

GENERAL NOTES

1. WATERLINES SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF WICHITA STANDARD SPECIFICATIONS, FOR THE "INSTALLATION OF WATER DISTRIBUTION SYSTEMS", NO. 14533.
2. AT LEAST 24 HOURS PRIOR TO BEGINNING ANY EXCAVATION (EXCLUDING WEEKENDS AND HOLIDAYS), THE CONTRACTOR SHALL CONTACT THE KANSAS ONE-CALL SYSTEM, A UTILITY LOCATION SERVICE, AT (316) 687-2470 TO REQUEST THE LOCAL UTILITY COMPANIES TO LOCATE ANY EXISTING LINES WITHIN THE PROJECT AREA.
3. THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:

COX COMMUNICATIONS	262-4270 OR 263-2061
AT&T	1-800-870-8390
KANSAS GAS SERVICE	1-888-482-4950
WESTAR	1-800-383-1183
BLACK HILLS ENERGY	1-800-303-0752
CITY OF WICHITA (WATER & SEWER)	268-4555
4. ANY EXCESS EXCAVATION WHICH IS TO BE WASTED, SHALL BE DISPOSED OF ON SITES PROVIDED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE, AND SITE LOCATION, AND SHALL BE DISPOSED OF IN ACCORDANCE WITH THE PROVISIONS OF THE KANSAS SOLID WASTE MANAGEMENT STATUTES AND REGULATIONS (KSA 65-3401, KAR 28-29-1 ET SEQ.)
5. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY. THE CONTRACTOR WILL DELIVER REMOVED FIRE HYDRANTS TO WATER DISTRIBUTION, 1703 SIM PARK DRIVE.
6. CONTRACTOR TO MAINTAIN TRAFFIC USING BARRICADES AND FLAGPERSONS WHILE WORKING WITHIN STREET RIGHT OF WAY.
7. ALL AREAS DISTURBED BY CONSTRUCTION INCLUDING STAGING AREAS, SHALL BE REPLANTED WITH GRASS SEED AT THE APPROPRIATE RATES APPROVED BY THE ENGINEER
8. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST AVAILABLE INFORMATION. IT SHOULD BE NOTED THAT OTHER BURIED LINES AND CABLE MAY EXIST WHICH ARE NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING TRENCHING OPERATIONS TO AVOID DAMAGING THESE LINES AND CABLES. ANY UTILITIES DAMAGED SHALL BE REPLACED OR REPAIRED IMMEDIATELY AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL PROTECT FROM DAMAGE AND SUPPORT EXISTING UTILITIES THROUGH CONSTRUCTION AS APPROVED BY THE UTILITY OWNER AND THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING EXISTING PROPERTY IRONS AND RIGHT-OF-WAY MONUMENTS. THE CONTRACTOR SHALL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS OR RIGHT-OF-WAY MONUMENTS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS OR MONUMENTS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.
10. THE CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION, TYPE, SIZE, AND CLASS OF EXISTING WATERLINES PRIOR TO CONSTRUCTION. EXISTING WATERLINE LOCATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL MAKE ADJUSTMENTS AS REQUIRED AND APPROVED BY THE ENGINEER. PROVISIONS FOR AND INSTALLATION OF PIPE ADAPTORS, SHORT SECTIONS OF PIPE, AND COUPLERS SHALL BE SUBSIDIARY TO OTHER PAY ITEMS OF WORK.
11. THE CONTRACTOR SHALL NOT START WORK ON THE PROJECT UNTIL THE PROJECT INSPECTOR IS ASSIGNED TO THE PROJECT AND IS PRESENT ON THE SITE. ANY WORK PERFORMED WITHOUT INSPECTION IS SUBJECT TO BE UNCOVERED FOR INSPECTION.
12. 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.
13. 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.
14. EACH BIDDER SHALL VISIT THE SITE OF THE PROJECT BEFORE SUBMITTING THE PROPOSAL FOR THIS WORK, SO THAT HE WILL BE FULLY INFORMED OF THE EXISTING FIELD CONDITIONS AND THE OBSTACLES WHICH MIGHT BE ENCOUNTERED. UPON AWARD OF THE CONTRACT THE CONTRACTOR WILL NOT BE GRANTED ANY ADDITIONAL COMPENSATION WITH REGARDS TO TIME AND MONEY FOR CONDITIONS THAT MAY HAVE BEEN EVALUATED DURING ANY INSPECTION OF THE SITE.
15. ALL WATERLINES SHALL HAVE A MINIMUM DEPTH OF BURY OF 42 INCHES. THE WATER MAIN SHALL BE CONSTRUCTED ON THE ALIGNMENT SHOWN BY THE PLANS. THE COST FOR ANY NECESSARY TREE TRIMMING, CLEARING AND/OR GRUBBING SHALL BE INCLUDED IN THE PRICE BID FOR THE INSTALLED WATER MAIN PIPE. TREES AND SHRUBS IN PUBLIC RIGHT OF WAY WHICH ARE IN DIRECT CONFLICT WITH PROPOSED CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE INCLUDED IN THE PRICE BID FOR THE INSTALLED WATER PIPE. TREES AND SHRUBS NOT IN DIRECT CONFLICT WITH PROPOSED CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE.
16. INSPECTOR WILL NOTE ON AS BUILT PLAN LOCATIONS OF ALL FITTINGS AND VALVES. LOCATIONS WILL BE MEASURED FROM PROPERTY LINES, CURB LINES, AND/OR CENTER LINES. HYDRANT BRANCH LENGTH AND HYDRANT BURY LINE ELEVATION ARE TO MATCH FIELD CONDITIONS AND BE APPROVED BY THE ENGINEER.

FIRE PROTECTION LINE TO SERVE BRAUM 1ST ADDITION WICHITA, SEDGWICK COUNTY, KANSAS

**CITY OF WICHITA PRIVATE PROJECT NO.:
1517 PPW (O.C.A. NO. 607853),
JAMES L. ARMOUR, P.E., CITY ENGINEER
JANUARY 2010**

Sheet List Table	
Sheet Number	Sheet Title
01	TITLE
02	SITE PLAN
03	FIRE PROTECTION P&P
04	STD. WATER ASSEMBLY DETAILS

APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA,
WATER & SEWER DEPT. AND
BY WICHITA FIRE DEPARTMENT

PUBLIC WORKS: *[Signature]* 1-29-10

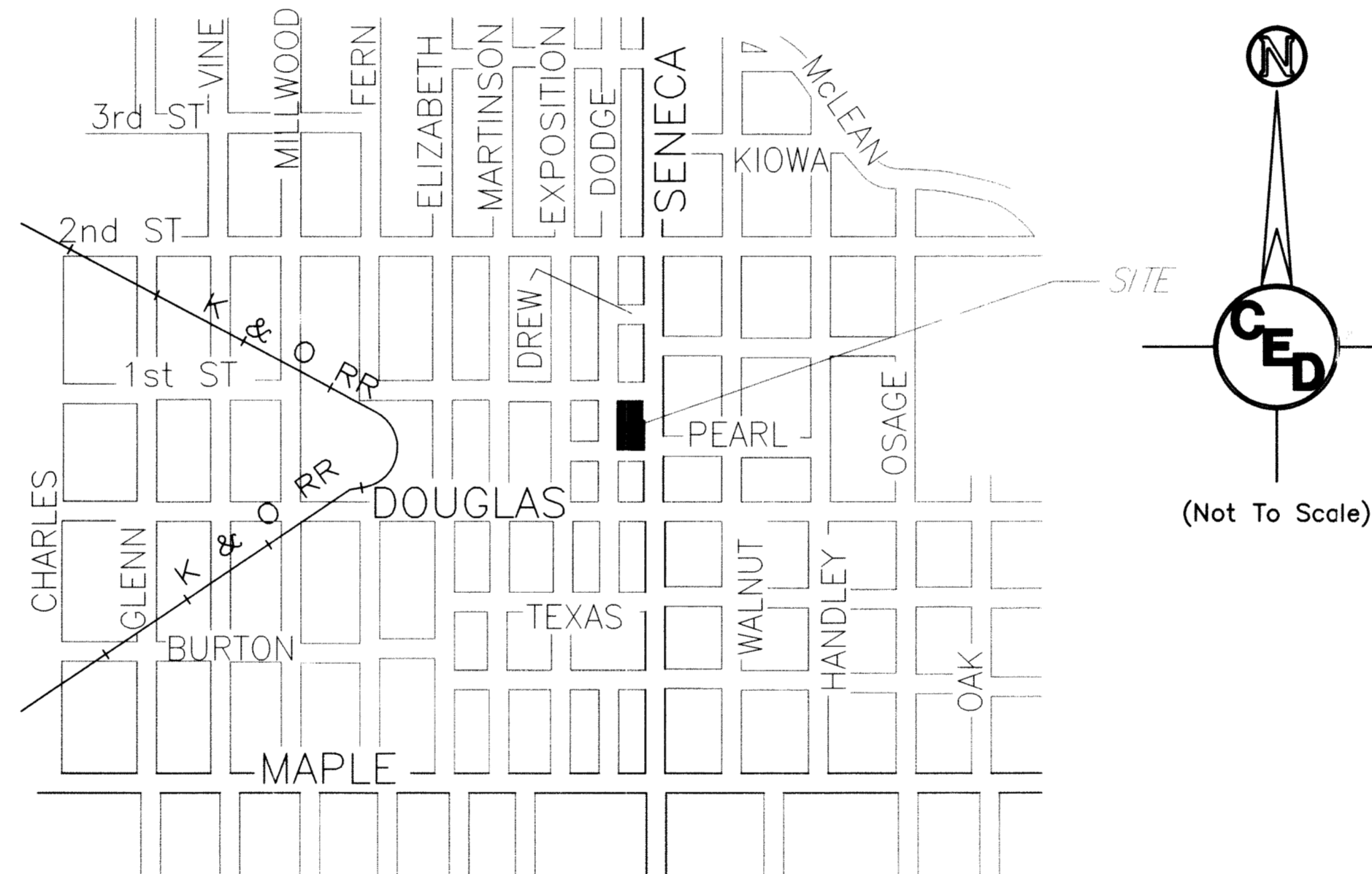
WATER & SEWER: *[Signature]* 1-29-2010

FIRE DEPARTMENT: *[Signature]* WFD 1-29-2010

NOTE TO CONTRACTORS

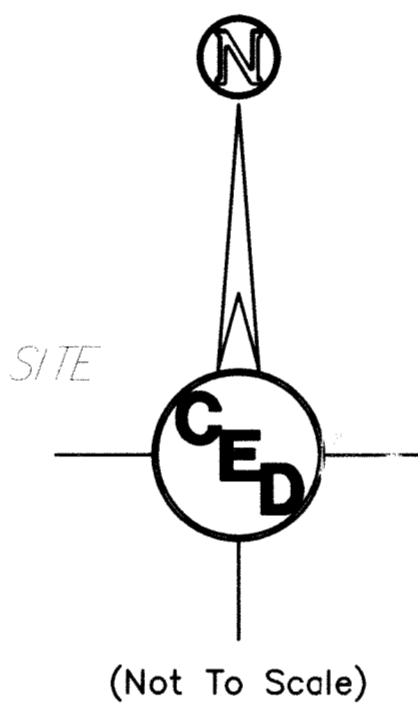
PUBLIC PROPERTY:
INSTALLATION, INSPECTION AND TESTING FOR THE WATERLINE IS TO BE PROVIDED BY A LICENSED CONSULTING ENGINEERING FIRM UNDER CONTRACT WITH THE OWNER/DEVELOPER. SAID INSPECTION TO BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD CONSTRUCTION ENGINEERING PRACTICES AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER. NO WORK SHALL BE PERFORMED IN DEDICATED EASEMENTS OR THE PUBLIC RIGHT-OF-WAY BY THE CONTRACTOR WITHOUT SUCH INSPECTION NOR SHALL ANY WORK BE COMMENCED WITHOUT THE WRITTEN AUTHORIZATION BY THE CITY ENGINEER. ALL CONSTRUCTION AND MATERIALS SHALL COMPLY WITH THE CITY OF WICHITA SPECIFICATIONS AND STANDARDS (ON FILE AND AVAILABLE IN THE CITY ENGINEER'S OFFICE).

PRIVATE PROPERTY:
INSTALLATION, INSPECTION, AND TESTING FOR THE FIRE PROTECTION LINE IS TO BE PERFORMED BY A CITY OF WICHITA CERTIFIED FIRE PROTECTION CONTRACTOR IN ACCORDANCE WITH THE FIRE CODES AS ADOPTED BY THE CITY OF WICHITA. ALL MATERIALS AND CONSTRUCTION PRACTICES FOR THE FIRE PROTECTION LINE SHALL COMPLY WITH THE FIRE CODES AS ADOPTED BY THE CITY OF WICHITA (AVAILABLE FROM THE CITY OF WICHITA FIRE DEPARTMENT). THE CONTRACTOR SHALL NOT COMMENCE WORK WITHOUT NOTIFICATION TO AND APPROVAL OF THE WICHITA FIRE DEPARTMENT.

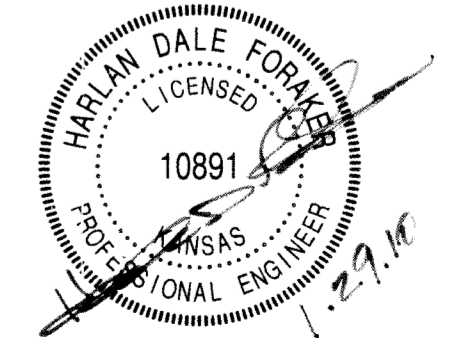
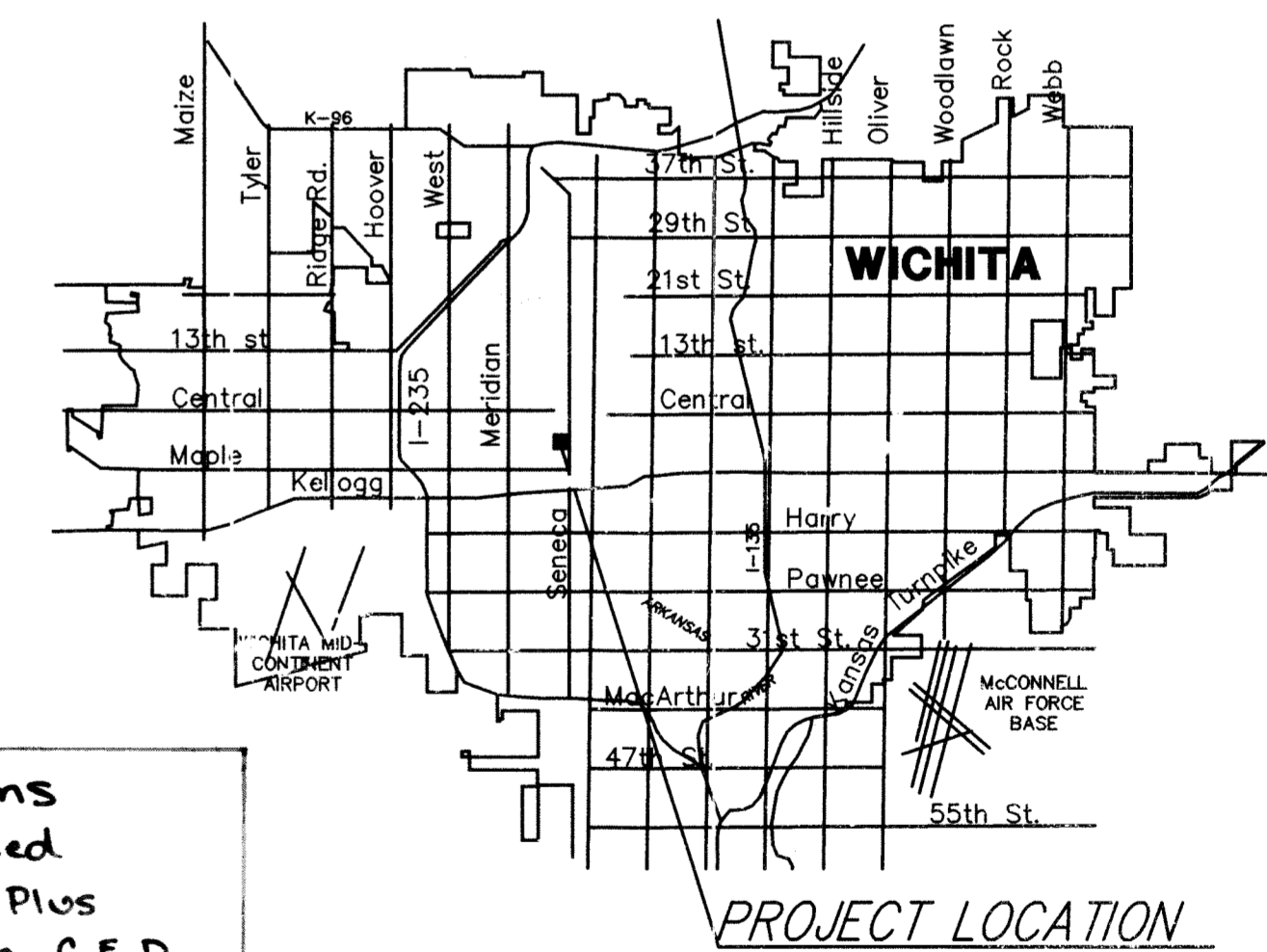


Vicinity Map

**PROJECT LOCATED IN THE NE 1/4,
SE 1/4, SEC 19, T27S, R1E,
WICHITA, SEDGWICK COUNTY, KANSAS**



**AS Built Plans
Built as Designed
Contractor: Utilities Plus
Inspector: Randy Voth, C.E.D.
pdf by: CC, November 10, 2010**

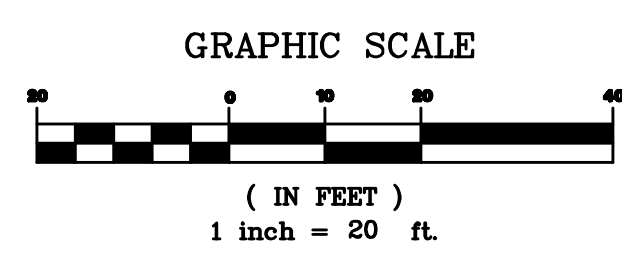
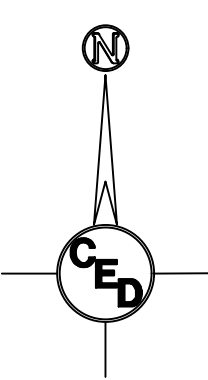


HORIZONTAL CONTROL POINTS			
C.P. 1	N 1685643.27	E 1644105.02	1/2" ReBar w/Savoy Cap @ Prop. NW Cor.
C.P. 2	N 1685639.33	E 1644360.01	1/2" ReBar w/Savoy Cap @ Prop. NE Cor.
C.P. 3	N 1685394.31	E 1644110.28	5/8" ReBar @ Prop. SW Cor.
C.P. 4	N 1685399.60	E 1644375.26	1/2" ReBar w/B-man Cap @ Prop. SE Cor.

Bench Mark:
Square Cut on top of curb 14.9' North of the NW
Corner of Lot 1, Block A, Braum 1st Addition:

Elevation = 1301.83 NAVD88

CED PROJ. NO. 20091878	
CERTIFIED ENGINEERING DESIGN, P.A.	
	1935 WEST MAPLE WICHITA, KANSAS 67213 PH: (316) 262-8808 FAX: (316) 262-1669
	SHEET 1 TOTAL 4

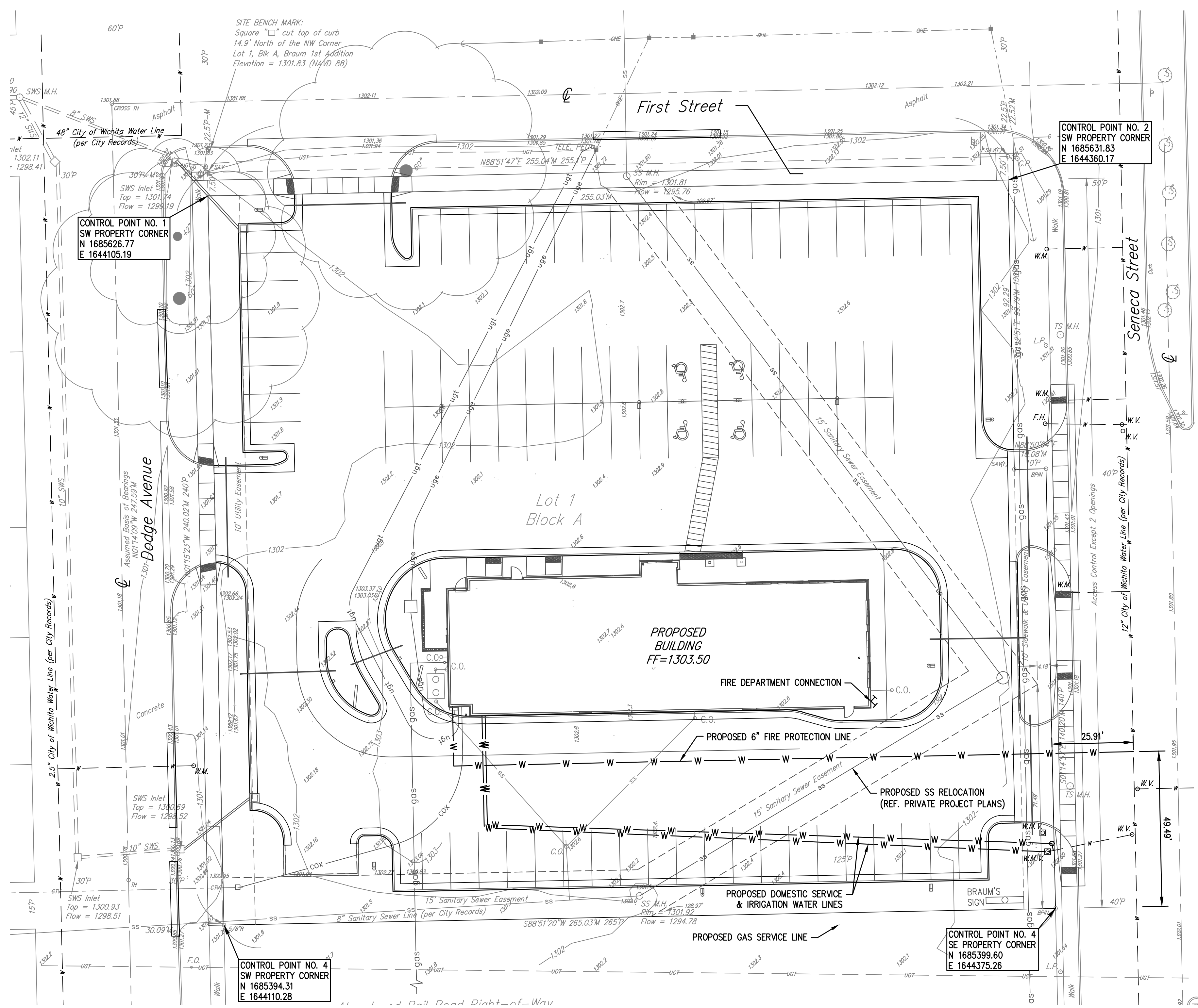


Elevations = NAVD 88
 SITE BENCH MARK: Square "□" cut top of curb
 14.9' North of the NW Corner
 Lot 1, Blk A, Braum 1st Addition
 Elevation = 1301.83 (NAVD 88)

- LEGEND:**
- P = Platted
 - M = Measured
 - C = Calculated
 - D = Described
- 5/8" R 5/8" REBAR (FOUND)
 - BPIN 1/2" REBAR W/BAUGHMAN CAP (FOUND)
 - MACON 1/2" REBAR W/MACON CAP (FOUND)
 - TH CITY OF WICHITA CONTROL (FOUND)
 - SAV 1/2" REBAR W/SAVOY CAP (SET)
 - SAV(F) 1/2" REBAR W/SAVOY CAP (FOUND)

- LEGEND**
- G = GAS MAIN
 - W = WATER MAIN
 - SS = SANITARY SEWER
 - SWS = STORM WATER SEWER
 - UGE = UNDER GROUND ELECTRIC
 - UGT = UNDER GROUND TELEPHONE

- TELE. PED TELEPHONE PEDESTAL
- E.B. ELECTRIC BOX
- G.M. GAS METER
- W.M. WATER METER
- W.V. WATER VALVE
- F.H. FIRE HYDRANT
- M.W. MONITOR WELL
- C.O. CLEAN OUT
- L.P. LIGHT POLE
- POWER POLE
- HIGH LINE POLE
- GUY ANCHOR
- 4 SIGN
- G.P. GUARD POST
- SWS M.H. STORM WATER SEWER MANHOLE
- SS M.H. SANITARY SEWER MANHOLE
- G.P. GUY POLE
- F.O. FIBER OPTIC MARKER



SURVEY DISCLAIMER:
 TOPOGRAPHIC SURVEY AND CONTOUR MAP USED IN PREPARING PLANS WAS PROVIDED BY SAVOY COMPANY, P.A., 433 S. HYDRAULIC, WICHITA, KS. ENGINEER DOES NOT GUARANTEE SURVEY ELEVATIONS FOR ACCURACY. CONTRACTOR SHALL VERIFY ELEVATIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

UTILITIES SHOWN REPRESENT THE BEST INFORMATION AVAILABLE FOR DESIGN. ADDITIONAL UTILITIES MAY BE PRESENT ON THIS PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION, DEPTH AND SIZE OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE LIABLE FOR ANY DAMAGE CAUSED BY THE FAILURE TO DO SO.

BRAUM'S ICE CREAM & DAIRY STORE #173

SITE PLAN
 1ST ST. N. & SENECA
 CED PROJ. NO.: 20091828

CERTIFIED ENGINEERING DESIGN, P.A.
 1935 WEST MAPLE
 WICHITA, KANSAS 67213
 PH.(316)262-8808 FAX.(316)262-1669

DESIGNED: HDF	SCALE: 1" = 20'	SHEET 2 TOTAL 4
DRAWN: CKW	DATE: 01.15.10	
CHECKED: HDF	CED FILE: FPPP-Site.dwg	

HORIZONTAL CONTROL POINTS			
C.P. 1	N 1685643.27	E 1644105.02	1/2" ReBar w/Savoy Cap @ Prop. NW Cor.
C.P. 2	N 1685639.33	E 1644360.01	1/2" ReBar w/Savoy Cap @ Prop. NE Cor.
C.P. 3	N 1685394.31	E 1644110.28	5/8" ReBar @ Prop. SW Cor.
C.P. 4	N 1685399.60	E 1644375.26	1/2" ReBar w/B'man Cap @ Prop. SE Cor.

PAVEMENT REPLACEMENT NOTE:
 CUTS MADE TO PAVED SURFACES ON PUBLIC PROPERTY WILL BE REPAIRED BY THE CITY'S CONTRACTOR AND CHARGED AGAINST THE OWNER/APPLICANT. UNIT REPAIR PRICES ARE AVAILABLE FROM THE CITY AT 268-4418. A SURCHARGE MAY BE APPLICABLE, CALL 268-4418 FOR DETAILS. REPAIR COSTS TO BE PAID PRIOR TO RELEASE OF WATER SERVICE IF WATER SERVICE IS AFFECTED.

CONTRACTOR SHALL SAWCUT AND REMOVE EXISTING CONCRETE PAVEMENT AS REQUIRED TO INSTALL FIRE SERVICE LINE. CONTRACTOR SHALL COORDINATE WITH CITY OF WICHITA FOR PAVEMENT REPLACEMENT. (SEE GENERAL NOTE ABOVE).

TRAFFIC NOTE:
 CONTRACTOR SHALL MAINTAIN ONE OPEN LANE FOR SOUTH BOUND TRAFFIC DURING CONSTRUCTION. THE TWO NORTH BOUND TRAFFIC LANES SHALL NOT BE IMPACTED.

STA. 0+74.09, BEGIN 6" FIRE PROTECTION SERVICE LINE (FPSL) 12"x6" TAPPING SLEEVE AND VALVE ASSEMBLY. (MJ GATE VALVE) TO BE FURNISHED AND INSTALLED BY CITY OF WICHITA WATER DEPARTMENT. CONTRACTOR TO BE RESPONSIBLE FOR \$1,400.00 TAPPING FEE. TOP VALVE BOX ELEV.=1301.60 CONTRACTOR SHALL VERIFY DEPTH AND LOCATION OF 12" MAIN PRIOR TO INSTALLATION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
 N 1685449.60
 E 1644400.08

STA. 0+74.09 TO STA. 0+94.09, CONTRACTOR SHALL INSTALL 20 L.F. OF 6" PIPE BY DIRECTIONAL DRILLING.

STA. 1+57.84, CAUTION!!!
 PROP. NEW 8" SS MAIN APPROX. CLEARANCE=19"
 8" SS TO BE CONCRETE ENCASED.
 (REF. 2027 PPS PRIVATE PROJECT PLANS.)

STA. 2+32.26, CAUTION!!!
 PROP. NEW 4" SS SERVICE. COORDINATE W/ BUILDING CONTRACTOR.

STA. 2+78.21, CAUTION!!!
 PROP. NEW 4" SS SERVICE. COORDINATE W/ BUILDING CONTRACTOR.

STA. 2+82.09, CAUTION!!!
 PROP. DOMESTIC SERVICE & IRRIGATION WATER LINES.

STA. 2+87.81, CAUTION!!!
 PROP. CATV SERVICE LINE.

STA. 2+90.71, INSTALL 6" CI CL. MJ 90° BEND
 N 1685445.00
 E 1644183.51

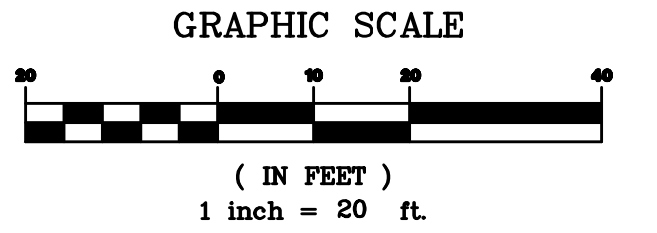
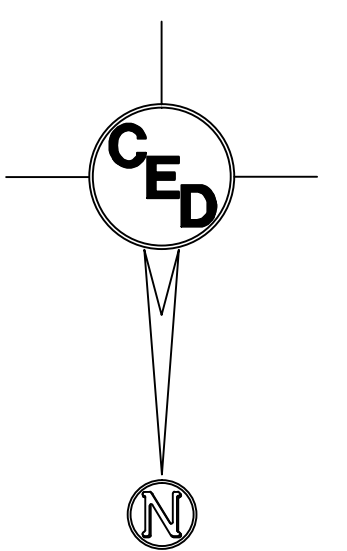
STA. 2+99.58, CAUTION!!!
 PROPOSED 3" CONDUIT TELEPHONE SERVICE LINE.

STA. 3+02.58, CAUTION!!!
 PROP. GAS SERVICE LINE.

CONTROL POINT NO. 4
 SW PROPERTY CORNER
 N 1685394.31
 E 1644110.28

STA. 3+04.49, CAUTION!!!
 PROPOSED UNDERGROUND ELECTRIC LINE.

STA. 3+09.58, CONNECT 6" FPSL TO NEW BUILDING RISER.
 N 1685463.87
 E 1644183.14



BACKFILL & COMPACTION NOTE:
 CONTRACTOR SHALL BACKFILL AND COMPACT FILL MATERIAL OVER THE NEW 6" FIRE PROTECTION LINE WITHIN THE PROPOSED PARKING LOT PAVEMENT AREA IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD SPECIFICATION, "801.6 BACKFILLING AND COMPACTION".

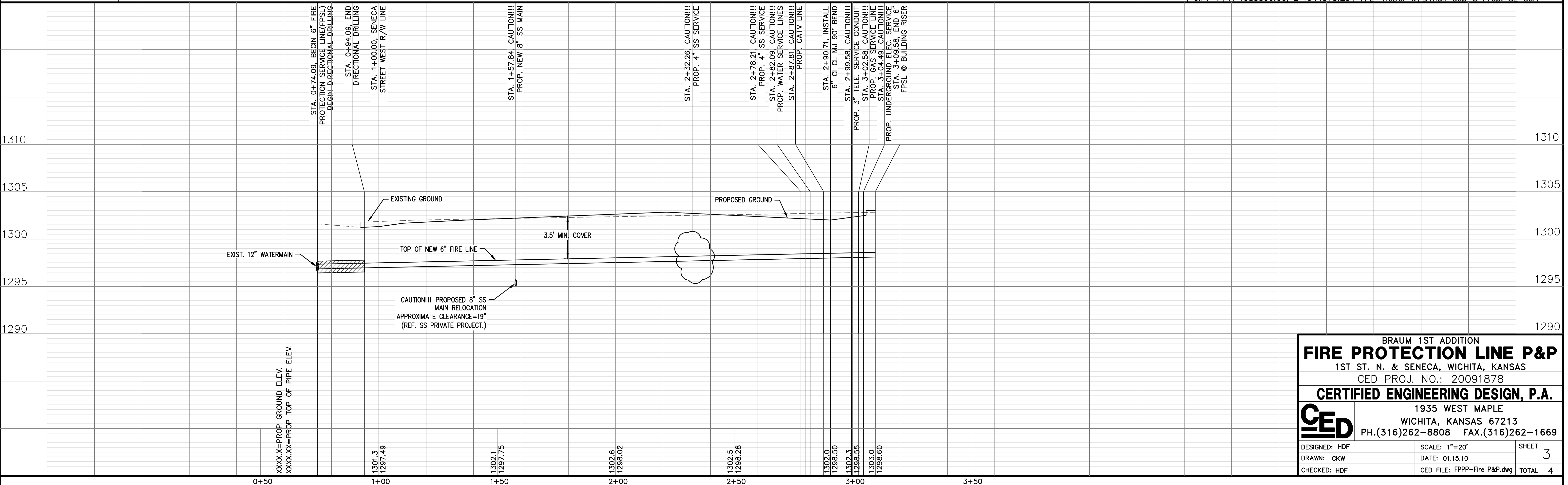
UTILITIES SHOWN REPRESENT THE BEST INFORMATION AVAILABLE FOR DESIGN. ADDITIONAL UTILITIES MAY BE PRESENT ON THIS PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION, DEPTH AND SIZE OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE LIABLE FOR ANY DAMAGE CAUSED BY THE FAILURE TO DO SO.

Bench Mark:
 Square Cut on top of curb 14.9' North of the NW Corner of Lot 1, Block A, Braum 1st Addition:
 Elevation = 1301.83 NAVD88

HORIZONTAL CONTROL POINTS					
C.P. 1	N 1685643.27	E 1644105.02	1/2"	ReBar w/Savoy Cap	@ Prop. NW Cor.
C.P. 2	N 1685639.33	E 1644360.01	1/2"	ReBar w/Savoy Cap	@ Prop. NE Cor.
C.P. 3	N 1685394.31	E 1644110.28	5/8"	ReBar	@ Prop. SW Cor.
C.P. 4	N 1685399.60	E 1644375.26	1/2"	ReBar w/B man Cap	@ Prop. SE Cor.

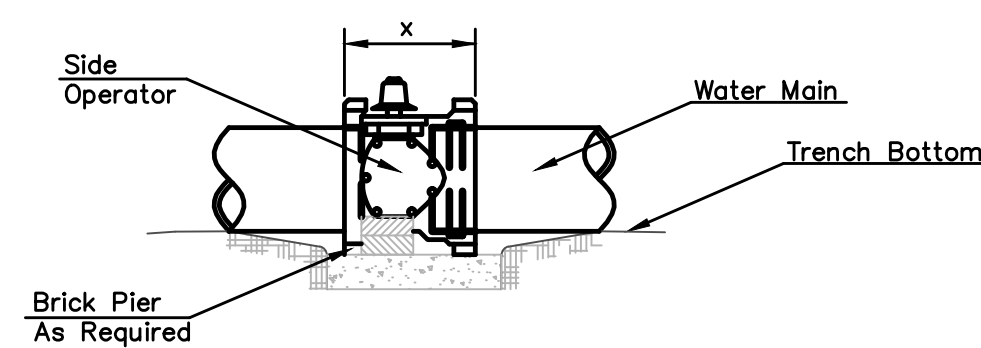
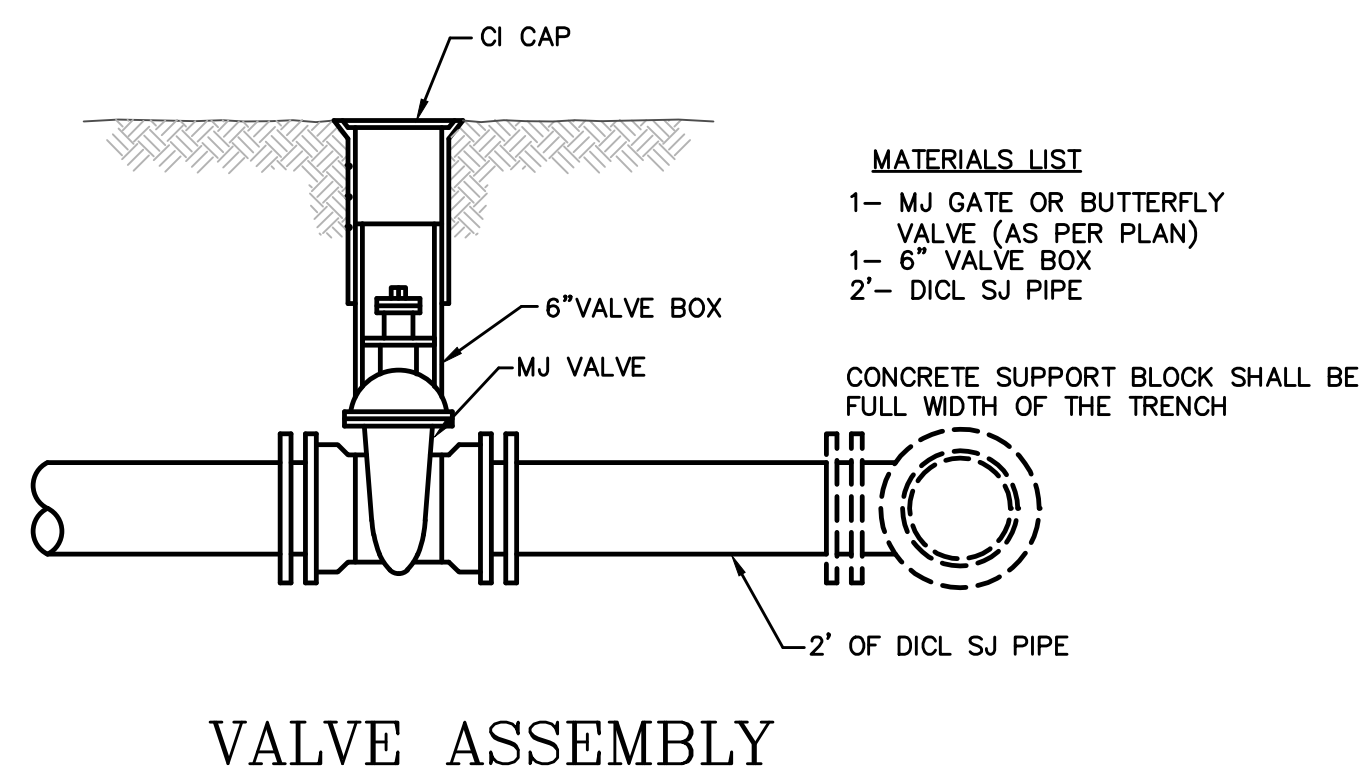
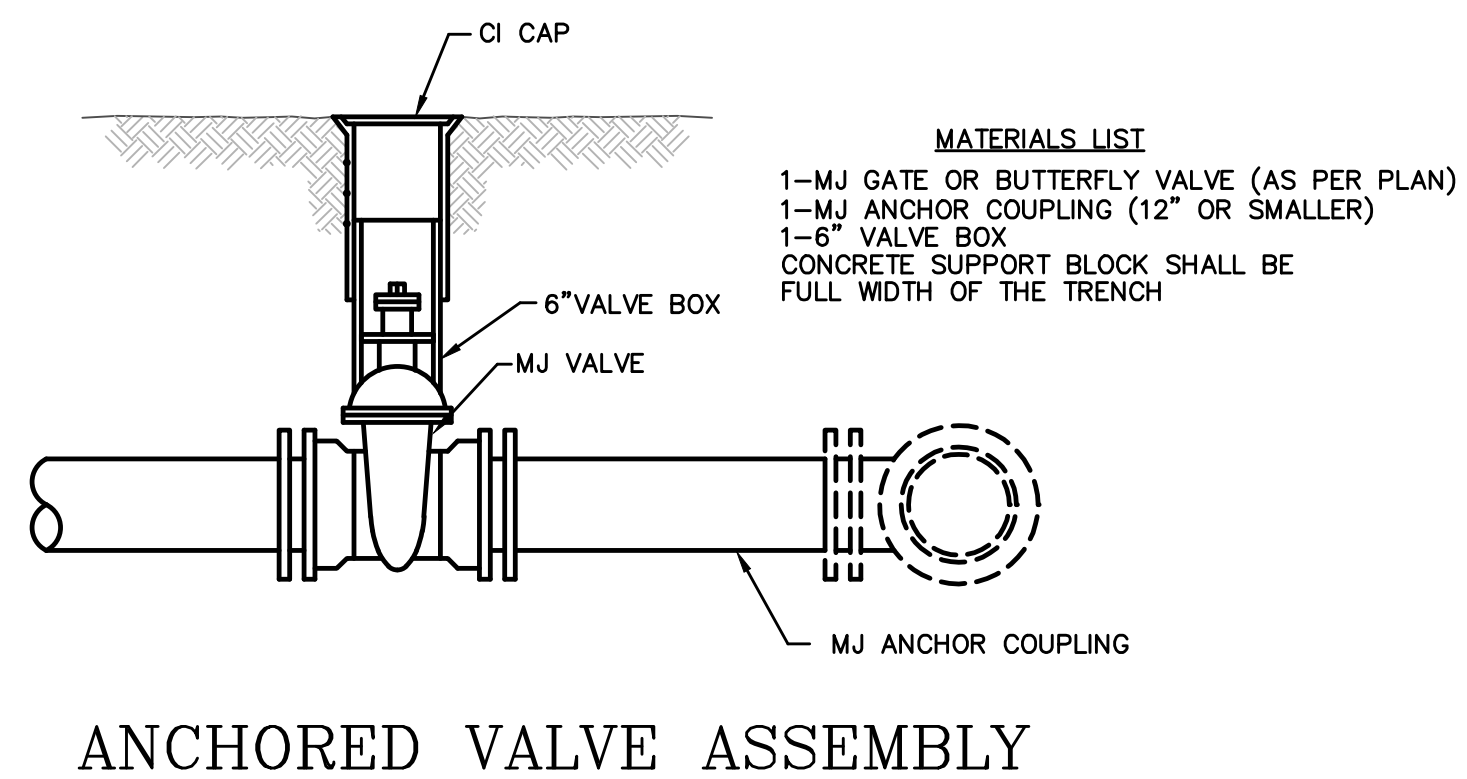
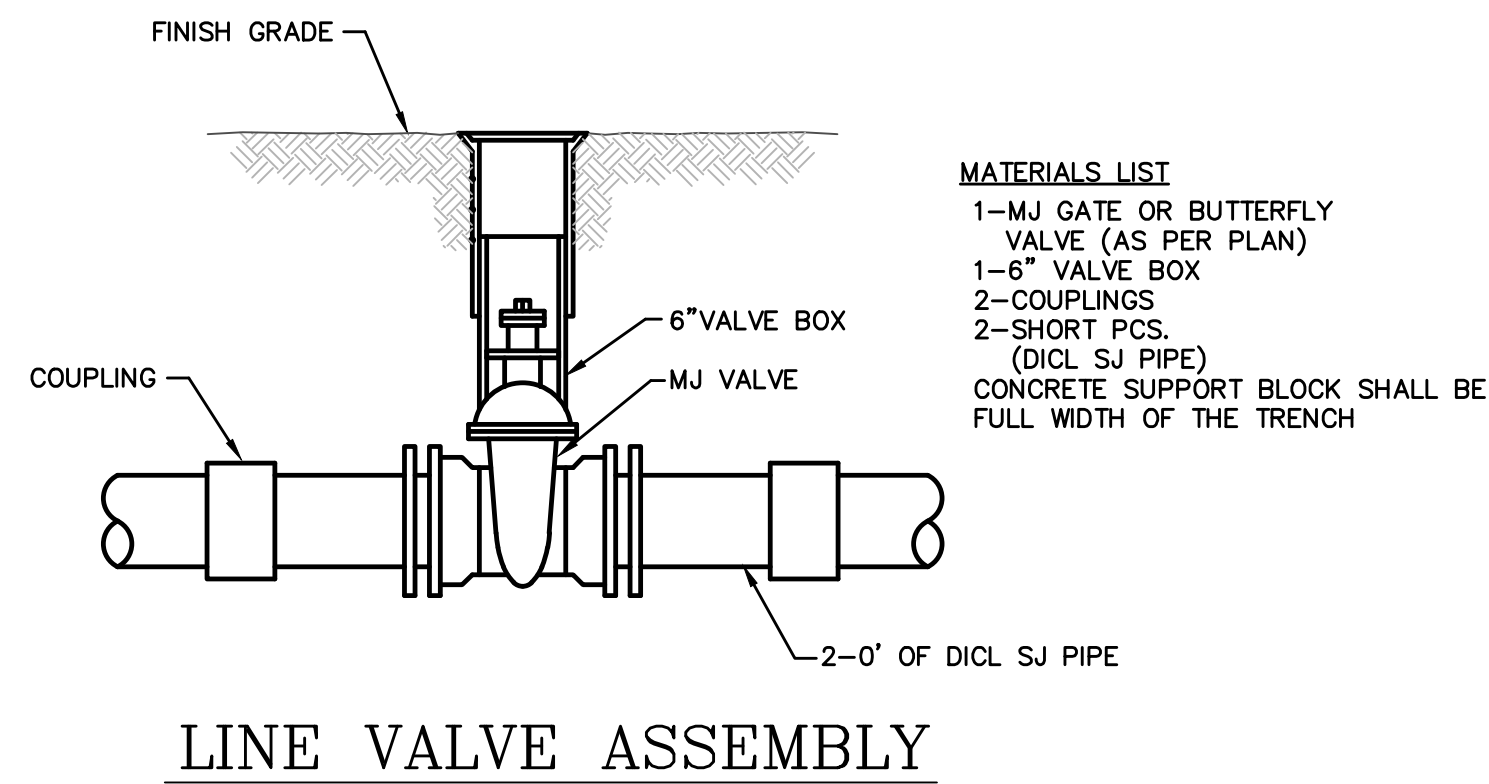
UNLESS OTHERWISE NOTED, PROPOSED ELEVATIONS ARE TO THE TOP OF PIPE.

FIRE PROTECTION SERVICE LINE PLAN & PROFILE



**BRAUM 1ST ADDITION
 FIRE PROTECTION LINE P&P**
 1ST ST. N. & SENECA, WICHITA, KANSAS
 CED PROJ. NO.: 20091878
CERTIFIED ENGINEERING DESIGN, P.A.
 1935 WEST MAPLE
 WICHITA, KANSAS 67213
 PH.(316)262-8808 FAX.(316)262-1669

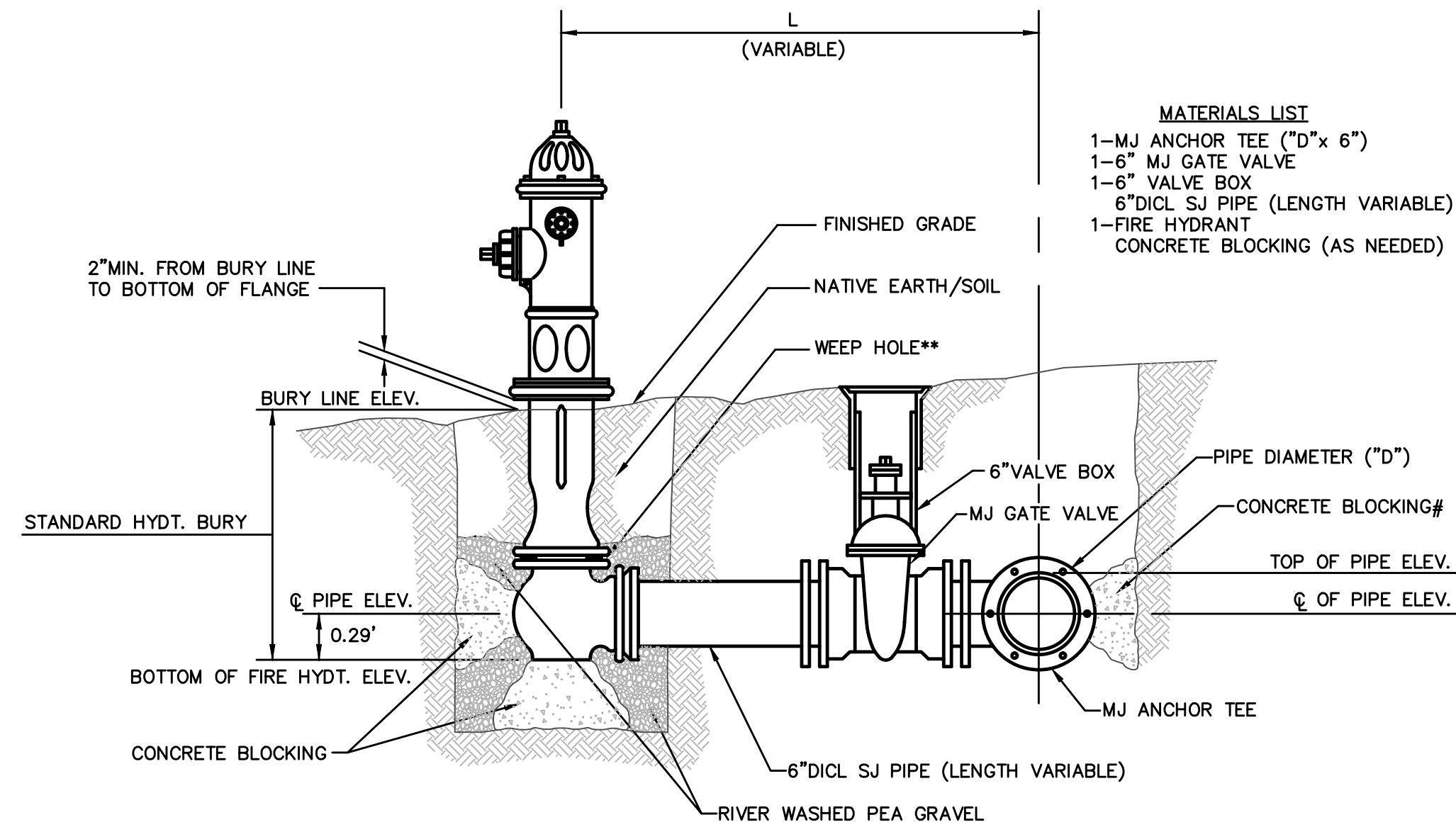
DESIGNED: HDF	SCALE: 1"=20'	SHEET
DRAWN: CKW	DATE: 01.15.10	3
CHECKED: HDF	CED FILE: FPPP-Fire P&P.dwg	TOTAL 4



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

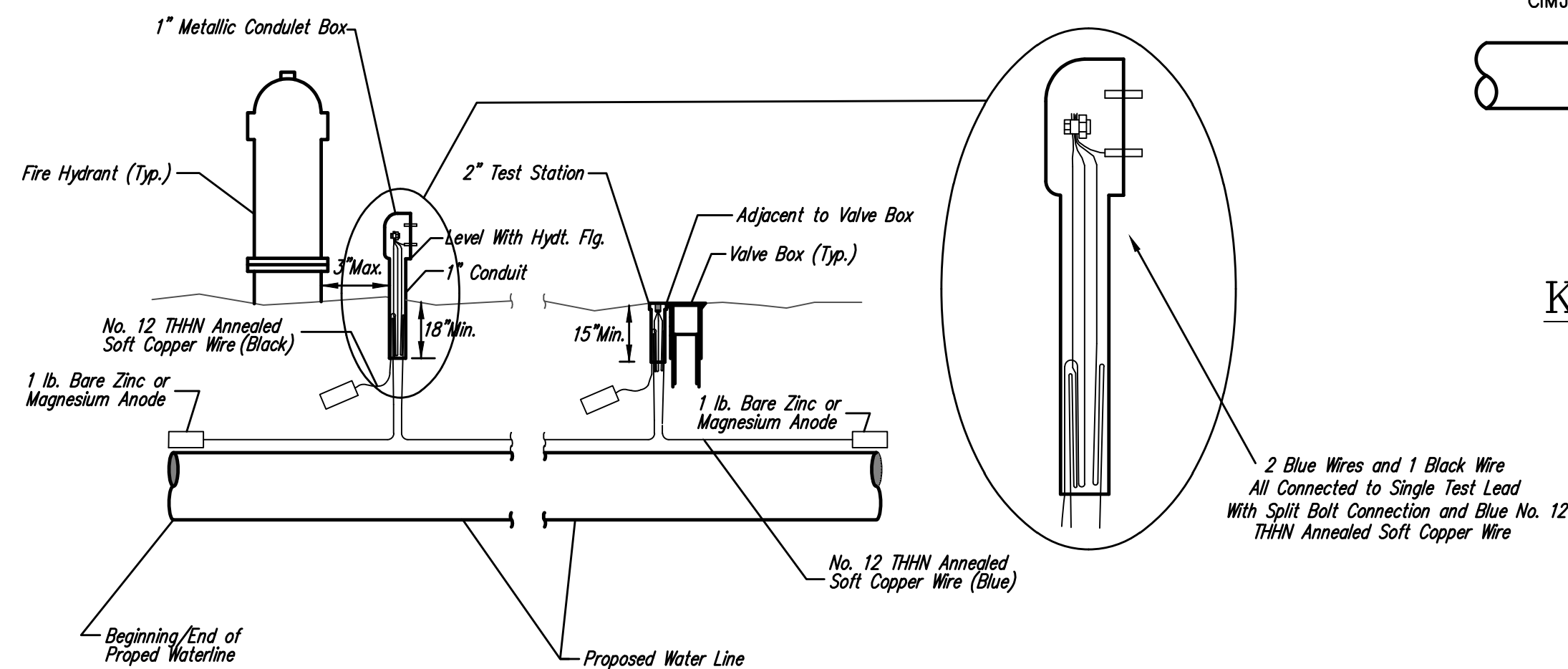


** CAUTION! WEEP HOLES TO BE KEPT CLEAR DURING CONSTRUCTION AND BACKFILL. CONCRETE FOR THRUST BLOCKING SHALL NOT OBSTRUCT WEEP HOLES.
 # CONCRETE THRUST BLOCKING SHALL BE KEPT CLEAR OF BOLTS, NUTS, AND MJ ACCESSORIES.
 * IF HYDRANT BURY IS IN EXCESS OF 5', CONTRACTOR SHALL USE STANDARD 5" HYDRANT BURY 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 all waterline pipe regardless of pipe material. 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.

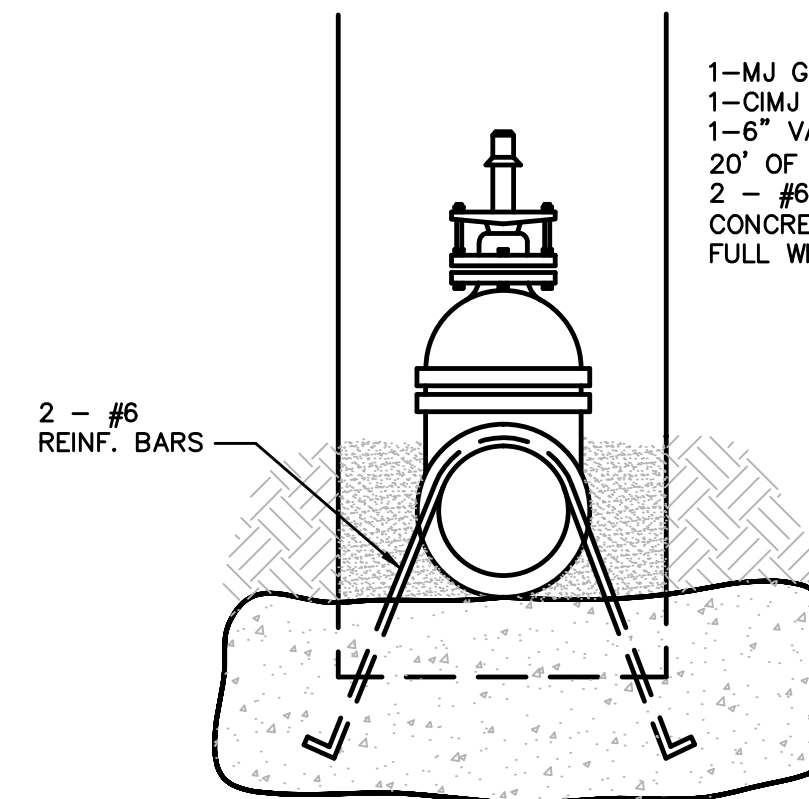
TEST STATIONS

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 12PS3B 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.

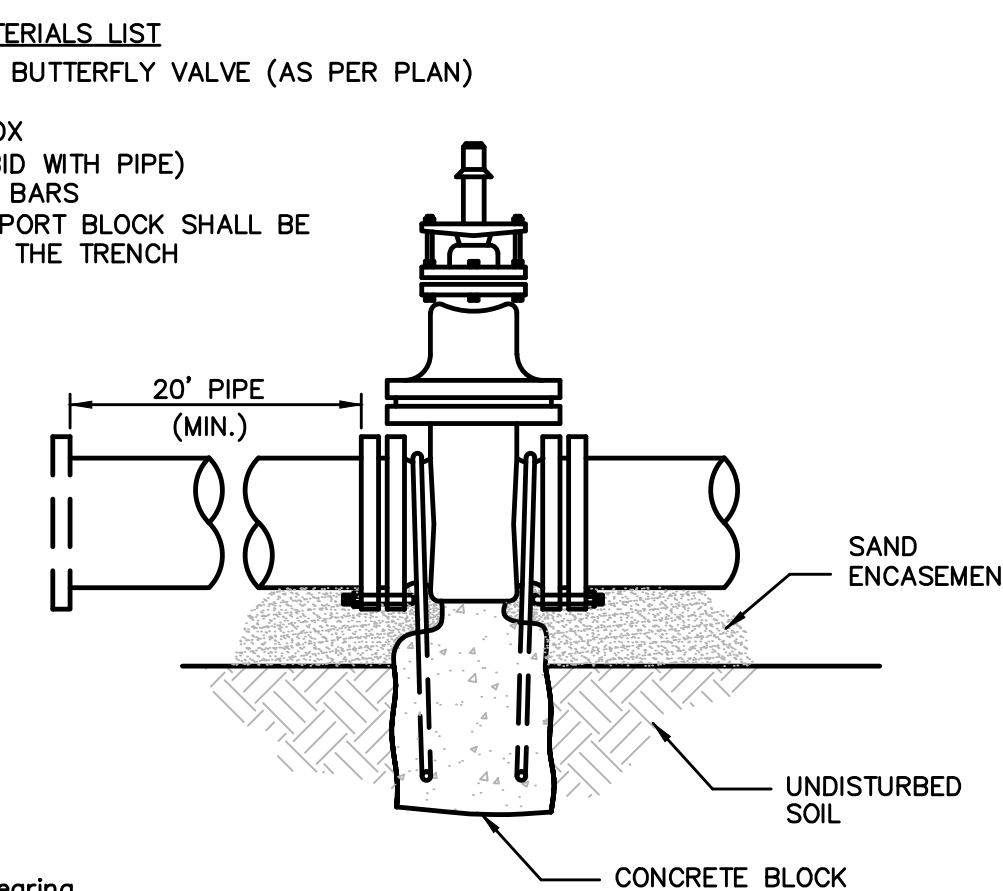
ANODES

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



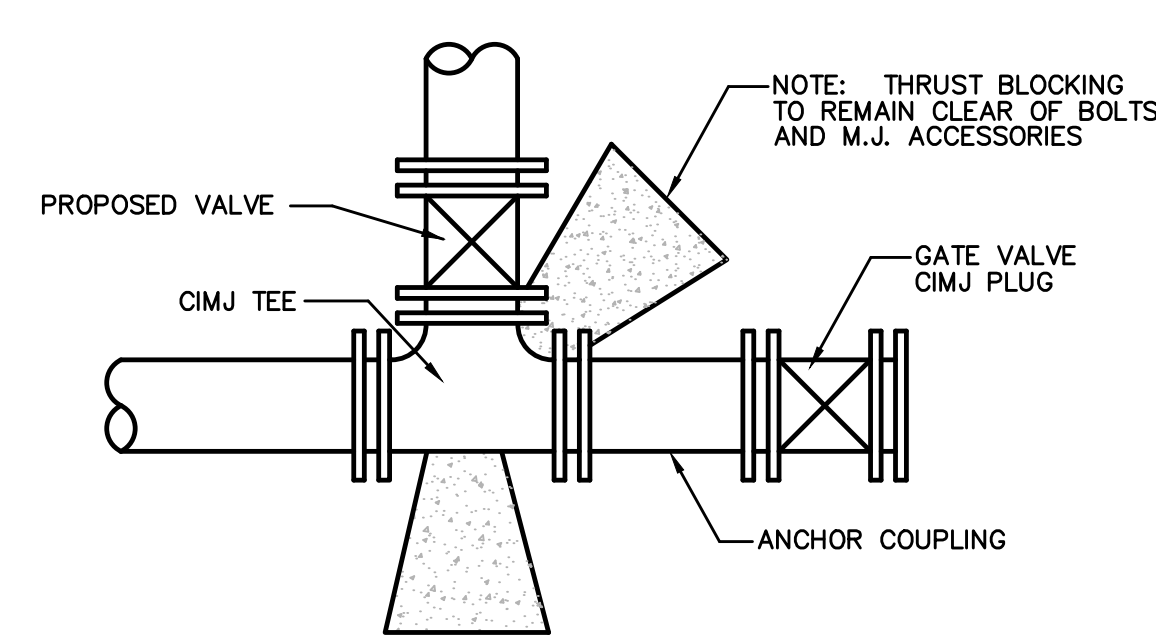
- Notes:**
 1. Concrete Block at Valve to have sufficient bearing in undisturbed soil to prevent thrust movement as shown in table at right. Field Engineer to determine thrust loading of undisturbed soil and final size of thrust block.
 2. The thrust block shall be constructed such that bolts, nuts,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



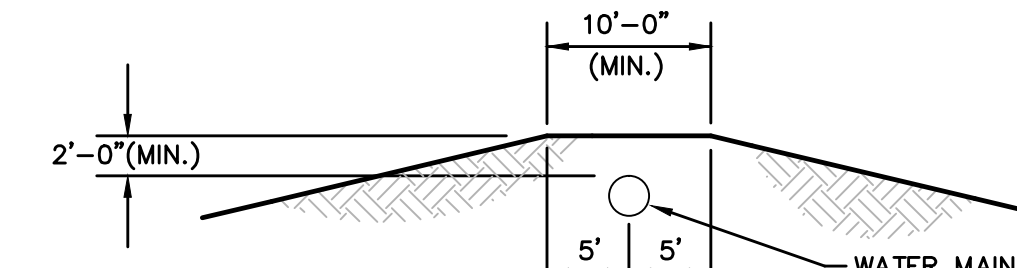
THRUST AT VALVES

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

ANCHORED VALVE ASSEMBLY, SPECIAL

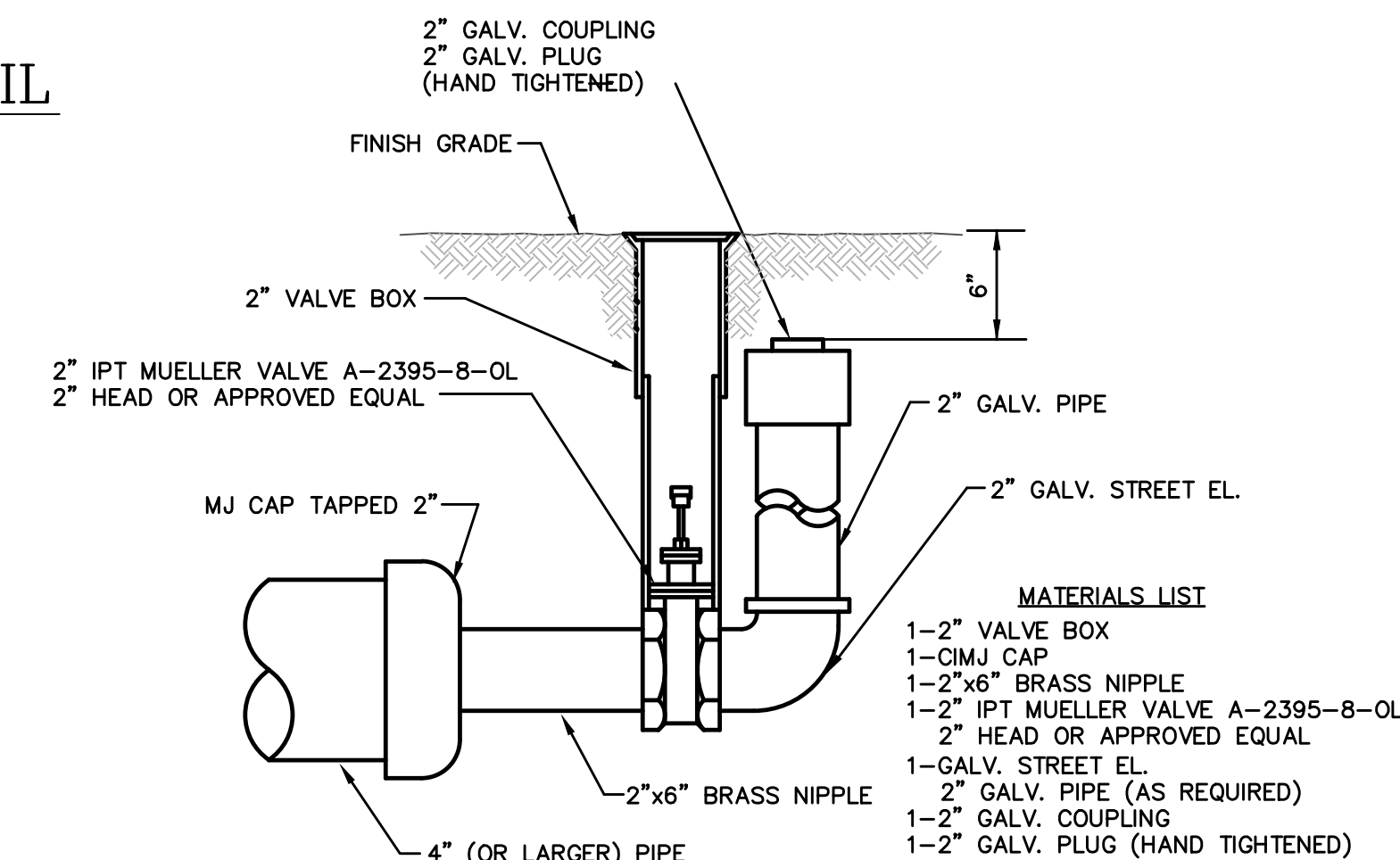


KEY BLOCK DETAIL



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 CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202 (316) 268-4901 (316) 268-4114 FAX</p>	<p>STANDARD WATER ASSEMBLY DETAILS</p>	
	<p>JAMES L. ARMOUR P.E. - CITY ENGINEER</p>	
<p>PROJECT NUMBER 1517 PPW</p>	<p>INDEX CODE 607853</p>	<p>DATE JAN 01</p>
<p>SHEET 4</p>		<p>Revised: 6-7-00, MCG</p>