

GENERAL NOTES:

1. WATERLINES AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH THE MOST RECENT EDITION OF THE CITY OF WICHITA STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
2. ALL ELEVATIONS SHOWN ARE BASED ON NAVD 88 DATUM.
3. CONTRACTOR WILL BE REQUIRED TO PROVIDE A MINIMUM ADVANCE NOTICE OF TWO FULL WORKING DAYS (48 HOURS) TO UTILITY COMPANIES PRIOR TO STARTING ANY EXCAVATION AS FOLLOWS:
 KANSAS ONE CALL 1-800-344-7233
 OR 1-316-687-2470
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:
 COX COMMUNICATIONS 1-316-262-4270
 OR 1-316-263-2061
 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) 1-316-268-4555
- THE CONTRACTOR SHALL NOTIFY PIPELINE COMPANIES AT LEAST 24 HOURS IN ADVANCE OF ANY WORK BEING PERFORMED ACROSS AND/OR ADJACENT TO PIPELINES.
4. THE CONTRACTOR SHALL NOTIFY THE INSPECTOR FOR THIS PROJECT 48 HOURS PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL NOT START WORK ON THE PROJECT UNTIL THE PROJECT INSPECTOR ASSIGNED TO THE PROJECT IS PRESENT ON SITE. ANY WORK DONE WITHOUT INSPECTION WILL BE REQUIRED TO BE UNCOVERED FOR INSPECTION.
5. 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.
6. 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.
7. TRAFFIC AFFECTED BY THE CONSTRUCTION OF THIS PROJECT SHALL BE HANDLED IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
8. THE CONTRACTOR MUST EXAMINE THE CONSTRUCTION SITE PRIOR TO BIDDING AND BE SATISFIED AS TO THE WORK SHOWN FOR COMPLETION. AFTER BIDS HAVE BEEN RECEIVED, THE CONTRACTOR SHALL NOT ASSERT THAT THERE WAS A MISUNDERSTANDING OF THE QUANTITIES OF WORK OR OF THE NATURE FOR THE WORK TO BE COMPLETED
9. COST OF EXCAVATION, HAULING, AND DUMPING OF EXCESS EXCAVATION SHALL BE SUBSIDIARY TO OTHER ITEMS OF WORK.
10. SEEDING AND FERTILIZING OF ALL AREAS DISTURBED BY THE CONSTRUCTION OF THE WATERLINE AS SHOWN ON THE PLANS SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS OF WORK.
11. THE CONTRACTOR SHALL RESTORE ALL DITCHES, SWALES, ROAD SHOULDERS, ENTRANCES AND BANK LINES TO THEIR ORIGINAL SLOPES AND GRADES EXCEPT AS SHOWN OTHERWISE. ALL AREAS DISTURBED BY CONSTRUCTION INCLUDING STAGING AREAS, SHALL BE REPLANTED WITH GRASS SEED AT THE APPROPRIATE RATES APPROVED BY THE ENGINEER.
12. 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, THAT IN THE OPINION OF THE ENGINEER, 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 FLOODPLAIN 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.
13. PAVED SURFACES OR SIDEWALK AREAS REMOVED FOR THE CONSTRUCTION OF THIS PROJECT SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.
14. TREES IN CONFLICT WITH CONSTRUCTION SHALL BE REMOVED OR TRIMMED AS NECESSARY AT THE CONTRACTORS EXPENSE.
15. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION AVAILABLE 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 PLAN LOCATIONS ARE NOT GUARANTEED. ADDITIONAL EXISTING UTILITIES MAY ALSO BE ENCOUNTERED. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WHICH ARE ENCOUNTERED ON THIS PROJECT. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING TRENCHING OPERATIONS TO AVOID DAMAGING THESE LINES. ANY LINES DAMAGED SHALL BE REPLACED OR REPAIRED IMMEDIATELY AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
16. PROPERTIES WITHIN THE PROJECT LIMITS MAY HAVE UNDERGROUND SPRINKLER SYSTEMS IN THE PUBLIC RIGHT-OF-WAY WHICH CONFLICT WITH NEW CONSTRUCTION. CONTRACTOR WILL BE REQUIRED TO REMOVE SUCH IMPROVEMENTS SHOULD THEY NOT BE REMOVED BY THEIR OWNER AT THE TIME OF CONSTRUCTION OF THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SALVAGE ALL SPRINKLER HEADS AND/OR VALVES AND GIVE SUCH MATERIAL TO THEIR OWNER. PORTIONS OF UNDERGROUND SPRINKLER SYSTEMS NOT IN CONFLICT WITH NEW CONSTRUCTION SHALL BE PROTECTED FROM DAMAGE AND SHALL REMAIN IN PLACE. ALL WORK IN CONNECTION WITH UNDERGROUND SPRINKLER SYSTEMS SHALL BE CONSIDERED AS SUBSIDIARY TO THE CONTRACT PAY ITEMS OF WORK.
17. THE CONTRACTOR SHALL INSTALL DEWATERING SYSTEMS AS NECESSARY TO KEEP TRENCHES FREE OF WATER. IN NO CIRCUMSTANCE WILL PIPE BE LAID IN STANDING WATER. DEWATERING SYSTEMS SHALL REMAIN IN OPERATION UNTIL THE TRENCH HAS BEEN BACKFILLED. THE COST FOR THIS WORK SHALL BE SUBSIDIARY TO THE INSTALLATION OF THE PIPE.
18. THE CONTRACTOR WILL DELIVER REMOVED FIRE HYDRANTS TO WATER DISTRIBUTION, 1703 SIM PARK DRIVE.
19. 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.
20. 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.
21. 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.
22. ALL PIPE JOINTS SHALL BE LAID AND PUSHED 'FULL HOME', WITH THE BEVELED END OF THE SPIGOT MAKING FULL CONTACT WITH THE CHAMFERED AREA AT THE THROAT OF THE BELL OR SOCKET, WITH NO SEPARATION BETWEEN THEM. IF SEPARATION IS DETERMINED, THE PIPE SHALL BE EXCAVATED AND RE-LAID ACCORDING TO SPECIFICATIONS AT THE CONTRACTOR'S EXPENSE.

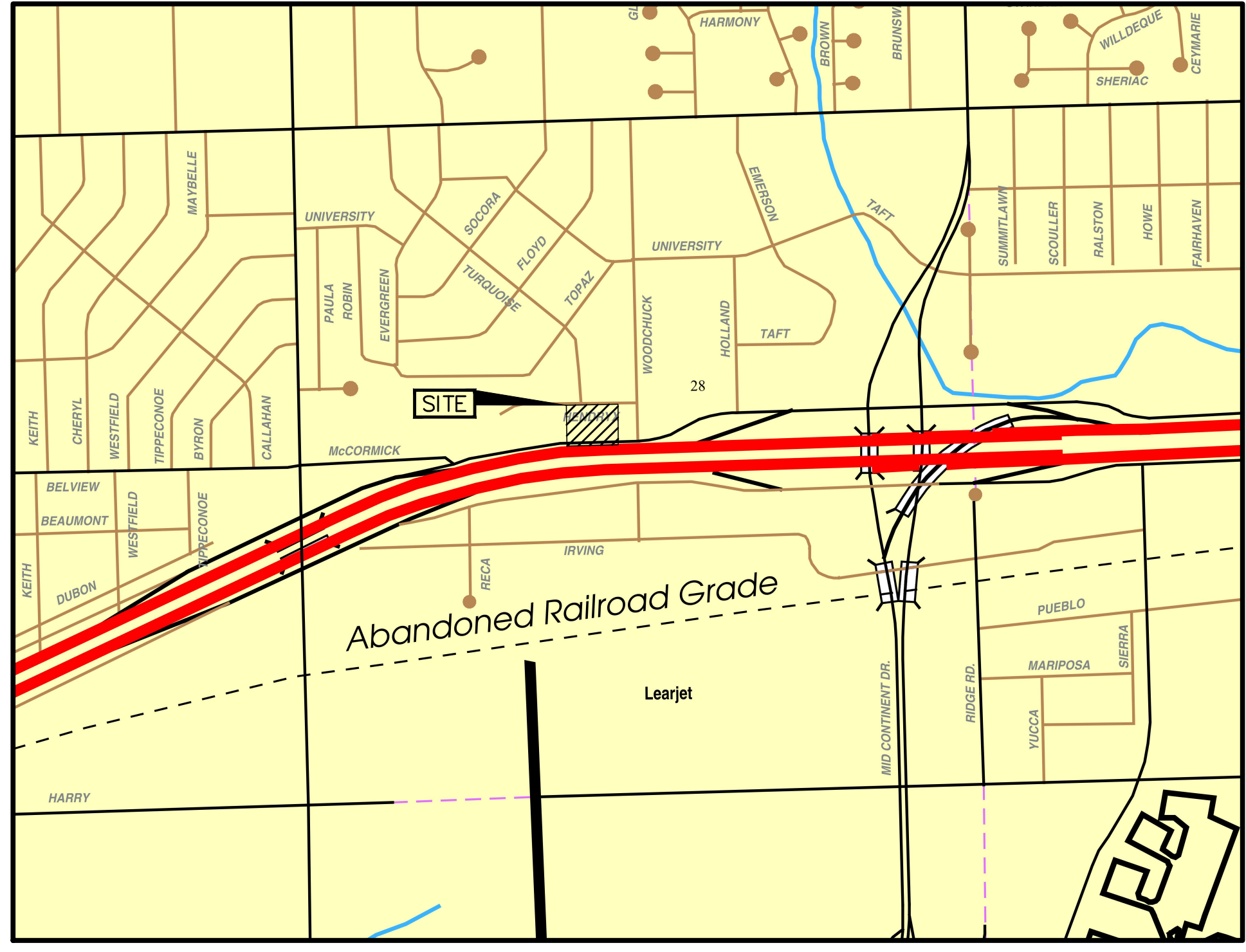
FIRE HYDRANT PRIVATE PROJECT PLANS FOR LOTS 6 & 7, BLOCK 1, CARRIAGE HOUSE PLAZA ADD. WICHITA, SEDGWICK COUNTY, KANSAS 1836 PPW (O.C.A. NO. 607853) GARY JANZEN, P.E., CITY ENGINEER JULY 2014

AS BUILTS

CONTRACTOR: B-2 Exc.
 INSPECTOR: LARRY GANN
 DATE: 9/24/2014

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

| Sheet Index | |
|-------------|-----------------------|
| Sheet No. | Sheet Title |
| 1 | Cover Sheet |
| 2 | Site Plan |
| 3 | Plan and Profile |
| 4 | Water Details |
| 5 | Vault & Meter Details |
| 6 | Misc. Water Details |



Vicinity Map
 Not to Scale

Tee is 290' west & 16' south of center line of Woodchuck & Hendryx.
 Valve looking east is 289' west & 16' south of center line of Woodchuck & Hendryx.
 Valve looking south is 290' west & 18' south of center line of Woodchuck & Hendryx.
 Blow-off valve is 270' west & 16' south of center line of Woodchuck & Hendryx.

SITE BENCHMARK:
 SQUARE CUT ON TOP OF CURB
 63.5'W & 17.5'S' OF THE S.E. CORNER OF
 LOT 2, BLOCK 1, CARRIAGE HOUSE PLAZA
 ADDITION
 ELEVATION=1328.20 (NAVD88)

LEGAL DESCRIPTION:
 LOTS 6 & 7, BLOCK 1, CARRIAGE
 HOUSE PLAZA ADDITION, WICHITA,
 SEDGWICK COUNTY, KANSAS



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

Water Mains (Engineering) *Theresa Soil 8/01/14*

Water Mains (Water) *Ang Jolly 08-4-14*

Fire Prot. Line *DWO 8-4-14*

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 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.

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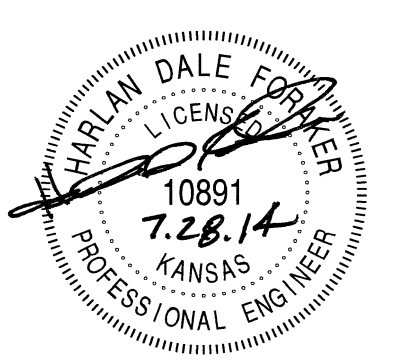
ULTRA MODERN

8100 WEST KELLOGG AVENUE
 WICHITA, KS 67209

CERTIFIED ENGINEERING DESIGN, P.A.
 CIVIL ENGINEERING SERVICES



1935 WEST MAPLE STREET
 WICHITA, KANSAS 67213
 PH.(316)262-8808 FAX.(316)262-1669



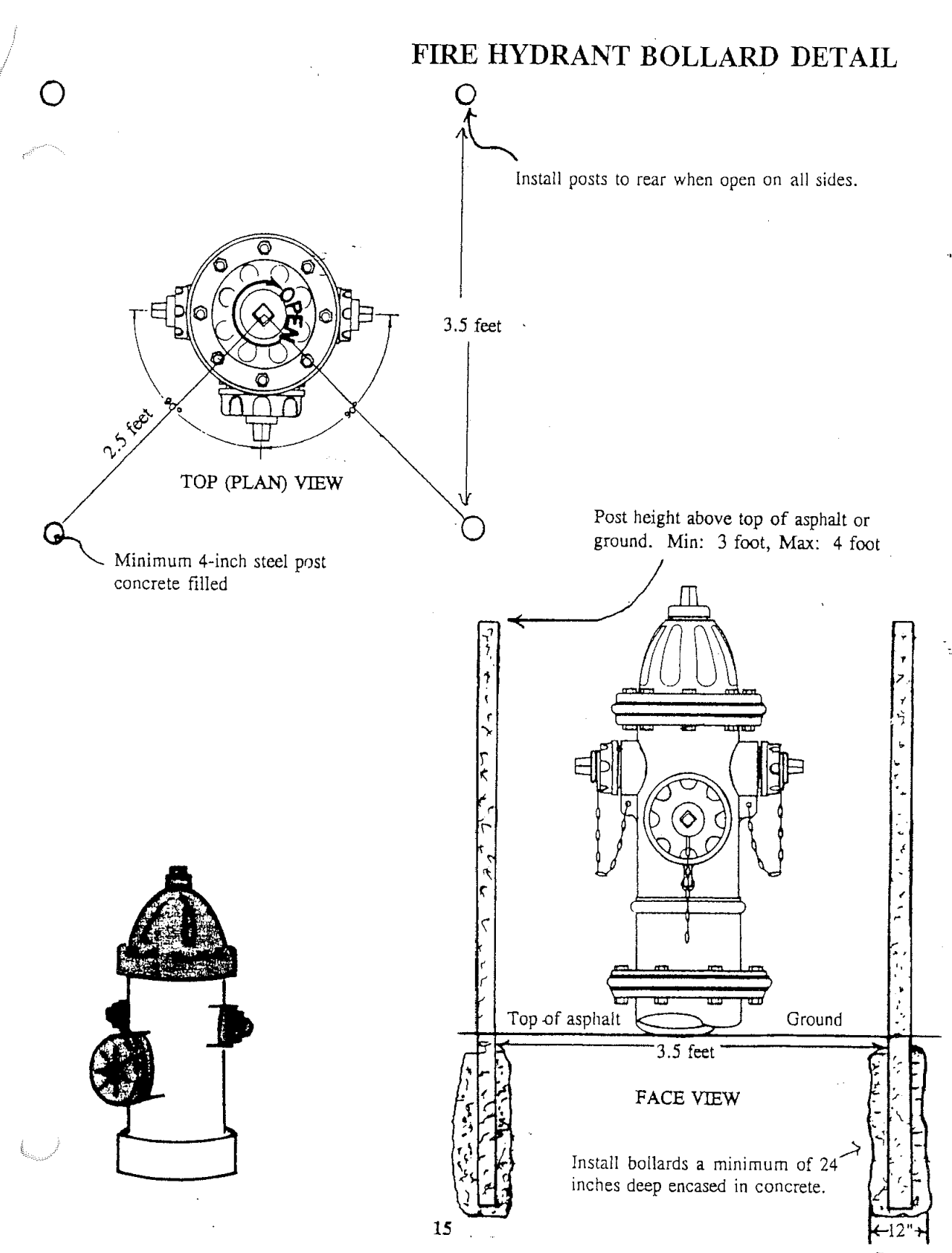
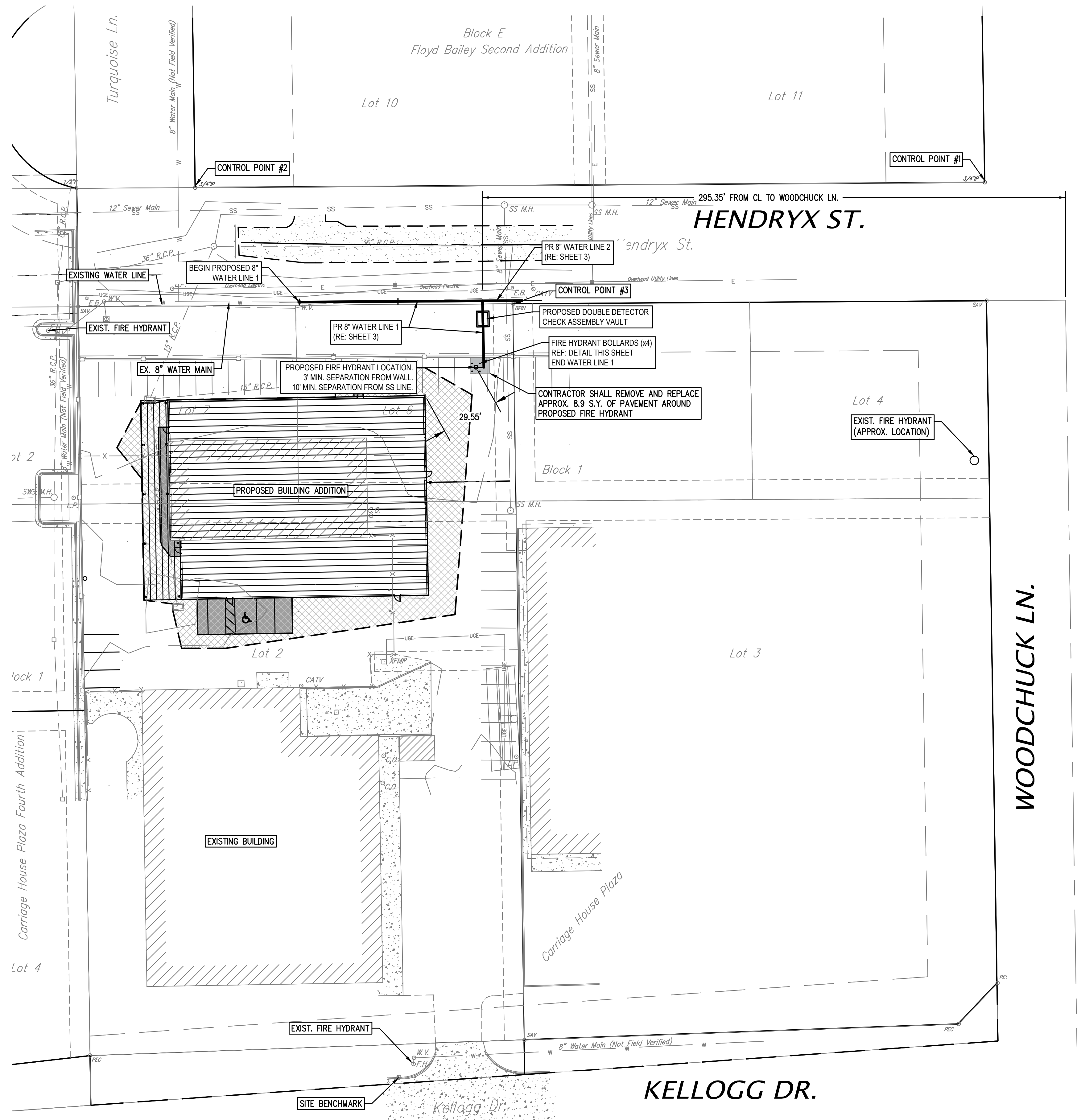
ISSUED FOR CONSTRUCTION

PROJECT NO.: 20142176
 ISSUE DATE: JULY 2014
 CONTACT: H. FORAKER
 CHECKED BY:

COVER SHEET

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Benchmark #1
 SQUARE CUT ON TOP OF CURB
 63.5'W & 17.5'S' OF THE S.E. CORNER
 OF LOT 2, CARRIAGE HOUSE
 PLAZA ADDITION
 ELEVATION=1328.20 (NAVD88)
 N:19546.44
 E:19703.24

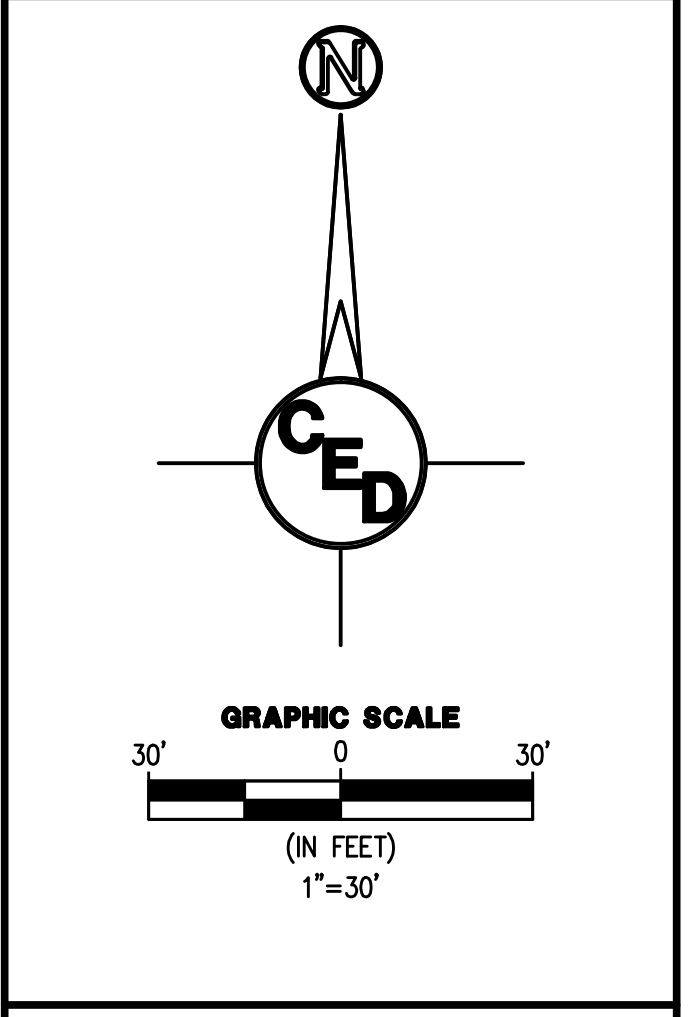
Control Point #1
 3/4" IRON PIPE LOCATED IN SE CORNER OF LOT 11
 BLOCK E FLOYD BAILEY 2ND ADDITION
 N:20000.0212
 E:20000.0212

Control Point #2
 3/4" IRON PIPE LOCATED IN SW CORNER OF LOT 10
 BLOCK E FLOYD BAILEY 2ND ADDITION
 N:19997.27
 E:19600.03

Control Point #3
 BPN LOCATED IN NE CORNER OF LOT 6 BLOCK 1
 CARRIAGE HOUSE PLAZA ADDITION
 N:19938.36
 E:19761.12

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.

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ULTRA MODERN

8100 WEST KELLOGG AVENUE
 WICHITA, KS 67209

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 CIVIL ENGINEERING SERVICES

CEED

1935 WEST MAPLE STREET
 WICHITA, KANSAS 67213
 PH.(316)262-8808 FAX.(316)262-1669

CHARLAN DALE FORAKER
 LICENSED PROFESSIONAL ENGINEER
 10891
 7.28.14
 KANSAS

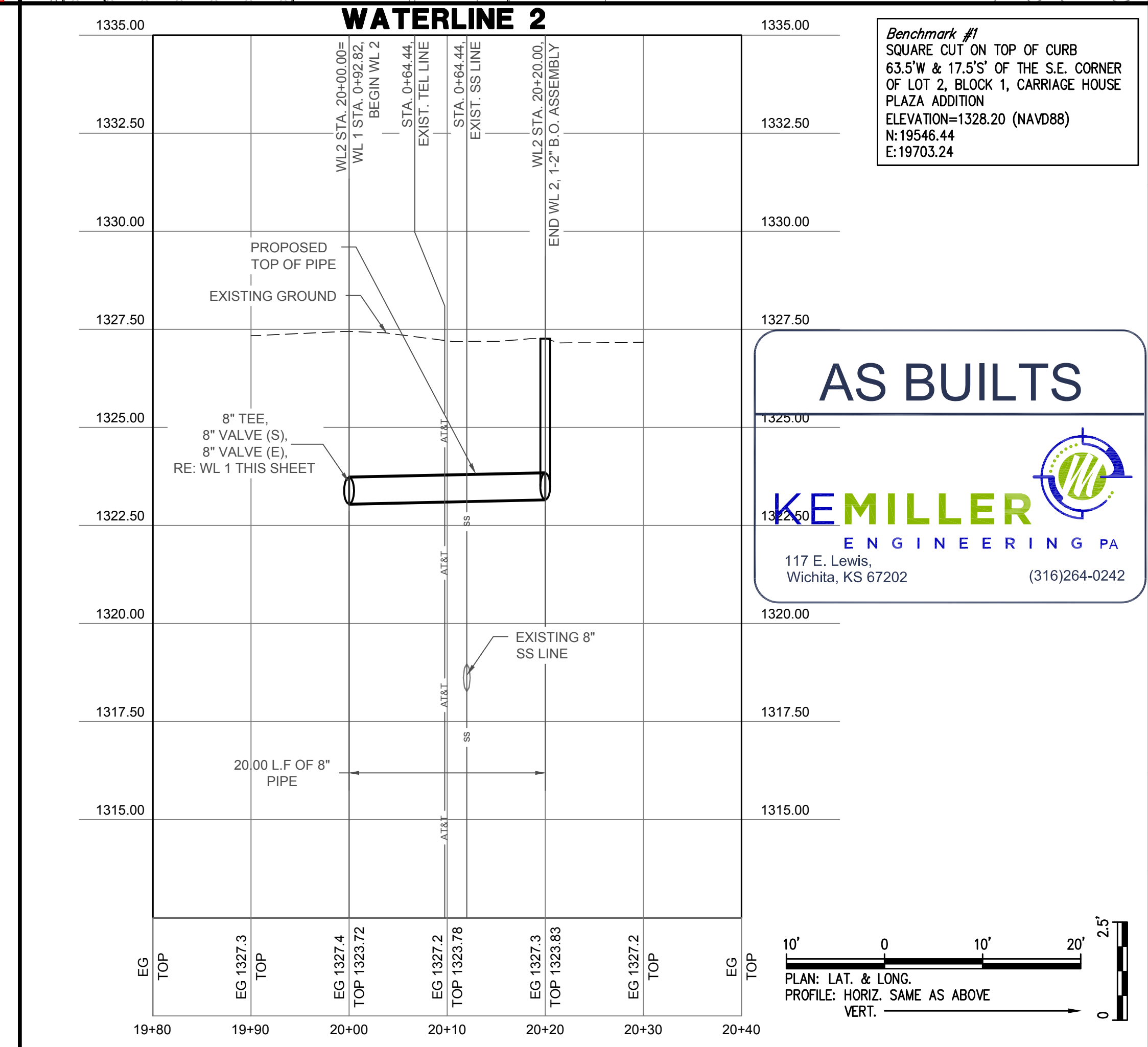
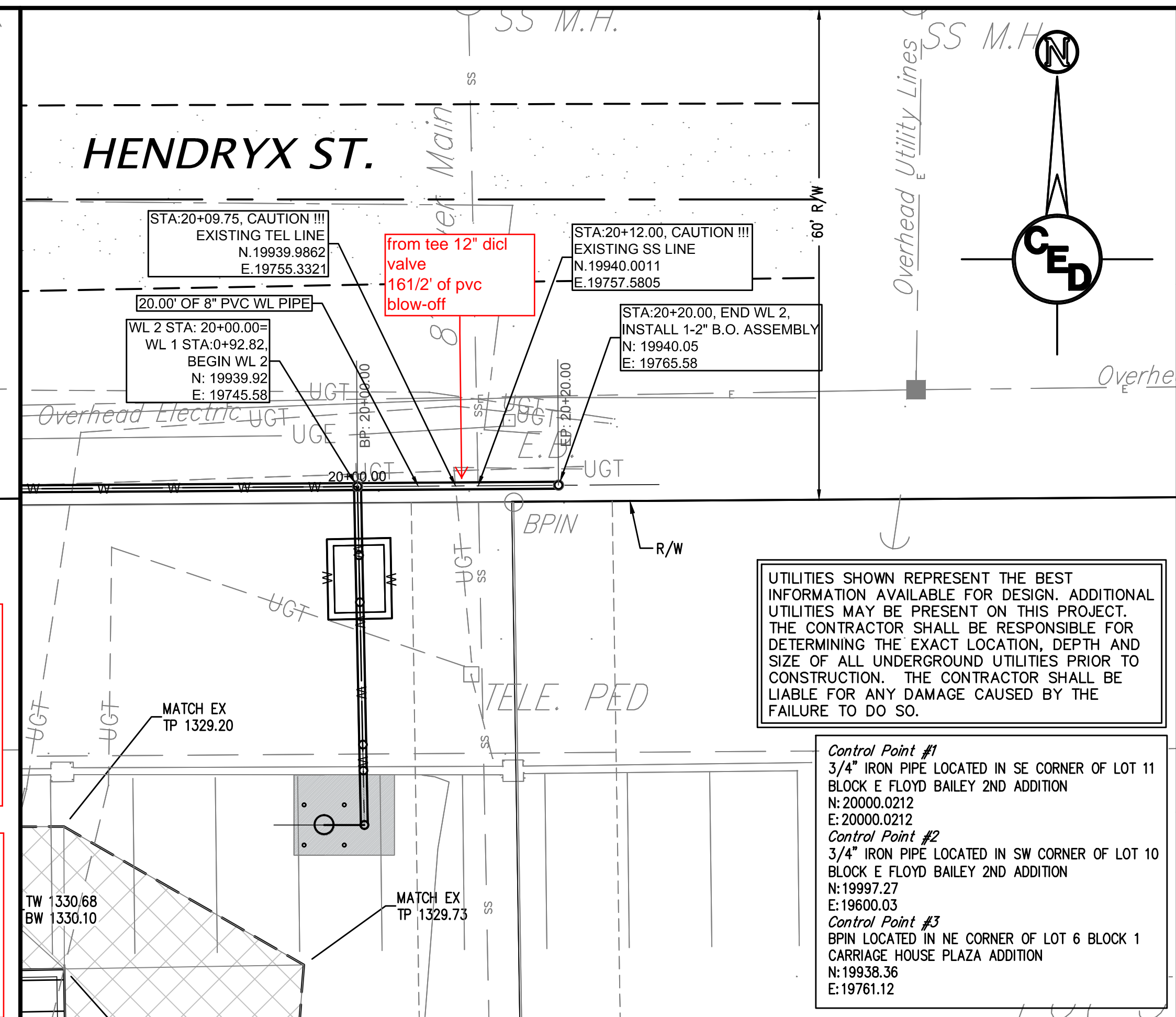
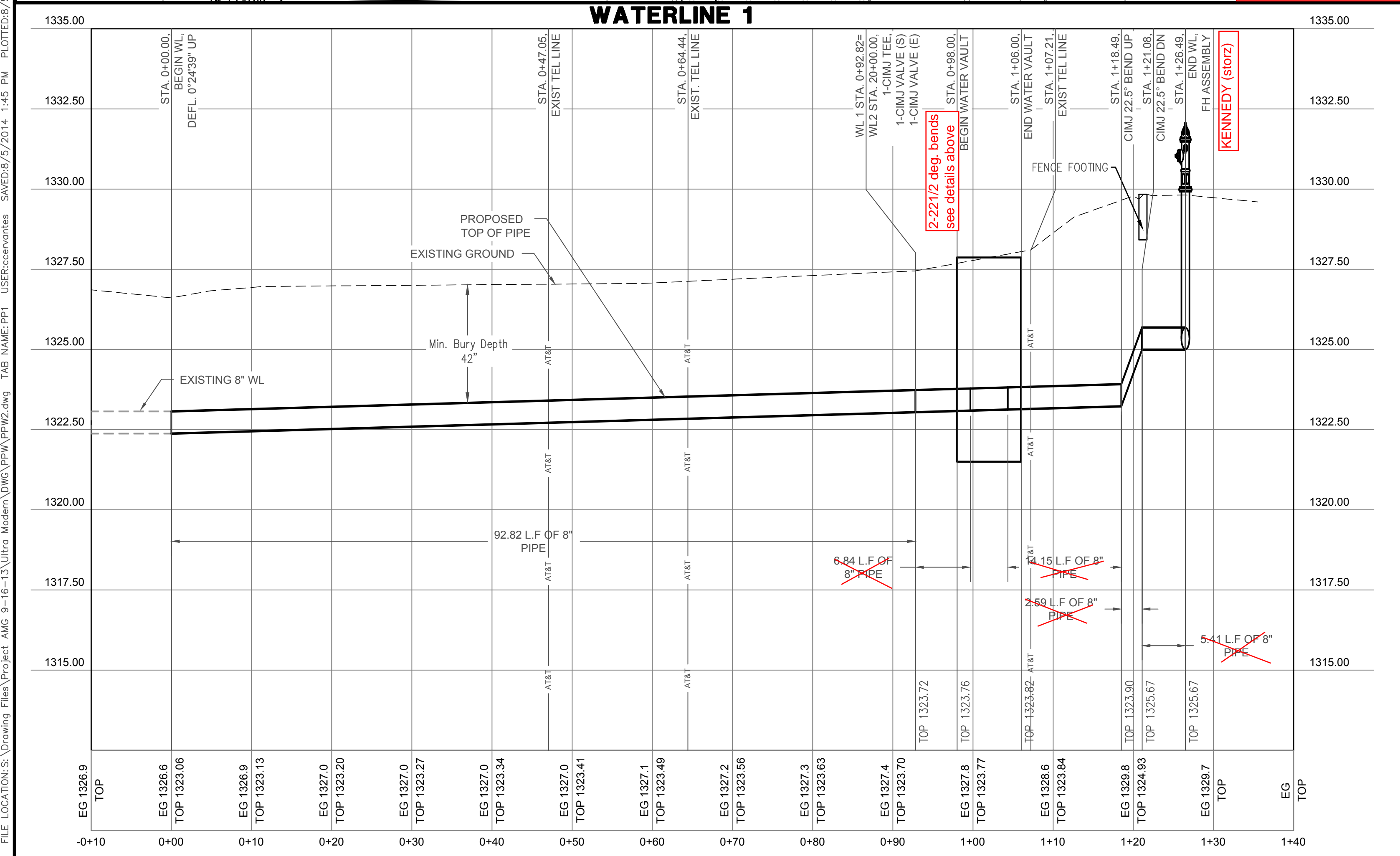
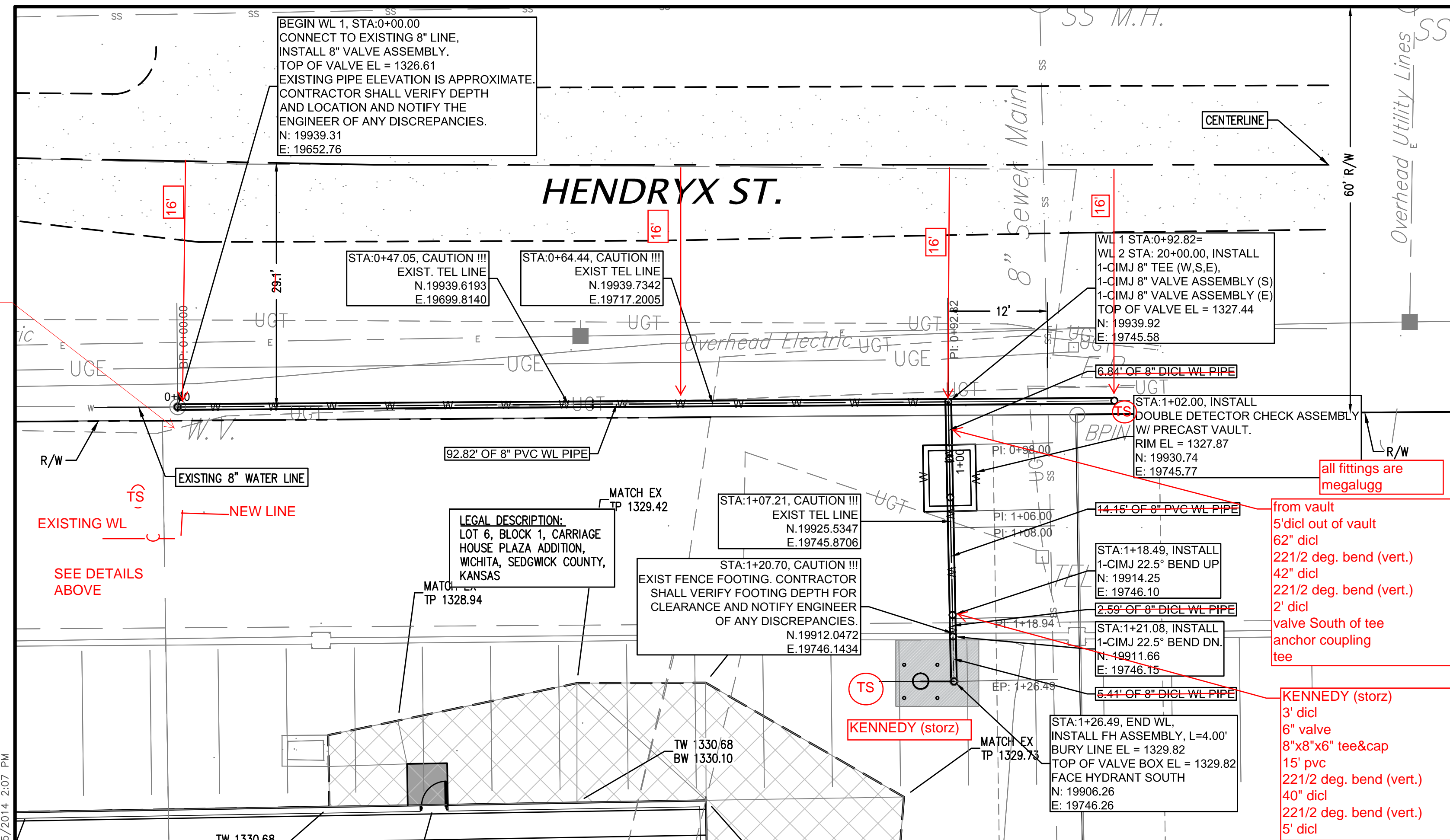
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CHECKED BY:

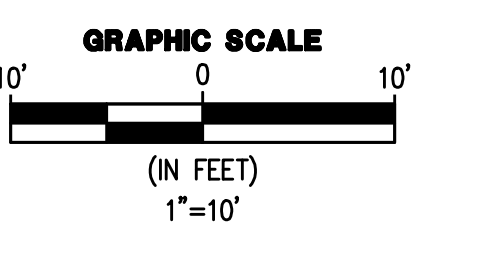
SITE PLAN

REMOVED BLOW-OFF
PUT IN QUANTUM COUPLER
34" OF DI CL
VALVE
18" OF DI CL
90 DEG. BEND
12" OF PVC
90 DEG. BEND
AND THE REST OF NEW LINE



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BPM LOCATED IN NE CORNER OF LOT 6 BLOCK 1
CARRIAGE HOUSE PLAZA ADDITION
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E: 19761.12

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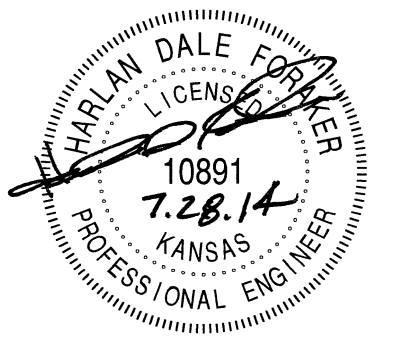
AS BUILTS

KEMILLER
ENGINEERING PA

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



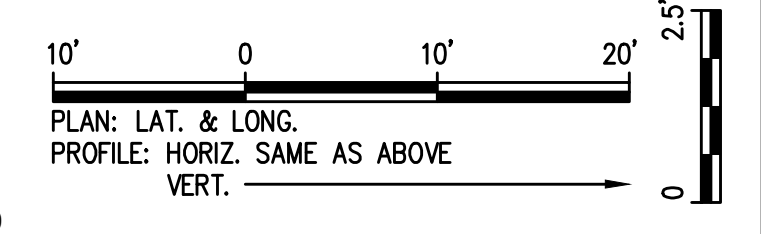
1935 WEST MAPLE STREET
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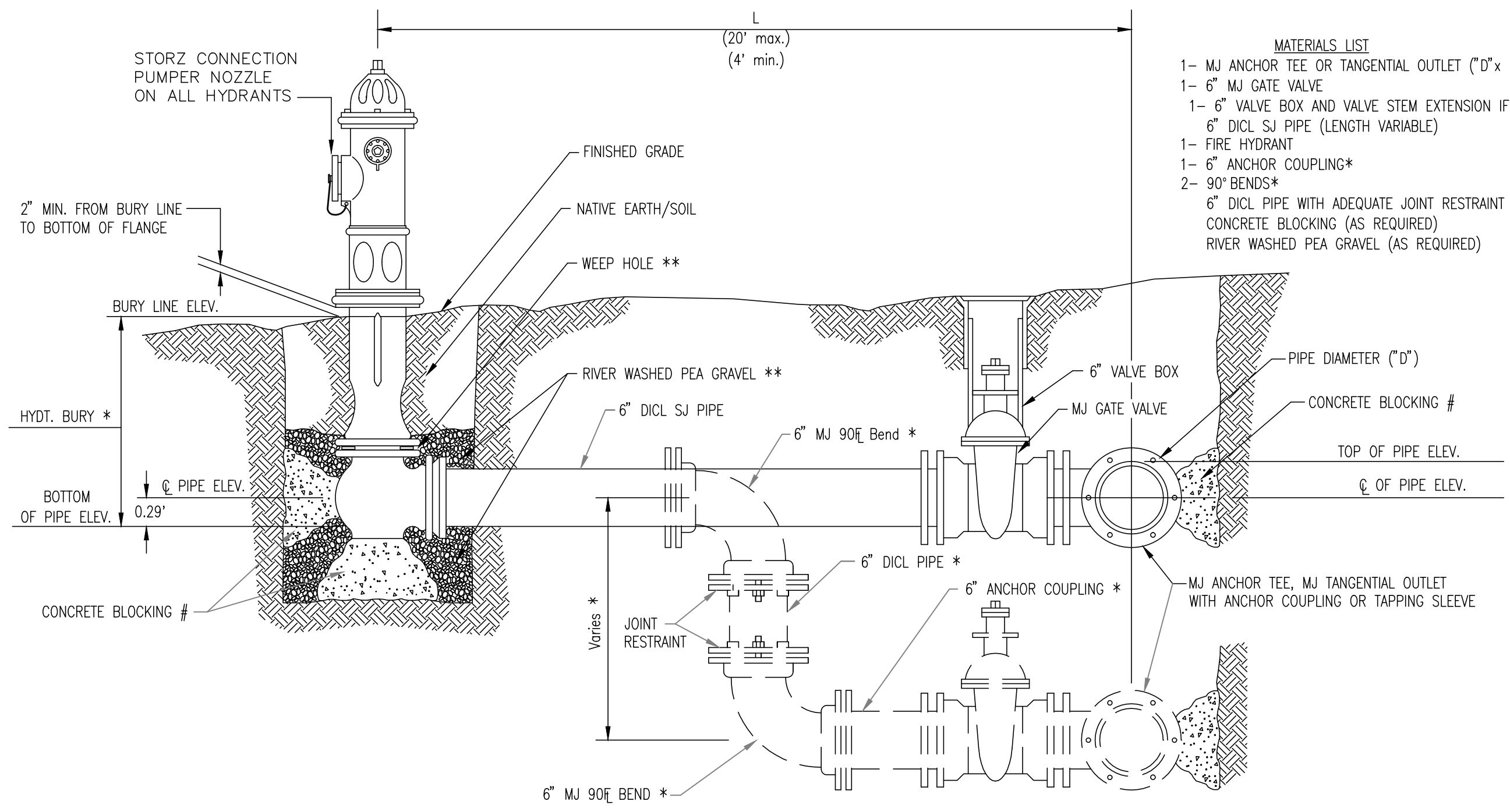
ISSUED FOR CONSTRUCTION

PROJECT NO.: 20142176
ISSUE DATE: JULY 2014
CONTACT: H. FORAKER
CHECKED BY:

PLAN AND PROFILE



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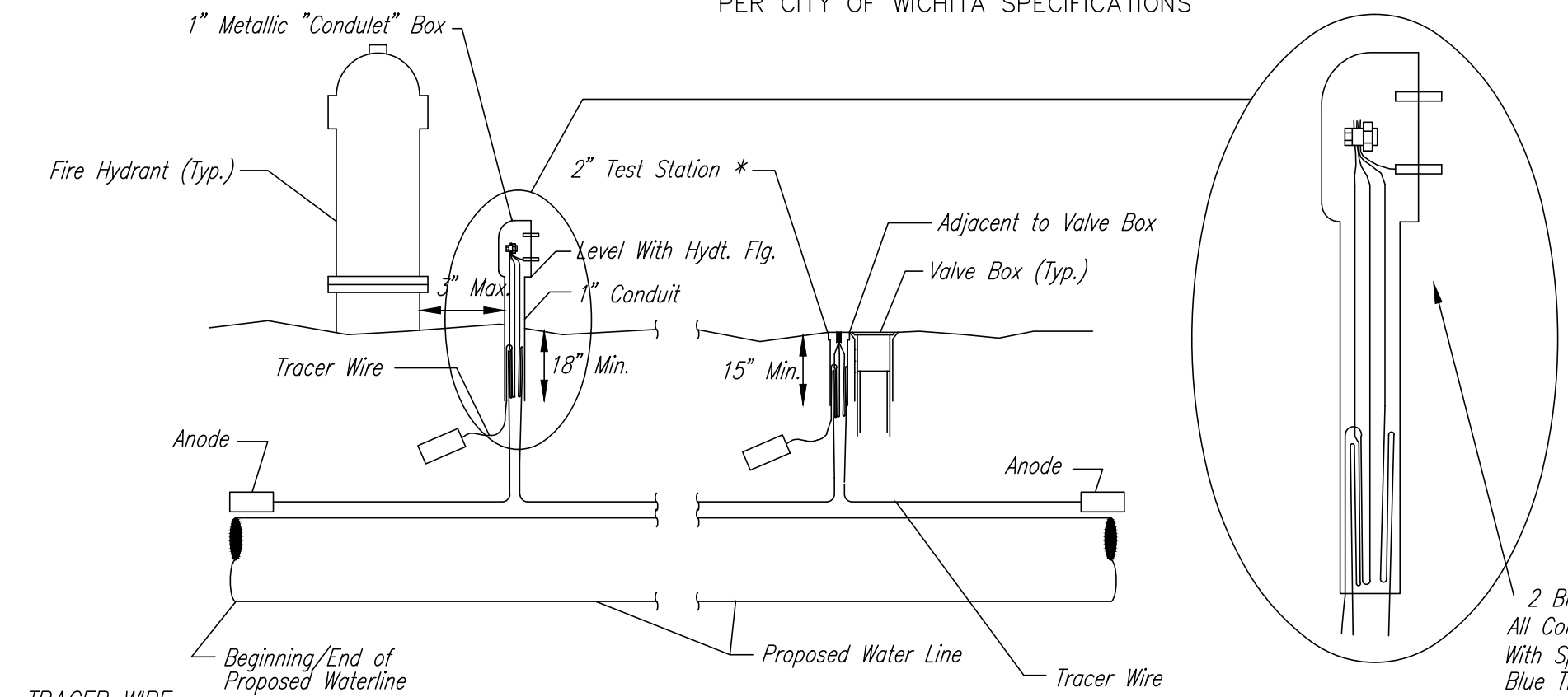


* IF THE REQUIRED HYDRANT BURY IS IN EXCESS OF 5', BUT LESS THAN 7', CONTRACTOR SHALL USE STANDARD 5' HYDRANT BURY AND HYDRANT BARREL EXTENSIONS AS NECESSARY. IF THE REQUIRED HYDRANT BURY IS GREATER THAN 7', CONTRACTOR SHALL USE 5' HYDRANT BURY, 2-MJ 90° BENDS, 6" ANCHOR COUPLING AND 6" DICT PIPE AS 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.

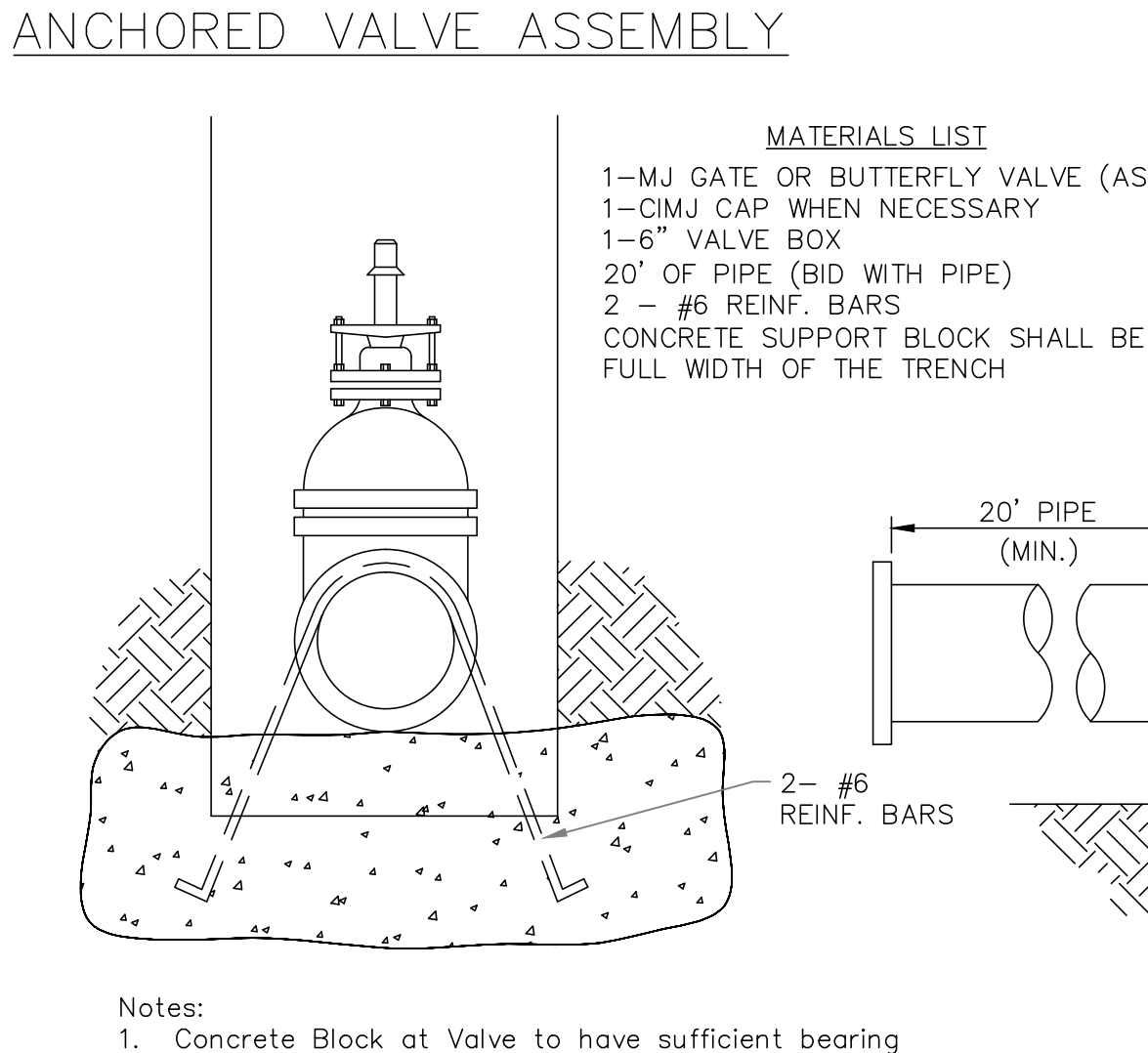
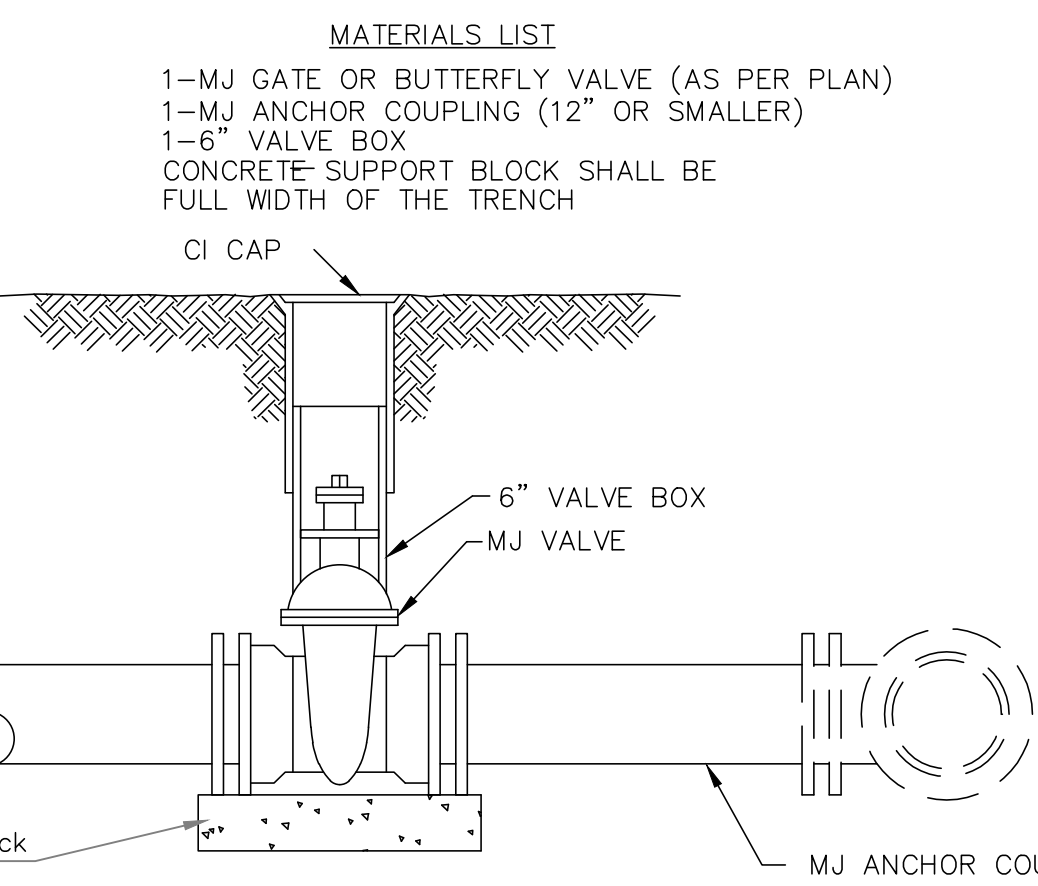
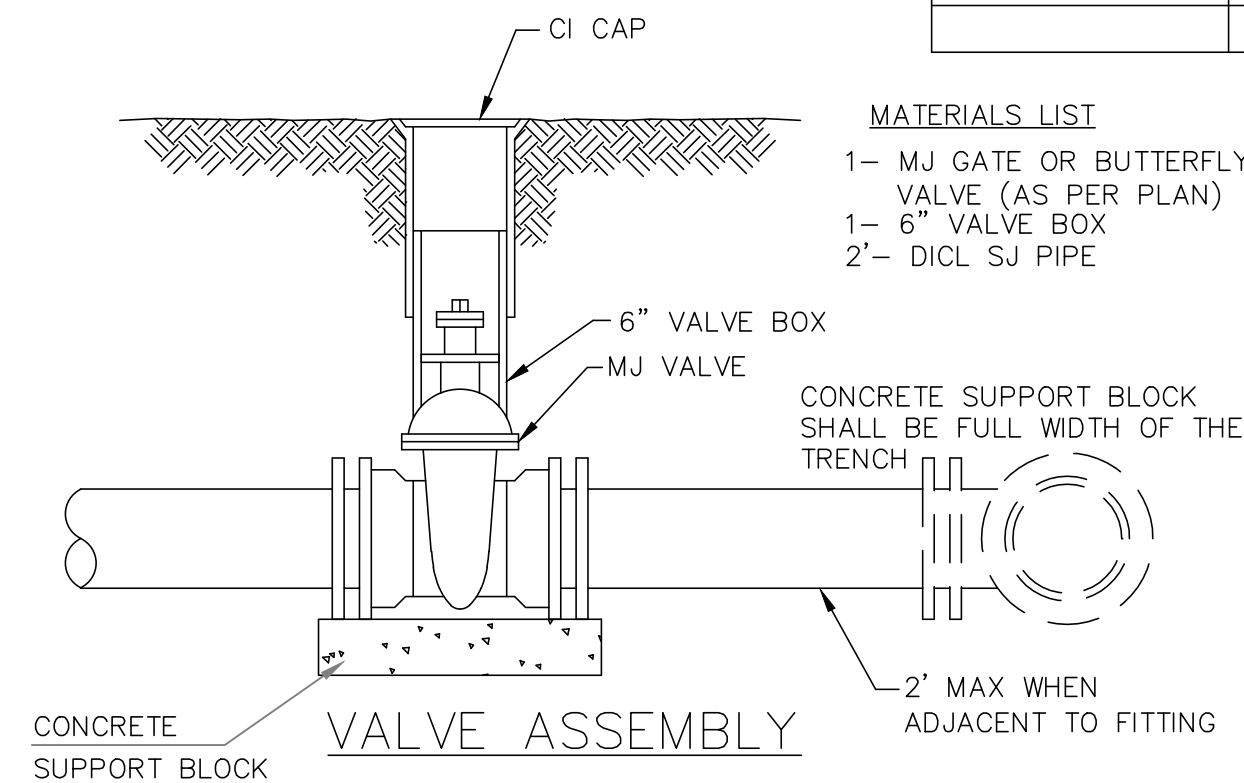
FIRE HYDRANT ASSEMBLY
PER CITY OF WICHITA SPECIFICATIONS



TRACER WIRE 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)* |
|---------|---------------------|-----------------------|-----------------------------|--------------------------------|
| 1+26.49 | 1329.82 | 1325.70 | 5' | 0 |
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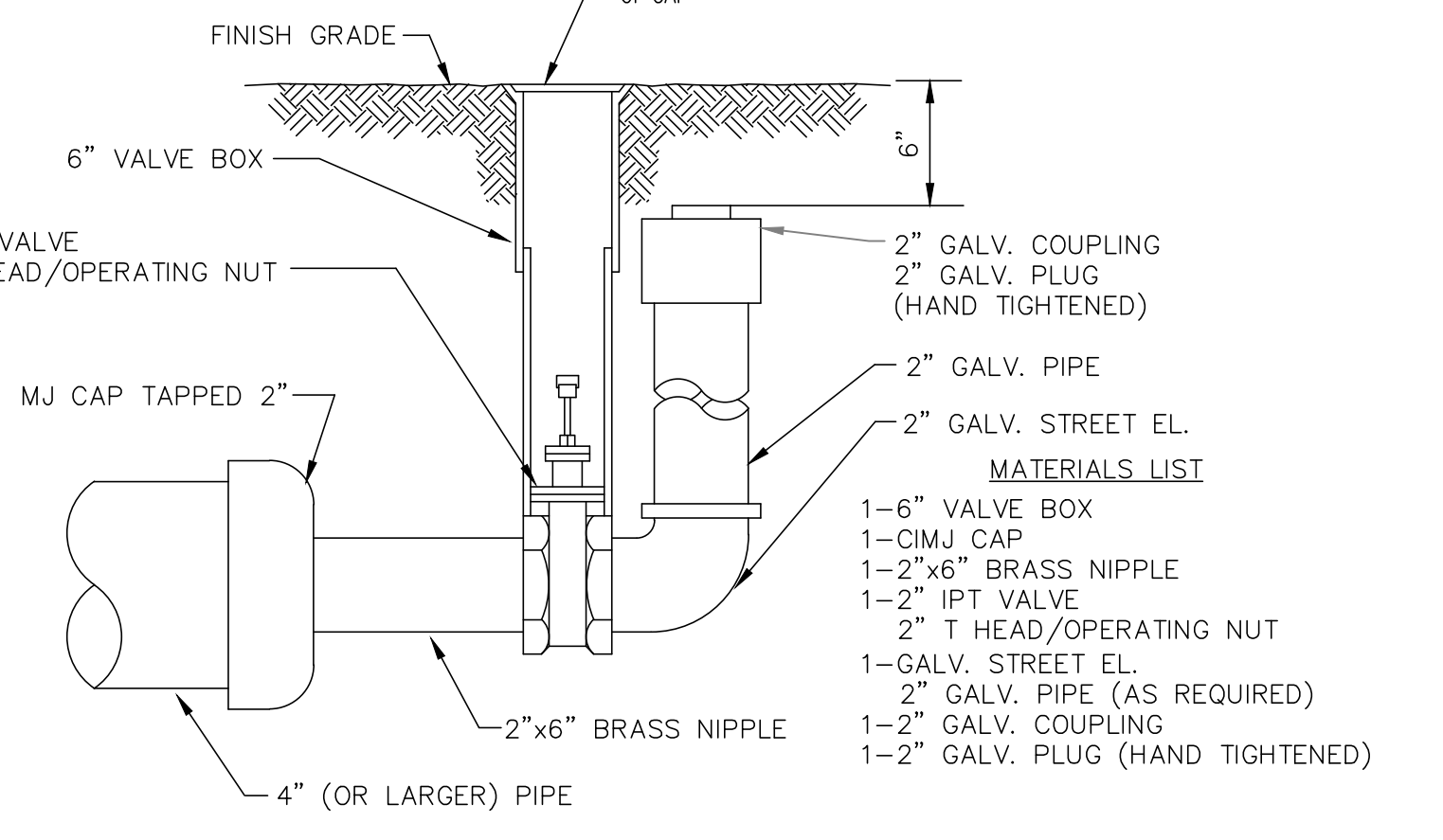
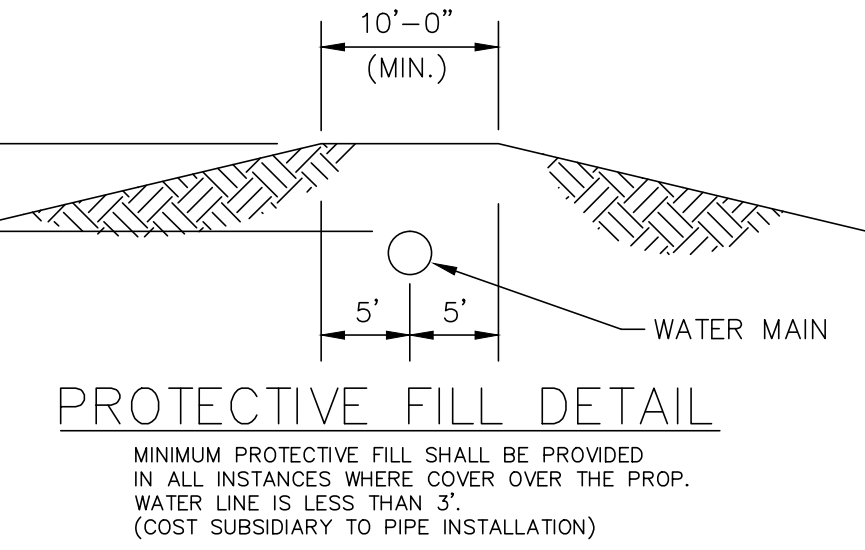
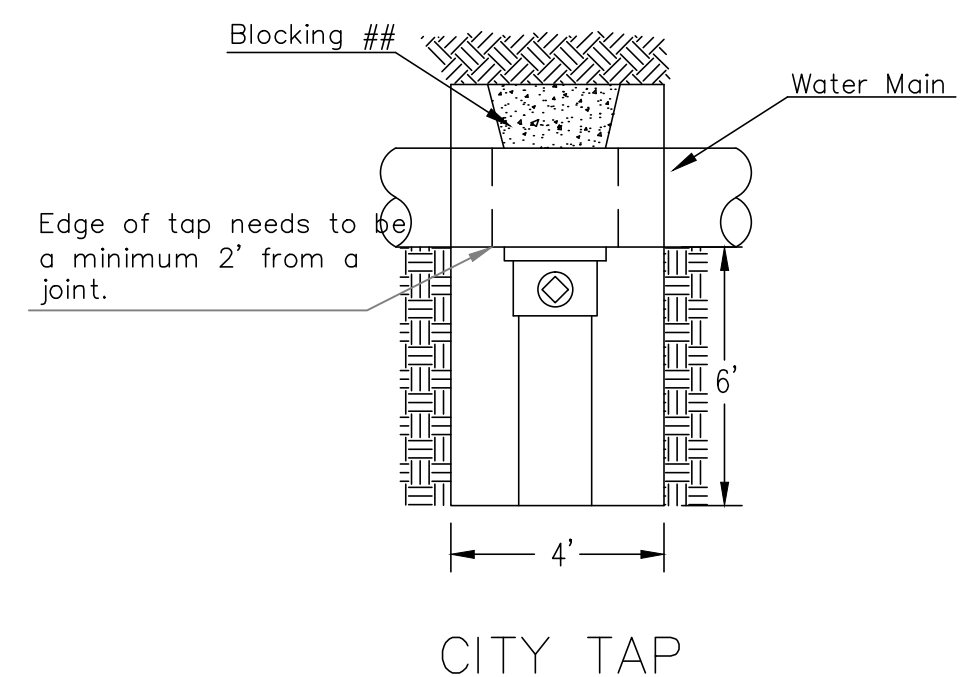
Notes:

- 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.

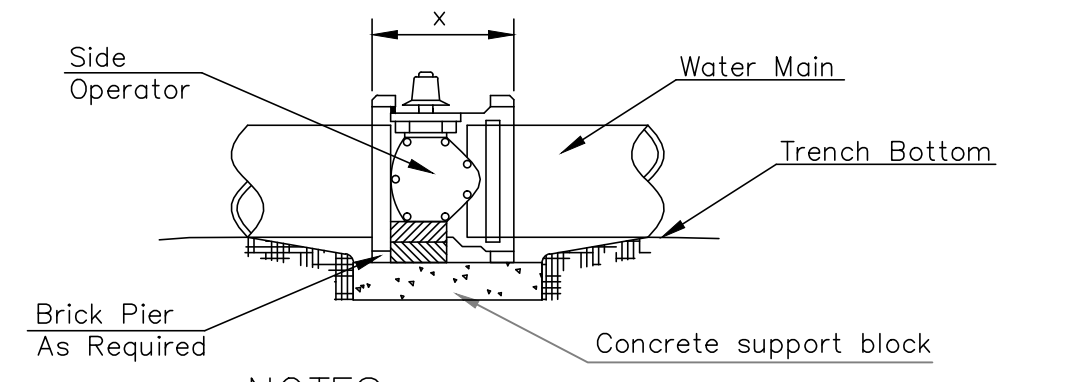
THRUST AT VALVES

| VALVE | THRUST AT 150 #/in. ² |
|-------|----------------------------------|
| 4" | 1809 lbs. |
| 6" | 4245 lbs. |
| 8" | 7540 lbs. |
| 12" | 16965 lbs. |

ANCHORED VALVE ASSEMBLY, SPECIAL



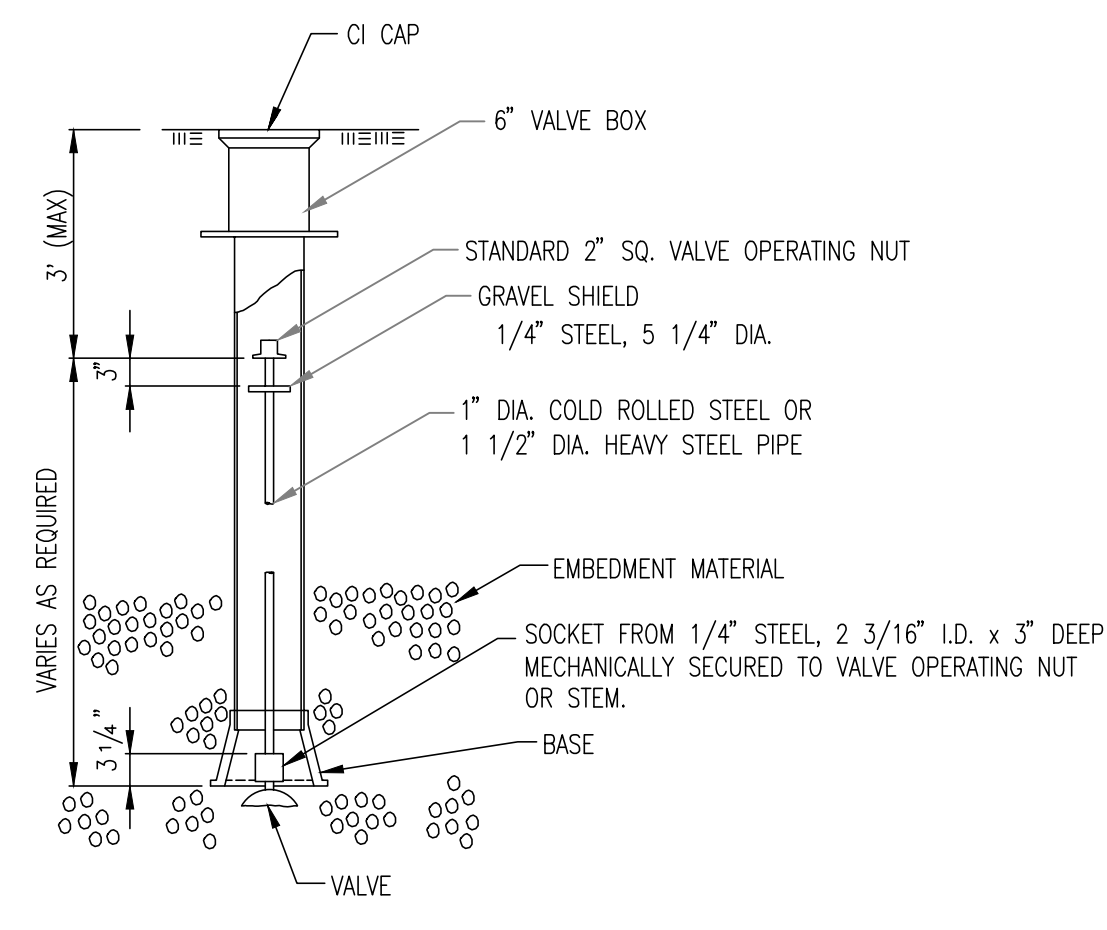
2" BLOWOFF ASSEMBLY



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 OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STANDARD WATER ASSEMBLY DETAIL

CITY ENGINEER
GARY JANZEN, P.E.

| | | |
|----------------|------------|---------|
| PROJECT NUMBER | OGA NUMBER | DATE |
| ---- | 607853 | 07/2014 |

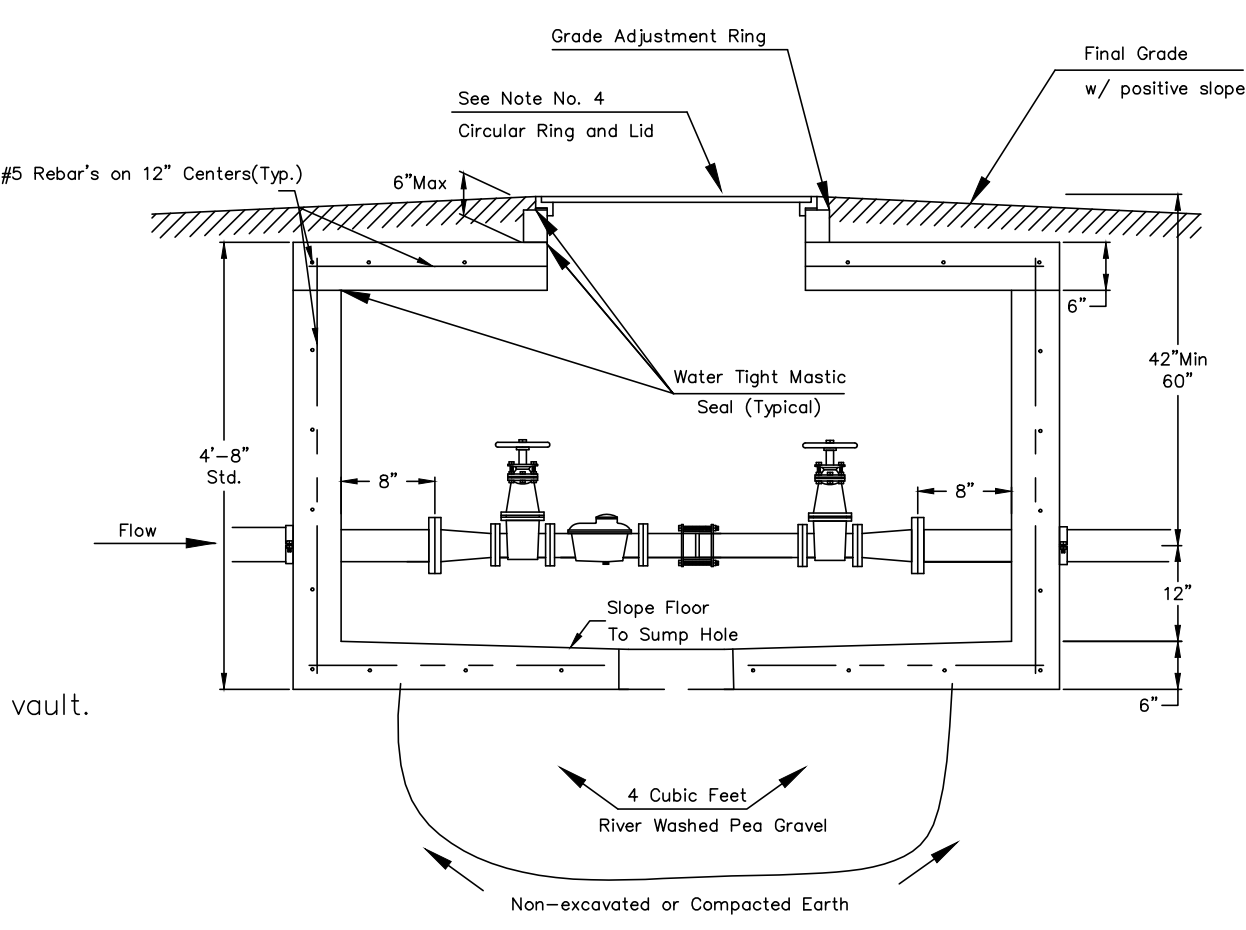
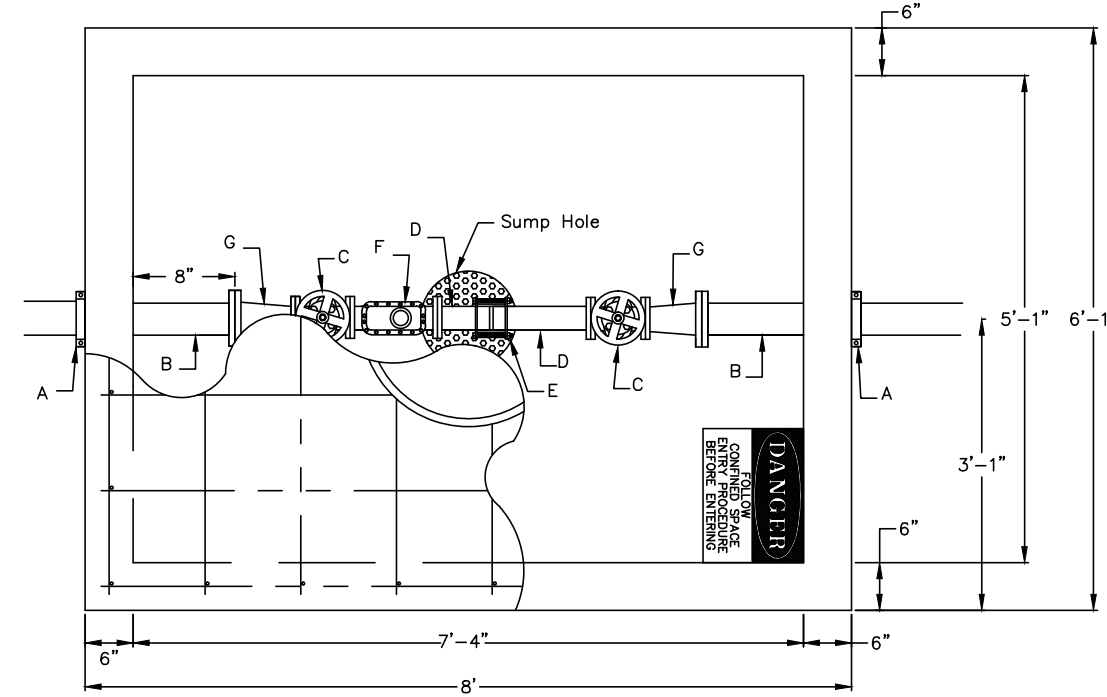
CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

4 of 6

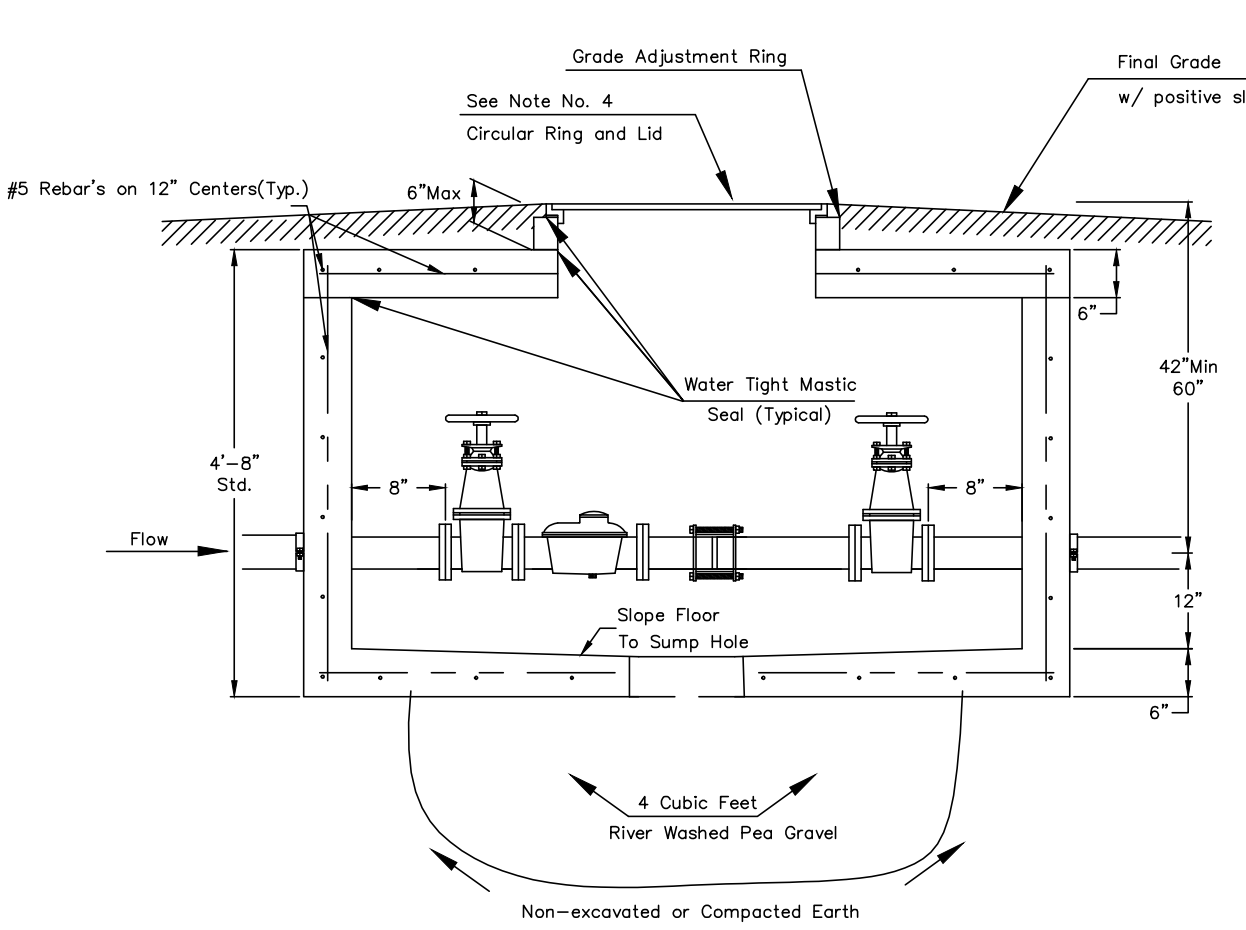
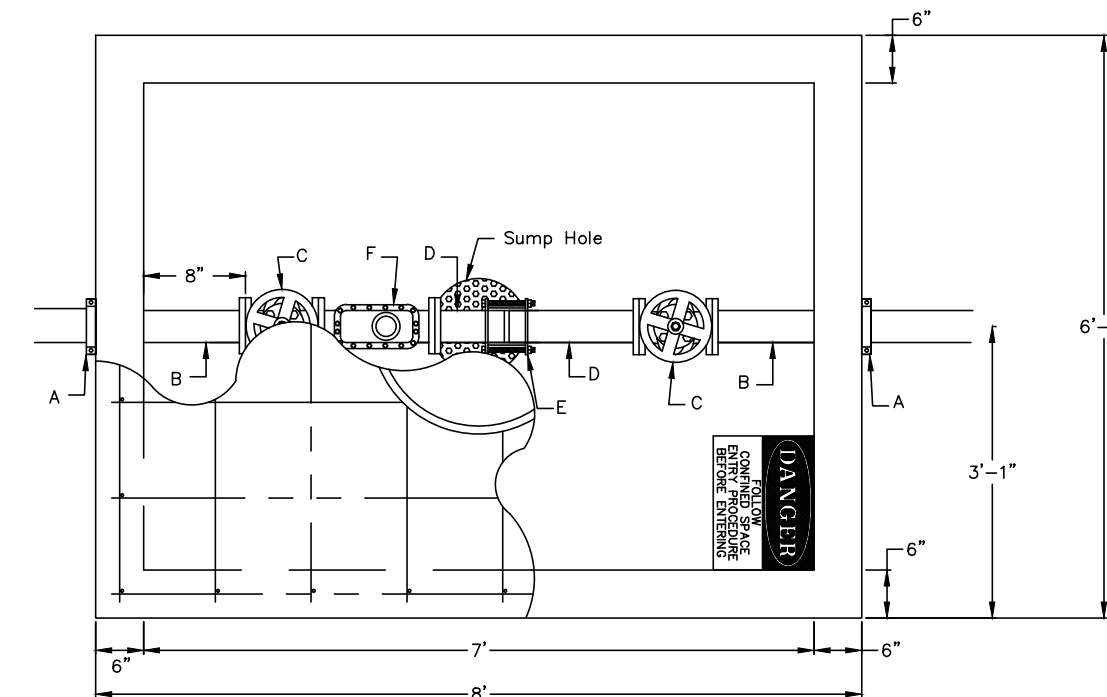
Notes For All Services - 3" thru 12":

- When the standard vault dimensions are not applicable, such as when additional space is required for special pipe, fittings, additional meters, etc. the design engineer shall design a vault with the required dimensions for Public Works and Utilities approval.
- The vault shall be poured concrete, cement blocks (voids to be completely filled with 2500 P.S.I. concrete), or approved precast structure (such as Clutter Inc. vaults approved 8/1/2000). The intent of these details shall not be limited by drawings or standards of precast structures.
- Vault location to be determined by Public Works and Utilities prior to construction and approved by Department's field supervisor prior to installation. A final inspection will be required for acceptance. Vault location standards include but not limited to: not to be located where subjected to vehicular loads, not to be located in any right-of-way or utility easement, and must be located on the property being served.
- The manhole ring and lid shall be Neenah R-6034 Frame with Type "C" Solid Lid and Drop Down Handle or US Foundry APS-30x30 (Aluminum). Where applicable the standard 10" Public Works and Utilities pattern meter reading lid and ring shall be located directly above water meter register. All meter registers shall have an approved lid directly vertical above. All joints of concrete to concrete or metal to concrete in the construction of the vault shall have an approved water tight mastic joint seal.
- Any fittings or appurtenances required to achieve proper elevation of pipe through the vault shall be provided by the contractor and appropriately noted on as-builts submitted by the inspecting engineer. Such fittings shall be a minimum of 2' from the exterior wall of vault.
- For all domestic services larger than 3" the contractor shall provide an outlet flange connection as shown 8" from the inside wall. Inlet and outlet wall sleeves shall be provided and installed by the contractor and shall be in alignment with one another. The inlet and outlet pipe shall be ductile iron pipe, cement lined, Class 150 per Standard Specifications and shall be continuous through vault wall and joint no less than 2' from the exterior wall of vault. Flanges of inlet and outlet pipes shall be in proper alignment and bolt pattern shall be rotated in such a way that valves and other fittings shall be in their proper vertical alignment when installed.
- For all services 4" and larger the contractor shall install a mega lug, restrained joint, or approved equal on the exterior walls of the vault, which shall be manufactured of ductile iron conforming to ASTM A 536-80, heat treated to a minimum hardness of 370 BHN and have a working pressure of at least 250 P.S.I. For all services smaller than 4" the contractor shall install an approved vault clamp on the exterior walls of the vault.
- All valves, meters, assemblies, and fittings shall be provided with sufficient concrete or other approved supports to the vault floor.
- The "Confined Space Warning" sign shall be fastened to the top of all vaults. If necessary for landscaping or site considerations, the sign may be fastened to the vault lid if it does not impede access to the handle. Acceptable materials: Aluminum 73415HH, Plastic 73439HH, or S.A. Vinyl 73463HH.
- All meters shall have an electronic read register compatible with the current City of Wichita meter reading system. All detector meters shall be an 5/8 cubic foot Badger meter with ERT register or approved equal. Gallon meters shall not be accepted.
- Additional Notes For Fire Services:
 - A post indicator valve (PIV) is an option for the outlet valve and may be requested by the architect or owner. The PIV is not required by City of Wichita ordinance.
 - When Siamese connections are required by the Wichita Fire Department, refer to the current City Code Section 15.
 - If due to any reason the completed vault retains ground or drainage water in excess of 4" in depth from the floor of the vault, the property owner shall be responsible for providing and installing an appropriate automatic sump pump or approved equal, as well as any other appurtenances required to make such system function as intended.
 - The property owner is responsible for completing an "Application for Private Fire Protection" prior to final acceptance of the project.



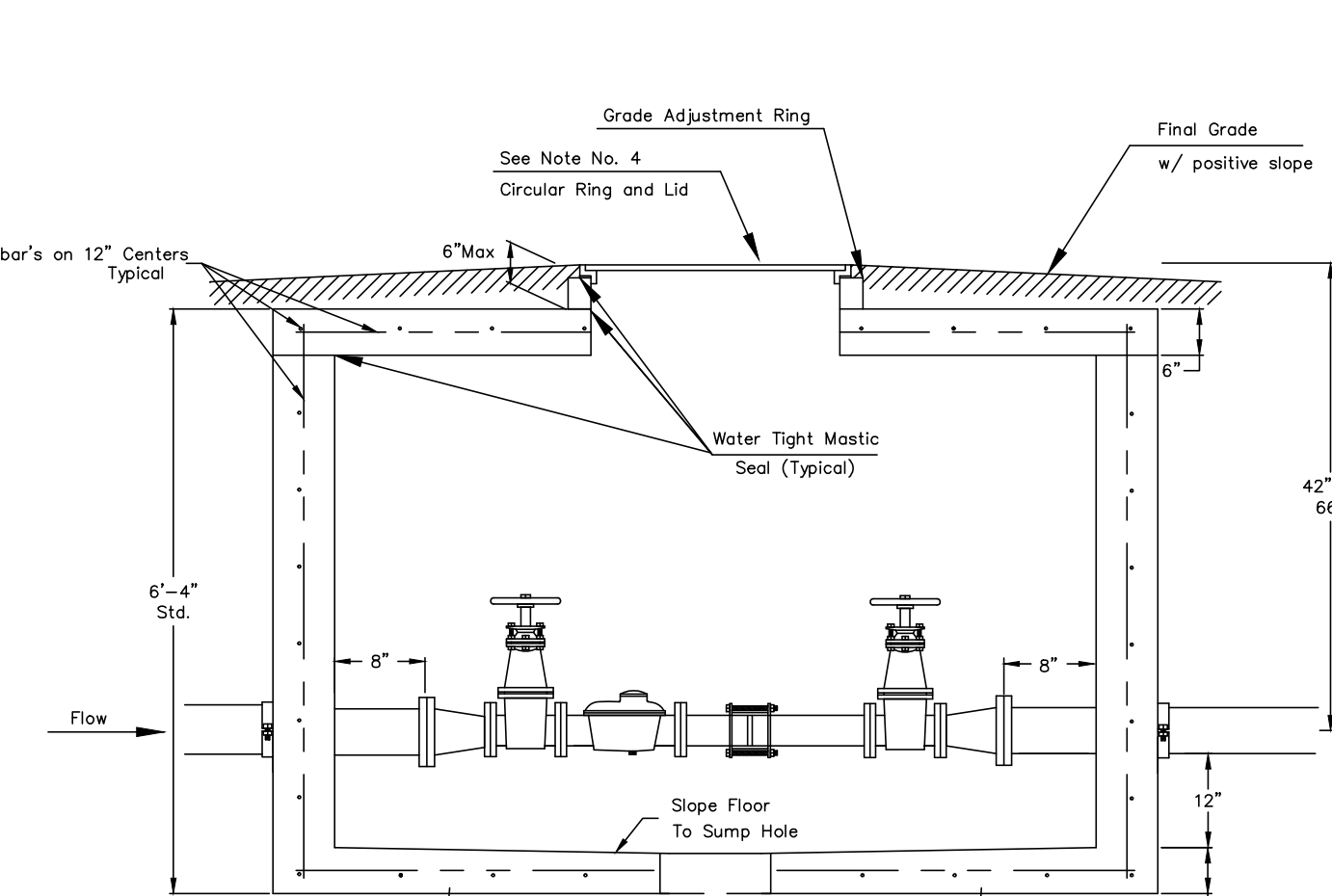
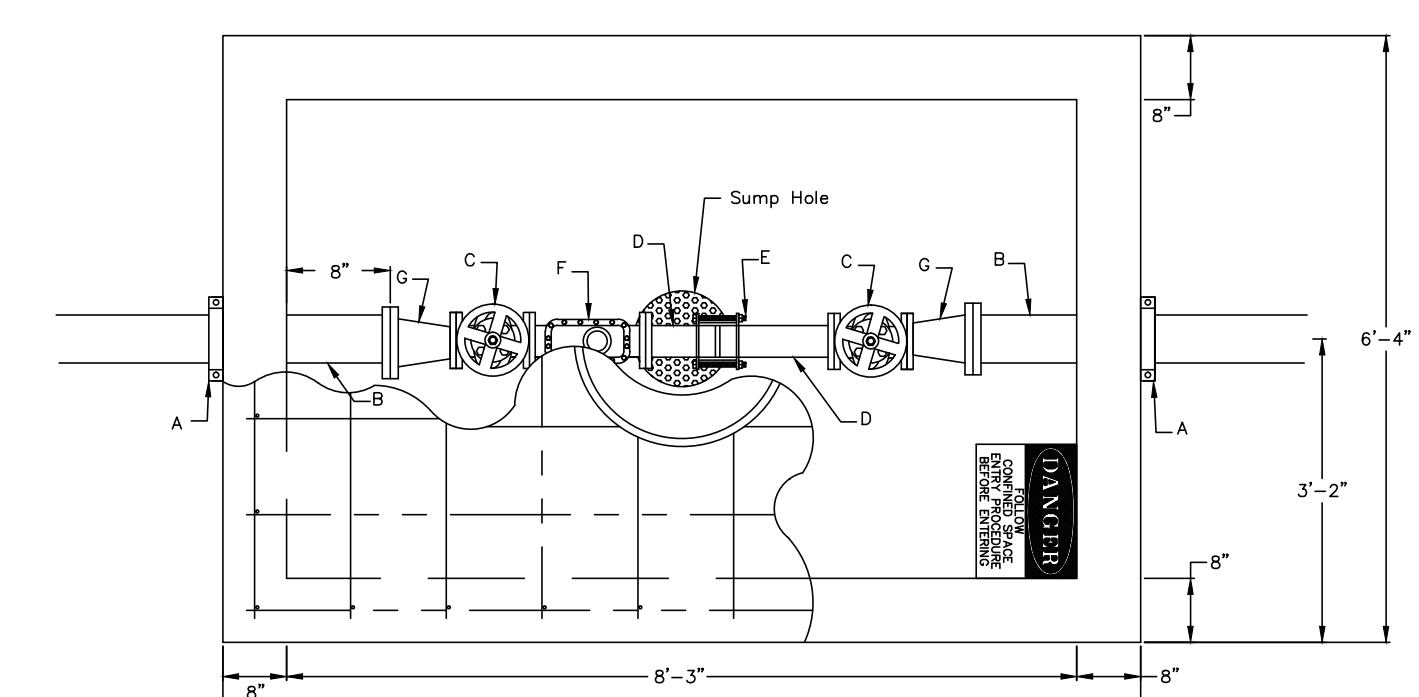
- A - 4" Vault Clamp
- B - Min. 3' Piece of 4" FL x PE DICL Pipe
- C - 3" Flange Non-rising Stem Gate Wheel Valve
- D - 4" FL x PE Pipe
- E - 3" Flex Coupling
- F - 3" Badger Recordall II Turbo Cubic Foot Meter with ERT Register or Sensus W-350DR Cubic Foot Meter with AMR Register.
- G - 3" x 4" FL Reducer

3" Domestic Service



- A - 4" Vault Clamp
- B - Min. 3' Piece of 4" FL x PE DICL Pipe
- C - 4" Flange Non-rising Stem Gate Wheel Valve
- D - 4" FL x PE Pipe
- E - 4" Flex Coupling
- F - 4" Badger Recordall II Turbo Cubic Foot Meter with ERT Register or Sensus W-1000DR Cubic Foot Meter with AMR Register.

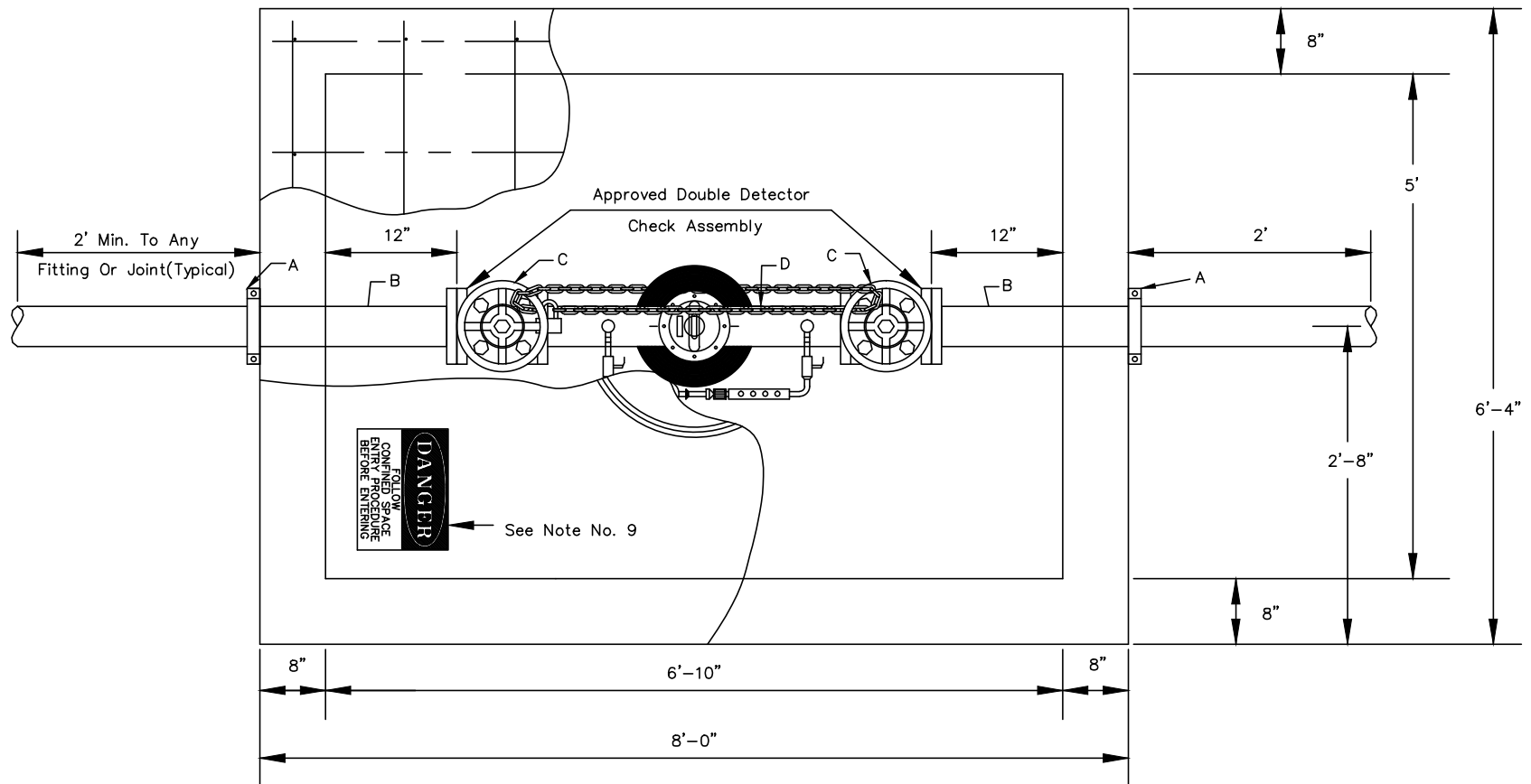
4" Domestic Service



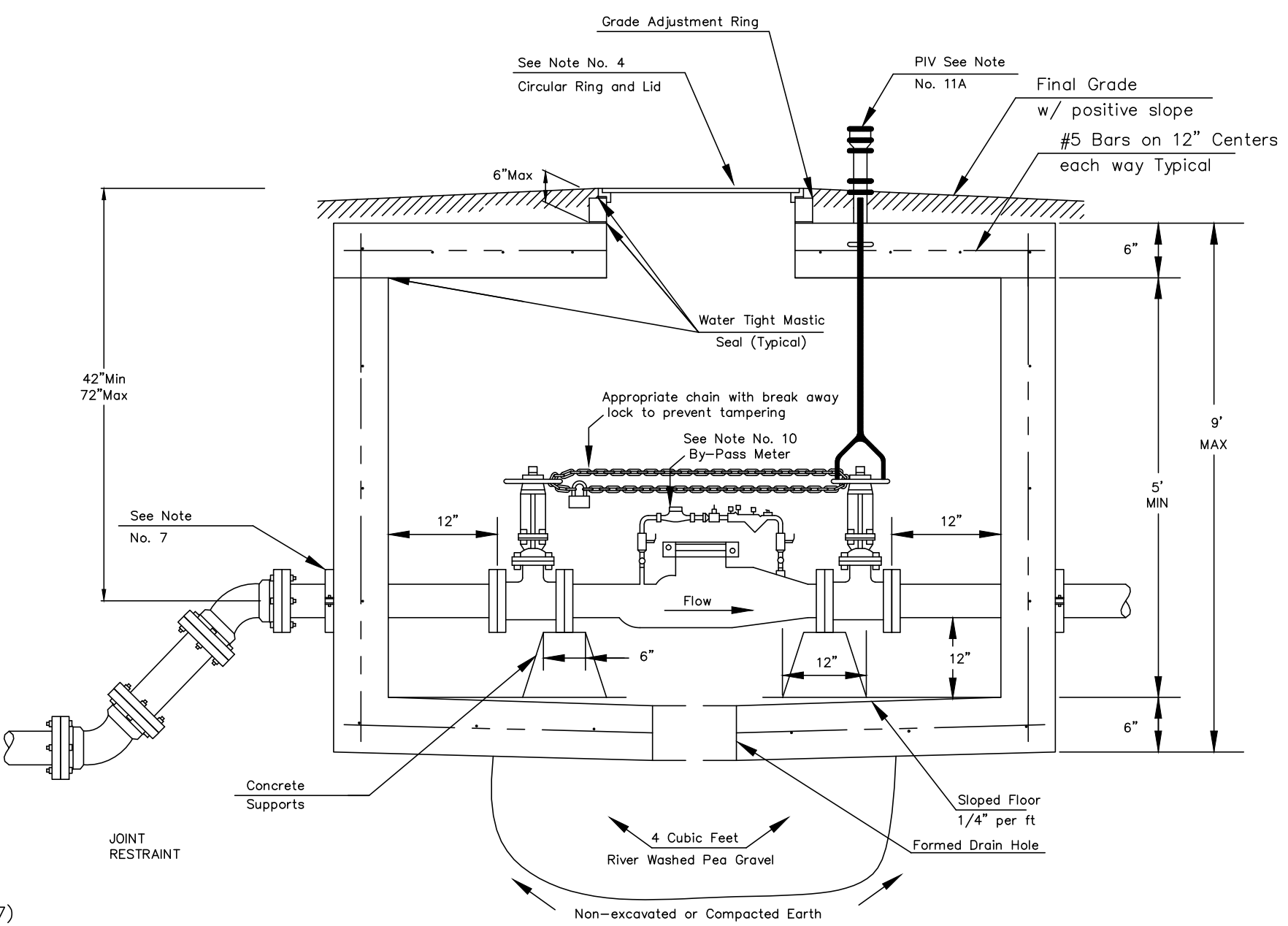
- A - 6" Mega Lug (See Note 7)
- B - Min. 3' Piece of 6" FL x PE DICL Pipe
- C - 4" Flange Non-rising Stem Gate Wheel Valve
- D - 4" FL x PE Pipe
- E - 4" Flex Coupling
- F - 4" Badger Recordall II Turbo Cubic Foot Meter with ERT Register or Sensus W-1000DR Cubic Foot Meter with AMR Register.
- G - 6" x 4" Flange Reducer

6" Domestic Service with 4" meter

NOTE:
INSPECTOR FROM PUBLIC WORKS AND UTILITIES TO BE CONTACTED
24 HOURS PRIOR TO INSTALLATION TO SET VAULT.
CONTACT: 316-219-8928 OR 316-219-8929



NOTE:
Domestic Services larger than 6" shall be custom designed by Engineer.



- A - Mega Lug (See Note 7)
- B - Min. 3'-8" Piece of FL x PE DICL Pipe
- C - Flange Gate Valve, Wheel Operated
- D - Ames Model 3001SS or approved equal with metered (cubic foot) by-pass assembly

4" thru 8" Fire Service

Use 45 degree fittings as necessary to keep depth of vault within 76 inch maximum. All fittings should be mega lug, restrained joint or approved equal.



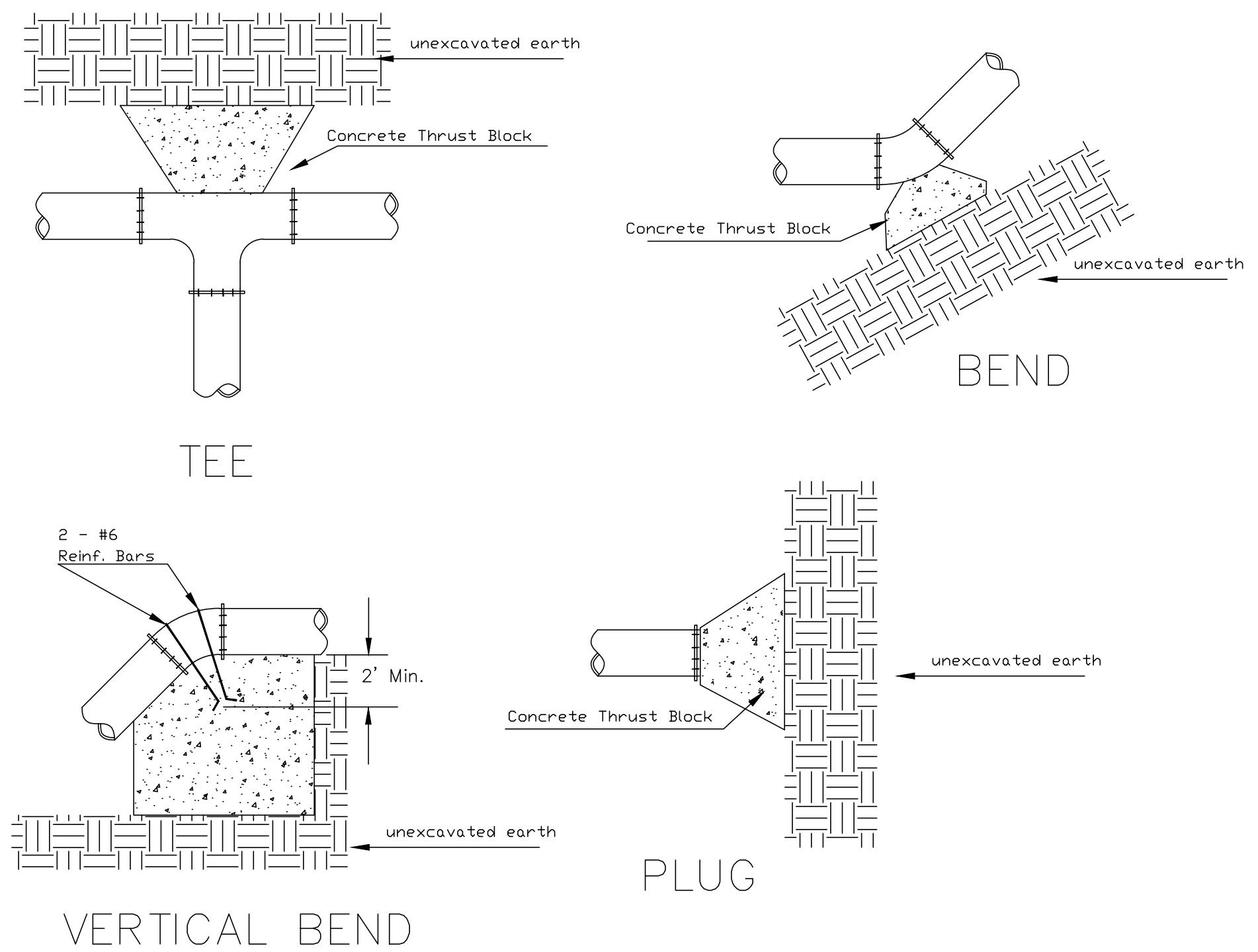
CITY OF WICHITA

PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

| | | |
|--|------------|------------------------|
| STANDARD VAULT DETAILS AND METER ASSEMBLIES | | |
| CITY ENGINEER GARY JANZEN, P.E. | | |
| PROJECT NUMBER | OCA NUMBER | DATE |
| | 607853 | 12/2011 |
| CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501 | | SHEET 5 of 6 |

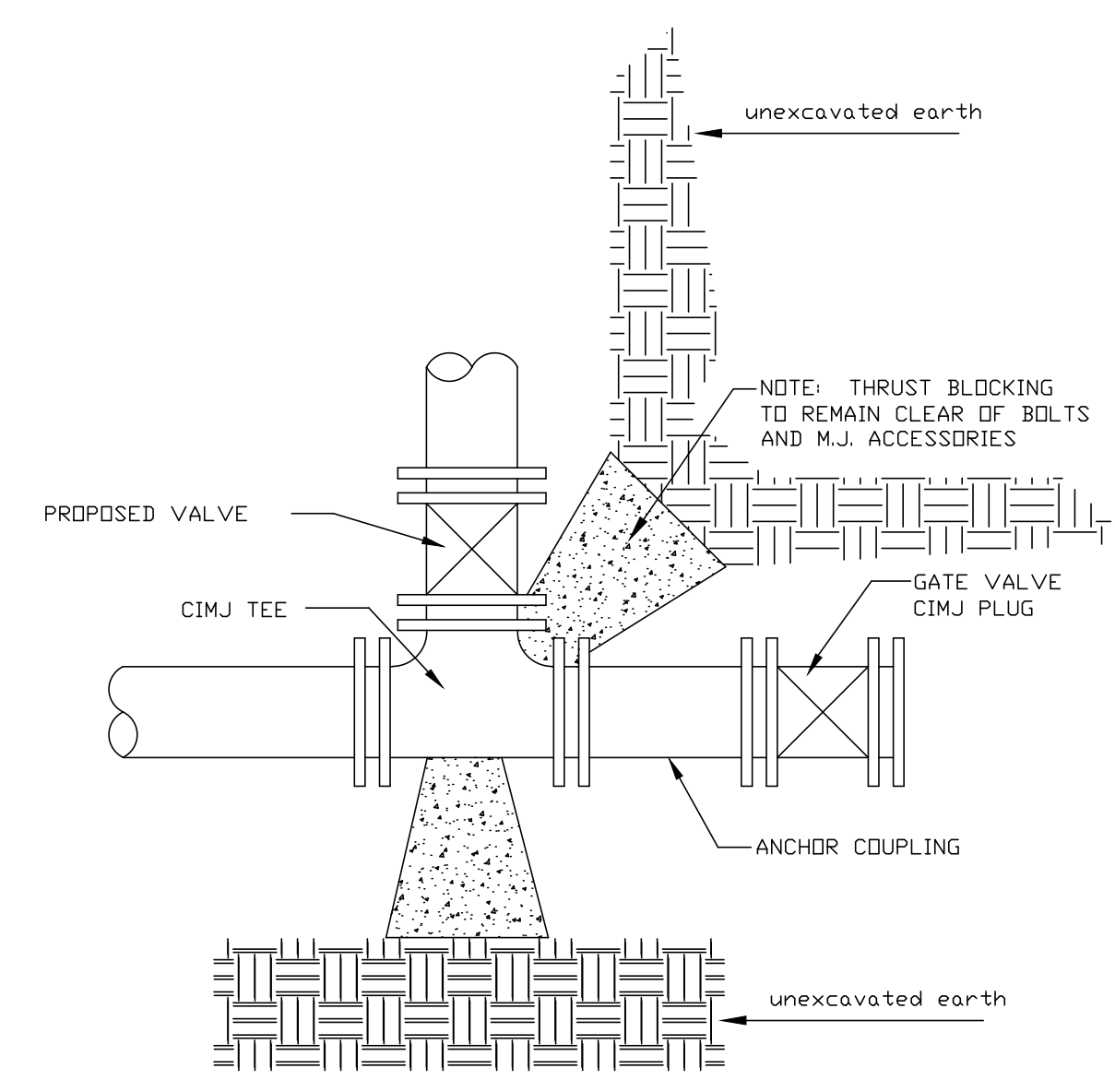
FILE LOCATION: S:\Drawing Files\Project_AMC 9-16-13\Ultra Modern\DWG\PWV\PWV.dwg TAB NAME: Vault & Meter Details USER:ccrcmantes SAVEd:8/5/2014 1:45 PM PLOTTED:8/5/2014 2:07 PM

FILE LOCATION: S:\Drawing Files\Project_AMC 9-16-13\Ultra Modern\DWG\PPW\PPW.dwg TAB NAME: Misc. Water Details USER:ccmontes SAVEd:8/5/2014 1:45 PM PLOTTED:8/5/2014 2:08 PM



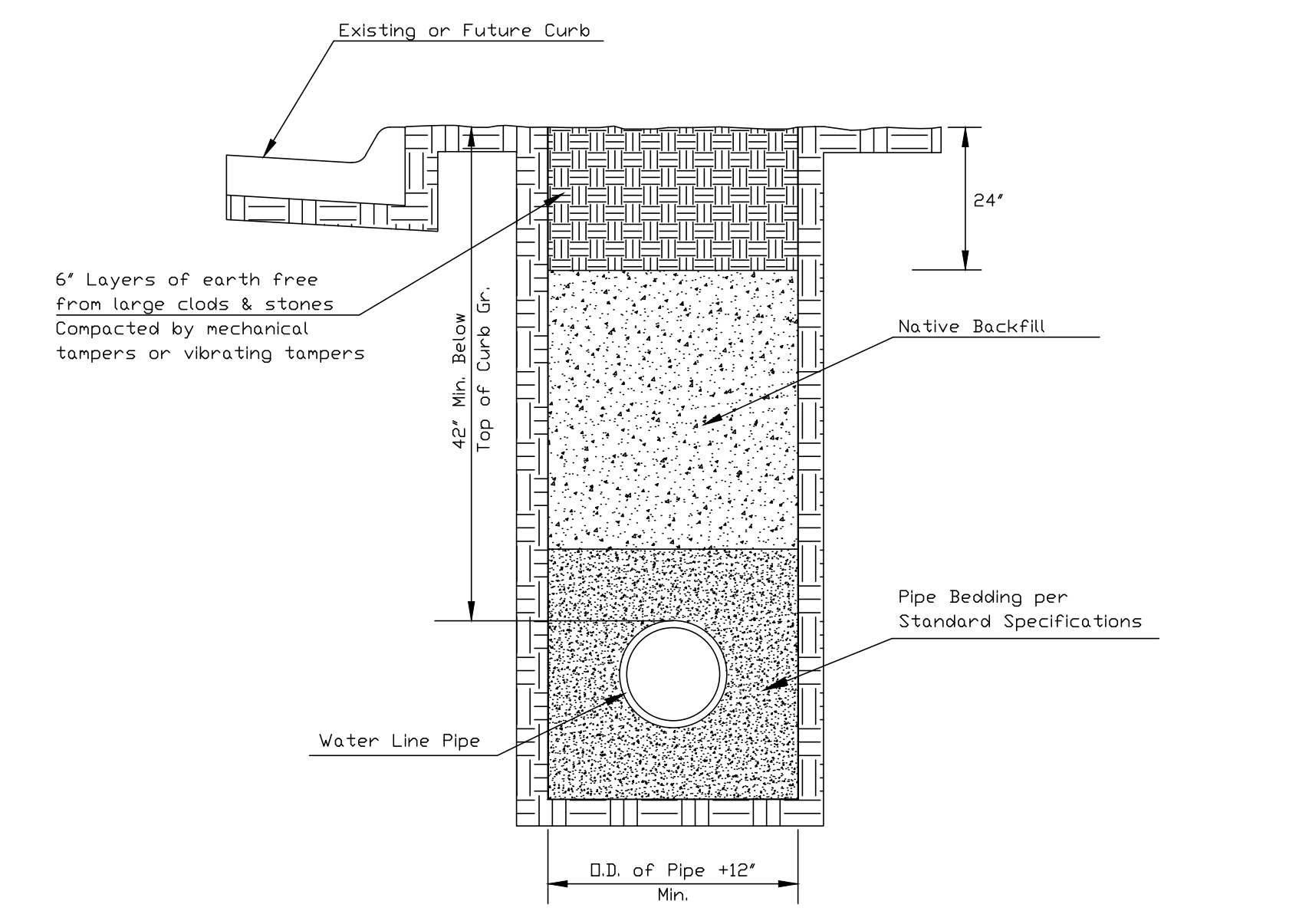
| PIPE SIZE | THRUST AT FITTINGS IN TONS-AT 150#/IN P ² | | | | | |
|-----------|--|------|-------|---------|---------|-------|
| | PLUG | 90° | 45° | 22 1/2° | 11 1/4° | TEE |
| 6" | 2.8 | 3.95 | 2.15 | 1.09 | .55 | 2.8 |
| 8" | 4.9 | 6.95 | 3.75 | 1.90 | .96 | 4.9 |
| 12" | 11.4 | 16.1 | 8.75 | 4.45 | 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

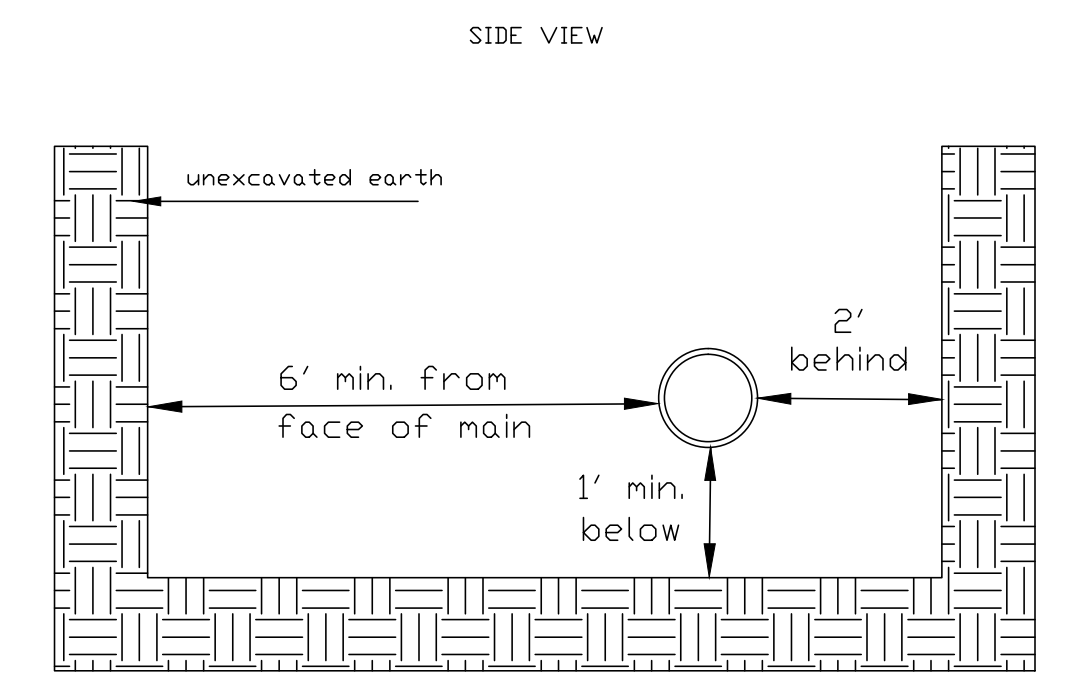


KEY BLOCK DETAIL

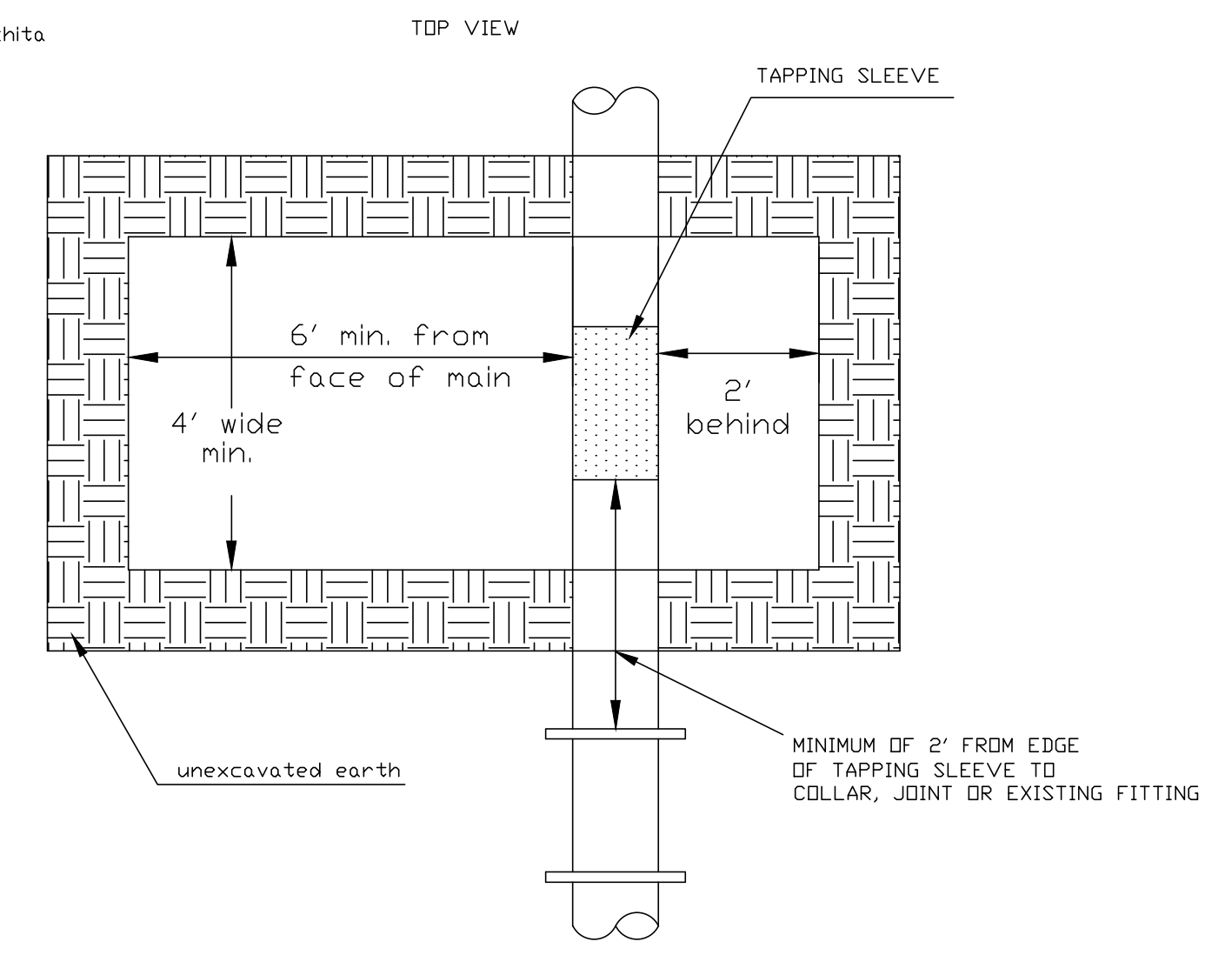
* PLANS GOVERN UNLESS OTHERWISE NOTED ON PLANS



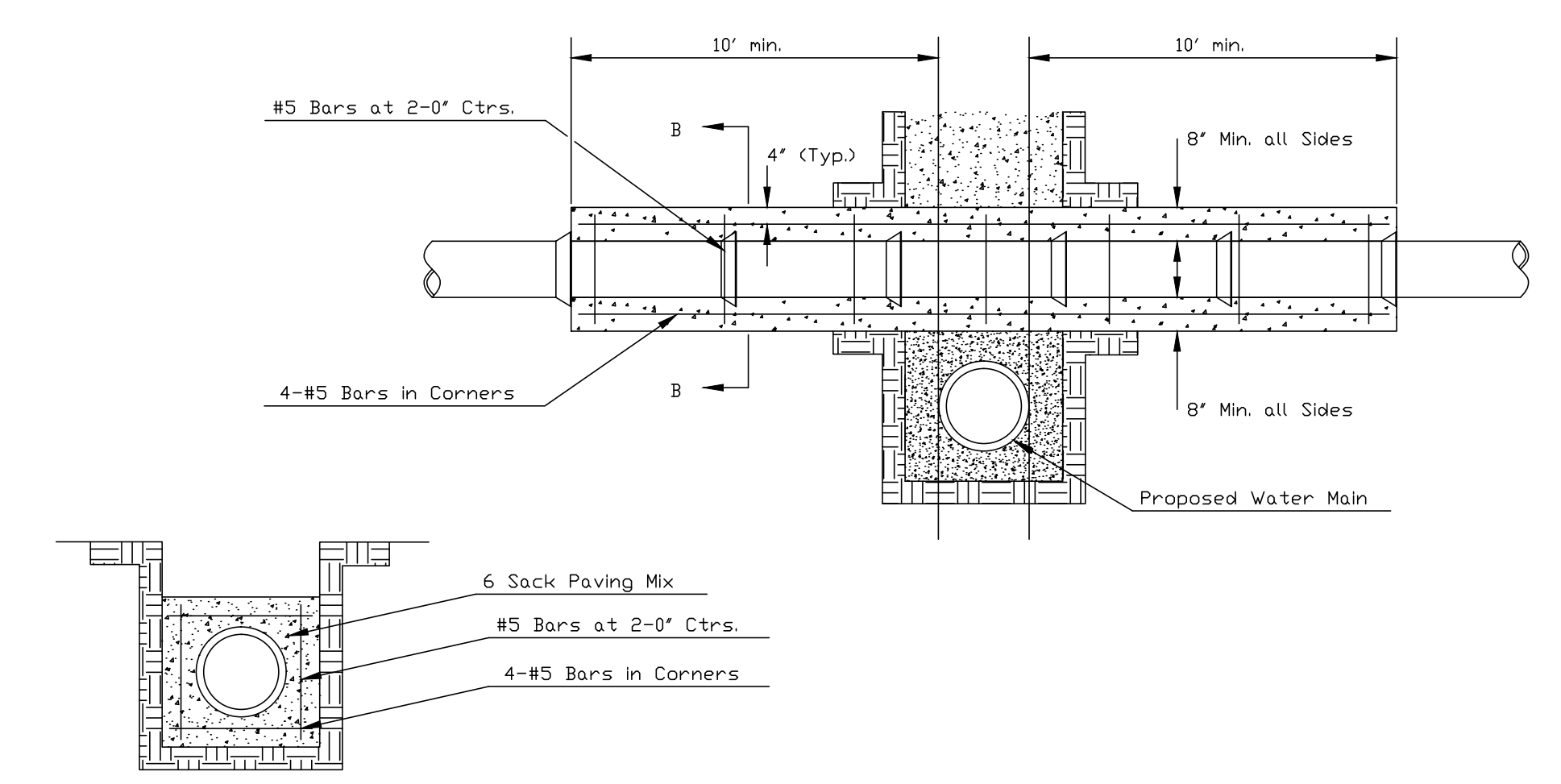
TRENCH COMPACTION IN ROAD RIGHT-OF-WAY



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

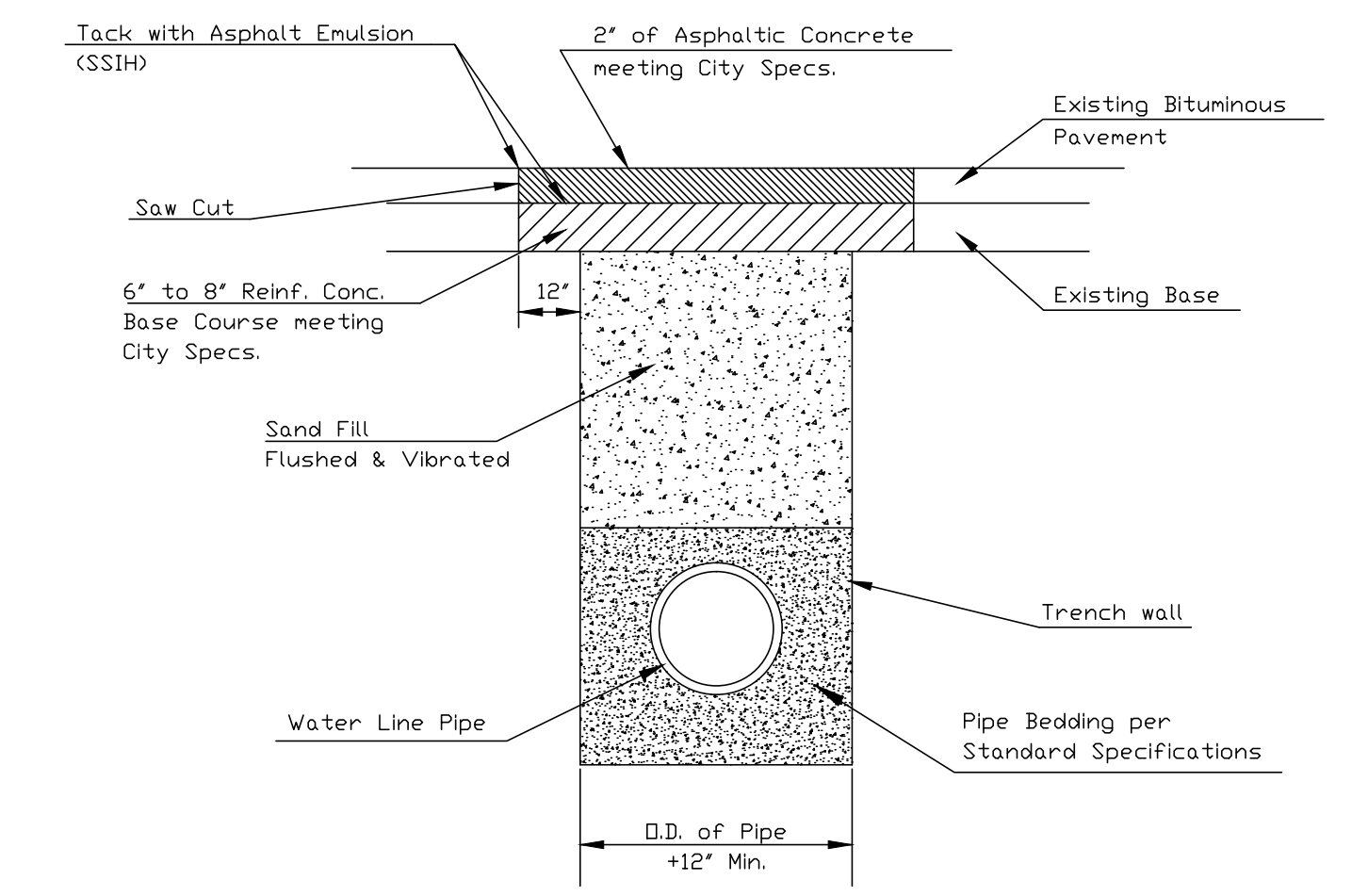


EXCAVATION FOR WET TAP



SECTION B-B

REINFORCED CONCRETE ENCASEMENT OF SANITARY SEWER



PAVEMENT REPLACEMENT & TRENCH COMPACTION UNDER EXISTING AND PROPOSED CITY ROADS



| MISCELLANEOUS WATER DETAILS | | |
|--|------------|---------|
| CITY ENGINEER GARY JANZEN, P.E. | | |
| PROJECT NUMBER | OGA NUMBER | DATE |
| | 607853 | 04/2014 |
| CITY ENGINEER'S OFFICE | | SHEET |
| CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501 | | 6 of 6 |

REVISED APRIL 2014