

# PRIVATE FIRE SERVICE LINE CATHEDRAL OF THE IMMACULATE CONCEPTION J.R. MEAD'S RESERVE PROJECT NUMBER 1590 PPW (607853)

**As-Built Plans**

Contractor: Dondlinger & Sons Construction Company Inc.  
Inspector: Arnie Valdemar with Schwab-Eaton P.A.  
PDF by: CR on September 27, 2011

**INDEX OF SHEETS**

(CITY SUBMITTAL INDEX)  
CG1.4 TITLE SHEET  
CG1.5 WATER PLAN & PROFILE  
CG1.6 WATER ASSEMBLY DETAILS

**BENCHMARKS**

BENCH MARK #1: CITY OF WICHITA  
NORTHEAST CORNER OF INTERSECTION OF  
CENTRAL AND BROADWAY ON TRAFFIC SIGNAL  
BASE.  
ELEVATION = 1300.18 (NGVD29)

BENCH MARK #2: CHISELED "X" NORTH RIM  
OF MANHOLE 197.5' WEST OF CENTERLINE OF  
TOPEKA & 54' SOUTH OF THE CENTERLINE OF  
CENTRAL.  
ELEVATION = 1301.14 (NGVD29)

BENCH MARK #3: CHISELED SQUARE TOP OF  
CURB OF THE NORTH RETURN ON THE NORTH  
DRIVE ENTRANCE, 22.8' WEST OF CENTERLINE  
OF TOPEKA & 310' SOUTH OF CENTERLINE OF  
CENTRAL.  
ELEVATION = 1300.18 (NGVD29)

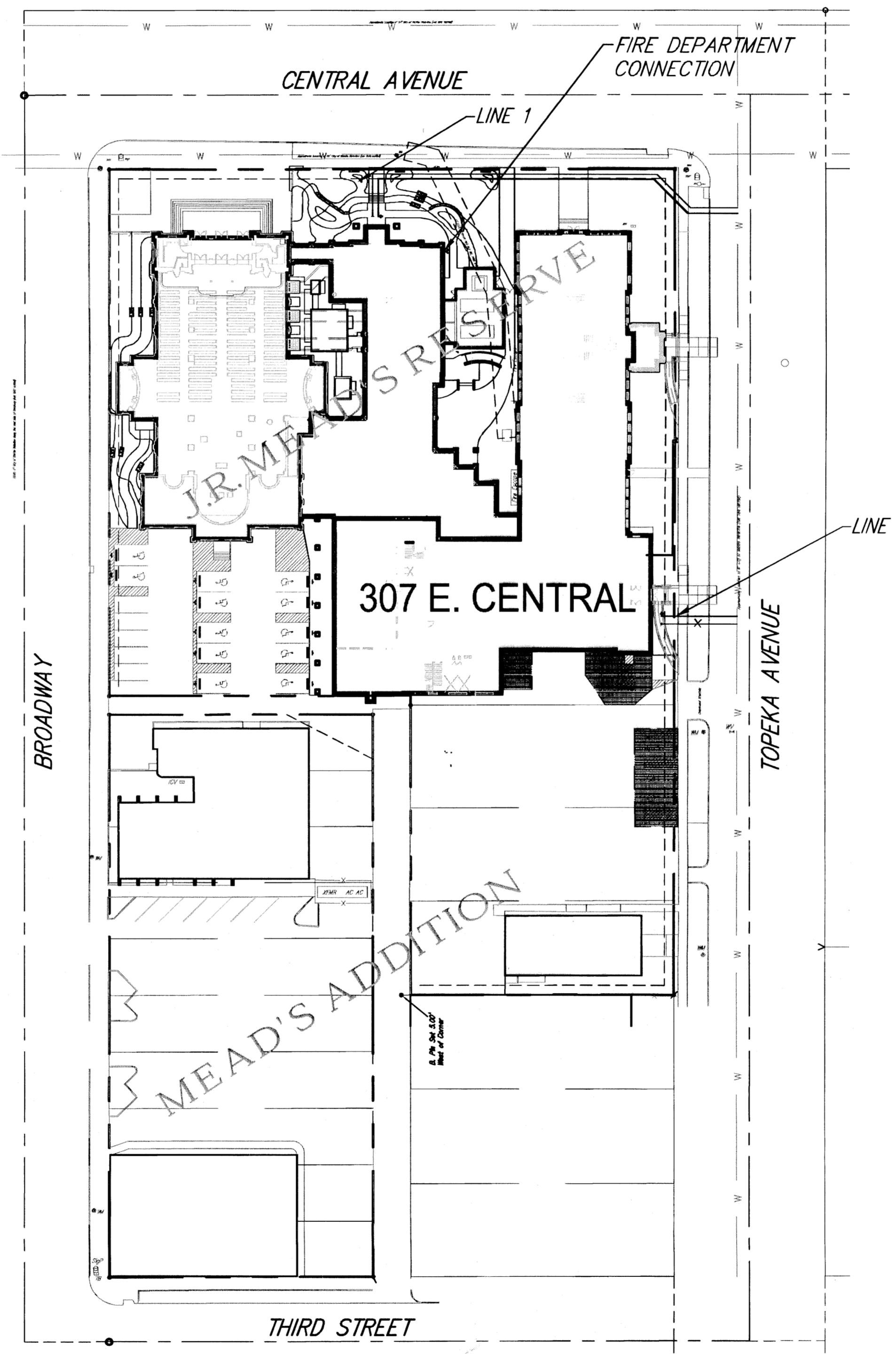
**GENERAL NOTES**

- Contractor will be required to provide a minimum notice of 72 hours to utility companies prior to starting any excavation as follows:  
  

Kansas One-Call	687-2470
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The Contractor must notify the following in case of an emergency:

Cox Communications	262-0661
Kansas Gas Service	383-8600
Westar Energy	383-8600
AT&T	1-800-286-8313
City of Wichita Water Utility	268-6000
Black Hills Energy	1-800-303-0357
- All water mains and appurtenances shall be installed in accordance with City of Wichita, Kansas, Standard Specifications for the Construction of City Projects, and current policy on construction of public works improvements by private contract.
- Opening and closing water valves shall be done slowly to prevent damage to the water distribution system from water hammer. All valves closed by the Contractor must be reopened as new construction permits. Project inspector must ascertain that any valve closed by the Contractor is reopened. Contractor will be permitted to operate water valves only when the project inspector assigned to the project is present.
- The Contractor shall give all property owners and/or tenants of developed property directly abutting the construction of this project a minimum of ten (10) days advance notice prior to start of construction.
- The Contractor shall be responsible for preserving property irons. The Contractor will be required to re-establish any property irons which are damaged or destroyed by his construction operations. Such irons shall be re-established by a licensed land surveyor in accordance with state laws.
- The Contractor shall reimburse the Wichita Water Utilities for cost of tap and materials.
- No work shall be done on this project until the project inspector has been notified and that Project Bonds have been received and approved by the City of Wichita.

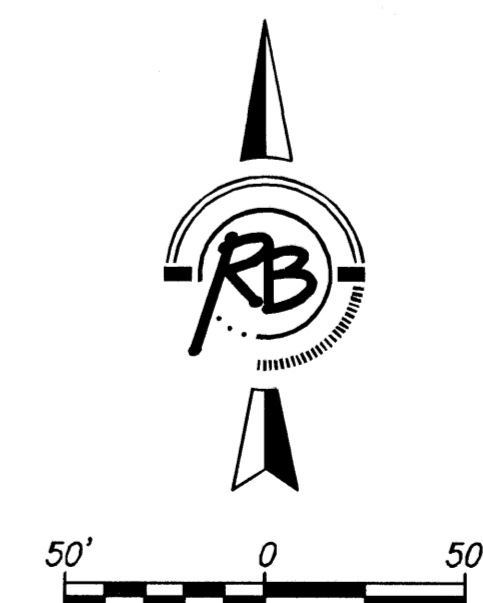
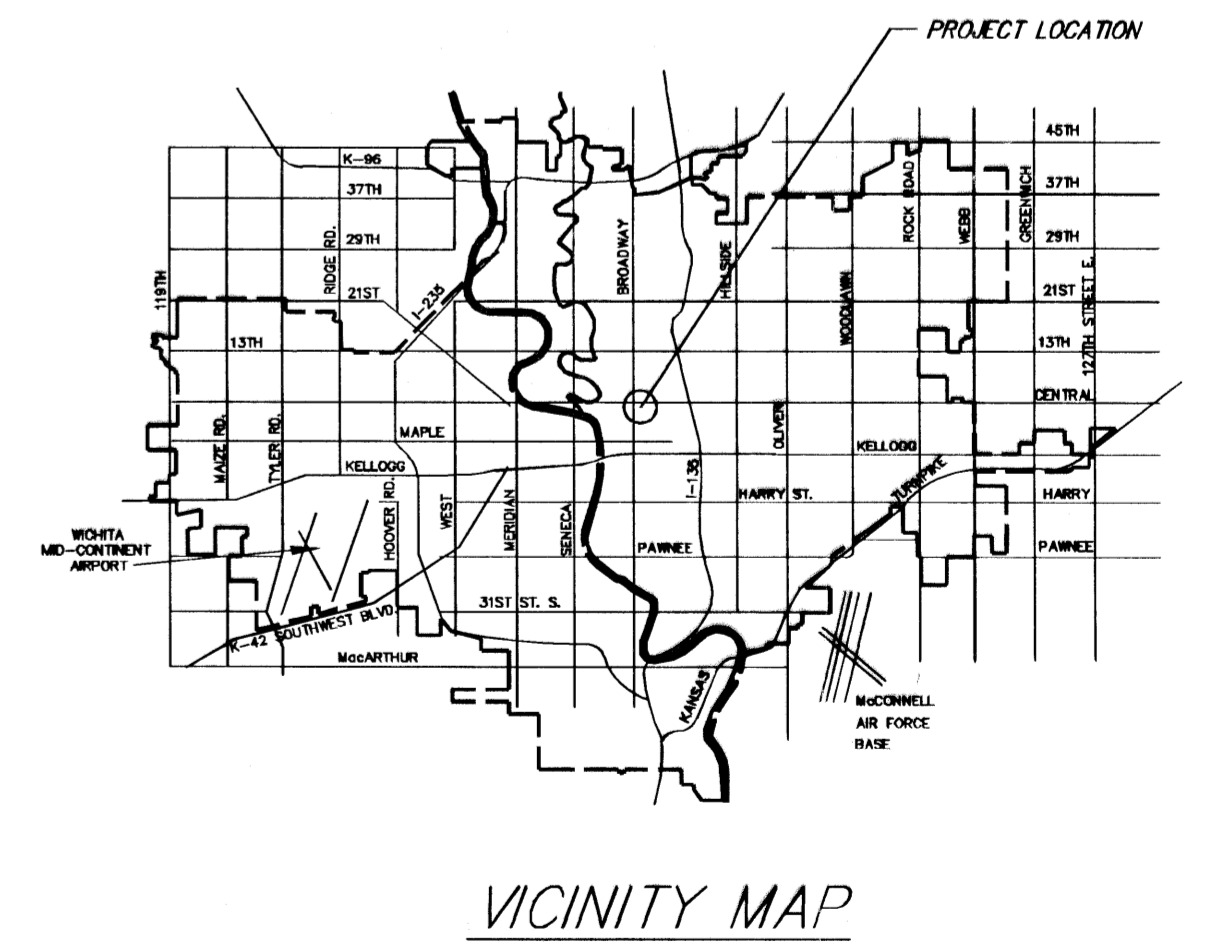


APPROVED AS NOTED  
BY CITY ENGINEER OF WICHITA

Engineering *[Signature]* 7/29/11  
Water *[Signature]* 08/04/11  
Fire *[Signature]* 08/05/11

NOTE TO CONTRACTORS

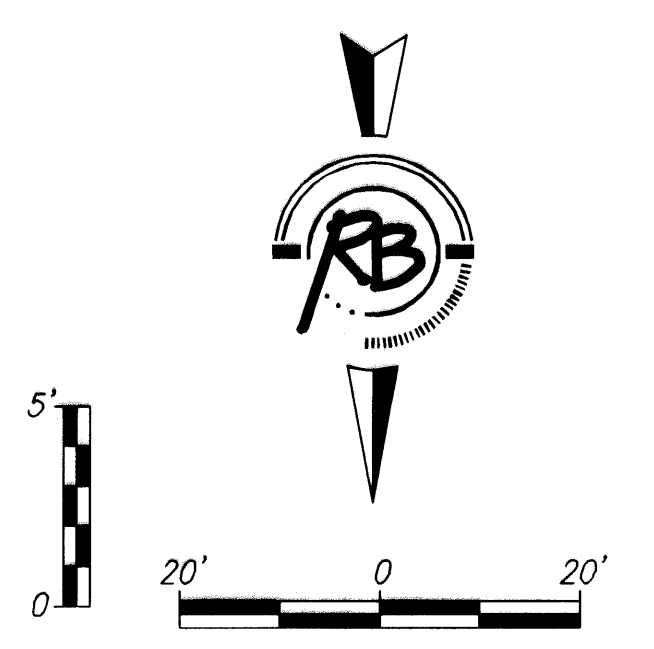
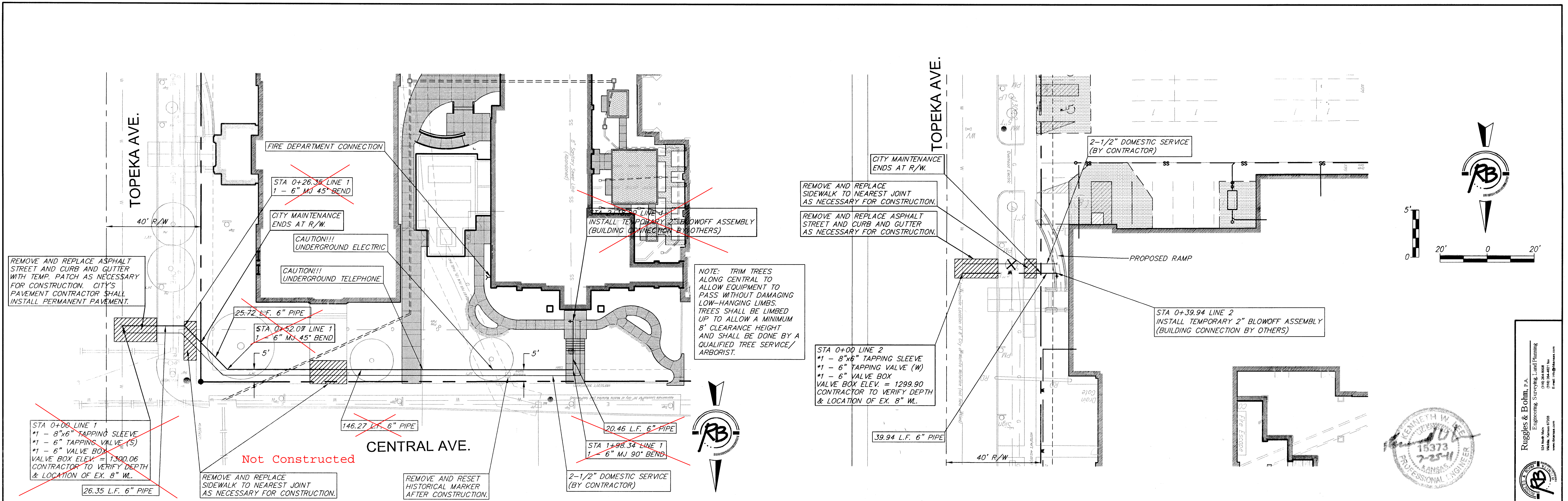
Inspection and testing for this project are to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection to be in accordance with the City of Wichita standard construction engineering practices and certified by a Licensed Professional Engineer. No work shall be performed in dedicated easements or public right-of-way by the Contractor without such inspection, nor shall any work be commenced without written authorization by the City Engineer.



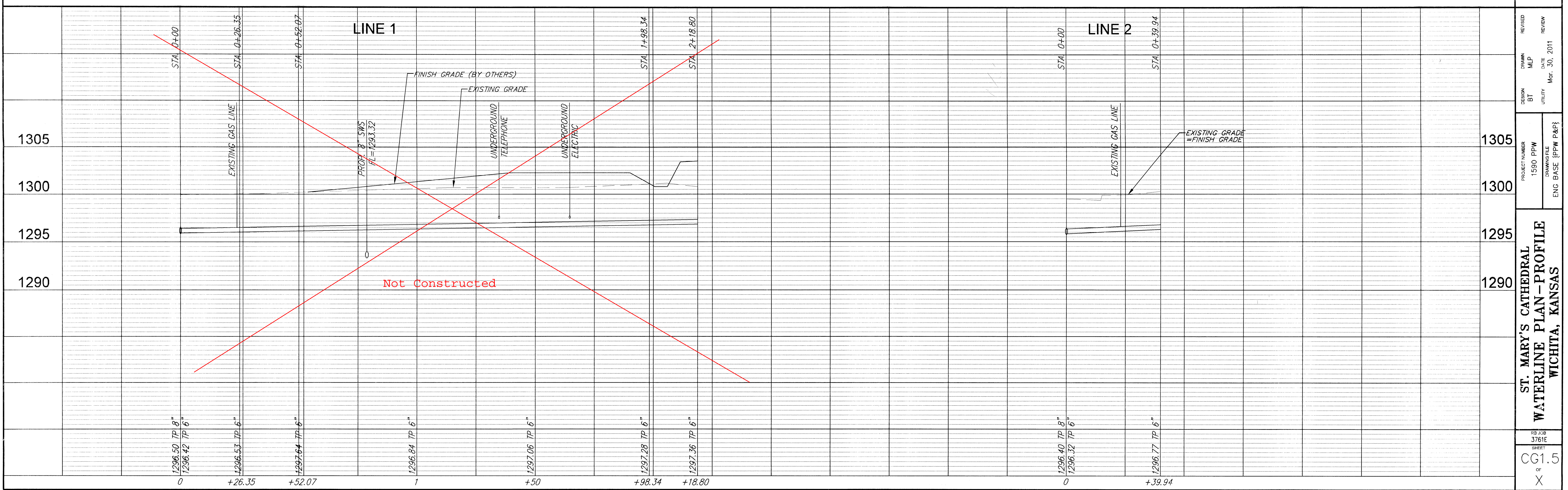
**CITY OF WICHITA, KANSAS**  
**JAMES L. ARMOUR, P.E., CITY ENGINEER**

**Ruggles & Bohm, P.A.**  
Engineering, Surveying, Land Planning

924 North Main (316) 264-8008  
Wichita, Kansas 67203 (316) 264-4621 fax  
www.rbkansas.com E-mail: info@rbkansas.com



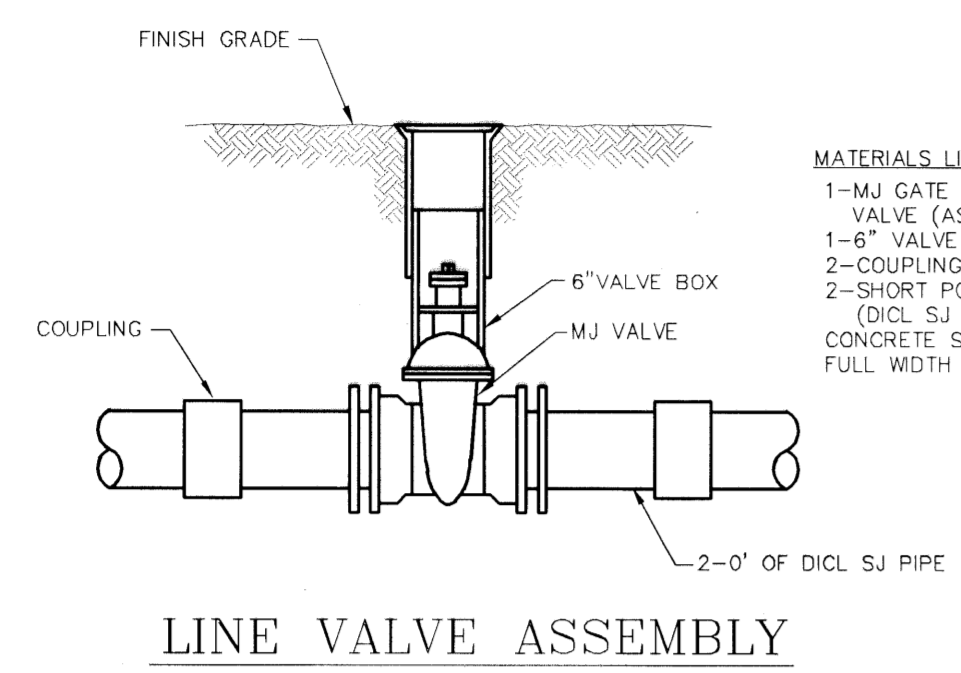
Ruggles & Bohm, P.A.  
Engineering, Surveying, Land Planning  
1000 S. Kansas Ave., Suite 200  
Wichita, Kansas 67202  
Phone: 316.261.4400  
Fax: 316.261.4401  
www.rugglesandbohm.com



DESIGN	BT	JULY	Mar. 30, 2011
PROJECT NUMBER	1590 P/PW	DRAWING FILE	ENG BASE (P/PW P&P)
REVISION	DATE	BY	REVIEW

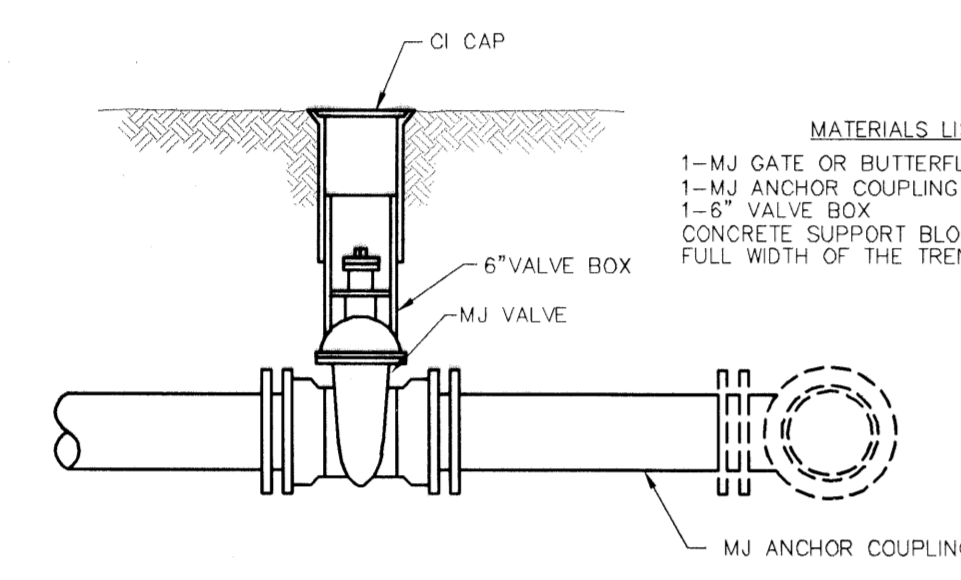
**ST. MARY'S CATHEDRAL  
WATERLINE PLAN - PROFILE  
WICHITA, KANSAS**

CG1.5  
X



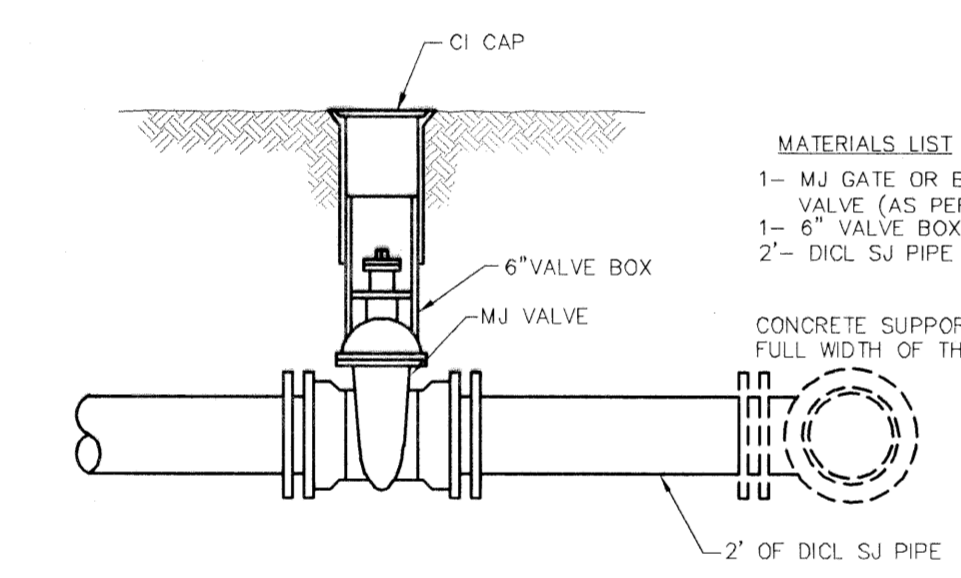
- MATERIALS LIST**
- 1-MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
  - 1-6" VALVE BOX
  - 2-COUPLINGS
  - 2-SHORT PCS. (D.I.C. S.J. PIPE)
  - CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH

**LINE VALVE ASSEMBLY**



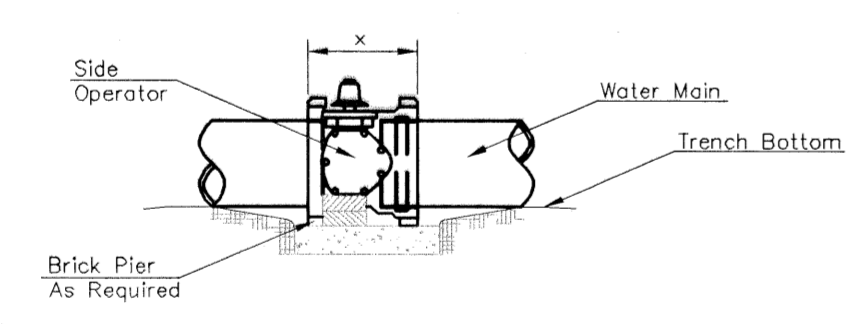
- MATERIALS LIST**
- 1-MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
  - 1-MJ ANCHOR COUPLING (12" OR SMALLER)
  - 1-6" VALVE BOX
  - CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH

**ANCHORED VALVE ASSEMBLY**



- MATERIALS LIST**
- 1-MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
  - 1-6" VALVE BOX
  - 2"- D.I.C. S.J. PIPE
  - CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH

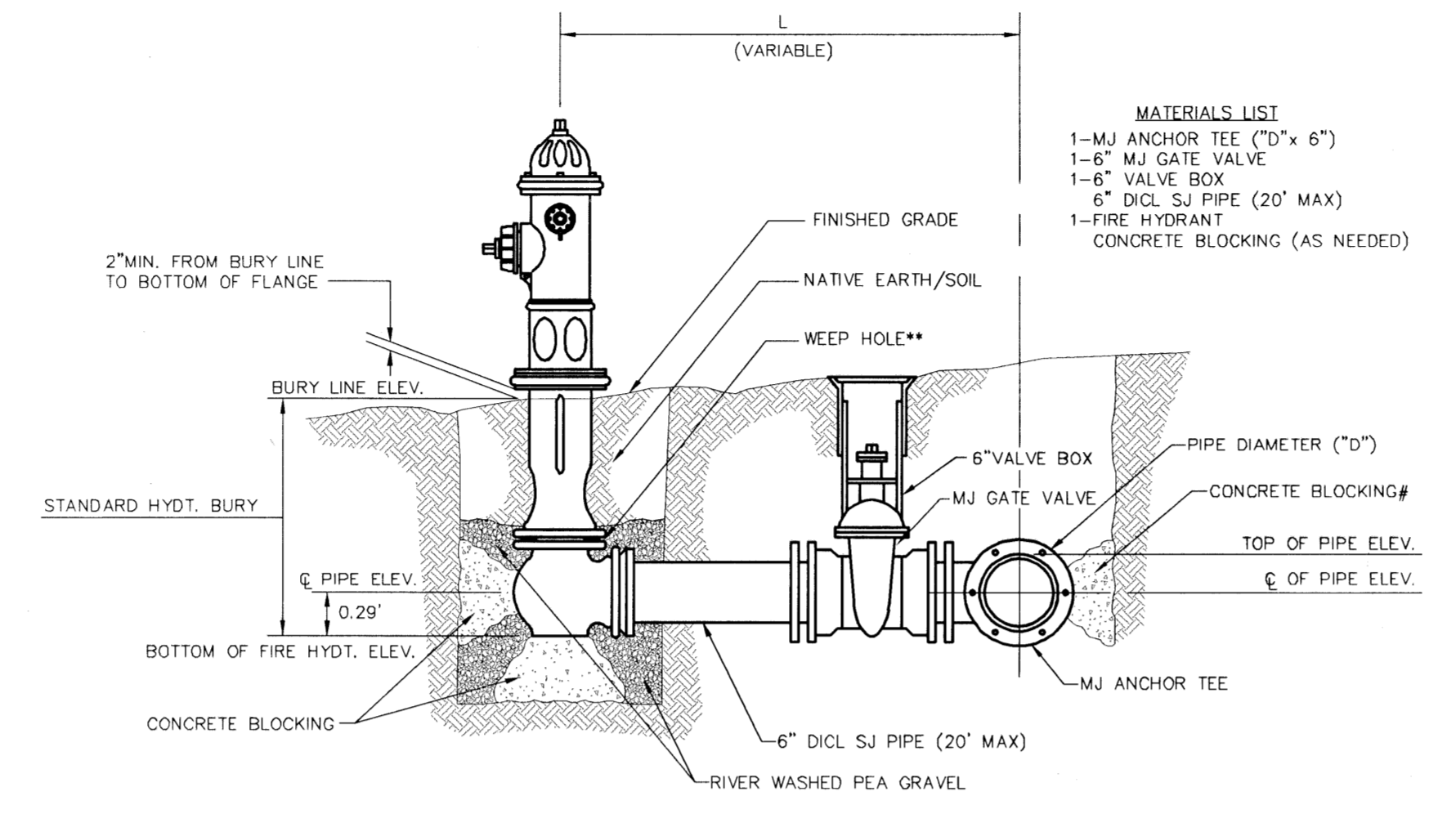
**VALVE ASSEMBLY**



**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 trench.

**CONCRETE SUPPORT BLOCKING FOR BUTTERFLY VALVE INSTALLATION**

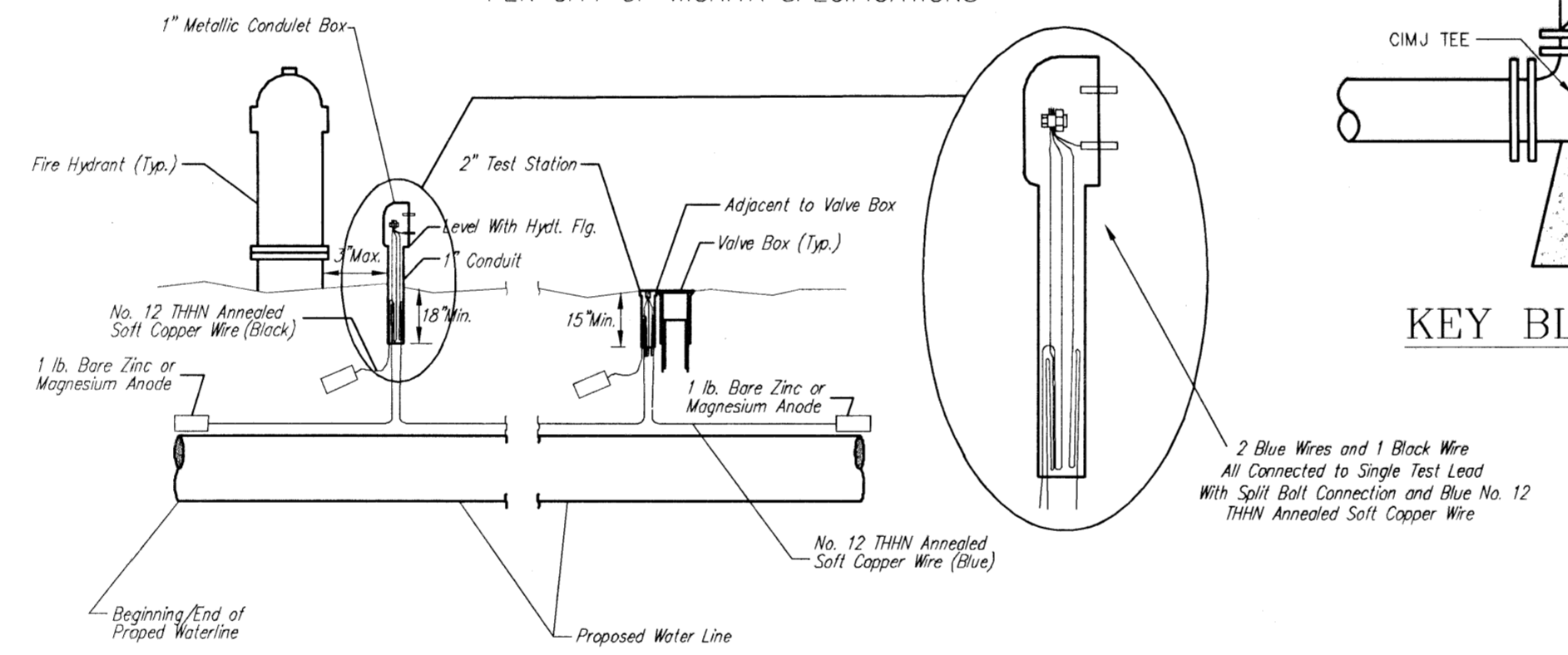


- MATERIALS LIST**
- 1-MJ ANCHOR TEE ("D"x 6")
  - 1-6" MJ GATE VALVE
  - 1-6" VALVE BOX
  - 6" D.I.C. S.J. PIPE (20' MAX)
  - 1-FIRE HYDRANT
  - CONCRETE BLOCKING (AS NEEDED)

- \*\* 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.**
- \* IF HYDRANT BURY IS IN EXCESS OF 5', CONTRACTOR SHALL USE STANDARD 5' HYDRANT BURY AND HYDRANT BARREL EXTENSIONS AS NECESSARY.**

FIRE HYDRANTS REQUIRED			
STATION	BURY LINE ELEVATION	TOP OF PIPE ELEVATION	FIRE HYDRANT BURY REQUIRED*

**FIRE HYDRANT ASSEMBLY PER CITY OF WICHITA SPECIFICATIONS**



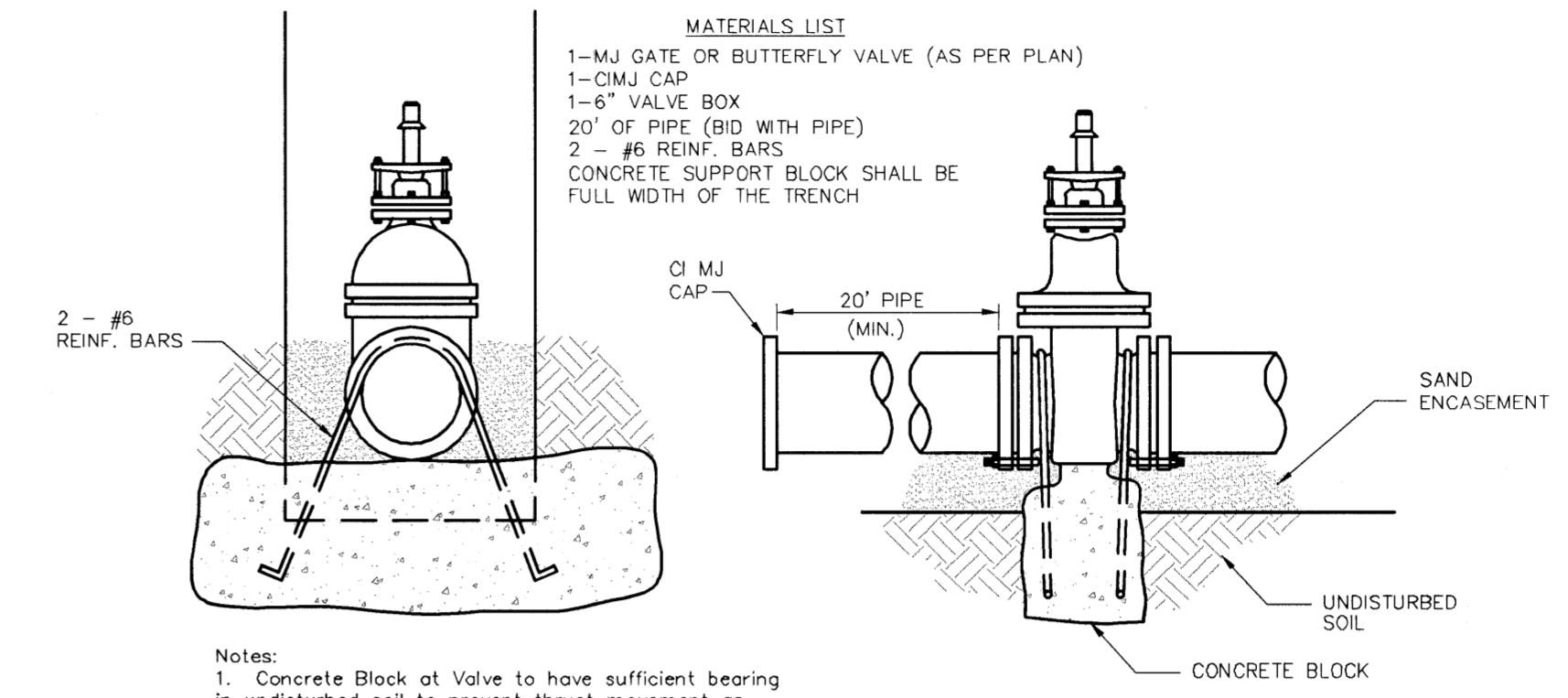
**TRACER WIRE**  
Conductive type pipe locator/tracer wire shall be installed to locate Polyvinyl Chloride (PVC) or any nonmetallic waterline pipes. The wire shall extend the entire length of the proposed pipe. The wire shall be taped to the waterline and pulled with the pipe. Split-bolt connectors shall 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 waterline and at blowoffs or valves near the ends of the waterlines. Any exceptions to the location of test stations shall be approved by the engineer. At each test station, the tracer wire shall be connected to a 1 lb. Zinc or magnesium anode. Anodes shall also be attached to the tracer wire at both the beginning and the end of the proposed waterline. 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 annealed soft copper wire with thermal plastic insulation. The insulation shall be heat, oil, and gasoline resistant as manufactured by Temple Electric or approved equal. To allow for grade adjustment, a minimum of 12" of excess wire shall be coiled at the bottom of the test station for all wires. The insulation sheathing shall be removed such that 1" bare copper wire is exposed at all points of connection. Contractor shall attach wire being installed with proposed water main to any tracer wire installed with adjacent waterline projects.

**TEST STATIONS**  
The test station for fire hydrant applications shall be a 1 inch galvanized conduit style test station as manufactured by AGRA Industries with a removable solid cover having two leads extending from the face or approved equal. The test station for valve applications shall be 2 inch flush style test station T2P53B as manufactured by HANDLEY Industries or approved equal. The conduit style shall be attached to a 1 inch rigid galvanized conduit with a minimum length of 36" and plastic end bushing. The flush style shall have the word "WATER" stamped or molded into the lid. All test stations shall be manufactured using molded blue tops or sufficiently coated with blue enamel paint. The tracer wire and the anode wire shall be installed to allow 10 inches of wire within the test station. In concrete environments such as sidewalks or in the downtown area the contractor shall use the flush style test station. The location of all test stations shall be approved by the 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 at the same elevation as the waterline at each test station. The anodes shall be connected to Black No. 12 THHN annealed soft copper wire which shall be extended to the test station.

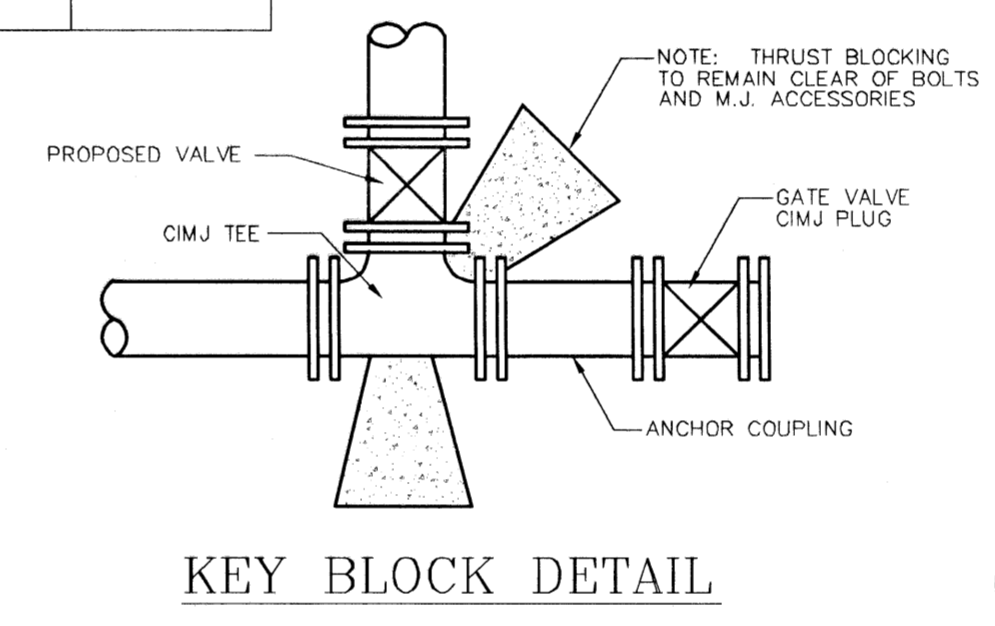
**TRACER WIRE DETAIL**  
COST IS SUBSIDIARY TO PIPE INSTALLATION



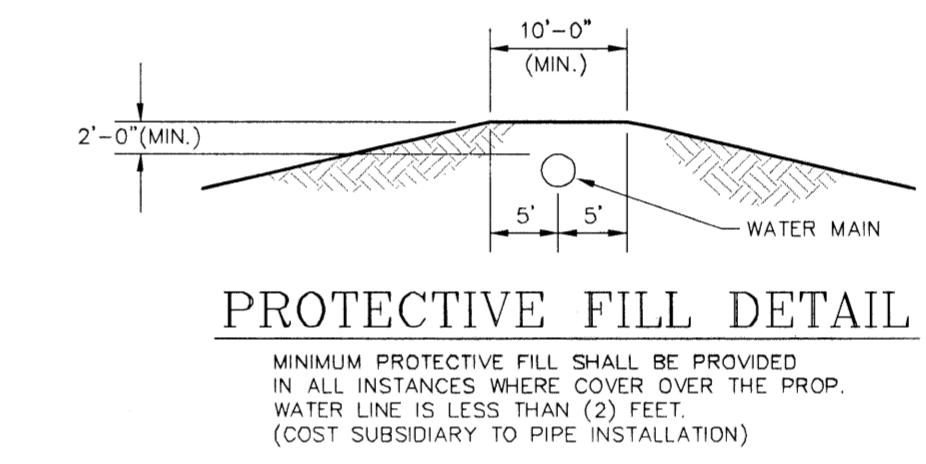
- Notes:**
- Concrete Block at Valve to have sufficient bearing in undisturbed soil to prevent thrust movement as shown in table at right. Field Engineer to determine thrust loading of undisturbed soil and final size of thrust block.
  - The thrust block shall be constructed such that bolts, nuts, and other MJ accessories are kept clear of concrete.
  - 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.

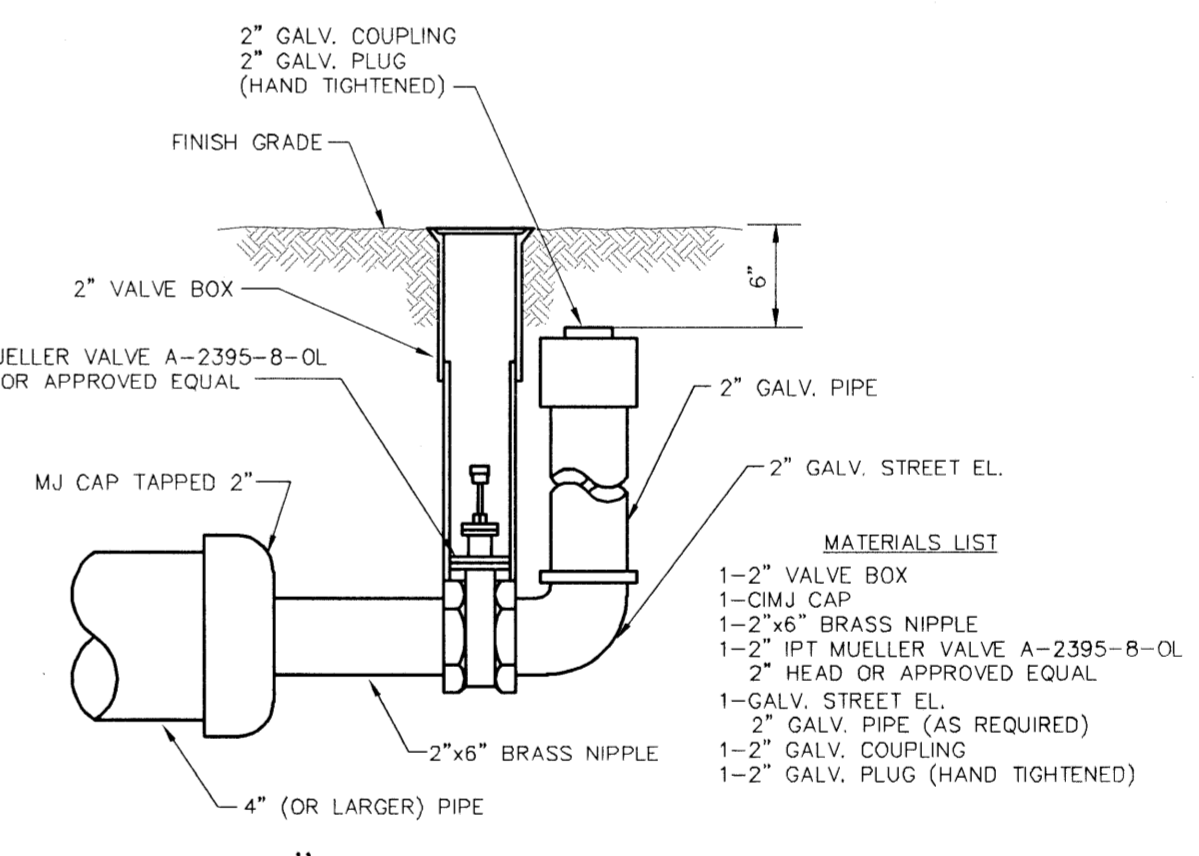
**ANCHORED VALVE ASSEMBLY, SPECIAL**



**KEY BLOCK DETAIL**



**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)



**2" BLOWOFF ASSEMBLY**

<p>THE CITY OF WICHITA</p> <p>CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 100 NORTH MAIN STREET WICHITA, KANSAS 67202 (316) 254-1500 (316) 268-4114 FAX</p>	<p><b>STANDARD WATER ASSEMBLY DETAILS</b></p>	
	<p>JAMES L. ARMOUR, P.E. - CITY ENGINEER</p>	
<p>PROJECT NUMBER 1590 PFW</p>	<p>DATA # 607853</p>	<p>DATE DEC 98</p>
<p>SHEET CG1.6 OF X</p>		

Revised: 6-7-00, MCG

