

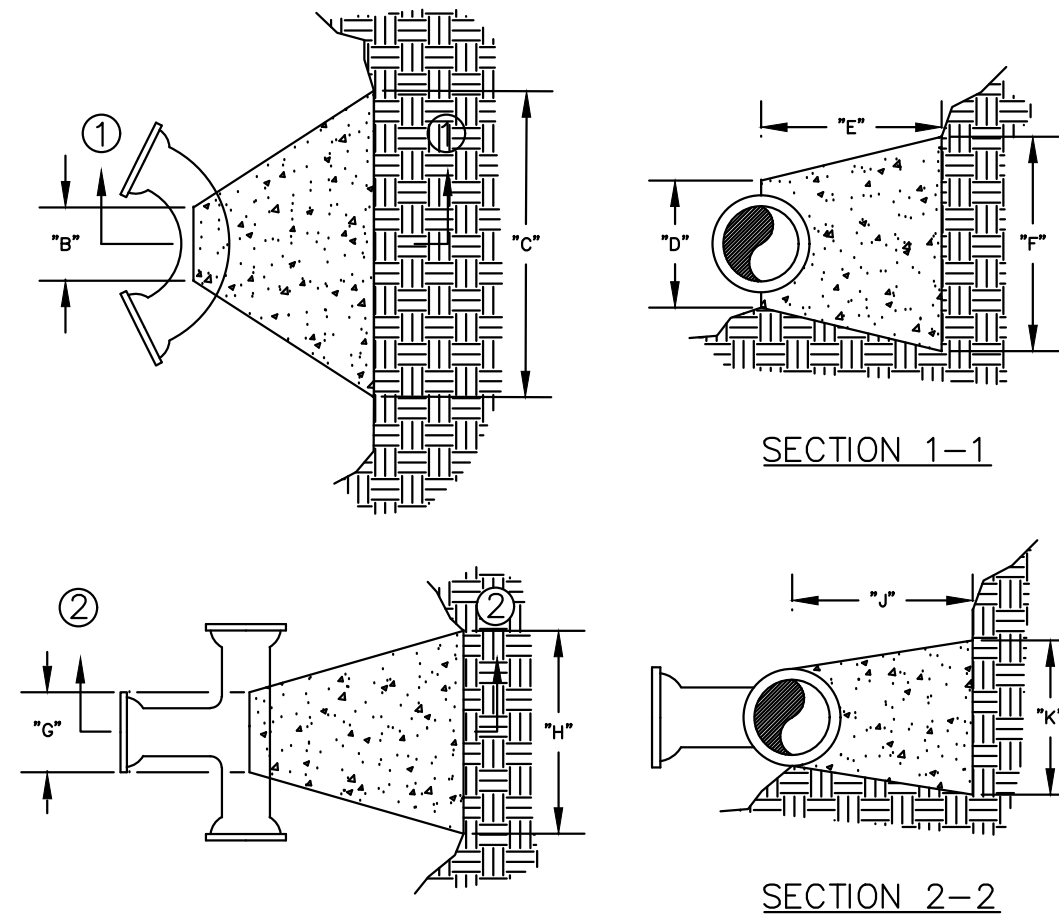
BENDS	"B"	"C"	"D"	"E"	"F"
6"-11 1/4"	8"	15"	12"	24"	10"
6"-22 1/2"	8"	18"	12"	24"	11"
6"-45"	8"	30"	12"	24"	13"
6"-90"	8"	30"	12"	24"	28"
8"-11 1/4"	8"	20"	12"	24"	10"
8"-22 1/2"	8"	22"	12"	24"	18"
8"-45"	8"	31"	12"	24"	24"
8"-90"	8"	38"	12"	24"	50"
12"-11 1/4"	8"	30"	12"	24"	15"
12"-22 1/2"	8"	35"	12"	24"	25"
12"-45"	8"	40"	12"	24"	40"
12"-90"	8"	40"	12"	24"	52"
16"-11 1/4"	TL	28"	20"	24"	28"
16"-22 1/2"	TL	39"	20"	24"	39"
16"-45"	TL	55"	20"	24"	55"
16"-90"	TL	81"	20"	24"	80"
20"-11 1/4"	TL	34"	24"	28"	28"
20"-22 1/2"	TL	48"	24"	28"	39"
20"-45"	TL	74"	24"	28"	55"
20"-90"	TL	138"	24"	28"	80"
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"	80"
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"	"H"	"J"	"K"
6"x6"x6"	12"	24"	24"	18"
8"x8"x8"	12"	24"	24"	18"
12"x12"x12"	12"	24"	24"	18"
12"x12"x12"	12"	24"	24"	18"
24"x24"x16"	16"	53"	28"	53"

- 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.

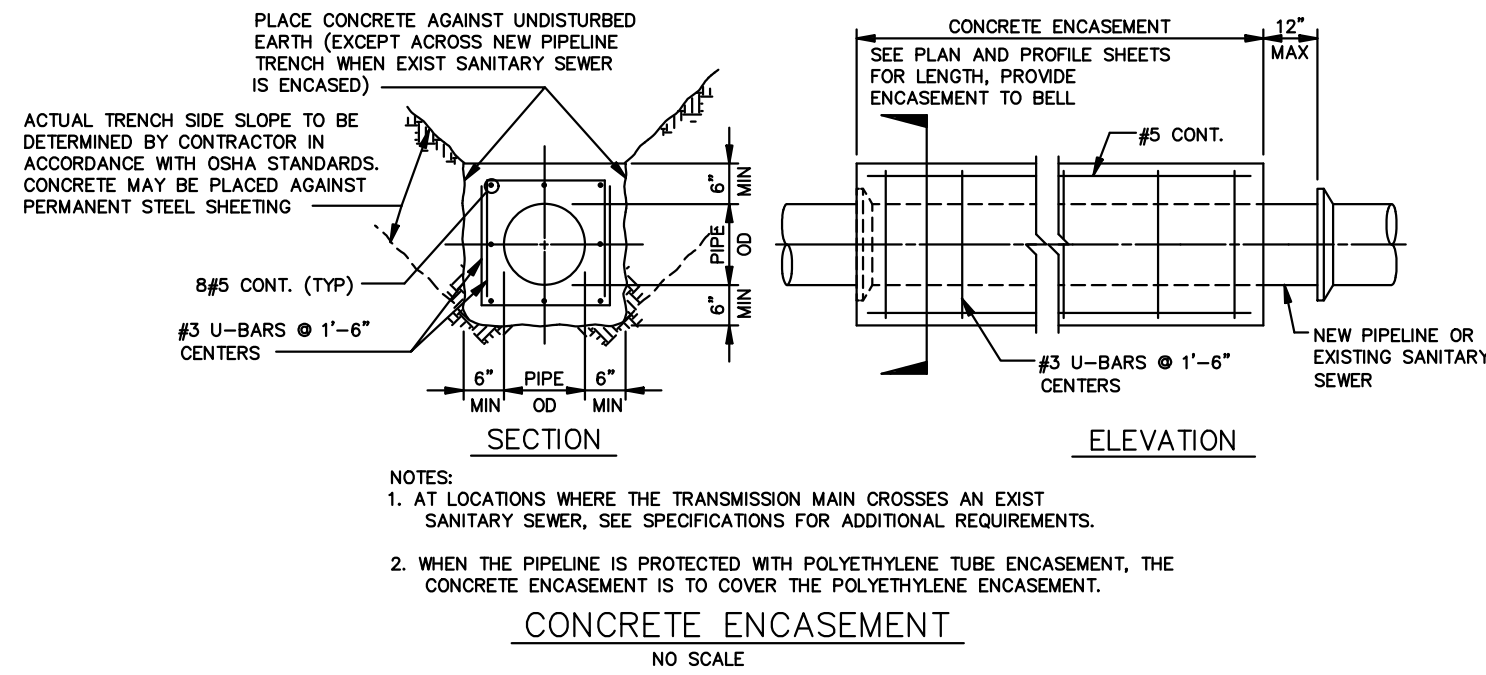
INTERNAL WATER PRESSURE 6" through 12"=200 psi
INTERNAL WATER PRESSURE 16" through 30"=210 psi
BEARING PRESSURE OF SOIL=2000 psi

BACKING BLOCKS
NOT TO SCALE



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**BACKING BLOCK
DETAILS AND LOCATIONS**



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**CONCRETE ENCASEMENT
DETAILS**

ISSUE	REMARKS/DATE
1	INITIAL SUBMITTAL 07-25-2017
2	CITY & CLIENT REV. 09-08-17
3	CITY REV. 10-16-17
4	CITY REV. 10-27-17

PROJECT TITLE

**BROOKSIDE
FOREST**

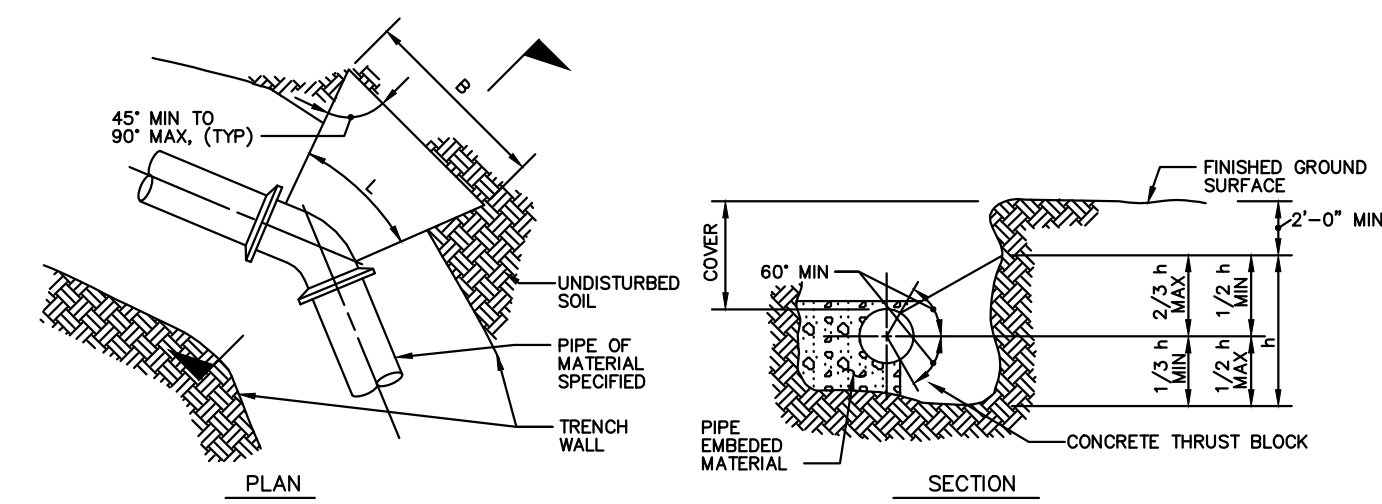
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THE **STERLING** CO.
ENGINEERS & SURVEYORS

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Corporate Certificate of Authority #001348



Date: 11-7-17
Jason D Howell
License No. PE 2007002801
Civil Engineer



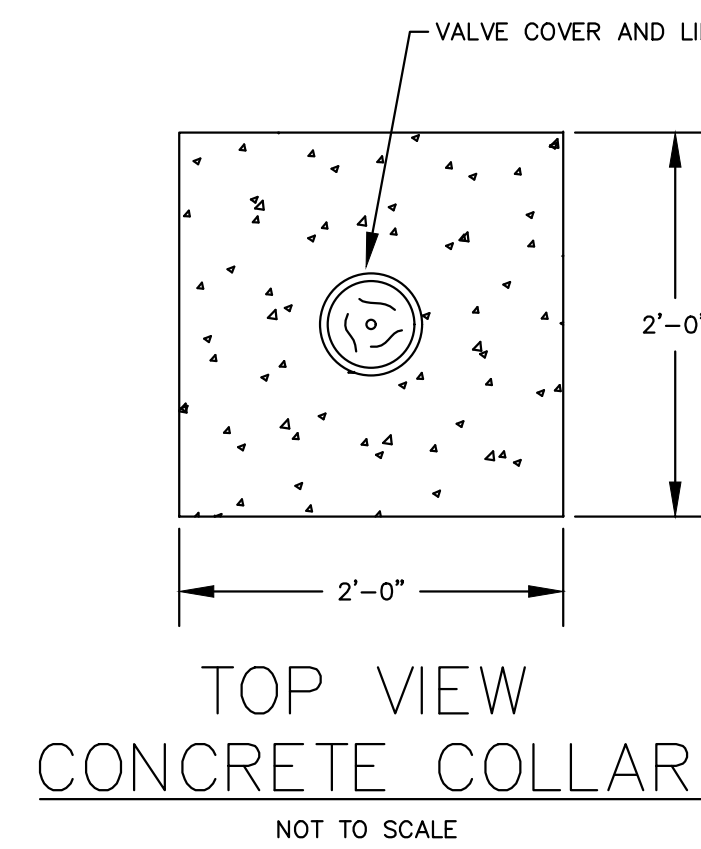
- NOTES:
1. AREA OF BLOCK, A = Bh, BLOCK AREAS ARE SHOWN ON GENERAL LAYOUT OR TABLE.
 2. B = h = \sqrt{A} , EXCEPT WHERE TOP OF BLOCK IS WITHIN 2 FEET FROM GROUND SURFACE, THEN B = A/h.
 3. MINIMUM BLOCK DIMENSION (B & h) SHALL BE AT LEAST 60 OF PIPE OR 1 FOOT FOR PIPE 50" 12" OR LESS.
 4. THE BOTTOM 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"	45"	8 SF	2.6'	2.6'

CONCRETE THRUST BLOCKING
NOT TO SCALE

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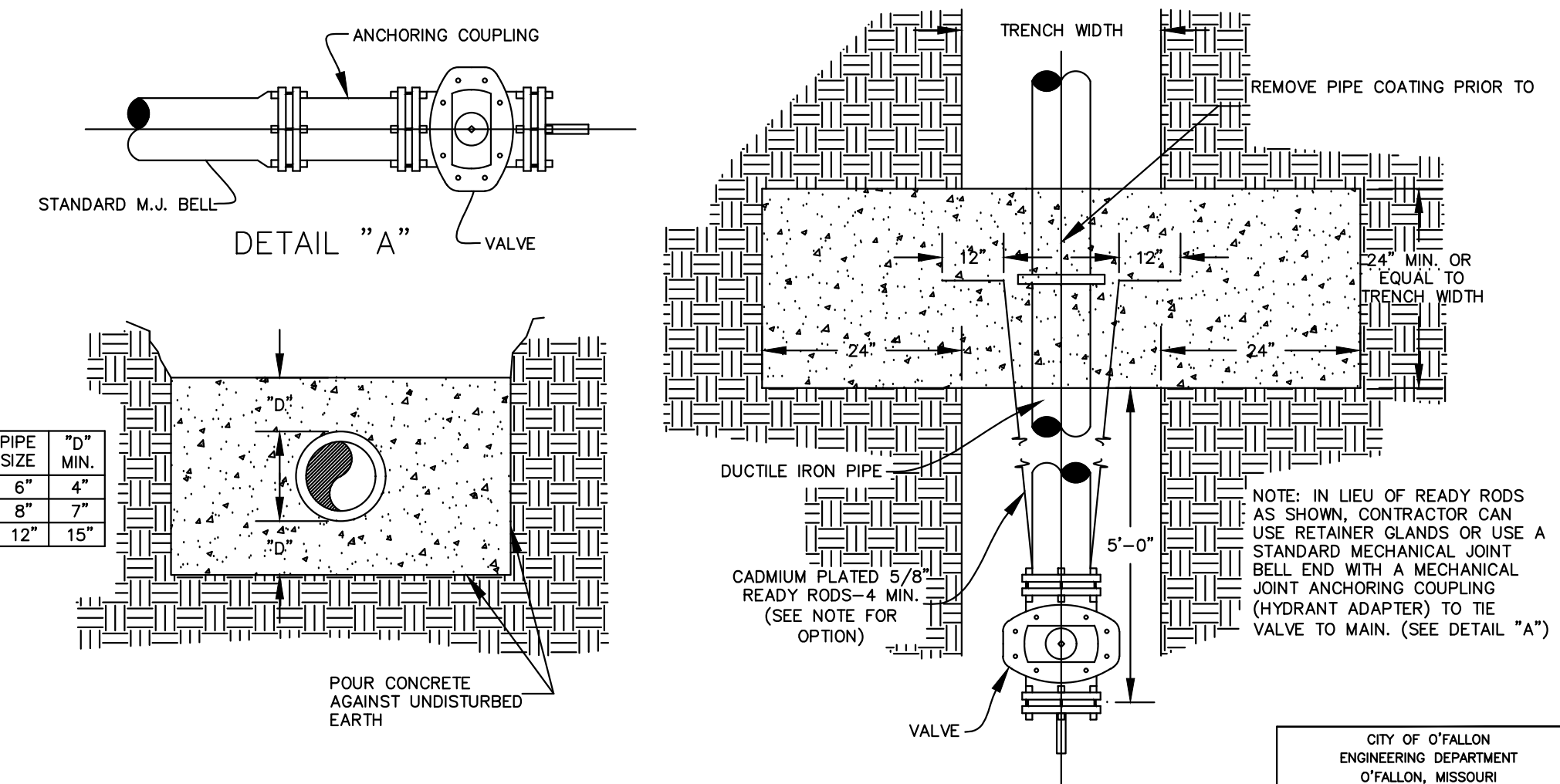
**CONCRETE THRUST
BLOCKING DETAILS**



- 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.

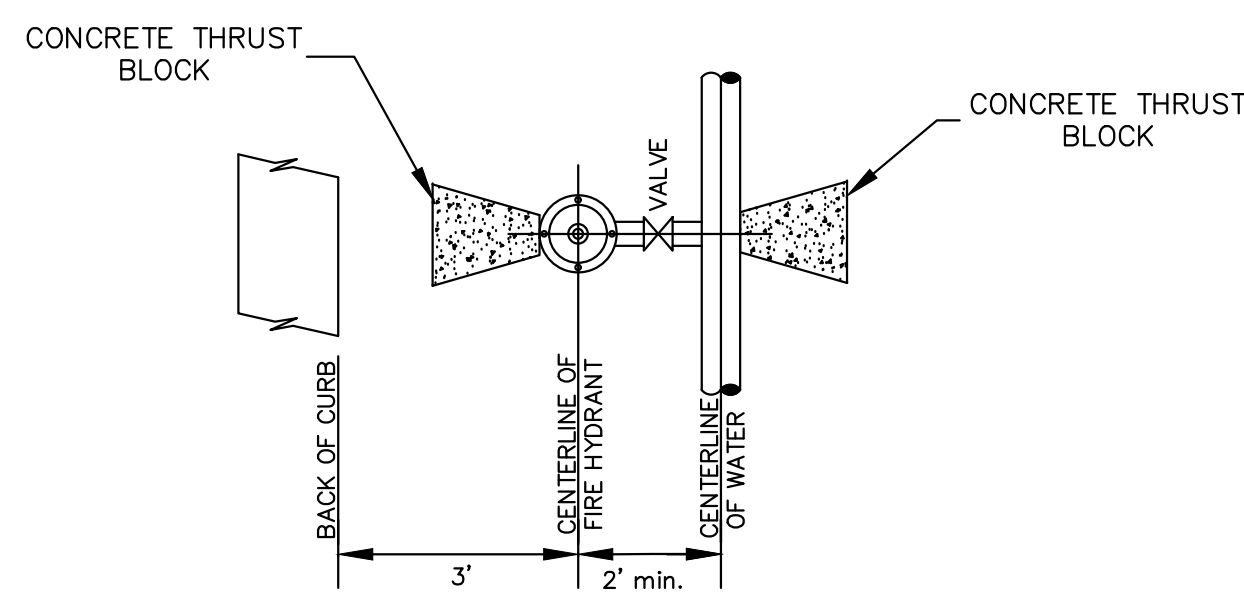
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**CONCRETE
COLLAR DETAIL**



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**STRADDLE BLOCK
DETAILS**

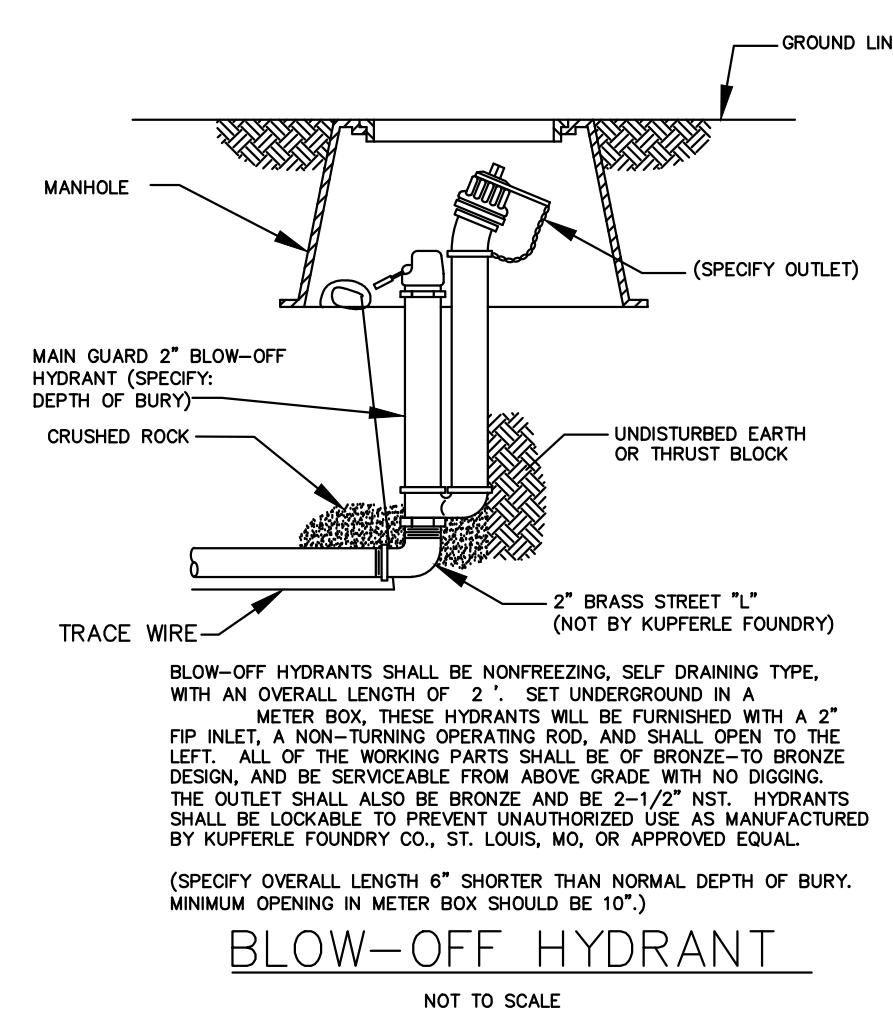


CONFIGURATION
ALL FIRE HYDRANTS SHALL BE 3' OFF BACK OF CURB
ALL WATER MAINS SHALL BE A MIN. OF 5' OFF BACK OF CURB

**TYPICAL WATER MAIN AND FIRE
HYDRANT LOCATIONS**
NOT TO SCALE

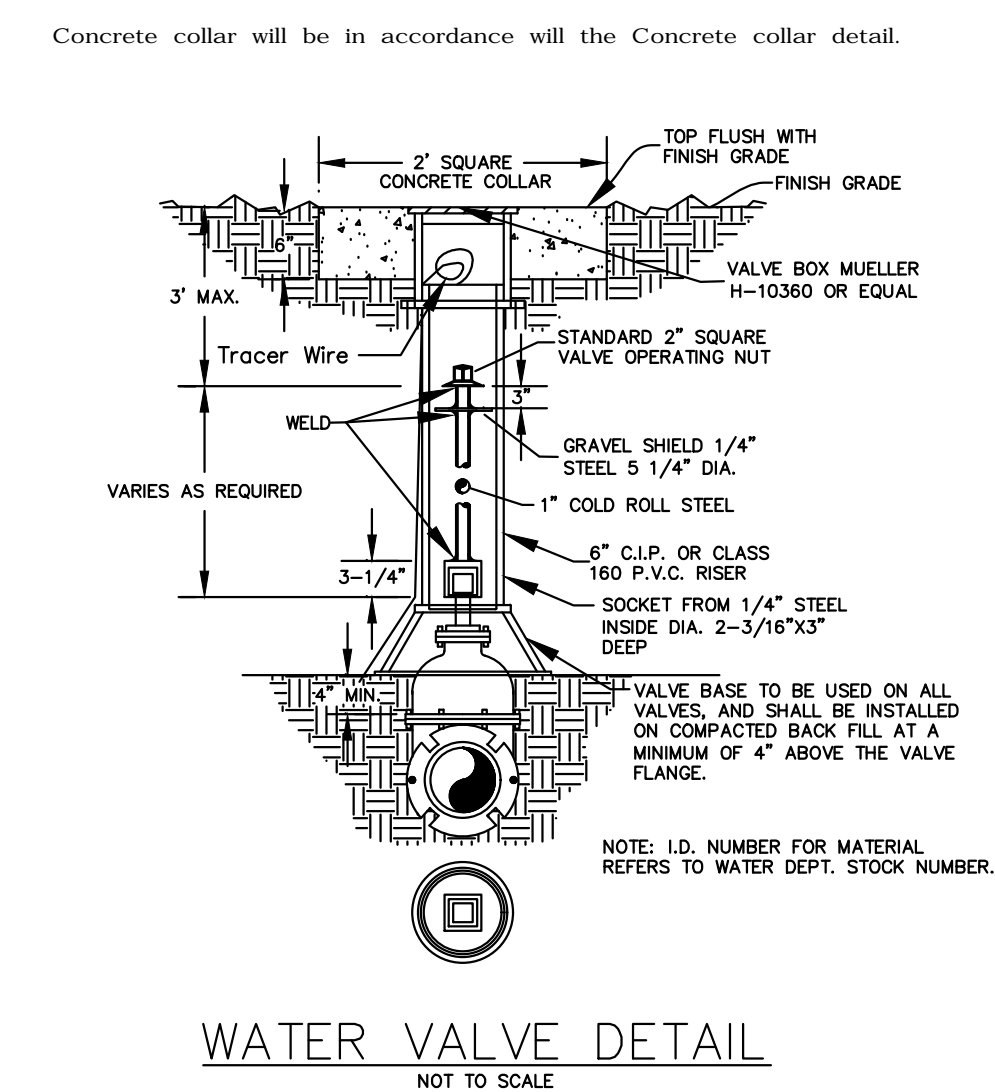
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**WATER MAIN
FIRE HYDRANT DETAIL**



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**BLOW-OFF
HYDRANT DETAIL**



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**WATER
VALVE DETAIL**

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WATER DETAILS

P+Z No. 02-17.01
City No.
Date: Nov. 7, 2017
Job No. 16-09-274

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