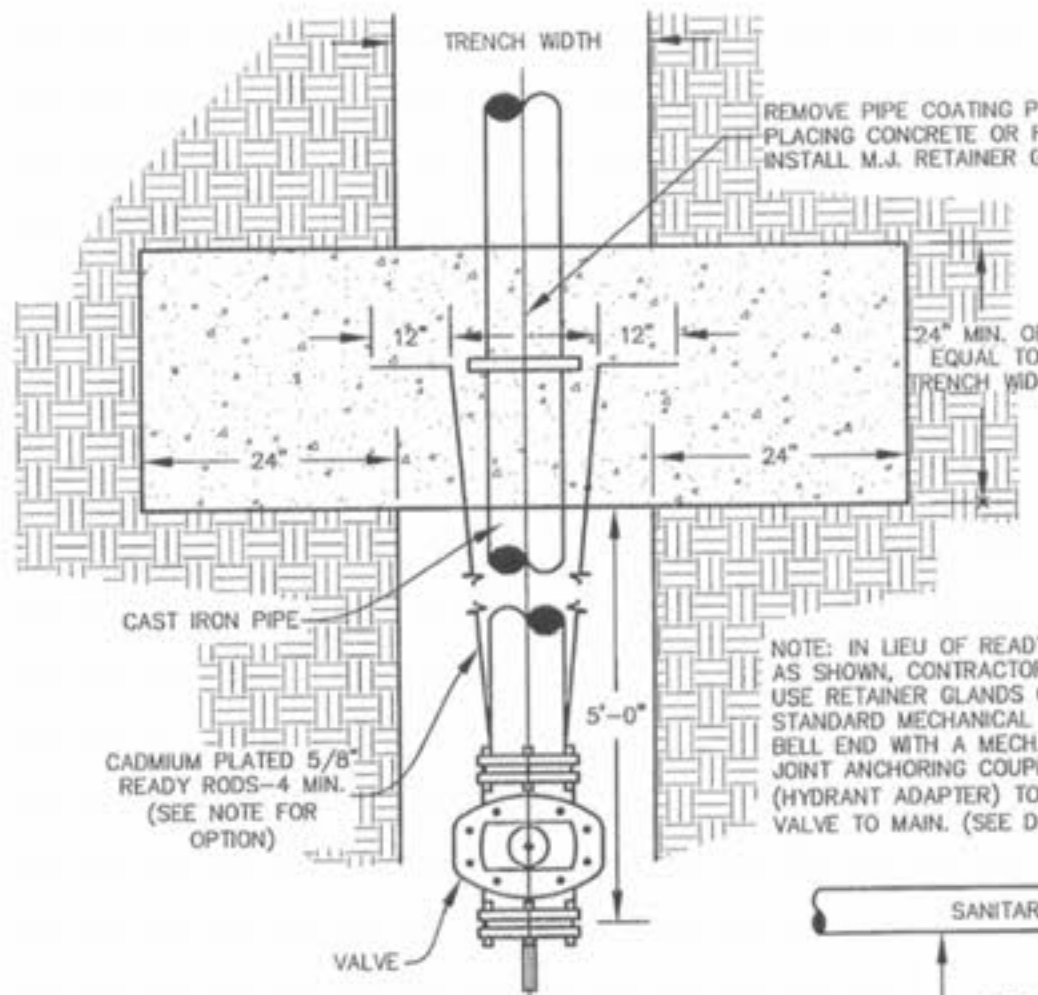
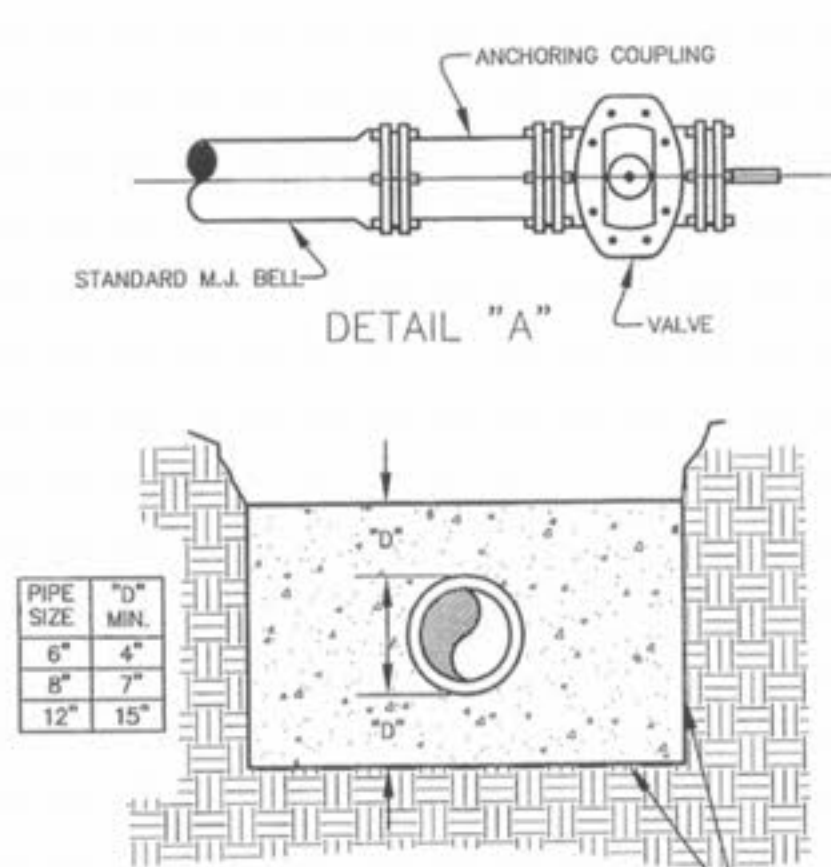
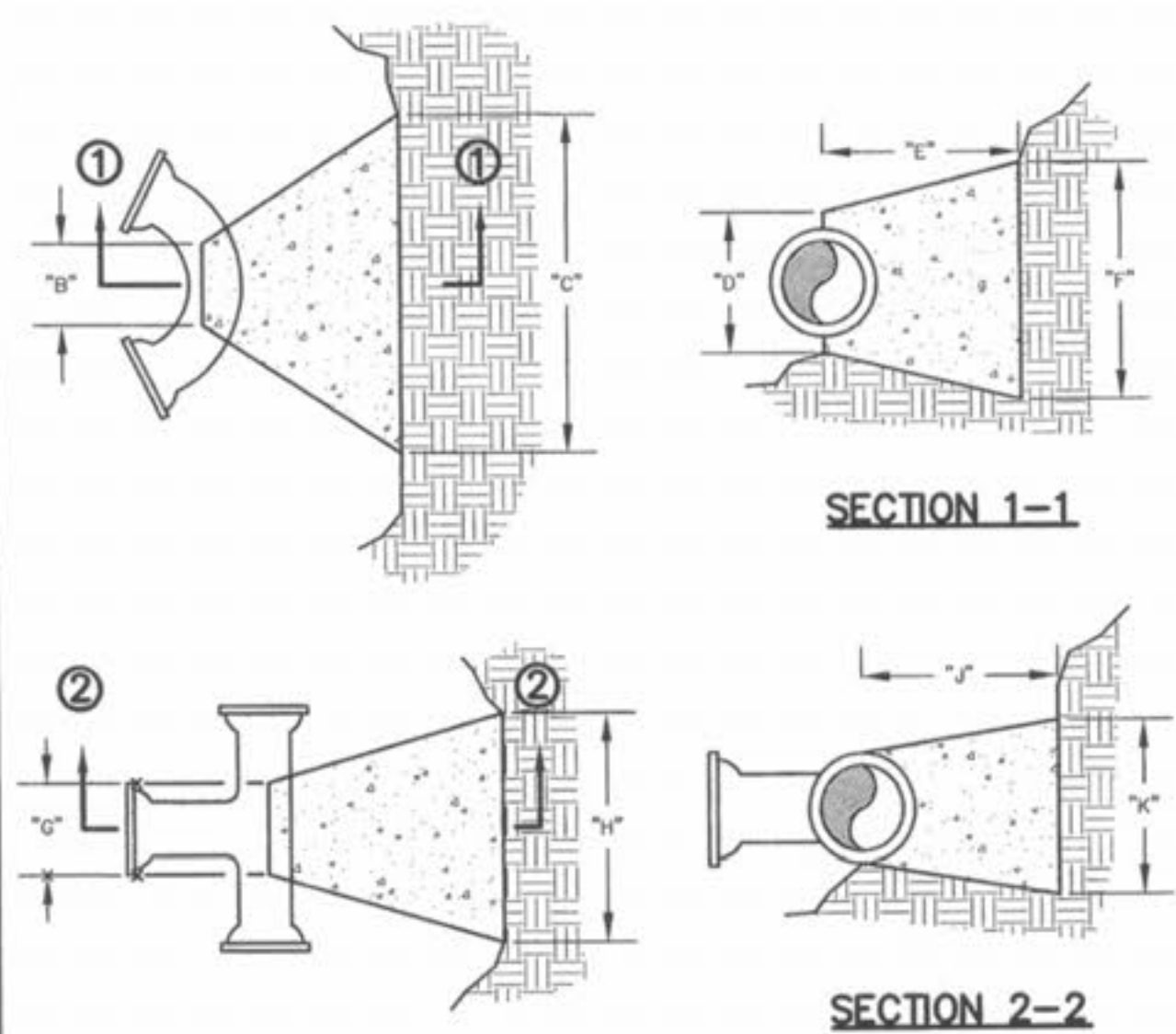


MANUAL AIR VALVE DETAIL
NOT TO SCALE

FLUSHING ASSEMBLY
NOT TO SCALE

WATER VALVE DETAIL
NOT TO SCALE

BLOW-OFF HYDRANT
NOT TO SCALE

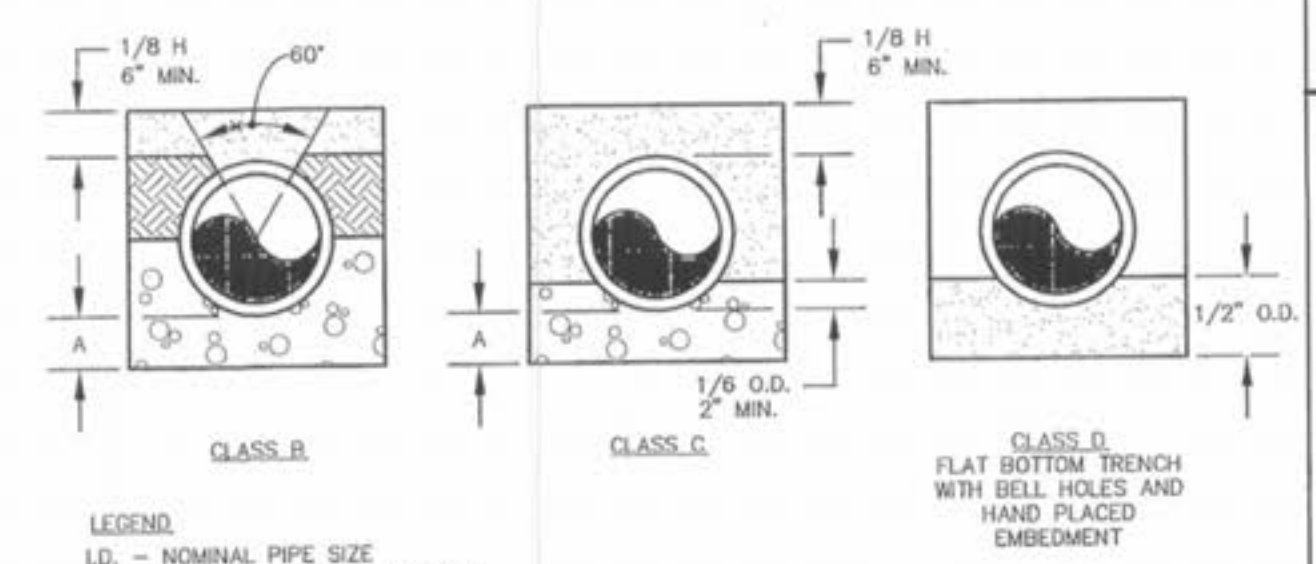


TOP VIEW CONCRETE COLLAR
NOT TO SCALE

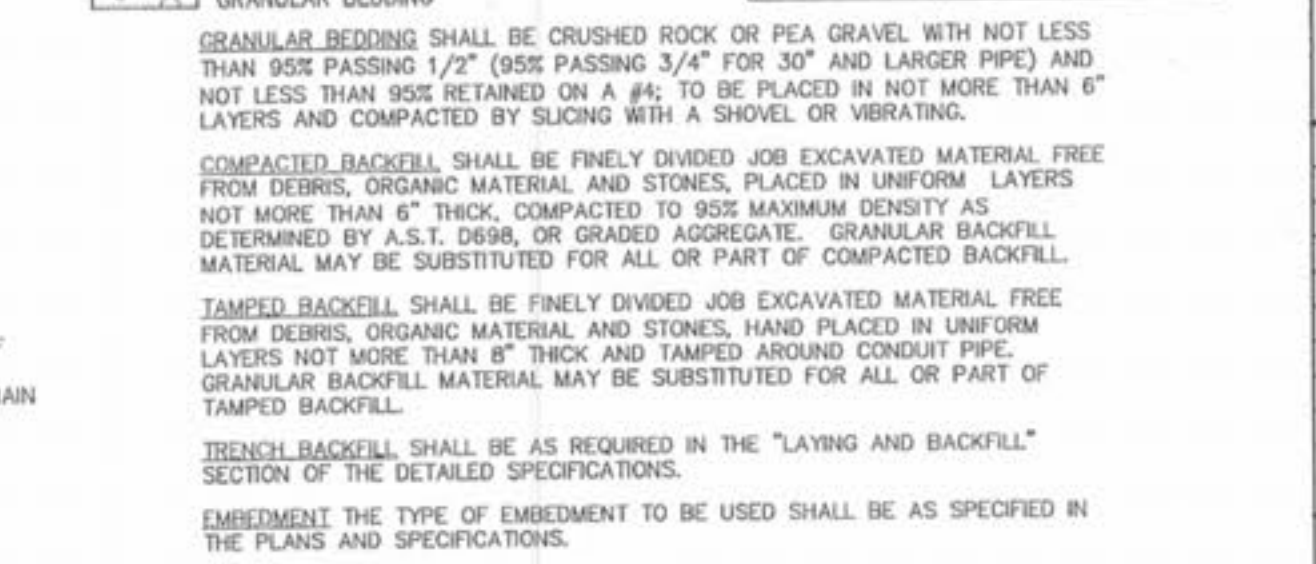
STRADDLE BLOCK DETAIL
NOT TO SCALE



TYPICAL WATER AND SEWER SEPERATION
NOT TO SCALE



WATER MAIN EMBEDMENT
NOT TO SCALE



CONCRETE THRUST BLOCKING
NOT TO SCALE

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"	14"
6"-90"	8"	30"	12"	24"	27"
8"-11 1/4"	8"	20"	12"	24"	10"
8"-22 1/2"	8"	22"	12"	24"	17"
8"-45"	8"	30"	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"	40"
12"-90"	8"	60"	12"	24"	52"

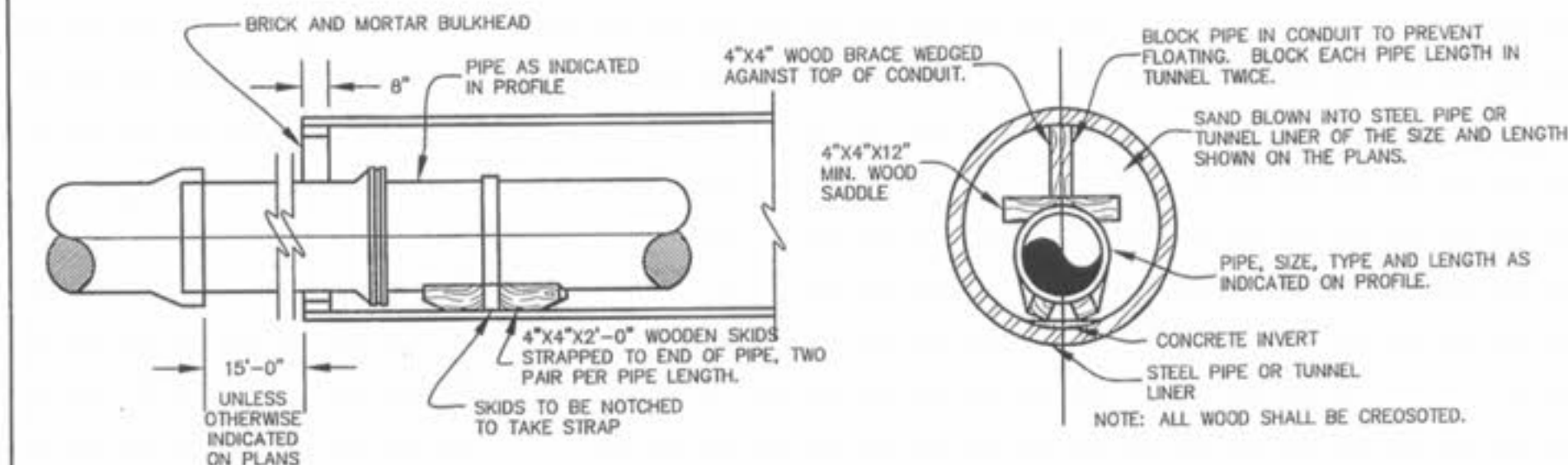
TEES	"G"	"H"	"J"	"K"
6"x6"x6"	12"	24"	24"	18"
8"x8"x8"	12"	24"	24"	18"
8"x8"x6"	12"	24"	24"	24"
12"x12"x6"	12"	24"	24"	18"
12"x12"x8"	12"	24"	24"	24"
12"x12"x12"	12"	36"	24"	36"

CUBIC FEET OF CONCRETE REQUIRED	BEND	11 1/4"	22 1/2"	45"	90"
6"	1.7	2.4	3.5	5.5	
8"	2.1	3.1	5.0	8.5	
12"	3.7	5.9	9.7	17.5	

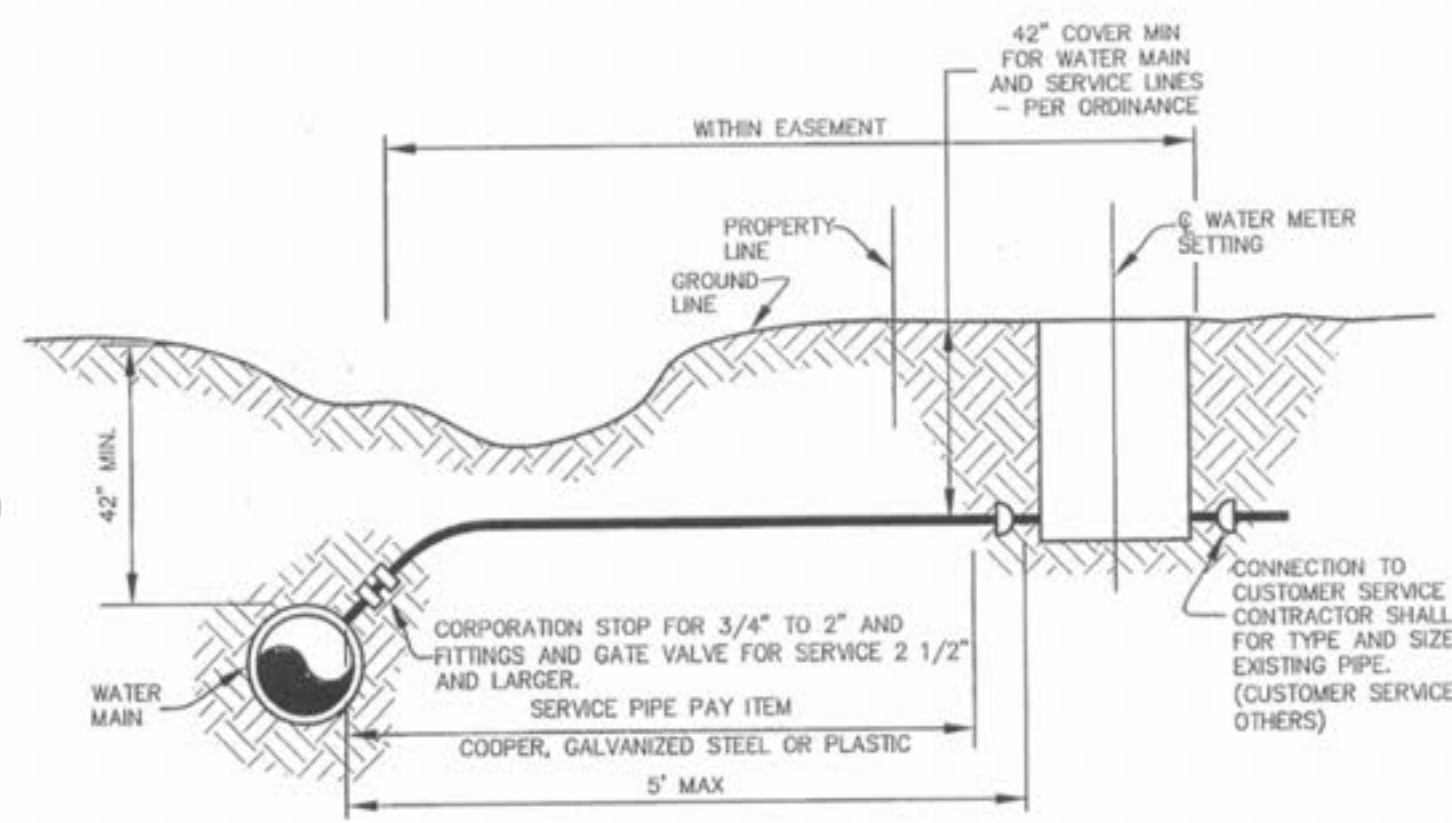
TEE X	6"	8"	12"	PLUG
6"	40	~	~	4.0
8"	40	5.0	~	5.0
12"	40	5.5	10.5	10.5

NOTES:
1. 2" & 4" FITTINGS EQUIVALENT TO 6" FITTINGS.
2. TAPPING SLEEVES TO HAVE BACKING BLOCKS SAME SIZE AS REQUIRED FOR TEES.

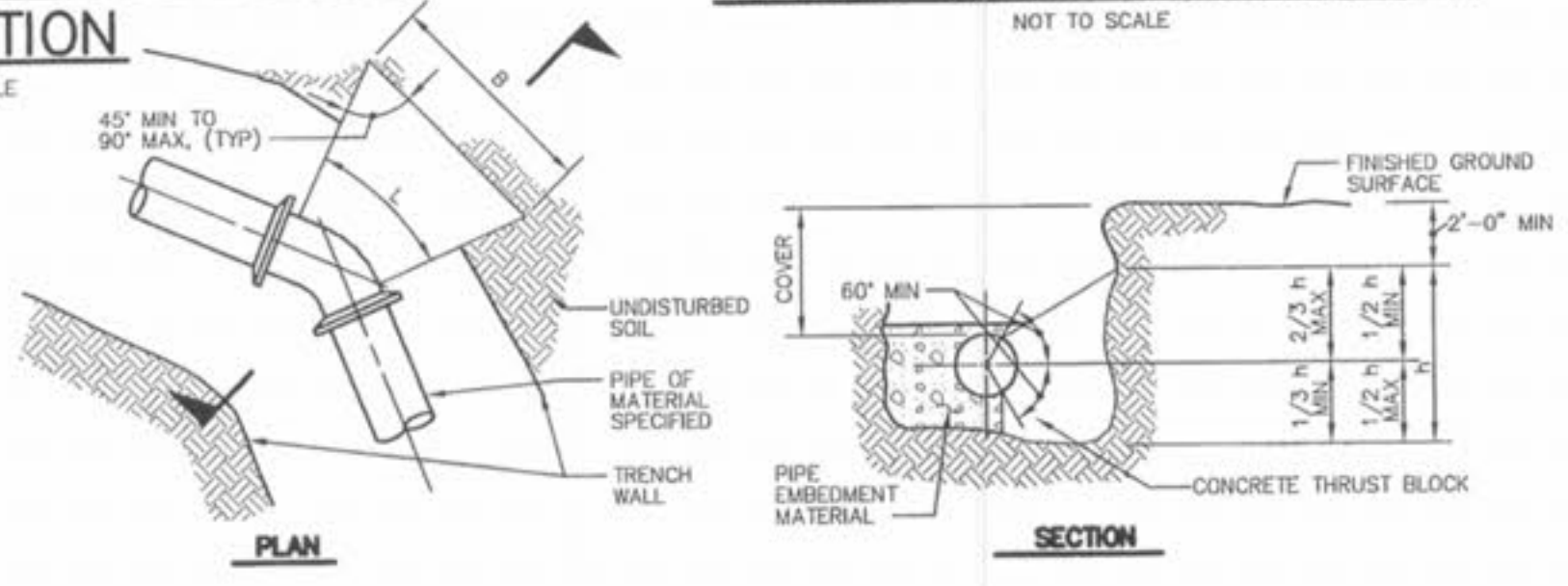
BACKING BLOCKS
NOT TO SCALE



TUNNEL LINER DETAIL
NOT TO SCALE



TYPICAL SERVICE ASSEMBLY
NOT TO SCALE



- NOTES:
- AREA OF BLOCK, A = Bxh. BLOCK AREAS ARE SHOWN ON GENERAL LAYOUT OR TABLE.
 - B = h = \sqrt{A} , EXCEPT WHERE TOP OF BLOCK IS WITHIN 2 FEET FROM GROUND SURFACE, THEN B = A/h.
 - MINIMUM BLOCK DIMENSION (B & h) SHALL BE AT LEAST OD OF PIPE OR 1 FOOT FOR PIPE OD 12" OR LESS.
 - THE BOTTOM OF THE BLOCK SHALL EXTEND AT LEAST TO THE BOTTOM OF THE TRENCH IN ALL CASES.
 - L-FITTING LENGTH MINUS CLEARANCE FOR BELLS.
 - DETAIL IS SHOWN FOR CAST IRON PIPE; DETAIL IS SIMILAR FOR OTHER TYPES OF PIPE.
 - 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"	8 SF	2.8'	2.8'

CONCRETE THRUST BLOCKING
NOT TO SCALE

CITY OF FALLON
COMMUNITY DEVELOPMENT
DESIGN DIVISION
O'FALLON, MISSOURI



DISCLAIMER OF RESPONSIBILITY
I HEREBY CERTIFY THAT THE DRAWINGS REFERRED TO ARE PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF THEY COMPLY WITH ALL CITY, STATE AND FEDERAL REQUIREMENTS AND I AM NOT PROVIDING CONTRACT ADMINISTRATION SERVICES.

DESIGNED: _____
CHECKED: _____
DATE: _____
PROJECT NO.: _____
SHEET _____ OF _____

MAGNOLIA
WATERLINE DETAILS 1

ST. CHARLES ENGINEERING & SURVEYING, INC.
801 S. FIFTH STREET, SUITE 202
ST. CHARLES, MO 63301
TEL: (636) 947-0607 FAX: (636) 947-2448



12-22-09

ORDER NO. 08-0498
DATE 12/1/03
D8