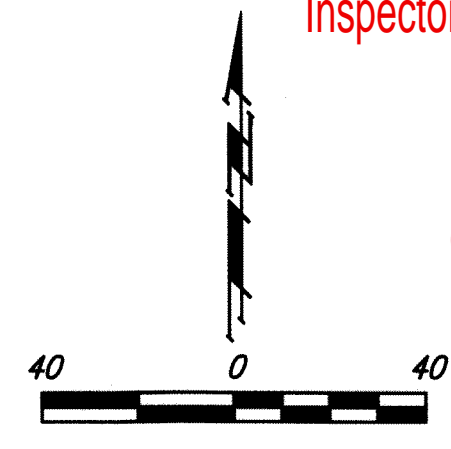


AS BUILT PLANS

Contractor: McCullough Excavating
 Inspector: Don Eddingfield, Baughman Co.
 pdf's by: KEK, 12/15/14

Clow Fire Hydrant



WATER LINE to serve

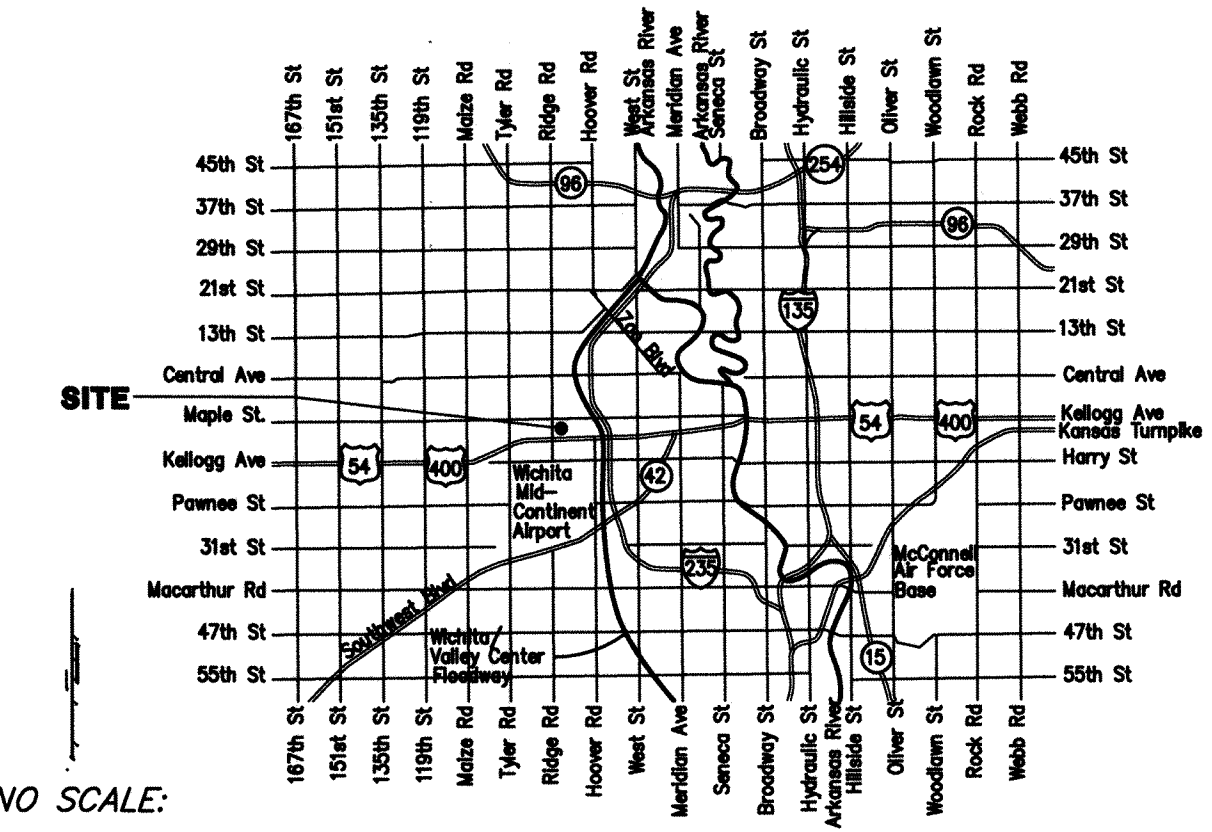
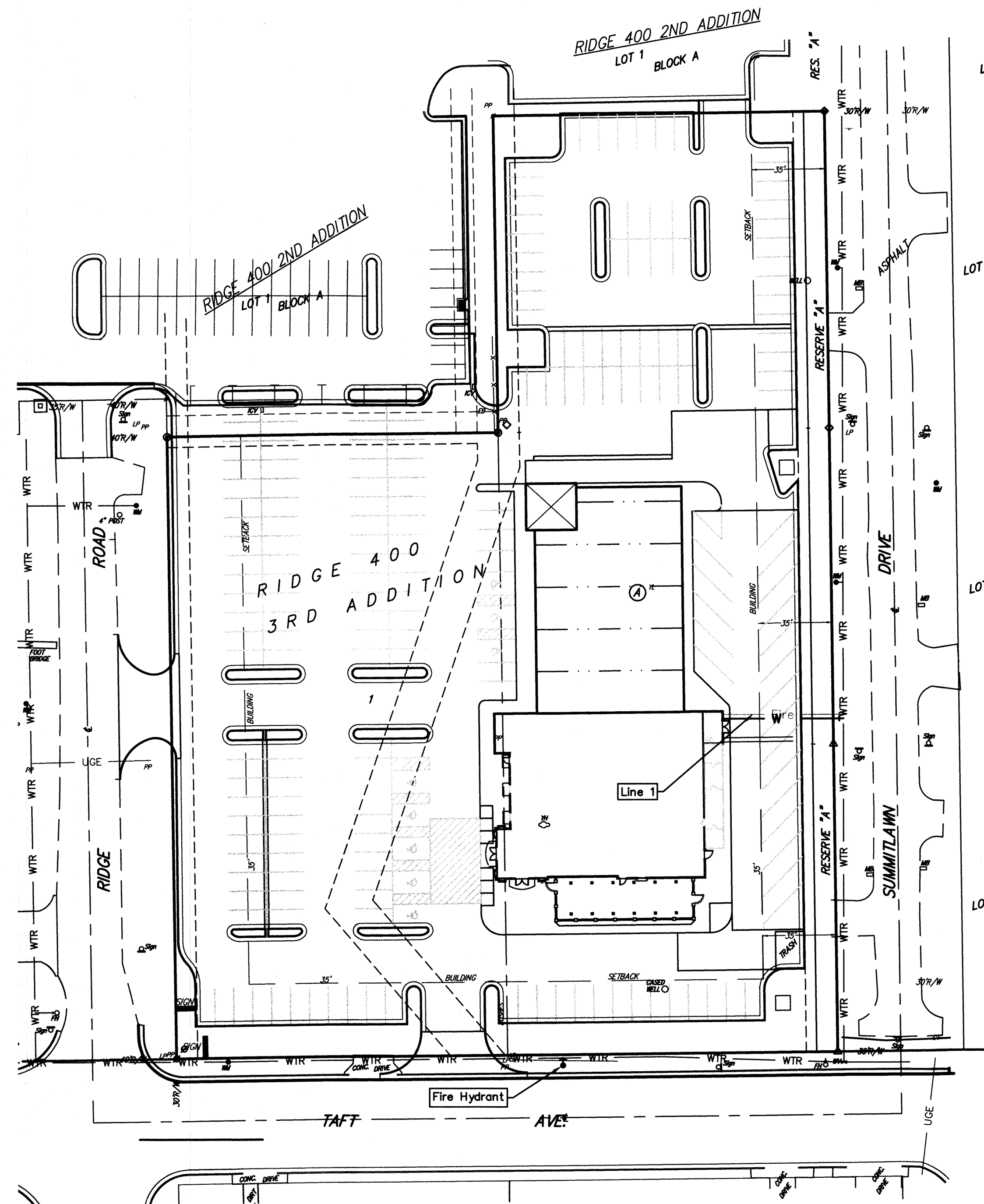
Ridge 400 3rd Addition

Private Project: 1841 PPW (607853)

CITY OF WICHITA, KANSAS

Gary Janzen, P.E., City Engineer

September 2014



Vicinity Map

BENCHMARKS

SITE BENCHMARK-1
 Chiseled square on top of curb, north side of Taft Ave., 157.6' east and 8.6' south of the SW corner of Lot 1, Block A, Ridge 400 3rd Add.
 Elevation=1324.73 (NAVD 88)

LEGAL DESCRIPTION

Lot 1, Block 1, Ridge 400 3rd Addition, Wichita, Sedgewick County, Kansas.

SHEET INDEX:

Title Sheet	1
Standard Water Details	2
Miscellaneous Water Details	3
Line 1 & 2	4

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

Public Works *Rebecca Strif* 9/26/14
 Water & Sewer *Joe Zool* 9-26-14
 Fire *DMC* 9-26-14

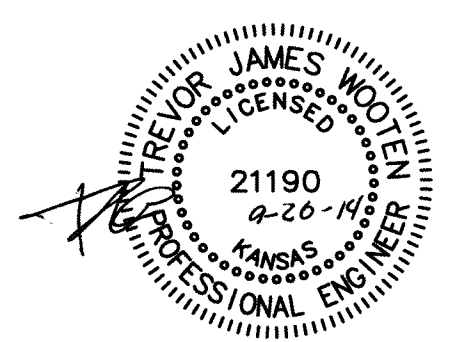
NOTE TO CONTRACTORS

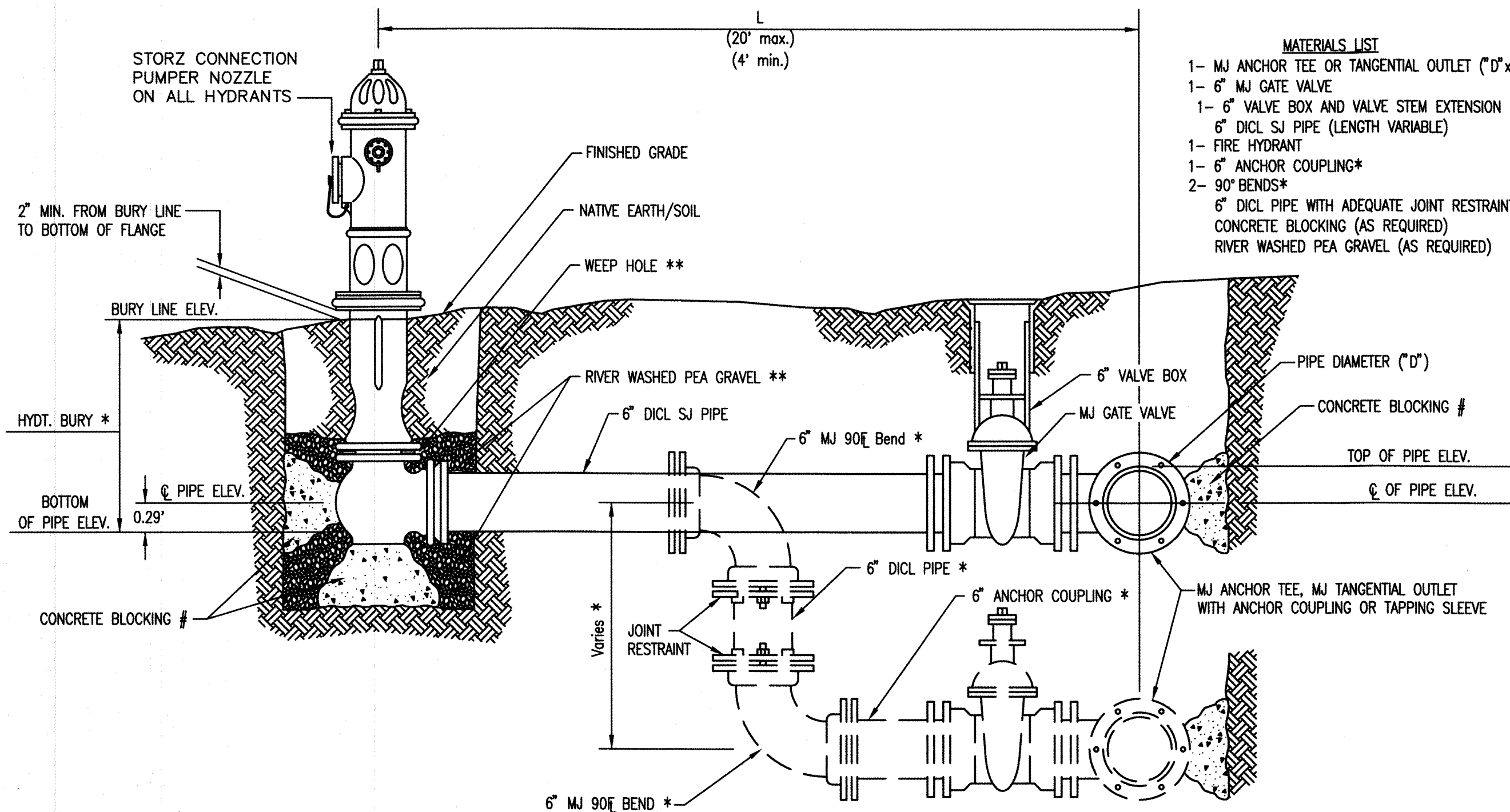
Public Property:
 Inspection and testing for the waterline is to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection to be in accordance with the City of Wichita standard construction engineering practices and certified by a Professional Engineer 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 (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 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.

General Notes

- Contractor will be required to provide notice to utility companies a minimum of forty-eight (48) hours prior to any excavation, as follows:
 Kansas One-Call 687-2470
 The Contractor must notify the following in case of an emergency:
 Cox Communications 262-4270
 Kansas Gas Service Company 1-888-482-4950
 Westar Energy (Electric) 383-8650
 Black Hills Energy (Gas) 1-800-303-0357
 AT&T 268-2245
 City of Wichita Water Dept. 268-4563
 City of Wichita Sewer Maint. 268-4024
 City of Wichita Storm Sewer Maint. 268-4090
 City of Wichita Traffic Maint. 268-4034
- 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.
- Contractor to remove concrete sidewalk to the nearest construction joint.
- Contractor shall furnish the inspector with a copy of the manufacturer's certification for any pipe used on this project after completion of pipe installation. The engineer will not certify the project to the city until pipe certification has been received.
- 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.
- All water lines and appurtenances shall be installed in accordance with the most recent edition of City of Wichita, Kansas Standard Specifications for the Construction of City Projects and Special Provisions.
- Contractor shall not start work on the project until the project inspector is assigned to the project and is present on the site. Contractor shall not start on the project until all necessary bonds and permits have been obtained. Bonds may include but are not limited to Statutory, Performance & Maintenance. Any work done without inspection will be required to be uncovered for inspection.
- 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 their construction operations. Irons shall be re-set by a licensed land surveyor.





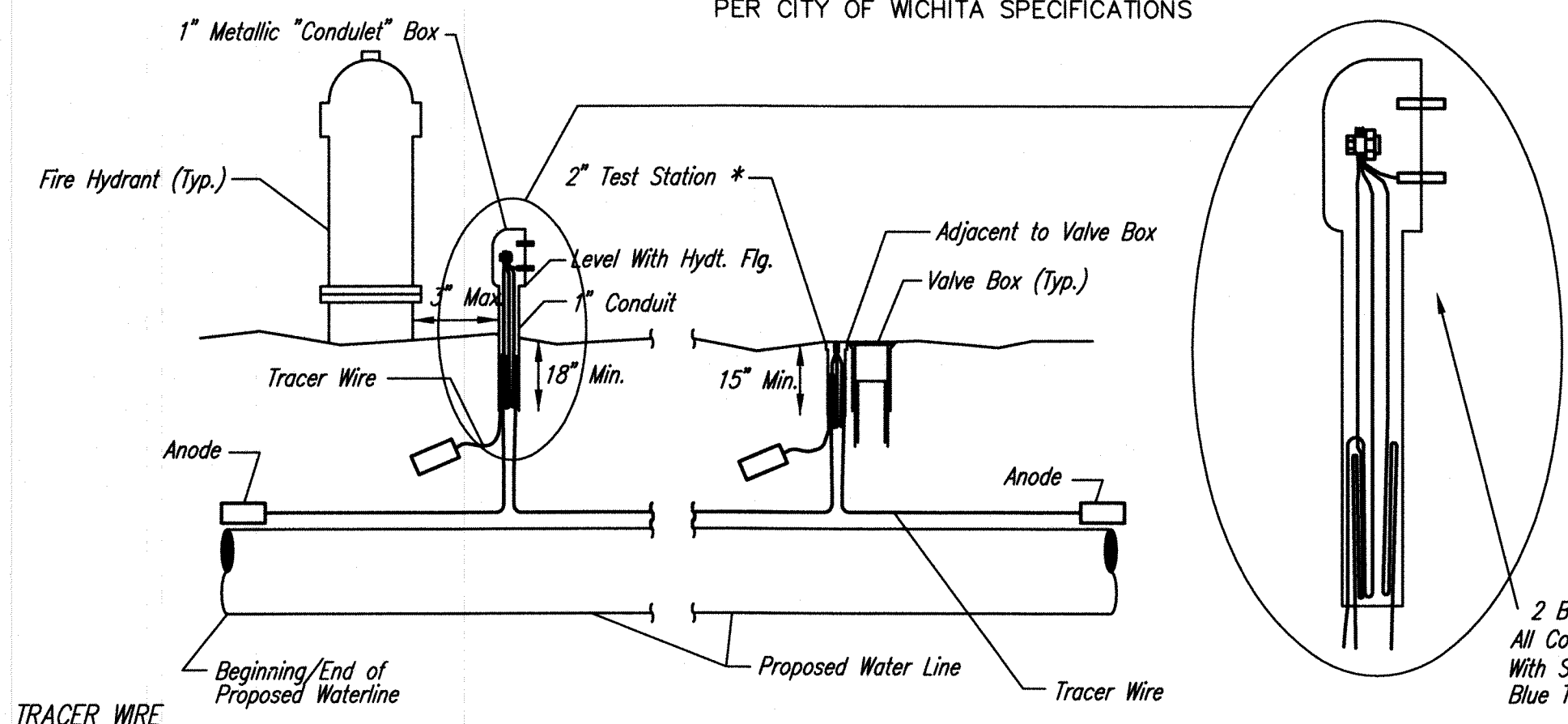
- MATERIALS LIST**
- 1- MJ ANCHOR TEE OR TANGENTIAL OUTLET (10"x 6")
 - 1- 6" MJ GATE VALVE
 - 1- 6" VALVE BOX AND VALVE STEM EXTENSION IF REQUIRED *
 - 6" DICTL SJ PIPE (LENGTH VARIABLE)
 - 1- FIRE HYDRANT
 - 1- 6" ANCHOR COUPLING*
 - 2- 90° BENDS*
 - 6" DICTL PIPE WITH ADEQUATE JOINT RESTRAINT *
 - 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" DICTL PIPE AS NECESSARY FOR VERTICAL ADJUSTMENT. THE CONTRACTOR SHALL PROVIDE ADEQUATE THRUST BLOCKING AT HYDRANT AND MEAGALUGS, 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.

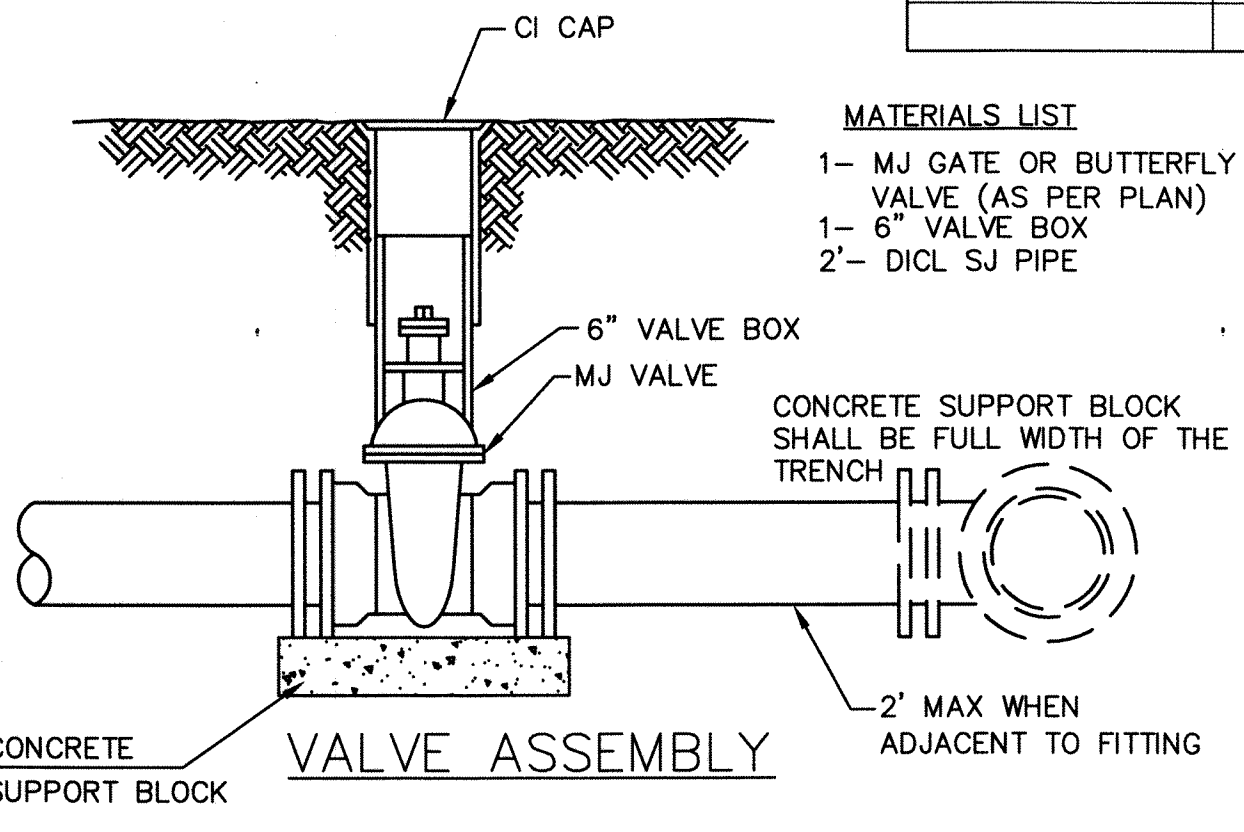
WIRE
The tracer wire shall be Blue No. 12 THHN annealed soft copper wire with thermal plastic insulation or Blue No. 12 AWG CCS with 30 mil HDPE insulation. The insulation shall be heat, oil, and gasoline resistant as manufactured by Temple Electric or approved equal. To allow for grade adjustment, a 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 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 "condulet" 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.

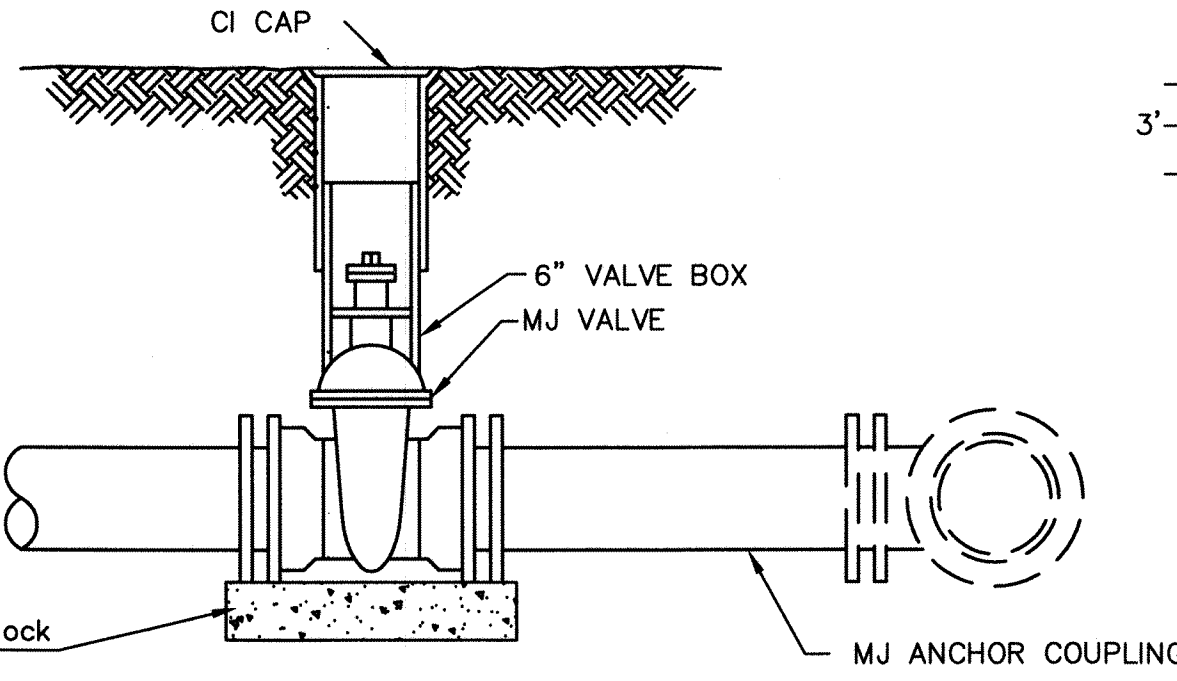
ANODES
The anodes shall be 3 lb. bare zinc or magnesium. The anodes shall be buried at the same elevation as the waterline at each test station. The anodes shall be connected to Black No. 12 THHN annealed soft copper wire which shall be extended to the test station.

TRACER WIRE DETAIL
COST IS SUBSIDIARY TO PIPE INSTALLATION

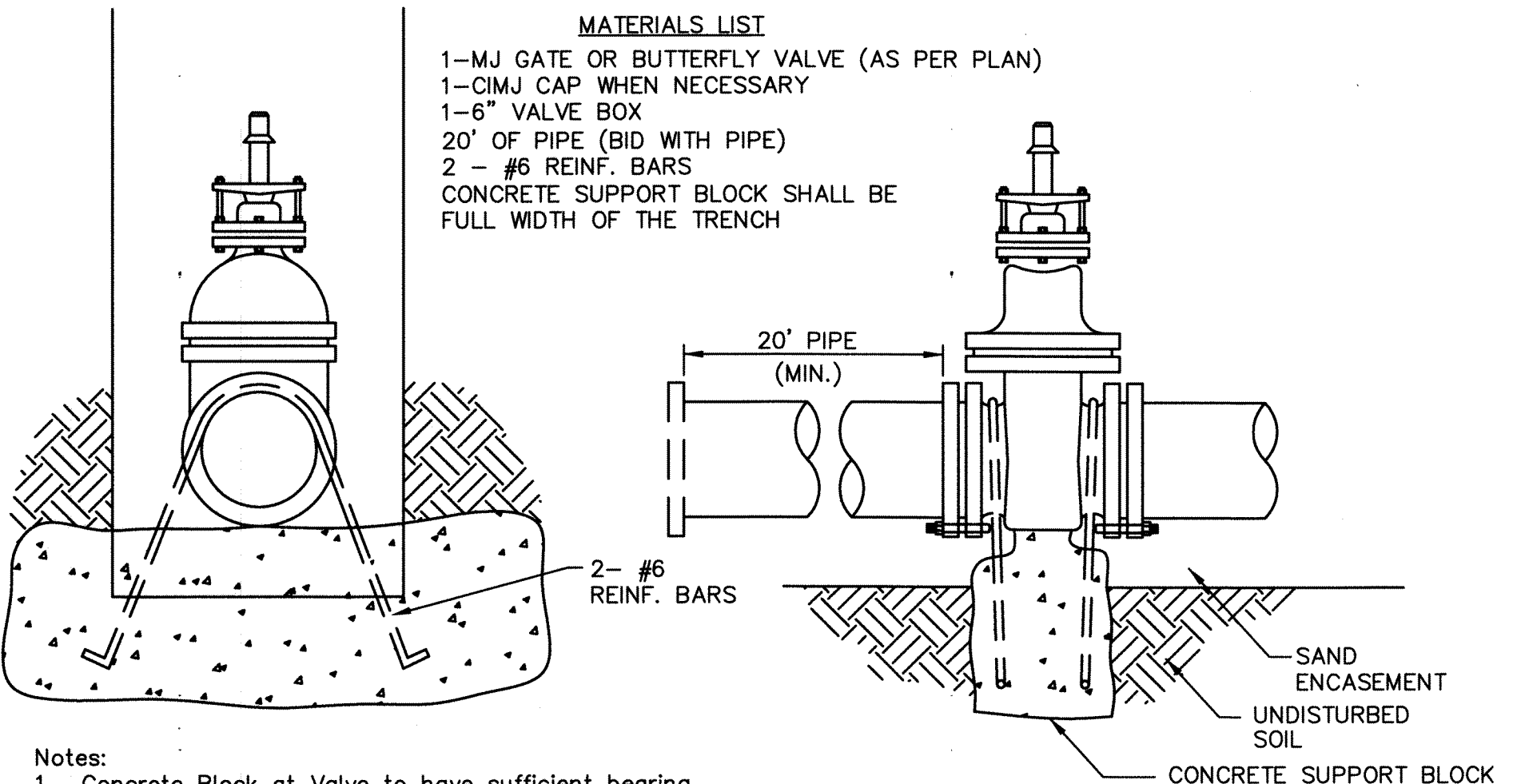
FIRE HYDRANTS REQUIRED				
STATION	BURY LINE ELEVATION	TOP OF PIPE ELEVATION	FIRE HYDRANT BURY REQUIRED*	VALVE STEM EXT. REQUIRED (ft)*
0+00.00, Line 1	1325.86	1322.04	4.50'	



- 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



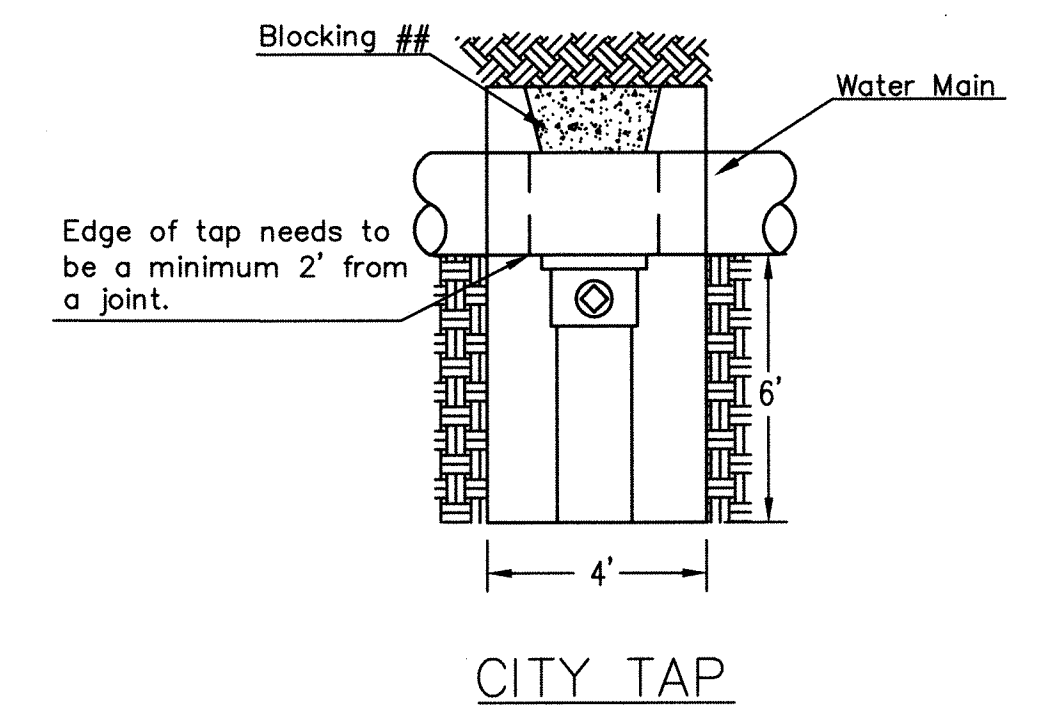
ANCHORED VALVE ASSEMBLY



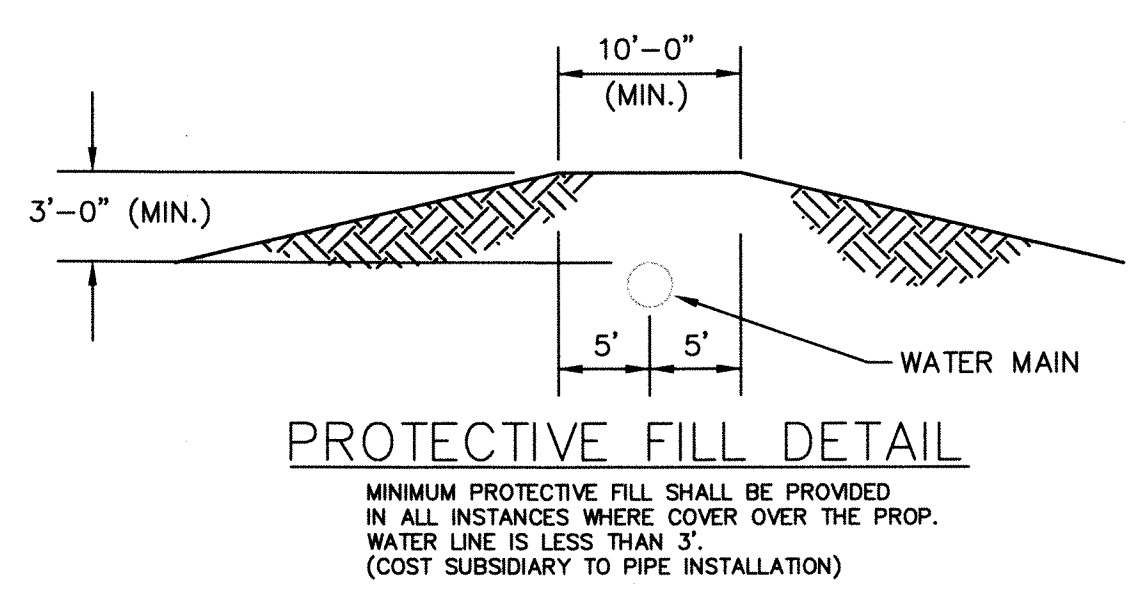
- Notes:**
- Concrete Block at Valve to have sufficient bearing in undisturbed soil to prevent thrust movement as shown in table at right. Field Engineer to determine thrust loading of undisturbed soil and final size of thrust block.
 - The thrust block shall be constructed such that bolts, nuts, and 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.2
4"	1809 lbs.
6"	4245 lbs.
8"	7540 lbs.
12"	16965 lbs.

ANCHORED VALVE ASSEMBLY, SPECIAL

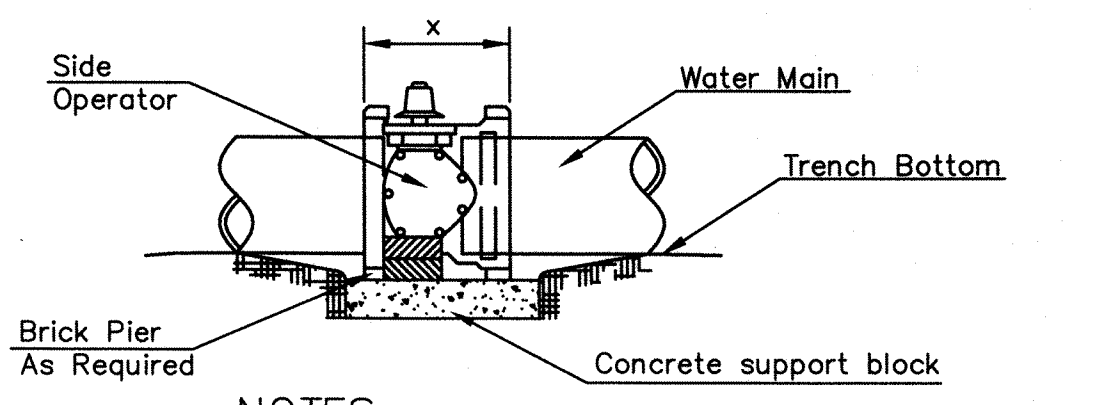


** When the City of Wichita makes tap, blocking is to be done by Contractor



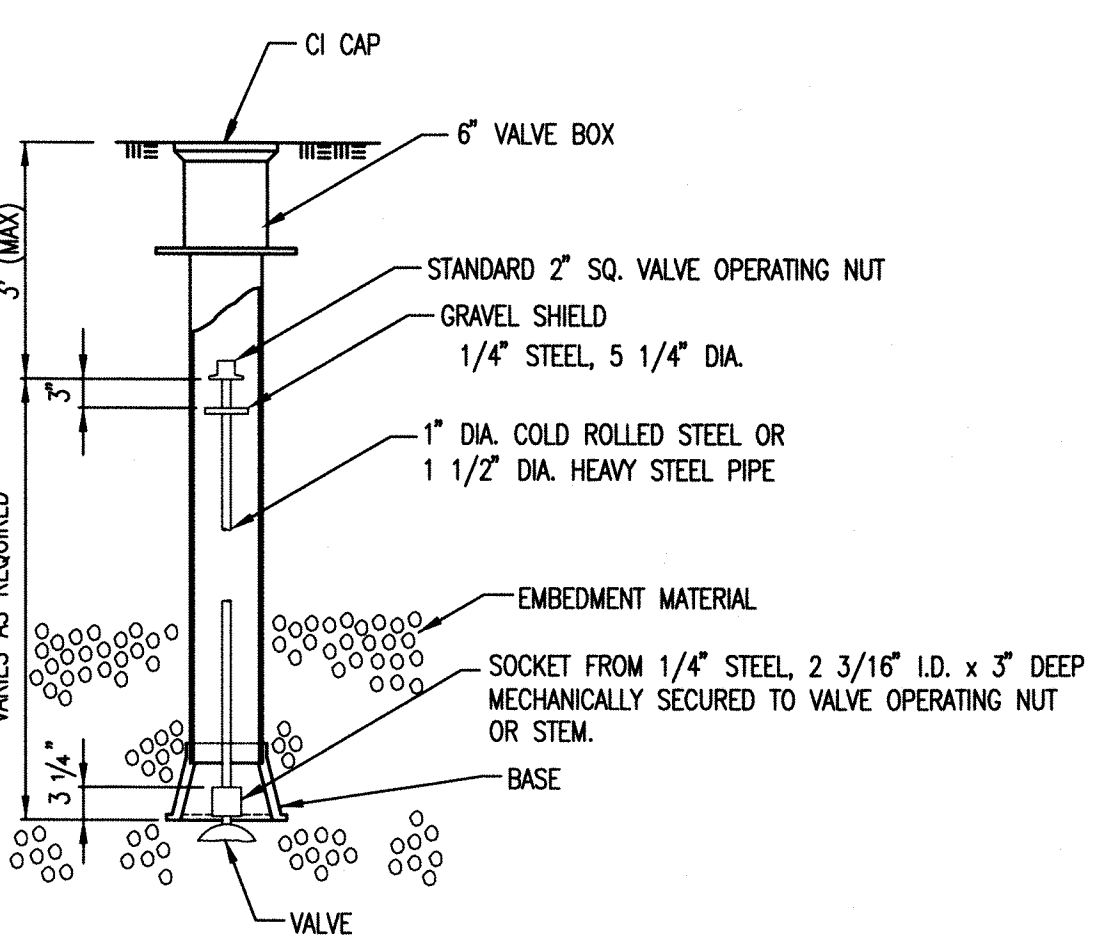
PROTECTIVE FILL DETAIL

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)



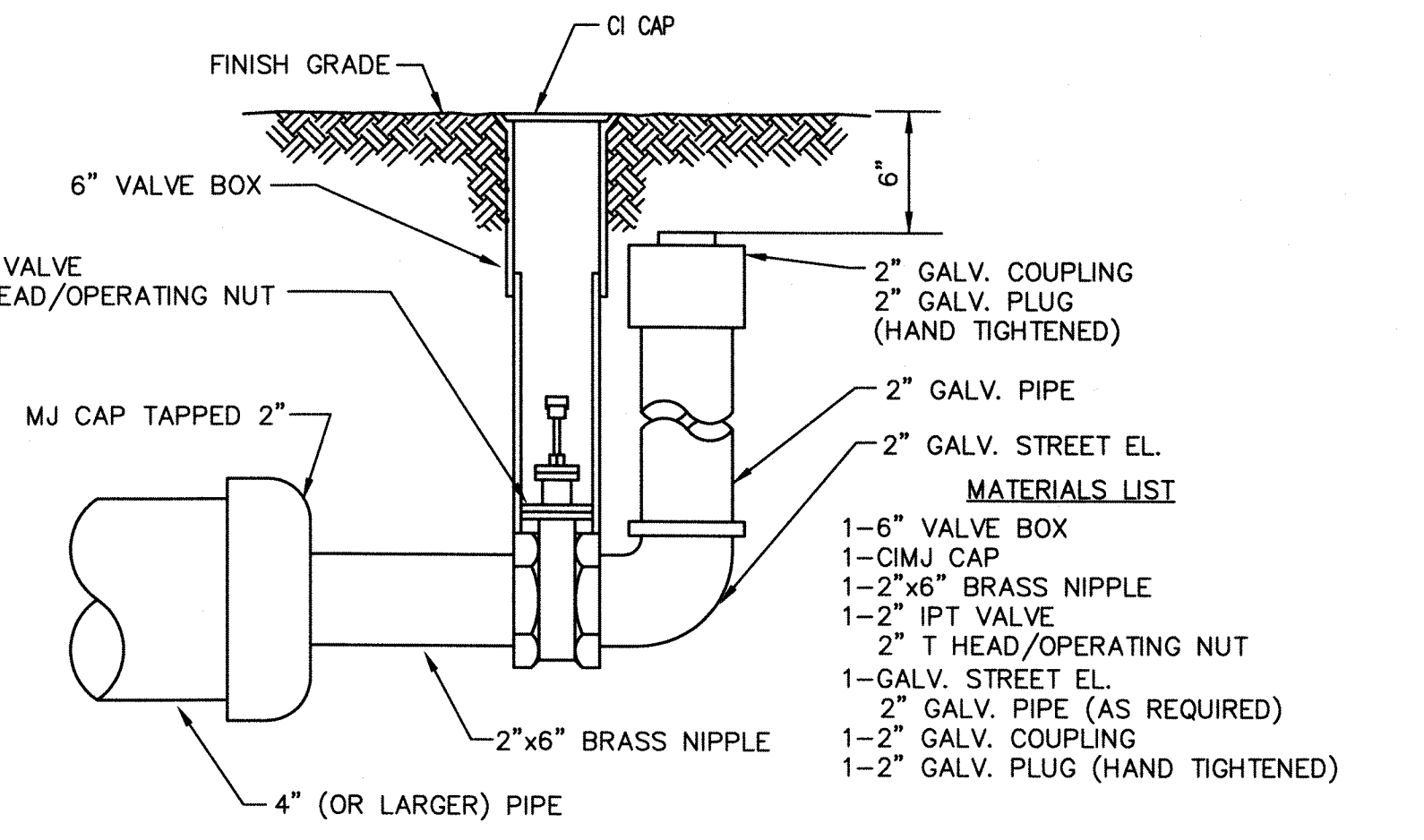
- NOTES**
- This detail covers Butterfly Valve installation, inclusive, regardless of type of pipe or joint used. 24" and larger lines to be detailed on plans.
 - 6" Valve Box and Cover required per City of Wichita Std. Specifications.
 - Conc. Support Block to be full width of trench.

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

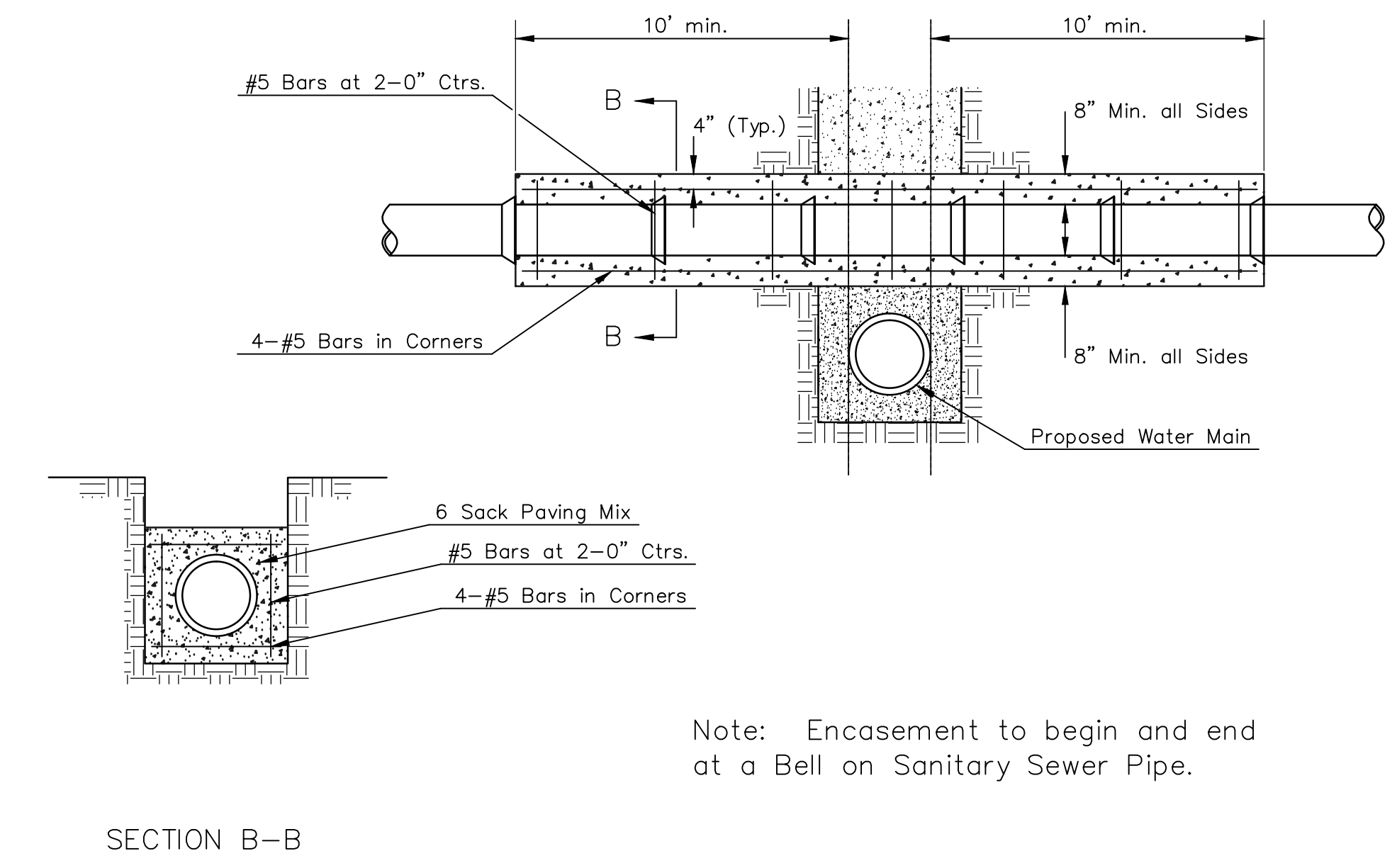
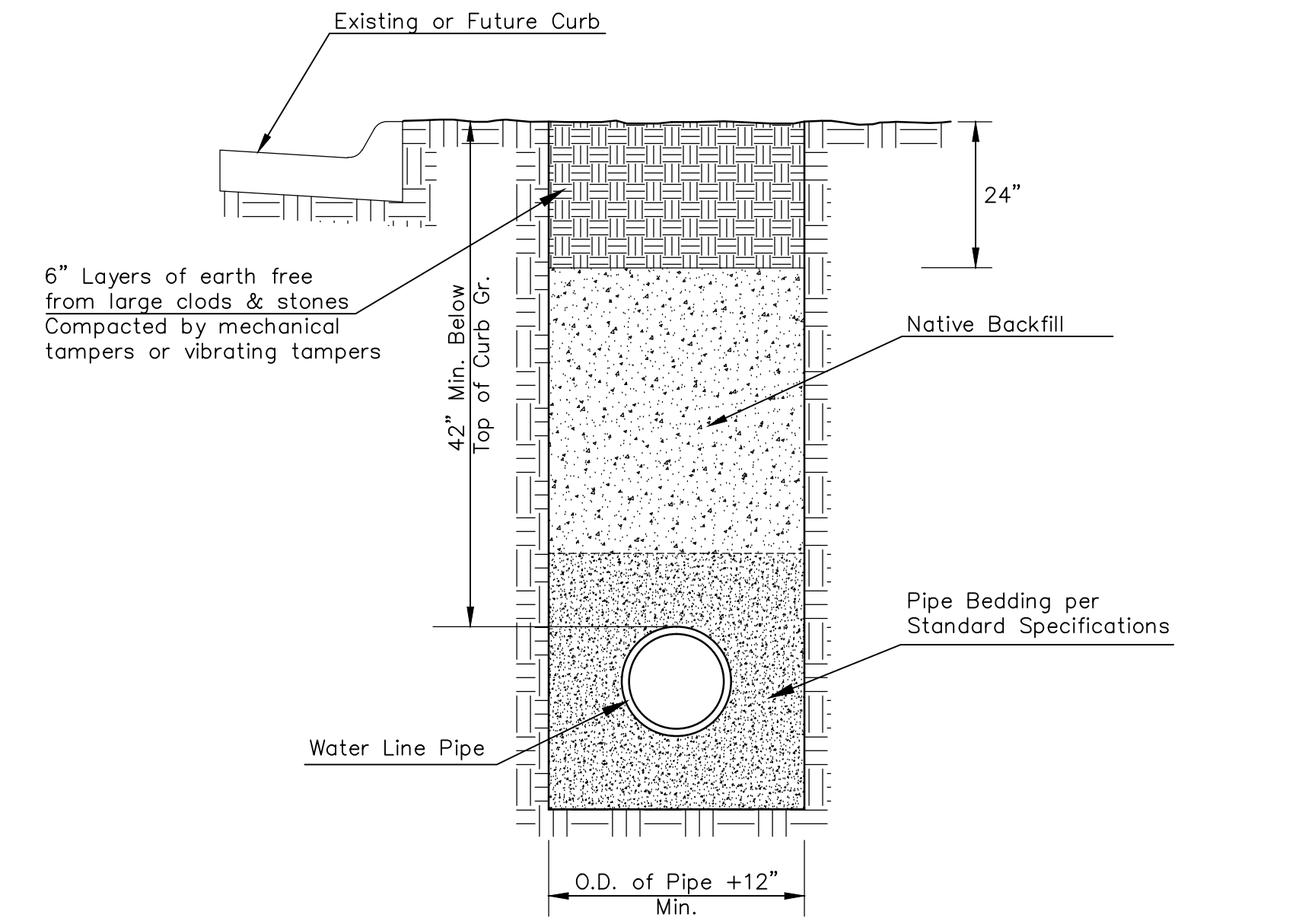
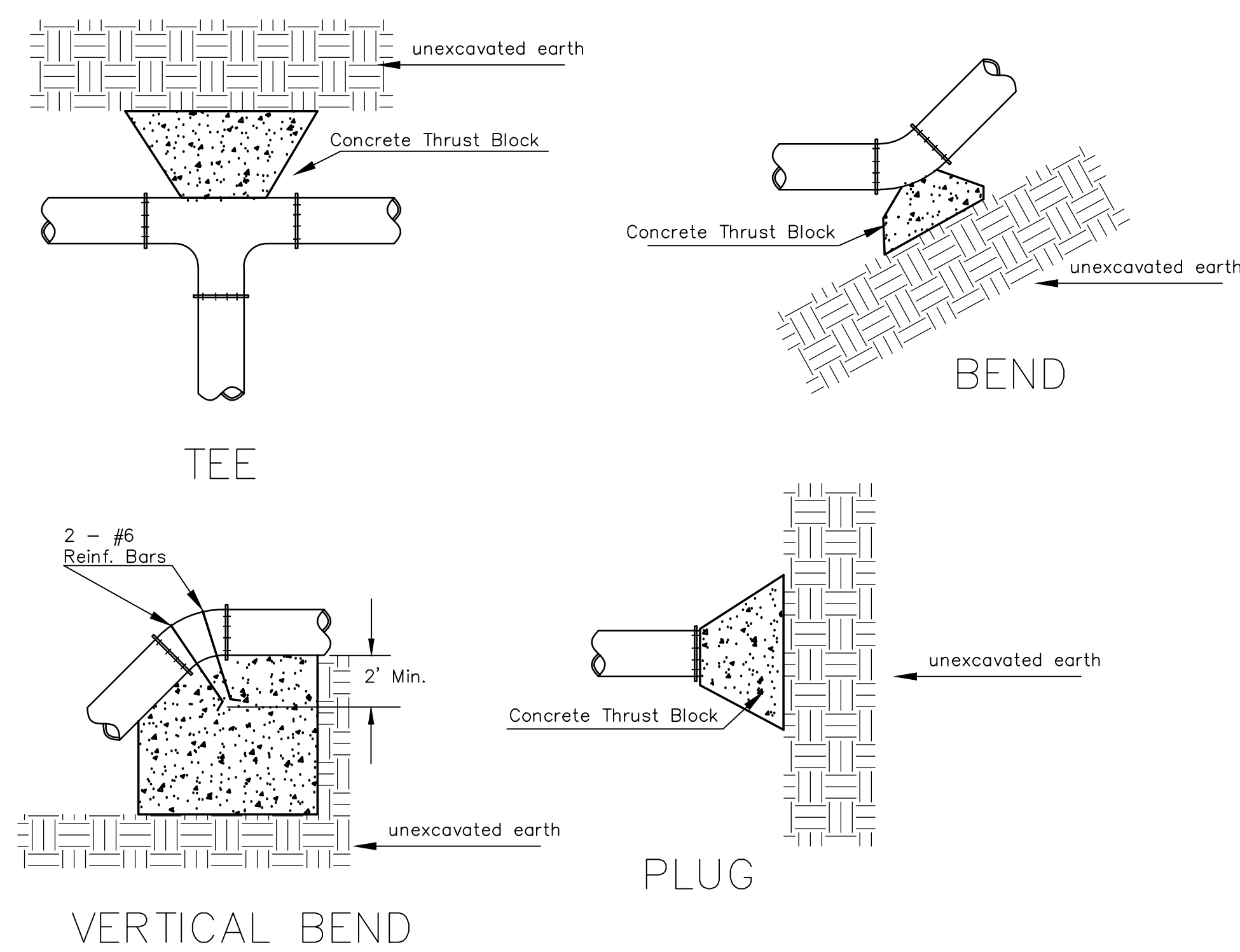
CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER 1841 PPW	OCA NUMBER 607853	DATE 04/2013
-----------------------------------	-----------------------------	------------------------

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

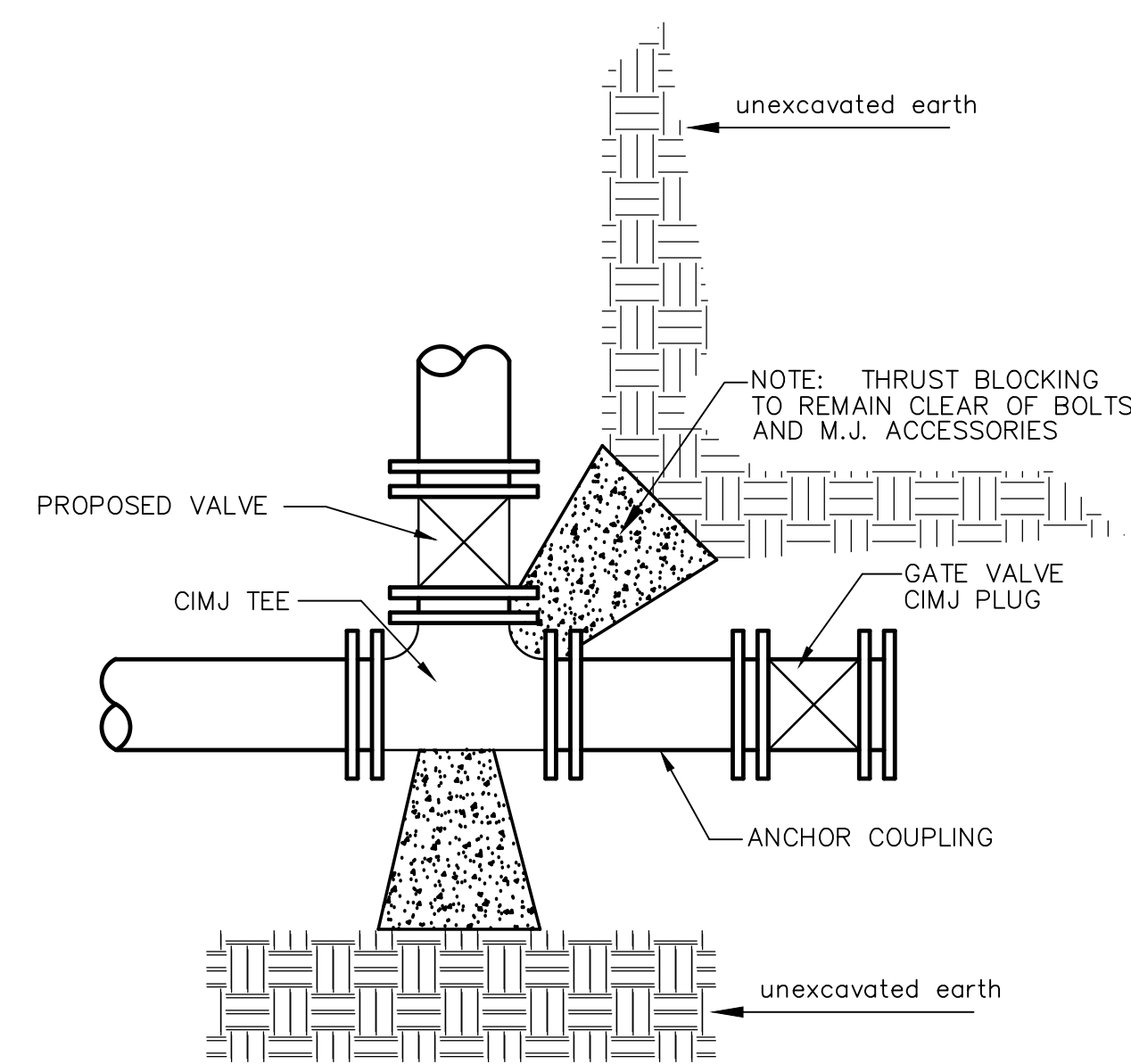
SHEET
2 of 4





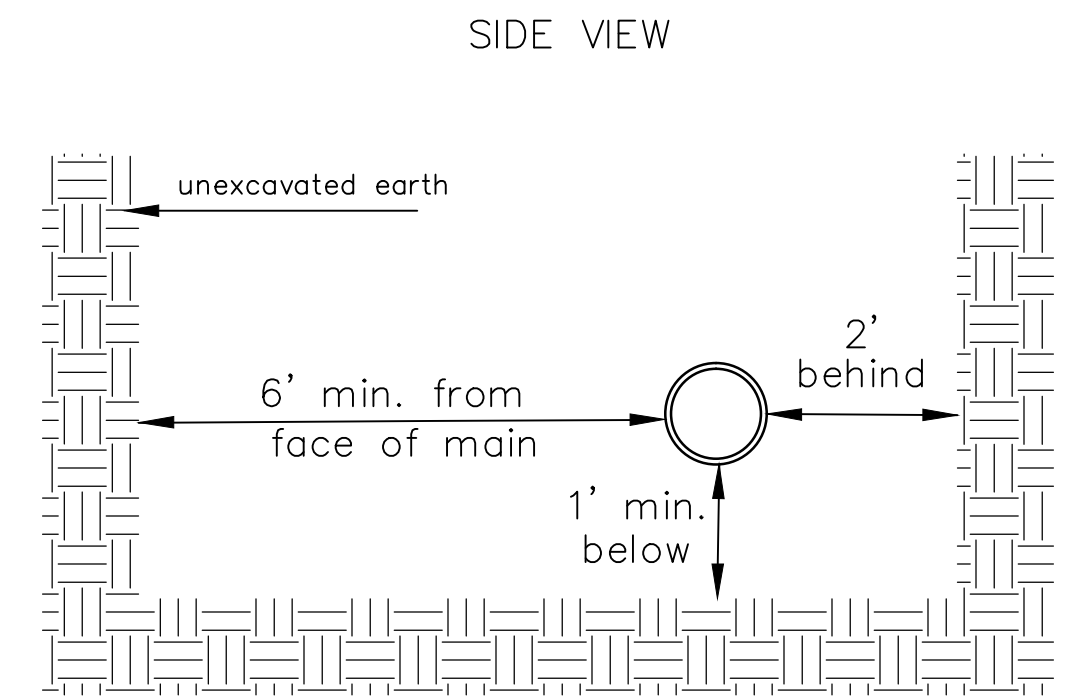
PIPE SIZE	THRUST AT FITTINGS IN TONS-AT 150#/IN ² P					
	PLUG	90°	45°	22 1/2'	11 1/4'	TEE
6"	2.8	3.95	2.15	1.09	.55	2.8
8"	4.9	6.95	3.75	1.90	.96	4.9
12"	11.4	16.1	8.75	4.45	2.25	11.4
16"	20.15	28.5	15.4	7.85	3.95	20.15
20"	31.15	44.0	23.85	12.15	6.10	31.15
24"	44.55	63.0	34.1	17.4	8.75	44.55

TYPICAL THRUST BLOCKS

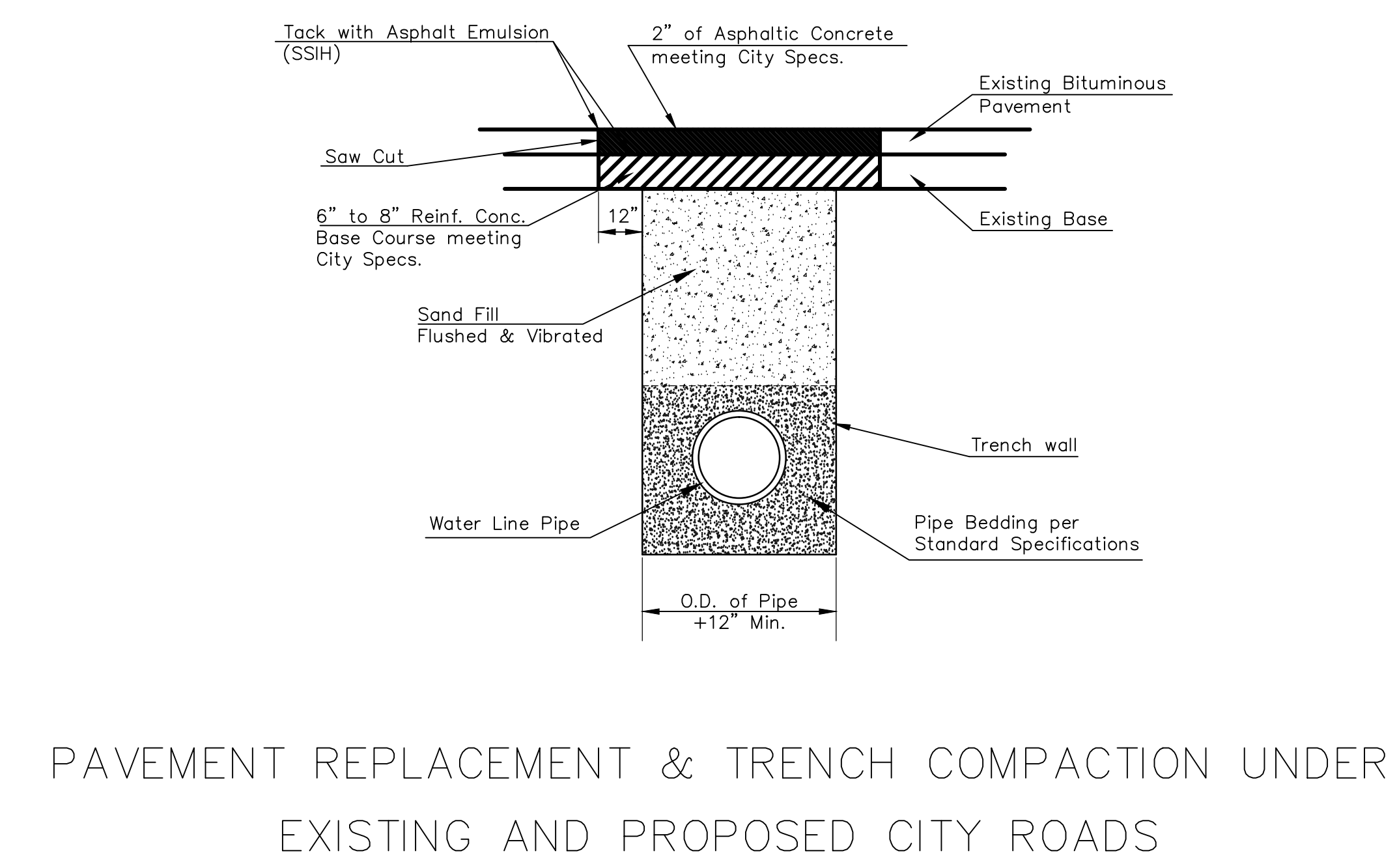
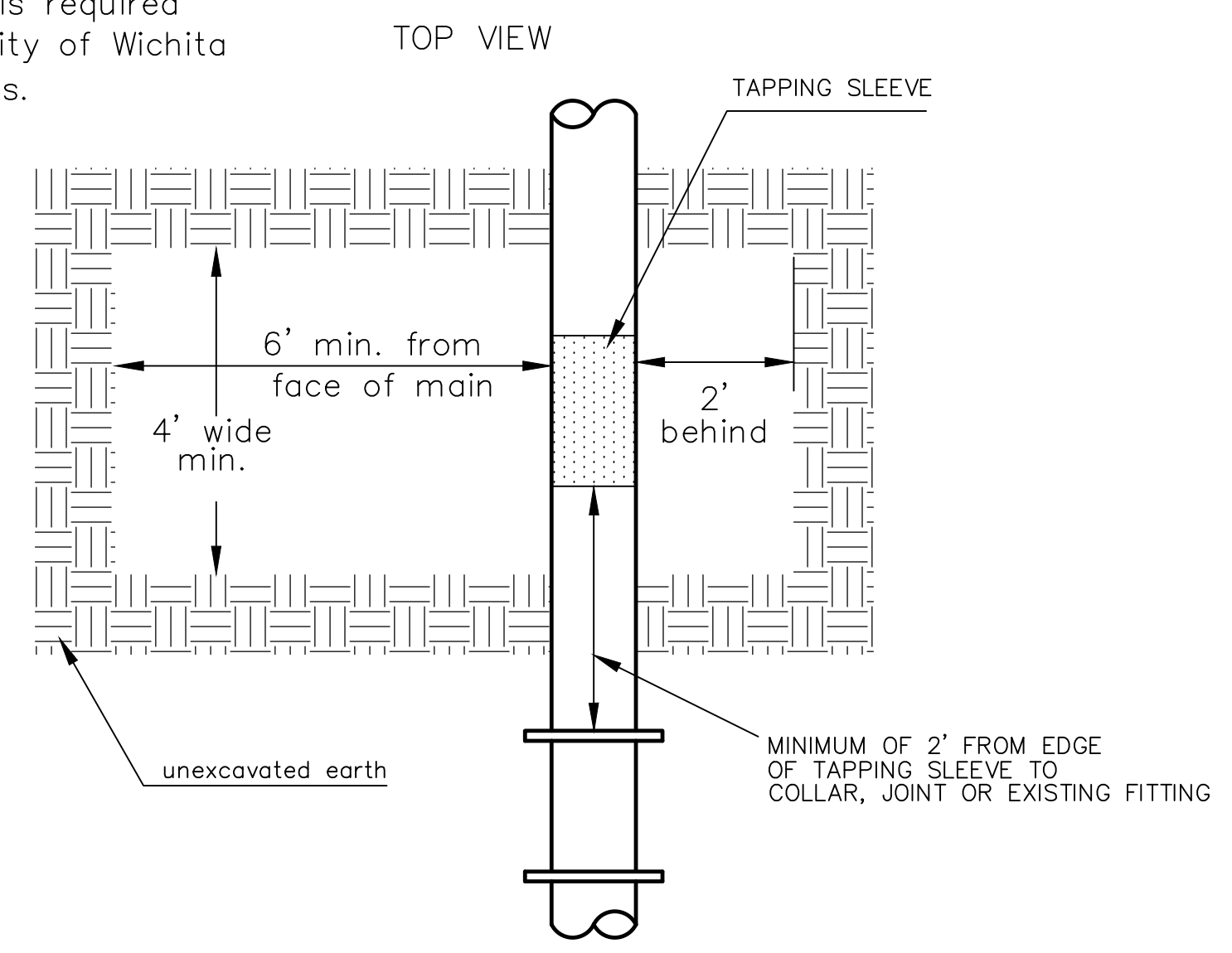


TRENCH COMPACTION IN ROAD RIGHT-OF-WAY

REINFORCED CONCRETE ENCASEMENT OF SANITARY SEWER

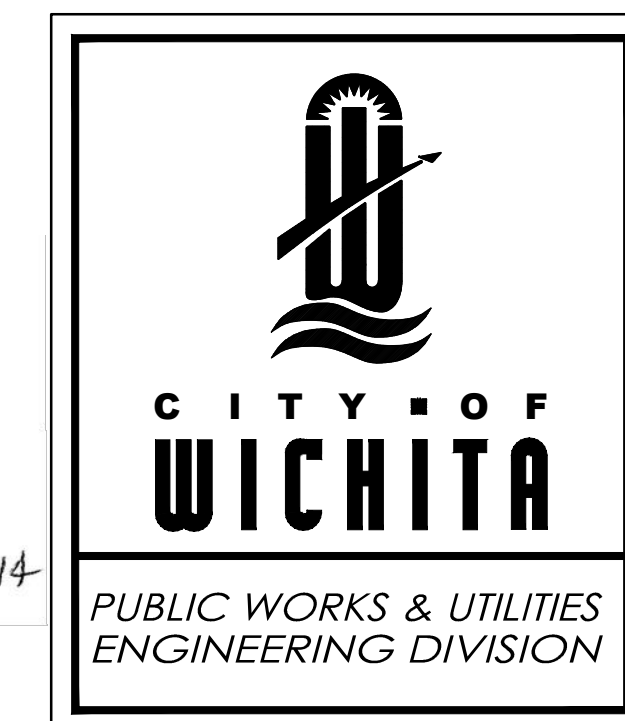


Note: When shoring is required it is to be per The City of Wichita Standard Specifications.



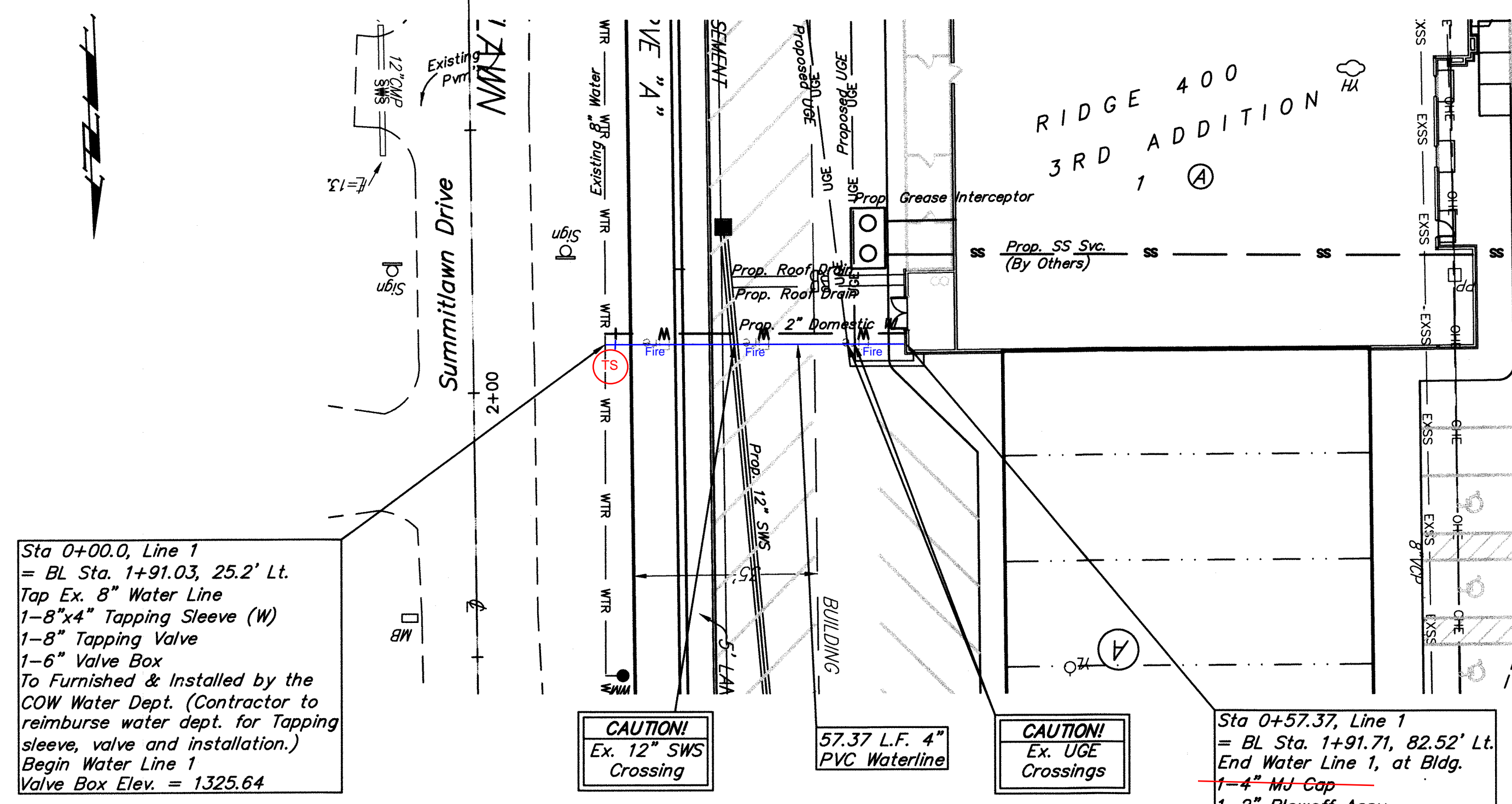
* PLANS GOVERN UNLESS OTHERWISE NOTED ON PLANS

EXCAVATION FOR WET TAP



MISCELLANEOUS WATER DETAILS		
CITY ENGINEER GARY JANZEN, P.E.		
PROJECT NUMBER	OCA NUMBER	DATE
1841 PPW	607853	04/2014
CITY ENGINEER'S OFFICE		SHEET
CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		3 of 4

BENCHMARK:
Chiseled square on top of curb, north side of Taft Ave., 157.6' east and 8.6' south of the SW corner of Lot 1, Block A, Ridge 400 3rd Add.
Elev. = 1324.73 NAVD88



Sta 0+00.0, Line 1
= BL Sta. 1+91.03, 25.2' Lt.
Tap Ex. 8" Water Line
1-8"x4" Tapping Sleeve (W)
1-8" Tapping Valve
1-6" Valve Box
To Furnished & Installed by the COW Water Dept. (Contractor to reimburse water dept. for Tapping sleeve, valve and installation.)
Begin Water Line 1
Valve Box Elev. = 1325.64

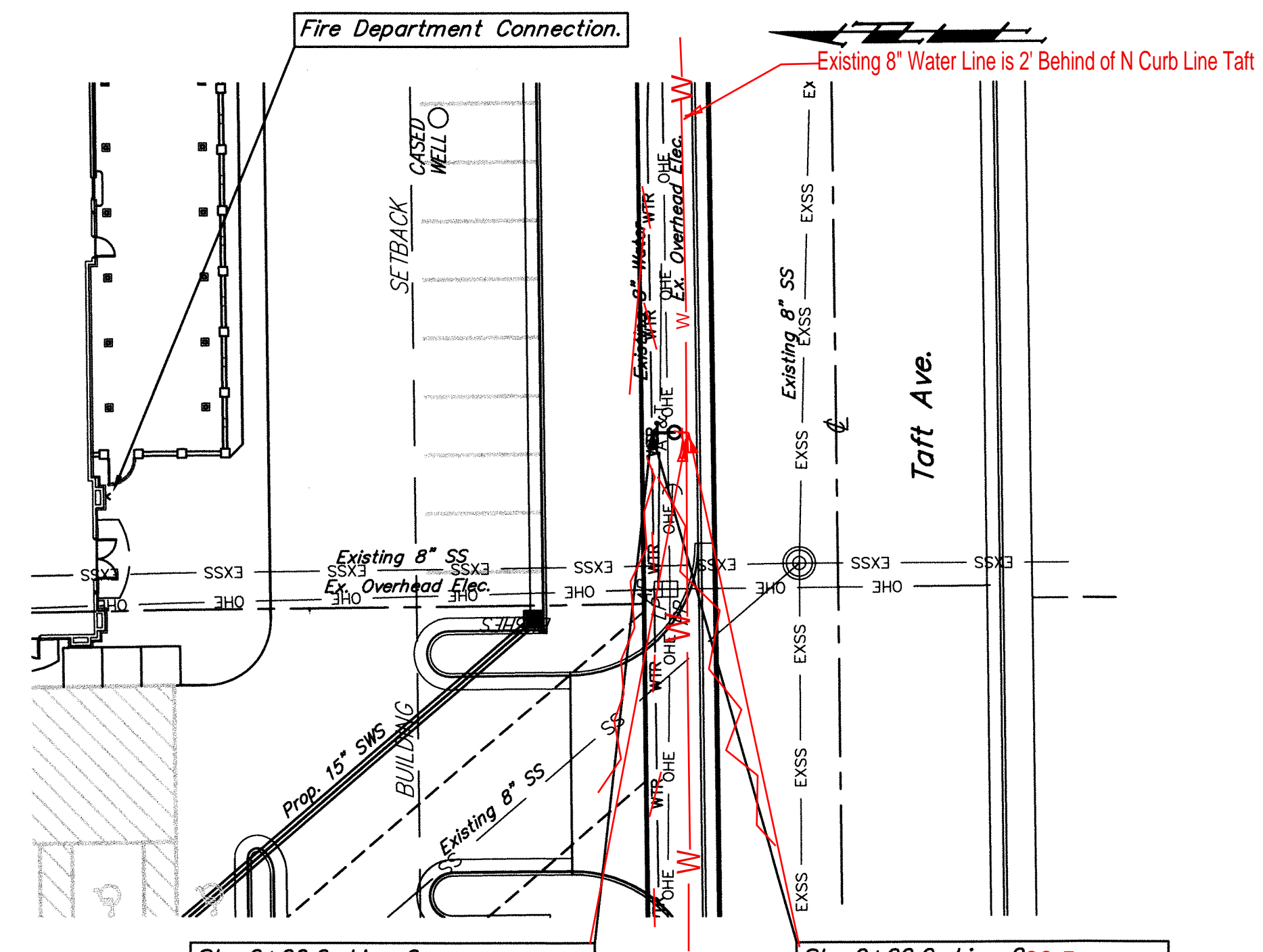
CAUTION!
Ex. 12" SWS Crossing

57.37 L.F. 4" PVC Waterline

CAUTION!
Ex. UGE Crossings

Sta 0+57.37, Line 1
= BL Sta. 1+91.71, 82.52' Lt.
End Water Line 1, at Bldg.
~~1-4" MJ Cap~~
~~1-2" Blowoff Assy.~~
~~Valve Box Elev. = 1328.30~~

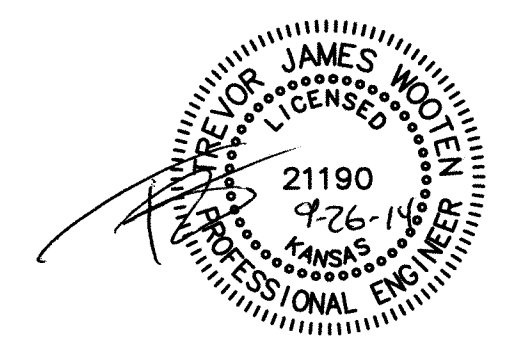
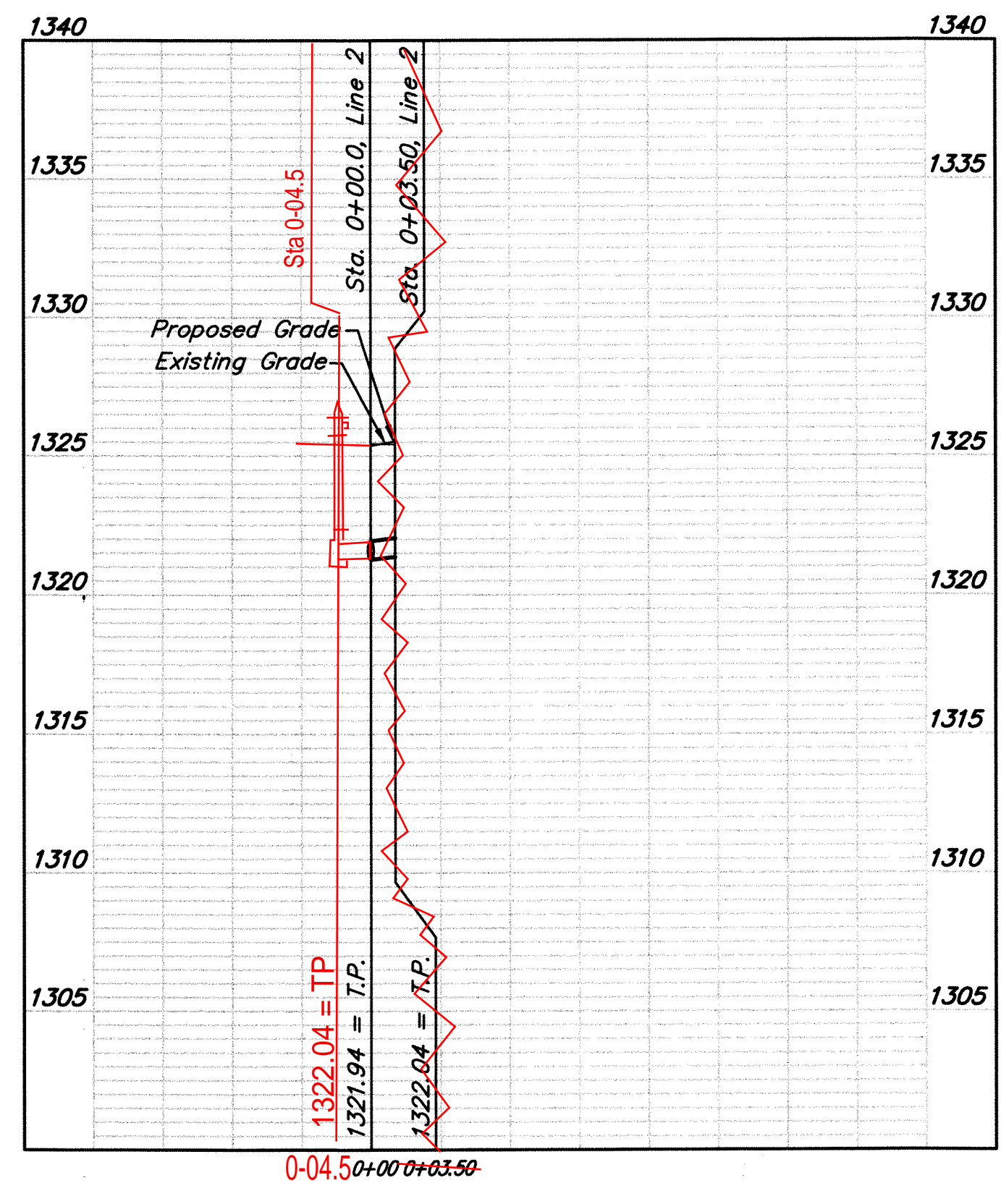
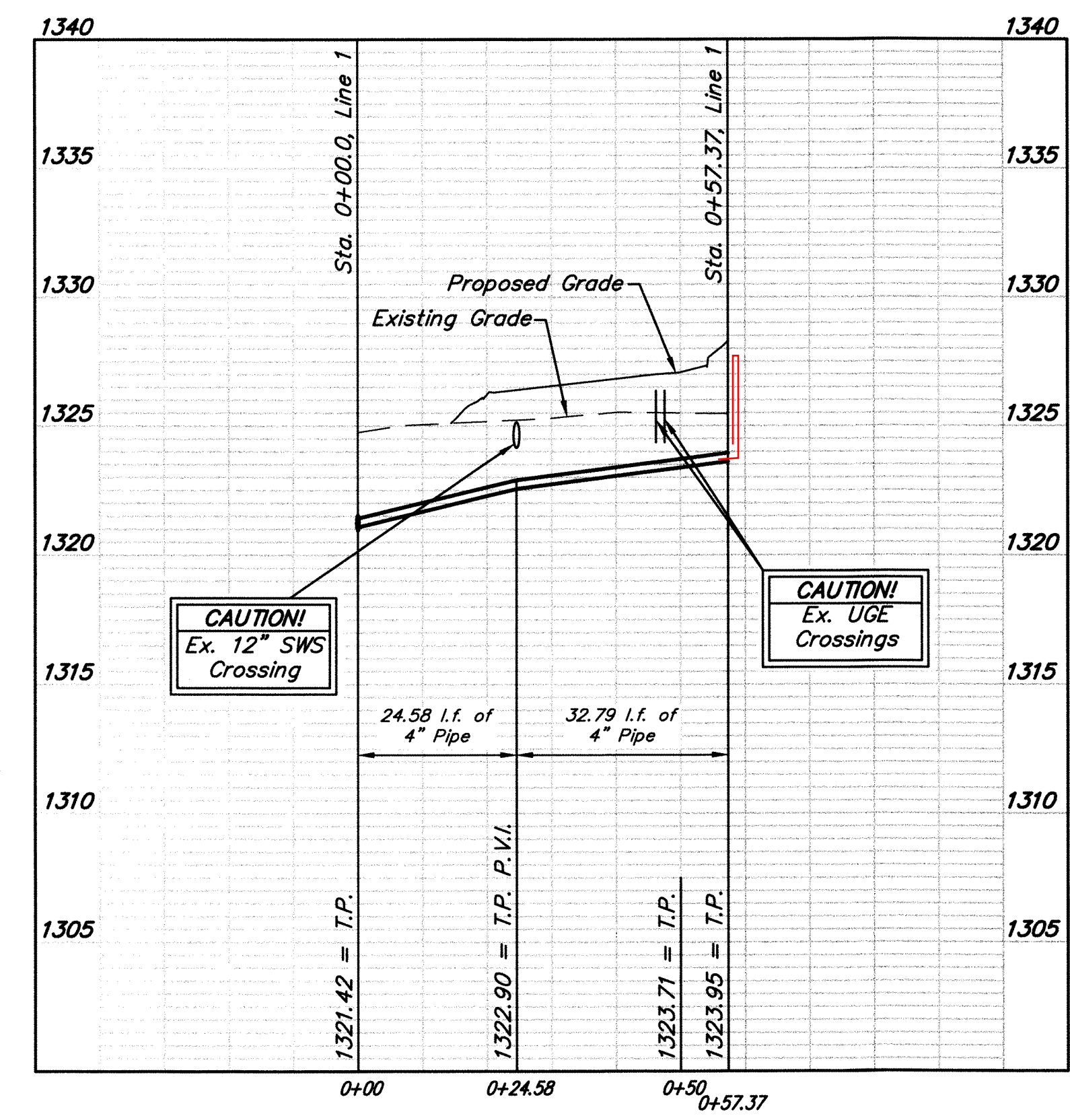
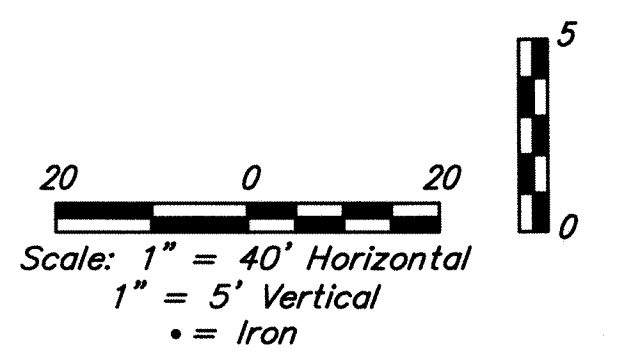
Delete Cap And Blowoff. Pipe ran Under Footing to 90° Bend Up to Riser Inside Building



Sta 0+00.0, Line 222.5
= BL Sta. 0+28.80, 160.74' Lt.
Tap Ex. 8" Water Line
1-8"x6" Tapping Sleeve (W) N
1-8" Tapping Valve
1-6" Valve Box
To Furnished & Installed by the COW Water Dept. (Contractor to reimburse water dept. for Tapping sleeve, valve and installation.)
Begin Water Line 2
Valve Box Elev. = 1325.70

Sta 0+00.0, Line 222.5
= BL Sta. 0+26.00, 160.74' Lt.
1-Fire Hydrant Assembly
(L=3.5') 4.50
Valve Box Elev. = 1325.70
Bury Line Elev. = 1325.86

F/H is 6.5' N of N Curb Line on Taft & 161' W of CL Summitlawn
Valve is 3.5' S of F/H And 30' north of center line of Taft.



Baughman		RIDGE 400 3RD ADDITION LINE 1 & 2 WATER LINE IMPROVEMENTS	
Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0149 ENGINEERING SURVEYING PLANNING LANDSCAPE ARCHITECTURE			
PROJECT NUMBER 1841 PPW (607853)	DESIGN TJW	DRAWN MLP	
REVISIONS:	APPROVED	DATE 07/14	
	SCALE Noted	SHEET	4 OF 4
E:\Projects\RIDGE 400 3RD ADD 11-11-P840\Engineering\WLPW.dwg 4-05-E076			