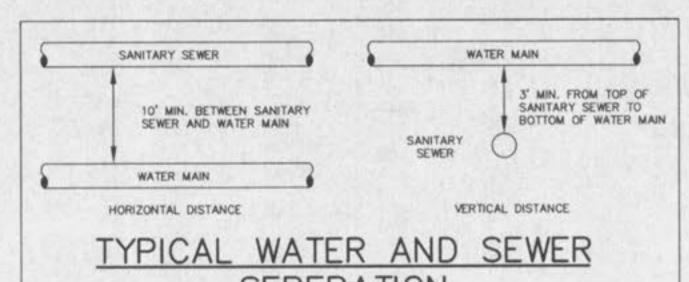


HYDRANT LOCATIONS

NOT TO SCALE



# SEPERATION NOT TO SCALE

IMPROVED A.W.W.A. TRAFFIC MODEL 3-WAY FIRE HYDRANT

MUELLER "CENTURION" OR AMERICAN DARLING B-62-B AS

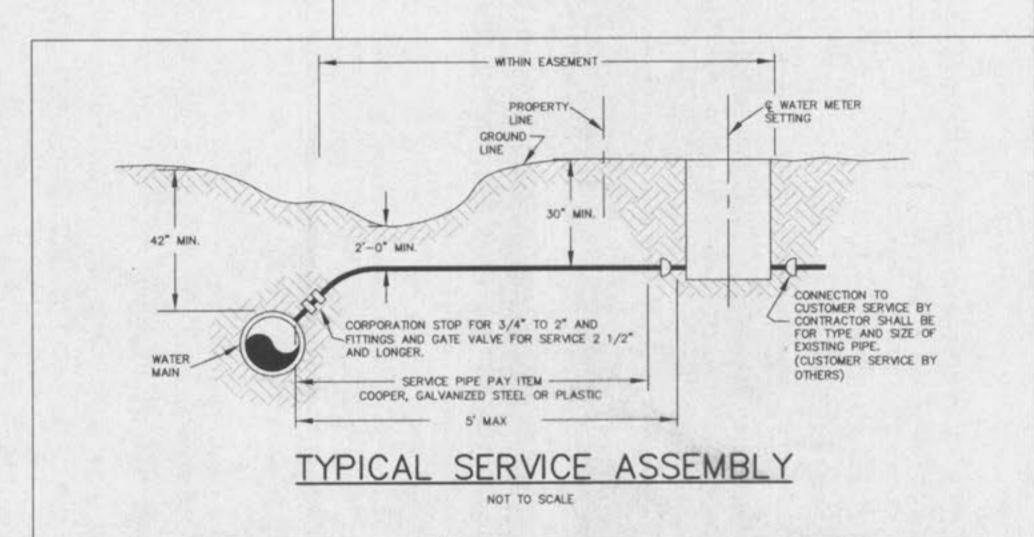
VALVE LID & COVER AS REQUIRED. (SEE

VALVE DETAIL)

#### VALVE BOX MUELLER 3' MAX. d:===:b \_STANDARD 2" SQUARE VALVE OPERATING NUT GRAVEL SHIELD 1/4" STEEL 5 1/4" DIA. VARIES AS REQUIRED " COLD ROLL STEEL 6" C.I.P. OR CLASS 3-1/4" SOCKET FROM 1/4" STEEL INSIDE DIA. 2-3/16"X3" -VALVE BASE TO BE USED ON ALL VALVES, AND SHALL BE INSTALLED ON COMPACTED BACKFILL AT A MINIMUM OF 4" ABOVE THE VALVE NOTE: I.D. NUMBER FOR MATERIAL REFERS TO WATER DEPT. STOCK NUMBER.

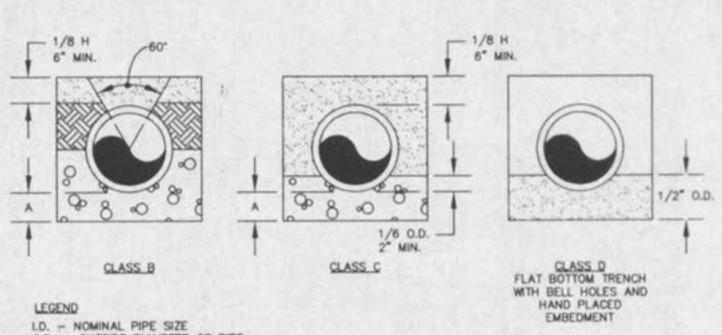
\_\_\_ 2' SQUARE \_\_\_\_ CONCRETE COLLAR

# WATER VALVE DETAIL



#### RISER-A.W.W.A. GATE VALVE MUELLER A-2380-16 OR KEEP WEEPHOLE FREE OF CONC. AND FOREIGN MATERIAL LOCATION 1/2 C.Y. COARSE STONE FILL IN SUMP FITTINGS WILL ALLOW THE OMISSION OF THE CONCRETE BACKING BLOCKS. TYPE "A" F.H. WITH 90' BEND INSTALLATION. TYPE "B" F.H. WITH STRAIGHT INSTALLATION. TYPE "A" CONCRETE BLOCKS

### FIRE HYDRANT DETAIL NOT TO SCALE



BACK OF CURB

3/4" DIA. ALL THREAD TIE

RODS W/ DUC LUGS,

WASHERS, AND NUTS

O.D. - OUTSIDE DIAMETER OF PIPE H - COVER ABOVE TOP OF PIPE A - EMBEDMENT BELOW PIPE (SEE TABLE)

TAMPED BACKFILL COMPACTED BACKFILL GRANULAR BEDDING

DEPTHS BELOW PIPE SOIL ROCK 27" & SMALLER

GRANULAR BEDDING SHALL BE CRUSHED ROCK OR PEA GRAVEL WITH NOT LESS THAN 95% PASSING 1/2" (95% PASSING 3/4" FOR 30" 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.

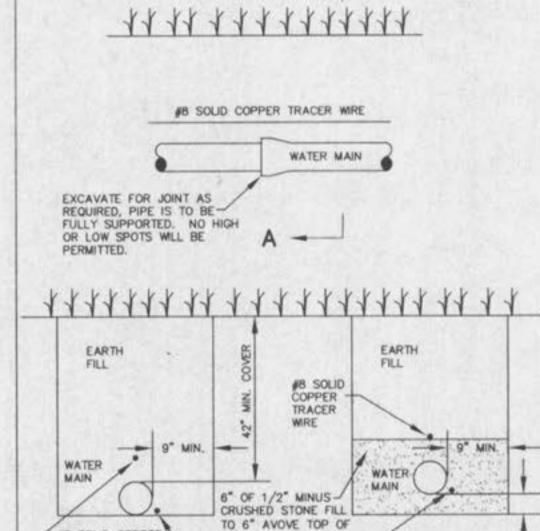
COMPACTED BACKFILL SHALL BE FINELY DIVIDED JOB EXCAVATED MATERIAL FREE FROM DEBRIS, ORGANIC MATERIAL AND STONES, PLACED IN UNIFORM LAYERS NOT MORE THAN 6" THICK, COMPACTED TO 95% MAXIMUM DENSITY AS DETERMINED BY A.S.T. D698, OR GRADED AGGREGATE. GRANULAR BACKFILL MATERIAL MAY BE SUBSTITUTED FOR ALL OR PART OF COMPACTED BACKFILL

TAMPED BACKFILL 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 BACKFILL MATERIAL MAY BE SUBSTITUTED FOR ALL OR PART OF TAMPED BACKFILL.

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

EMBEDMENT THE TYPE OF EMBEDMENT TO BE USED SHALL BE AS SPECIFIED IN THE PLANS AND SPECIFICATIONS. TRACER WIRE REQUIRED ON ALL WATER MAINS

WATER MAIN EMBEDMENT NOT TO SCALE



TRACER WIRE

EARTH EXCAVATION

A

### SECTION A-A TYPICAL WATER MAIN INSTALLATION DETAILS

NOT TO SCALE

1-NO. 12 UL. APPROVED

600V. INSULATED

LOCATOR WIRE

6" OF 1/2" MINUS -

(PRIOR TO PIPE

INSTALLATION)

THROUGH SOLID ROCK EXCAVATION

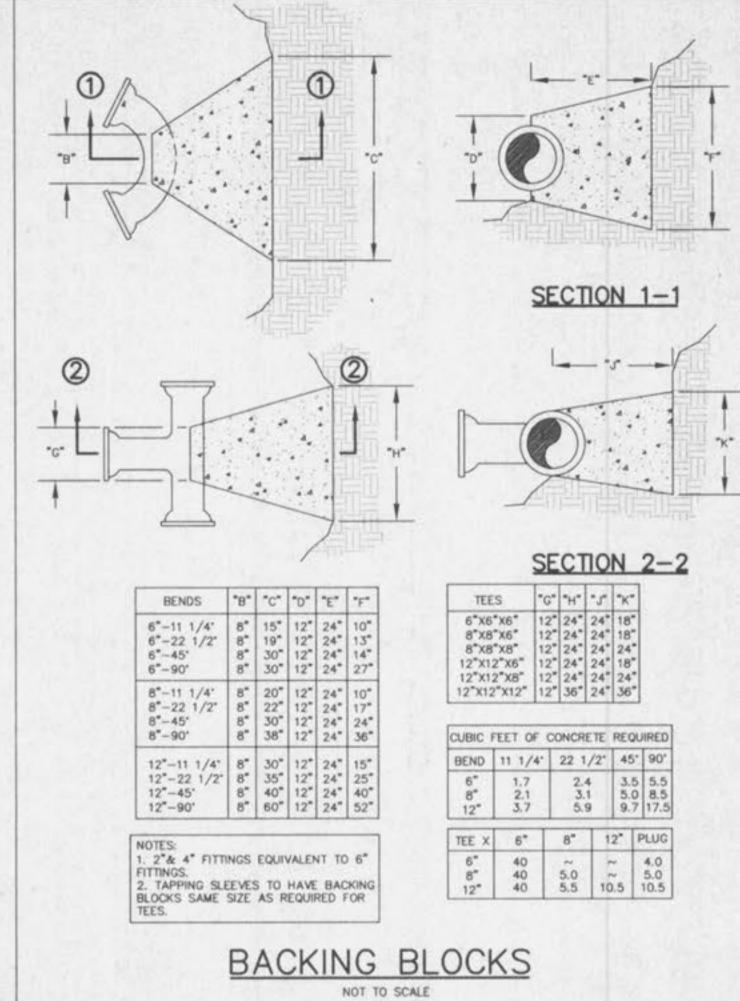
#### INSTALLATION OF WATER MAINS

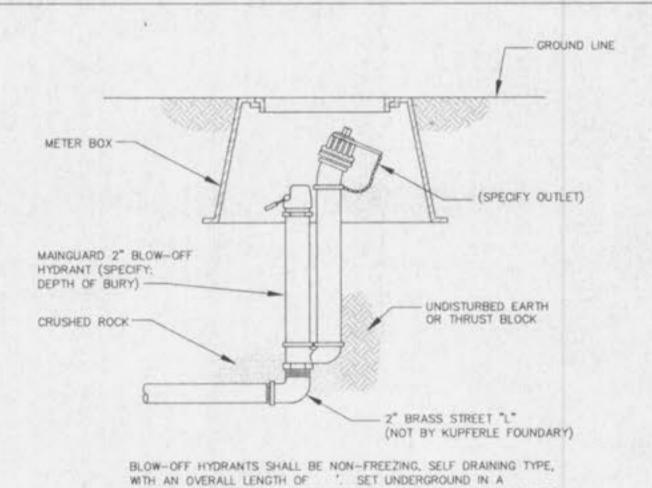
"ALWAYS KEEP THE WATER MAIN ON EASEMENT"

- Water main should be located 5' behind the curb, as not to interfere with other utility
- All water mains should be 8 inches in diameter, the last 300' can be 6" diameter pipe. The pipe should have a Minimum Pressure Rating (PR) of 200 or SDR-21. All water mains of PVC materials shall be certified by NSF (National Sanitation Foundation) and listed in NSF Standard 61 (certified drinking water system components). Missouri DNR requires that any product which comes in contact with drinking water be listed in NSF Standard 61. If the pipe is NSF certified, it will have a stamp on the pipe that says "NSF-pw".
- 3. Fire hydrants must be Mueller Steamer Centurion and painted yellow in color and all valves must be Mueller mechanical joint resilient wedge gate valve.
- All fire hydrants are to have valves flanged to the tee and (with a total length of 38" or less) hydrant swivel anchored to the valve. Clean 1" rock should be used to backfill above the weep holes of the fire hydrant.
- 5. The contractor shall place all fire hydrants between 1.5 (1-1/2) feet and three feet (3') from the street curb (measured from the edge of the fire hydrant).
- These water bends (45 degree, 22-1/2 degree, 11-1/4 degree), are to be made with mechanical joint fittings using mega lugs. Ninety degree (90°) bends are not allowed. The first slip joint, up and down stream after fittings, should be restrained per pipe manufacturer
- 7. Tees, 4-ways, etc. shall have concrete blocking. Concrete not to be on nuts or bolts.
- 8. Rocky soils shall require bedding 6" under and 6" over water pipe.
- Concrete encasement require; to DNR Specification, when crossing storm or sanitary sewers. Sanitary: vertical is 18", horizontal is 10' - Storm: vertical is 12", horizontal is 3'.
- 10. Must use appropriate sized cosings when crossing streets.
- 11. Must attach coated solid care, 12 gauge tracer wire, taped to the top of the pipe. All wire must run up the outside of the valve box and come up inside the valve box under the water
- 12. Use 3M waterproof splice kits for all splicing of tracer wire.
- 13. Any project with over 1500' of pipe should use the 2500' role of tracer wire to eliminate
- 14. A chlorine test is required. It must initially test at 25 PPM, or greater, and 24 hours later 10 PPM must be present. It must be tested by a City Inspector, and have 24 hours notice prior to that inspection. The main will be tested for CL2 every 1,200' of pipe.
- 15. If chlorine test fails then main must be rechlorinated.

pressure for two hour without any drop in pressure.

- 16. The contractor will meter water and pay for it. Hydrant meters are at Public Works and require a \$1,600 deposit.
- Coliform samples should be collected every 1,200'. 18. Final Pressure Test: The water main must be pumped up to 150 PSI and maintain this
- 19. Gas, water, and other underground utilities shall not conflict with the depth or harizontal location of existing and proposed sanitary and storm sewers including house laterals.





METER BOX, THESE HYDRANTS WILL BE FURNISHED WITH A 2" FIP INLET, A NON-TURNING OPERATING ROD, AND SHALL OPEN TO THE LEFT. ALL OF THE WORKING PARTS SHALL BE OF BRONZE-TO BRONZE DESIGN, AND BE SERVICABLE 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 BURRY. MINIMUM OPENING IN METER BOX SHOULD BE 10".)

## ECLIPSE NO. 78 BLOW-OFF HYDRANT

NOT TO SCALE

20. All waterline construction shall conform to current City of O'Fallon Standards and

- 21. The contractor shall place the "steamer" outlet of the fire hydrant toward the street.
- 22. Backfill no debris larger than 6" in diameter.

Specifications.

- 23. All creek crossings will require ductile iron pipe. If less than 3' of cover, concrete encasement with rip-rap required.
- 24. Hydrant distances: 600'\$300' Residential/Commercial pending.
- 25. Easements shall be provided for water mains, and all utilities on the record plat. See record plot for location size, and width of easements.
- 26. The City of O'Fallon Water Department shall be notified at least 48 hours prior to construction of water mains for coordination and inspections.
- 27. All open mains should be properly capped when the main is unattended for more than 4 hours. Duct tape the end closed so it is visually seen.
- 28. All bore casings, except service lines, shall have a casing spacer every 10'.
- 29. All service lines under the streets are to have a 2" PVC casing installed, at a minimum of 30" depth.

NOTE: 24 HOUR NOTICE REQUIRED ON ALL INSPECTIONS



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DIGITAL FILE LOCATION

940 WD-1