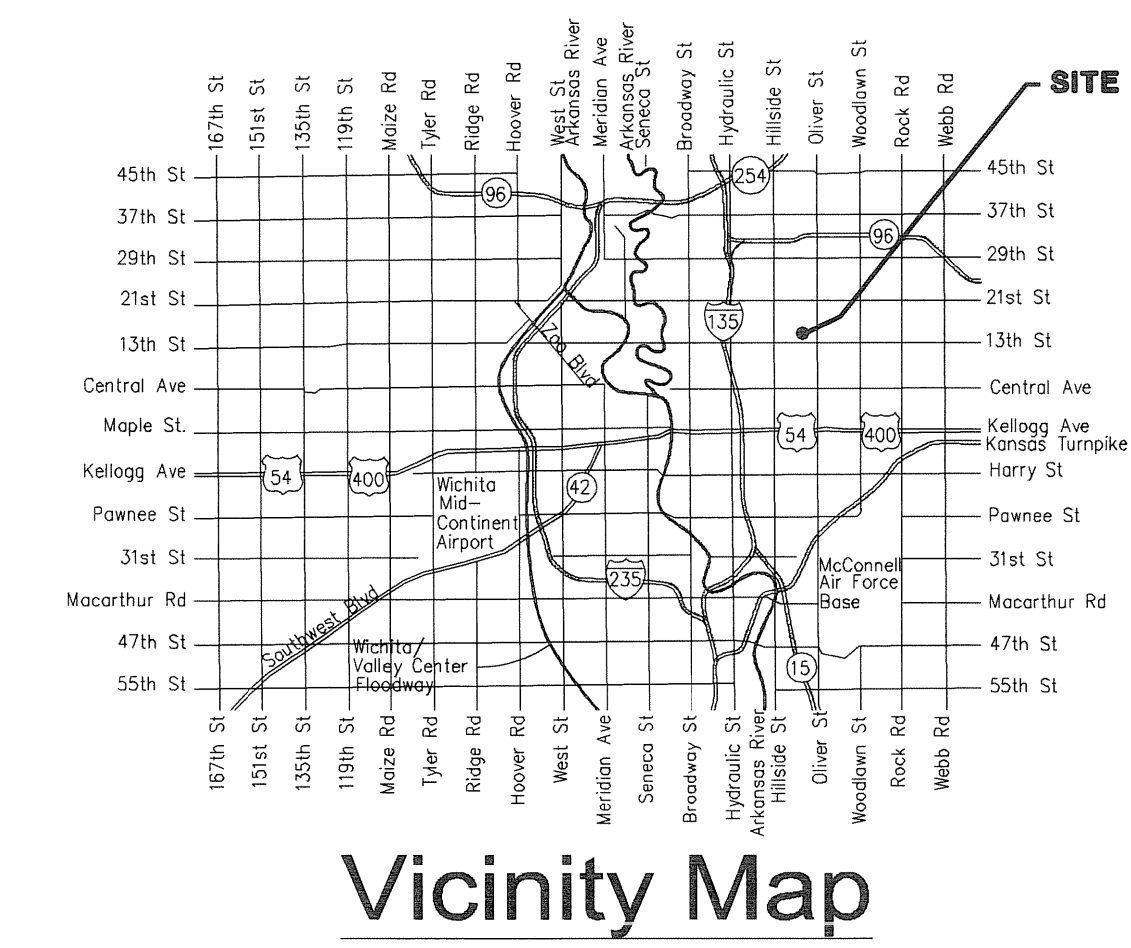


## GENERAL NOTES

- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY REGULATIONS. ALL CONSTRUCTION SHALL BE COMPLETED FOLLOWING CURRENT CITY STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
- CONTRACTOR WILL BE REQUIRED TO PROVIDE NOTICE TO UTILITY COMPANIES A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO ANY EXCAVATION, AS FOLLOWS:  
KANSAS ONE-CALL 687-2470  
THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:  
AT&T 1-800-246-8464  
BLACK HILLS ENERGY 1-800-694-8989  
CITY OF WICHITA WATER 1-316-268-4555  
CITY OF WICHITA SEWER 1-316-268-4073  
CITY OF WICHITA STORMWATER 1-316-268-4090  
CITY OF WICHITA TRAFFIC 1-316-268-4034  
COX COMMUNICATIONS 1-888-249-3530  
KANSAS GAS SERVICE 1-888-482-4950  
WESTAR ENERGY 1-800-544-4857
- UTILITY SERVICE LINES, POLES, ETC. ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY THE CONTRACTOR OR UNLESS THE PLANS SPECIFICALLY IDENTIFY A UTILITY TO BE ADJUSTED BY ITS OWNER DURING CONSTRUCTION. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.
- RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITES TO BE PROVIDED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE AND SITE LOCATION. LOCATIONS, IN THE OPINION OF THE ENGINEER, THAT WILL LEAVE AN UNSIGHTLY APPEARANCE WILL NOT BE APPROVED. ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A FLOOD PLAIN WOULD REQUIRE A KANSAS STATE BOARD OF AGRICULTURE PERMIT. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES OR WETLANDS IS SUBJECT TO U.S. CORPS. OF ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS WOULD REQUIRE ADDITIONAL ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.
- TREES AND SHRUBS IN PUBLIC RIGHT-OF-WAY WHICH ARE IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR WITH THE ENGINEER'S APPROVAL. TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE.
- THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY ADJUTING THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF TEN (10) DAYS 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 WATER DISTRIBUTION DIVISION SHALL FIELD LOCATE WATER VALVES ONE TIME DURING CONSTRUCTION WHEN REQUESTED BY THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PRESERVE SUCH FIELD LOCATIONS DURING THE CONSTRUCTION PROCESS. WATER VALVES, VALVE BOXES OR FIRE HYDRANTS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY CONTRACTOR AT HIS OWN EXPENSE. VALVE BOXES AND WATER METERS WITHIN THE PROJECT LIMITS SHALL BE ADJUSTED TO MATCH FIELD GRADES.
- THE CONTRACTOR SHALL NOTIFY THE CONSULTANT ENGINEER AND TOM MASON AT 316-268-4574 WITH THE CITY OF WICHITA WITH THE ANTICIPATED CONSTRUCTION START DATE AND NOTIFY THEM OF PROJECT COMPLETION, STAKING AND INSPECTION FOR THIS PROJECT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- IF TRAFFIC WILL BE IMPACTED BY CONSTRUCTION, A TRAFFIC CONTROL PLAN MUST BE SUBMITTED AND APPROVED BY THE CITY TRAFFIC ENGINEER, BRIAN COON AT [TRAFFIC@WICHITA.GOV](mailto:TRAFFIC@WICHITA.GOV) BEFORE CONSTRUCTION CAN BEGIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL MEASURES TO FACILITATE CONSTRUCTION. ALL CONSTRUCTION ZONE MARKINGS AND SIGNAGE SHALL CONFORM TO THE LATEST VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AS PUBLISHED BY THE US DEPT. OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION. ALL COSTS ASSOCIATED WITH CONSTRUCTION MARKINGS AND SIGNAGE SHALL BE THE CONTRACTORS RESPONSIBILITY.
- ALL ELEVATIONS SHOWN ARE U.S.G.S. DATUM (NAVD 88).
- ALL AREAS DISTURBED DURING CONSTRUCTION THAT WILL NOT BE UNDER PROPOSED PAVEMENT SHALL BE RESTORED TO MATCH EXISTING CONDITIONS.

- OPENING AND CLOSING OF WATER VALVES SHALL BE DONE SLOWLY TO PREVENT DAMAGE TO THE WATER DISTRIBUTIONS SYSTEM FROM WATER HAMMER. ALL VALVES CLOSED BY THE CONTRACTOR MUST BE REOPENED AS NEW CONSTRUCTION PERMITS. THE PROJECT INSPECTOR MUST ASCERTAIN THAT ANY VALVE CLOSED BY THE CONTRACTOR IS REOPENED. THE CONTRACTOR WILL BE PERMITTED TO OPERATE WATER VALVES ONLY WHEN THE PROJECT INSPECTOR ASSIGNED TO THE PROJECT IS PRESENT.
- THE CONTRACTOR SHALL PROVIDE MATERIALS FOR TEMPORARY BLOWOFF OF WATERLINES. CONNECTIONS TO THE EXISTING WATERLINE(S) SHALL BE MADE WITH CLEAN, SWABBED PIPE AND FLUSHED UPON COMPLETION OF TIE-INS.
- REQUESTS FOR SHORT TERM WATER INTERRUPTIONS SHALL BE MADE TO THE CITY WATER DISTRIBUTION DIVISION AND WILL BE SUBJECT TO THEIR APPROVAL. THE CONTRACTOR SHALL GIVE WRITTEN NOTICE TO ANY PROPERTY OWNER, BUSINESS, AND/OR TENANTS THAT WILL HAVE WATER SERVICE INTERRUPTED AT LEAST 5 DAYS IN ADVANCE. SUCH NOTIFICATIONS SHOULD INDICATE THE TIME AND DATE THAT THE WATER WILL BE TURNED OFF AND WHEN THE SERVICE WILL BE RESTORED. NO BUSINESS, PROPERTY OWNER, AND/OR TENANTS SHALL BE WITHOUT WATER SERVICE FOR MORE THAN 8 HOURS. PROPOSED TIE IN LOCATIONS WHICH WILL AFFECT WATER SERVICE TO PROPERTY OWNERS SHALL BE PERFORMED DURING NON-PEAK HOURS.
- THE CONTRACTOR MUST SCHEDULE THE CONNECTIONS TO THE EXISTING MAIN WITH THE CITY SUCH THAT THERE IS A MINIMUM DISRUPTION OF SERVICE. CONNECTIONS SHALL BE MADE DURING PERIODS OF LOW WATER USAGE. THE CONTRACTOR SHALL SUBMIT HIS PROPOSED SCHEDULE FOR COMPLETING WORK FOR CITY APPROVAL AT LEAST 10 DAYS PRIOR TO BEGINNING CONSTRUCTION.
- DEFLECTIONS AT PIPE JOINT OR COUPLINGS SHALL NOT EXCEED THE PIPE MANUFACTURERS RECOMMENDED MAXIMUM. WHERE DEFLECTIONS ARE GREATER THAN THE MAXIMUM ALLOWED, THE CONTRACTOR SHALL UTILIZE C/MJ LONG SLEEVE OR MULTIPLE JOINTS.
- ANY EXTENSION GREATER THAN ONE LENGTH OF PIPE SHALL REQUIRE TESTING.
- CITY MAINTENANCE OF WATER MAINS ENDS AT RIGHT-OF-WAY OR EASEMENT LINE.
- VALVES 12 INCH AND LARGER ARE TO BE OPERATED BY THE CITY WATER DISTRIBUTION DIVISION, 48 HOURS OF ADVANCE NOTICE IS REQUIRED.
- ALL WET TAPS SHALL BE INSTALLED BY THE CITY OF WICHITA. THE CONTRACTOR WILL REIMBURSE THE CITY FOR TAPPING FEES.
- THE CONTRACTOR SHALL PROTECT FROM DAMAGE AND SUPPORT EXISTING UTILITIES THROUGH CONSTRUCTIONS AS APPROVED BY THE UTILITY OWNER AND THE ENGINEER AT THE CONTRACTORS EXPENSE.
- CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH OPENINGS OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.
- ALL APPROVED EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE STOCKPILED AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER. STOCKPILE LOCATIONS SHALL BE AS DIRECTED BY THE OWNER AND IN ACCORDANCE WITH GENERAL NOTE NO. 4 ABOVE.
- THE CONTRACTOR SHALL SEED ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES WITH TEMPORARY RYE GRASS. RYE GRASS SEED SHALL BE PLANTED AT A MINIMUM RATE OF SIX (6) POUNDS PER ONE THOUSAND (1,000) SQUARE FEET. THIS TEMPORARY SEEDING MAY BE OMITTED ONLY IF OTHER SEEDING IS REQUIRED IN ACCORDANCE WITH GENERAL NOTE NO. 13 ABOVE. TEMPORARY SEEDING OR PERMANENT SEEDING/SODDING SHALL BE APPLIED WITHIN 14 DAYS AFTER THE AREA HAS BEEN DISTURBED.
- 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.
- THE CONTRACTOR SHALL INSTALL AND/OR MAINTAIN EROSION CONTROL METHODS AS SPECIFIED. THE GENERAL LOCATION OF THE REQUIRED EROSION CONTROL IS ILLUSTRATED ON EROSION CONTROL PLAN, SHEET NO. L-205. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE EROSION CONTROL SHOWN THROUGH THE COMPLETION OF THIS PROJECT. INSTALLATION OF THESE BMP'S DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF ABATING SOIL EROSION.

# WATER DISTRIBUTION SYSTEM to serve WSU EXPERIENTIAL ENGINEERING BUILDING CITY OF WICHITA, KANSAS Gary Janzen, P.E. City Engineer Project Number 1882 PPW (607853)



## SHEET INDEX

SHEET NO. C-401	PPW TITLE
SHEET NO. C-402	PPW KEY MAP
SHEET NO. C-403	WATERLINE NO. 1
SHEET NO. C-404	WATERLINE NO. 2 AND NO. 3
SHEET NO. C-405	STANDARD WATER SERVICE DETAILS
SHEET NO. C-406	STANDARD WATER ASSEMBLY DETAIL
SHEET NO. C-407	MISCELLANEOUS WATER DETAILS
SHEET NO. C-501	COPIY OF PLAT
SHEET NO. L-205	EROSION CONTROL PLAN
SHEET NO. C-502 thru C-506	EROSION CONTROL BMP DETAILS

SEE SHEET NO. C-402 FOR KEY MAP.

**APPROVED AS NOTED**  
BY WICHITA PUBLIC WORKS  
ENGINEERING DIVISION  
& BY WICHITA FIRE DEPARTMENT

Engineering *Robson Dief* 4/17/2015  
Utilities *Janzen* 4-17-15  
Fire Dept. *Janzen* 4-17-15

**NOTE TO CONTRACTORS**

**Public Property:**  
Inspection and testing for the waterline is to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection is to be in accordance with the City of Wichita standard construction engineering practices and certified by a Professional Engineer Licensed in the state of Kansas. 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. All Construction and Materials shall comply with the City or Wichita Specifications and Standards and Special Provision (on file and available in the City Engineer's Office) or on the City's Website.

**Private Property:**  
Installation and testing for the fire protection line is to be performed by a City of Wichita licensed fire protection contractor in accordance with the fire codes as adopted by the City of Wichita. All material 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 and approval of the Wichita Fire Department. Inspection of the fire protection line is to be provided by a licensed Engineering Firm under contract with the Owner/Developer and the Fire Department. The contractor shall not start work until the project inspector is assigned to the project and present on the site. Any work done without inspection will be required to be uncovered for inspection.

An approved copy of these plans signed by City staff are required on-site.

**AS BUILTS**

Contractor: Utilities Plus 3/02/2016	Project Inspector: Larry Gann <b>KEMILLER</b> ENGINEERING P.C. 117 E. Lewis, Wichita, KS 67202 (316)264-0242
--	--

APRIL 2015

## BENCHMARKS

SEE SHEET NO. C-402 FOR BENCHMARKS AND HORIZONTAL CONTROL.

**PEC** PROFESSIONAL ENGINEERING CONSULTANTS, P.A.  
303 S. TOPEKA WICHITA, KS 67202  
316-262-2691 www.pec1.com

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F 316.262.0002  
wdmarchitects.com

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f (214) 283-8701  
perkinswill.com

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T 316.262.2691  
pec1.com

Professional Engineer  
2015  
Professional Engineer

**REVISIONS**

#	ISSUE	DATE

Wichita State University  
607  
FACILITIES PLANNING  
WICHITA STATE UNIVERSITY  
1405 FAIRMOUNT ST  
WICHITA, KANSAS 67260-0023  
TEL: 316.984.9829

Department of Administration  
Office of Facilities & Procurement  
& Compliance  
800 S. FAIRMOUNT ST  
WICHITA, KANSAS 67260-0023  
Phone 785-296-8899

WICHITA STATE UNIVERSITY  
EXPERIENTIAL ENGINEERING BUILDING  
1405 FAIRMOUNT ST  
WICHITA, KANSAS 67260-0023  
Original Issue Date:  
April 20, 2015  
Drawn By:  
PEC

PPW TITLE  
A-012430  
C-401  
ORIGINAL CONSTRUCTION DOCUMENTS

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Plot Scale: 1:1 04-17-2015 1:37:53 PM by CSJ  
Wichita - CIV (2014) (ADDN) (4037) (S&E) (PPW) (4037-000-00-001) (PPW) TITLE

**REVISIONS**

#	ISSUE	DATE

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PROJECT TYPE CONSTRUCTION	

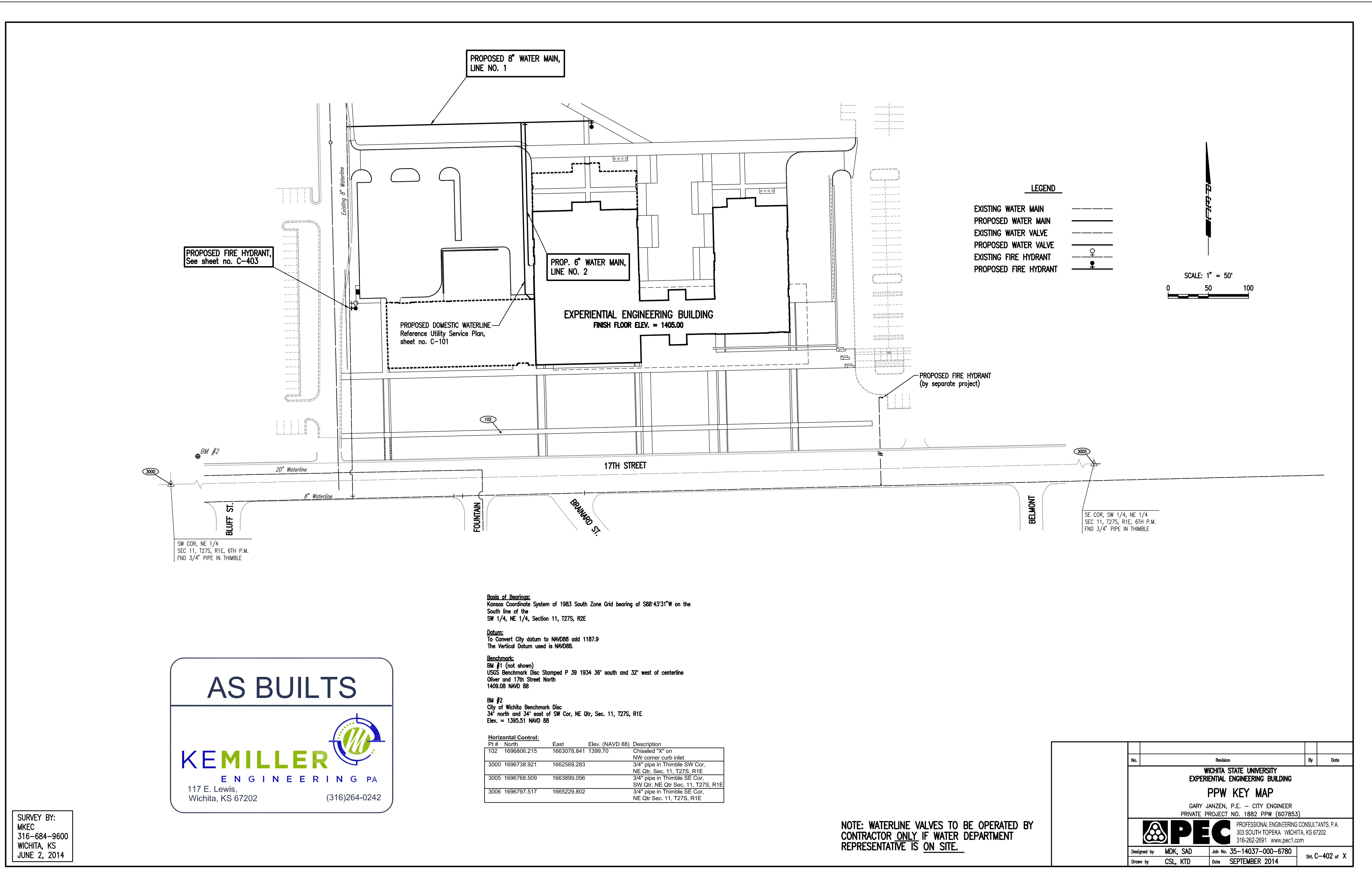
WICHITA STATE UNIVERSITY FACILITIES PLANNING WICHITA STATE UNIVERSITY 1845 FAIRMOUNT ST. WICHITA, KANSAS 67260-0023 TEL: 316-262-2691
Department of Administration Office of Facilities & Procurement Management Design & Construction 800 SW Jackson, Suite 700 Topeka, Kansas 66612-1216 Phone 785-296-8899

WICHITA STATE UNIVERSITY EXPERIENTIAL ENGINEERING BUILDING
PPW KEY MAP GARY JANZEN, P.E. - CITY ENGINEER PRIVATE PROJECT NO. 1882 PPW (607853) PROFESSIONAL ENGINEERING CONSULTANTS, P.A. 303 SOUTH TOPEKA WICHITA, KS 67202 316-262-2691 www.pec1.com

DESIGNED BY	DRAWN BY	DATE	SHEET
MDK, SAD	CSL, KTD	SEPTEMBER 2014	SH. C-402 OF X

DESIGNED BY	DRAWN BY	DATE	SHEET
MDK, SAD	CSL, KTD	SEPTEMBER 2014	SH. C-402 OF X

DESIGNED BY	DRAWN BY	DATE	SHEET
MDK, SAD	CSL, KTD	SEPTEMBER 2014	SH. C-402 OF X



**AS BUILTS**

**KEMILLER ENGINEERING P.A.**  
117 E. Lewis,  
Wichita, KS 67202 (316)264-0242

**Basis of Bearings:**  
Kansas Coordinate System of 1983 South Zone Grid bearing of S88°43'31"W on the South line of the SW 1/4, NE 1/4, Section 11, T27S, R2E

**Datum:**  
To Convert City datum to NAD88 add 1187.9  
The Vertical Datum used is NAD88.

**Benchmarks:**  
BM #1 (not shown)  
USGS Benchmark Disc Stamped P 39 1934 36' south and 32' west of centerline Oliver and 17th Street North 1408.08 NAVD 88

BM #2  
City of Wichita Benchmark Disc  
34' north and 34' east of SW Cor, NE Qtr, Sec. 11, T27S, R1E  
Elev. = 1395.51 NAVD 88

**Horizontal Control:**

PI #	North	East	Elev. (NAVD 88)	Description
102	1696806.215	1663078.841	1399.70	Chiseled "X" on NW corner curb inlet
3000	1696738.921	1662569.283		3/4" pipe in Thimble SW Cor, NE Qtr, Sec. 11, T27S, R1E
3005	1696768.509	1663899.056		3/4" pipe in Thimble SE Cor, SW Qtr, NE Qtr Sec. 11, T27S, R1E
3006	1696797.517	1665229.802		3/4" pipe in Thimble SE Cor, NE Qtr Sec. 11, T27S, R1E

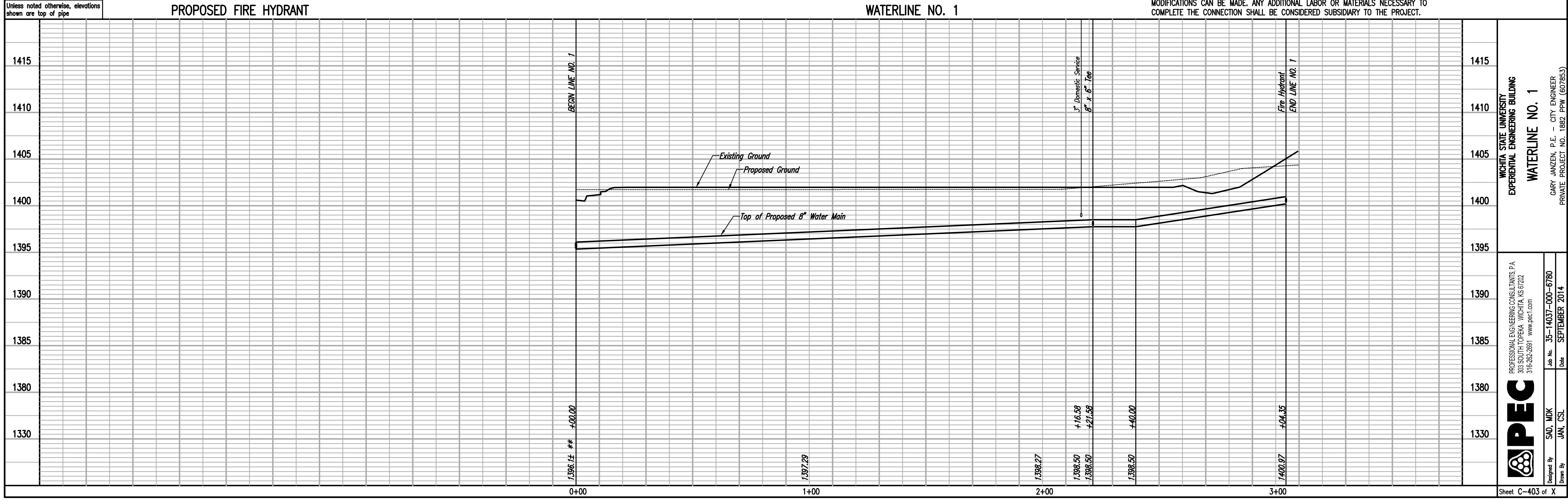
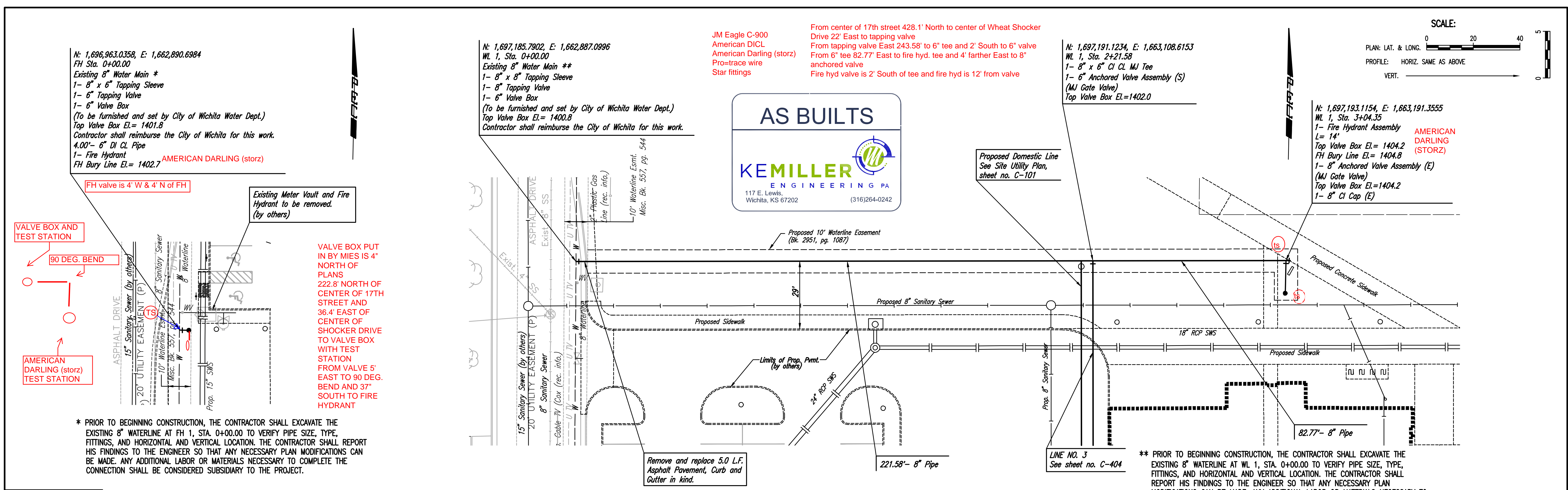
**NOTE: WATERLINE VALVES TO BE OPERATED BY CONTRACTOR ONLY IF WATER DEPARTMENT REPRESENTATIVE IS ON SITE.**

**SURVEY BY:**  
MKEC  
316-684-9600  
WICHITA, KS  
JUNE 2, 2014

Scale: 0'-0"=20'-0" (1:400) 8/11/16 AM by CSJ  
 Plot Scale: 1"=40'-0" (1:480) 8/11/16 AM by CSJ  
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DATE	BY	CHECKED

DATE	BY	CHECKED



Sheet C-403 of X

Unless noted otherwise, elevations shown are top of pipe

\* PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE THE EXISTING 8" WATERLINE AT FH 1, STA. 0+00.00 TO VERIFY PIPE SIZE, TYPE, FITTINGS, AND HORIZONTAL AND VERTICAL LOCATION. THE CONTRACTOR SHALL REPORT HIS FINDINGS TO THE ENGINEER SO THAT ANY NECESSARY PLAN MODIFICATIONS CAN BE MADE. ANY ADDITIONAL LABOR OR MATERIALS NECESSARY TO COMPLETE THE CONNECTION SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT.

\*\* PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE THE EXISTING 8" WATERLINE AT WL 1, STA. 0+00.00 TO VERIFY PIPE SIZE, TYPE, FITTINGS, AND HORIZONTAL AND VERTICAL LOCATION. THE CONTRACTOR SHALL REPORT HIS FINDINGS TO THE ENGINEER SO THAT ANY NECESSARY PLAN MODIFICATIONS CAN BE MADE. ANY ADDITIONAL LABOR OR MATERIALS NECESSARY TO COMPLETE THE CONNECTION SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT.

N: 1,696,963.0358, E: 1,662,890.6984  
 FH Sta. 0+00.00  
 Existing 8" Water Main \*  
 1- 8" x 6" Tapping Sleeve  
 1- 6" Tapping Valve  
 1- 6" Valve Box  
 (To be furnished and set by City of Wichita Water Dept.)  
 Top Valve Box EL= 1401.8  
 Contractor shall reimburse the City of Wichita for this work.  
 4.00'- 6" DI CL Pipe  
 1- Fire Hydrant  
 FH Bury Line EL= 1402.7  
**AMERICAN DARLING (storz)**

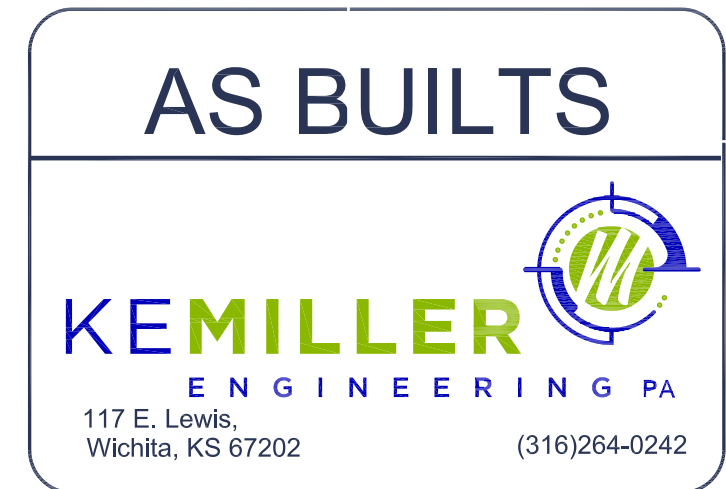
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 WL 1, Sta. 0+00.00  
 Existing 8" Water Main \*\*  
 1- 8" x 8" Tapping Sleeve  
 1- 8" Tapping Valve  
 1- 6" Valve Box  
 (To be furnished and set by City of Wichita Water Dept.)  
 Top Valve Box EL= 1400.8  
 Contractor shall reimburse the City of Wichita for this work.

JM Eagle C-900  
 American D1CL  
 American Darling (storz)  
 Prontrace wire  
 Star fittings

From center of 17th street 428.1' North to center of Wheat Shocker Drive 22' East to tapping valve  
 From tapping valve East 243.58' to 6" tee and 2' South to 6" valve  
 From 6" tee 82.77' East to fire hyd. tee and 4' farther East to 8" anchored valve  
 Fire hyd valve is 2' South of tee and fire hyd is 12' from valve

N: 1,697,191.1234, E: 1,663,108.6153  
 WL 1, Sta. 2+21.58  
 1- 8" x 6" CI CL MJ Tee  
 1- 6" Anchored Valve Assembly (S)  
 (MJ Gate Valve)  
 Top Valve Box EL=1402.0

N: 1,697,193.1154, E: 1,663,191.3555  
 WL 1, Sta. 3+04.35  
 1- Fire Hydrant Assembly  
 L= 14'  
 Top Valve Box EL= 1404.2  
 FH Bury Line EL= 1404.8  
 1- 8" Anchored Valve Assembly (E)  
 (MJ Gate Valve)  
 Top Valve Box EL=1404.2  
 1- 8" CI Cap (E)



**wcm**  
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 perkinswill.com



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 WICHITA STATE UNIVERSITY  
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 TOPEKA, KANSAS 66612-1216  
 TEL: 785-889-8899


Department of Administration  
 Office of Facilities & Procurement  
 Management Design & Construction  
 800 SW JANSSEN, SUITE 700  
 TOPEKA, KANSAS 66612-1216  
 Phone 785-296-8899

WICHITA STATE UNIVERSITY  
**EXPERIENTIAL ENGINEERING BUILDING**  
 1846 FAIRMOUNT ST.  
 WICHITA, KANSAS 67260-0023  
 Original Issue Date: April 20, 2015  
 Drawn By: PEC

WATERLINE NO. 1  
 A-012430  
 C-403  
 ORIGINAL CONSTRUCTION DOCUMENTS

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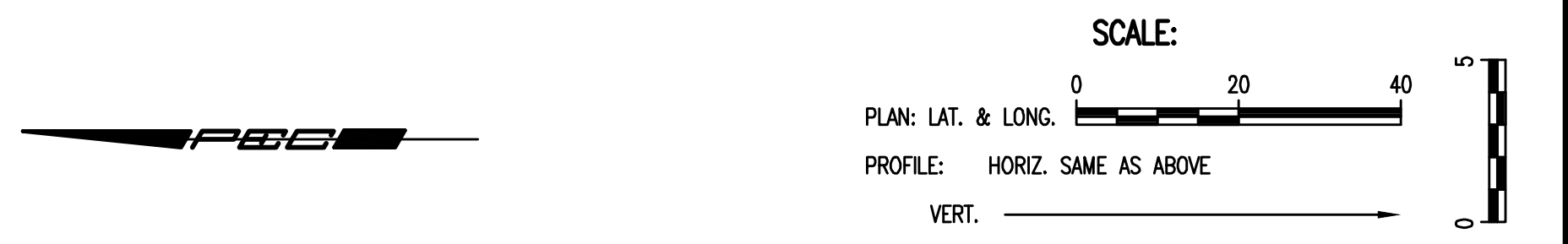
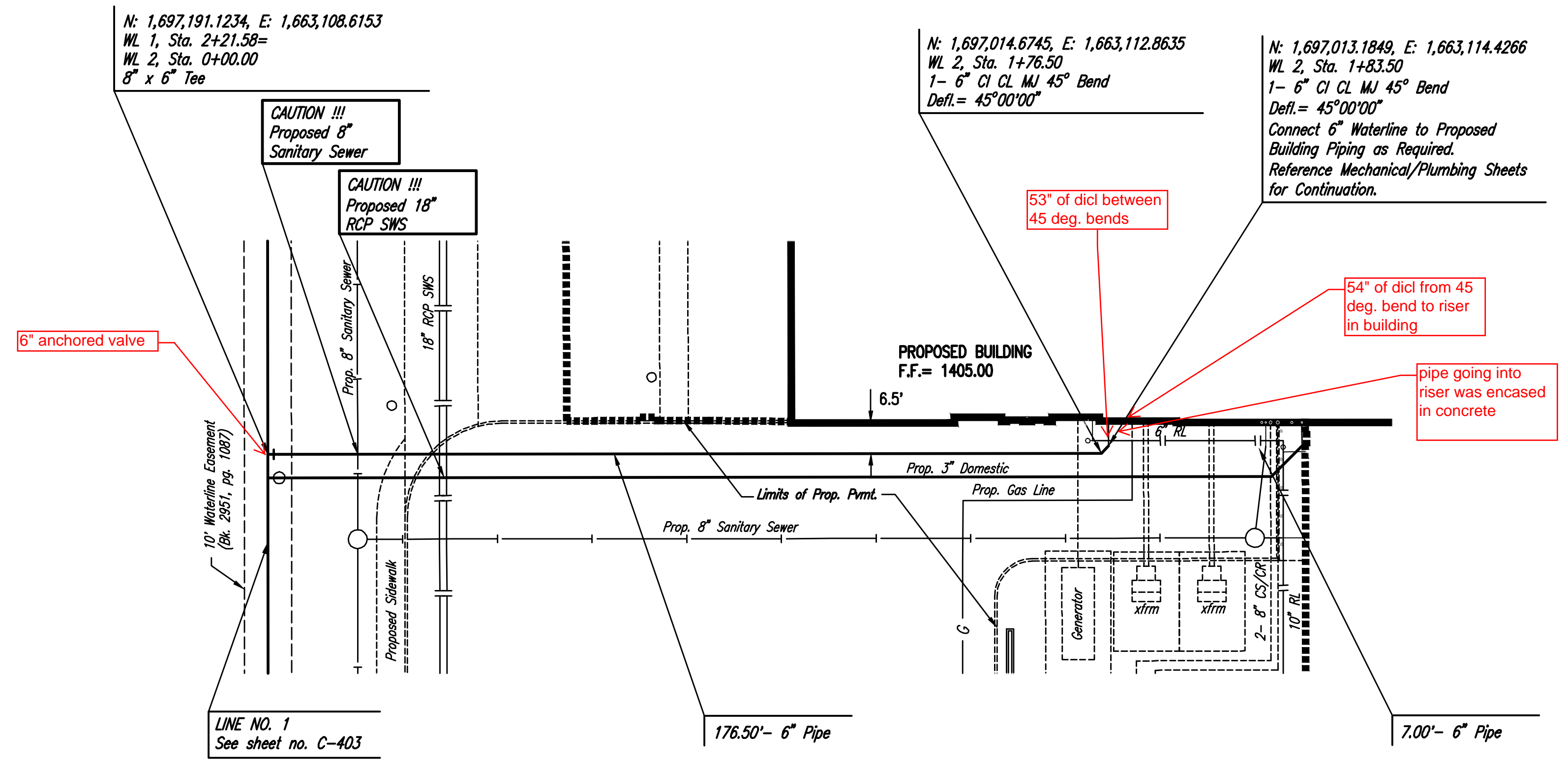
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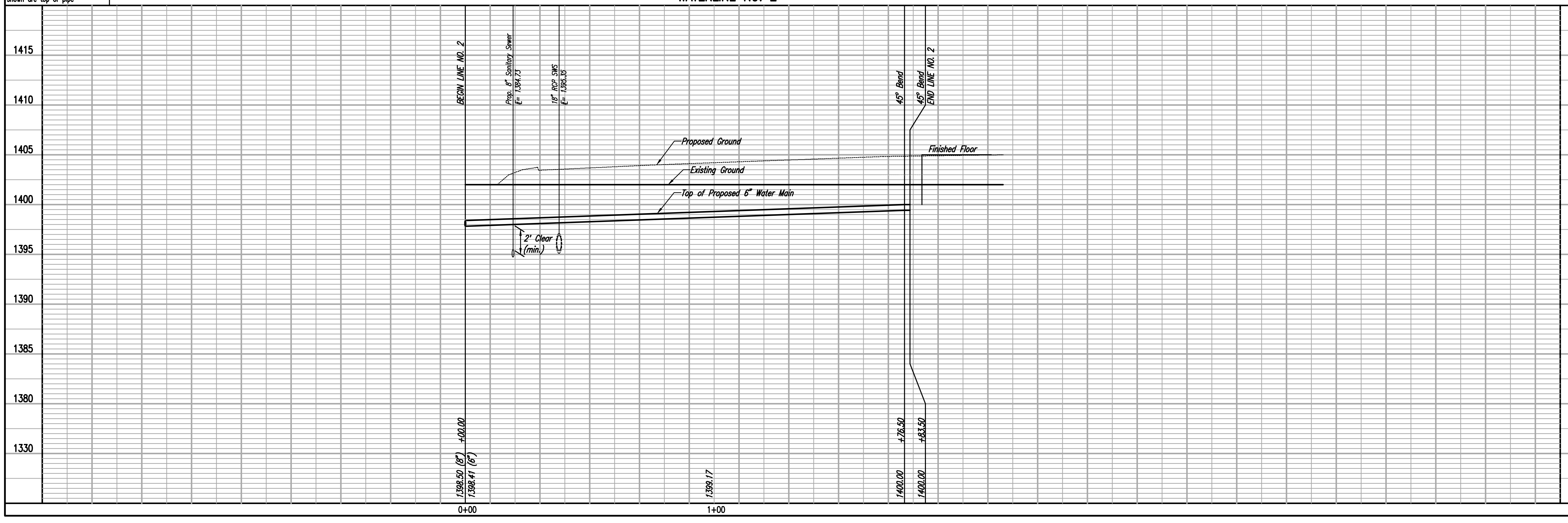
**KEMILLER ENGINEERING PA**  
 117 E. Lewis,  
 Wichita, KS 67202 (316)264-0242

PLAN	CHECKED	DATE

PROFILE	CHECKED	DATE



Unless noted otherwise, elevations shown are top of pipe



**WATERLINE NO. 2**

WICHITA STATE UNIVERSITY  
 EXPERIMENTAL ENGINEERING BUILDING

CARY JANZEN, P.E. - CITY ENGINEER  
 PRIVATE PROJECT NO. 1882-PPW (607953)

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.  
 303 SOUTH TOPEKA, WICHITA, KS 67202  
 316-262-2981 www.pec1.com

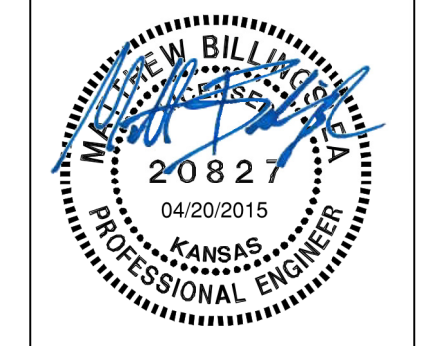
Designed By: SAO, MDK  
 Drawn By: JAN, CSL  
 Job No. 35-14037-000-6780  
 Date: SEPTEMBER 2014

Sheet C-404 of X

**wcm ARCHITECTS**  
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 wdmarchitects.com

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 f (214) 283-8701  
 perkinswill.com

**PEC**  
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 pec1.com



**REVISIONS**

#	ISSUE	DATE

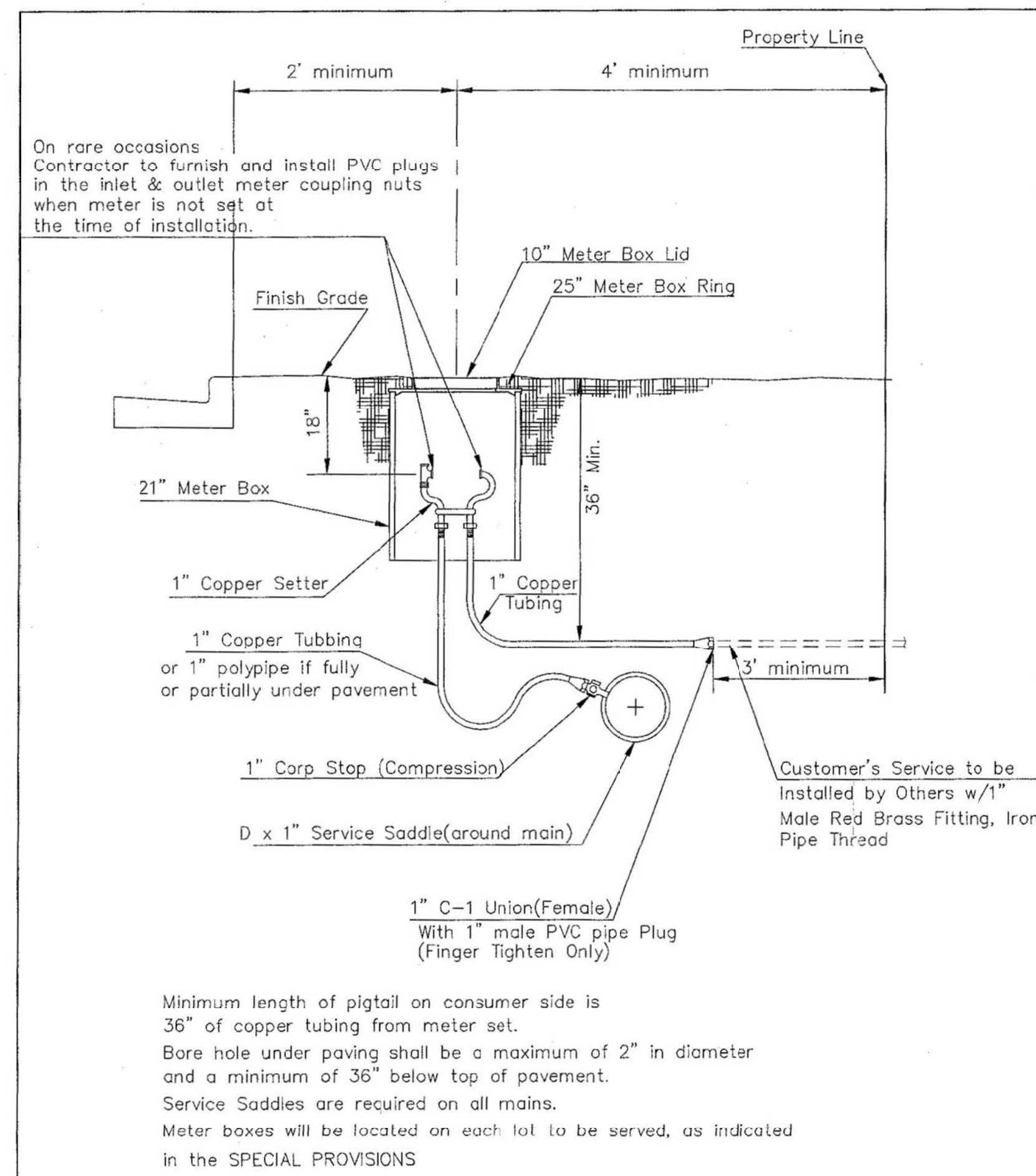
**PROJECT NUMBERS**  
 State Project # A-012430  
 State Work # 14037  
 PROJECT TYPE  
 CONSTRUCTION  
 APPROVED BY

**WICHITA STATE UNIVERSITY FACILITIES PLANNING**  
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 800 SW Jackson, Suite 700  
 Topeka, Kansas 66612-1216  
 Phone 785-296-8899

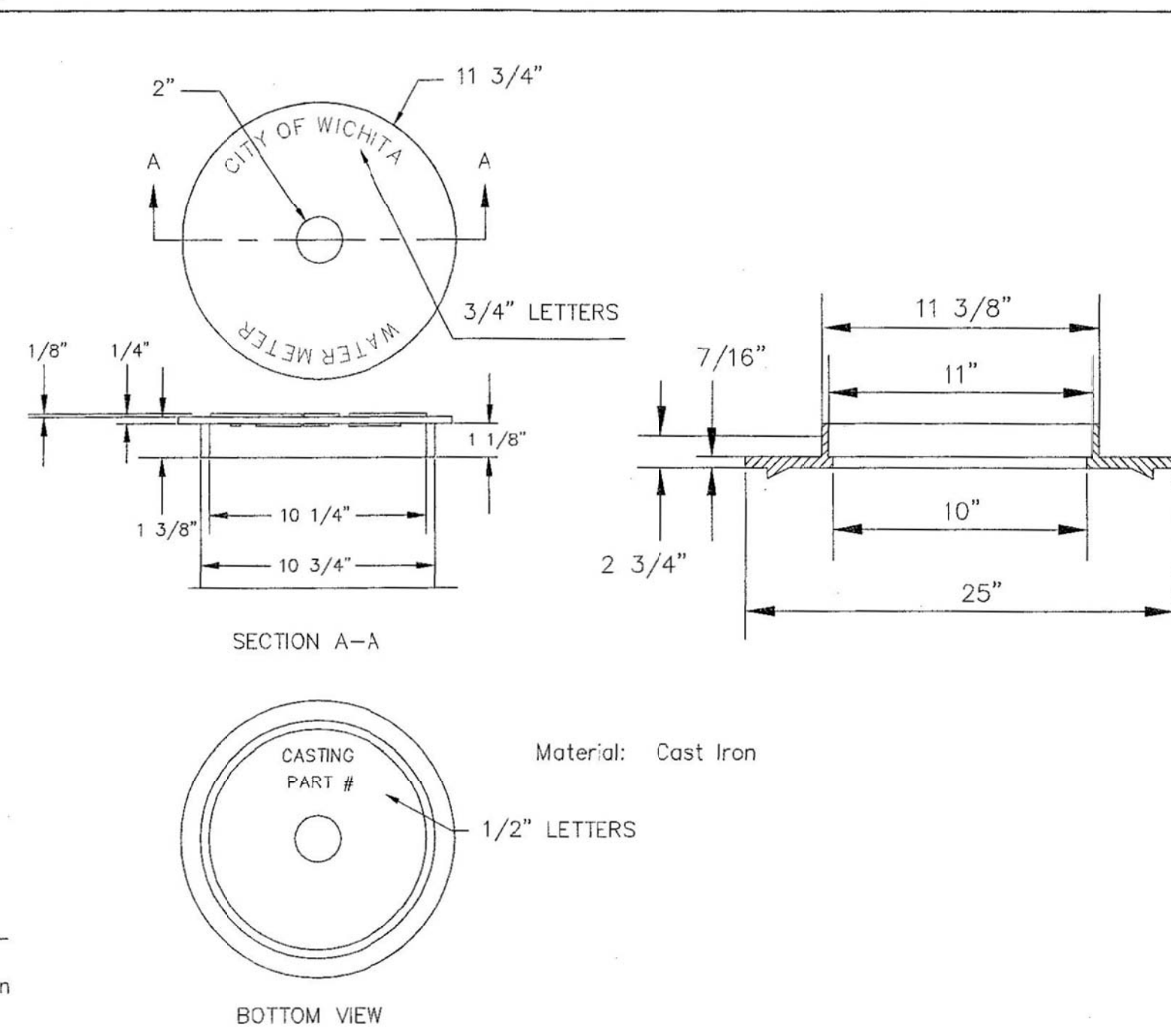
Department of Administration  
 Office of Facilities & Procurement  
 Management Design & Construction  
 800 SW Jackson, Suite 700  
 Topeka, Kansas 66612-1216  
 Phone 785-296-8899

**WICHITA STATE UNIVERSITY EXPERIMENTAL ENGINEERING BUILDING**  
 1846 FAIRMOUNT ST.  
 WICHITA, KANSAS 67260-0023  
 Drawn By: PEC  
 Original Issue Date: April 20, 2015

WATERLINE NO. 2  
 A-012430  
 C-404  
 ORIGINAL CONSTRUCTION DOCUMENTS



TYPICAL 1" METER SETTING

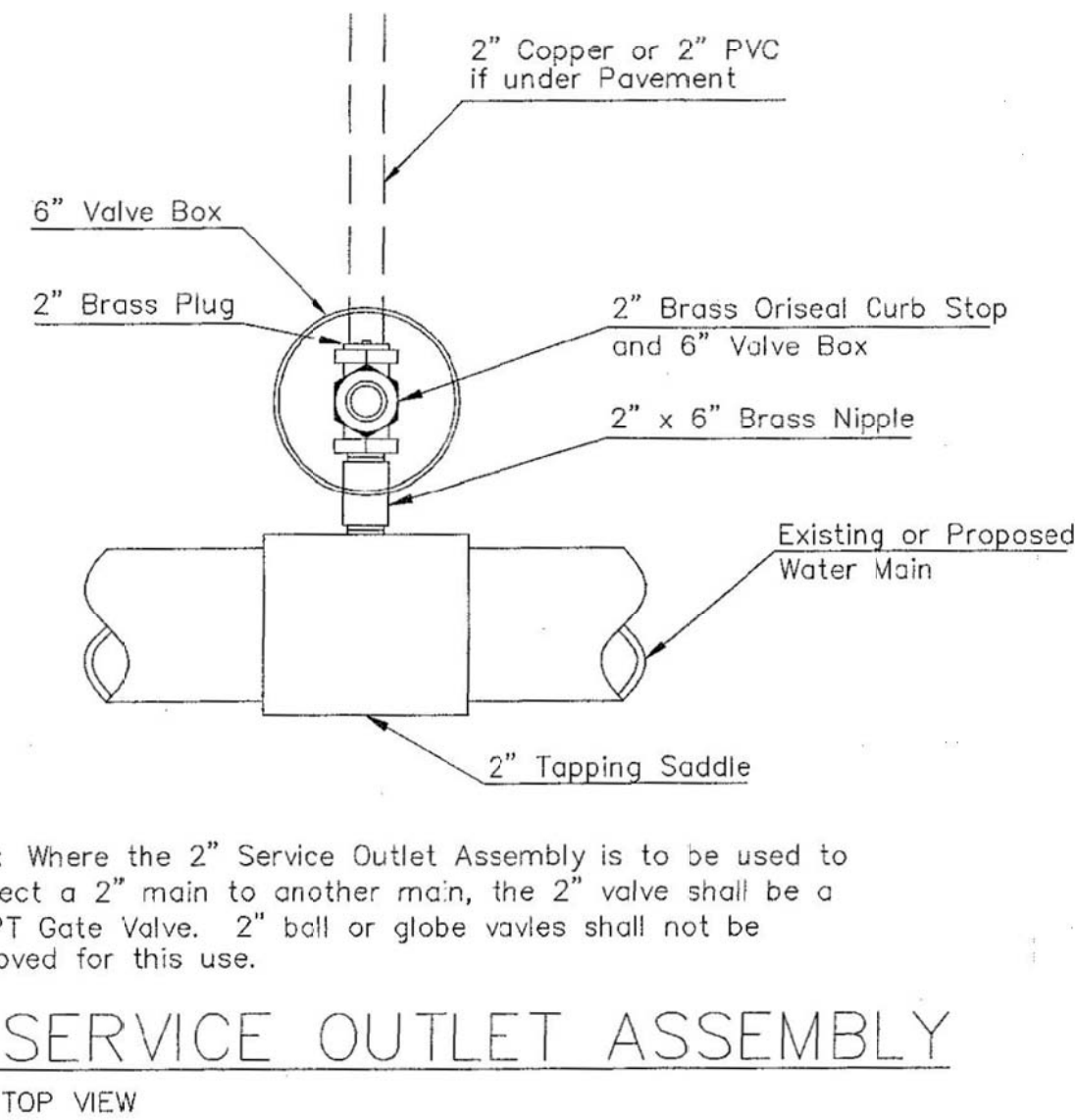


NOT TRAFFIC RATED RING & LID FOR 1" METER BOX

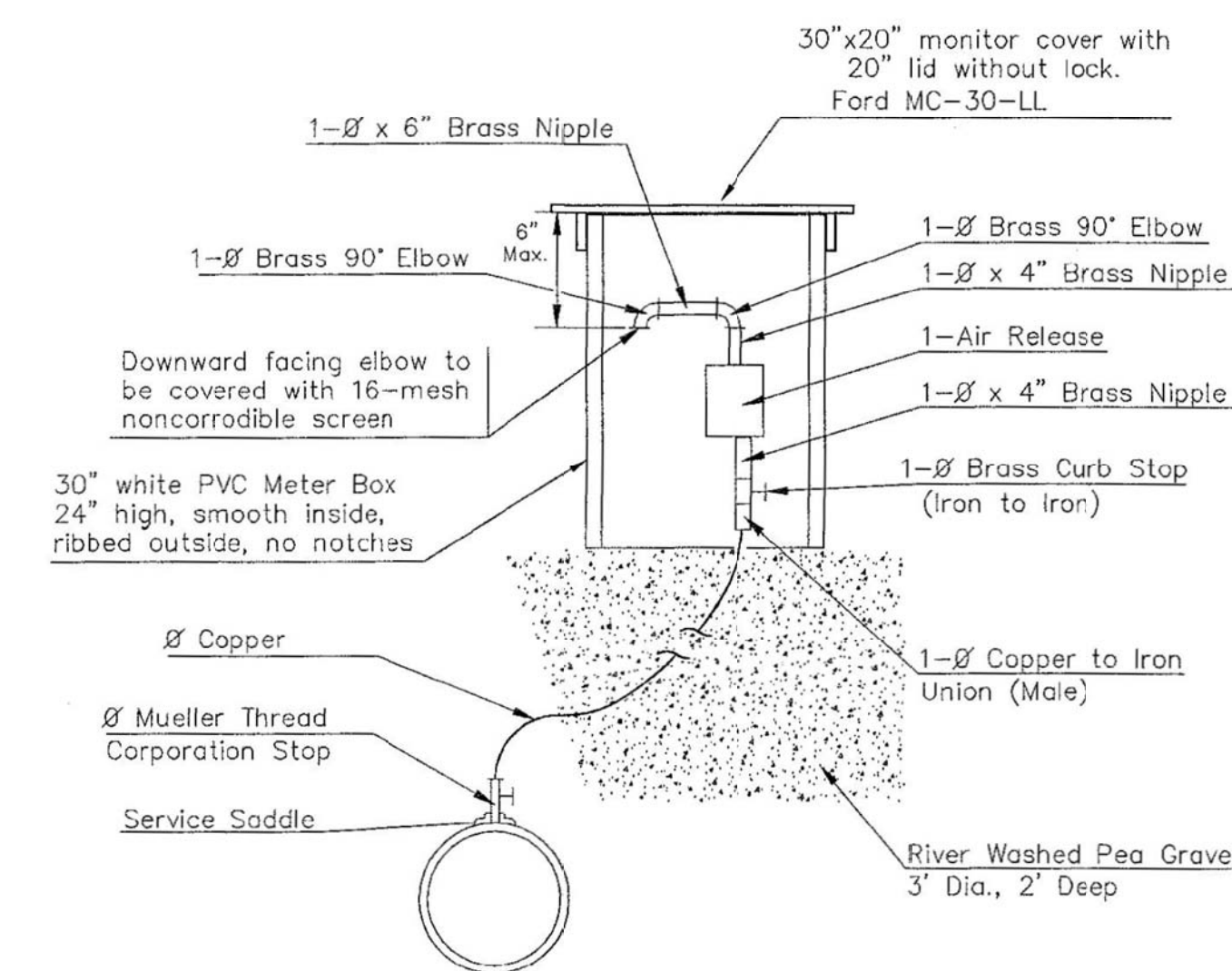
- 1 - 1/2" Mueller Thread Corporation Stop
- 1 - 1/2" Type "K" Copper Tubing
- 1 - 1/2" Copper to Iron Union (Male)
- 1 - 1/2" Brass Curb Stop (Iron to Iron)
- 2 - 3/4" Brass Nipple
- Air Release
- 2 - 1/2" Brass Elbows (90°)
- 1 - 1" x 6" Brass Nipple
- 1 - 30" Monitor Cover
- 1 - 20" Meter Lid

NOTE:

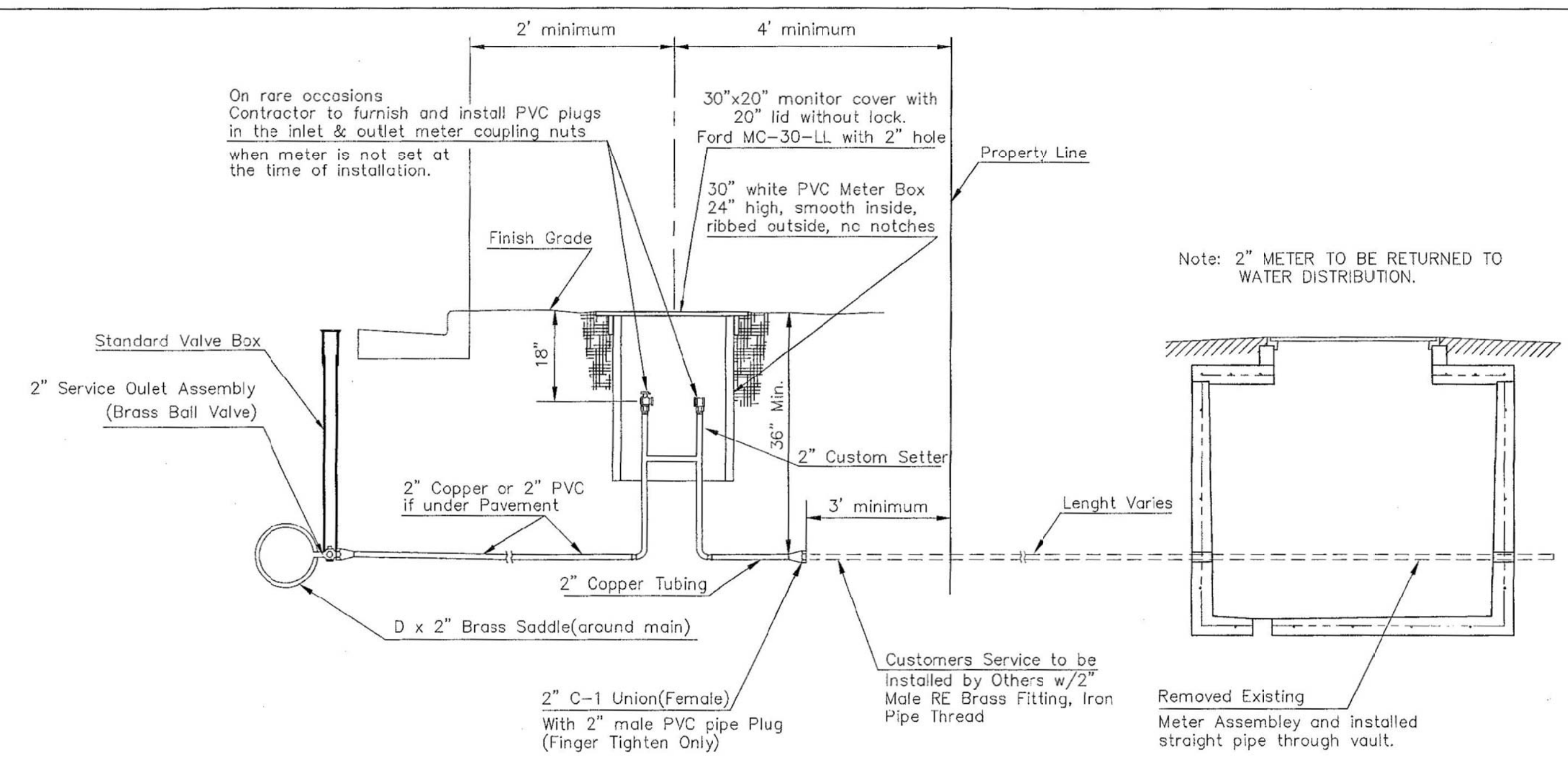
THE 1 1/2" AIR RELEASE ASSEMBLY WILL TYPICALLY BE USED ON WATER MAINS 24" AND SMALLER, AS SPECIFICALLY DESIGNATED IN THE PLANS. COMBINATION AIR RELEASE ASSEMBLIES WILL BE SPECIFICALLY DESIGNED FOR PROJECTS WITH LARGER MAINS, AND WILL BE INCLUDED IN THE PLANS.



2" SERVICE OUTLET ASSEMBLY



MATERIALS FOR 1" or 2" AIR RELEASE ASSEMBLY  
Ø = 1" or 2"

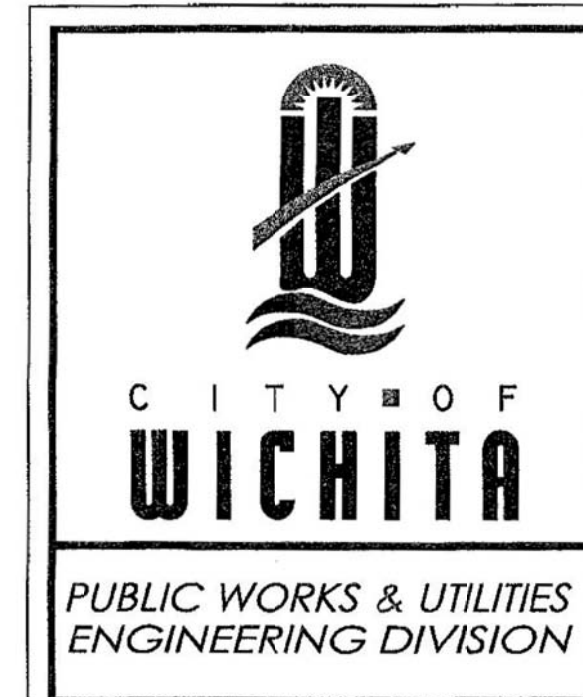
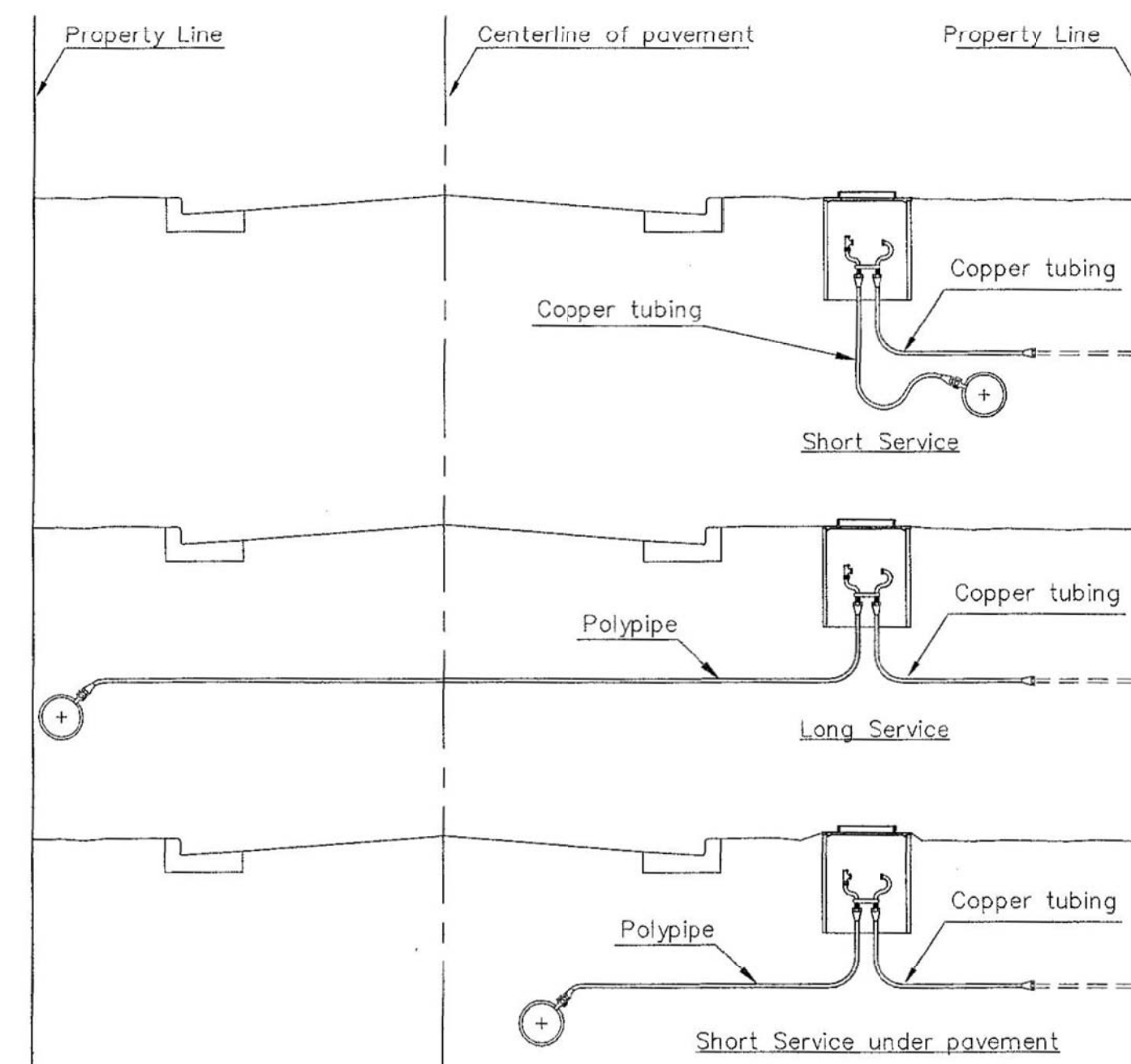


TYPICAL 2" METER SETTING

Note: ONE VALVE STEM EXTENSION FOR EACH VALVE BURIED GREATER THAN 5'.

TYPICAL 2" METER SETTING INVOLVING EXISTING 2" METER VAULT

Note: ONE VALVE STEM EXTENSION FOR EACH VALVE BURIED GREATER THAN 5'.



STANDARD WATER SERVICE DETAIL		
CITY ENGINEER		
GARY JANZEN, P.E.		
PROJECT NUMBER	DCA NUMBER	DATE
1882 PPW	(607853)	
CITY ENGINEER'S OFFICE		SHEET
CITY HALL - SEVENTH FLOOR		C-405
455 NORTH MAIN STREET		
WICHITA, KANSAS 67202-1620		
(316) 268-4301		

WL-102



REVISIONS		
#	ISSUE	DATE

PROJECT NUMBERS	State Project # A-012430 State Work # 14037
APPROVED BY	CONTRACTOR
WICHITA STATE UNIVERSITY FACILITIES PLANNING	WICHITA STATE UNIVERSITY WATER PLANNING 800 SW Jackson, Suite 700 Topeka, Kansas 66612-1216 Phone 785-296-8899 TEL: 785-296-8899

Department of Administration Office of Facilities & Procurement Management Design, Construction 800 SW Jackson, Suite 700 Topeka, Kansas 66612-1216 Phone 785-296-8899
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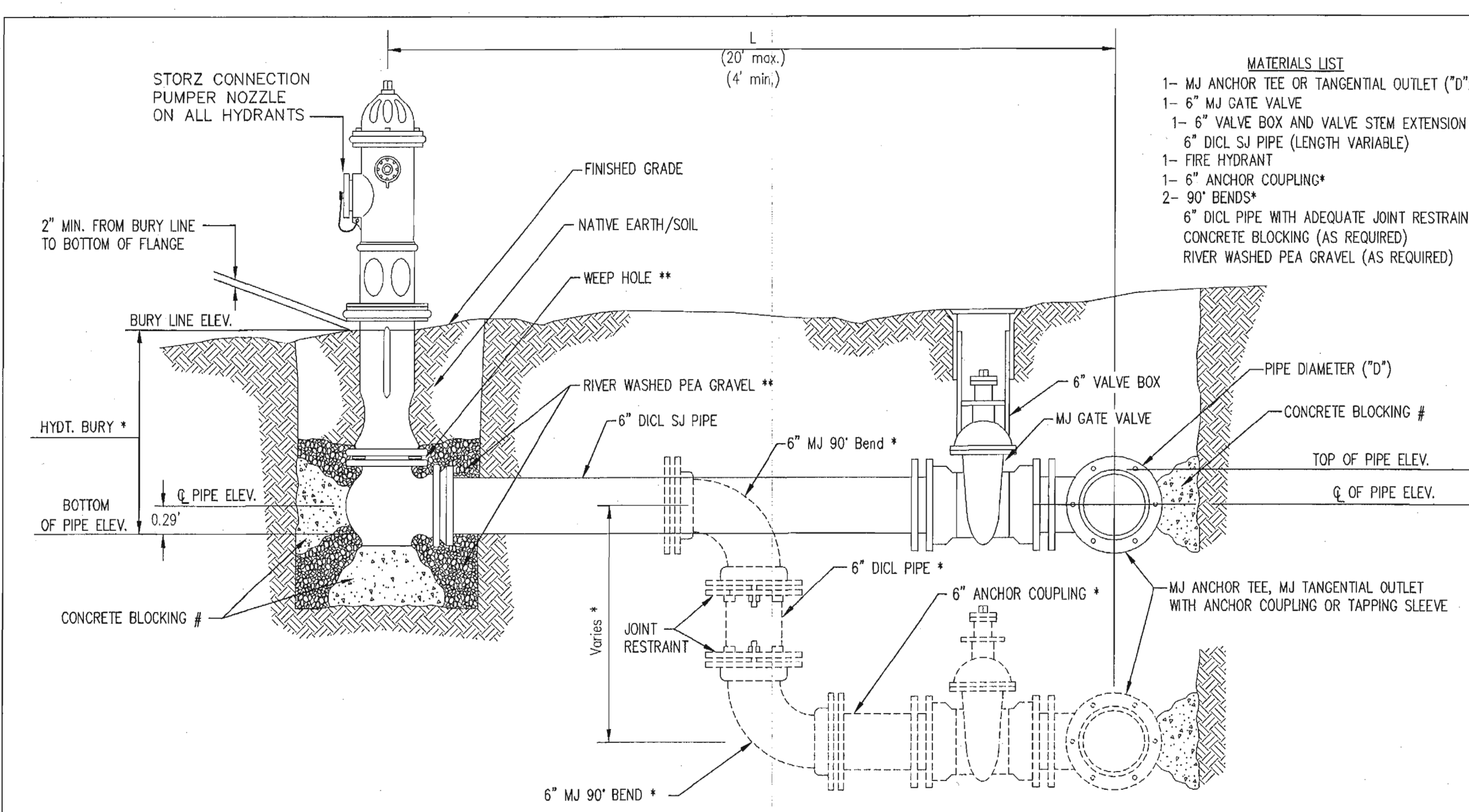
WICHITA STATE UNIVERSITY EXPERIENTIAL ENGINEERING BUILDING	1846 FAIRMOUNT ST. WICHITA, KANSAS 67260-0023
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STANDARD WATER SERVICE DETAILS

A-012430

C-405

ORIGINAL CONSTRUCTION DOCUMENTS



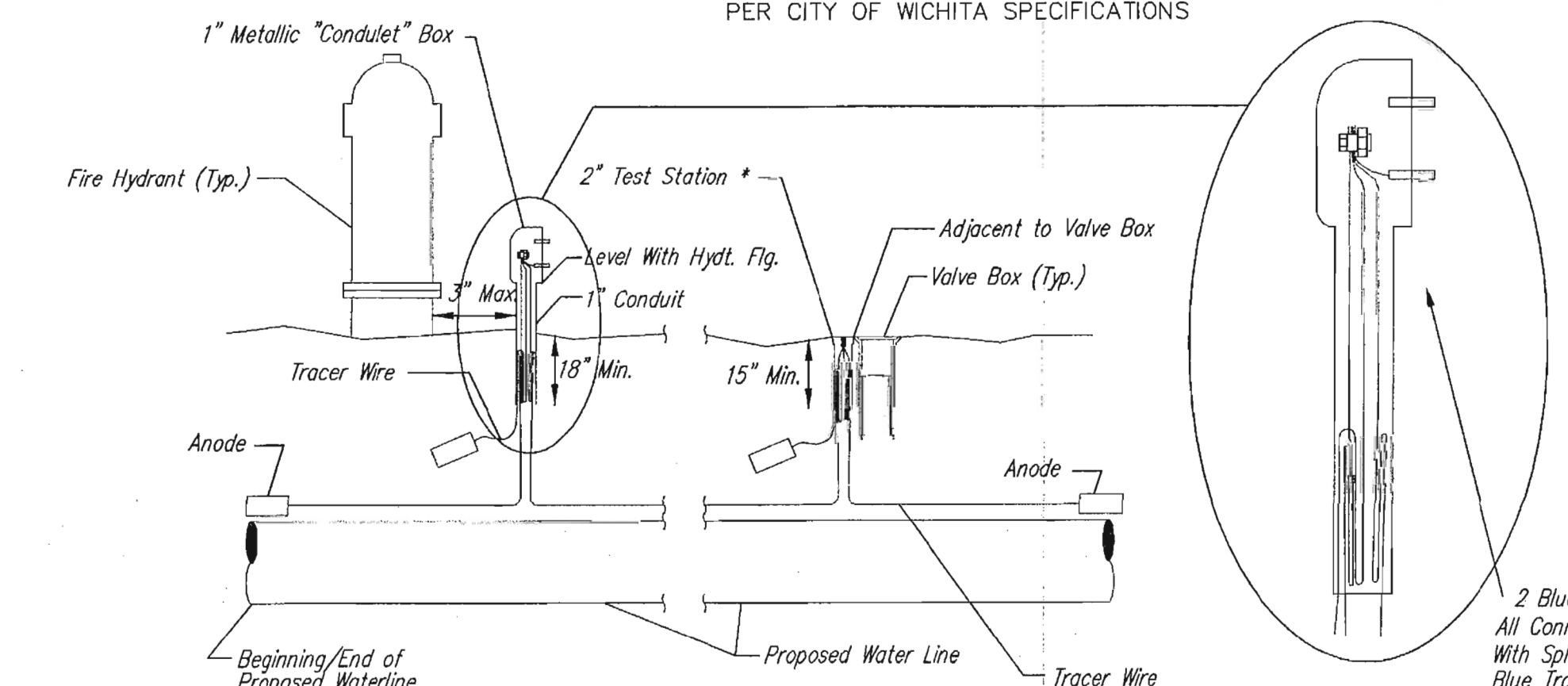
- MATERIALS LIST**
- 1- MJ ANCHOR TEE OR TANGENTIAL OUTLET (0"x 6")
  - 1- 6" MJ GATE VALVE
  - 1- 6" VALVE BOX AND VALVE STEM EXTENSION IF REQUIRED \*
  - 6" DI CL SJ PIPE (LENGTH VARIABLE)
  - 1- FIRE HYDRANT
  - 1- 6" ANCHOR COUPLING\*
  - 2- 90° BENDS\*
  - 6" DI CL PIPE WITH ADEQUATE JOINT RESTRAINT \*
  - CONCRETE BLOCKING (AS REQUIRED)
  - RIVER WASHED PEA GRAVEL (AS REQUIRED)

\* IF THE REQUIRED HYDRANT BURY IS IN EXCESS OF 5', BUT LESS THAN 7', CONTRACTOR SHALL USE STANDARD 5' HYDRANT BURY AND HYDRANT BARREL EXTENSIONS AS NECESSARY. IF THE REQUIRED HYDRANT BURY IS GREATER THAN 7', CONTRACTOR SHALL USE 5' HYDRANT BURY, 2-MJ 90° BENDS, 6" ANCHOR COUPLING AND 6" DI CL PIPE AS NECESSARY FOR VERTICAL ADJUSTMENT. THE CONTRACTOR SHALL PROVIDE ADEQUATE THRUST BLOCKING AT HYDRANT AND MEGALUGS, OR SIMILAR RESTRAINT BETWEEN 90° BENDS TO SECURE ALL FITTINGS DURING TESTING AND OPERATION. THE CONTRACTOR SHALL PROVIDE A VALVE STEM EXTENSION PER DETAIL THIS SHEET.

\*\* CAUTION: WEEP HOLES TO BE KEPT CLEAR DURING CONSTRUCTION AND BACKFILL. CONCRETE FOR THRUST BLOCKING SHALL NOT OBSTRUCT WEEP HOLES. PLACE 1 CUBIC FOOT OF RIVER WASHED PEA GRAVEL AROUND EACH WEEP HOLE.

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

**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. A waterproof connector shall be used at splice locations. Test stations shall be installed adjacent to all fire hydrants along the waterline and at blowoffs or valves near the ends of waterlines. Any exception to the location shall be approved by the engineer. At each test station, the tracer wire shall be connected to a 3 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 AWG CCS with 3045 mil HDPE 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 at all points of connection. Contractor shall attach wire being installed with proposed water main to any tracer wire installed with adjacent waterline pipes.

**TEST STATIONS**  
A complete list of approved Tracer Wire can be found on City of Wichita's website at [www.wichita.gov](http://www.wichita.gov). 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 72PS30 as manufactured by HANDLEY Industries or approved equal. The "conduit" style test station 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.

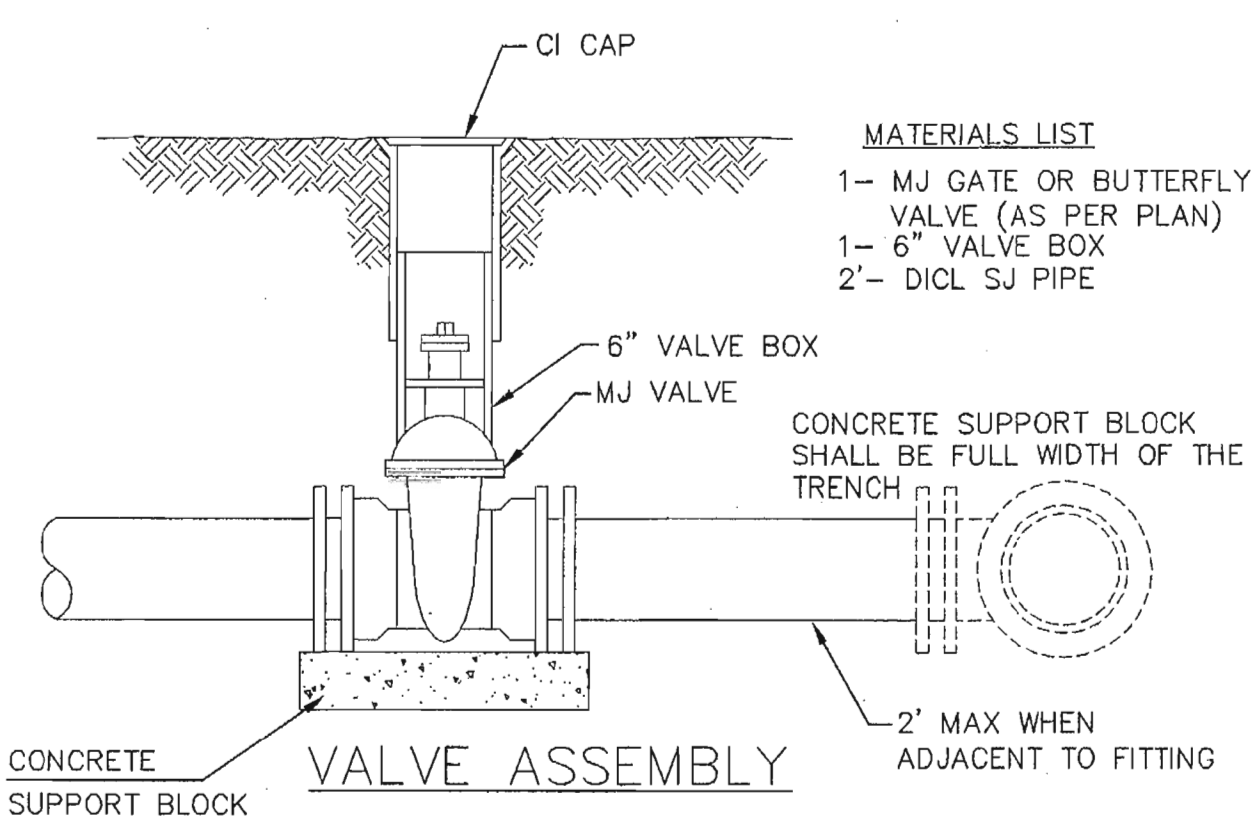
**ANODES**  
The anodes shall be 3 lb. bare zinc or magnesium. The anodes shall be buried at the same elevation as the waterline at each test station. The anodes shall be connected to 12 AWG ccs which shall be extended to the test station.

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

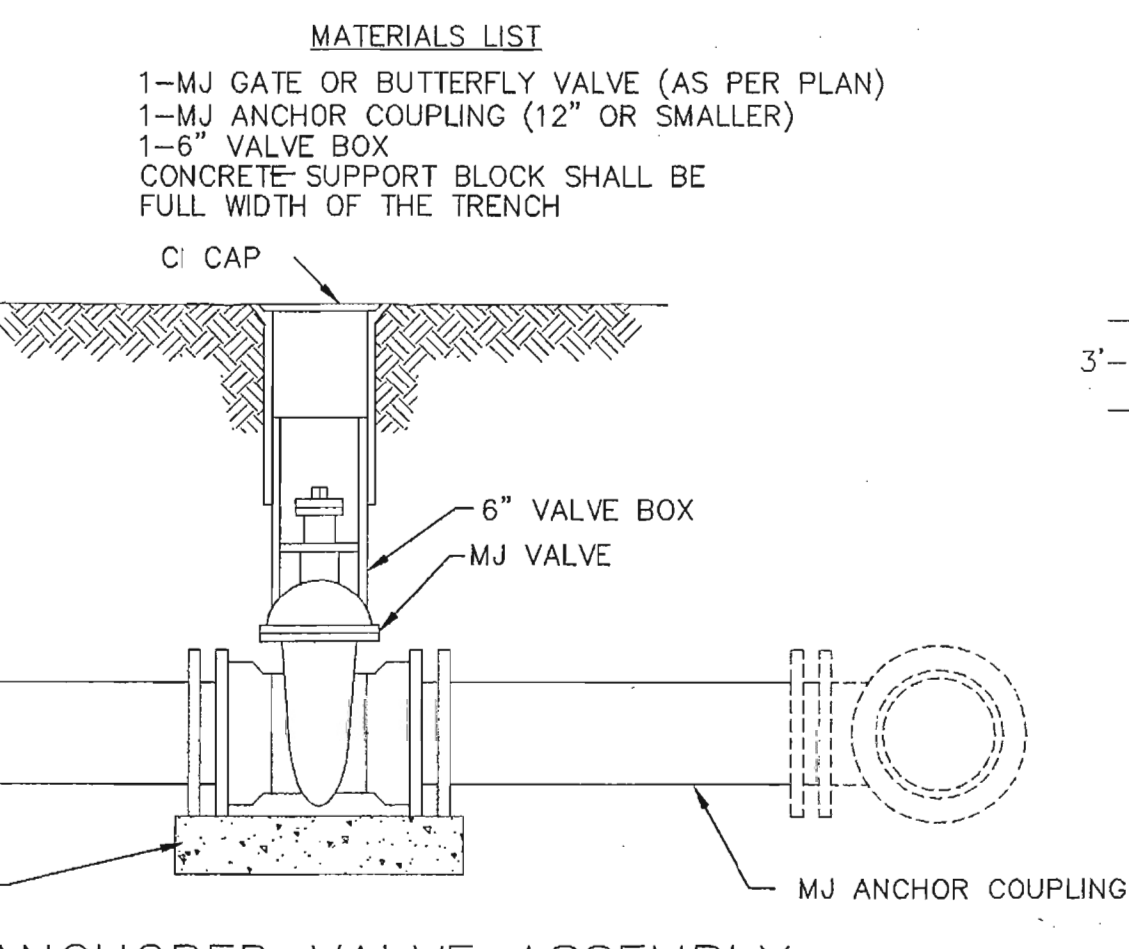
**FIRE HYDRANTS REQUIRED**

STATION	BURY LINE ELEVATION	TOP OF PIPE ELEVATION	FIRE HYDRANT BURY REQUIRED*	VALVE STEM EXT. REQUIRED (ft)*
WL NO. 1, Sht. 3+04.35	1404.8	1400.97	4.5'	-
FH ON EXISTING 6"	1402.7	1398.87	4.5'	-

CONTRACTOR SHALL VERIFY.

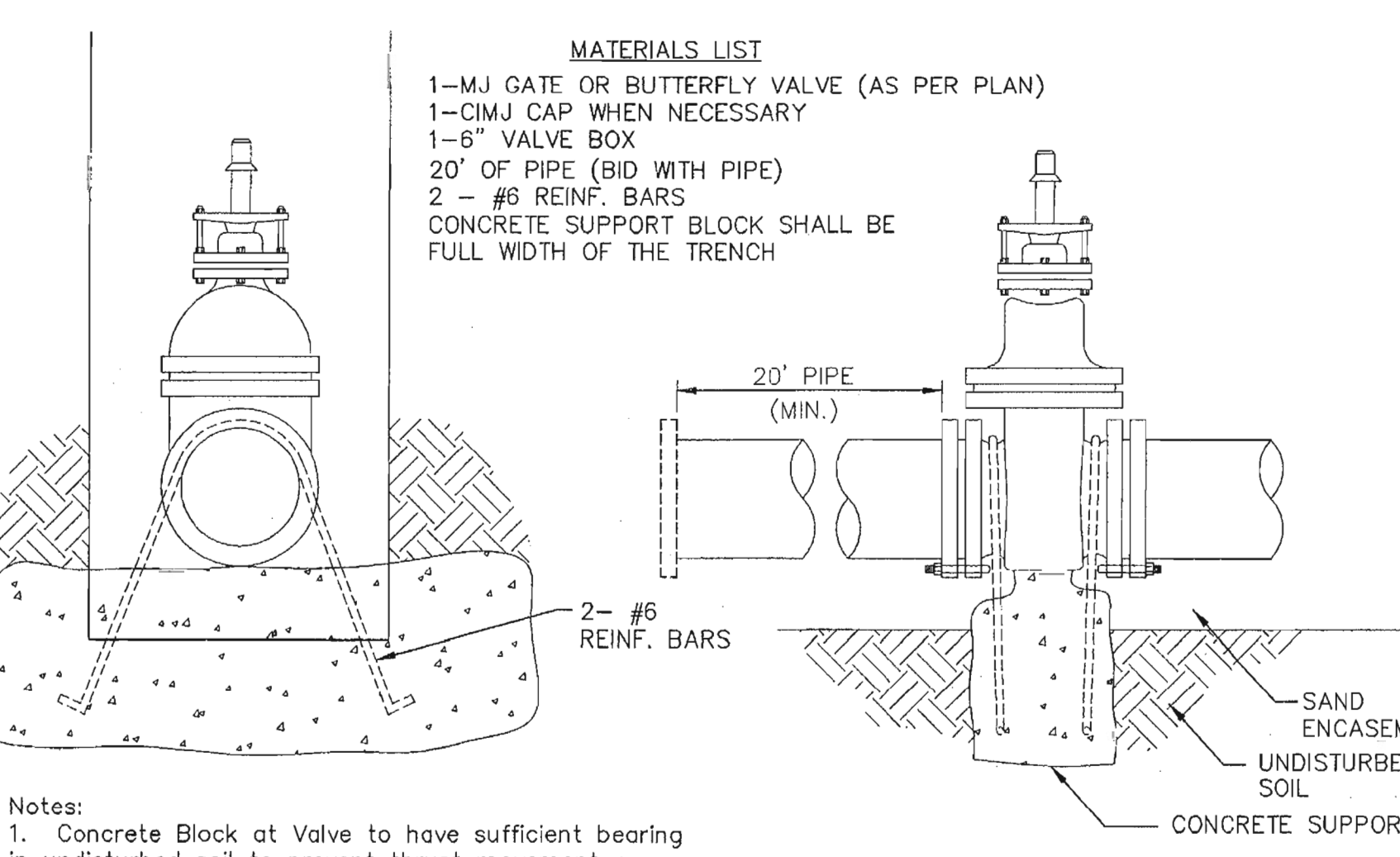


- MATERIALS LIST**
- 1- MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
  - 1- 6" VALVE BOX
  - 2- DI CL SJ PIPE



- 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**



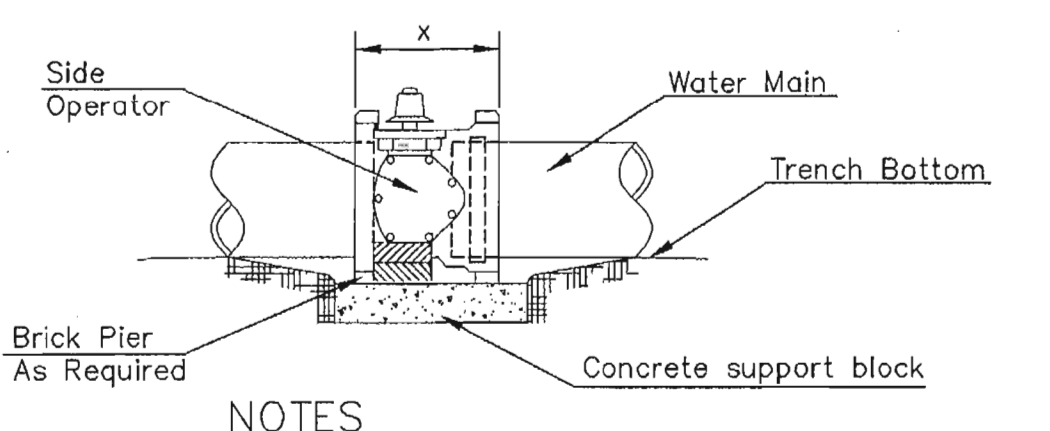
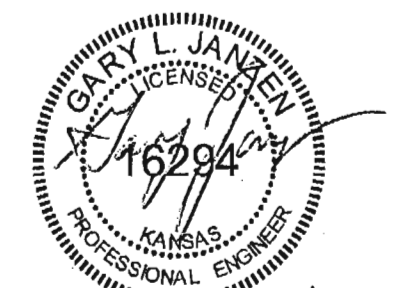
- MATERIALS LIST**
- 1-MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
  - 1-CIMJ CAP WHEN NECESSARY
  - 1-6" VALVE BOX
  - 20' OF PIPE (SID WITH PIPE)
  - 2 - #6 REINF. BARS
  - CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH

**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.

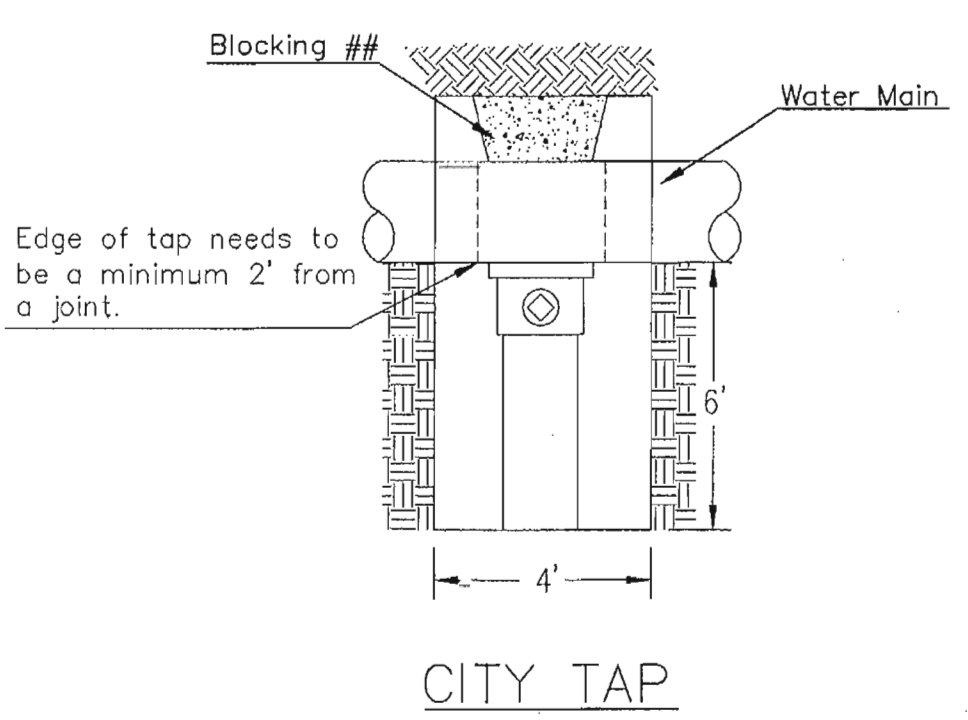
**THRUST AT VALVES**

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



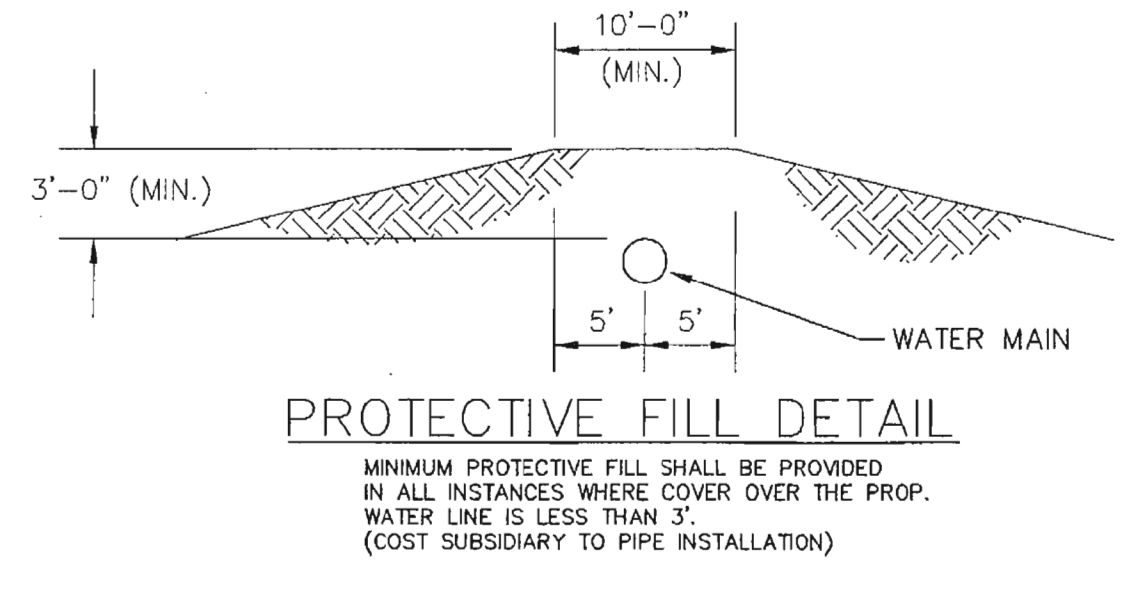
- NOTES**
- This detail covers Butterfly Valve installation, inclusive, regardless of type of pipe or joint used. 24" and larger lines to be detailed on plans.
  - 6" Valve Box and Cover required per City of Wichita Std. Specifications.
  - Conc. Support Block to be full width of trench.

**CONCRETE SUPPORT BLOCKING FOR BUTTERFLY VALVE INSTALLATION**



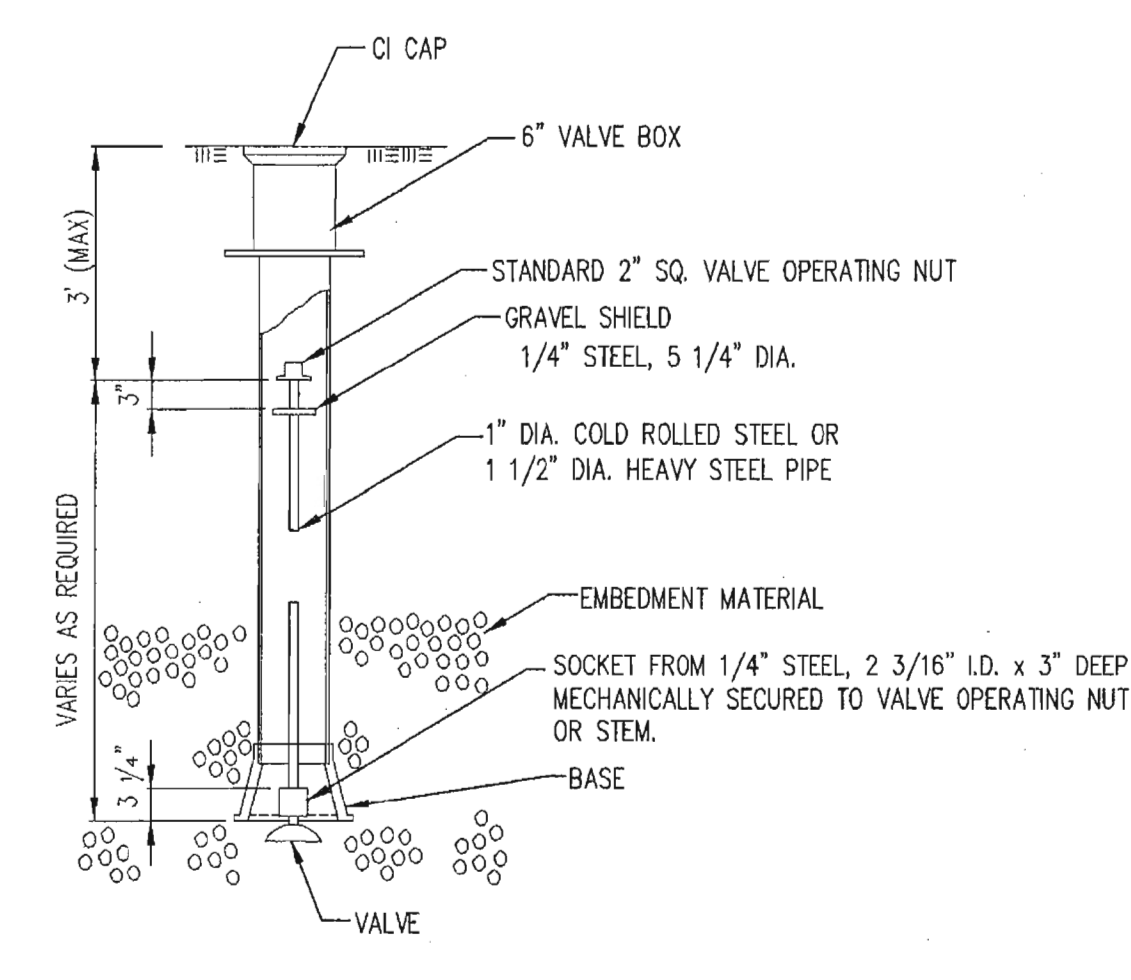
**CITY TAP**

When the City of Wichita makes tap, blocking is to be done by Contractor



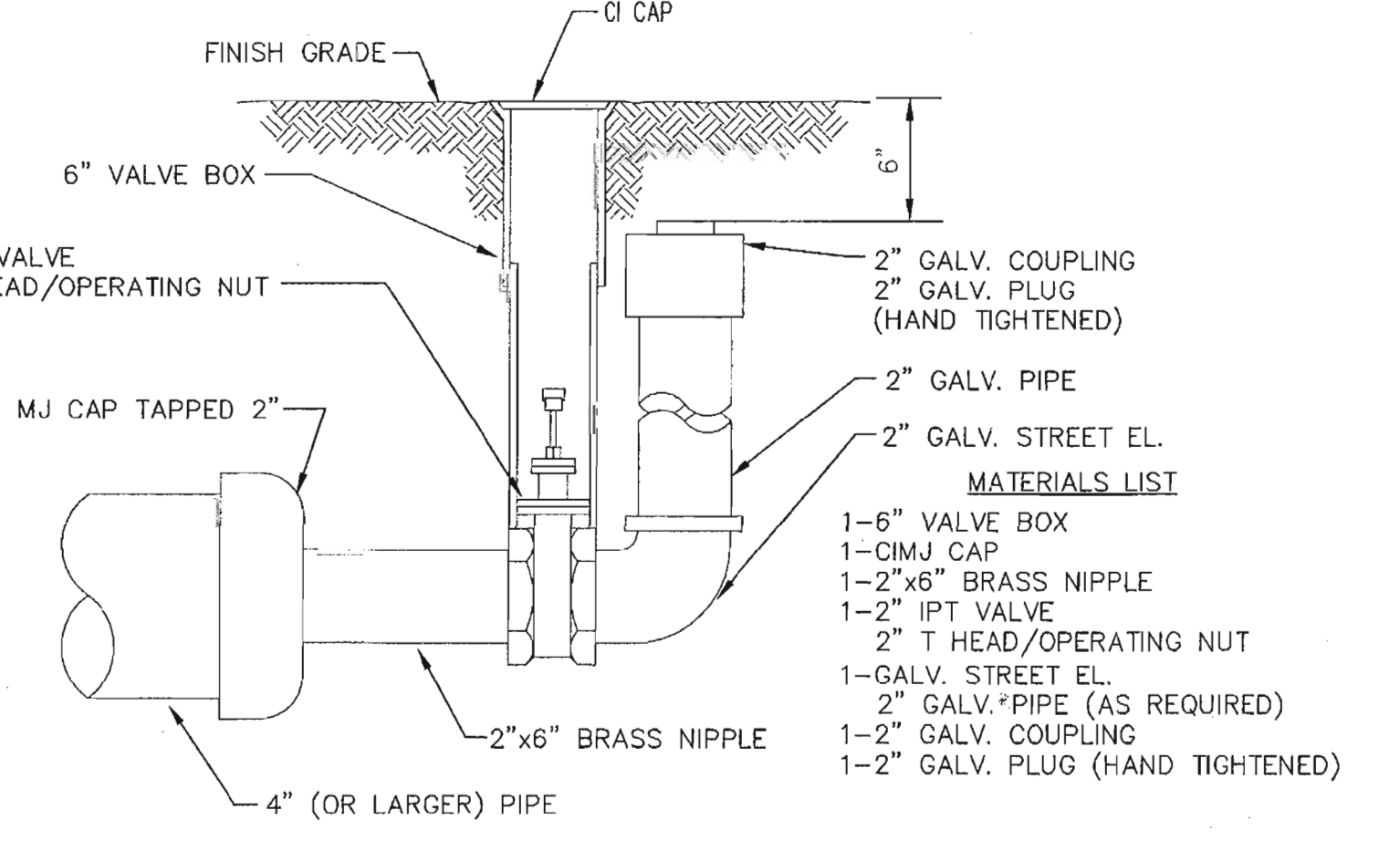
**PROTECTIVE FILL DETAIL**

MINIMUM PROTECTIVE FILL SHALL BE PROVIDED IN ALL INSTANCES WHERE COVER OVER THE PROP. WATER LINE IS LESS THAN 3'. (COST SUBSIDIARY TO PIPE INSTALLATION)



**VALVE STEM EXTENSION DETAIL**

NOTE: ONE VALVE STEM EXTENSION FOR EACH VALVE BURED GREATER THAN 5'.



**2\"/>**



STANDARD WATER ASSEMBLY DETAIL

CITY ENGINEER  
**GARY JANZEN, P.E.**

PROJECT NUMBER 1882 PPW	CCA NUMBER (607853)	DATE 04/2013
----------------------------	------------------------	-----------------

CITY ENGINEER'S OFFICE  
CITY HALL - SEVENTH FLOOR  
455 NORTH MAIN STREET  
WICHITA, KANSAS 67202-1620  
(314) 268-4501

SHEET  
**C-406**

WL-101

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105 North Washington  
Wichita, KS 67202-2815  
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F 316.262.0002  
wdmarchitects.com

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Perkins+Will  
10100 N. Central  
Expressway, Suite 300  
Dallas, TX 75231  
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f (214) 283-8701  
perkinswill.com

**IPEC**  
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.  
303 S. Topeka  
Wichita, KS 67202  
T 316.262.2691  
pec1.com

**WICHITA STATE UNIVERSITY**  
FACILITIES PLANNING  
WICHITA STATE UNIVERSITY  
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PHONE 785-296-8899

**WICHITA STATE UNIVERSITY**  
OFFICE OF ADMINISTRATION  
Office of Facilities & Procurement  
Management Design, Construction  
Compliance  
800 SW WYOMING ST., SUITE 700  
TOPEKA, KANSAS 66612-1216  
PHONE 785-296-8899

**WICHITA STATE UNIVERSITY**  
**EXPERIENTIAL ENGINEERING BUILDING**  
1845 FAIRMOUNT ST.  
WICHITA, KANSAS 67202-0023

Standard Water Assembly Detail  
A-012430  
C-406  
ORIGINAL CONSTRUCTION DOCUMENTS

Sheet: 04-17-2013, 14:06, 04 by CSI  
 Plot Scale: 1/8" = 1'-0", 17-2013, 1:28:44 PM by CSI  
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