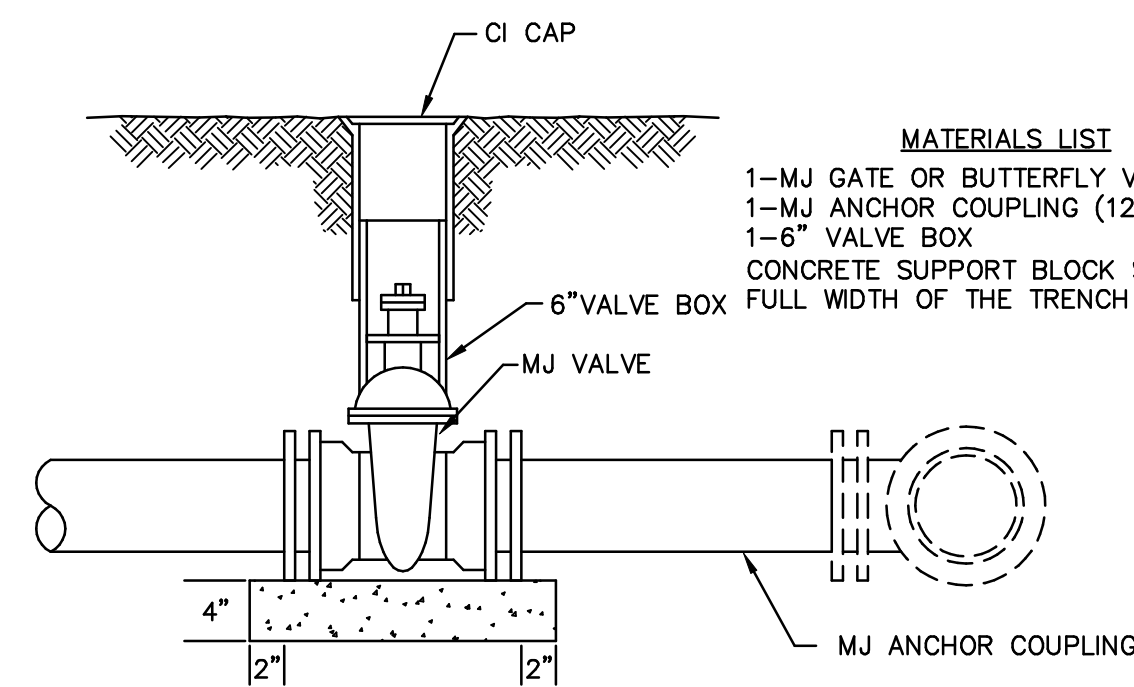


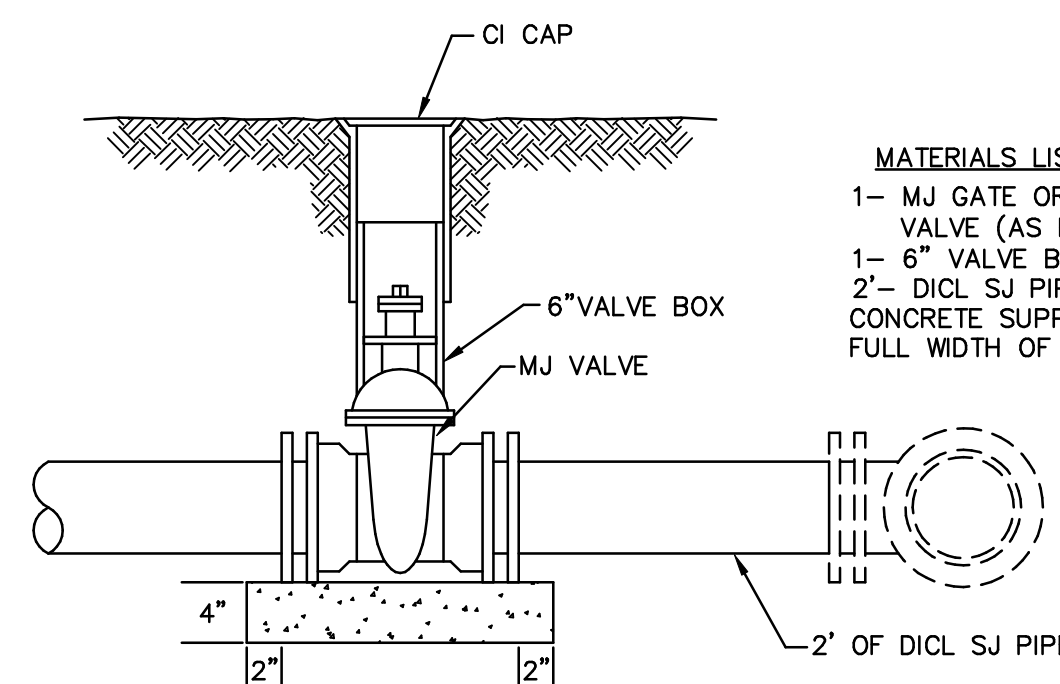
LINE VALVE ASSEMBLY

- MATERIALS LIST**
- 1-MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
 - 1-6" VALVE BOX
 - 2-COUPINGS
 - 2-SHORT PCS. (DICTL SJ PIPE)
 - CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH



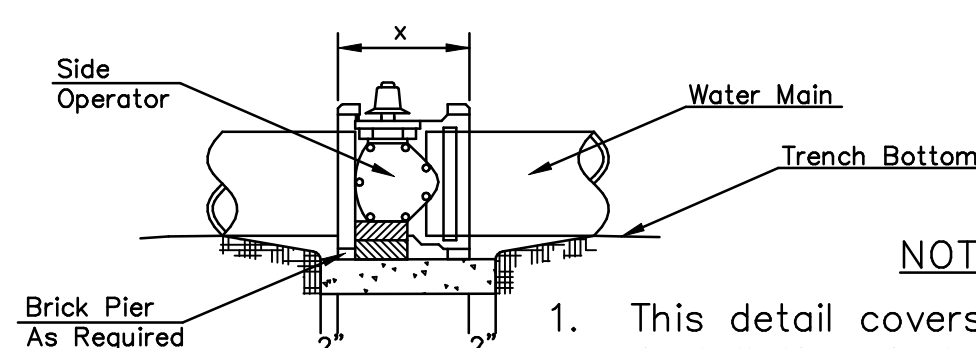
ANCHORED VALVE ASSEMBLY

- MATERIALS LIST**
- 1-MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
 - 1-MJ ANCHOR COUPLING (12" OR SMALLER)
 - 1-6" VALVE BOX
 - CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH



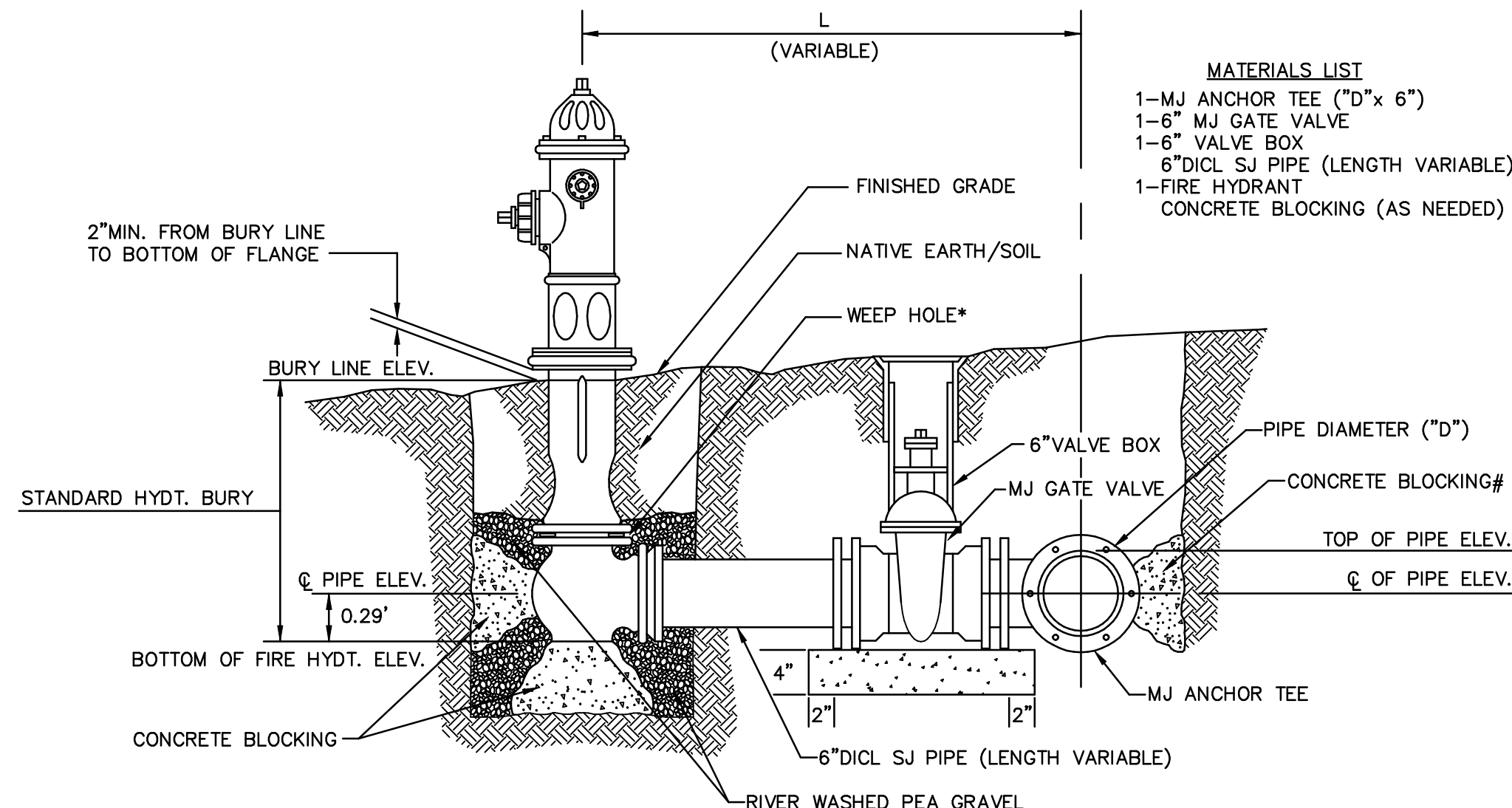
VALVE ASSEMBLY

- MATERIALS LIST**
- 1- MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
 - 1- 6" VALVE BOX
 - 2- DICTL SJ PIPE
 - CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH



CONCRETE SUPPORT BLOCKING FOR BUTTERFLY VALVE INSTALLATION

- NOTES**
- This detail covers Butterfly Valve installation, inclusive, regardless of type of pipe or joint used. Larger lines to be detailed on plans.
 - 6" Valve Box and Cover required per City of Wichita Std. Specifications.
 - Conc. Support Block to be full width of trech.



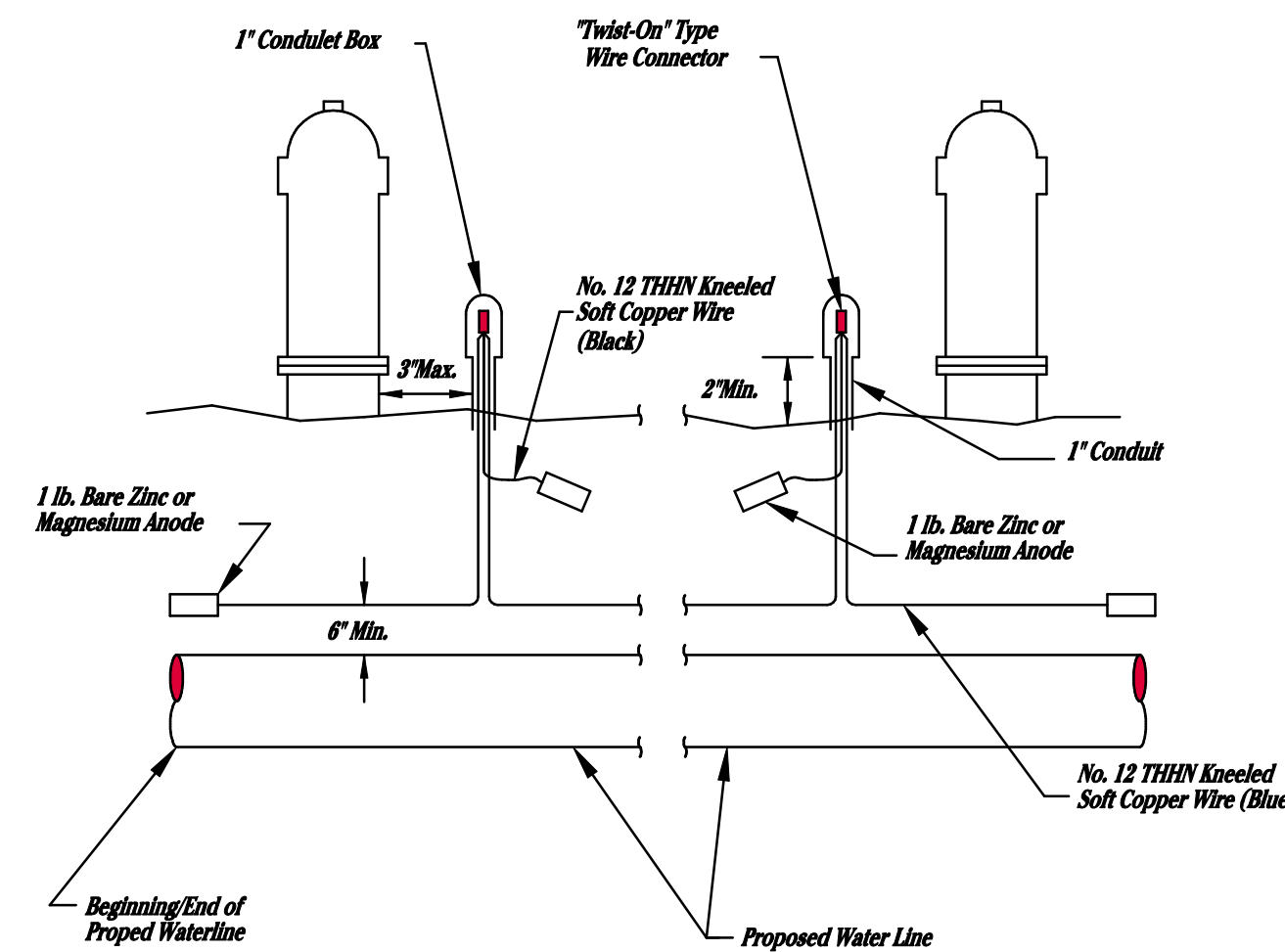
FIRE HYDRANT ASSEMBLY
PER CITY OF WICHITA SPECIFICATIONS

- MATERIALS LIST**
- 1-MJ ANCHOR TEE ("D"x 6")
 - 1-6" MJ GATE VALVE
 - 1-6" VALVE BOX
 - 6"DICTL SJ PIPE (LENGTH VARIABLE)
 - 1-FIRE HYDRANT
 - CONCRETE BLOCKING (AS NEEDED)

* CAUTION! WEEP HOLES TO BE KEPT CLEAR DURING CONSTRUCTION AND BACKFILL. CONCRETE FOR THRUST BLOCKING SHALL NOT OBSTRUCT WEEP HOLES.

CONCRETE THRUST BLOCKING SHALL BE KEPT CLEAR OF BOLTS, NUTS, AND MJ ACCESSORIES.

FIRE HYDRANTS REQUIRED				
LINE NO.	STATION	BURY LINE ELEVATION	TOP OF PIPE ELEVATION	FIRE HYDRANT BURY REQUIRED
1	6+16.59	180.17	176.00	4.00



TRACER WIRE

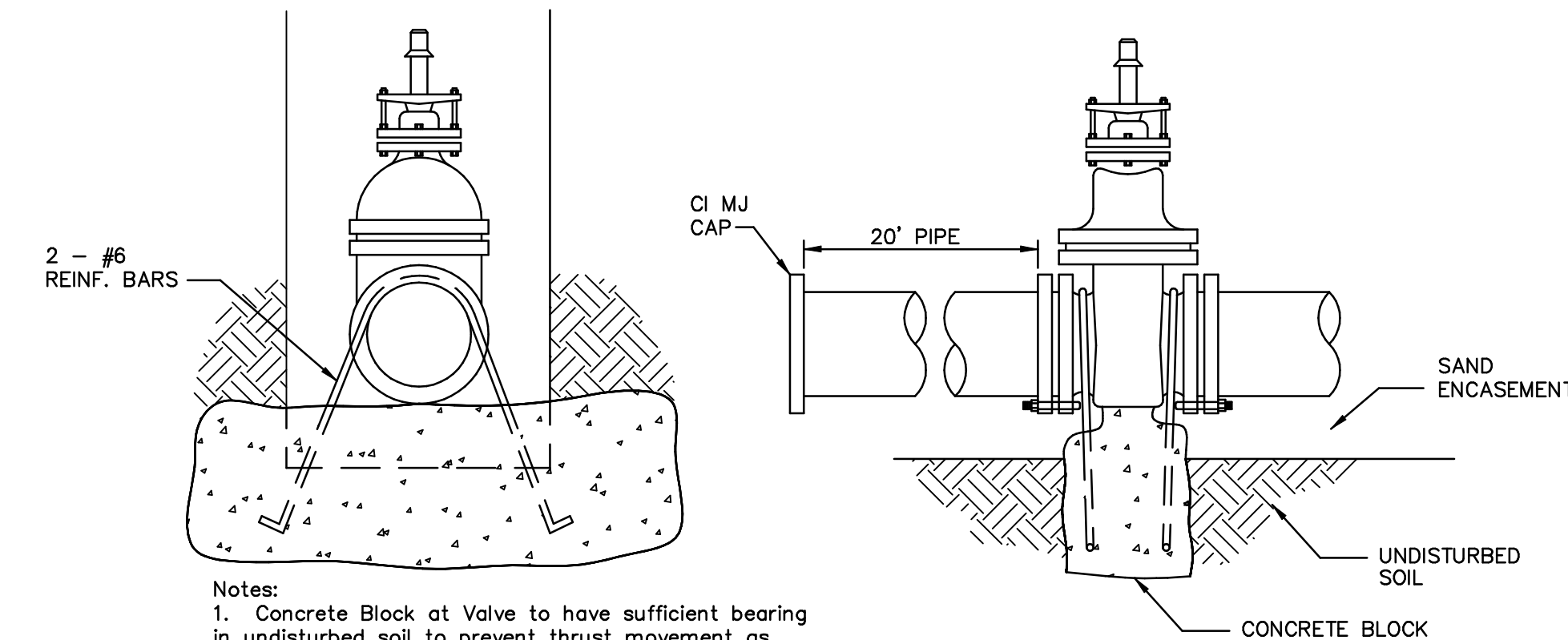
Conductive type pipe locator/tracer wire shall be installed to locate Polyvinyl Chloride (PVC), or any nonmetallic, waterline pipes. The wire shall be installed 6 inches above the proposed pipe, and shall extend the entire length of the proposed pipe. In directional drilling applications, the wire shall be taped to the top of the waterline and pulled with the pipe. Split-bolt connectors or crimpers shall be used at splice locations. Electrical tape shall cover all splices so no bare wire is exposed.

Test stations shall be installed adjacent to all fire hydrants along the proposed alignment. At each test station, the tracer wire shall be connected to a 1 lb. zinc or magnesium anode. This connection shall be made using a "twist-on" wire connector which shall splice the blue tracer wire from each direction to a black wire leading to the anode. The anode shall be installed a minimum of 5 feet away from the water line. Anodes shall also be attached to the tracer wire at both the beginning and the end of the proposed improvement. A typical layout of the tracer wire and test station is provided in the above Figure.

WIRE: The tracer wire shall be blue No. 12 THHN kneeled soft copper wire with thermal plastic insulation. The insulation shall be heat, oil, and gasoline resistant as manufactured by Temple Electrical or approved equal.

TEST STATIONS: The test station shall be a 1 inch conduit style test station as manufactured by COTT Manufacturing Company or approved equal and shall be provided with a removable solid cover with no leads extending from it. The test station shall be attached to a 1 inch conduit (min. length of 36 inches). Both the conduit and the test station shall be coated with weather resistant blue enamel paint. The tracer wire and the anode wire connection shall be installed to allow 10 inches of wire within the test box. Test stations shall be provided at each fire hydrant (a max. distance of 3 inches). The location of all test stations shall be approved by the construction engineer, recorded, and shown in the as-built drawings.

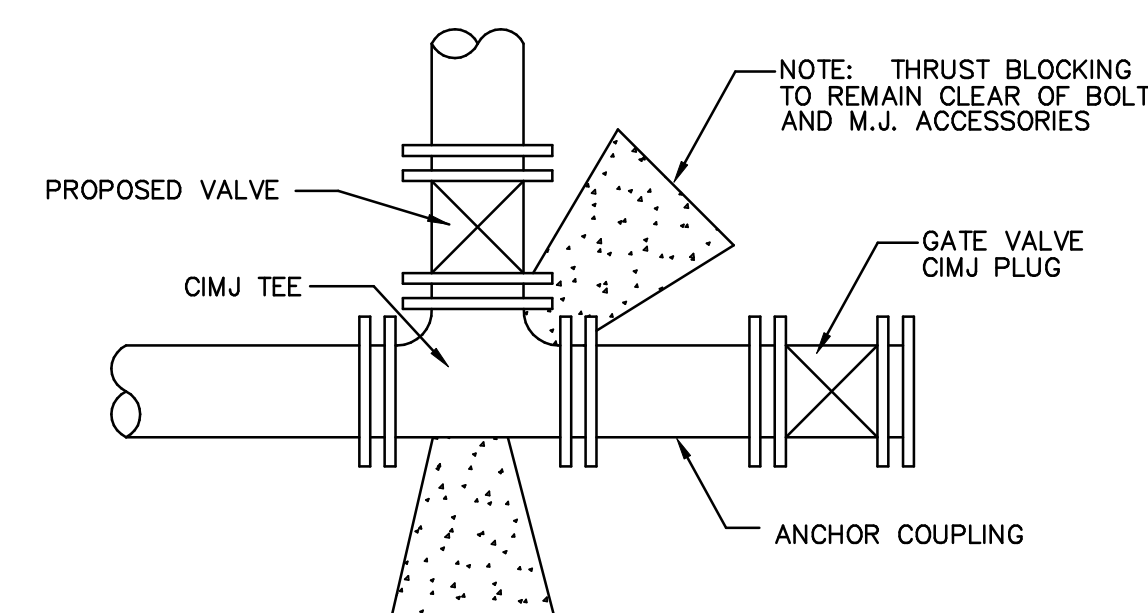
ANODES: The anodes shall be 1 lb. bare zinc or magnesium. The anodes shall be buried a minimum of 5 feet deep at each test station. The anodes shall be connected to black No. 12 THHN kneeled soft copper wire which shall be extended to the test station. Adequate length of the insulated black wire shall be attached to each anode to provide 10 inches within the test box.



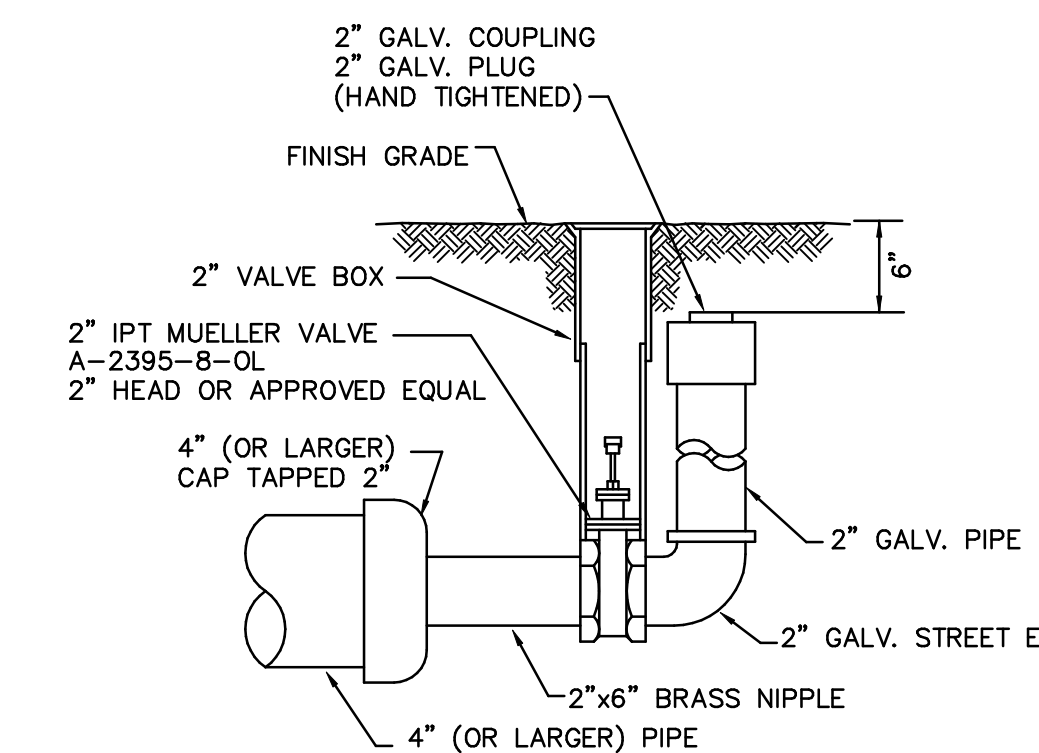
- Notes:**
- Concrete Block at Valve to have sufficient bearing in undisturbed soil to prevent thrust movement as shown in table at right. Field Engineer to determine thrust loading of undisturbed soil and final size of thrust block.
 - The thrust block shall be constructed such that bolts, nuts, and other MJ accessories are kept clear of concrete.
 - Valve block to be included in bid item of Concrete for thrust blocks.
 - All valves at dead ends and at other locations as called out on the plans shall be blocked as shown here.

THRUST AT VALVES	
VALVE	THRUST AT 150 #/sq
4"	1809 lbs.
6"	4245 lbs.
8"	7540 lbs.
12"	16965 lbs.

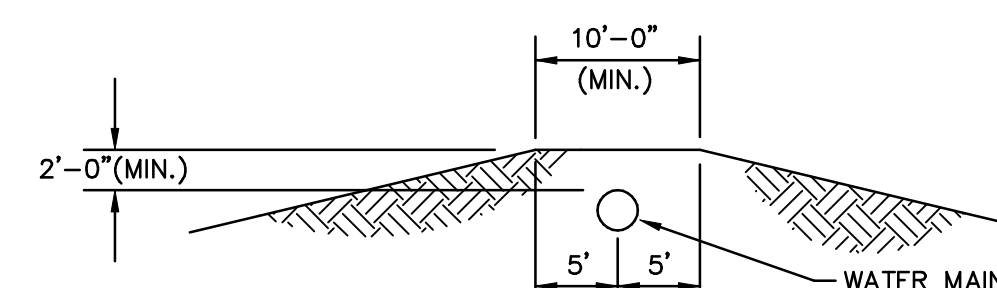
ANCHORED VALVE ASSEMBLY, SPECIAL



KEY BLOCK DETAIL



2" BLOWOFF ASSEMBLY



PROTECTIVE FILL DETAIL

MINIMUM PROTECTIVE FILL SHALL BE PROVIDED IN ALL INSTANCES WHERE COVER OVER THE PROP. WATER LINE IS LESS THAN (2) FEET. (COST SUBSIDIARY TO PIPE INSTALLATION)

GREAT PLAINS BUSINESS PARK 3RD ADDITION-PHASE
WATERLINE - STANDARD DETAILS
CITY OF WICHITA, KANSAS
MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER
Prof.# 448-89692 O.C.A.# 735066

POE & ASSOCIATES OF KANSAS, INC.
CONSULTING ENGINEERS
5940 E. Central, Suite 200 Wichita, KS 67208-4242
Phone 316/685-4114 FAX 316/685-4444

FINAL

Designed By: J. Ubert / B. Kulla
Drawn By: B. Kulla
Poe Job No.: 1674C
Date: June 2002

Sheet 3 of 7