. 17 of 20



NOTES:
 1. AREA OF BLOCK, A = Bxh. BLOCK AREAS ARE SHOWN ON GENERAL LAYOUT OR TABLE.
 2. B = h = 1/2T. EXCEPT WHERE TOP OF BLOCK IS WITHIN 2 FEET FROM GROUND SURFACE, THEN B = A/h.
 3. MINIMUM BLOCK DIMENSION (B & h) SHALL BE AT LEAST OD OF PIPE OR 1 FOOT FOR PIPE OD 12" OR LESS.
 4. THE BOTTOM OF THE BLOCK SHALL EXTEND AT LEAST TO THE BOTTOM OF THE TRENCH IN ALL CASES.
 5. L=FITTING LENGTH MINUS CLEARANCE FOR BELLS.
 6. DETAIL IS SHOWN FOR CAST IRON PIPE. DETAIL IS SIMILAR FOR OTHER TYPES OF PIPE.
 7. DIMENSIONS FOR THRUST BLOCKS FOR FIRE HYDRANT ASSEMBLY ARE SHOWN FIRE HYDRANT ASSEMBLY DETAIL.

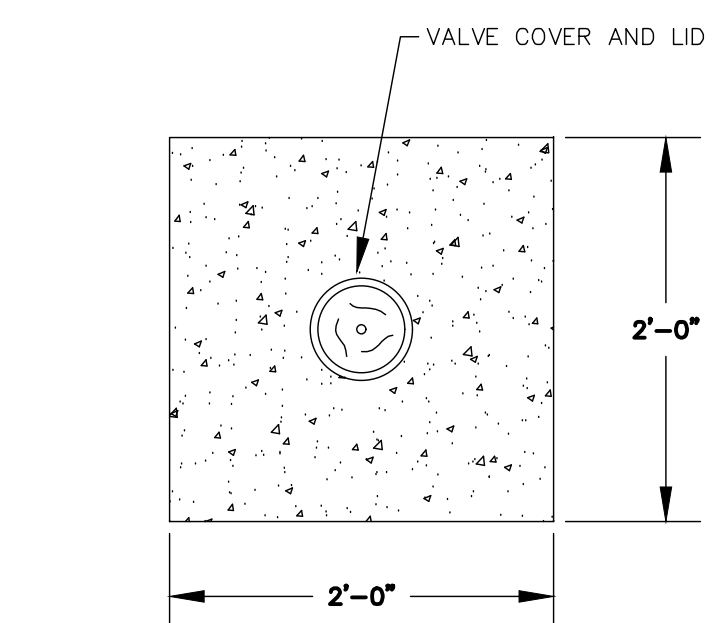
SIZE	BEND	THRUST AREA	B	H
16"	11 1/2"	4 SF	2'	2'
16"	22 1/2"	4 SF	2'	2'
16"	45"	8 SF	2.8'	2.8'

CONCRETE THRUST BLOCKING

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**CONCRETE THRUST
 BLOCKING DETAILS**



**TOP VIEW
 CONCRETE COLLAR**

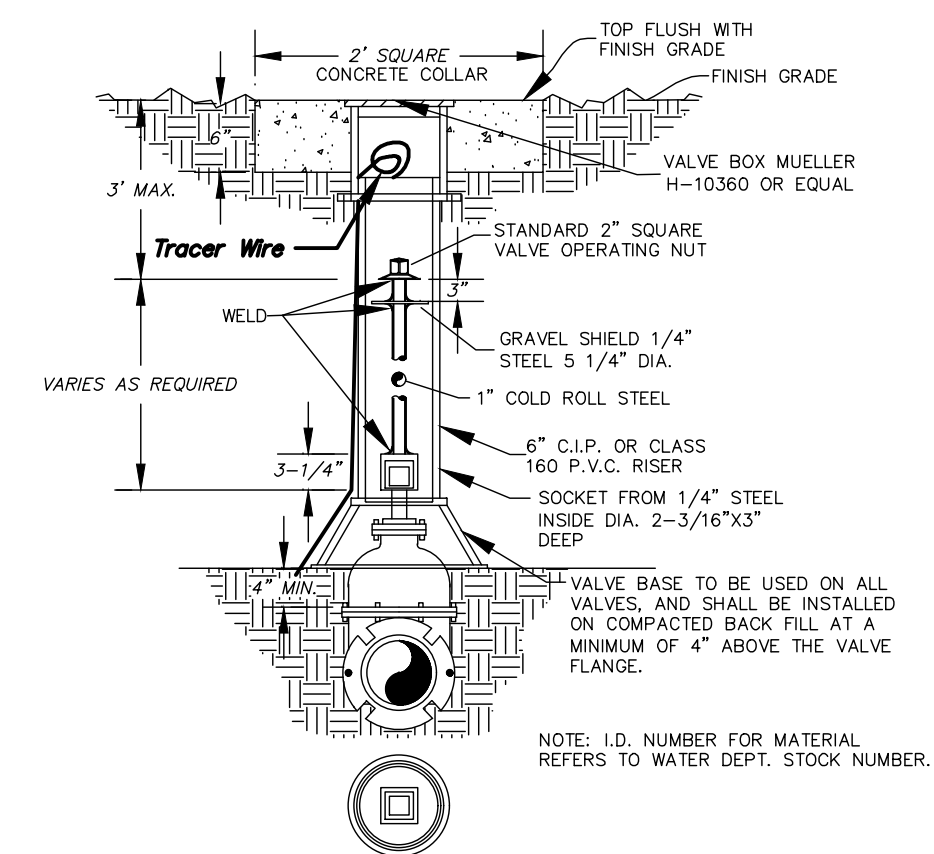
NOT TO SCALE

Note: 1. Concrete collar joint pattern is required in paved areas such as roadways, driveways, sidewalks or other areas of paved surfaces.
 2. Concrete collars are optional in other non-paved areas.

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CONCRETE COLLAR DETAIL

Concrete collar will be in accordance with the Concrete collar detail.

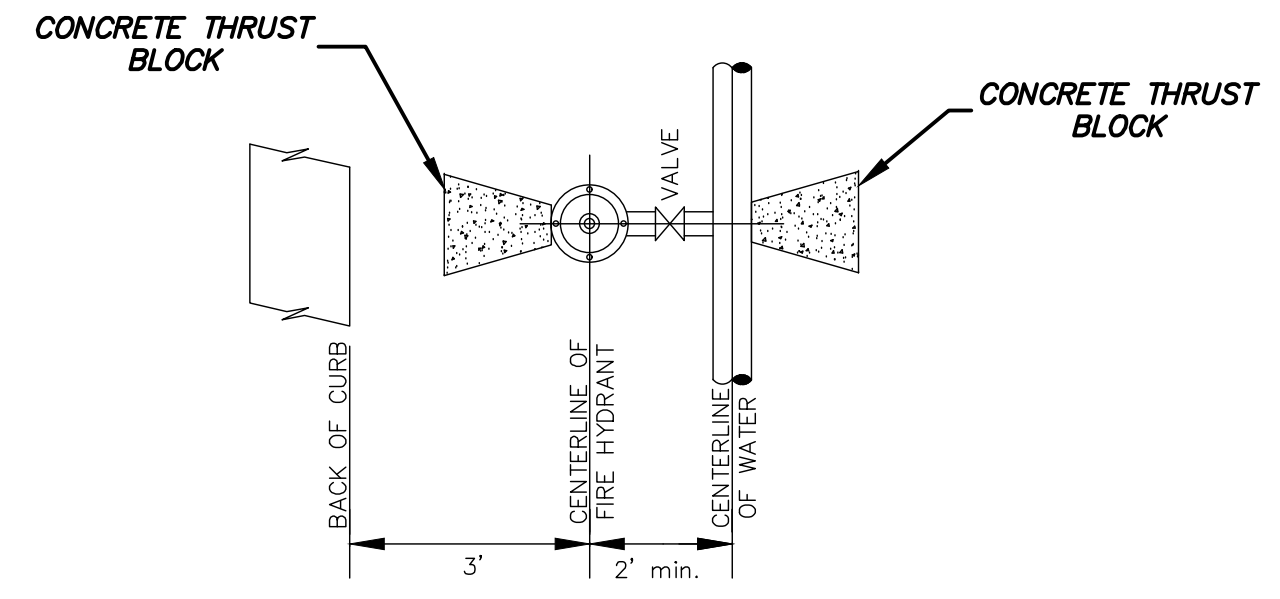


WATER VALVE DETAIL

NOT TO SCALE

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 O'FALLON, MISSOURI

WATER VALVE DETAIL

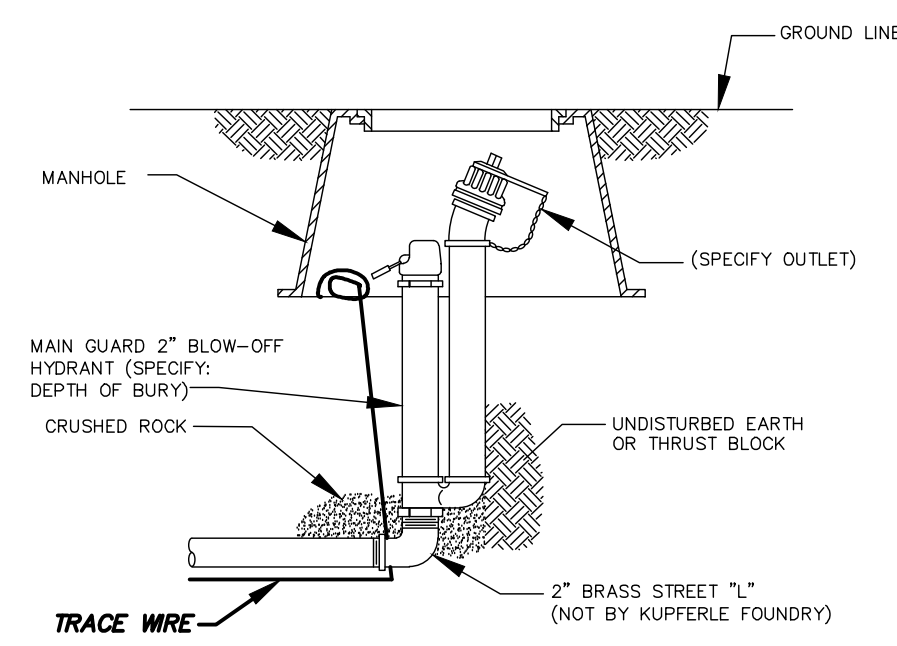


TYPICAL WATER MAIN AND FIRE HYDRANT LOCATIONS

NOT TO SCALE

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**WATER MAIN
 FIRE HYDRANT DETAIL**



BLow-OFF HYDRANTS SHALL BE NONFREEZING, SELF DRAINING TYPE, WITH AN OVERALL LENGTH OF 2' SET UNDERGROUND IN A METER BOX. THESE HYDRANTS WILL BE FURNISHED WITH A 2" FIP INLET, A NON-TURNING OPERATING ROD, AND SHALL OPEN TO THE LEFT. ALL OF THE WORKING PARTS SHALL BE OF BRONZE-TO BRONZE DESIGN, AND BE SERVICEABLE FROM ABOVE GRADE WITH NO DIGGING. THE OUTLET SHALL ALSO BE BRONZE AND BE 2-1/2" NST. HYDRANTS SHALL BE LOCKABLE TO PREVENT UNAUTHORIZED USE AS MANUFACTURED BY KUPFERLE FOUNDRY CO., ST. LOUIS, MO. OR APPROVED EQUAL.

(SPECIFY OVERALL LENGTH 6" SHORTER THAN NORMAL DEPTH OF BURY. MINIMUM OPENING IN METER BOX SHOULD BE 10".)

BLOW-OFF HYDRANT

NOT TO SCALE

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**BLOW-OFF
 HYDRANT DETAIL**