

WATER DISTRIBUTION SYSTEM IMPROVEMENTS

TO SERVE McDONALD'S,
 LOT 1, BLOCK 1, REGENCY LAKES COMMERCIAL, 3RD ADDITION
 CITY OF WICHITA, KANSAS
 GARY JANZEN, PE CITY ENGINEER
 1838PPW
 OCA NUMBER: 607653

ON-SITE BENCHMARK:
 SQUARE CUT IN TOP OF CURB INLET NEAR SE CORNER
 PROPERTY.
 ELEVATION 1363.30 (NAVD 88)

THE TOPOGRAPHIC AND BOUNDARY SURVEY, INCLUDING BUT
 NOT LIMITED TO PROPERTY LINES, LEGAL DESCRIPTIONS,
 EXISTING UTILITIES, SITE TOPOGRAPHY INCLUDING SPOT
 ELEVATIONS, EXISTING STRUCTURAL LOCATIONS AND
 OUTSTANDING PHYSICAL FEATURES HAS BEEN PROVIDED BY
 OZARK CIVIL ENGINEERING. CONTACT RICK DAYTON AT
 479-464-8850 FOR SURVEY RELATED INFORMATION.

AS BUILTS

<p>Contractor: Ewertz Excavation</p> <p style="color: red; text-align: center;">9/19/2014</p>	<p>Project Inspector: Larry Gann</p> <p style="text-align: center;">KEMILLER ENGINEERING PA</p> <p style="text-align: center;">117 E. Lewis, Wichita, KS 67202 (316)264-0242</p>
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GENERAL NOTES

- Contractor will be required to provide a minimum advance notice of seventy-two (72) hours to utility companies prior to starting any excavation as follows:
 Kansas One-Call 687-2470 or 811
- The Contractor must notify the following in case of an emergency:
 Cox Communications 260-7204
 Kansas Gas Service 832-3126
 Westar 383-8600
 Aquila Net 1-800-303-0357
 AT&T 1-800-296-8313
 City of Wichita Water Utilities 262-6000
- Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. Location information has been obtained from the various utility companies and is either from company record drawings or company-provided field locations. The Contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.
- 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.
- Construction of this project will be subject to all provisions and requirements of the "Construction of Infrastructure by Private Contract" and "Standard Specifications for the Construction of City Projects", available from the City of Wichita Public Works Department.
- Traffic will not be affected by the construction of this project.
- Trees in conflict with construction shall be removed or trimmed as necessary.

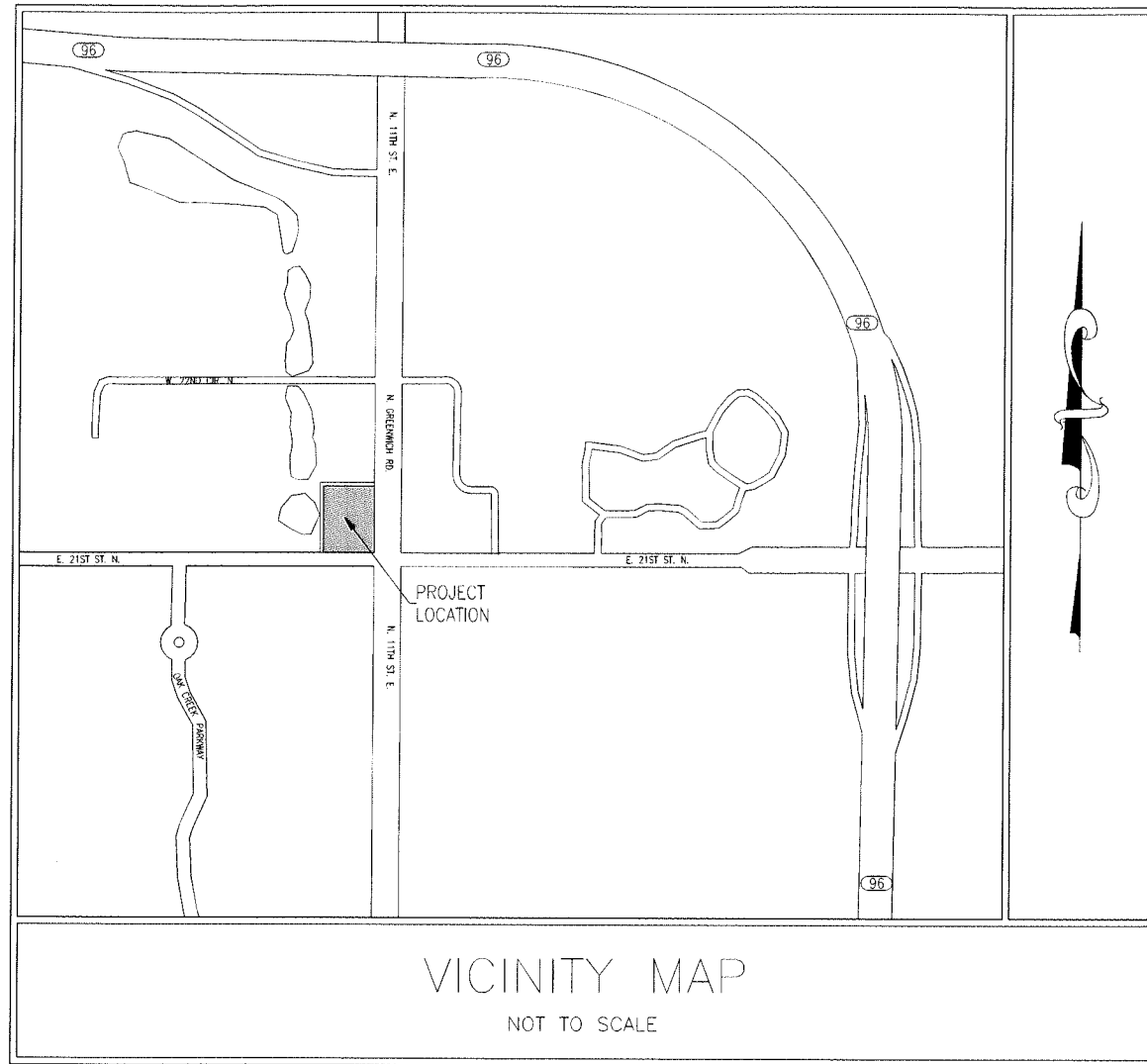
American Darling
 storz
 American Flow control valve

8" jet stream C-900
 star fittings

DRAWING INDEX:

	DATE	ACTION
PPW COVER SHEET	07/24/14	CITY COMMENTS 07/24/14
C-4.1 UTILITY PLAN	07/24/14	CITY COMMENTS 07/24/14
C-4.2 WATER LINE 1 PLAN AND PROFILE	07/24/14	CITY COMMENTS 07/24/14
- CITY OF WICHITA STANDARD WATER ASSEMBLY DETAIL SHEET	07/24/14	CITY COMMENTS 07/24/14
- CITY OF WICHITA MISCELLANEOUS WATER DETAIL SHEET	07/24/14	CITY COMMENTS 07/24/14

tapping valve is North of SS
 #23 MANHOLE 12' AND 8'
 East



APPROVED AS NOTED
 BY CITY ENGINEER OF WICHITA
 & BY WICHITA FIRE DEPARTMENT

Rebecca Gail 7/26/14
Ang Jolly 7-26-14
[Signature] 7-25-14

Water Mains (Engineering)
 Water Mains (Water)
 Fire Prot. Line

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 to be in accordance with the City of Wichita standard construction engineering practices and certified by a Licensed 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 of Wichita Specifications and Standards (on file and available in the City Engineer's Office).

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 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 and approval of the Wichita Fire Department.
 Inspection of the fire protection line is to be provided by the City of Wichita Fire Department and by a Licensed Consulting Engineering Firm under contract with the Owner/Developer.
 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.

SITE UTILITY CONTACTS CITY OF WICHITA, KS

CITY OF WICHITA PAUL HAYS 455 N. MAIN WICHITA, KS 67202 316-268-4477 (V) phays@wichita.gov	SANITARY SEWER LADONNA LAWRENZ 455 N. MAIN WICHITA, KS 67202 316-268-4329 (V) llawrenz@wichita.gov	GAS KANSAS GAS SERVICE CINDY LITTLEJOHN 1021 E. 26th Street N. WICHITA, KS 67219 316-831-5664 (V) clittlejohn@kgas.com
CITY ENGINEER GARY JANZEN 455 N. MAIN WICHITA, KS 67202 316-268-4450 (V) gjanzen@wichita.gov	TELEPHONE AT&T MARK OLSON 154 N. BROADWAY WICHITA, KS 67202 316-268-2105 (V) m95998@att.com	SIGNAGE TERRILL FLORENCE 455 N. MAIN WICHITA, KS 67202 316-268-4479 (V) tflorence@wichita.gov
WATER JEFF CROSBY 455 N. MAIN WICHITA, KS 67202 316-268-4555 (V) jcrosby@wichita.gov	STORMWATER ALAN JOHNSON 1801 S. McCLEAN BLVD., STE. B WICHITA, KS 67203 316-268-4090 (V) ajohnson@wichita.gov	OWNER McDONALD'S CORP. C/O HOWARD JOHNSON 10801 MASTIN BLVD STE 400 OVERLAND PARK, KS 66210 913-217-3800 (V)
FIRE STU BEVVS 455 N. MAIN WICHITA, KS 67202 316-268-4245 (V) sbevvs@wichita.gov	ELECTRIC WESTAR BECKY THOMPSON PO BOX 208, WICHITA, KS 67201 316-261-6320 (V) becky.thompson@westarenergy.com	DEVELOPER LAHAM DEVELOPMENT GEORGE LAHAM 150 N. MARKET WICHITA, KS 67202 316-292-3927 (V)

ALL CONSTRUCTION WILL BE COMPLETED IN ACCORDANCE WITH CITY OF WICHITA STANDARD SPECIFICATION AND PROVISIONS.

PLANS PREPARED BY BLACKSTONE ENVIRONMENTAL
 9154 W. 133RD STREET, OVERLAND PARK, KS 66213

STREET ADDRESS 11130 E 21ST ST N	
CITY WICHITA	STATE KS
COUNTY SEDGWICK	REGIONAL DWG. NO 15-0373
PPW COVER SHEET	

BY: EDH
 DATE: 06/17/14 REVISION PER CITY COMMENT LETTER 06/17/14
 DATE: 07/07/14 REVISION PER CITY COMMENT LETTER 07/07/14


McDonald's
 THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF McDONALD'S CORPORATION AND SHALL NOT BE REPRODUCED WITHOUT THEIR WRITTEN PERMISSION.
 OFFICE: HEARTLAND REGION
 ADDRESS: 10801 MASTIN BLVD., STE. 400, OVERLAND PARK, KS 66210

BLACKSTONE ENVIRONMENTAL
 9154 W. 133RD STREET
 OVERLAND PARK, KS 66213

NOTE:
PARKING LOT LIGHTING SHALL BE EITHER LITHONIA KSF2 (METAL HALIDE) OR LINCOLN P32 (METAL HALIDE) TO MATCH DEVELOPMENT STANDARD FOR SHOPPING CENTER. SECURITY LIGHTING WILL NOT PROVIDE LOT LIGHTING FOR THIS PROJECT.

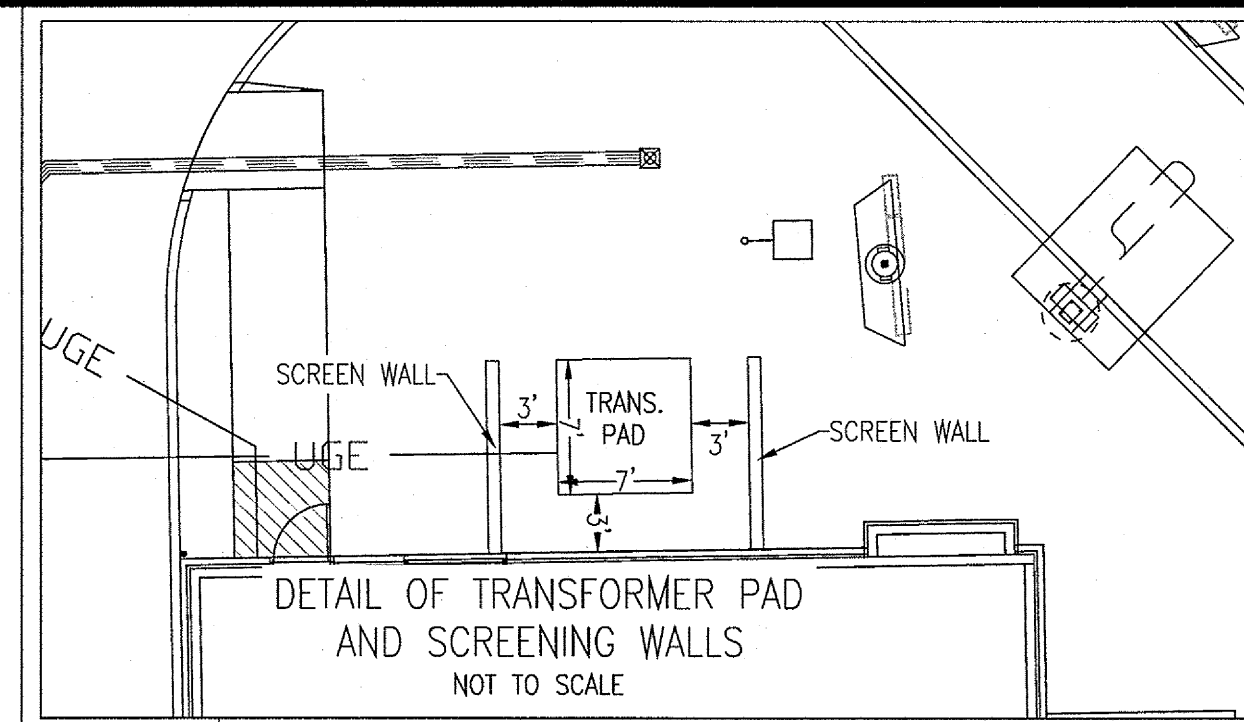
**FH is 311' north of center line of 21st St. N. & 146' west of center line of Greenwich.
FH valve is 3' south of FH.**

AS BUILTS



KEMILLER
ENGINEERING PA

117 E. Lewis,
Wichita, KS 67202 (316)264-0242



UTILITY PROPOSED FEATURES	
---	PROPERTY LINE
---	EASEMENT LINE
---	SANITARY SEWER SERVICE
---	WATER SERVICE
---	UNDERGROUND ELECTRIC SERVICE
---	UNDERGROUND TELEPHONE SERVICE
---	OVERHEAD ELECTRIC SERVICE
---	OVERHEAD TELEPHONE SERVICE
---	GAS SERVICE
---	STORM INLETS (SEE GRADING PLAN FOR TYPE)

DXX/XX UTILITY DETAILS

(SHEET #/DETAIL #)

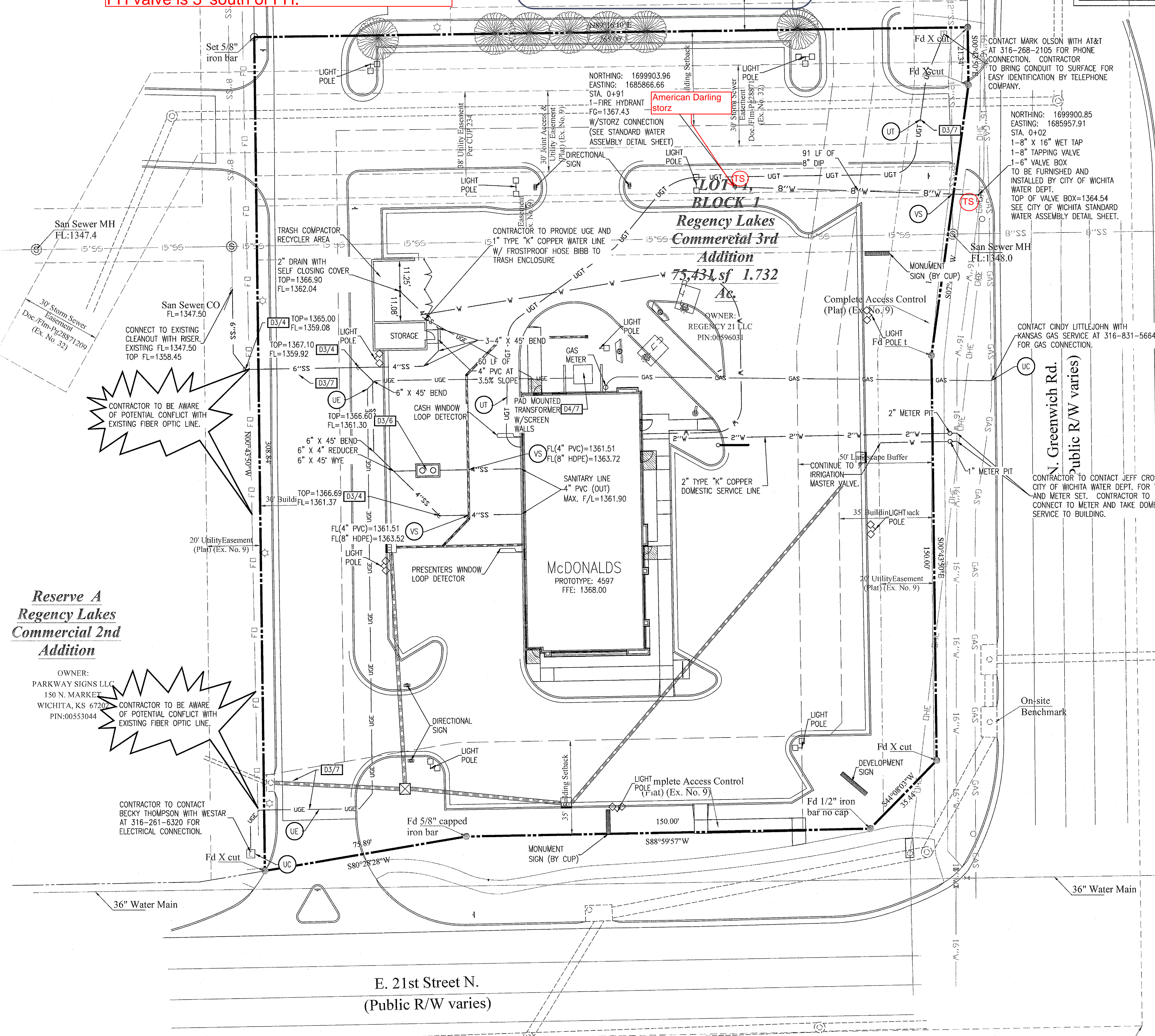
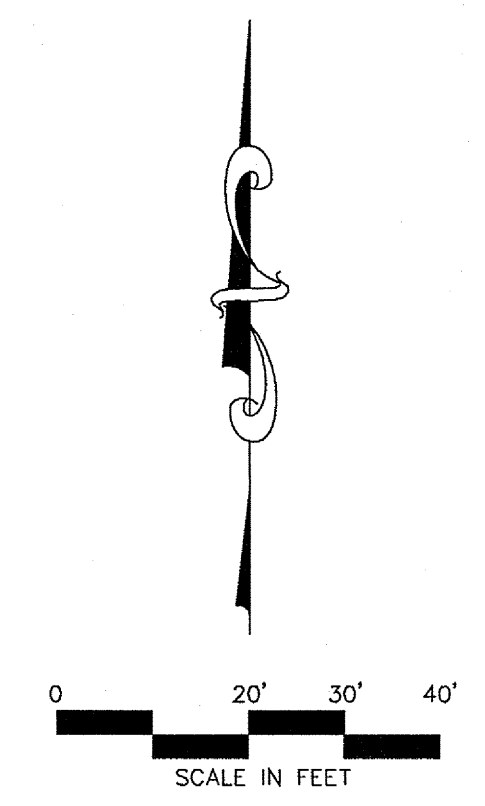
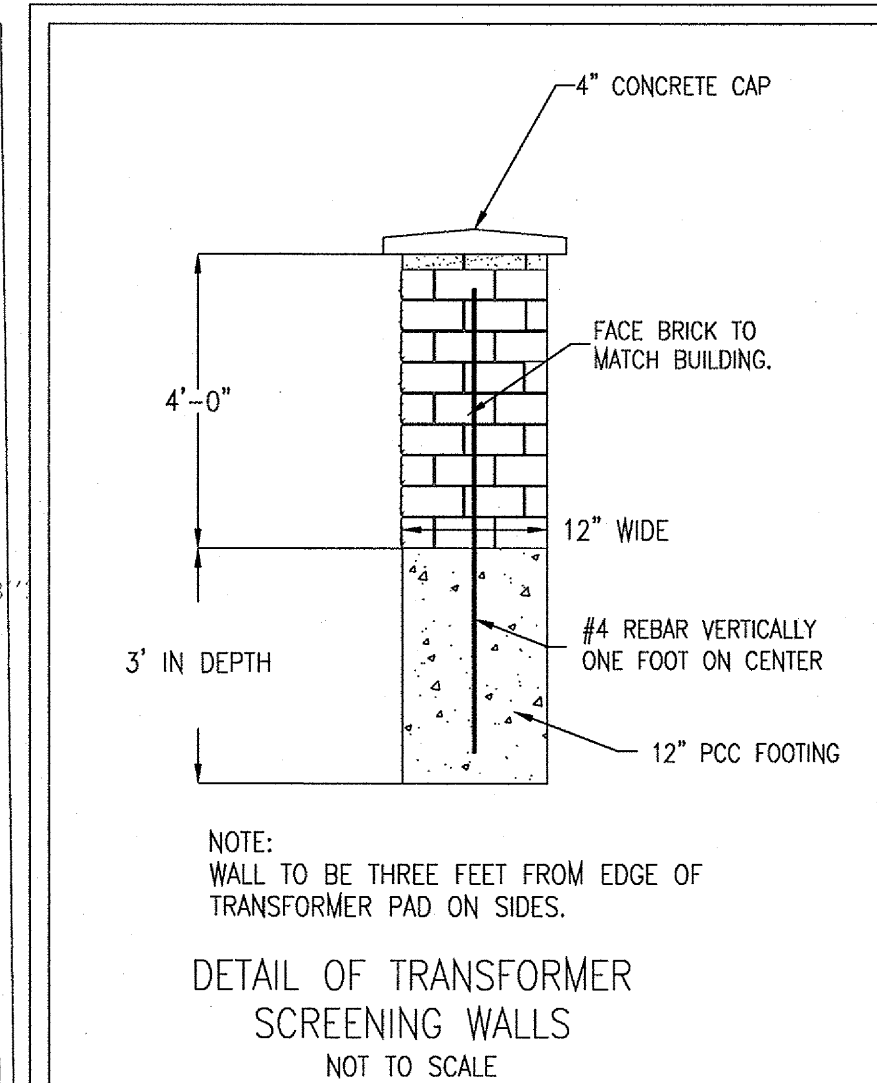
- D3/4 CLEAN OUT DETAIL
- D3/6 TYPICAL EXTERIOR GREASE TRAP
- D3/7 STREET CUT REPLACEMENT
- D4/7 CONCRETE PAD FOR TRANSFORMER

UTILITY NOTES

- (XXX) Items tabbed by the following symbols are shown on this sheet.
- (UT) (2) 2" TELEPHONE CONDUIT (PVC SCHEDULE 40)
- (UE) INSTALL (2) 4" SCHEDULE 40 PVC CONDUITS
- (UC) POINT OF CONNECTION (PER LOCAL CODES)
- (VS) VERTICAL SEPARATION

UTILITY GENERAL NOTES:

ALL WATER LINES SHALL HAVE A MINIMUM OF 42" COVER ABOVE TOP OF PIPE.
ALL SANITARY SEWER LINES SHALL HAVE A MINIMUM COVER OF 30" COVER ABOVE TOP OF PIPE.
PROPOSED UTILITIES TO BE BURIED IN THE SAME TRENCH INSTALLATION SHALL BE COORDINATED AND APPROVED BY LOCAL UTILITY COMPANIES.
VERIFY LOCATION AND DEPTH OF EXISTING UTILITY BEFORE CONSTRUCTING PROPOSED UTILITY.
CONTRACTOR SHALL COORDINATE ANY DISRUPTIONS TO EXISTING UTILITY SERVICES WITH ADEQUATE PROPERTY OWNERS.
ALL ELECTRIC, TELEPHONE AND GAS EXTENSIONS INCLUDING SERVICE LINES SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONTINUATIONS SHALL BE COORDINATED WITH THE DESIGNATED UTILITY COMPANIES.
CONSTRUCTION SHALL NOT START ON ANY PUBLIC UTILITY SYSTEM UNTIL WRITTEN APPROVAL HAS BEEN RECEIVED BY THE ENGINEER FROM THE APPROPRIATE GOVERNING AUTHORITY AND CONTRACTOR HAS BEEN NOTIFIED BY THE ENGINEER.
THE MINIMUM HORIZONTAL SEPARATION BETWEEN THE CLOSEST TWO POINTS OF THE WATER AND SEWER LINE IS TEN FEET. THE MINIMUM VERTICAL SEPARATION BETWEEN THE CLOSEST TWO POINTS OF THE WATER AND SEWER LINE IS 24".
ALL TRENCHING, PIPE LAYING, AND BACK FILLING PROCEDURES SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
PRIOR TO THE CONSTRUCTION OF OR CONNECTION TO ANY SANITARY SEWER, WATER MAIN OR ANY OF THE DRY UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSINGS AND WORKING ENGINEER OF RECORD AND THE OWNER/DEVELOPER OF ANY CONDUIT OR REQUIRED DEVIATIONS FROM THE PLAN. NOTIFICATION SHALL BE MADE A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION. ENGINEER OF RECORD AND HIS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION.
ALL WATER LINE PIPE BEDDING SHALL BE INSTALLED PER DETAIL D3/3 (SEE DETAIL SHEETS).
ALL SANITARY SEWER PIPE BEDDING SHALL BE INSTALLED PER DETAIL D3/3 (SEE DETAIL SHEETS).
CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE CITY CONSTRUCTION DIVISION TO SCHEDULE A PRE-CONSTRUCTION MEETING AT LEAST 48 HOURS PRIOR TO STARTING ANY WORK ON THIS PROJECT. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS.
EXISTING UTILITIES ACROSS OR ALONG THE LINE OF THE PROPOSED WORK ARE SHOWN ONLY IN AN APPROXIMATE LOCATION ON THESE PLANS. CONTRACTOR SHALL CALL THE STATE ONE-CALL SYSTEM OR DESIGNATED UTILITY COMPANY PRIOR TO CONSTRUCTION. CONTRACTOR SHALL, ON HIS OWN INITIATIVE AND AT NO ADDITIONAL COST, LOCATE ALL UNDERGROUND LINES AND STRUCTURES AS NECESSARY. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UNDERGROUND LINES OR STRUCTURES.
IF FIRE HYDRANTS ARE INSTALLED, THEY SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY'S UTILITY DEPARTMENT STANDARD OR PER BEST AS PROVIDED ON DETAIL SHEETS.
CONTRACTOR SHALL NOT TAP OR OTHERWISE PENETRATE EXISTING WATER AND SEWER MAIN LINES WITHOUT PRIOR APPROVAL FROM THE CITY'S INSPECTOR. CONTRACTOR IS RESPONSIBLE FOR AVOIDING SPILLAGE OF RAW SEWAGE. CONTRACTOR SHALL PROVIDE ALL SEWER PLUGGING AND PUMPING EQUIPMENT NECESSARY TO AVOID SPILLAGE. CONTRACTOR SHALL NOT OPERATE VALVES ON EXISTING WATER MAINS.
THE EXISTING UTILITIES AND OBSTRUCTIONS SHOWN ARE FROM THE BEST AVAILABLE RECORDS AND SHALL BE VERIFIED BY THE CONTRACTOR TO HIS SATISFACTION PRIOR TO CONSTRUCTION. NECESSARY PRECAUTIONS SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT EXISTING SERVICES AND MAINS, AND ANY DAMAGE TO THEM SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO SPECIFICALLY MENTION WORK WHICH IS REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM SUCH WORK.
CONTRACTOR SHALL MAINTAIN TOP OF PROPOSED SANITARY SEWER MANHOLE TO PROPOSED GRADE. IF A DISCREPANCY OCCURS BETWEEN PROPOSED GRADES AND PROPOSED STRUCTURE TOPS, THE GRADING SHALL GOVERN. IF THE DISCREPANCY IS MORE THAN 2 INCHES THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD.
ALL UTILITIES SHOWN WITHIN PUBLIC EASEMENTS OR RIGHT OF WAYS SHALL BE CONSTRUCTED TO THE GOVERNING AGENCY'S SPECIFICATIONS. ALL OTHER UTILITIES SHALL BE CONSTRUCTED TO THE CLIENT'S OR THE GOVERNING AGENCY'S SPECIFICATIONS, WHICHEVER IS MORE STRINGENT. IF THERE IS A QUESTION AS TO WHICH SPECIFICATIONS SHOULD APPLY THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD.
IF SANITARY SEWER MANHOLE IS LOCATED IN A GRASS AREA OR SLOPE, CONTRACTOR SHALL CONSTRUCT MANHOLE TOP TO AN ELEVATION 6 INCHES HIGHER THAN THE PROPOSED GRADES.
ALL WATER MAINS SHALL BE HYDROSTATICALLY TESTED, DISINFECTED AND PASS ALL REQUIRED TESTS BEFORE ACCEPTANCE.
CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES ON ADJUSTING EXISTING UTILITY LINE AS REQUIRED BY CUT AND FILL AT NO ADDITIONAL COST TO THE OWNER.
CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD AND ARCHITECT SHOULD ANY LIGHT POLE OR SIGN FOUNDATIONS CONFLICT WITH ANY UTILITY AND / OR STORM SEWER SYSTEM.
GENERAL CONTRACTOR SHALL PROVIDE 2" x 2" x 4" THIN CONCRETE AFFON AT ALL CLEANOUTS, GATE VALVES, ETC. OUTSIDE OF BUILDING AND IN PAVED AREAS.
GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR ALL TAP AND TIE IN FEES REQUIRED, AS WELL AS COST OF UNDERGROUND SERVICE CONNECTIONS TO THE BUILDING.
ELECTRICAL SERVICE TO PAD MOUNTED TRANSFORMER SHALL BE RUN UNDERGROUND, FROM CONNECTION POINT TO TRANSFORMER LOCATION. ASSOCIATED COST BY GENERAL CONTRACTOR.
UTILITY CONTRACTOR SHALL FURNISH (2) 2" TELEPHONE CONDUITS AS SHOWN ON PLAN. VERIFY LOCATION OF THE IN AT TELEPHONE COMPANY SERVICE LINE. PROVIDE MINIMUM 6" COVER ABOVE CONDUIT.
DIMENSIONS SHOWN ARE TO CENTERLINE OF PIPE OR FITTING UNLESS OTHERWISE NOTED.
ALL FIRE HYDRANTS SHALL BE PROVIDED WITH AN APPROVED GATE VALVE A MAXIMUM OF 6'-0" FROM HYDRANT OR PER LOCAL REQUIREMENTS.
REFER TO ARCHITECTURAL PLANNING SHEETS FOR LOCATION OF SEWER, DOMESTIC, AND IRRIGATION CONNECTIONS AT BUILDING.



DATE: 07/16/14
DESCRIPTION: REVISED PER CITY COMMENT LETTER 06/17/14
BY: EJP
EJP

McDonald's

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OFFICE: HEARTLAND REGION
ADDRESS: 10801 MASTIN BLVD., STE. 400, OVERLAND PARK, KS 66210

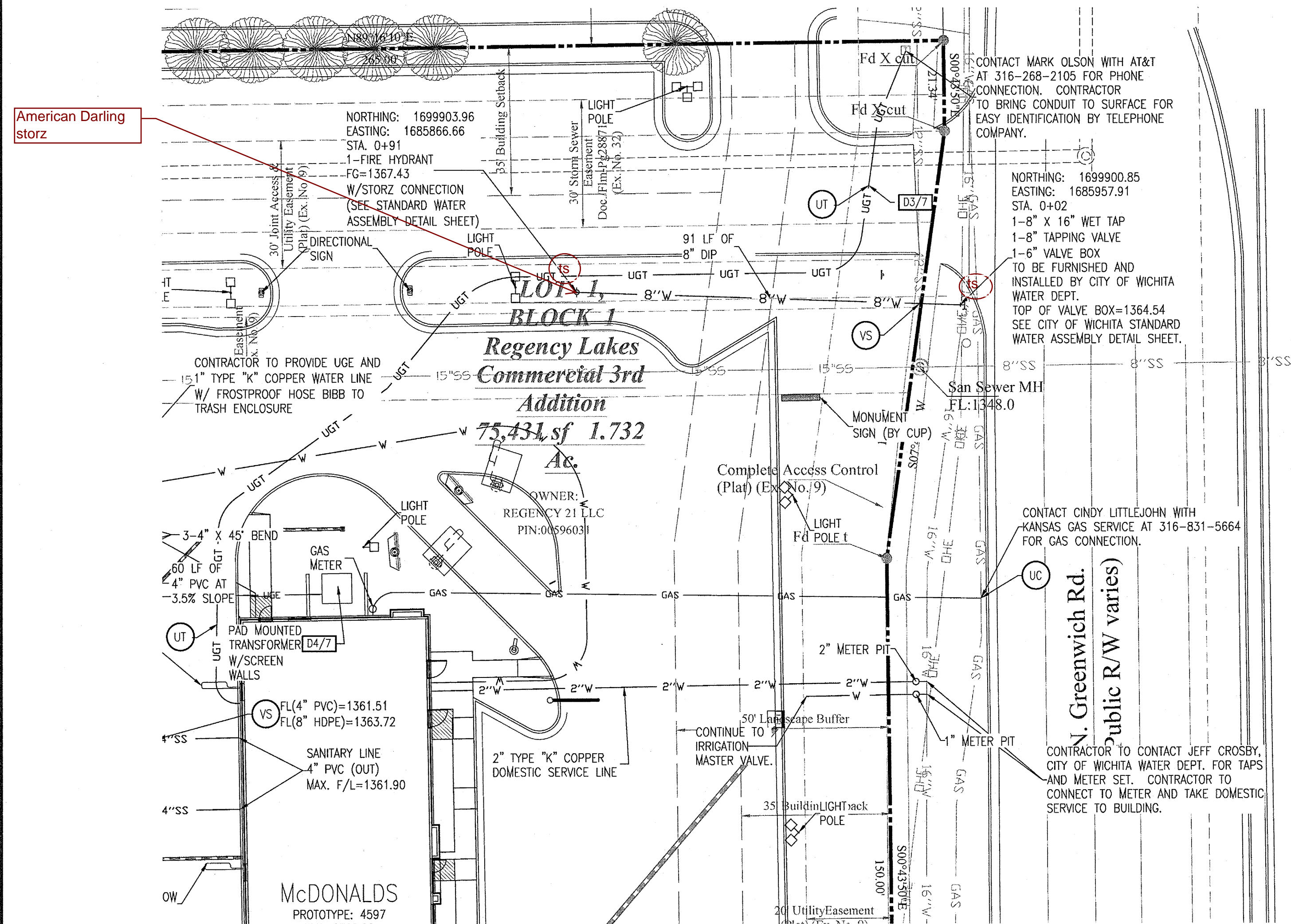
12552
KANSAS
PROFESSIONAL ENGINEER
7/24/14

BLACKSTONE ENVIRONMENTAL

9153 W. 133RD STREET
OVERLAND PARK, KS 66212

STREET ADDRESS 11130 E 21ST ST N	
CITY WICHITA	STATE KS
COUNTY SEDGWICK	REGIONAL DWG. NO. 15-0373
UTILITY PLAN	

C-4.1



*WATER LINE FROM MAIN TO FIRE HYDRANT MUST BE 8"

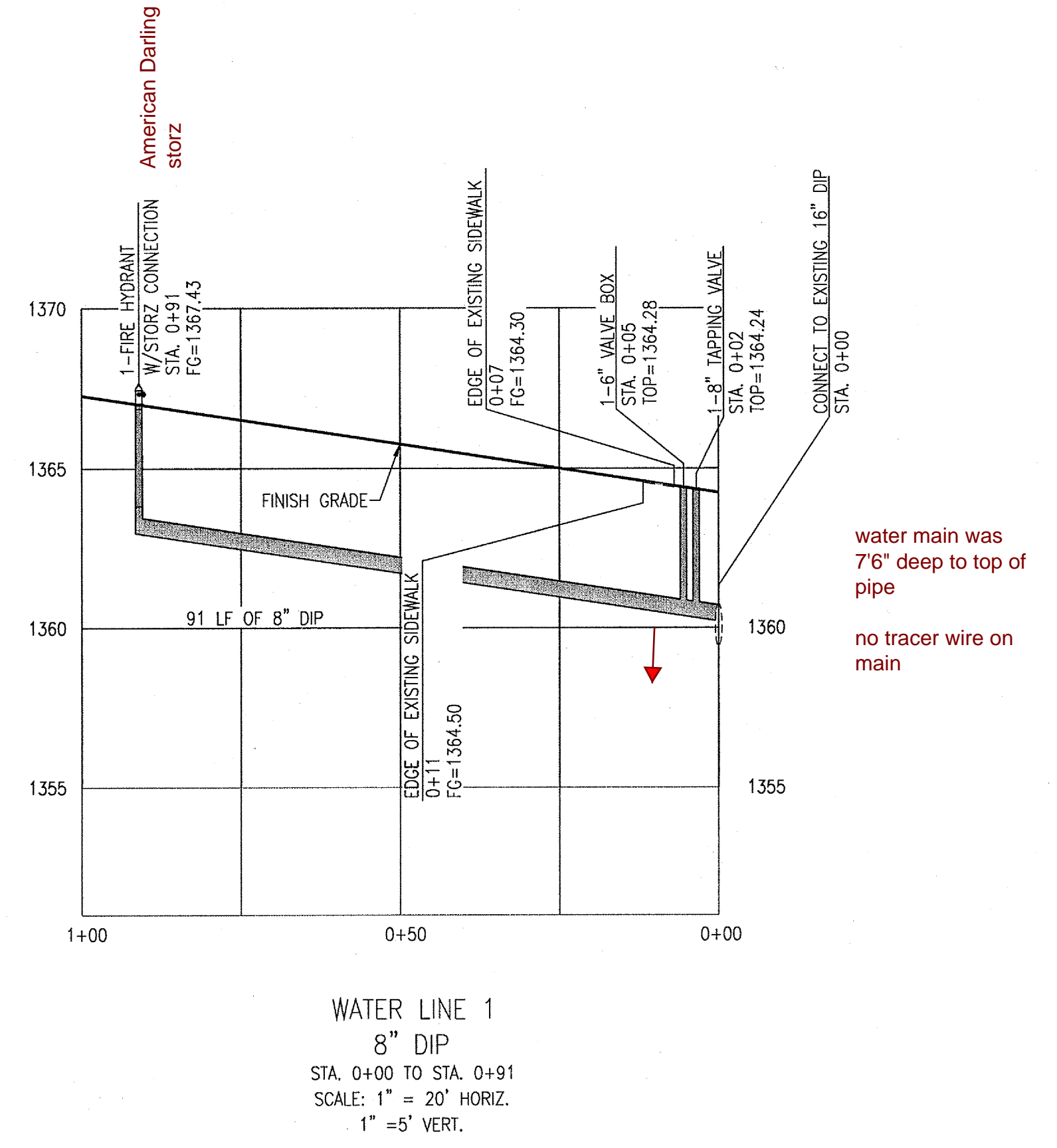
UTILITY PROPOSED FEATURES	
---	PROPERTY LINE
---	EASEMENT LINE
8"SS	SANITARY SEWER SERVICE
10"W	WATER SERVICE
UGT	UNDERGROUND ELECTRIC SERVICE
UGT	UNDERGROUND TELEPHONE SERVICE
DHE	OVERHEAD ELECTRIC SERVICE
DHT	OVERHEAD TELEPHONE SERVICE
GAS	GAS SERVICE
■ ■ ■ ■	STORM INLETS (SEE GRADING PLAN FOR TYPE)

DXX/XX UTILITY DETAILS	
(SHEET #/DETAIL #)	
D3/4	CLEAN OUT DETAIL
D3/6	TYPICAL EXTERIOR GREASE TRAP
D3/7	STREET CUT REPLACEMENT
D4/7	CONCRETE PAD FOR TRANSFORMER

UTILITY NOTES	
(XX)	Items labeled by the following symbols are shown on this sheet.
(UT)	(2) 2" TELEPHONE CONDUIT (PVC SCHEDULE 40)
(UE)	INSTALL (2) 4" SCHEDULE 40 PVC CONDUITS
(UC)	POINT OF CONNECTION (PER LOCAL CODES)
(VS)	VERTICAL SEPARATION

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 CONTRACTOR SHALL MATCH TOP OF PROPOSED SANITARY SEWER MANHOLE TO PROPOSED GRADE. IF A DISCREPANCY OCCURS BETWEEN PROPOSED GRADE AND PROPOSED STRUCTURE TOPS, THE GRADING SHALL CONTROL. IF THE DISCREPANCY IS MORE THAN 2 INCHES THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD.
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 CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD AND ARCHITECT SHOULD ANY LIGHT POLE OR SIGN FOUNDATIONS CONFLICT WITH ANY UTILITY AND / OR STORM SEWER SYSTEM.
 GENERAL CONTRACTOR SHALL PROVIDE 2' x 2' x 6" THICK CONCRETE APRON AT ALL CLEANOUTS, GATE VALVES, ETC. OUTSIDE OF BUILDING AND IN PAVED AREAS.
 GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR ALL TAP AND TIE ON FEES REQUIRED, AS WELL AS COST OF UNDERGROUND SERVICE CONNECTIONS TO THE BUILDING.
 ELECTRICAL SERVICE TO PAD MOUNTED TRANSFORMER SHALL BE RUN UNDERGROUND, FROM CONNECTION POINT TO TRANSFORMER LOCATION. ASSOCIATED COST BY GENERAL CONTRACTOR.
 UTILITY CONTRACTOR SHALL FURNISH (2) 2" TELEPHONE CONDUITS AS SHOWN ON PLAN, VERIFY LOCATION OF TIE IN AT TELEPHONE COMPANIES SERVICE LINE. PROVIDE MINIMUM 18" COVER UNDER CONDUIT. DIMENSIONS SHOWN ARE TO CENTERLINE OF PIPE OR FITTING UNLESS OTHERWISE NOTED.
 ALL FIRE HYDRANTS SHALL BE PROVIDED WITH AN APPROVED GATE VALVE A MINIMUM OF 6'-0" FROM HYDRANT OR PER LOCAL REQUIREMENTS.
 REFER TO ARCHITECTURAL PLUMBING SHEETS FOR LOCATION OF SEWER, DOMESTIC, AND IRRIGATION CONNECTIONS AT BUILDING.



AS BUILTS

KEMILLER ENGINEERING PA

117 E. Lewis,
Wichita, KS 67202 (316)264-0242

0 20' 30' 40'

SCALE IN FEET

811

Know what's below.
Call before you dig.

DATE DESCRIPTION

06/13/14 REVISED PER CITY COMMENT LETTER 06/12/14

07/18/14 ADDED FIRE HYDRANT PER CITY COMMENTS

McDonald's

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10801 MASTIN BLVD., STE. 400, OVERLAND PARK, KS 66210

STEVEN F. ALLEN, P.E.

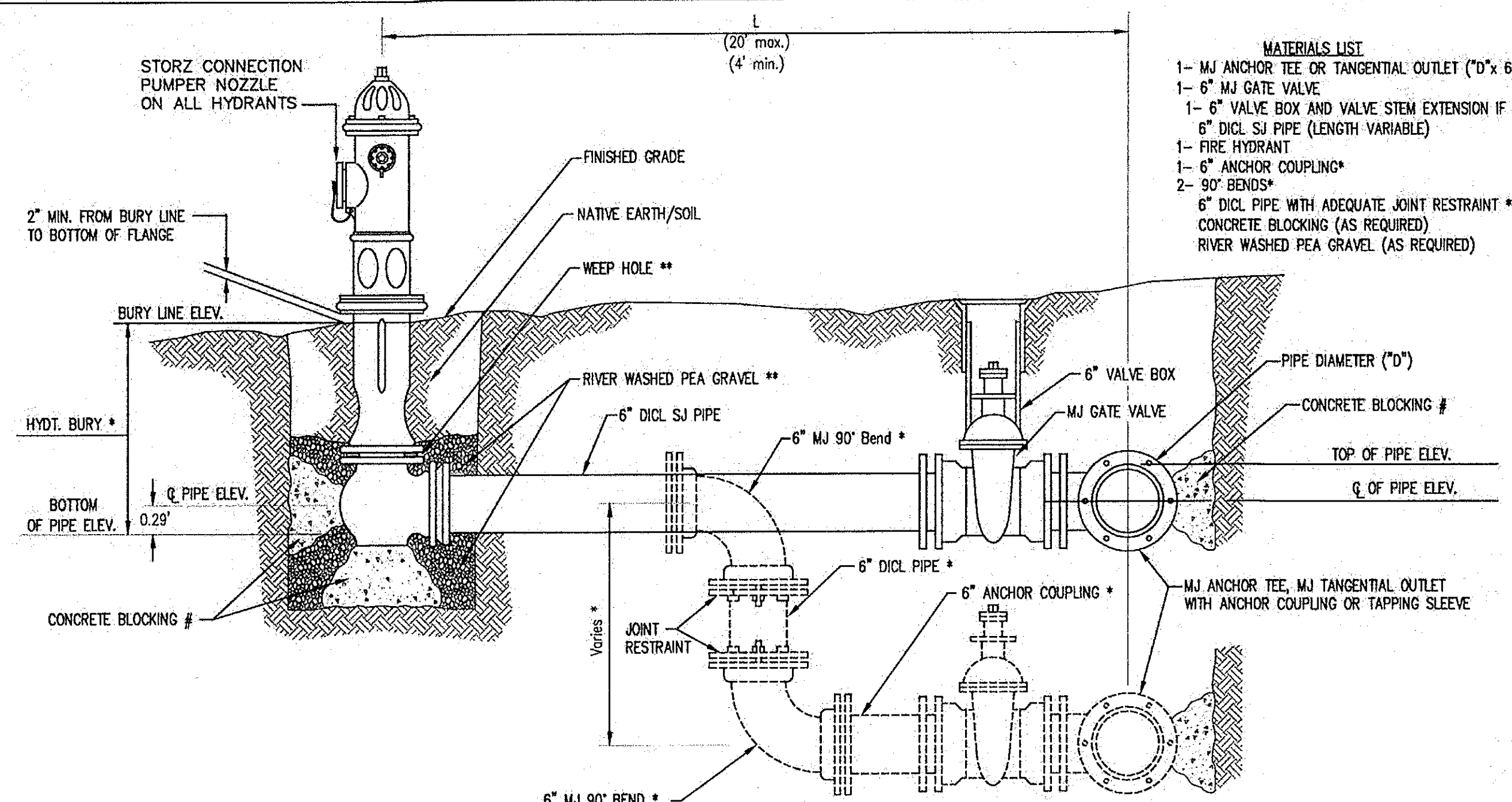
Professional Engineer

7/24/14

BLACKSTONE ENVIRONMENTAL

9153 W. 133RD STREET
OVERLAND PARK, KS 66212

STREET ADDRESS		11130 E 21ST ST N	
CITY	WICHITA	STATE	KS
COUNTY	SEDGWICK	REGIONAL DWG. NO	15-0373
WATER LINE 1 PLAN AND PROFILE			



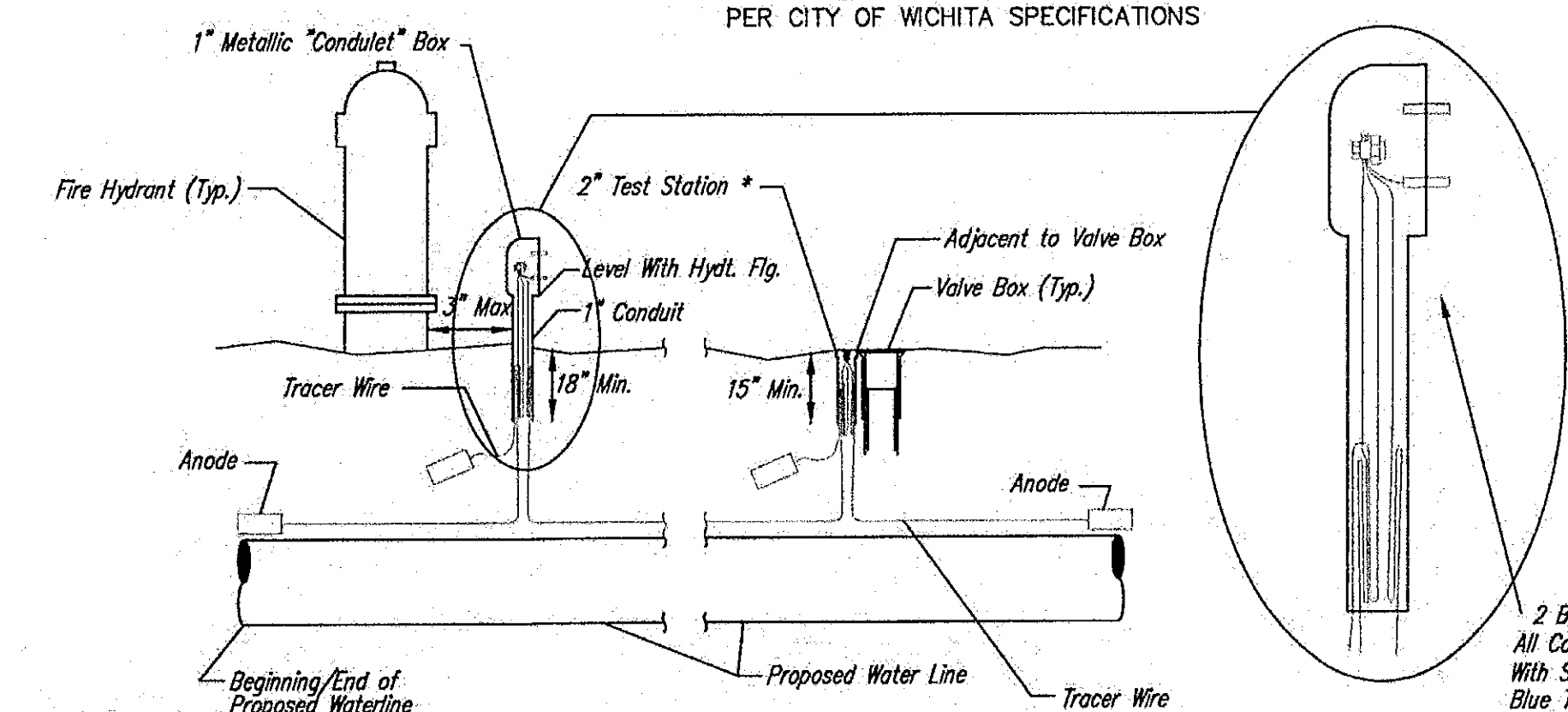
- MATERIALS LIST**
- 1- MJ ANCHOR TEE OR TANGENTIAL OUTLET ("0" x 6")
 - 1- 6" MJ GATE VALVE
 - 1- 6" VALVE BOX AND VALVE STEM EXTENSION IF REQUIRED *
 - 6" DI CL SJ PIPE (LENGTH VARIABLE)
 - 1- FIRE HYDRANT
 - 1- 6" ANCHOR COUPLING*
 - 2- 90° BENDS*
 - 6" DI CL PIPE WITH ADEQUATE JOINT RESTRAINT *
 - 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. 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 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 THHN annealed soft copper wire with thermal plastic insulation or Blue No. 12 AWG CCS with 30 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 is at all points of connection. Contractor shall attach wire being installed with proposed water main to any tracer wire installed with adjacent waterline projects.

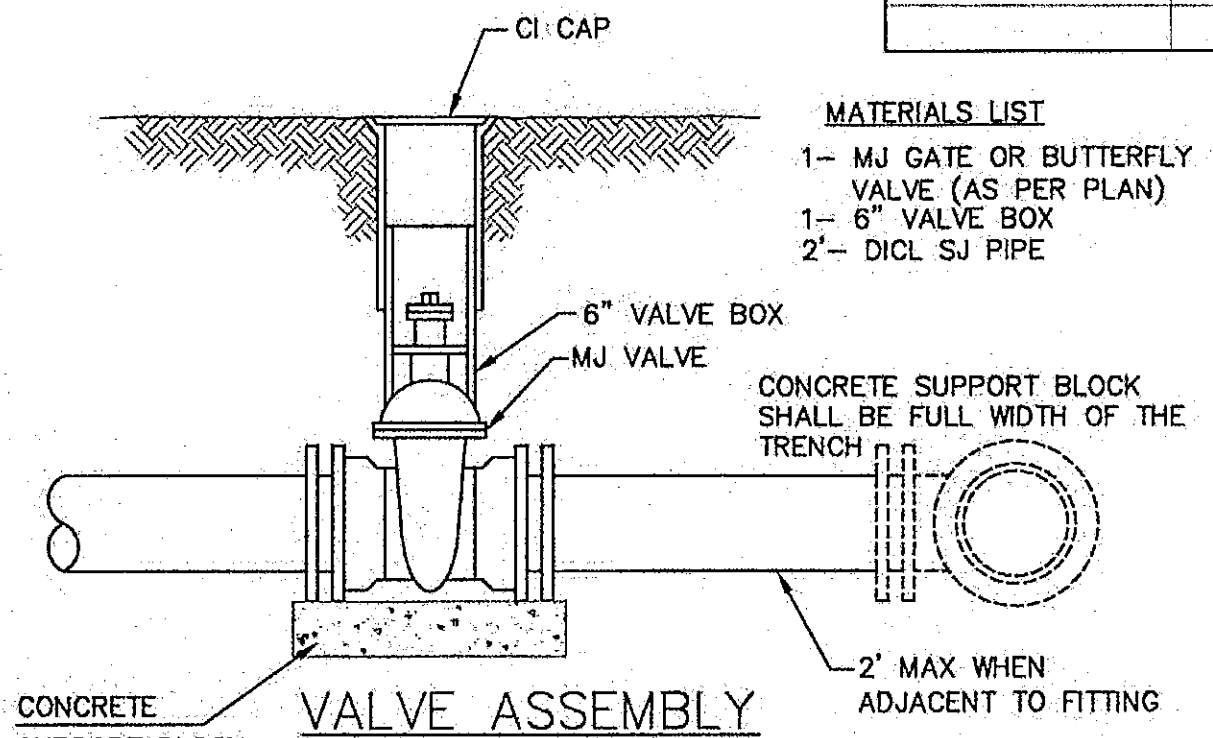
TEST STATIONS
The test station for fire hydrant applications shall be a 1 inch galvanized "conduit" style test station as manufactured by AGRA Industries with a removable solid cover having two leads extending from the face or approved equal. The test station for valve applications shall be 2 inch flush style test station T2PS3B 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. 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.

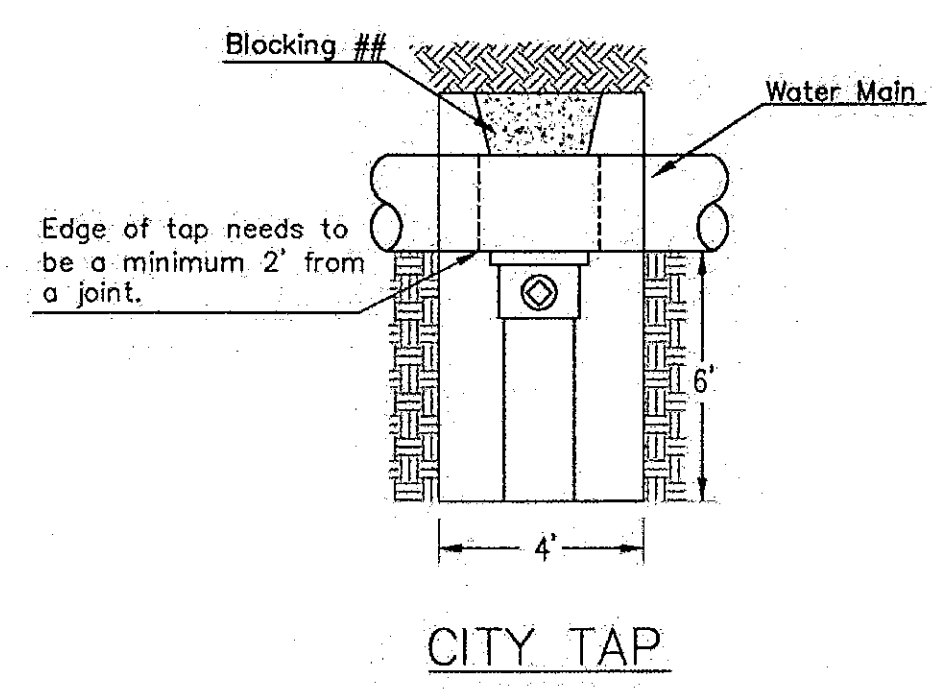
TRACER WIRE DETAIL
COST IS SUBSIDIARY TO PIPE INSTALLATION

FIRE HYDRANTS REQUIRED

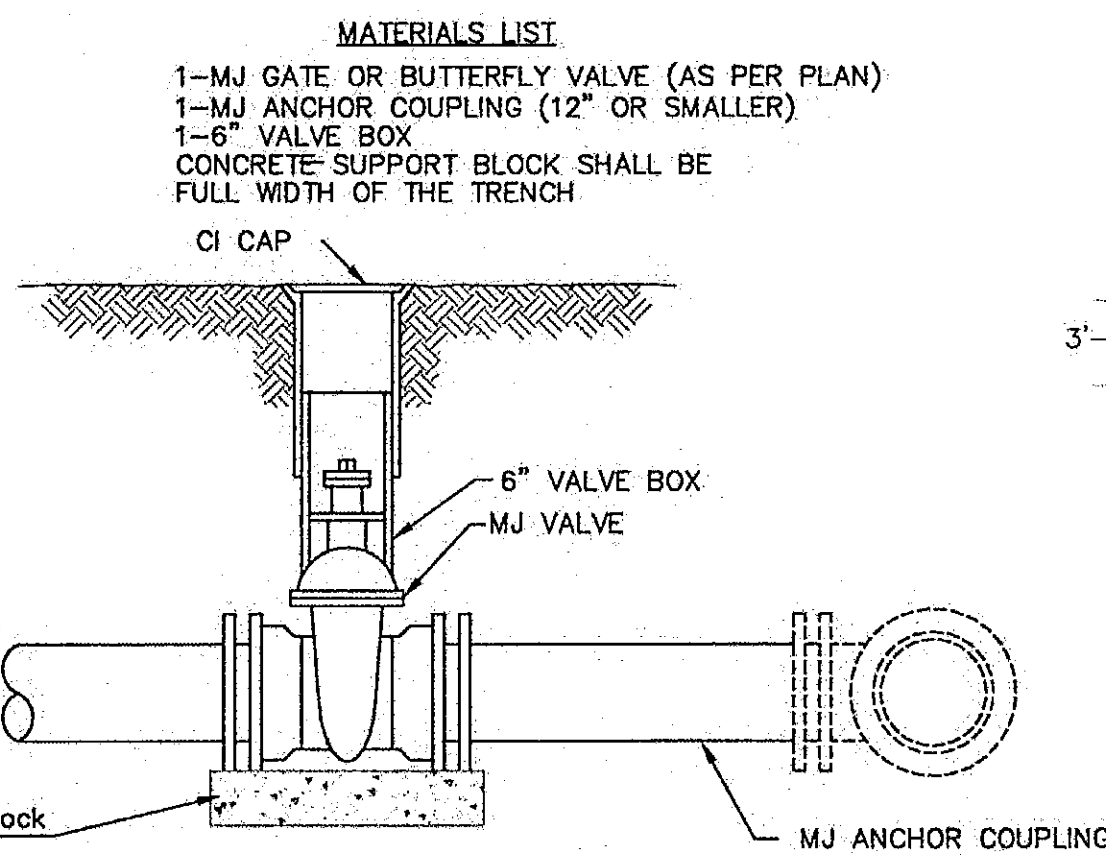
STATION	BURY LINE ELEVATION	TOP OF PIPE ELEVATION	FIRE HYDRANT BURY REQUIRED*	VALVE STEM EXT. REQUIRED (ft)*
0+91	1367.93	1363.93	No	No



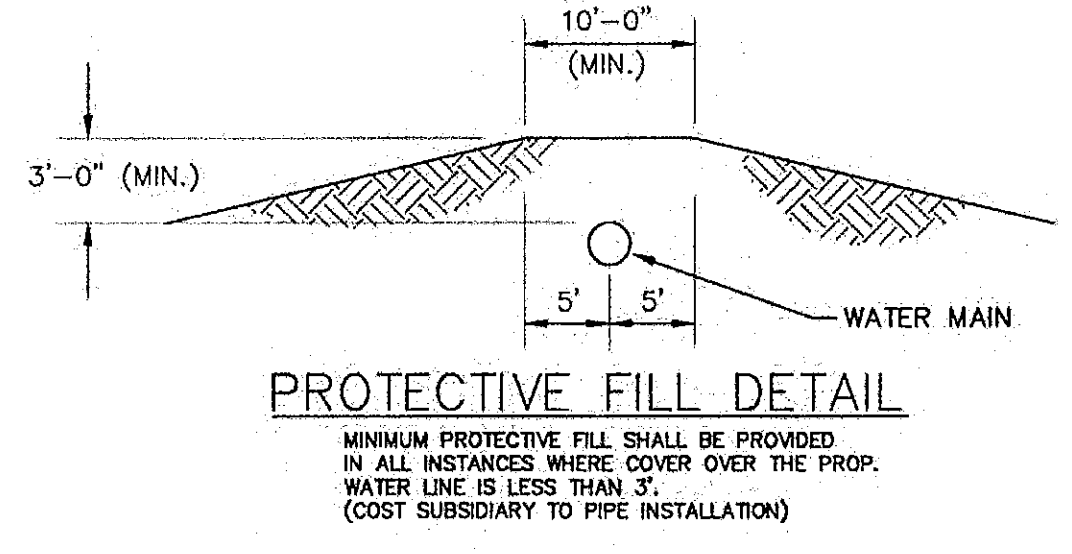
- MATERIALS LIST**
- 1- MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
 - 1- MJ ANCHOR COUPLING (12" OR SMALLER)
 - 1- 6" VALVE BOX
 - CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH



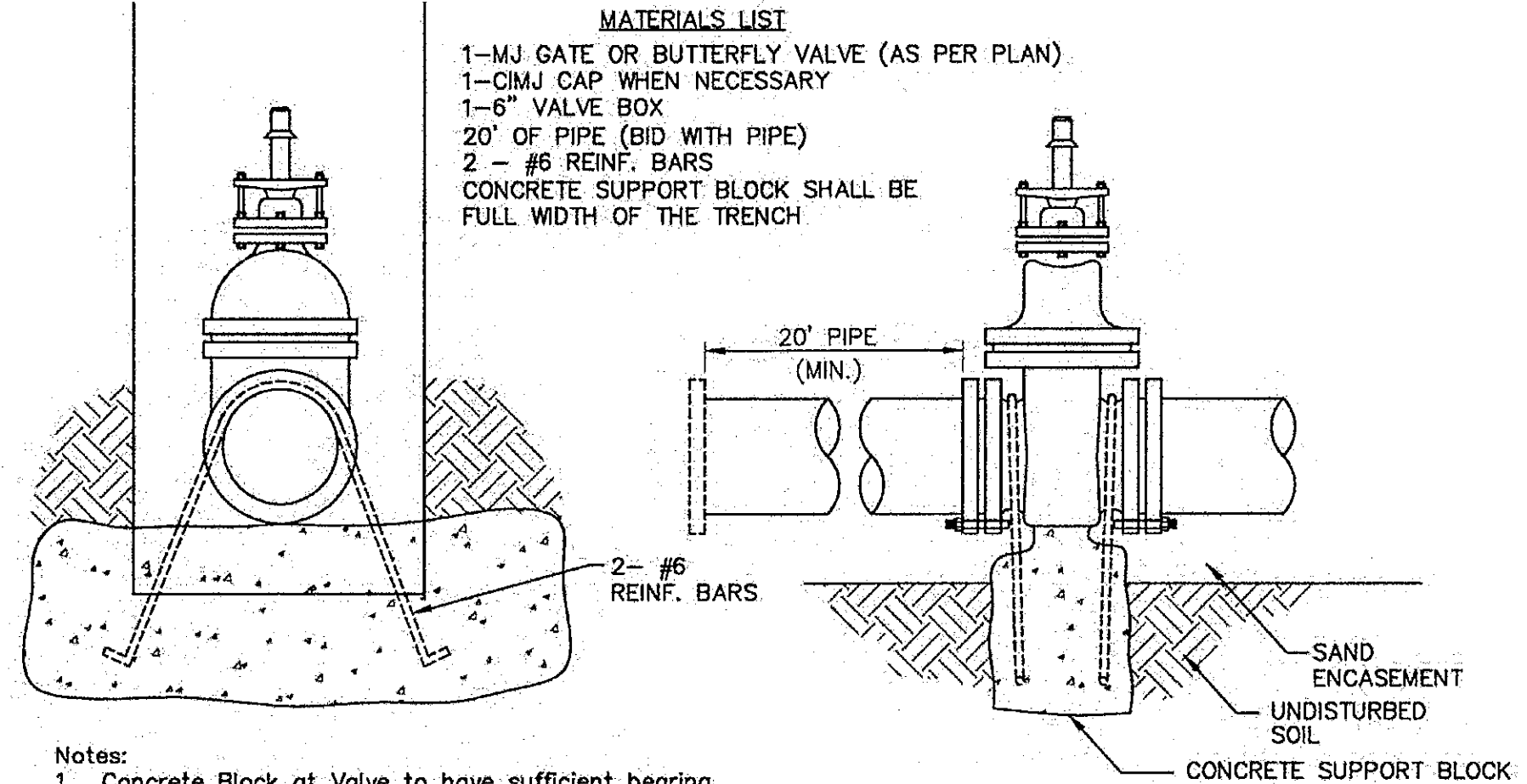
When the City of Wichita makes tap, blocking is to be done by Contractor



- 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



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)



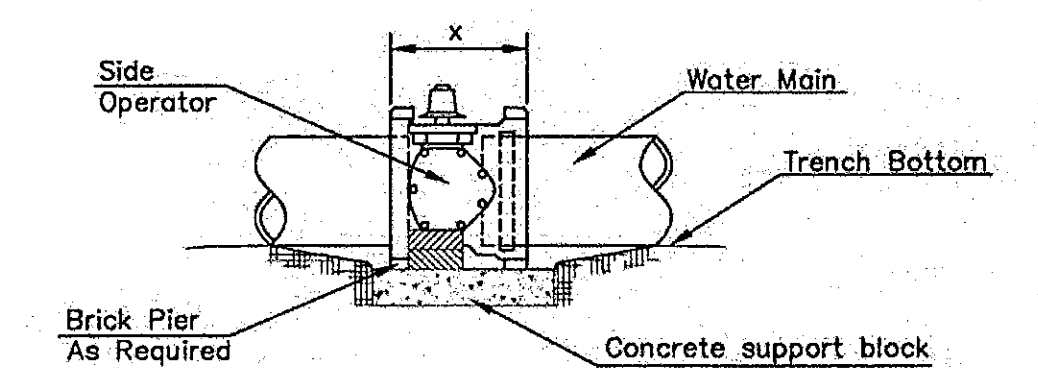
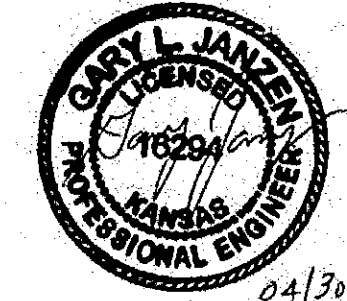
- MATERIALS LIST**
- 1- MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
 - 1- CI MJ CAP WHEN NECESSARY
 - 1- 6" VALVE BOX
 - 20' OF PIPE (BID WITH PIPE)
 - 2- #6 REINF. BARS
 - CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH

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.

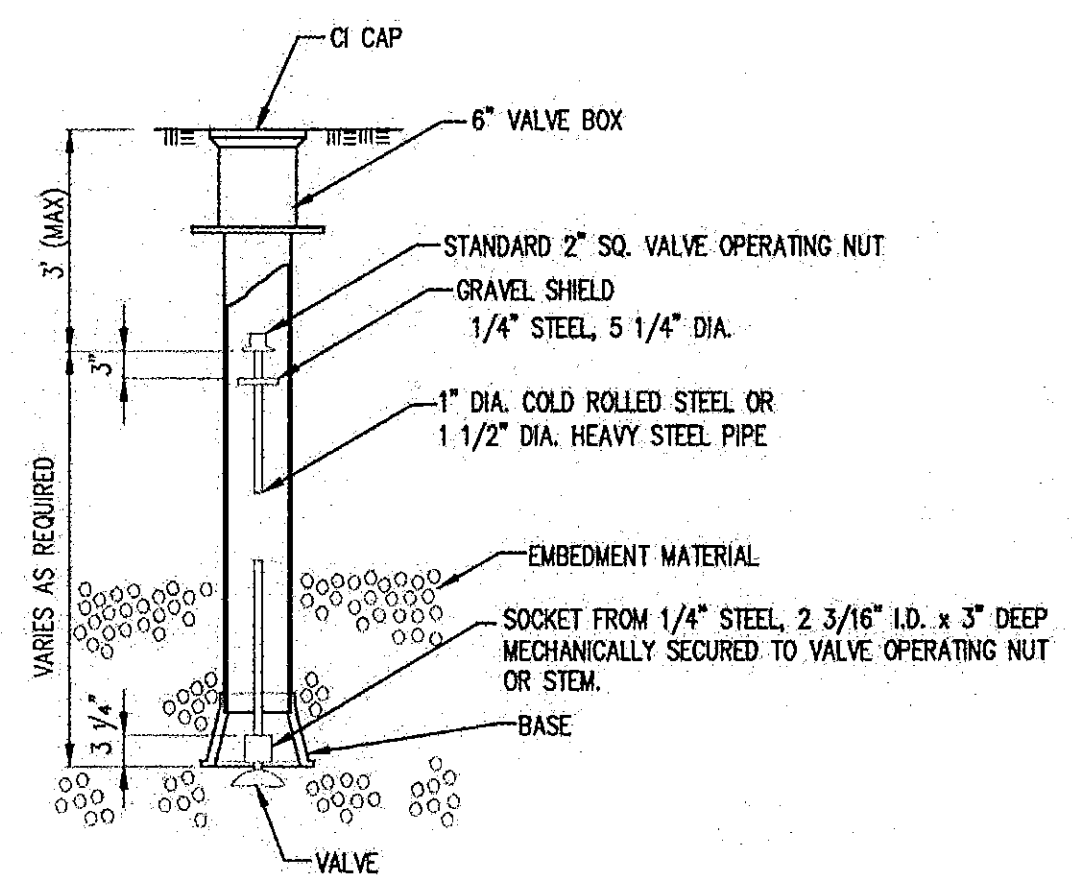
THRUST AT VALVES

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



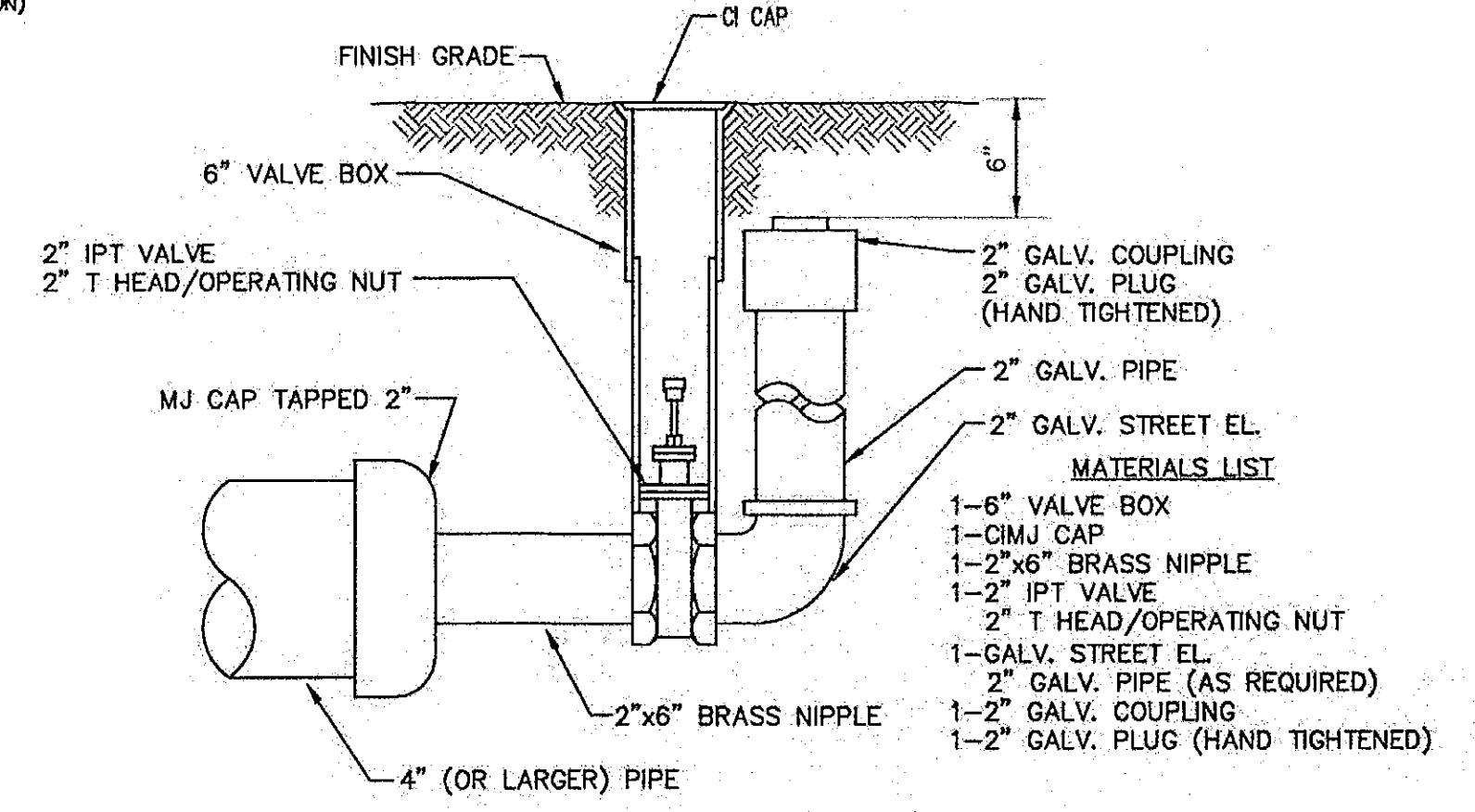
- NOTES**
- This detail covers Butterfly Valve installation, inclusive, regardless of type of pipe or joint used. 24" and larger lines to be detailed on plans.
 - 6" Valve Box and Cover required per City of Wichita Std. Specifications.
 - Conc. Support Block to be full width of trench.

CONCRETE SUPPORT BLOCKING FOR BUTTERFLY VALVE INSTALLATION



VALVE STEM EXTENSION DETAIL

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



2" BLOWOFF ASSEMBLY

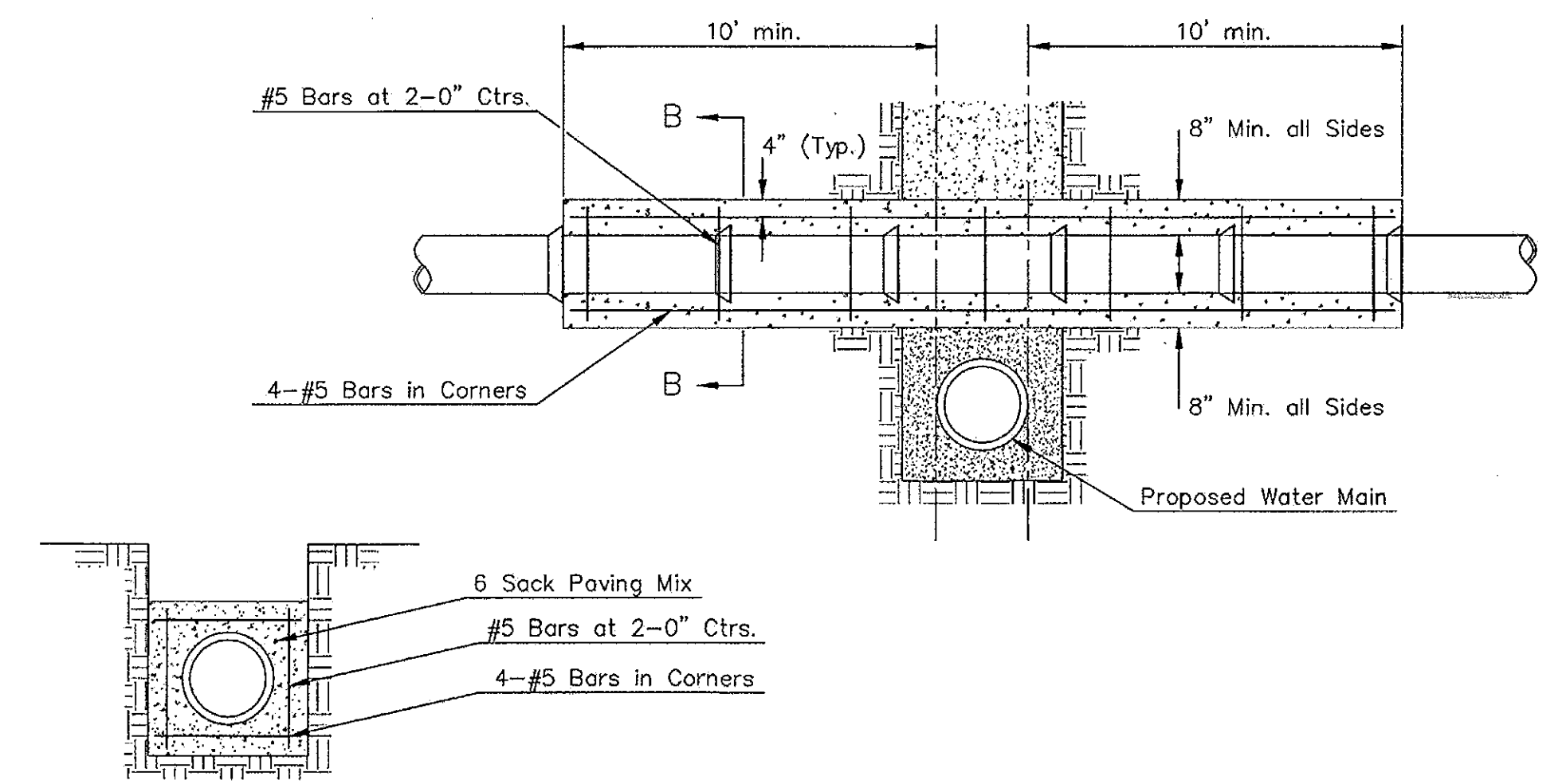
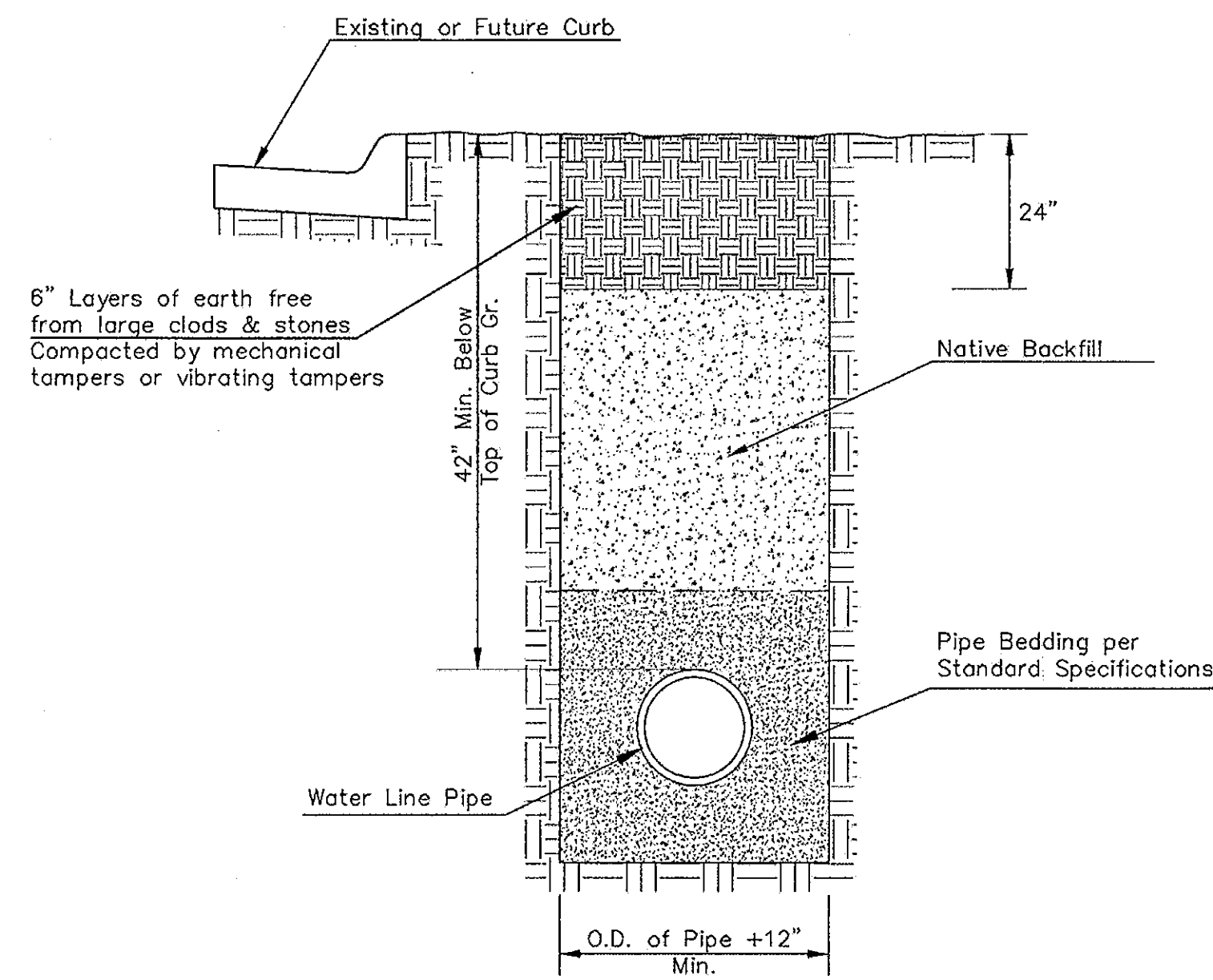
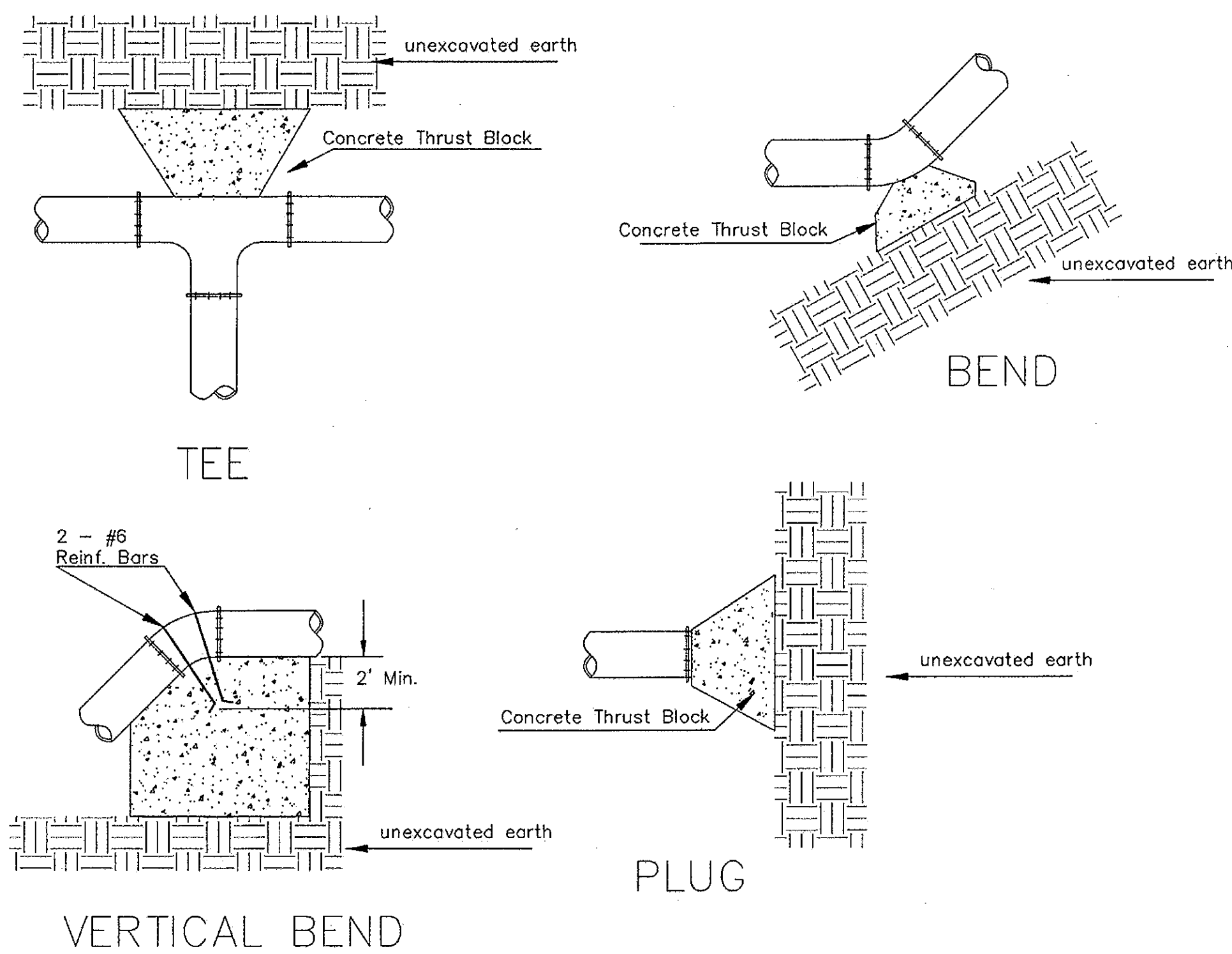
CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STANDARD WATER ASSEMBLY DETAIL
CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
		04/2013

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1420
(316) 268-4501

SHEET
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Note: Encasement to begin and end at a Bell on Sanitary Sewer Pipe.

SECTION B-B

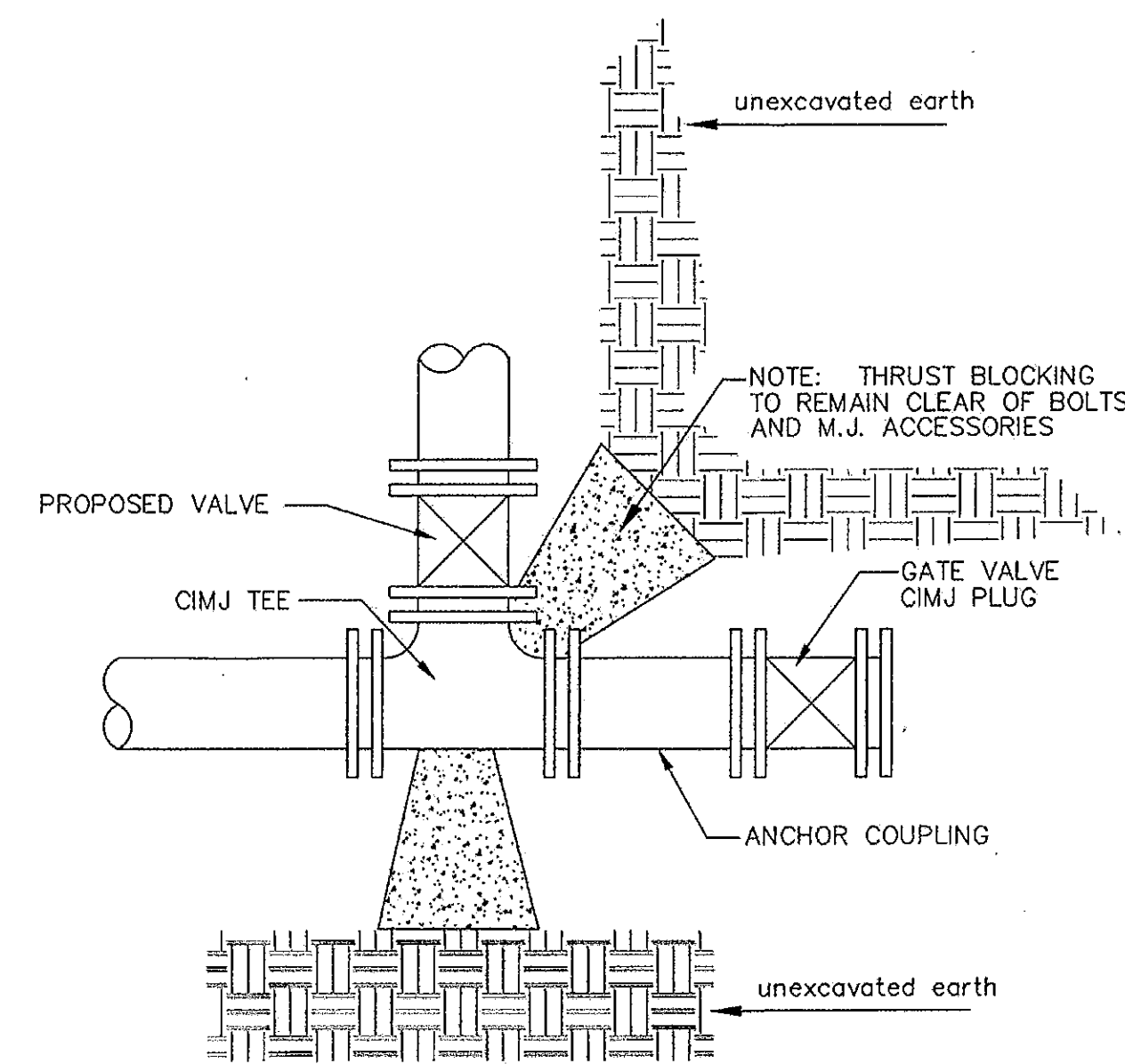
TRENCH COMPACTION IN ROAD RIGHT-OF-WAY

SIDE VIEW

REINFORCED CONCRETE ENCASEMENT OF SANITARY SEWER

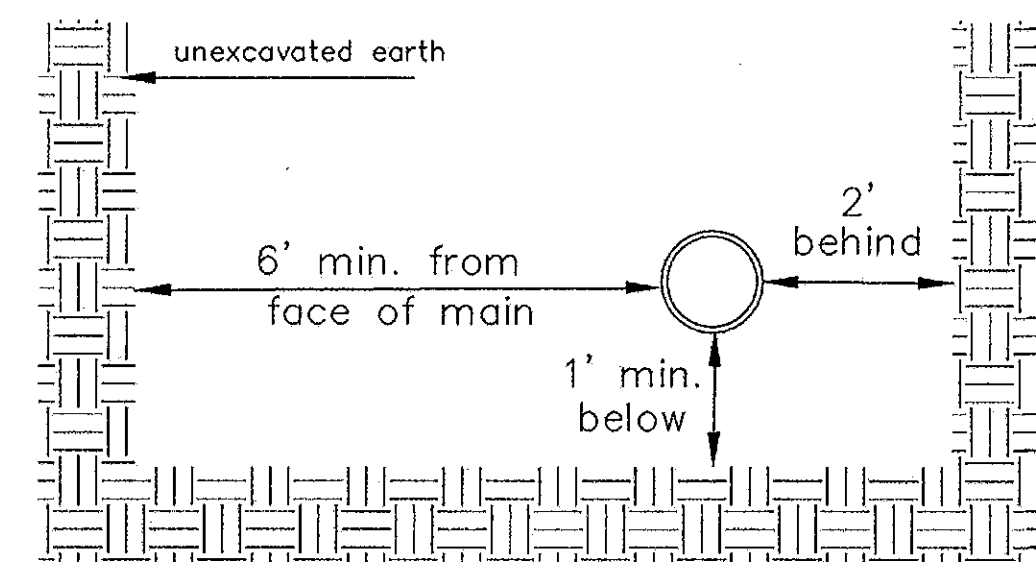
PIPE SIZE	THRUST AT FITTINGS IN TONS-AT 150#/IN ² P					
	PLUG	90°	45°	22 1/2°	11 1/4°	TEE
6"	2.8	3.95	2.15	1.09	.55	2.8
8"	4.9	6.95	3.75	1.90	.96	4.9
12"	11.4	16.1	8.75	4.45	2.25	11.4
16"	20.15	28.5	15.4	7.85	3.95	20.15
20"	31.15	44.0	23.85	12.15	6.10	31.15
24"	44.55	63.0	34.1	17.4	8.75	44.55

TYPICAL THRUST BLOCKS



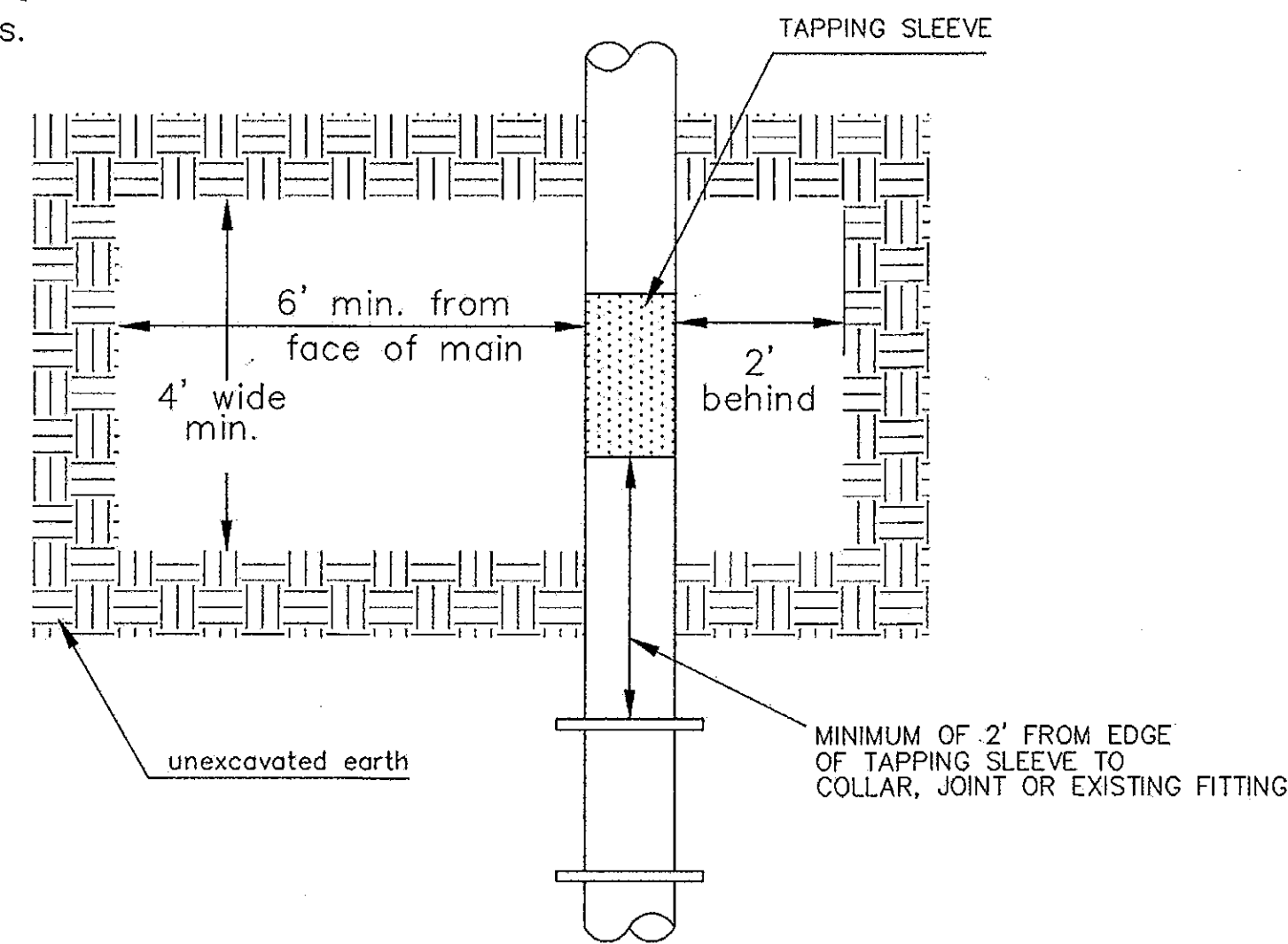
KEY BLOCK DETAIL

* PLANS GOVERN UNLESS OTHERWISE NOTED ON PLANS



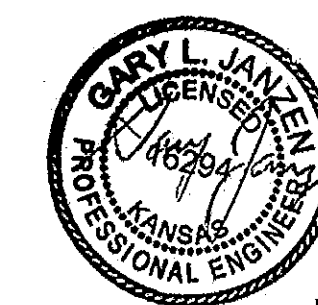
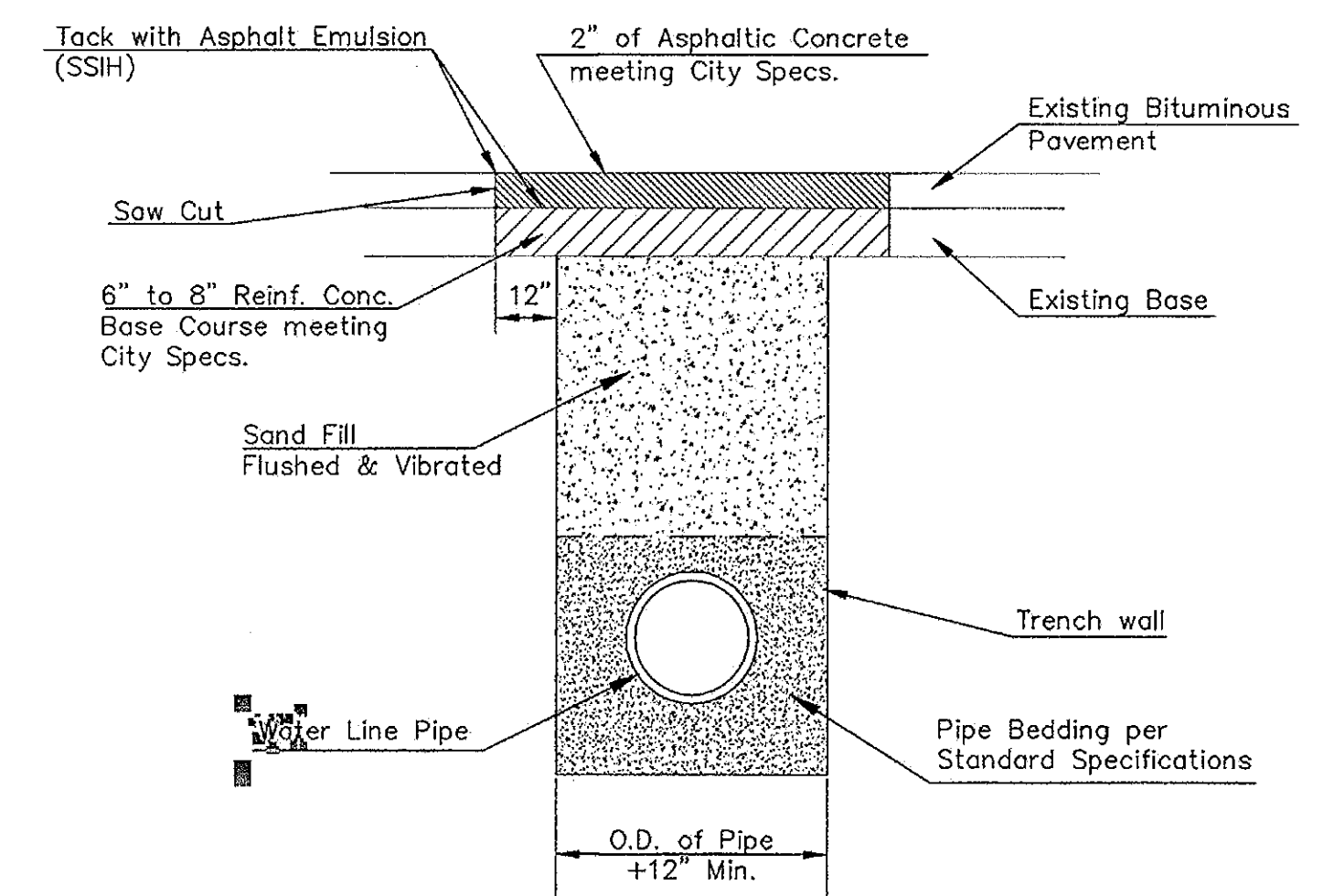
Note: When shoring is required it is to be per The City of Wichita Standard Specifications.

TOP VIEW



EXCAVATION FOR WET TAP

PAVEMENT REPLACEMENT & TRENCH COMPACTION UNDER EXISTING AND PROPOSED CITY ROADS



04/24/14

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

MISCELLANEOUS WATER DETAILS
CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
		04/2014
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET
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