

BENDS	90°	45°	30°	15°
6"-11 1/4"	8" 15'	10" 12'	12" 10'	14" 10'
6"-22 1/2"	8" 30'	10" 24'	12" 20'	14" 18'
6"-45°	8" 30'	10" 24'	12" 20'	14" 18'
6"-90°	8" 30'	10" 24'	12" 20'	14" 18'
8"-11 1/4"	8" 20'	10" 16'	12" 14'	14" 12'
8"-22 1/2"	8" 22'	10" 18'	12" 16'	14" 14'
8"-45°	8" 31'	10" 24'	12" 20'	14" 18'
8"-90°	8" 38'	10" 32'	12" 28'	14" 26'
12"-11 1/4"	8" 30'	10" 24'	12" 20'	14" 18'
12"-22 1/2"	8" 30'	10" 24'	12" 20'	14" 18'
12"-45°	8" 40'	10" 32'	12" 28'	14" 26'
12"-90°	8" 60'	10" 48'	12" 42'	14" 38'
16"-11 1/4"	8" 28'	10" 22'	12" 18'	14" 16'
16"-22 1/2"	8" 39'	10" 30'	12" 24'	14" 22'
16"-45°	8" 51'	10" 40'	12" 32'	14" 30'
16"-90°	8" 91'	10" 72'	12" 60'	14" 54'
20"-11 1/4"	8" 34'	10" 28'	12" 22'	14" 20'
20"-22 1/2"	8" 48'	10" 38'	12" 30'	14" 28'
20"-45°	8" 74'	10" 56'	12" 48'	14" 44'
20"-90°	8" 136'	10" 96'	12" 80'	14" 72'
24"-11 1/4"	8" 40'	10" 32'	12" 28'	14" 24'
24"-22 1/2"	8" 56'	10" 48'	12" 36'	14" 32'
24"-45°	8" 101'	10" 80'	12" 64'	14" 56'
24"-90°	8" 186'	10" 144'	12" 112'	14" 100'
30"-11 1/4"	8" 49'	10" 38'	12" 30'	14" 26'
30"-22 1/2"	8" 79'	10" 64'	12" 48'	14" 44'
30"-45°	8" 154'	10" 128'	12" 96'	14" 88'
30"-90°	8" 285'	10" 240'	12" 192'	14" 176'

TEES	90°	45°	30°	15°
6"x8"x8"	12" 24'	14" 18'	16" 12'	18" 6'
8"x8"x8"	12" 24'	14" 18'	16" 12'	18" 6'
8"x8"x8"	12" 24'	14" 18'	16" 12'	18" 6'
12"x12"x12"	12" 24'	14" 18'	16" 12'	18" 6'
12"x12"x12"	12" 24'	14" 18'	16" 12'	18" 6'
24"x24"x24"	12" 24'	14" 18'	16" 12'	18" 6'

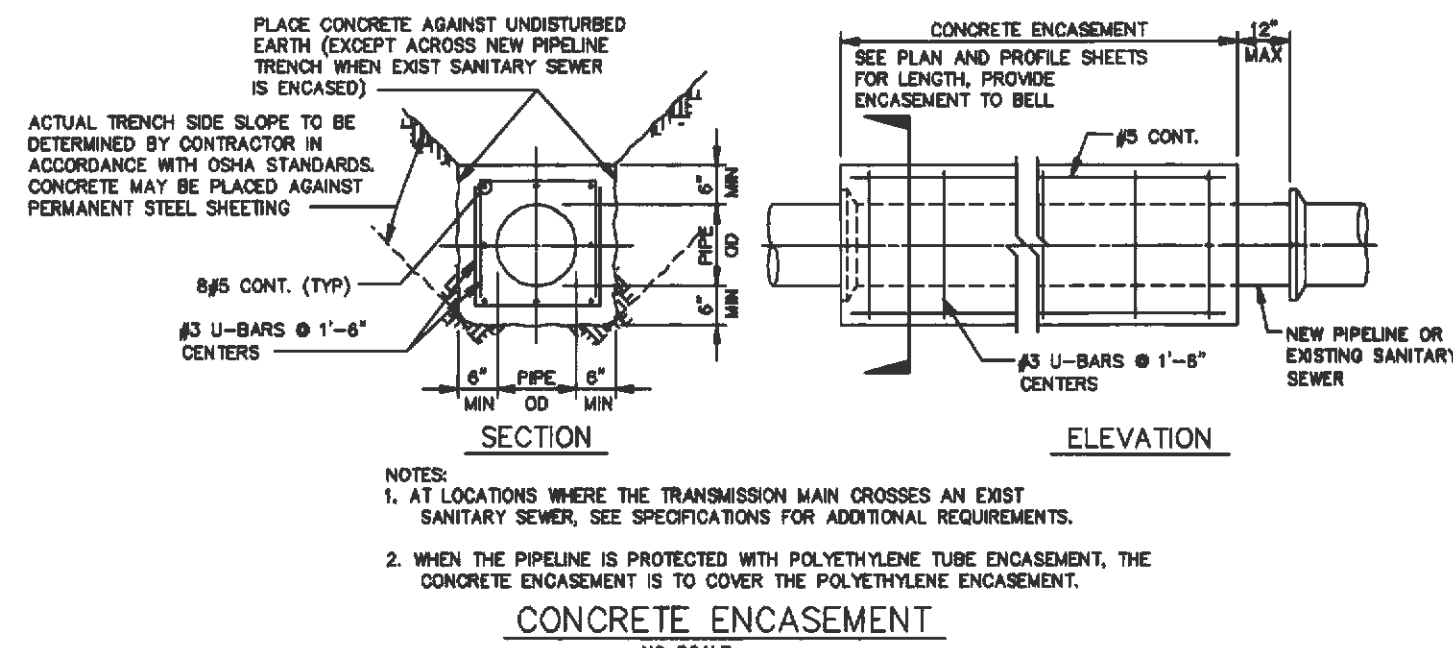
- NOTES:
- 2" & 4" FITTINGS EQUIVALENT TO 4" FITTINGS.
  - TAPPING SLEEVES TO HAVE BACKING BLOCKS SAME SIZE AS REQUIRED FOR TEES.
  - TTL = TOTAL LENGTH OF FITTING MINUS CLEARANCE FOR BELLS.

INTERNAL WATER PRESSURE 6" through 12"=200 psi  
INTERNAL WATER PRESSURE 18" through 30"=210 psi  
SEWER PRESSURE OF SOIL=2000 psi

**BACKING BLOCKS**  
NOT TO SCALE

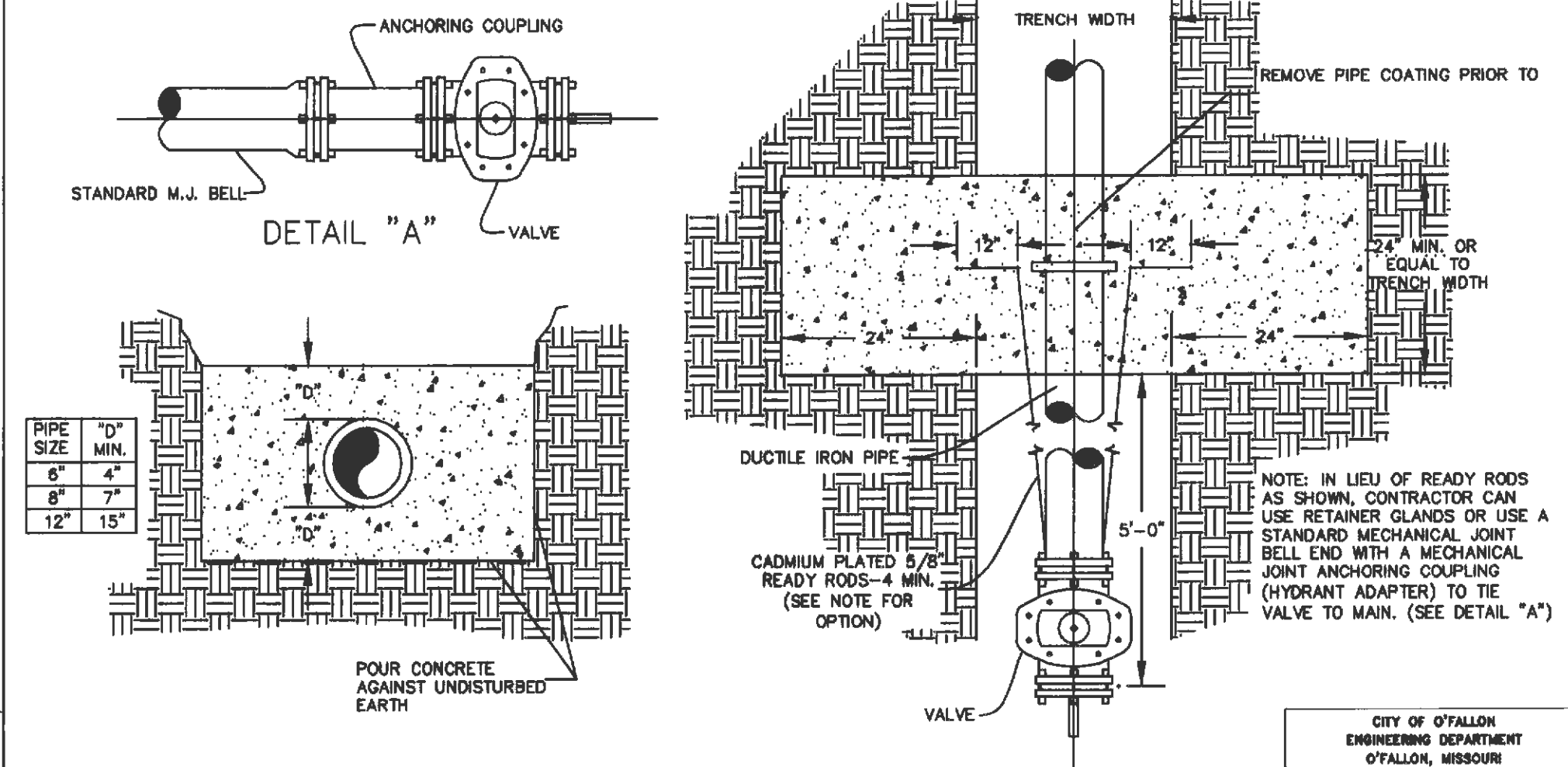
CITY OF O'FALLON  
ENGINEERING DEPARTMENT  
O'FALLON, MISSOURI

**BACKING BLOCK  
DETAILS AND LOCATIONS**



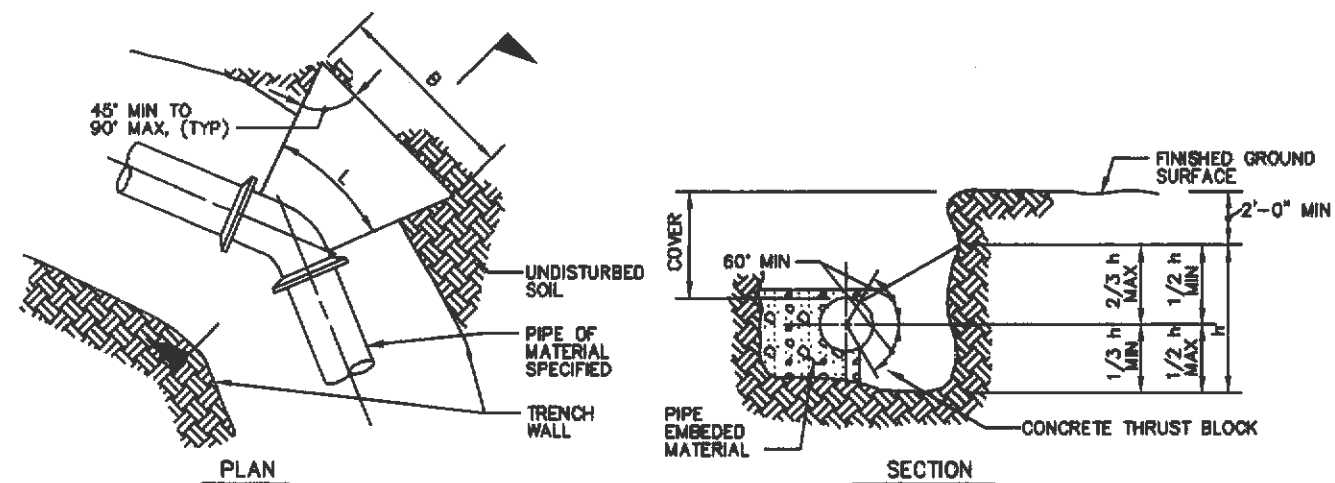
CITY OF O'FALLON  
ENGINEERING DEPARTMENT  
O'FALLON, MISSOURI

**CONCRETE ENCASEMENT  
DETAILS**



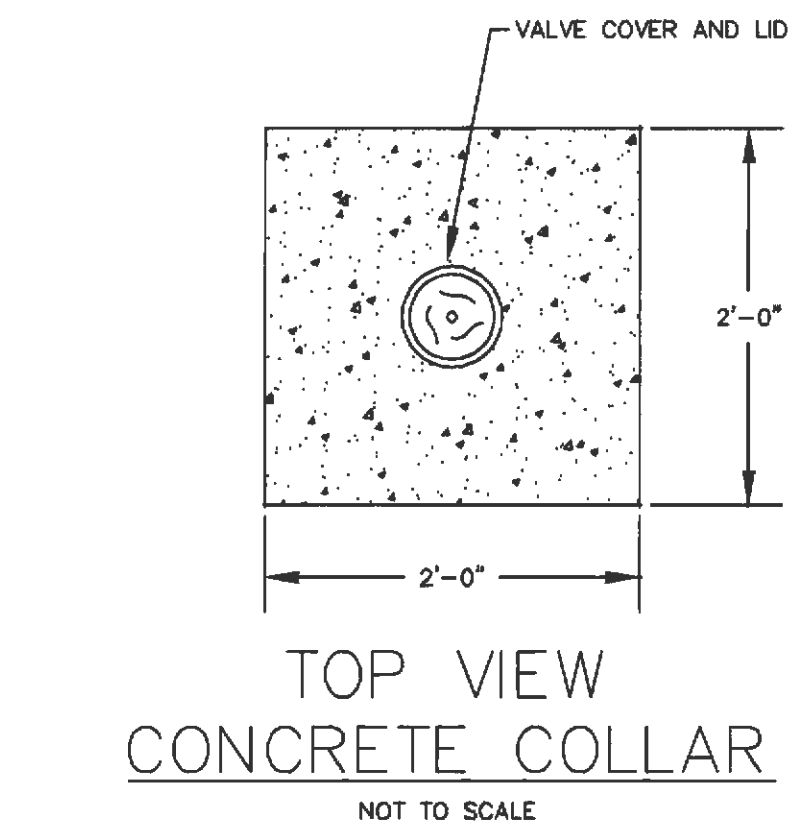
CITY OF O'FALLON  
ENGINEERING DEPARTMENT  
O'FALLON, MISSOURI

**STRADDLE BLOCK  
DETAILS**



CITY OF O'FALLON  
ENGINEERING DEPARTMENT  
O'FALLON, MISSOURI

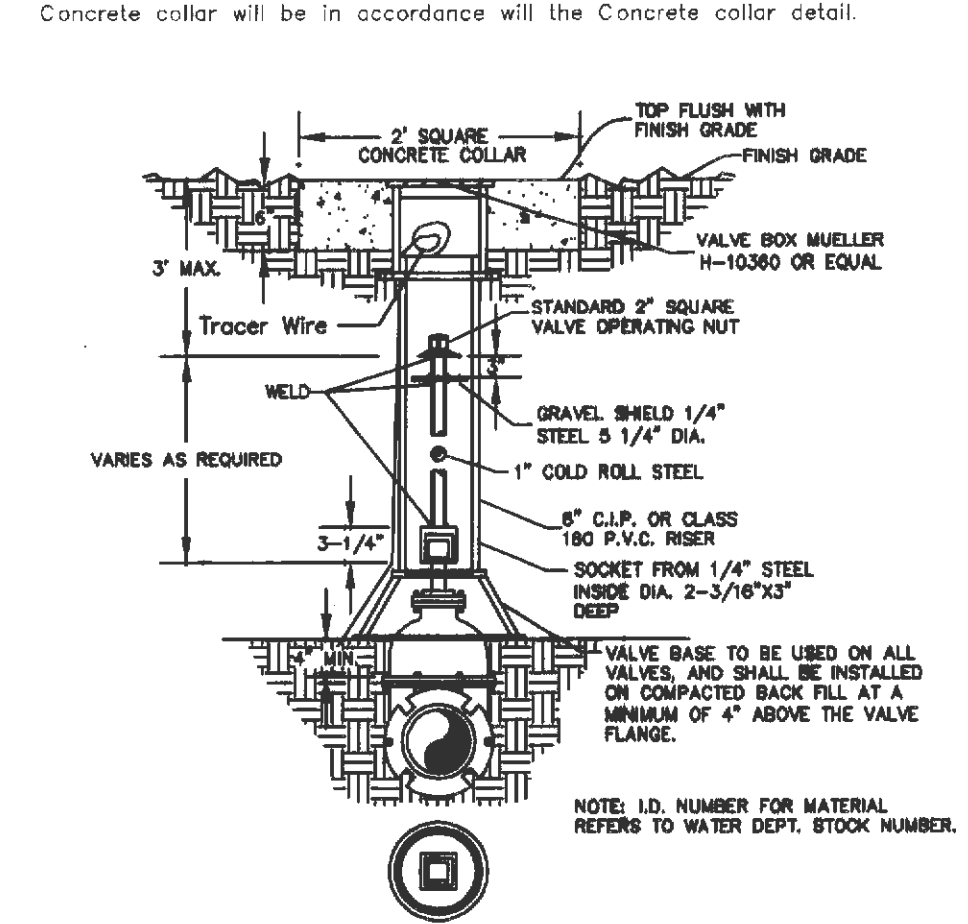
**CONCRETE THRUST  
BLOCKING DETAILS**



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.

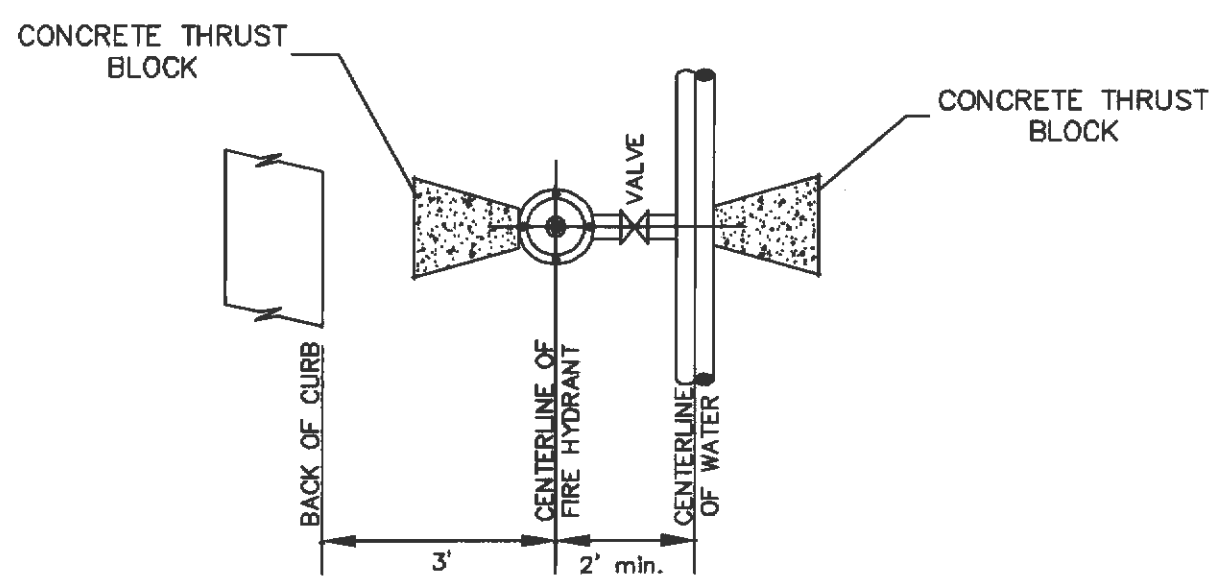
CITY OF O'FALLON  
ENGINEERING DEPARTMENT  
O'FALLON, MISSOURI

**CONCRETE  
COLLAR DETAIL**



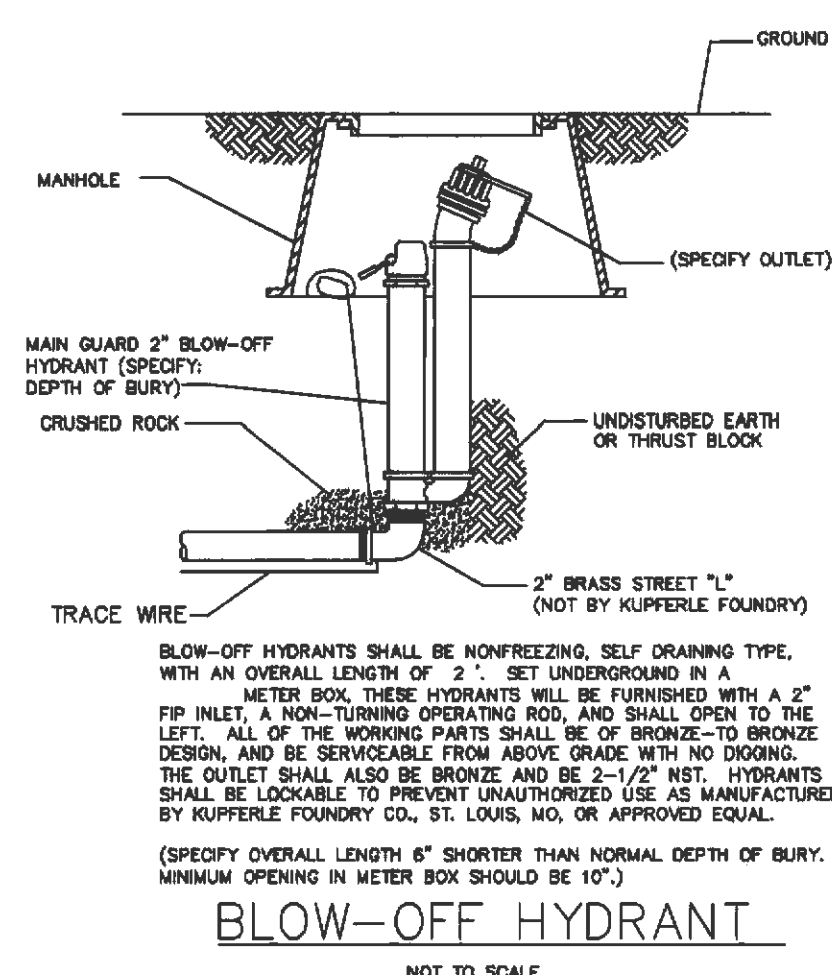
CITY OF O'FALLON  
ENGINEERING DEPARTMENT  
O'FALLON, MISSOURI

**WATER  
VALVE DETAIL**



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ENGINEERING DEPARTMENT  
O'FALLON, MISSOURI

**WATER MAIN  
FIRE HYDRANT DETAIL**

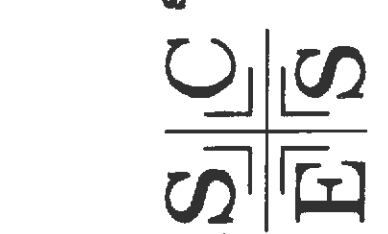


CITY OF O'FALLON  
ENGINEERING DEPARTMENT  
O'FALLON, MISSOURI

**BLOW-OFF  
HYDRANT DETAIL**

HIGHWAY "K" RETAIL  
ACCESS DRIVE

ST. CHARLES ENGINEERING & SURVEYING, INC.  
801 S. FIFTH STREET, SUITE 202  
ST. CHARLES, MO 63301  
TEL: (636) 947-0207  
FAX: (636) 947-2446



ENGINEER SIGNATURE  
BLOCK

MICHAEL NEWELL MEINERS  
CIVIL ENGINEER PE-22483

Developer / Owner Information  
K PROPERTIES HOLDINGS, LLC  
1704 NORTH FOURTH STREET  
ST. CHARLES, MO 63301  
CONTACT: MIKE THOELE  
(314) 220-1206

CITY OF O'FALLON WATER DETAILS

P-4-Z No. 18-12.05  
Approval Date: May 2, 2018  
City No.

Page No.  
17