

LEGEND:  
 I.D. - NOMINAL PIPE SIZE  
 O.D. - OUTSIDE DIAMETER OF PIPE  
 H - COVER ABOVE TOP OF PIPE  
 A - EMBEDDED BELOW PIPE (SEE TABLE)

CLASS	I.D.	A MIN. SOIL	A MIN. ROCK
CLASS B	27" & SMALLER	3"	6"

CLASS B  
 CLASS C  
 CLASS D  
 FLAT BOTTOM TRENCH WITH BELL HOLES AND HAND PLACED BEDDING

GRANULAR BEDDING SHALL BE CRUSHED ROCK OR PEA GRAVEL WITH NOT LESS THAN 85% PASSING 1/2" (SEE PARAGRAPH 3/4" FOR 36" AND LARGER PIPE) AND NOT LESS THAN 95% RETAINED ON A #4; TO BE PLACED IN NOT MORE THAN 6" LAYERS AND COMPACTED BY SLICING WITH A SHOVEL OR VIBRATING.

COMPACTED BACK FILL SHALL BE FINELY DIVIDED JOB EXCAVATED MATERIAL FREE FROM DEBRIS, ORGANIC MATERIAL AND STONES, PLACED IN UNIFORM LAYERS NOT MORE THAN 6" THICK, COMPACTED TO 95% MAXIMUM DENSITY AS DETERMINED BY A.S.T.M. D893, OR GRADED AGGREGATE. GRANULAR BACK FILL MATERIAL MAY BE SUBSTITUTED FOR ALL OR PART OF COMPACTED BACK FILL.

TAMPED BACK FILL SHALL BE FINELY DIVIDED JOB EXCAVATED MATERIAL FREE FROM DEBRIS, ORGANIC MATERIAL AND STONES, HAND PLACED IN UNIFORM LAYERS NOT MORE THAN 8" THICK AND TAMPED AROUND CONDUIT PIPE. GRANULAR BACK FILL MATERIAL MAY BE SUBSTITUTED FOR ALL OR PART OF TAMPED BACK FILL.

TRENCH BACK FILL SHALL BE AS REQUIRED IN THE "LAYING AND BACK FILL" SECTION OF THE DETAILED SPECIFICATIONS.

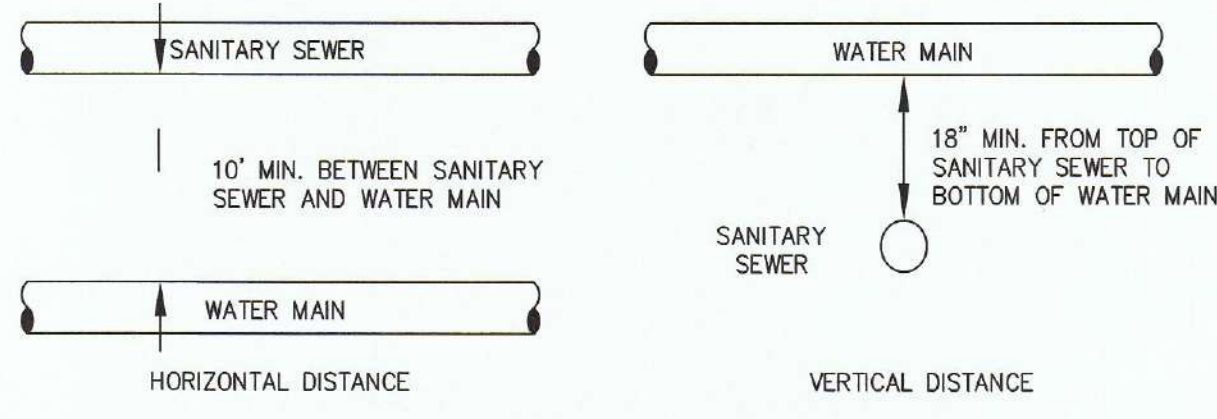
EMBEDDED THE TYPE OF EMBEDDED TO BE USED SHALL BE AS SPECIFIED IN THE PLANS AND SPECIFICATIONS.

TRACER WIRE REQUIRED ON ALL WATER MAINS

**WATER MAIN EMBEDDED**  
 NOT TO SCALE

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

**WATER MAIN EMBEDDED**

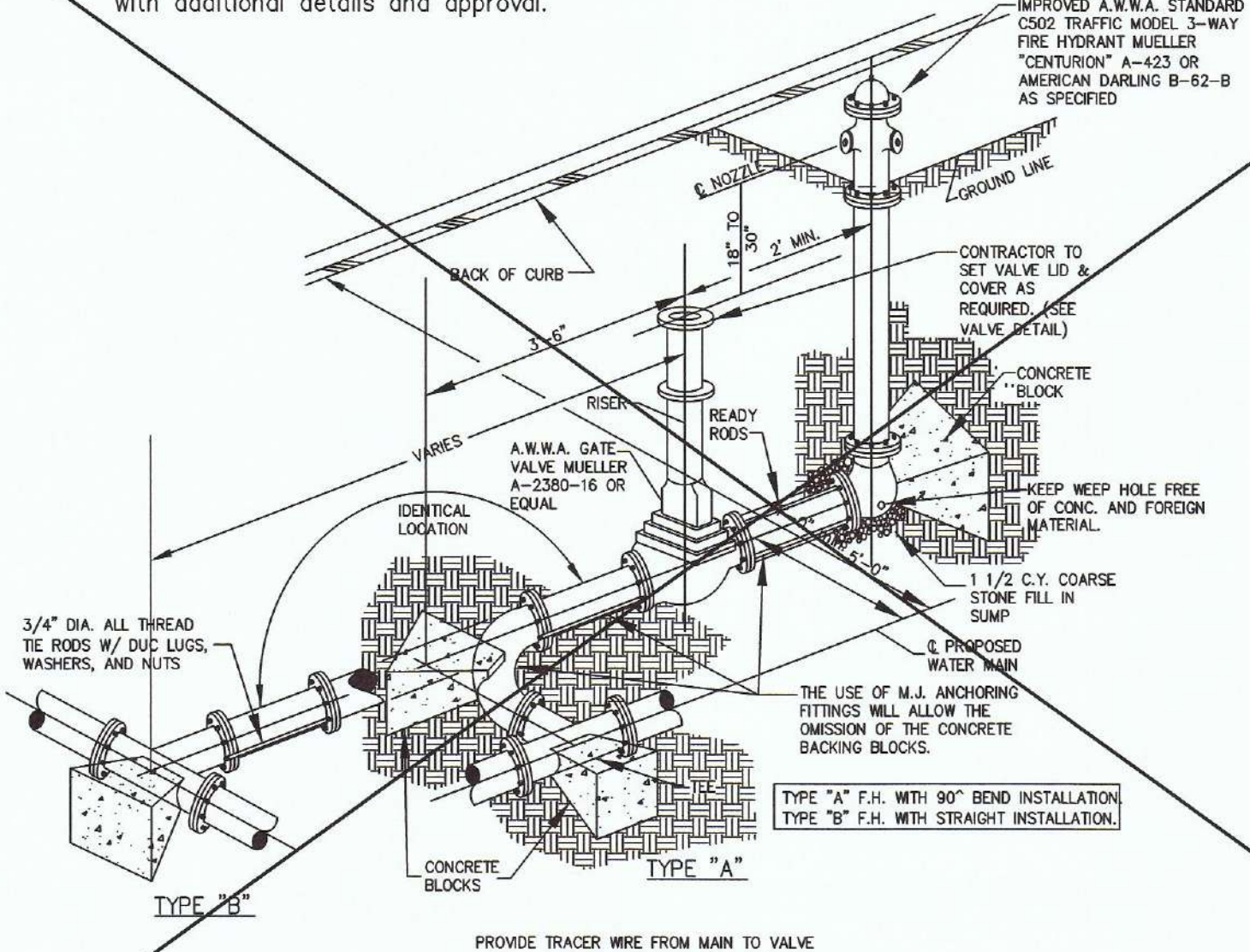


**TYPICAL WATER AND SEWER SEPARATION**  
 NOT TO SCALE

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 ENGINEERING DEPARTMENT  
 O'FALLON, MISSOURI

**WATER AND SEWER SEPARATION DETAIL**

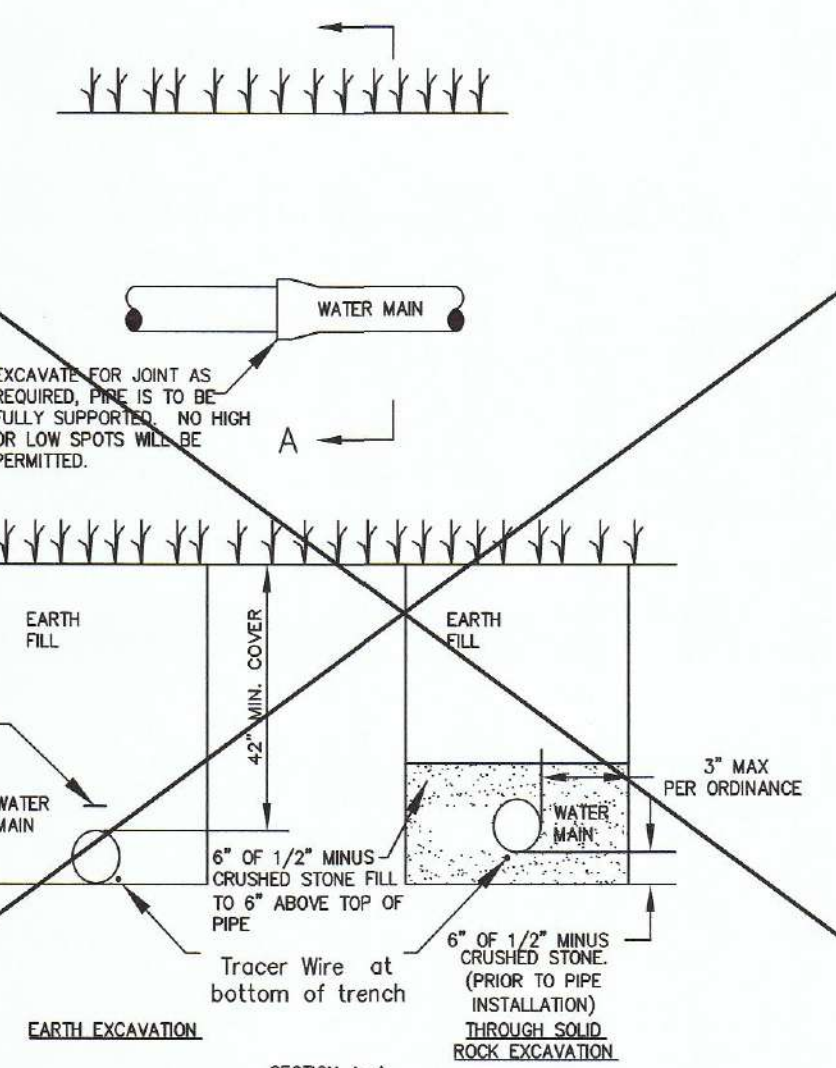
Note: Other connections such as anchor coupling are allowable with additional details and approval.



**FIRE HYDRANT DETAIL**  
 NOT TO SCALE

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 O'FALLON, MISSOURI

**FIRE HYDRANT DETAILS**

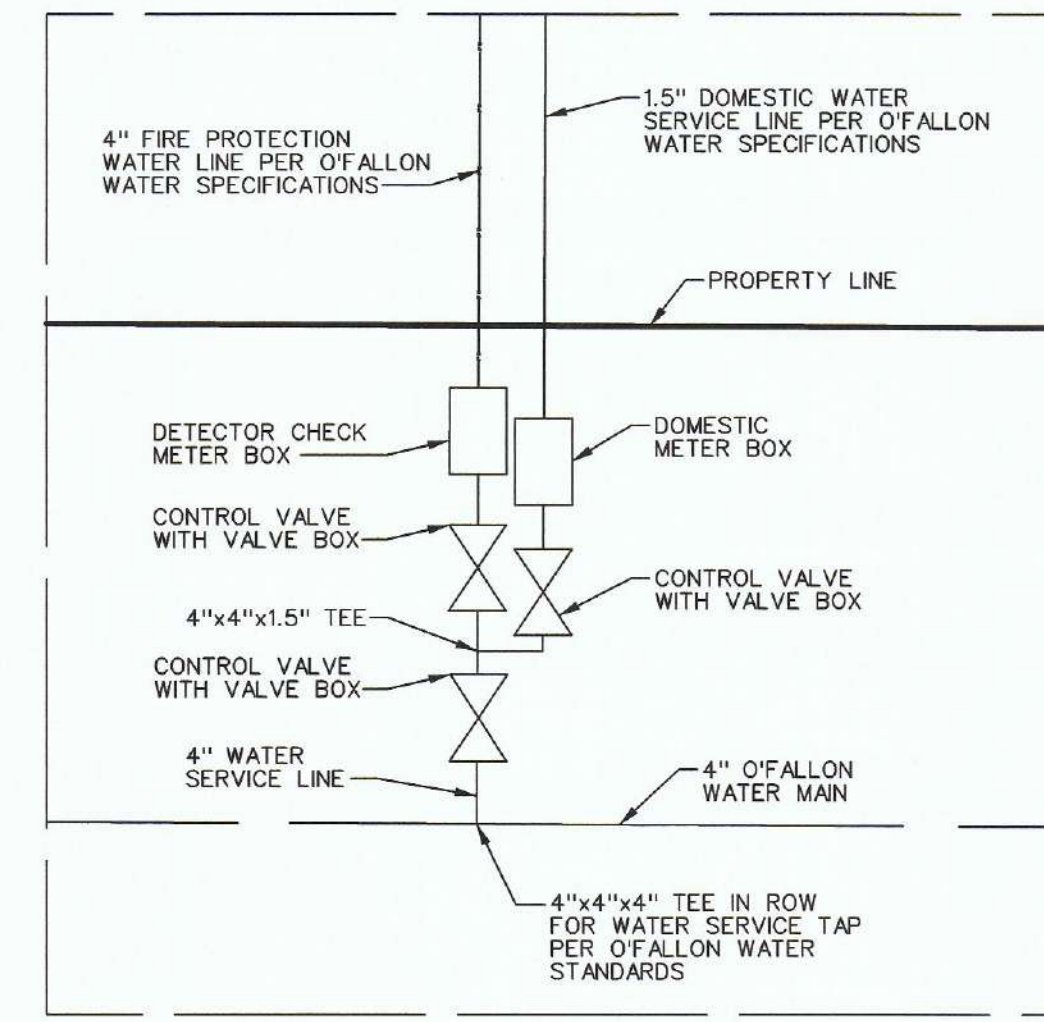


**TYPICAL WATER MAIN INSTALLATION DETAILS**  
 NOT TO SCALE

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 ENGINEERING DEPARTMENT  
 O'FALLON, MISSOURI

**WATER MAIN INSTALLATION DETAIL**

Ductile Iron Pipe installation shall follow the Ductile Iron Research Association (DIPRA) guide line.  
 The installation of PVC Pipe shall follow the Uni-Bell PVC Pipe Association Handbook of PVC Design and Construction.



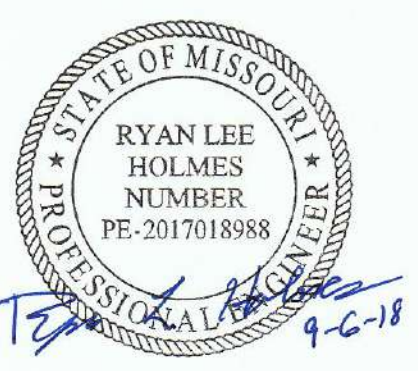
**WATER SERVICE LINE CONFIGURATION**  
 NOT TO SCALE

PROJECT TITLE  
**KNIGHTS OF COLUMBUS - O'FALLON**

SITE ADDRESS: 202 W. 3RD ST., O'FALLON, MO 63366  
 PERMIT NO. CSP18-000025

ENGINEERING COMPANY'S INFORMATION  
**VOLZ Incorporated**  
 ENGINEERS  
 LAND PLANNING  
 LAND SURVEYING  
 TRANSPORTATION  
 CONSULT. MANAGEMENT  
 10849 Indian Head Indl. Blvd.  
 St. Louis, Missouri 63132  
 314.426.1250 Fax  
 www.volzinc.com  
 Authority #203

ORDER # 11344  
 ENGINEER SIGNATURE BLOCK



Ryan L. Holmes  
 Professional Engineer  
 PE-2017018988

DEVELOPER / OWNER INFORMATION:  
 Knights of Columbus - O'Fallon  
 202 W. 3rd St.  
 O'Fallon, MO 63366

CITY OF O'FALLON WATER DETAILS  
 SHEET 2

P&Z NO. 17-011060

CITY NO.

DATE: 02/16/2018

PAGE NO.

**C13**