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# PRIVATE FIRE WATER IMPROVEMENTS to serve Temporary Audi Facility Lot 4, Block 1, Berkeley Square First Addition Private Project Water: 1811 PPW (607853) CITY OF WICHITA, KANSAS

Gary Janzen, P.E. - City Engineer  
MAY 2014

## 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
Cox Communications	262-4270
Kansas Gas Service	1-888-482-4950
Wester Energy	383-8650
Aquila Energy	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
Canoco Phillips Pipeline Co.	1-877-267-2290
Southern Star Pipeline Co.	529-6600
Kinder-Morgan Pipeline Co.	1-888-844-5658

The Contractor must notify the following in case of an emergency:
- Utility service lines, poles, valve boxes, meters, and etcetera 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.
- All disturbed R/W areas not intended for pavement or sidewalk construction shall be seeded with Kansas Premium Fescue Blend at a rate of 8 lb./1000 Sq. Ft., fertilized with a 16-20-6 ratio at a rate of 4 lb./1000 Sq. Ft., and mulched with Prairie Hay at a rate of 92 lb./1000 Sq. Ft. Mulch shall be "patted" with forks or punched into soil to reduce loss due to wind.
- 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 if within 3' of joint. Saw cut if over 3' from joint. Removal and replacement of pavement shall not be paid for directly, but shall be considered incidental to other items in the project.
- 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.
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- 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.
- 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 Baseline for this project is East line of the property, see cover page.
- Part of this water line is private. City of Wichita is not responsible for the maintenance and records for this project.

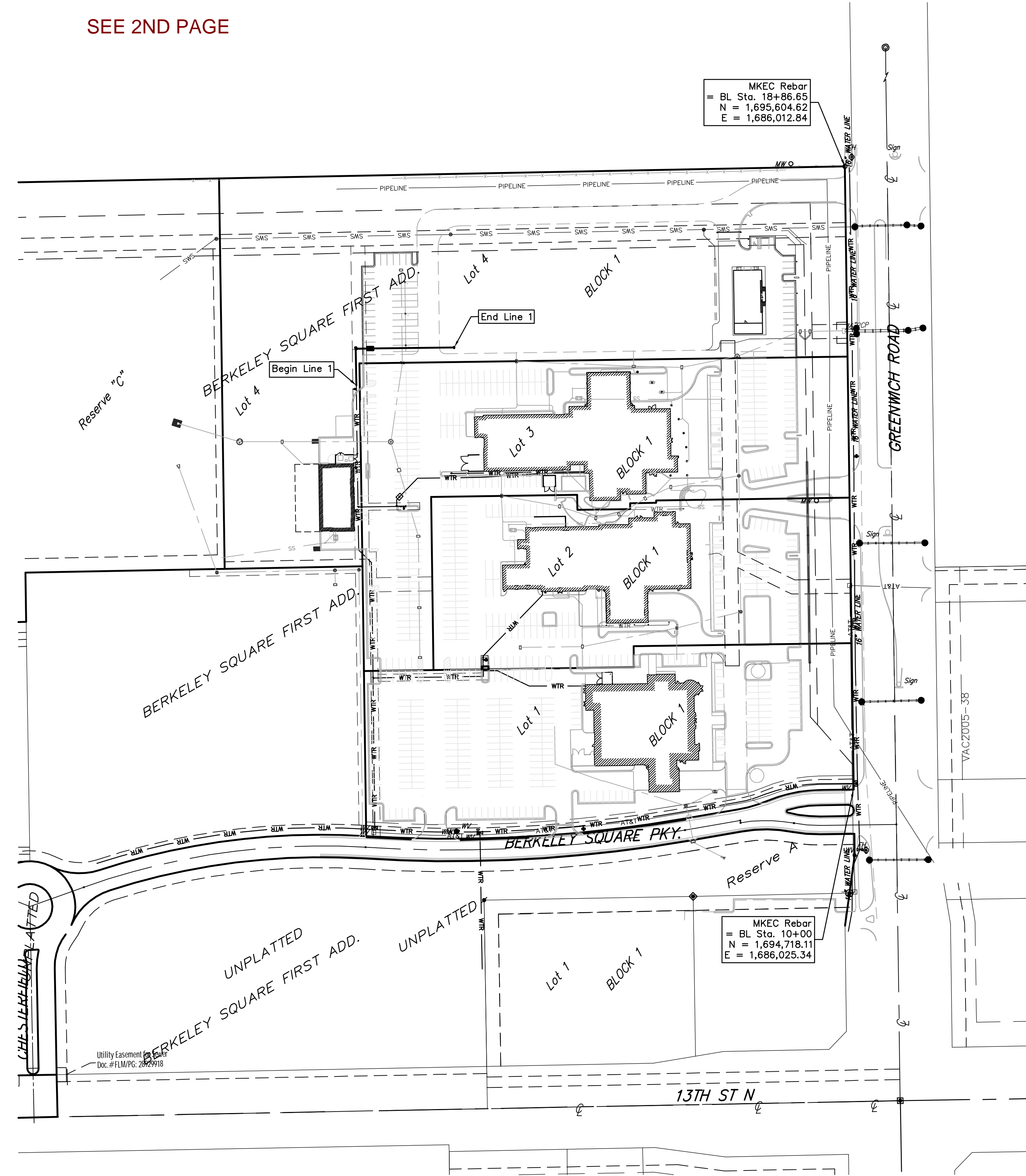
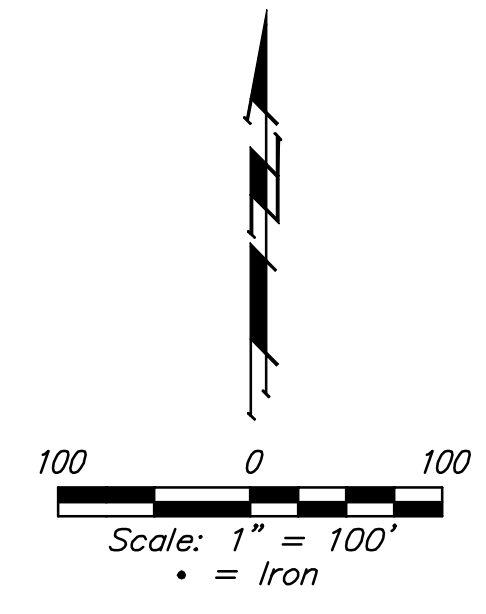
APPROVED AS NOTED  
BY CITY ENGINEER OF WICHITA,  
BY WICHITA WATER & SEWER DEPARTMENT,  
& BY WICHITA FIRE DEPARTMENT

Public Works Rebecca Dril 9-14  
Water & Sewer Jan 10 5-7-14  
Fire 5-7-14

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.



## BENCHMARKS

SITE BENCHMARK-1  
"□" cut in west edge of catch basin.  
Elevation=1381.56 (NAVD 88)

SITE BENCHMARK-2  
"V" notch in west edge of sidewalk.  
Elevation=1375.60 (NAVD 88)

## SHEET INDEX:

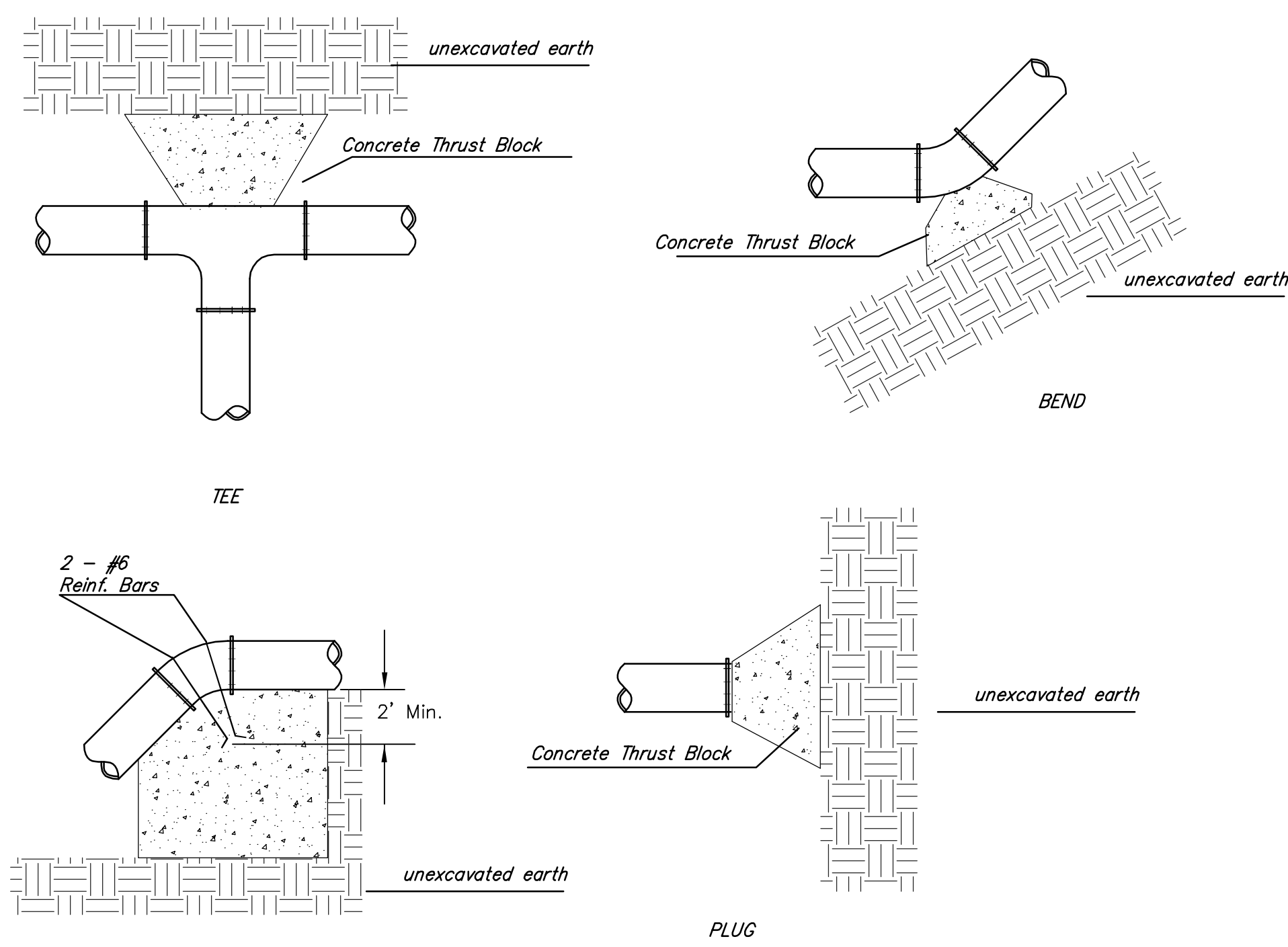
Title Sheet	1
Line 1	2
Water Line Details	3-5

**AS BUILTS**

Contractor: Ewertz Excavation  7/8/2014	Project Inspector: Larry Gann  <b>KEMILLER</b> ENGINEERING PA 117 E. Lewis, Wichita, KS 67202 (316)264-0242
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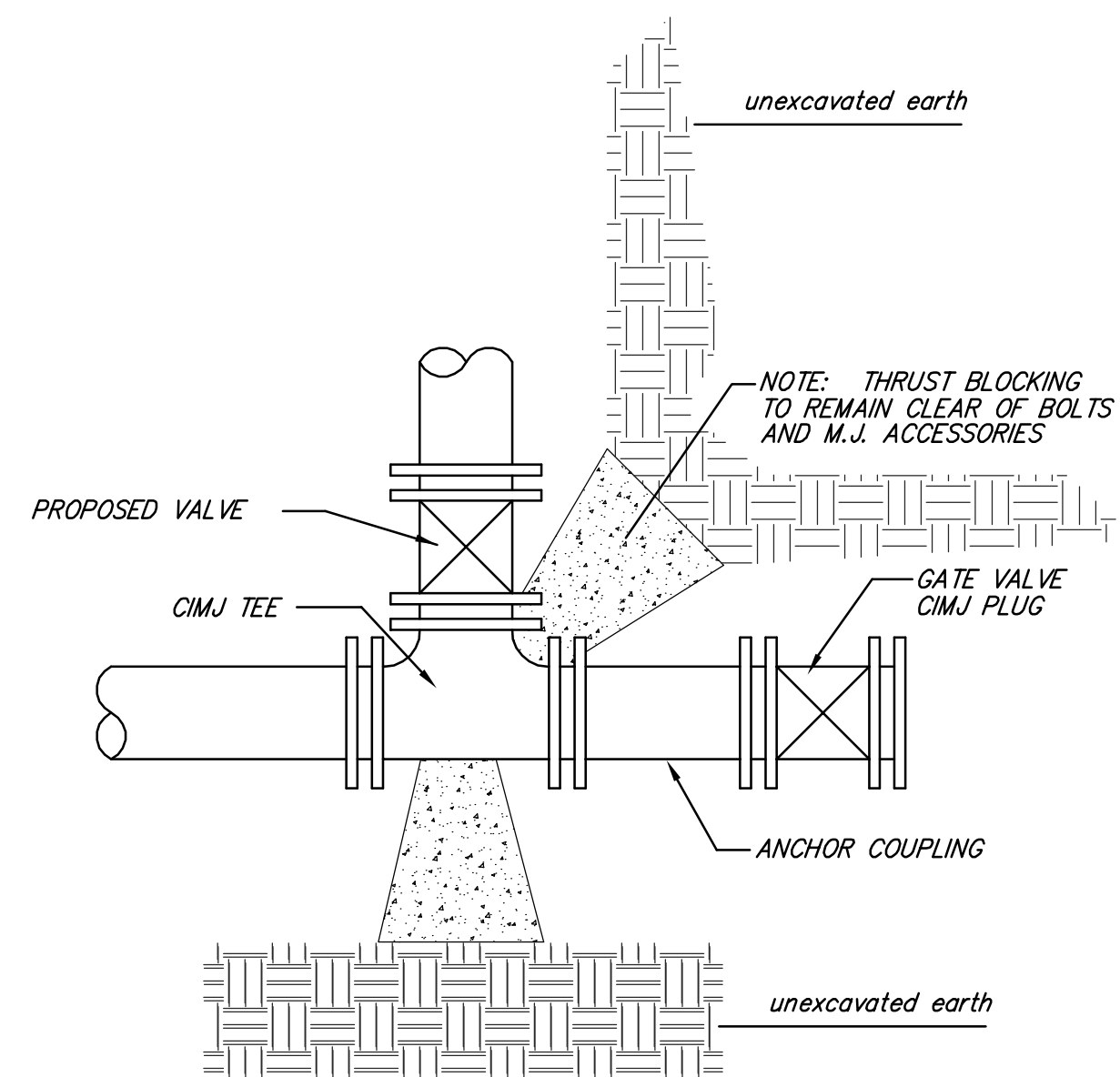




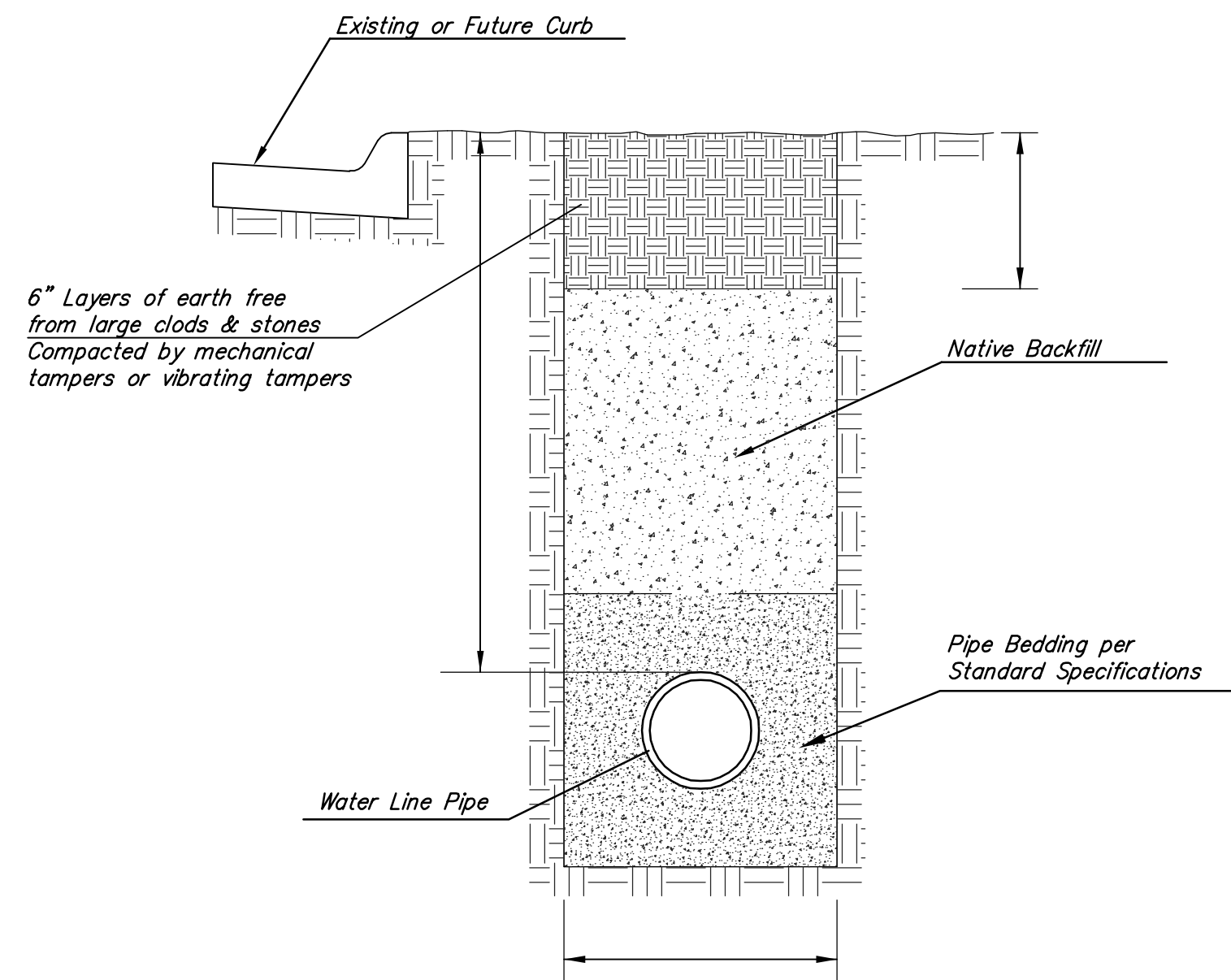
VERTICAL BEND

PIPE SIZE	THRUST AT FITTINGS IN TONS--AT 150#/IN <sup>2</sup>					
	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

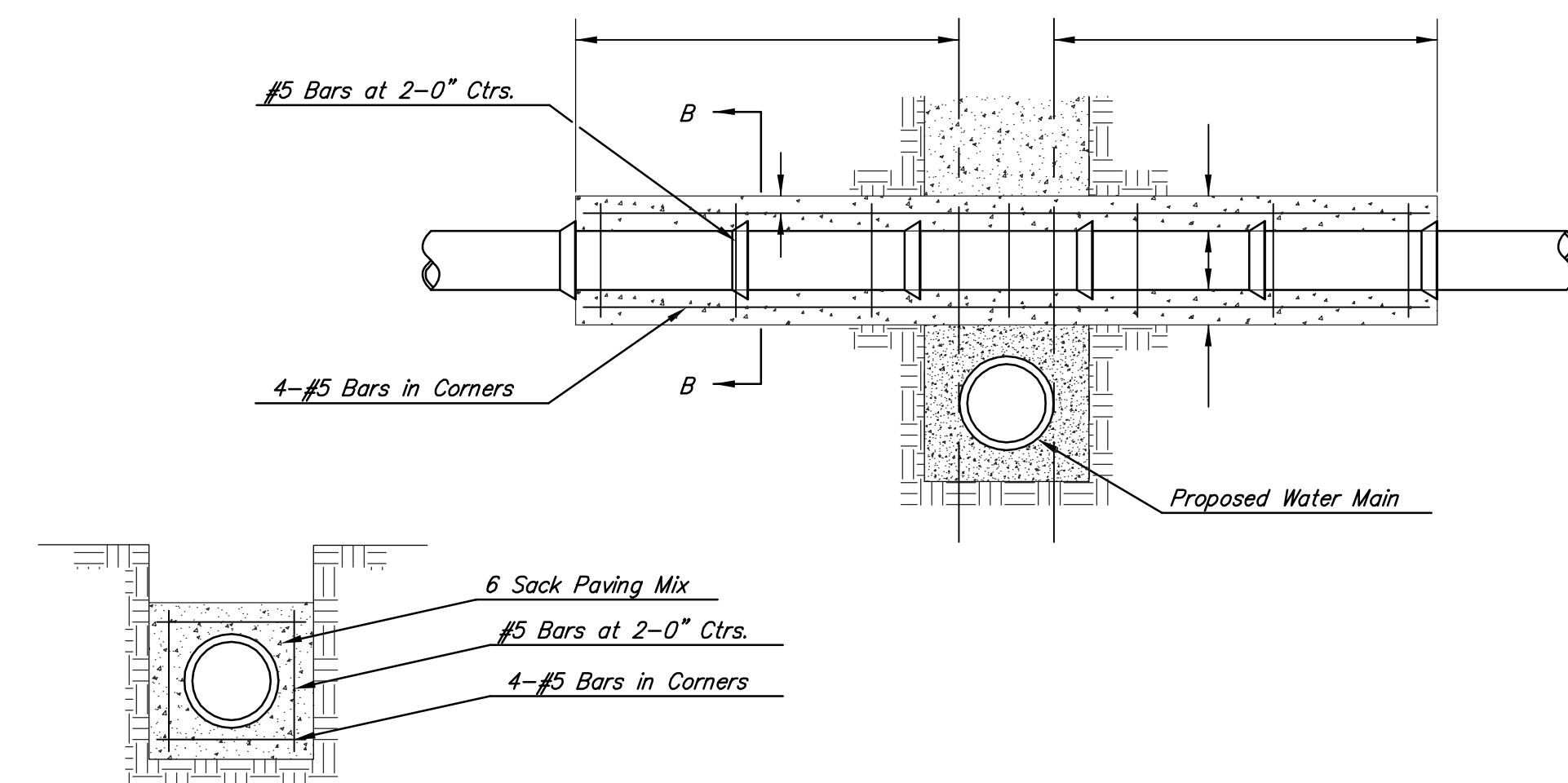
TYPICAL THRUST BLOCKS



KEY BLOCK DETAIL

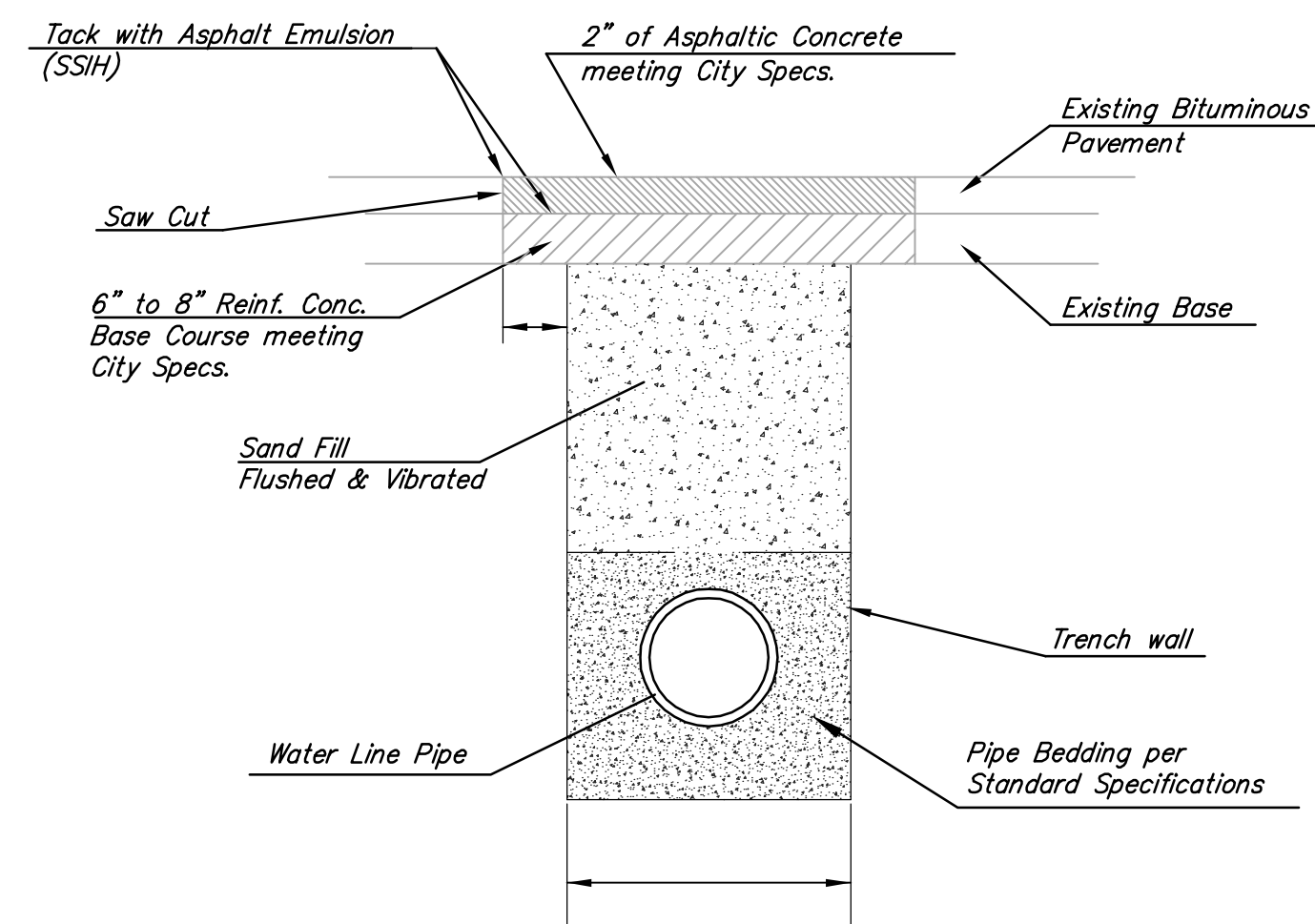


TRENCH COMPACTION IN ROAD RIGHT-OF-WAY



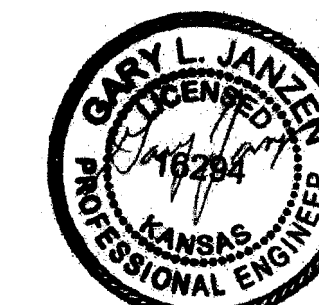
SECTION B-B

REINFORCED CONCRETE ENCASEMENT OF SANITARY SEWER




PAVEMENT REPLACEMENT & TRENCH COMPACTION UNDER EXISTING AND PROPOSED CITY ROADS

PLANS GOVERN  
\* UNLESS OTHERWISE NOTED ON PLANS



04/22/13

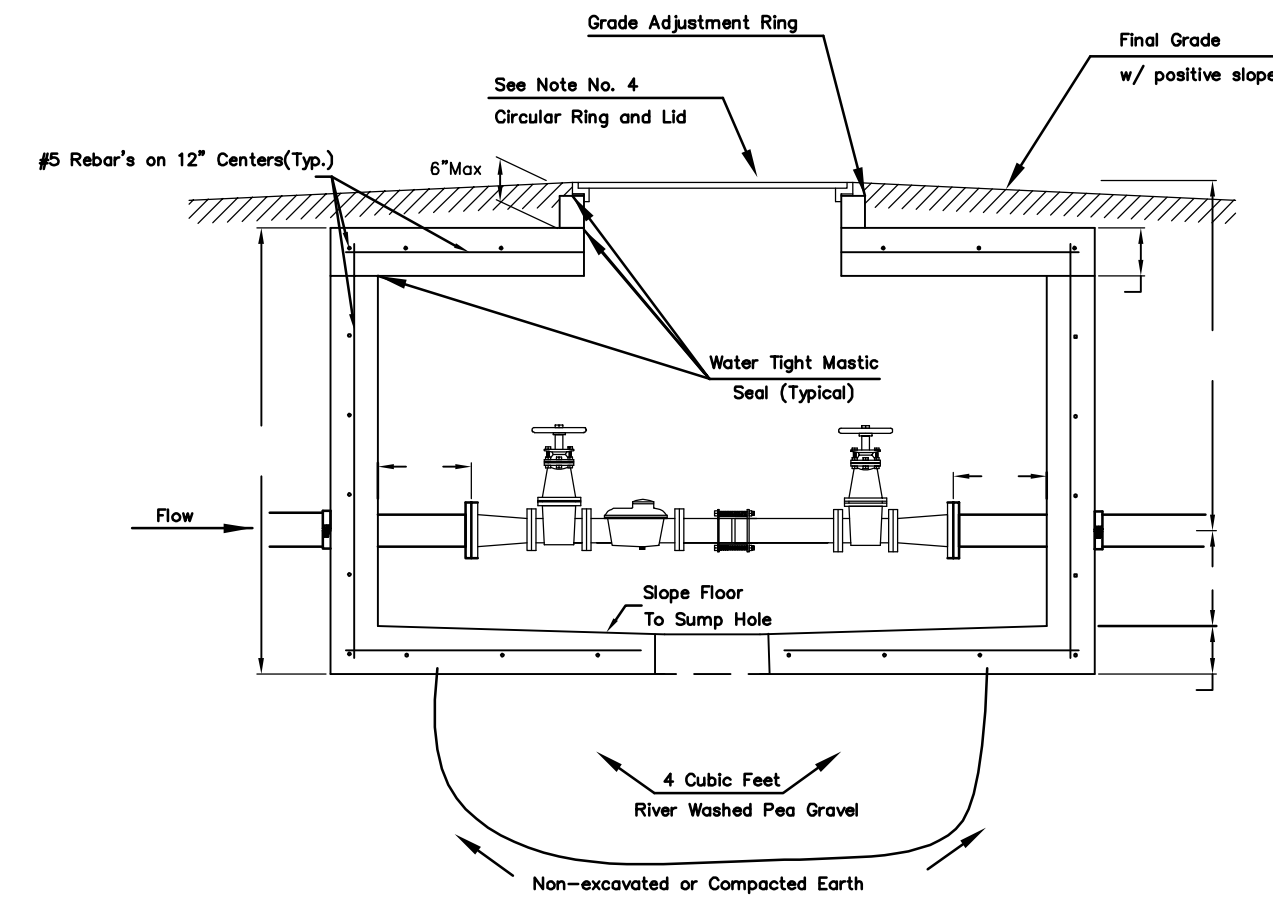
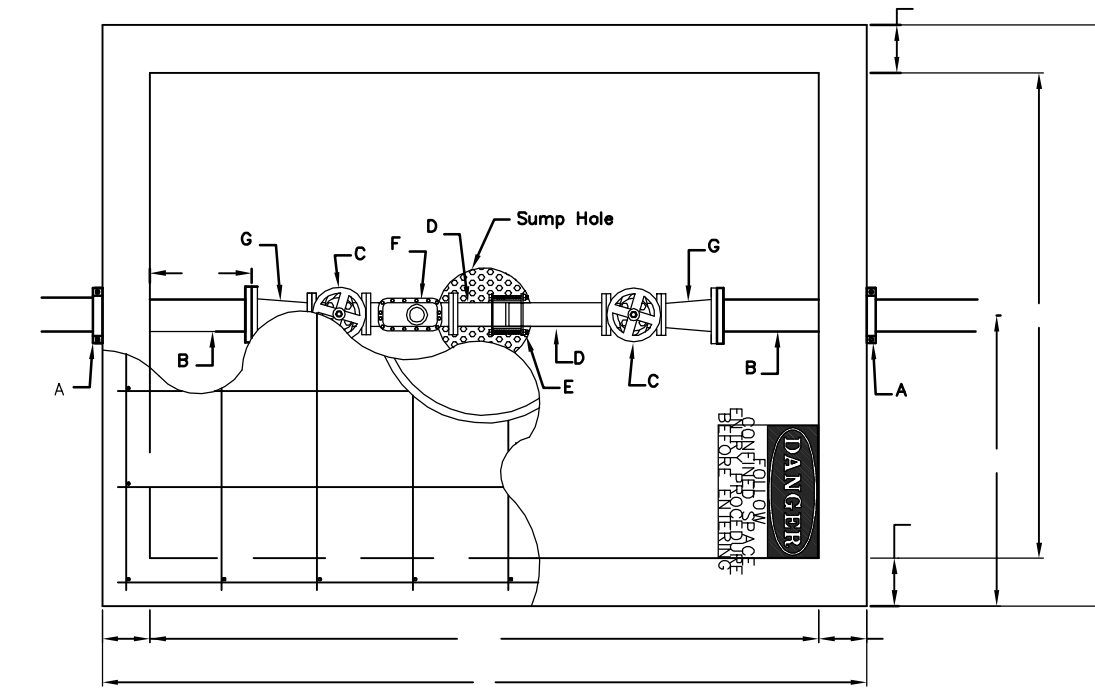
 <b>CITY OF WICHITA</b> PUBLIC WORKS & UTILITIES ENGINEERING DIVISION			MISCELLANEOUS WATER DETAILS CITY ENGINEER <b>GARY JANZEN, P.E.</b>		
			PROJECT NUMBER <b>1811PPW</b>	OCA NUMBER <b>607853</b>	DATE <b>04/2013</b>
			SHEET <b>4 of 5</b>		

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.

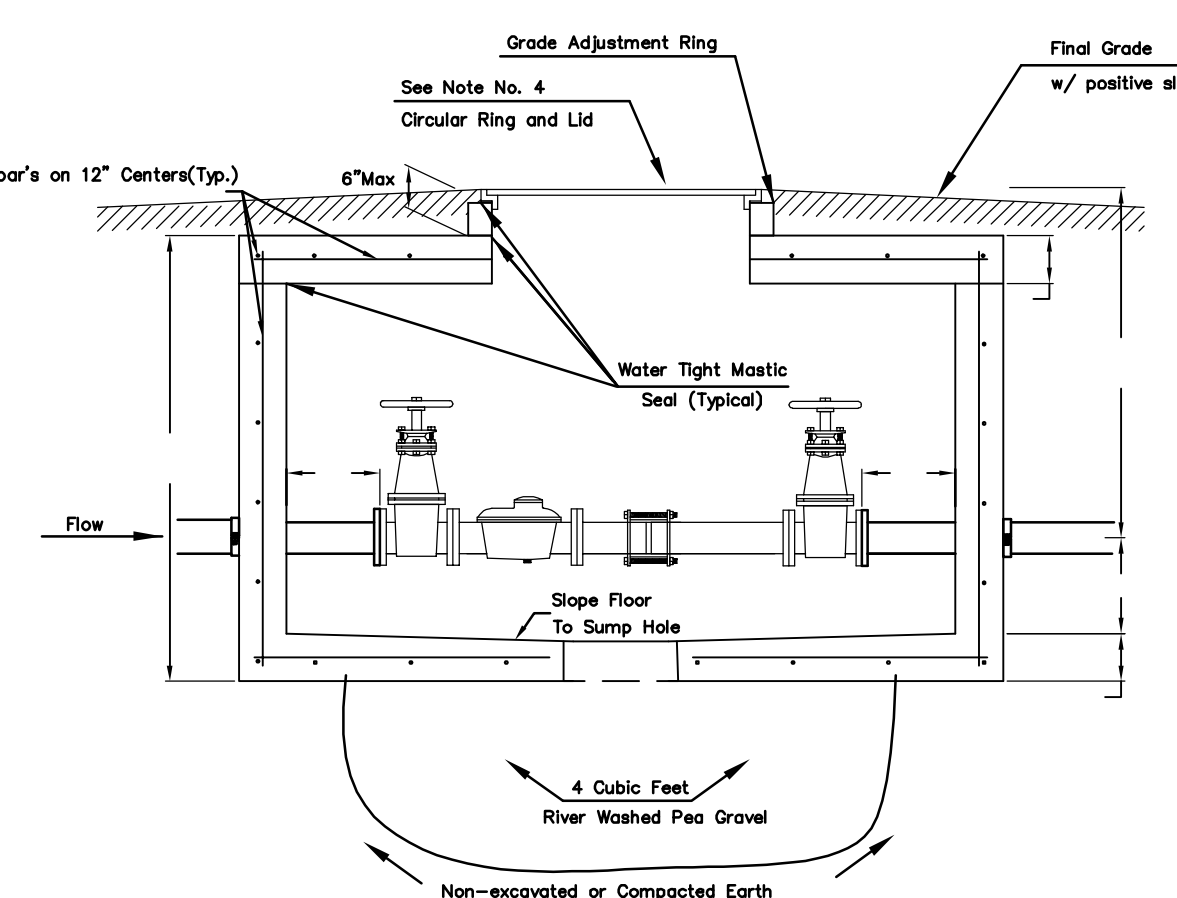
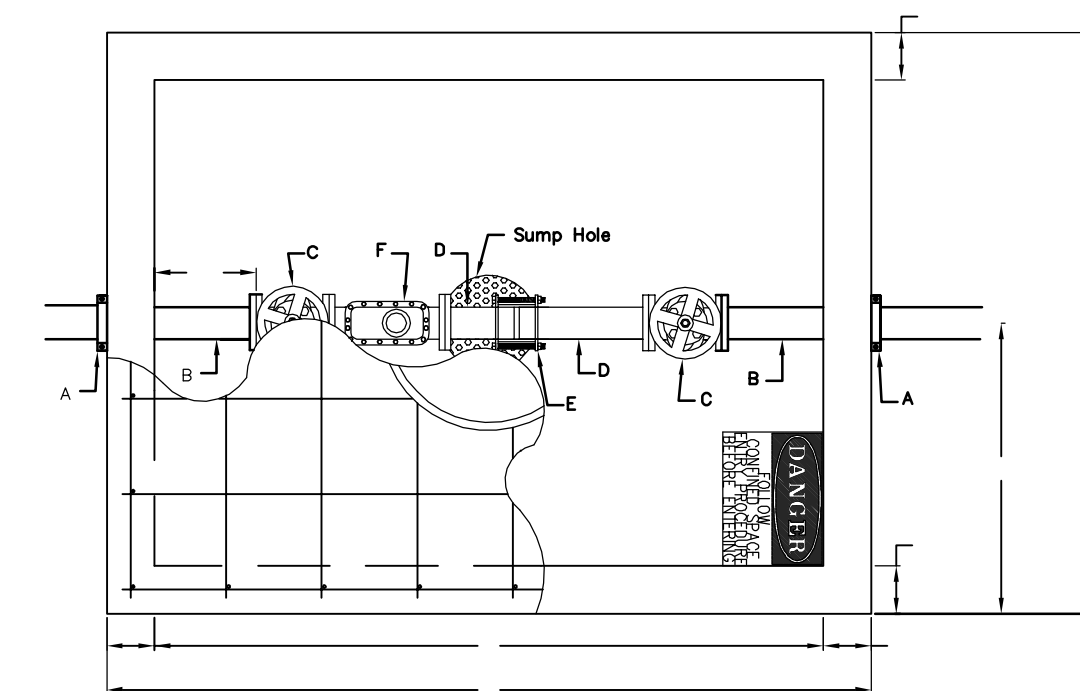
11. Additional Notes For Fire Services:

- 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.



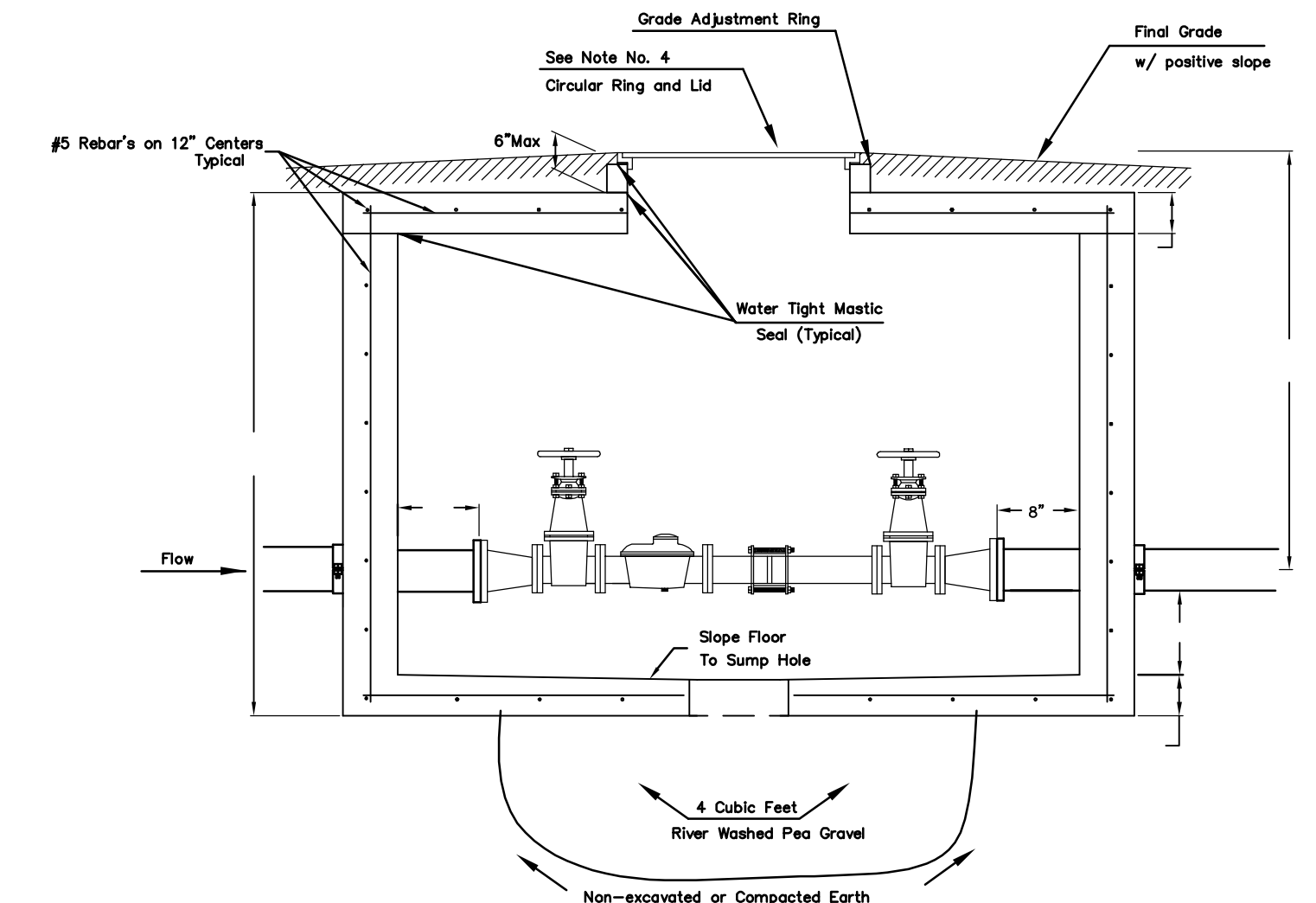
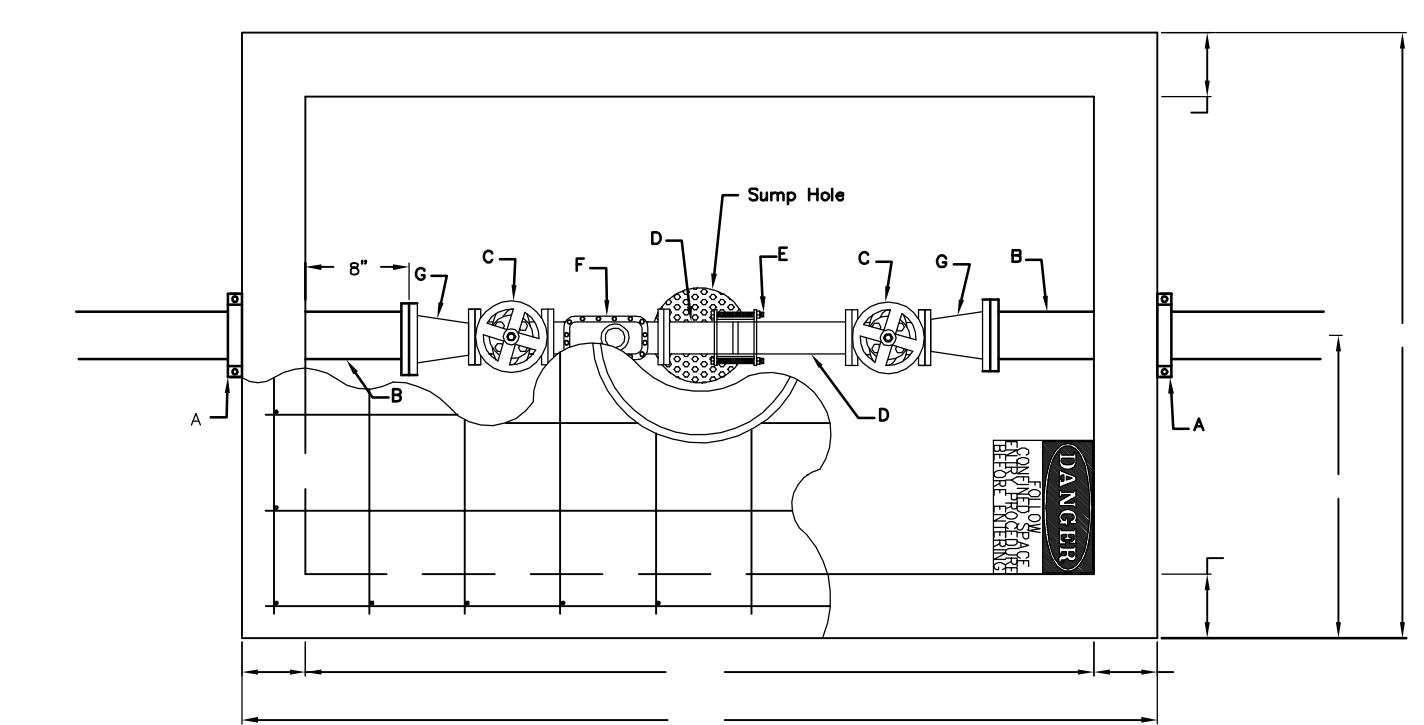
- A - 4" Vault Clamp
- B - Min. 3' Piece of 4" FL x PE DICL Pipe
- C - 3" Flange Non-rising Stem Gate Wheel Valve
- D - 3" FL x PE Pipe
- E - 3" Flex Coupling
- F - 3" Badger Recordall II Turbo Cubic Foot Meter with ERT Register or Sensus W-3500R Cubic Foot Meter with AMR Register.
- G - 3" x 4" FL Reducer

### 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-1000R Cubic Foot Meter with AMR Register.

### 4" Domestic Service

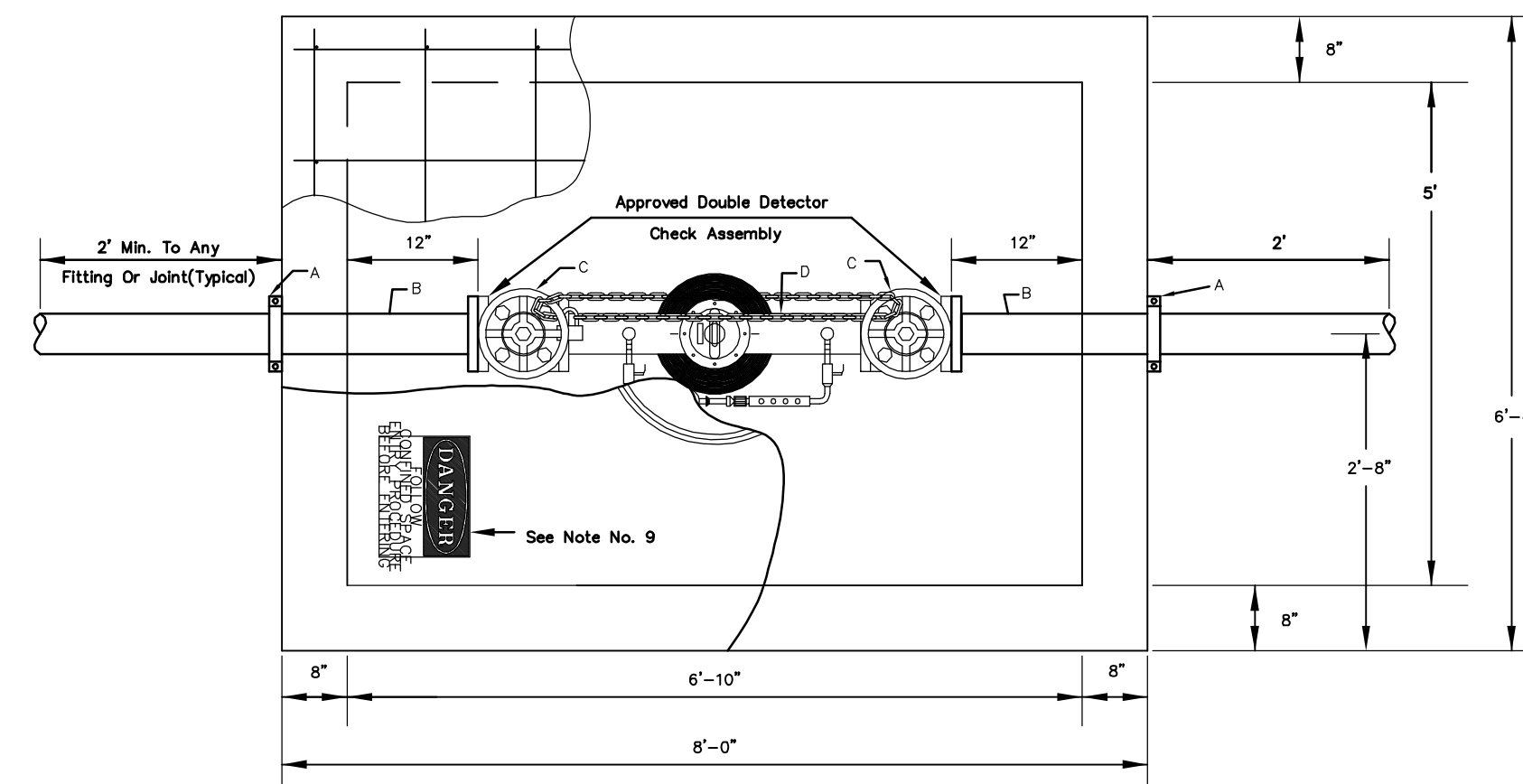


- A - 6" Mega Lug (See Note 7)
- B - Min. 3' Piece of 6" FL x PE DICL Pipe
- C - 4" Flange Non-rising Stem Gate Wheel Valve
- D - 4" FL x PE Pipe
- E - 4" Flex Coupling
- F - 4" Badger Recordall II Turbo Cubic Foot Meter with ERT Register or Sensus W-1000R Cubic Foot Meter with AMR Register.
- G - 6"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

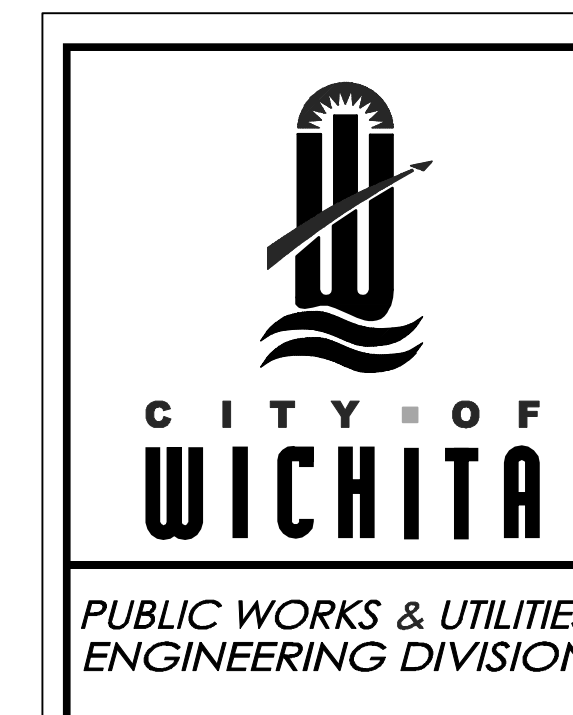
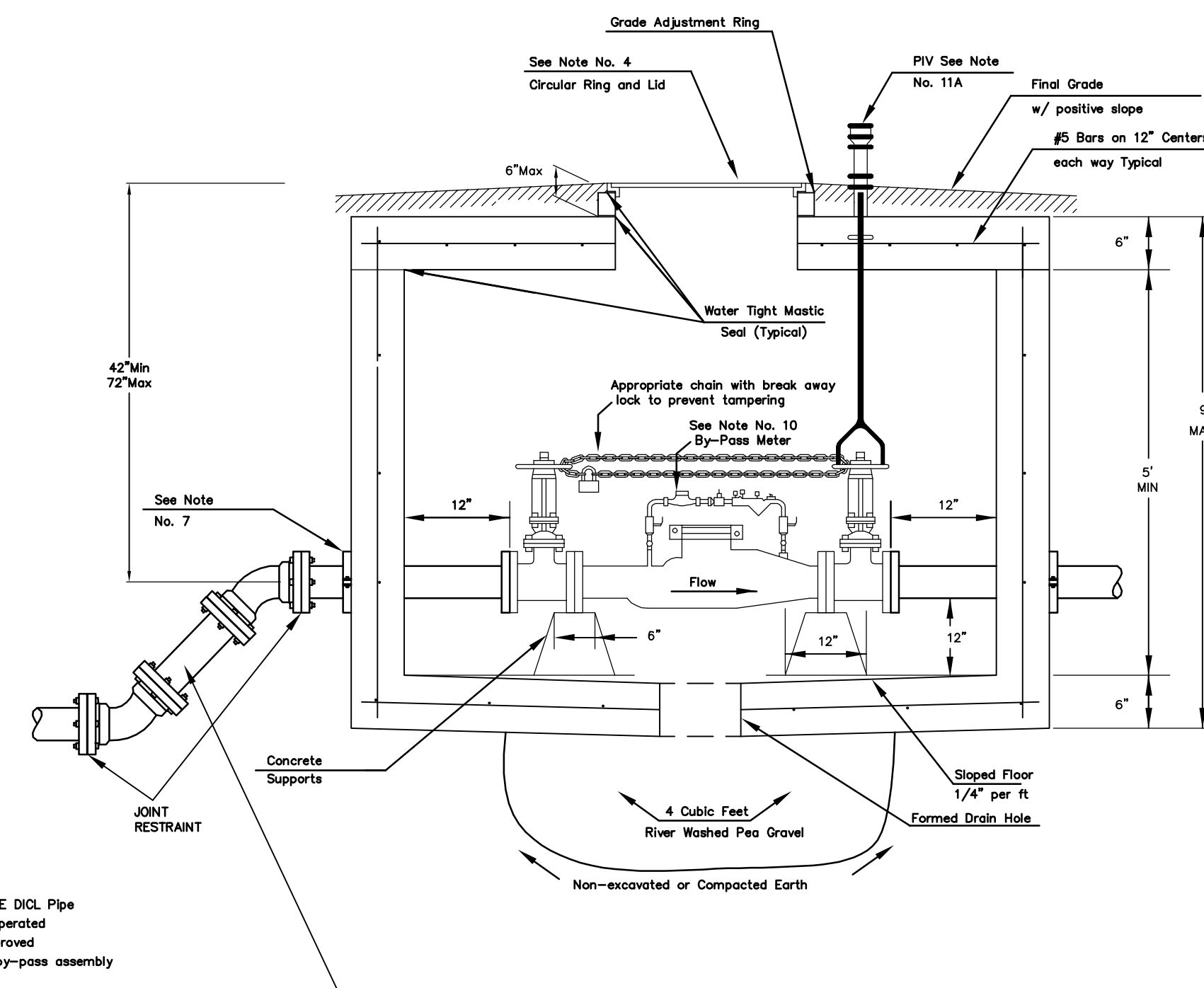


NOTE:

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



### STANDARD VAULT DETAILS AND METER ASSEMBLIES

CITY ENGINEER <b>GARY JANZEN, P.E.</b>		
PROJECT NUMBER <b>1811 PPW</b>	OCA NUMBER <b>607861</b>	DATE <b>12/2011</b>
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET <b>5 of 5</b>