

# VERTICAL RISER DETAILS

## ADOPTED AS STANDARD DESIGN

BY  
CITY OF WICHITA, KANSAS  
OCTOBER 1992

GENERAL NOTES

1. RISERS. Risers shall be installed to serve all lots or tracts where the sanitary sewer main is below the water table. Risers shall also be installed to serve all lots and tracts where the water table is above the water table. Installation of risers below the proposed ground elevation shall be approved by the Construction Engineer. The location of the risers to serve the lots and tracts shall be approved by the property owner and the Construction Engineer.
2. PIPE STUBS. Pipe stubs shall be installed in manholes where locations or manholes will provide satisfactory service. The vertical distance between the flowline of the manhole pipe stub and the flowing of the sanitary sewer main out of the manhole shall not exceed 2 feet. Risers shall be utilized at manhole set such that the top of the stub is not lower than the top of the sanitary sewer main.
3. SIZING. Pipe stubs and risers shall be sized according to the plans and riser table where risers are indicated by the plans. Where risers or pipe stubs are required because of field conditions, the risers and stubs shall be six-inch diameter for residential properties and eight-inch diameter for commercial properties and industrial properties. Sizing of risers and stubs shall be approved by the Construction Engineer prior to installation.
4. RISER OR STUB MATERIAL. Risers and stubs shall be constructed of Schedule 40 PVC Pipe, meeting the requirements of the latest revision of A.S.T.M. . All pipe joints shall be solvent welded.

5. REINFORCED CONCRETE ENCASUREMENT. Riser connections to dry pipe sanitary sewers shall be reinforced concrete encased both ways down the riser and three feet from the top of the riser or stop at the first sanitary sewer pipe joint within three feet of the riser centerline. Riser connections to PVC sanitary sewer mains shall be reinforced concrete encased one way down the riser and three feet from the top of the riser. Riser connections to reinforced concrete encased mains shall be reinforced using reinforcing steel as shown in the appropriate drawing. The concrete shall conform to the City Standard Specifications for concrete pavement.
6. BEDDING. Bedding around the sanitary sewer riser shall be compacted Pipe Bedding Type 1 or 2. The bedding shall be placed and compacted from the depth of the sanitary sewer main to the top of the riser. Bedding Type 1 or 2 shall be required for all risers whether constructed in vertical wall or staged wall trenches. Bedding material and construction practices shall be approved by the Construction Engineer prior to installation.

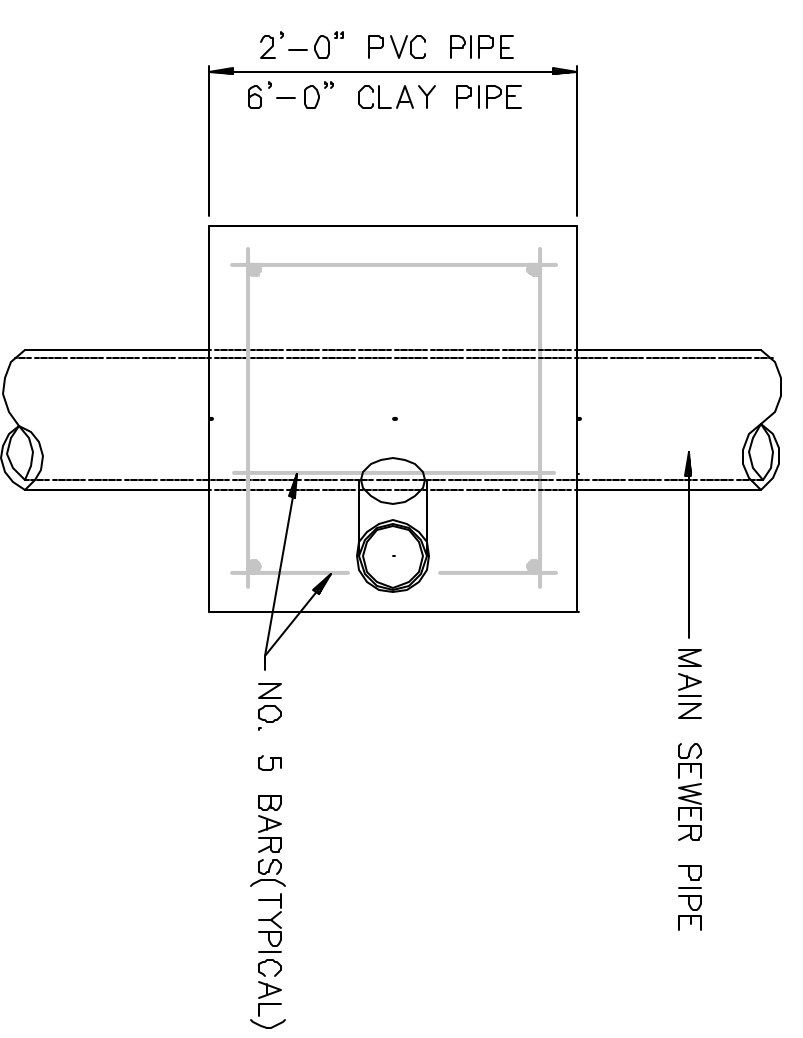
7. SUPPORT OF RISERS. Sanitary sewer riser pipe shall be supported during trench backfill. The riser pipe shall be held in a vertical position at all times until trench backfill is completed. The riser pipe shall be supported by supporting and backfilling the riser pipe shall be approved by the Construction Engineer.
8. PLUGGING. The ends of the riser pipes and manhole stubs shall be plugged using an airtight solvent welded cap or plug. Cap or plug fittings shall be approved by the Construction Engineer prior to installation. Caps or plugs which do not provide an airtight seal will not be accepted.

9. TOP OF THE RISER PIPE. The top elevation of the sanitary sewer riser pipe shall be built per plan elevations, unless otherwise directed by the Construction Engineer. Where risers are shown on the plans, the riser pipe shall be set at an elevation four feet below the proposed ground surface. If ground water is encountered, the top of the riser pipe shall be set at an elevation two feet (min.) above the water table. The riser pipe shall be set at an elevation, regardless of the riser elevation shown on the plans.
10. MARKING. Locations of the ends of the sanitary sewer riser pipe shall be permanently marked with green color paint. The riser pipe shall be marked with green color paint at a depth of length of wooden 2 x 4, extending from the top of the riser pipe to the proposed ground surface. The green tape shall be visible and extend one foot above the proposed ground surface. The minimum width of three inches, specifically manufactured for the purpose of identification of underground sewers.

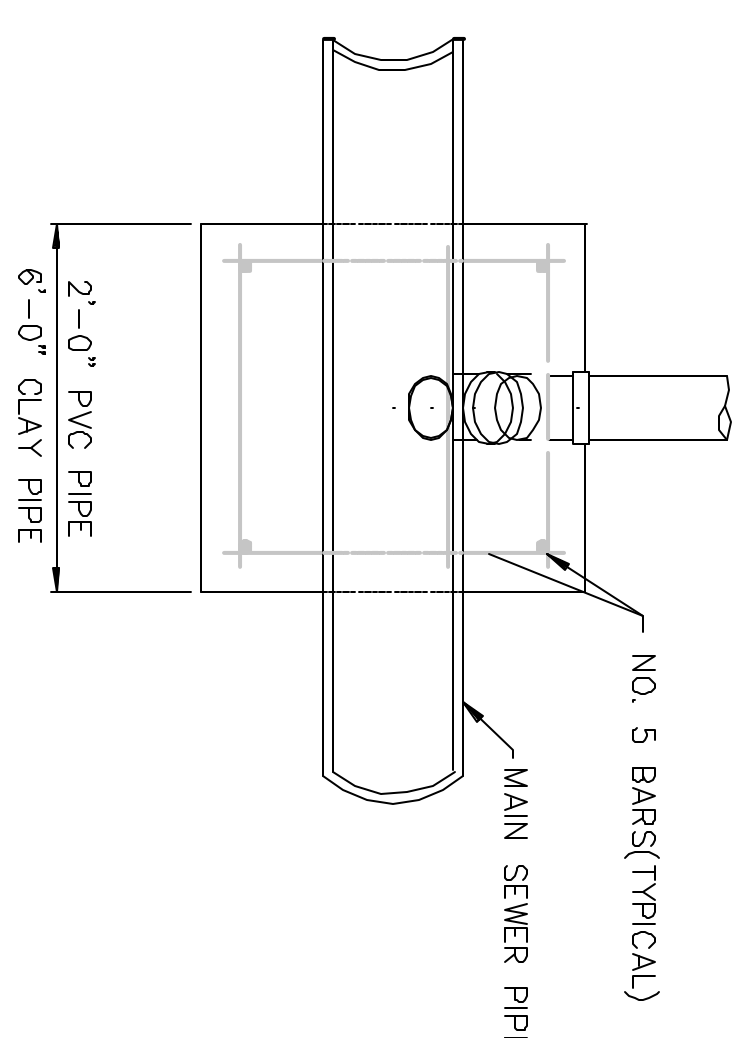
11. LOCATION MEASURES. The project inspector shall record and document the location of all risers constructed as measured from the nearest manhole, indicating the direction from the manhole, the direction and distance from the main, riser size, and elevation of the top of the riser.
12. RISER LOCATION. The riser shall be located per plan. If shown, if not shown on the plan, the riser shall be located at the center of the lot, within one foot of the property side of the lot. The riser shall be located within one foot of the property side of the lot. The riser shall be approved by the Construction Engineer prior to installation.

13. PAYMENT. "Sanitary sewer risers" shall be paid for at the contract unit price per each, which price shall be full compensation for all pipe, fittings, marking tape, length of wooden 2 x 4, reinforced concrete encasement, support during backfill, bedding, site preparation, and any other items necessary to complete the work.

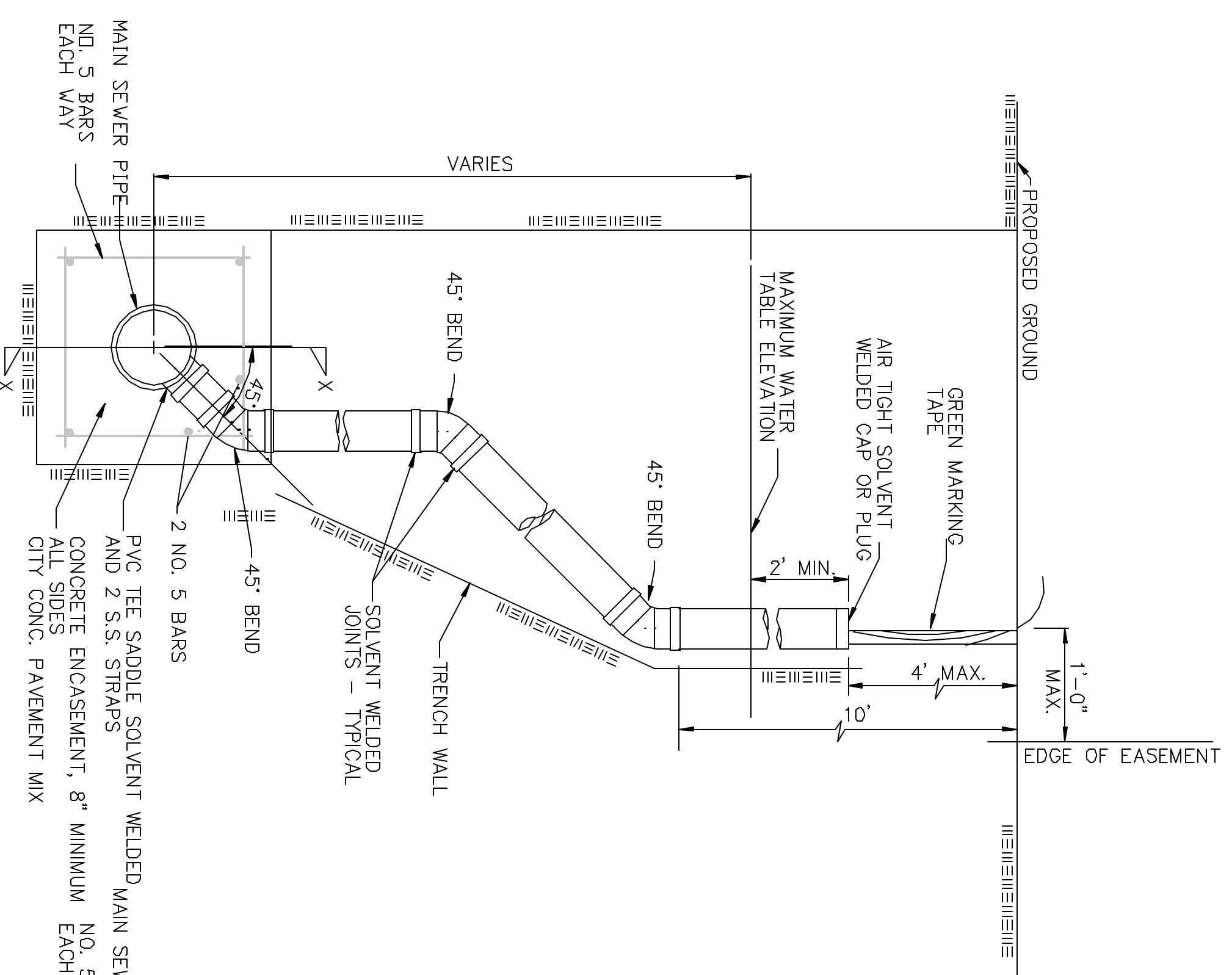
Manhole stubs shall be paid for at the contract unit price per each, which shall be full compensation for all labor, materials, and equipment, including all pipe, fittings, reinforced concrete encasement, and all other items as required and listed for "Sanitary Sewer Risers".



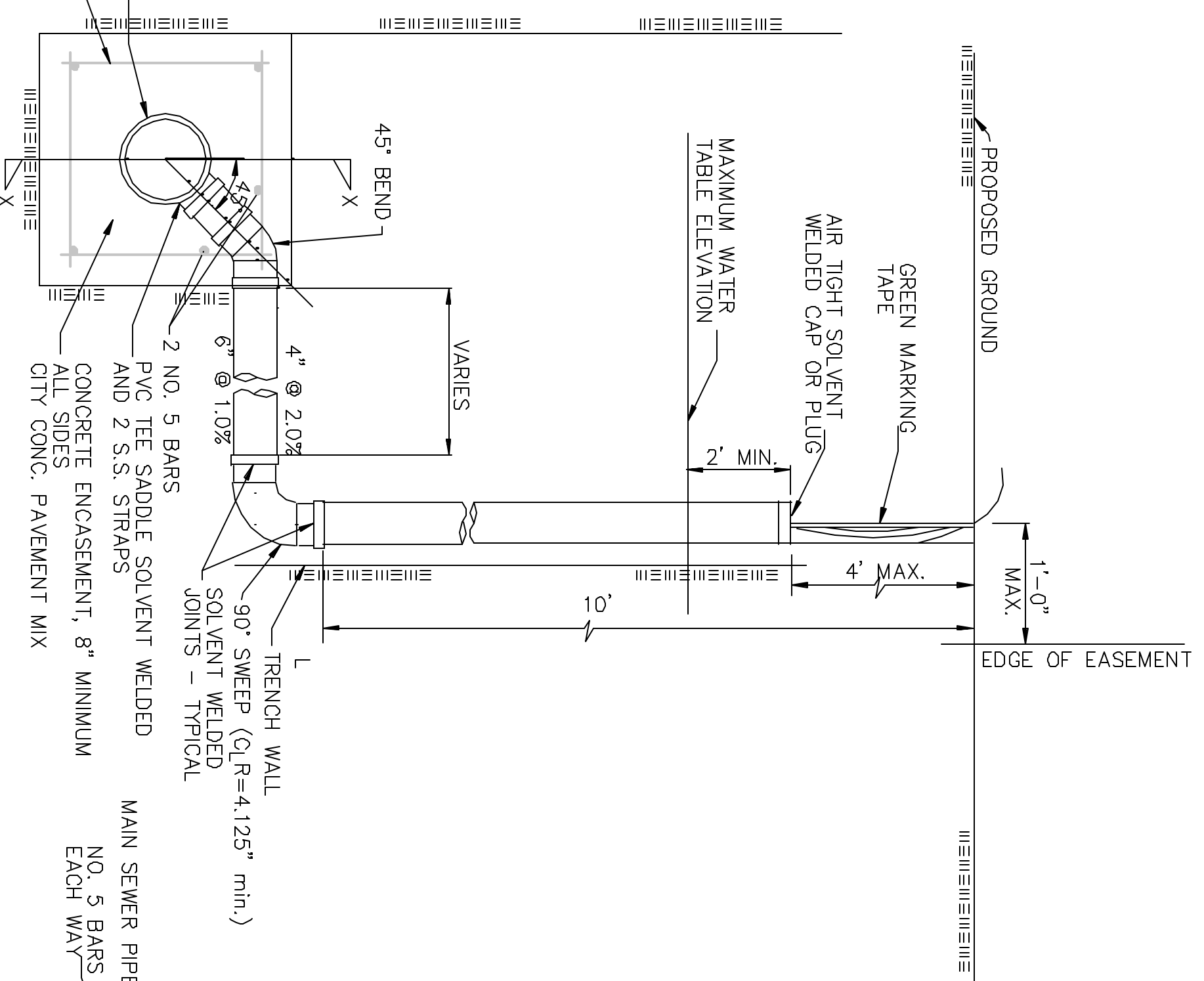
TYPICAL PLAN VIEW



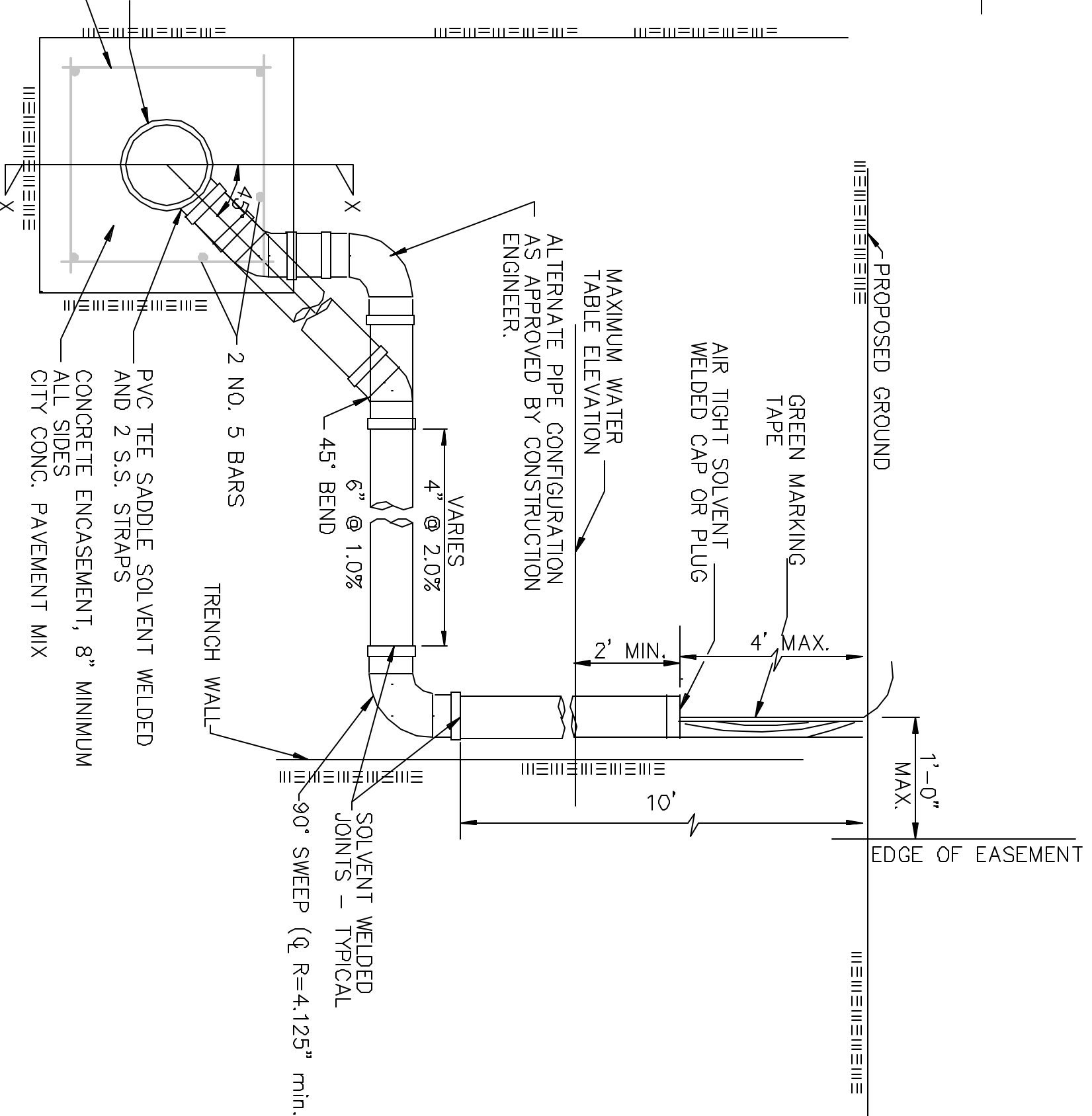
TYPICAL SECTION X-X



METHOD "A"



METHOD "B"



METHOD "C"

NOTE: RISER PIPE REQUIREMENTS AT MANHOLE STUBS SHALL BE SIMILAR TO THOSE SHOWN ABOVE.

City of Wichita Standard  
**Riser Details**

**BAUGHMAN COMPANY P.A.**  
ENGINEERING, SURVEYING, & PLANNING

318-282-7271 • 318 E. FLUIDS • WICHITA, KANSAS 67201

PROJECT NUMBER 488-89524

DESIGN STAFF    DRAWN STAFF    APPROVED DATE 1/04    SCALE NONE