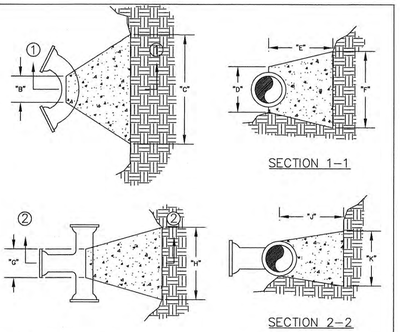
| BENDS | "B" | "C" | "D" | "E" | "F" |
|---|---|---|---|---|---|
| 6"-11 1/4° | 8" | 15" | 12" | 24" | 10" |
| 6"-22 1/2° | 8" | 19" | 12" | 24" | 13" |
| 6"-45° | 8" | 30" | 12" | 24" | 15" |
| 6"-90° | 8" | 30" | 12" | 24" | 28" |
| 8"-11 1/4° | 8" | 20" | 12" | 24" | 10" |
| 8"-22 1/2° | 8" | 22" | 12" | 24" | 16" |
| 8"-45° | 8" | 31" | 12" | 24" | 28" |
| 8"-90° | 8" | 38" | 12" | 24" | 36" |
| 12"-11 1/4° | 8" | 30" | 12" | 24" | 15" |
| 12"-22 1/2° | 8" | 35" | 12" | 24" | 27" |
| 12"-45° | 8" | 40" | 12" | 24" | 40" |
| 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 | 55" | 20" | 24" | 55" |
| 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" | 55" |
| 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" | 45" |
| 30"-22 1/2° | TL | 79" | 34" | 30" | 60" |
| 30"-45° | TL | 154" | 34" | 30" | 60" |
| 30"-90° | TL | 285" | 34" | 30" | 60" |

| TEES | "G" | "H" | "J" | "K" |
|---|---|---|---|---|
| 6"X6"X6" | 12" | 24" | 24" | 18" |
| 8"X8"X6" | 12" | 24" | 24" | 18" |
| 8"X8"X8" | 12" | 27" | 24" | 27" |
| 12"X12"X6" | 12" | 24" | 24" | 18" |
| 12"X12"X8" | 12" | 27" | 24" | 27" |
| 12"X12"X12" | 12" | 36" | 24" | 36" |
| 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. "TL" = TOTAL LENGTH OF FITTING MINUS CLEARANCE FOR BELLS.

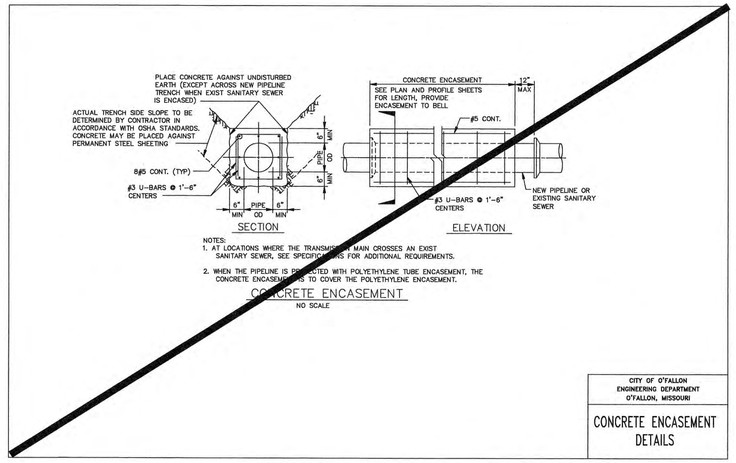



INTERNAL WATER PRESSURE 6" through 12"=200 psi
INTERNAL WATER PRESSURE 16" through 30"=210 psi
BEARING PRESSURE OF SOIL=2000 psi

## BACKING BLOCKS
NOT TO SCALE

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

BACKING BLOCK DETAILS AND LOCATIONS

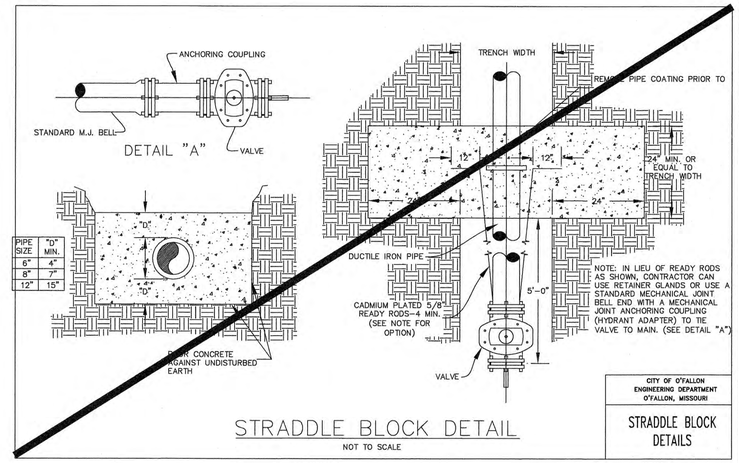



NOTES:
1. AT LOCATIONS WHERE THE TRANSMISSION MAIN CROSSES AN EXIST SANITARY SEWER, SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. WHEN THE PIPELINE IS PROTECTED WITH POLYETHYLENE TUBE ENCASEMENT, THE CONCRETE ENCASEMENT SHALL TO COVER THE POLYETHYLENE ENCASEMENT.

## CONCRETE ENCASEMENT
NO SCALE

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

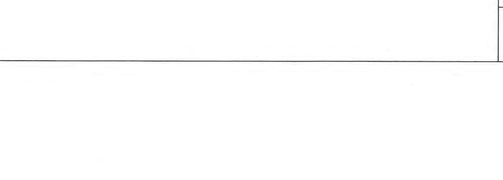
CONCRETE ENCASEMENT DETAILS




## STRADDLE BLOCK DETAIL
NOT TO SCALE

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

STRADDLE BLOCK DETAILS




NOTES:
1. AREA OF BLOCK, A = Bwh; BLOCK AREAS ARE SHOWN ON GENERAL LAYOUT OR TABLE.
2. B = h =√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 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° 22 1/2° | 4 SF | 2' | 2' |
| 16" | 45° | 8 SF | 2.8' | 2.8' |

## CONCRETE THRUST BLOCKING
NOT TO SCALE

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

CONCRETE THRUST BLOCKING DETAILS




## TOP VIEW CONCRETE COLLAR
NOT TO SCALE

Note : 1. Concrete collar joint pateren 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

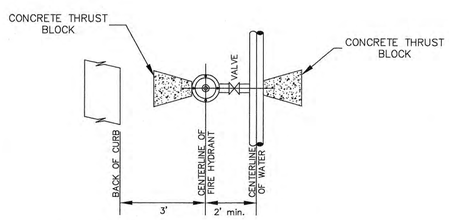
Concrete collar will be in accordance will the Concrete collar detail.




## WATER VALVE DETAIL
NOT TO SCALE

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

WATER VALVE DETAIL




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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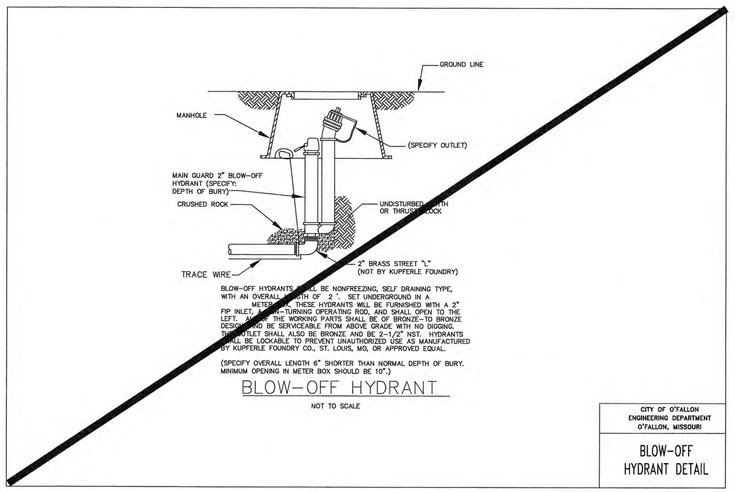
WATER MAIN FIRE HYDRANT DETAIL




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" PIP INLET, A PENTA-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

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

BLOW-OFF HYDRANT DETAIL

**PROJECT TITLE:**
FALLON CREST TOWNHOMES

Bax Project # 85-1820F | Issue Date: 7/22/2019


ENGINEERING
PLANNING
SURVEYING
221 Point Test Blvd.
St. Charles, MO 63301
636-928-5552
FAX 928-1718


REFERENCE DRAWINGS ONLY, ENGINEERS SEAL DOES NOT APPLY TO THESE DETAILS

**REVISIONS**

| | |
|---|---|
| 8-15-19 | city comments |
| 9-3-19 | city comments |
| | |
| | |
| | |
| | |
| | |

**Developer / Owner:**
CORPORATE GROUP INC.
2500 S. OLD HWY 94, SUITE 200
ST. CHARLES, MO. 63303
636-946-0761

**WATER DETAILS**

P+Z No. # 19-005136
Approval Date: July 18, 2019
City No. #

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