

GENERAL NOTES:

- The Contractor shall comply with all applicable safety regulations. All construction shall be completed following current City Standard Specifications and Special Provisions.
- Contractor will be required to provide notice to utility companies a minimum of seventy-two (72) hours prior to any excavation, as follows:
Kansas One-Call 687-2470
The Contractor must notify the following in case of an emergency:
AT&T 1-800-246-8464
Black Hills Energy 1-800-694-8989
City of Wichita Water 1-316-268-4555
City of Wichita Sewer 1-316-268-4073
City of Wichita Stormwater 1-316-268-4090
City of Wichita Traffic 1-316-268-4034
Cox Communications 1-888-249-3530
Kansas Gas Service 1-888-482-4950
Westar Energy 1-800-544-4857
- Utility service lines, poles, etc. 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.
- 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.
- 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.
- The Contractor shall give all property owners and/or tenants of developed property abutting the construction of this project a minimum of ten (10) days 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.
- The Water Distribution Division shall field locate water valve one time during construction when requested by the Contractor. It shall be the Contractor's responsibility to preserve such field locations during the construction process. Water valves, valve boxes or fire hydrants damaged during construction shall be repaired by Contractor at his own expense. Valve boxes and water meters within the project limits shall be adjusted to match field grades.
- The Contractor shall notify the consultant engineer and Tom Mason with the City at 316-268-4574 with the anticipated construction start date and notify them of project completion. Staking and inspection for this project will be the responsibility of the Contractor.
- If traffic is impacted by construction, a traffic control plan must be submitted and approved by the City Traffic Engineer, Brian Coon at traffic@wichita.gov before construction can begin. The Contractor shall be responsible for all traffic control measures to facilitate construction. All construction zone markings and signage shall conform to the latest version of Manual on Uniform Traffic Control Devices (MUTCD) as published by the US Dept. of Transportation, Federal Highway Administration. All costs associated with construction markings and signage shall be the Contractors responsibility.
- All elevations shown are U.S.G.S. Datum (NAVD 88).
- All areas disturbed during construction that will not be under proposed pavement shall be restored to match existing conditions.
- All stubs and plugged pipes shall be located with green plastic tape in the same manner as risers.
- Connecting to Existing Manholes:
Prior to laying sewer lines using existing stubs in existing manholes, the Contractor shall expose and verify the elevation, grade and alignment of existing stubs and notify the Engineer of any deviation from the plans. Where connection to an existing manhole that does not have an existing stub or the stub is unusable due to elevation grade or alignment, the Contractor shall bore cut into existing manhole wall to make connection using approved water stop gasket, and reshape the existing manhole invert to provide smooth flow. The cost to connect to existing manholes is incidental to the project.
- Contractor shall limit the extend of trench open overnight and weekends to less than 50 feet.
- Contractor shall provide positive drainage away from all manhole covers.
- The Contractor shall prevent any construction debris from entering the existing sanitary sewer during construction.
- The Contractor shall be responsible for maintaining continuous flow of sewage through construction. Contractors proposed method for maintaining sewage flow shall be submitted and approved by the Sewer Maintenance Division (316-268-4073) prior to starting and by-passing of sewage flows.
- Any over excavation from manhole and pipe removal shall be backfilled with AB-3 compacted to 90-95% ASTM D698.
- City Maintenance of sanitary sewer mains ends at last structure within easement or right-of-way line.
- Any sidewalk, drive approach, curb, or street pavement removed to construct project must have a pavement cut permit and be replaced by the City contractor. Permits can be obtained by calling 316-268-4501 or 316-268-4480.
- All existing and proposed erosion control measures including silt fencing, erosion control mat, straw bales, inlet barriers, and const. entrance shall be maintained throughout construction by the contractor and until project is accepted by the City of Wichita. The on-site engineer shall complete weekly reports on the status of erosion control measures. The contractor shall be required to comply with maintenance and/or replacement of erosion control measures as determined by the on-site engineer until project is accepted by City of Wichita. Maintenance and/or replacement of erosion control measures to be paid by L.S. bid item "Site Restoration".
- All excess excavation shall remain on-site and shall be stockpiled or spread at a location determined by the engineer.
- Contractor shall grade around exposed manholes at a 1:1 slope. Manholes set lower than existing grade shall have a 9" berm constructed around manhole to prevent infiltration into sanitary sewer system. Cost of dirt, labor, equipment, etc. to be incidental to cost of manhole.
- All areas disturbed during construction shall be seeded by site contractor.
- The Contractor shall not begin work on the project until the Project Inspector is assigned and on site. Any work completed without inspection will be required to be uncovered for inspection at the Contractor's expense.

BENCHMARKS:

BM #1: CHISELED CROSS AT BACK OF SIDEWALK, 825.7' W. & 48' S. OF THE NE COR., NE1/4, SEC. 18, TWP. 28-S, R-1-E. ELEV. = 1278.78 NAVD88

BM #2: CHISELED CROSS AT BACK OF SIDEWALK, 222' S. & 49' W. OF THE NE COR., NE1/4, SEC. 18, TWP. 28-S, R-1-E. ELEV. = 1278.94 NAVD88

BM #3: CHISELED CROSS AT BACK OF SIDEWALK, 1582.6' S. & 49.5' W. OF THE NE COR., NE1/4, SEC. 18, TWP. 28-S, R-1-E. ELEV. = 1278.31 NAVD88

BM #4: CHISELED CROSS AT BACK OF SIDEWALK, 1587.7' S. & 48.6' W. OF THE NE COR., NE1/4, SEC. 18, TWP. 28-S, R-1-E. ELEV. = 1277.48 NAVD88

BM #5: TOP OF MAGNAIL IN ASPHALT PAVEMENT, 982.5' W. & 10.1' S. OF THE MOST EASTERLY NE COR., LOT 1, SOUTH LAKE ADDITION. ELEV. = 1277.58 NAVD88

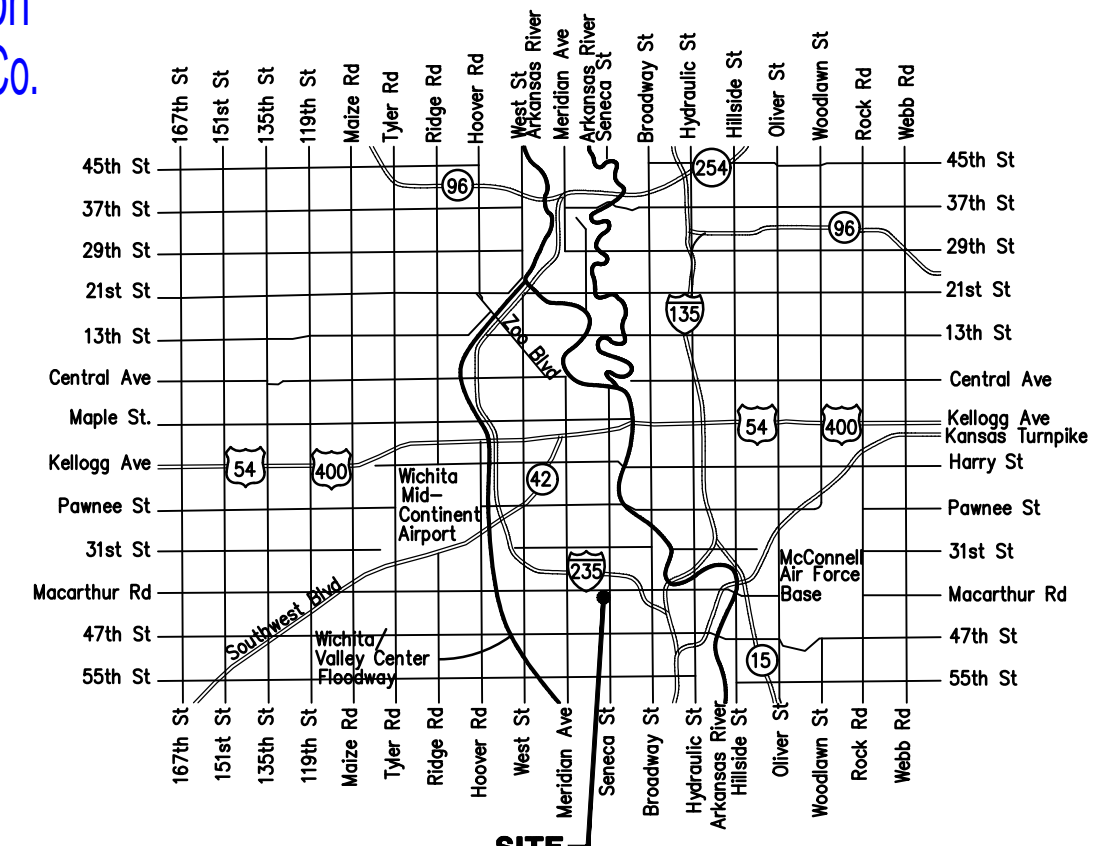
SANITARY SEWER to serve CROSS GATE ADDITION

MacArthur Road & Seneca Avenue
CITY OF WICHITA, KANSAS
Gary Janzen, P.E. City Engineer
Project Number 2253 PPS (607861)

Sheet Index

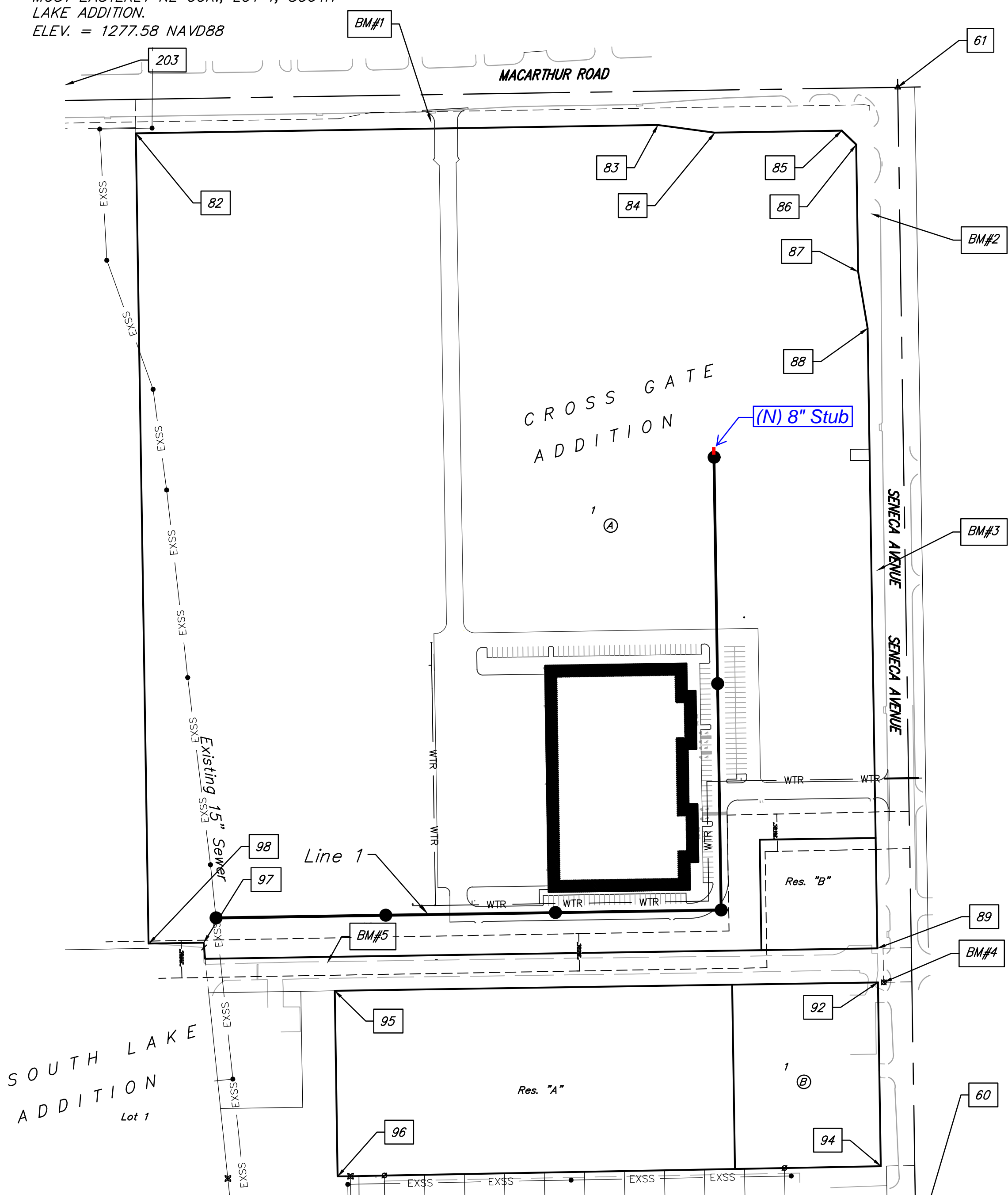
Title Sheet	1
Precast SS Manhole Detail	2
Manhole Frame & Cover Detail	3
Vertical Riser Detail	4
Line 1	5-6
Copy of Plat	7
Erosion Control BMP Details*	

*Erosion Control Details SW501 to SW505 are available at City of Wichita web site at <http://www.wichita.gov/Government/Departments/PWU/Pages/Regulations.aspx>



Vicinity Map

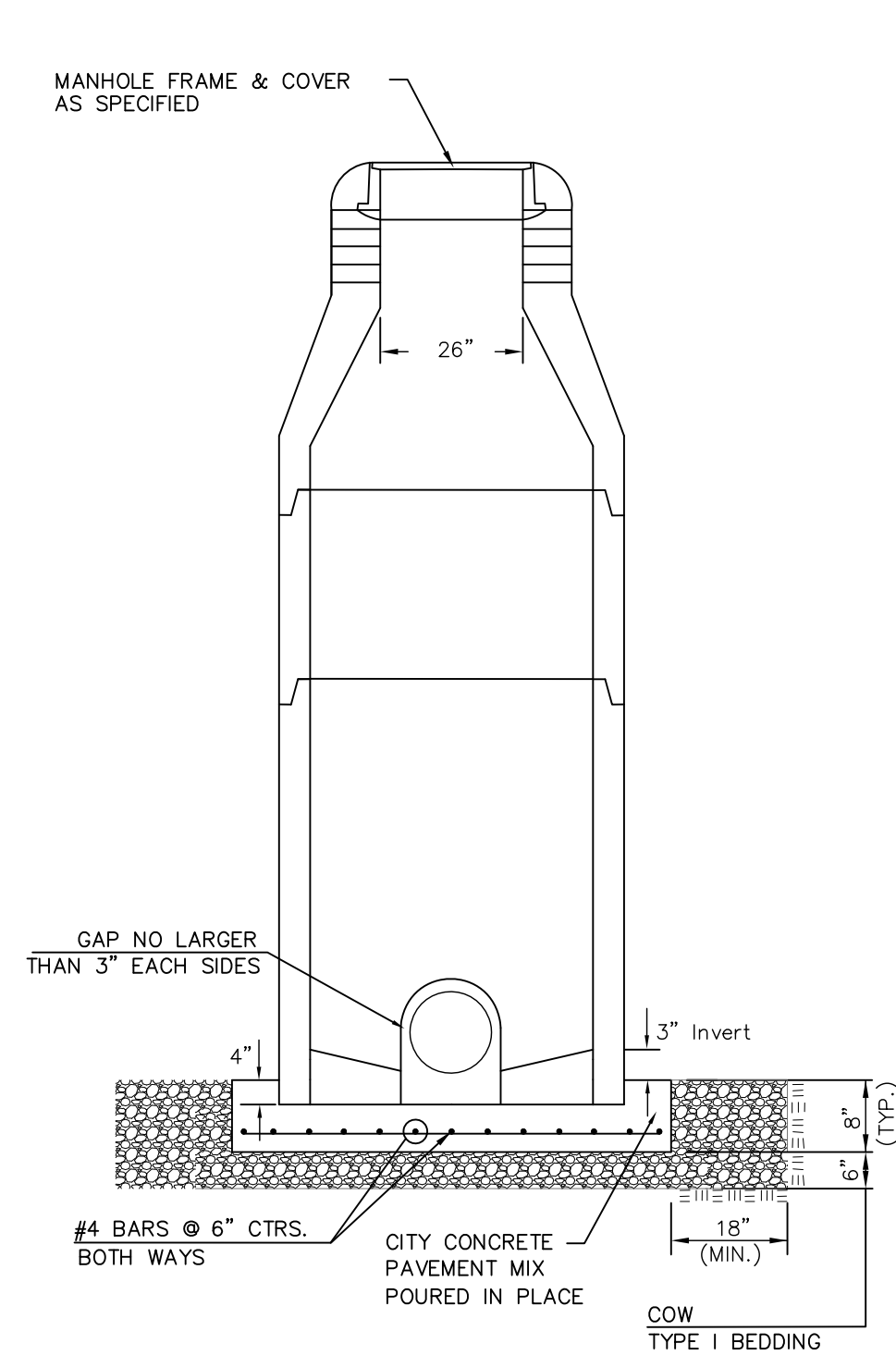
T. Mason - City of Wichita, Inspector
8" Stub
Release Date: 03/29/2017
: 05/01/2017 apr



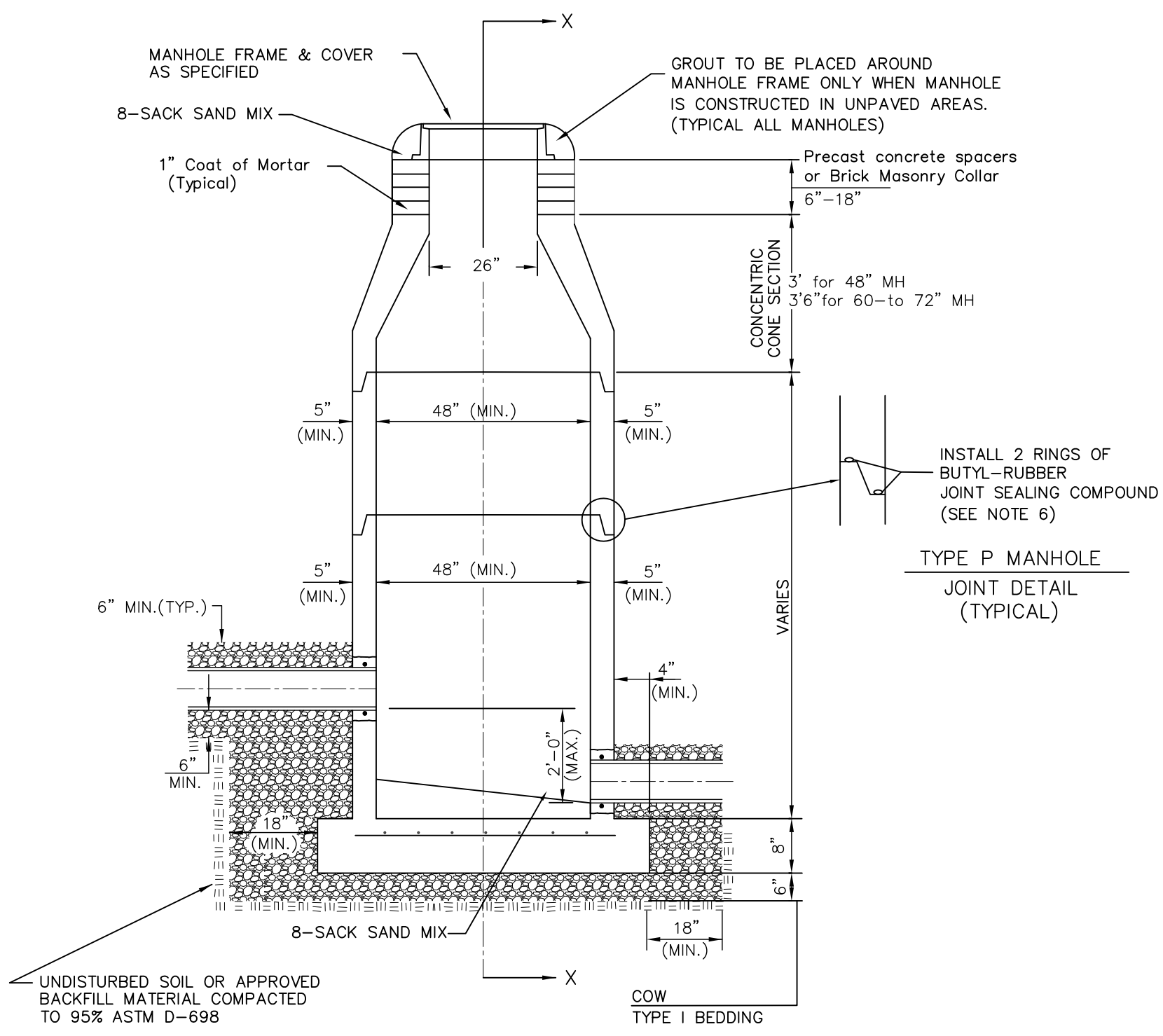
Point Table				
#	LOCATION	Northing	Easting	Elevation
1	BM1-CROSS	1,662,348.53	1,643,878.06	1,278.78
2	BM2-CROSS	1,662,186.83	1,644,657.41	1,278.94
3	BM3-CROSS	1,661,556.32	1,644,666.91	1,278.31
4	BM4-CROSS	1,660,821.29	1,644,679.42	1,277.48
5	BM5-CROSS	1,660,862.82	1,643,694.73	1,277.58
60	1/2" IP	1,659,769.43	1,644,744.72	1,275.52
61	3/4" IP (SECT)	1,662,409.59	1,644,702.88	1,279.64
82	BRF	1,662,328.34	1,643,355.99	
83	BRF	1,662,342.90	1,644,278.88	
84	BRF	1,662,329.48	1,644,379.11	
85	BRF	1,662,333.02	1,644,604.08	
86	BRF	1,662,308.42	1,644,629.47	
87	BRF	1,662,083.45	1,644,633.04	
88	BRF	1,661,983.70	1,644,649.62	
89	BRF	1,660,888.15	1,644,666.98	
92	BRF	1,660,827.93	1,644,667.94	
94	BRF	1,660,503.18	1,644,673.08	
95	BRF	1,660,813.07	1,643,707.79	
96	BRF	1,660,485.00	1,643,712.87	
97	BRF	1,660,898.07	1,643,475.96	
98	BRF	1,660,896.48	1,643,378.60	
203	th-1-2	1,662,367.84	1,642,055.37	

APPROVED AS NOTED
BY WICHITA PUBLIC WORKS
ENGINEERING DIVISION
Engineering *Rebecca Dil* 9/29/2016
Utilities *[Signature]* 9-29-16
NOTE TO CONTRACTORS
Inspection and testing for this project 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 in the state of Kansas. No work shall be performed by the Contractor without such inspection nor shall any work be commenced without written authorization by City Engineering. All Construction and Materials shall comply with the current City of Wichita Specifications and Standards (on file and available at Wichita.gov).
An approved copy of these plans signed by City staff are required on-site.

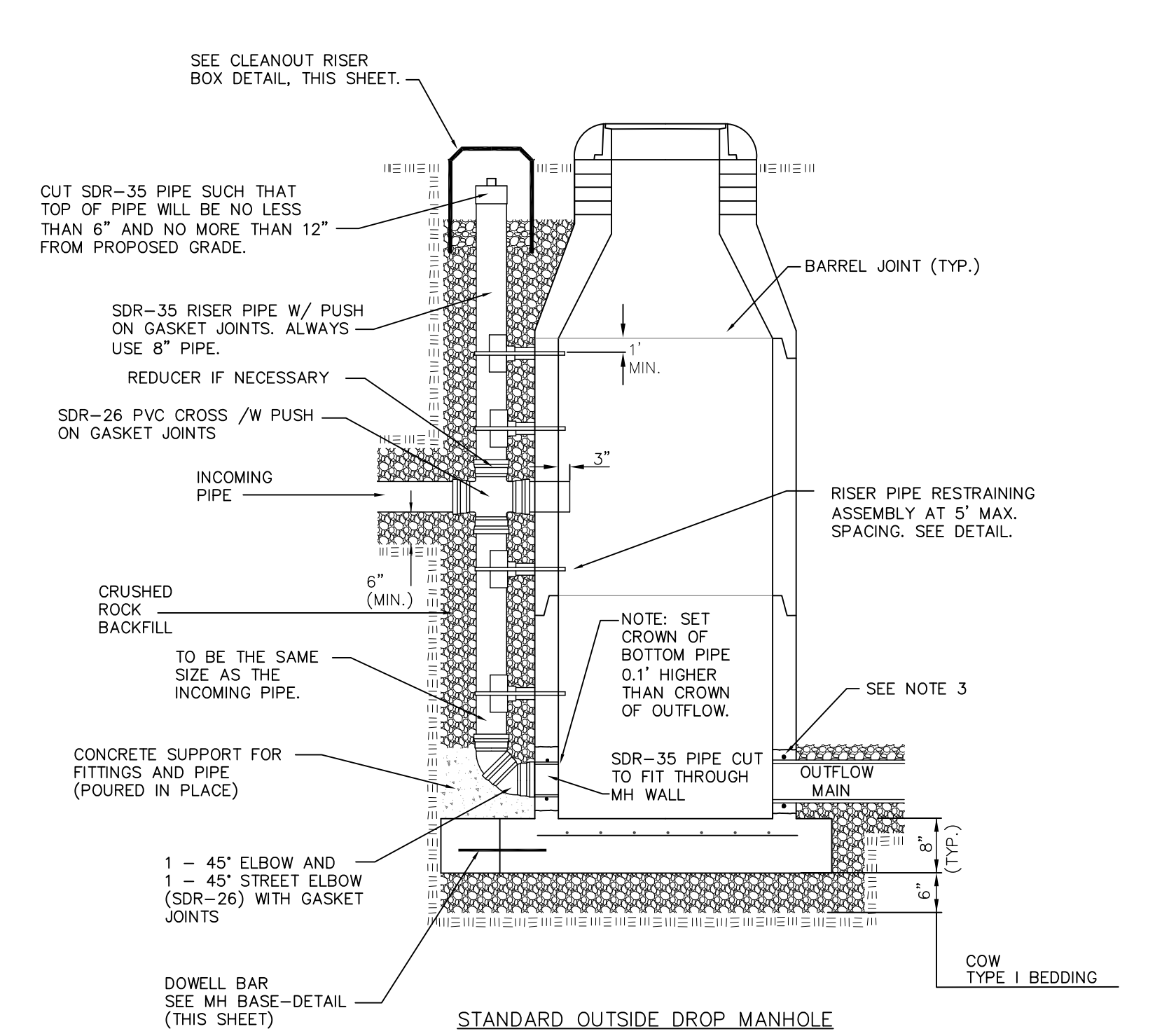




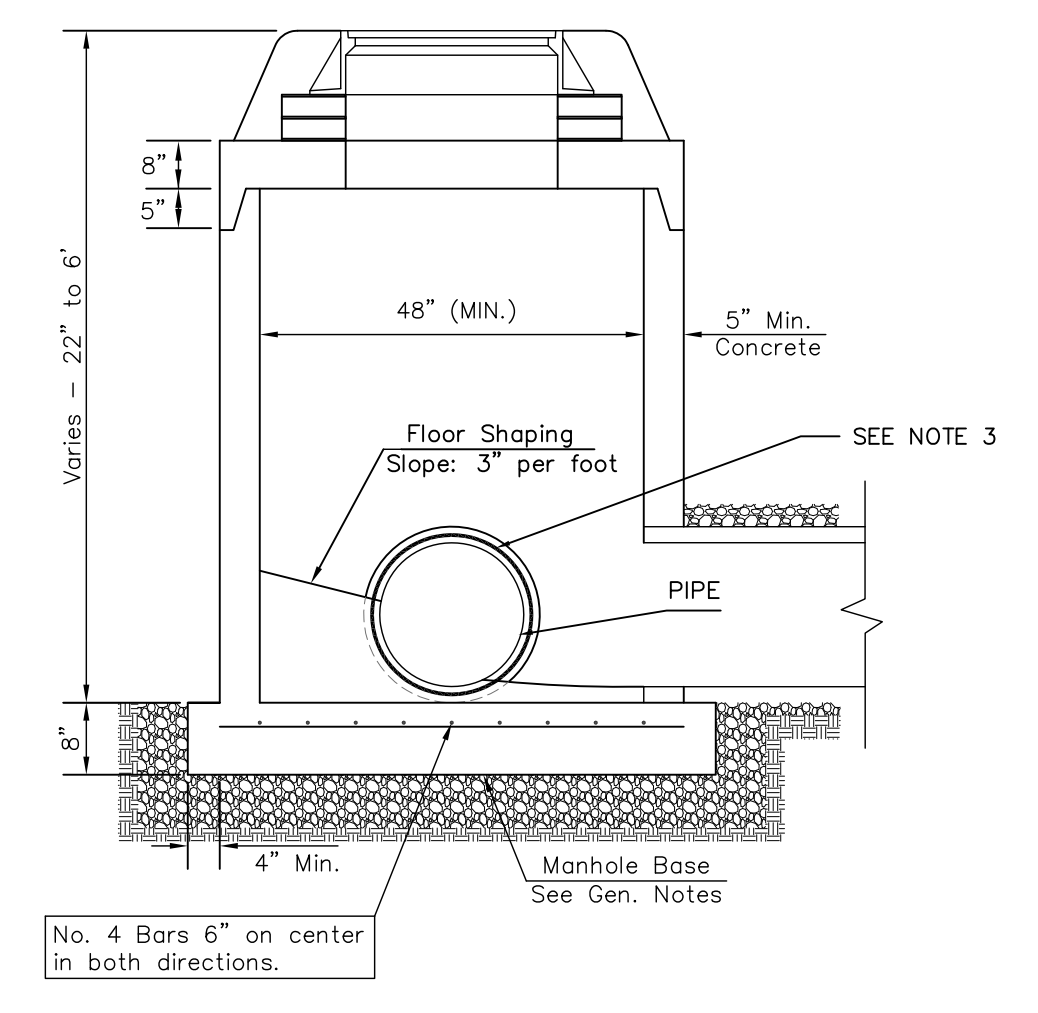
DOG HOUSE MANHOLE
(OVER EXISTING PIPE)
Not to Scale



STANDARD MANHOLE
Not to Scale



STANDARD OUTSIDE DROP MANHOLE
Not to Scale

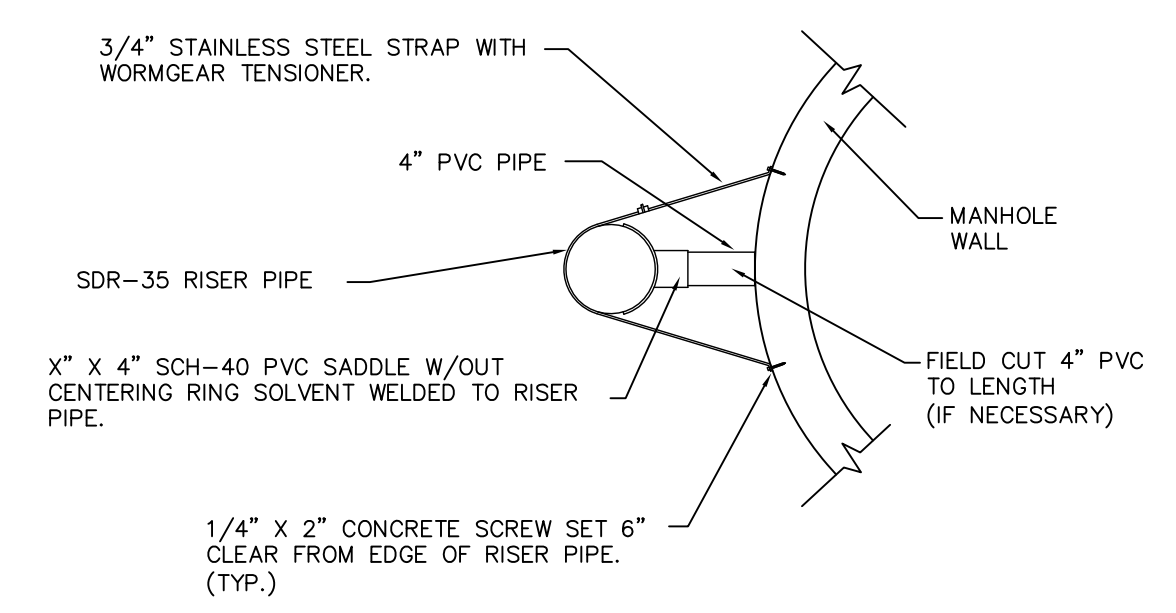


SHALLOW MANHOLE
Not to Scale

= COW TYPE I BEDDING
 = UNDISTURBED SOIL

PRECAST MANHOLE GENERAL NOTES

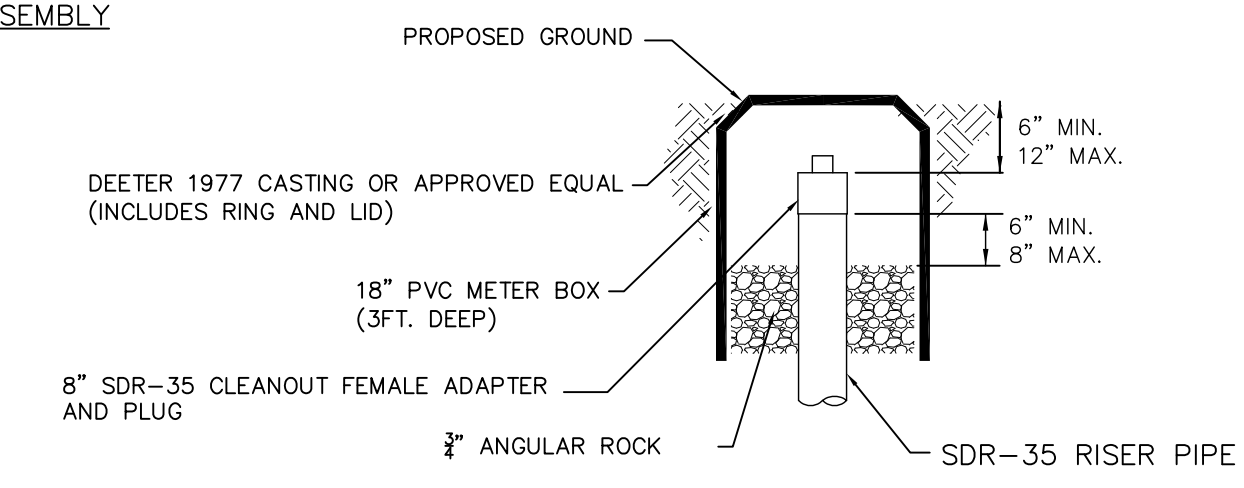
- ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
- NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
- APPROVED FLEXIBLE WATERSTOP SHALL BE INSTALLED TO JOIN THE SEWER PIPE TO THE MANHOLE WALL. THE SEWER PIPE SHALL BE SUPPORTED WITH CRUSHED ROCK A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
- ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
- EXTERIOR MANHOLE WALLS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
- JOINT SEALING COMPOUND SHALL BE PER 804.4 OF STANDARD SPECIFICATIONS.
- ALL MANHOLE SECTION JOINTS THAT WILL BE IN GROUNDWATER OR GREATER THAN 12' DEEP SHALL BE WRAPPED WITH AN EXTERNAL JOINT SEAL PER SECTION 804.4 OF STANDARD SPECIFICATIONS, AS INDICATED BY THE PLANS.
- PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE FOR DOG HOUSE MANHOLES.
- TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
- LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
- MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
- REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO.4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
- WALL THICKNESS SHALL BE 1" GREATER THAN MANHOLE DIAMETER IN FEET.
- OPENINGS SHALL BE CORE DRILLED INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS DRILLED INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKETS SHALL BE USED WITH P.V.C. PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.
- THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO NEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
- MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
- THE VERTICAL DROP IN STANDARD MANHOLES SHALL NOT EXCEED 2' REGARDLESS OF PIPE SIZE. THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
- STANDARD MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4" UNLESS INDICATED OTHERWISE.
- PRECAST CONCRETE SPACERS OR BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCENTRIC CONE. THE COLLAR WILL HAVE 8" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 18" MAXIMUM. A 1" COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR. THE USE OF PRE-CAST CONCRETE SPACERS FOR MANHOLE TOP ADJUSTMENT IS ALSO ALLOWED.
- THE FULL DIAMETER OF THE MANHOLE SHALL EXTEND THE ENTIRE DEPTH OF THE MANHOLE TO THE CONE SECTION. NO REDUCTION IN MANHOLE DIAMETER WILL BE ALLOWED.
- REFER TO PLANS FOR SIZE OF OUTSIDE DROP RISER, SADDLES AND CROSS.



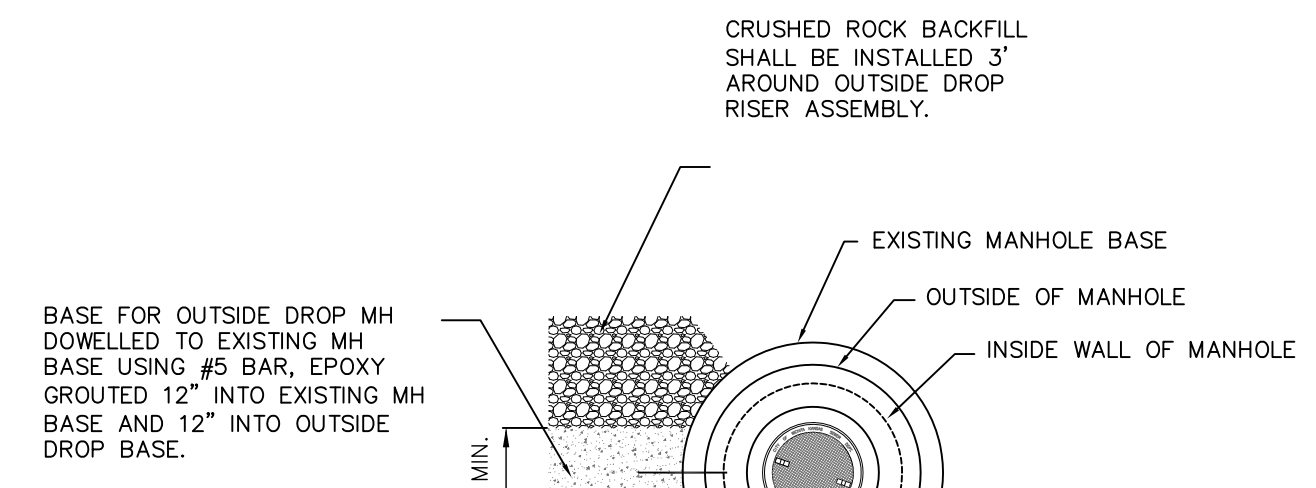
RISIER PIPE RESTRAINING ASSEMBLY
Not to Scale

SANITARY SEWER MANHOLE DIAMETERS

DIAMETER	DEPTH	PIPE SIZE
4'	0'-15'	8"-18"
5'	>15'-30'	21"-30"
6'	>30'	36"-60"



CLEANOUT RISIER BOX DETAIL
Not to Scale



MH BASE DETAIL
Not to Scale

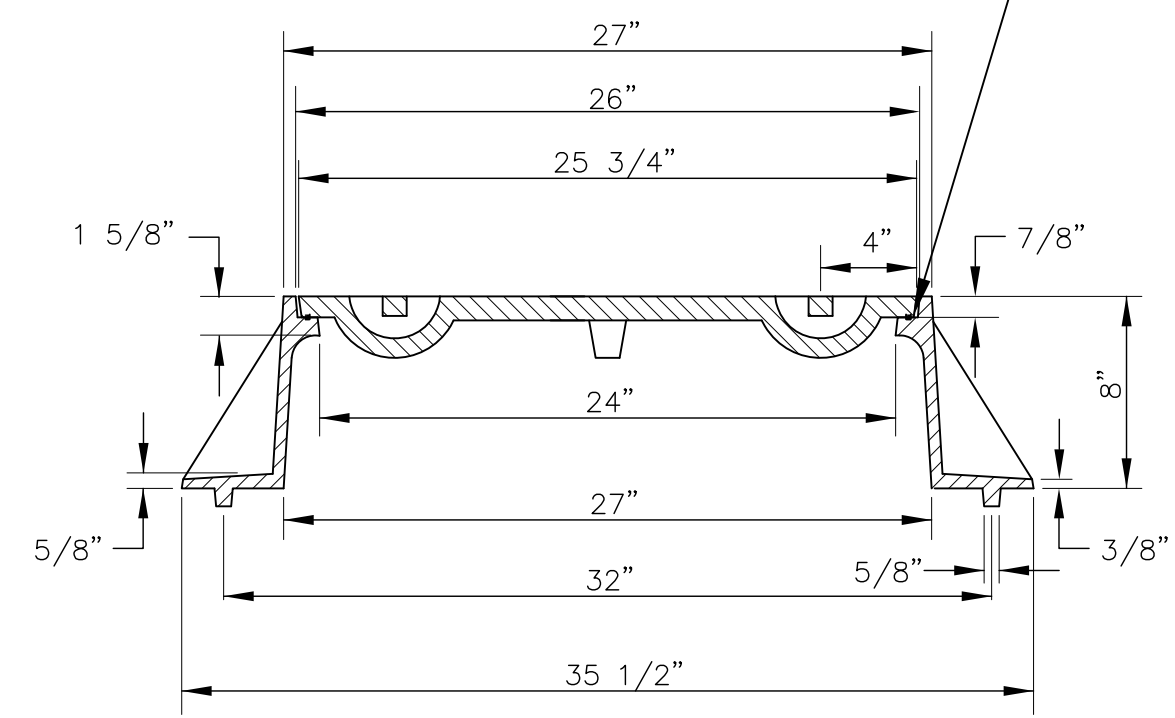
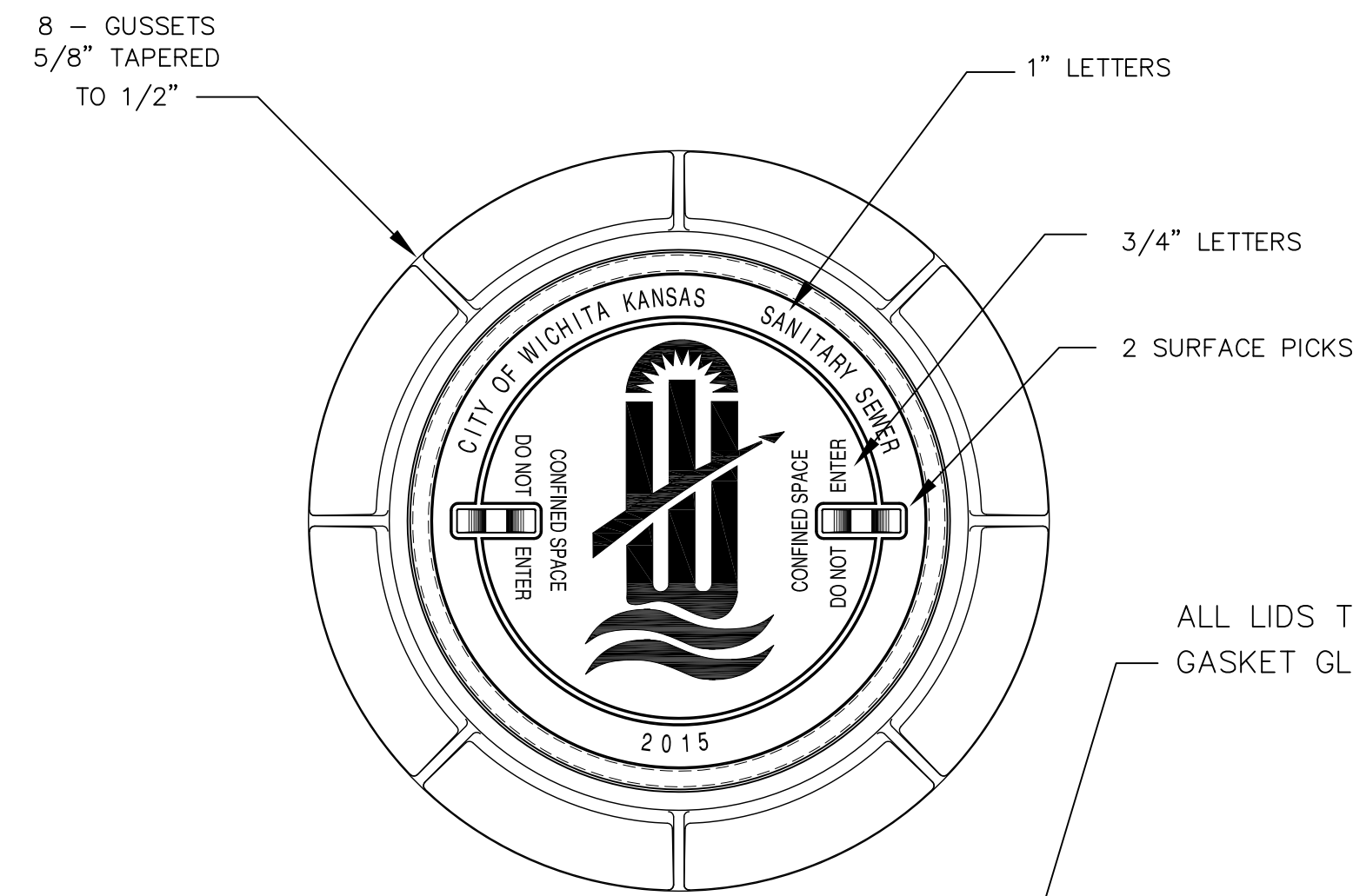


REVISED JANUARY 2015

PRECAST SANITARY SEWER MANHOLE

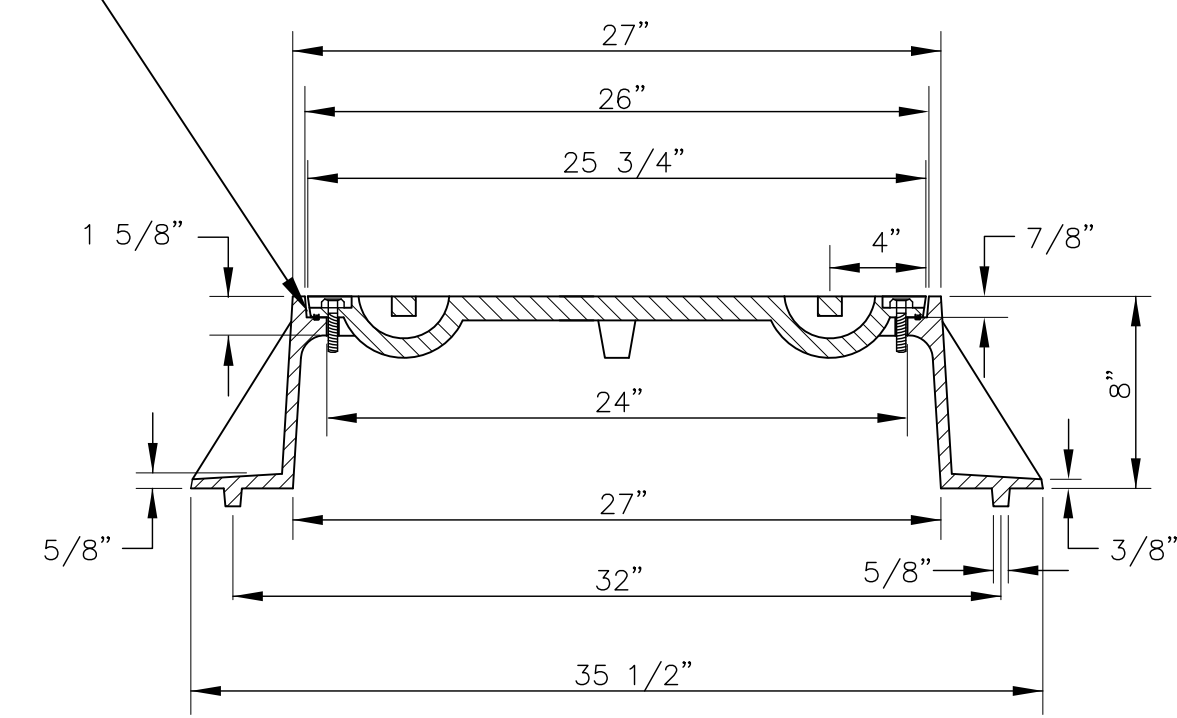
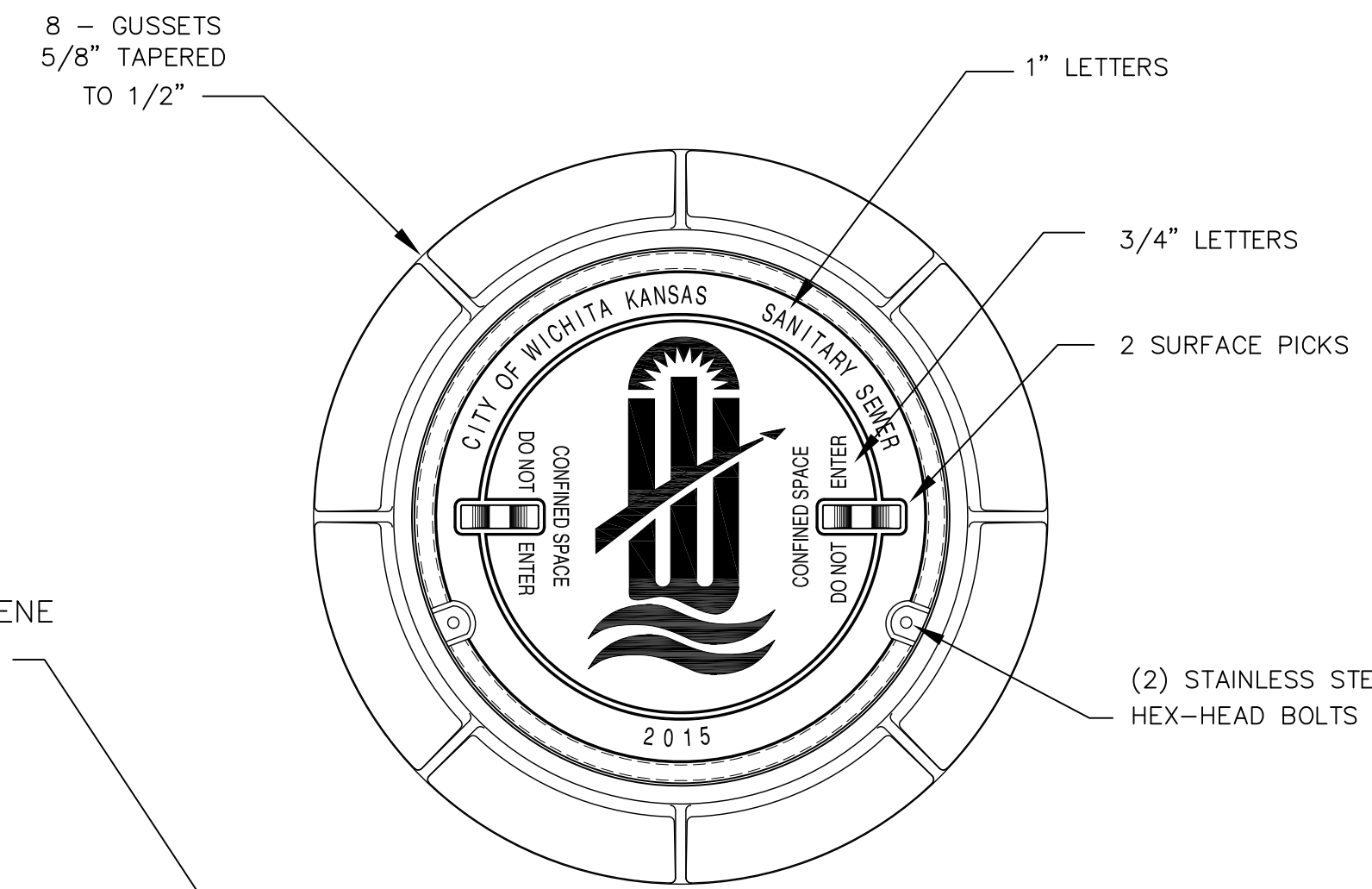
CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
		08/16
CITY ENGINEER'S OFFICE		SHEET
CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		2 of 7



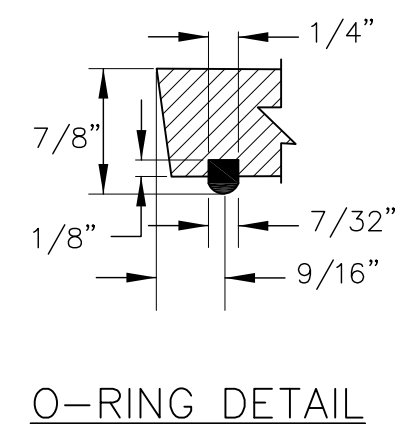
STANDARD MANHOLE FRAME & COVER
DEETER #1261 OR EJIW #1936-Z1

NOTE:
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.

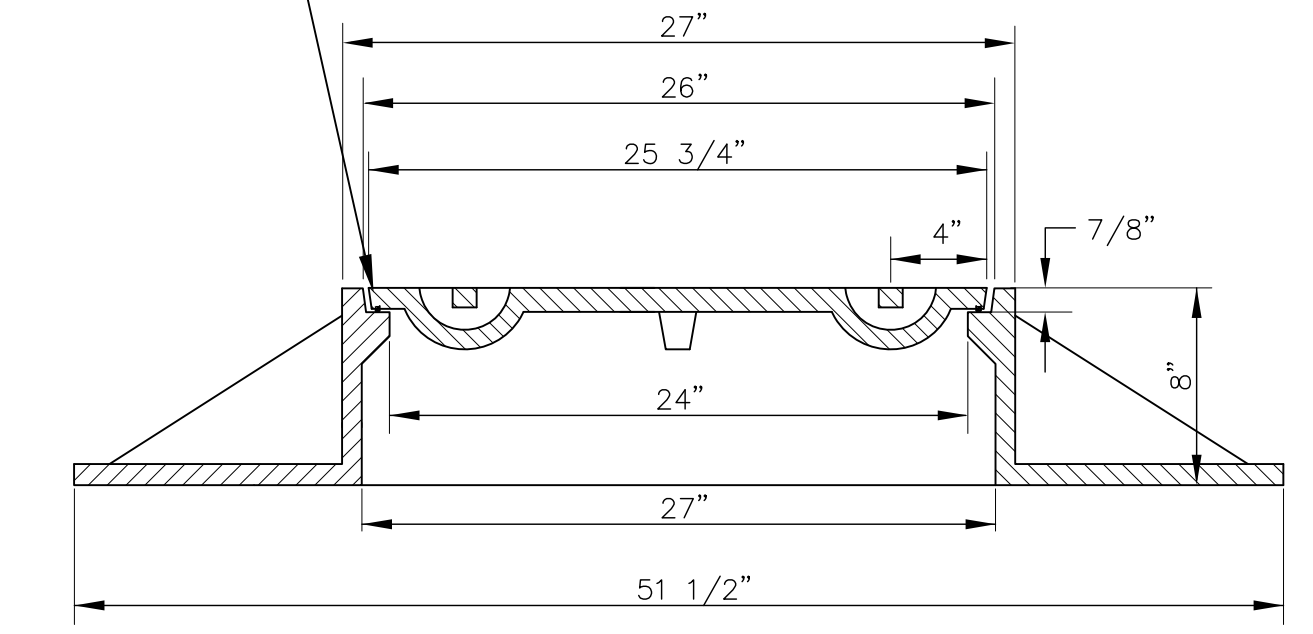
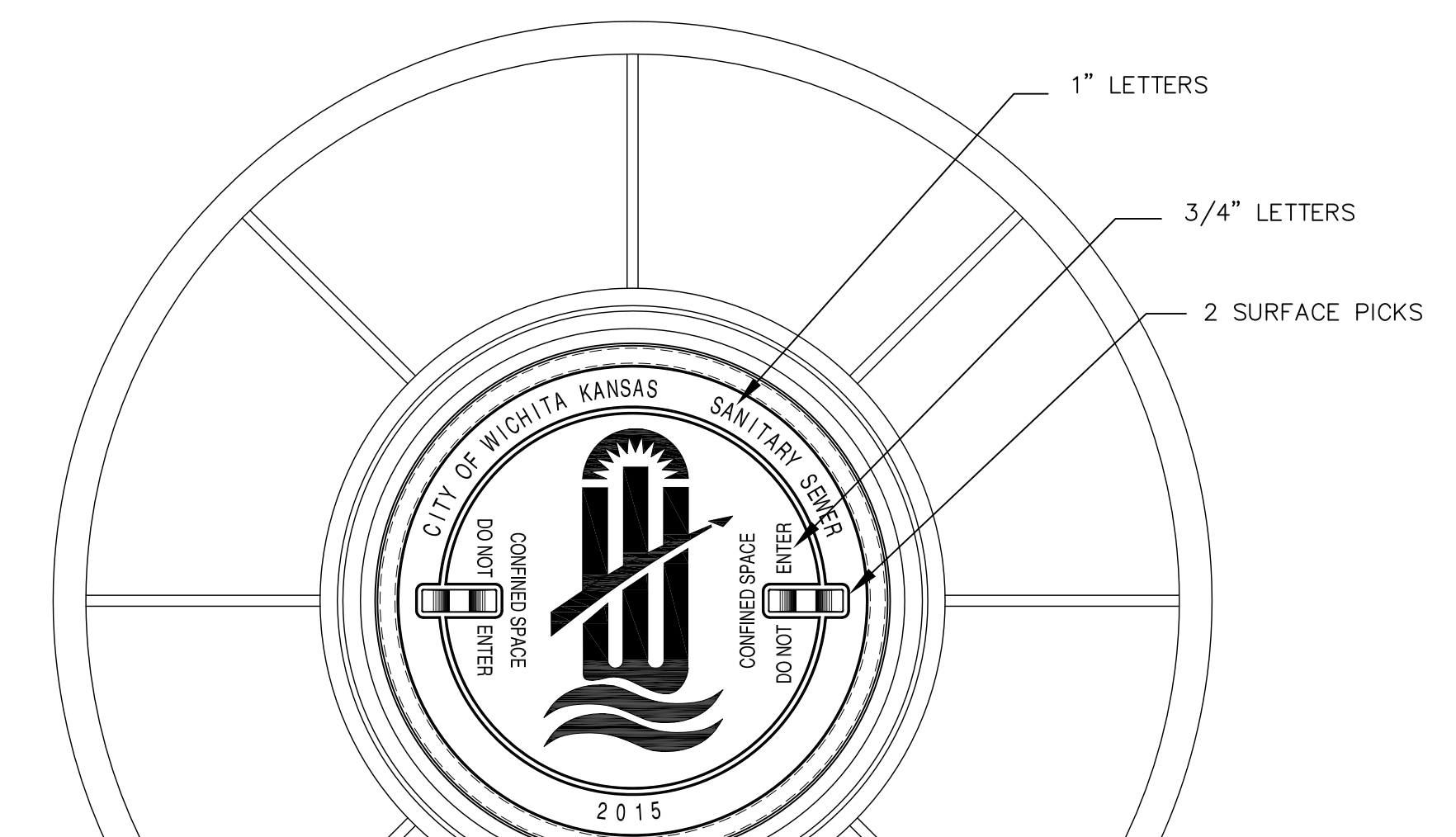


BOLT DOWN MANHOLE FRAME & COVER
DEETER #1261 OR EJIW #1936-Z1

NOTE:
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.



ALL LIDS TO BE FURNISHED WITH O-RING/NEOPRENE GASKET GLUED IN THE COVER BEARING SURFACE.



WIDE FLANGED FRAME & COVER
DEETER #1261A

NOTE:
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.

GENERAL NOTES

- MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A-48. DIMENSIONS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.
- MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDRY WILL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER FOUNDRY AND STILL MEET ALLOWABLE CLEARANCES AND NON-ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.
- THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE IN THE FRAME RECESS SHALL BE MANUFACTURED TO TOLERANCES SUCH THAT THE CLEARANCE BETWEEN THE COVER AND FRAME WILL NOT EXCEED 1/8" AT ANY POINT AROUND THE CIRCUMFERENCE OF THE COVER. THE SEATING SURFACES BETWEEN THE COVER AND FRAME SHALL BE MACHINED SUCH THAT THESE SEATING SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUMFERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.
- THE MANHOLE FRAME AND COVER SHALL BE MARKED WITH LETTERING INDICATING THE NAME OF THE MANUFACTURER AND THE YEAR WHEN THE COVER OR FRAME WAS CAST. THE COVER SHALL BE FURTHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1" IN HEIGHT. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SANITARY SEWER". THE TOP SURFACE OF THE COVER SHALL BE MANUFACTURED IN WITH CITY OF WICHITA DESIGN AS INDICATED ON THE DRAWINGS. SMOOTH BLOCKOUTS SHALL BE UTILIZED TO HIGHLIGHT THE LETTERING ON THE COVER SURFACE. THE TOTAL AREA OF SMOOTH SURFACE BLOCKOUT SHALL NOT EXCEED THE AREA AS INDICATED ON THE DRAWING. POSITIONING OF SMOOTH BLOCKOUTS AND LETTERING MAY VARY FROM THAT SHOWN ON THE DETAILED DRAWING.



MANHOLE FRAME AND COVER (SANITARY SEWER)		
CITY ENGINEER GARY JANZEN, P.E.		
PROJECT NUMBER	OCA NUMBER	DATE
		08/16
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET
		3 of 7

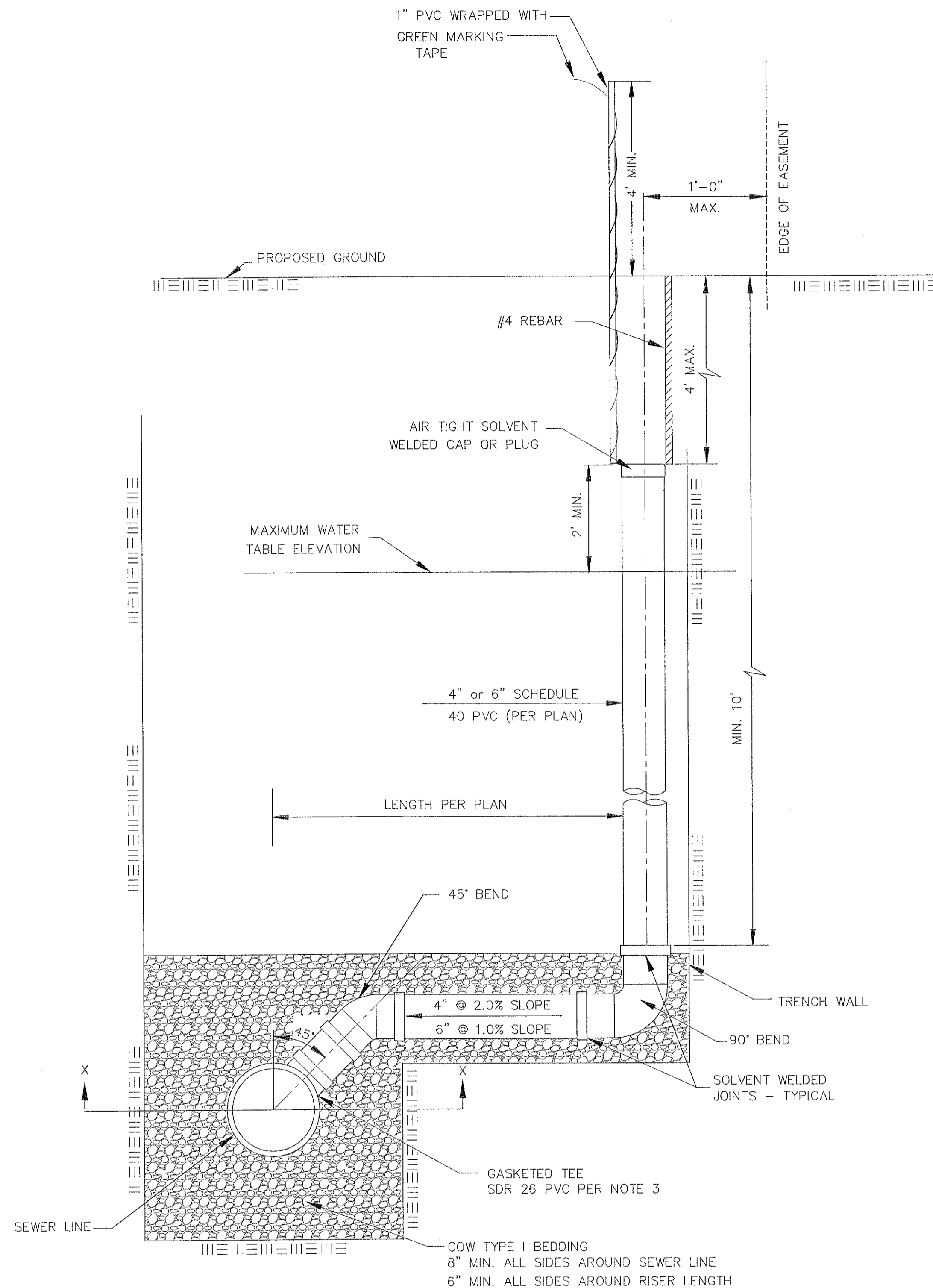
REVISED: MARCH 2016

GENERAL NOTES

1. APPLICATION. Risers shall be installed to serve all lots or tracts where the sanitary sewer main is below the water table, where the sanitary sewer main depth is greater than 12' below the proposed ground elevation, where the main is adjacent to a pond or wherever service lines would have to cross under storm sewer pipe. Installation of risers because of field conditions shall be as approved by the City Engineer. The location of the risers to serve developed property shall be approved by the property owner and the Construction Engineer.
2. MANHOLE STUB RISERS. Manhole stub risers be installed in manholes where locations of manholes will provide satisfactory service connection as determined by the Construction Engineer. The vertical distance between the flowline of the manhole stub and the flowline of the sanitary sewer line out of the manhole shall not exceed 2'. Risers shall be utilized at manholes as indicated in Note 1. Manhole stub riser shall be set such that the top of the stub is not lower than the top of the sanitary sewer line.
3. SIZING. Risers shall be sized according to the plans and riser table where risers are indicated by the plans. Where risers are required because of field conditions, the risers shall be 6" diameter for commercial or industrial properties and 4" or 6" diameter for residential properties, based on lot size and sanitary sewer main depth. Sizing of risers shall be approved by the construction Engineer prior to installation.
4. RISER MATERIAL. Risers shall be constructed of Schedule 40 PVC Pipe, meeting the requirement of the latest revision of A.S.T.M.. All pipe joints shall be solvent welded. Full body tee shall be SDR 26 PVC pipe.
5. ROCK ENCASUREMENT. Riser connection to clay pipe sanitary sewers shall be rock encased both ways from the riser centerline. The rock encasement shall extend three feet from the riser centerline 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 rock encased one foot each way from the riser centerline. Crushed rock shall conform to ASTM C-33, Gradation No. 67, and shall meet all requirements for Portland Cement Concrete pavement Coarse Aggregate, Section 406.2, City of Wichita Standard Specifications.
6. BEDDING. Beyond the limits of the rock encasement, 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 sanitary sewer riser pipe. Compacted Pipe Bedding Type 1 or 2 shall be required for all risers whether constructed in vertical wall or sloped 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 and compaction has been completed. Contractor's methods for supporting and back filling 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 riser elevations are not shown on the plans, the top of the risers 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 2' (min.) above the maximum water table elevation, regardless of the riser elevation shown on the plans.
10. MARKING. Locations of the ends of the sanitary sewer riser pipe shall be marked by installing 1" PVC from the top of the riser to a minimum of 4' above the top of finished grade. No. 4 rebar shall be placed centered over the riser from the cap to the existing ground. The 1" PVC pipe shall be wrapped with green colored plastic tape, for the full length above ground surface. The green tape shall be 4 mil Polyethylene film with a 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, indicate the direction from the manhole, the direction and distance from the main, riser size, and elevation of the top of the riser in tabular format.
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 easement for the lot being served. All riser locations shall be approved by the Construction Engineer prior to installation.
13. PAYMENT. "Riser Assembly, Vertical" shall be paid for at the contract unit price per each, which shall be full compensation for all pipe, fittings, marking tape, length of backfill, labor, site restoration, and any other items necessary to complete the work.

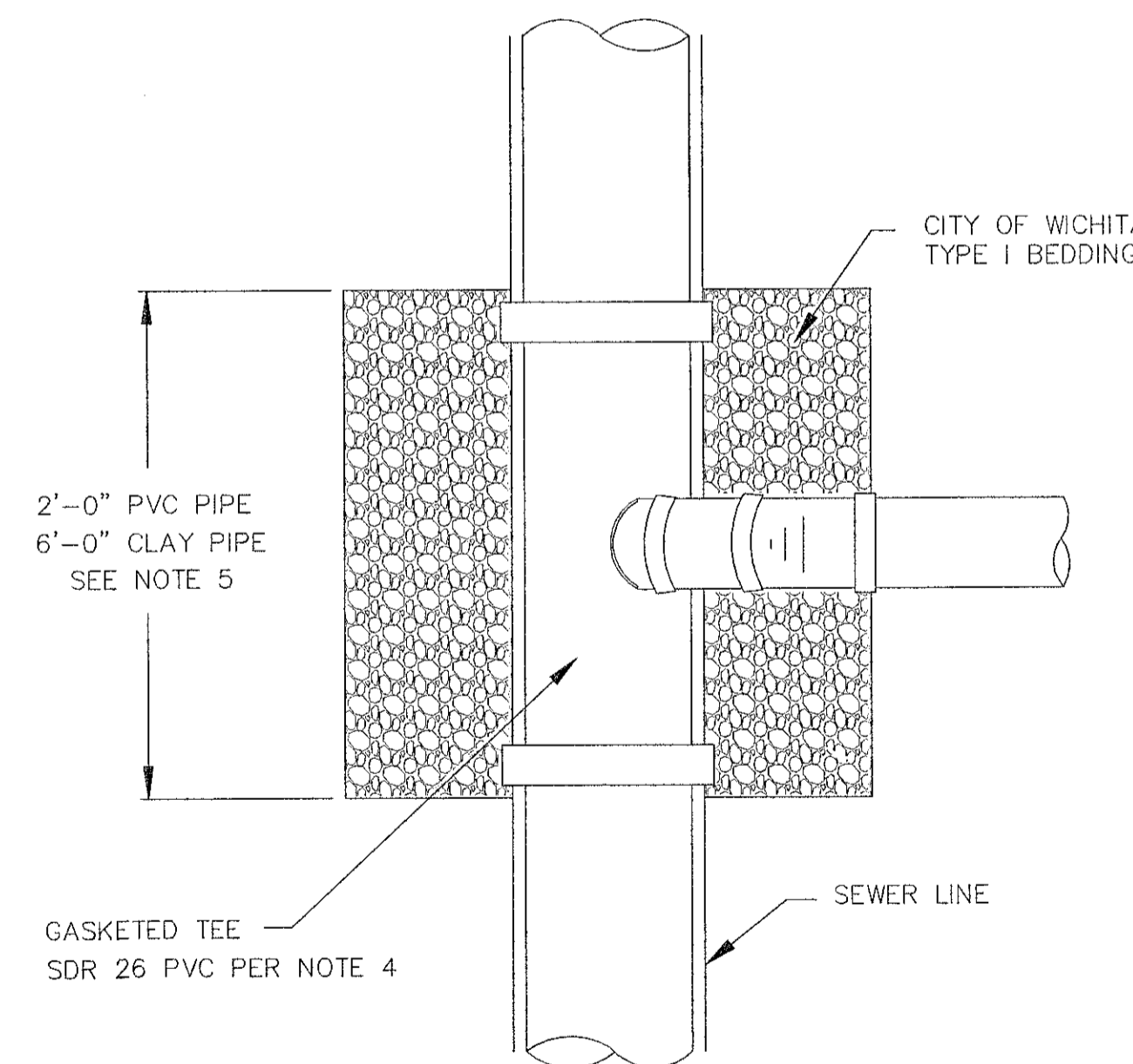
"Riser Assembly, Manhole Stub" shall be paid for at the contract unit price per each, which shall be full compensation for all labor material and incidentals necessary to complete the work including all pipe, fittings, rock encasement, and all other items as required and listed for "Riser Assembly, Vertical"

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



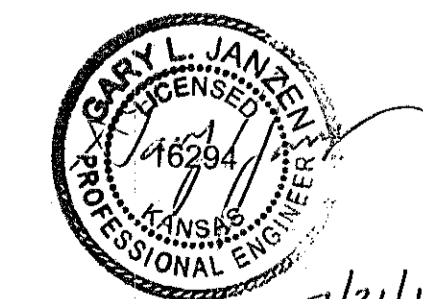
SANITARY SEWER RISER TABLE							FOR INFORMATION ONLY	
NUMBER	TYPE	LOCATION			STATION	DIRECTION	APPROXIMATE LENGTH	
		LOT NO.	BLOCK NO.	LINE NO.			VERTICAL (FT)	HORIZONTAL (FT)
1	4" MANHOLE CONNECTION							
2	6" MANHOLE CONNECTION							
3	4" TEE							
4	6" TEE							

NOTE: TABLE FOR REFERENCE ONLY AND SHOULD BE ON EACH APPLICABLE PLAN SHEET.




NOTE: NON SHEAR COUPLING TO BE USED WHEN HOOKING TO CLAY PIPE.

TYPICAL SECTION X-X



07/21/15

 CITY OF WICHITA PUBLIC WORKS & UTILITIES ENGINEERING DIVISION			REVISED: JULY 2015 VERTICAL RISER ASSEMBLY SEWER DETAIL CITY ENGINEER GARY JANZEN, P.E.		
PROJECT NUMBER	OCA NUMBER	DATE			
		08/16			
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET	4 of 7		

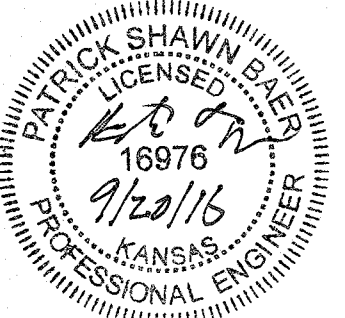
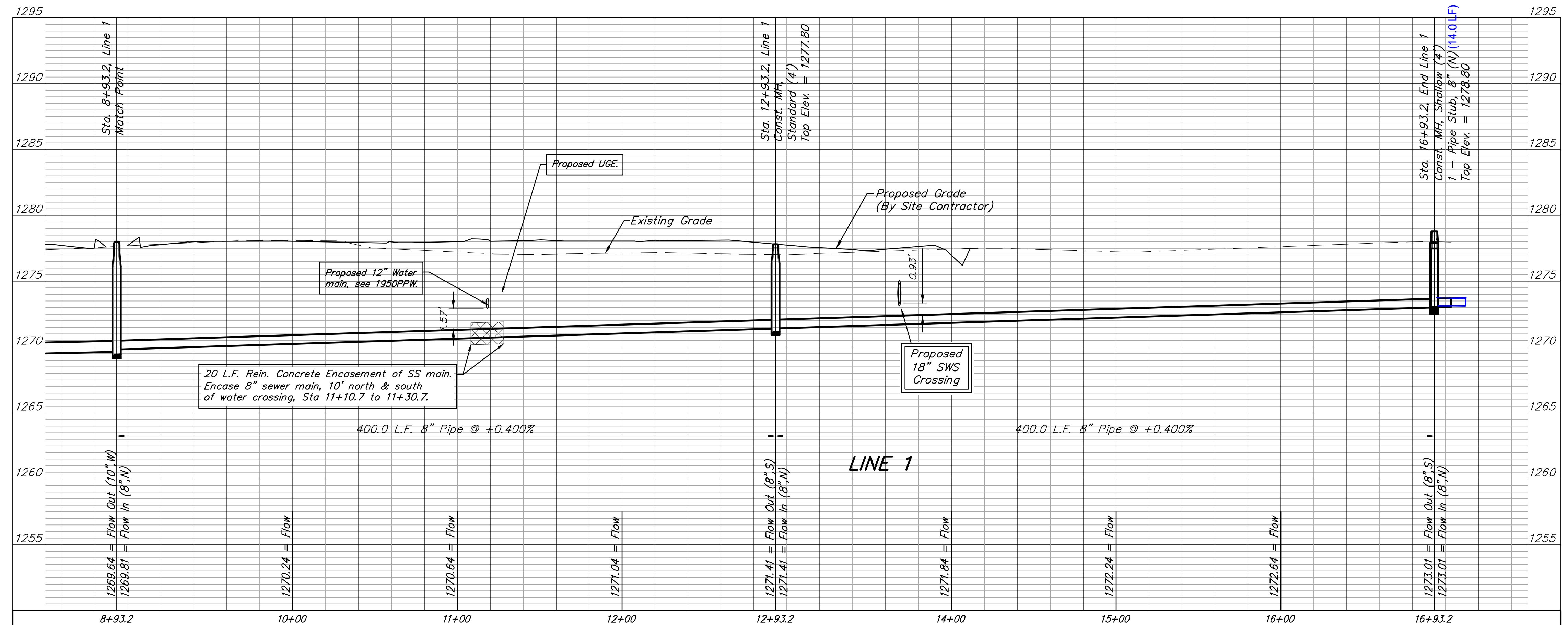
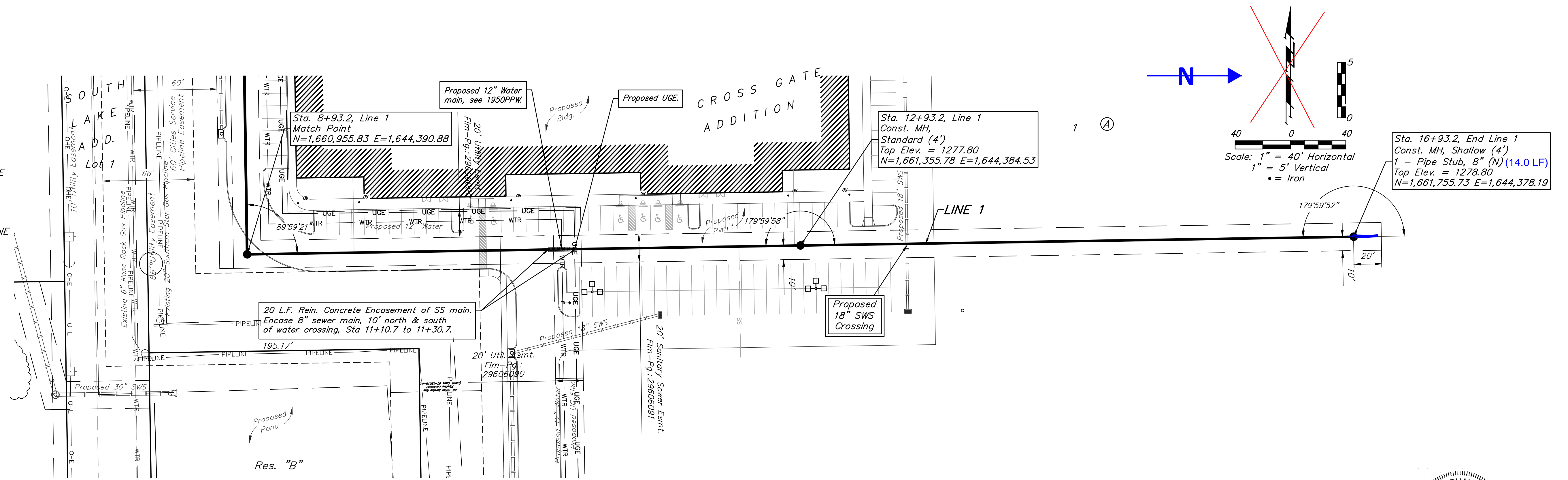
BENCHMARKS:
 BM #1: CHISELED CROSS AT BACK OF SIDEWALK, 825.7' W. & 48' S. OF THE NE COR., NE1/4, SEC. 18, TWP. 28-S, R-1-E. ELEV. = 1278.78 NAVD88

BM #2: CHISELED CROSS AT BACK OF SIDEWALK, 222' S. & 49' W. OF THE NE COR., NE1/4, SEC. 18, TWP. 28-S, R-1-E. ELEV. = 1278.94 NAVD88

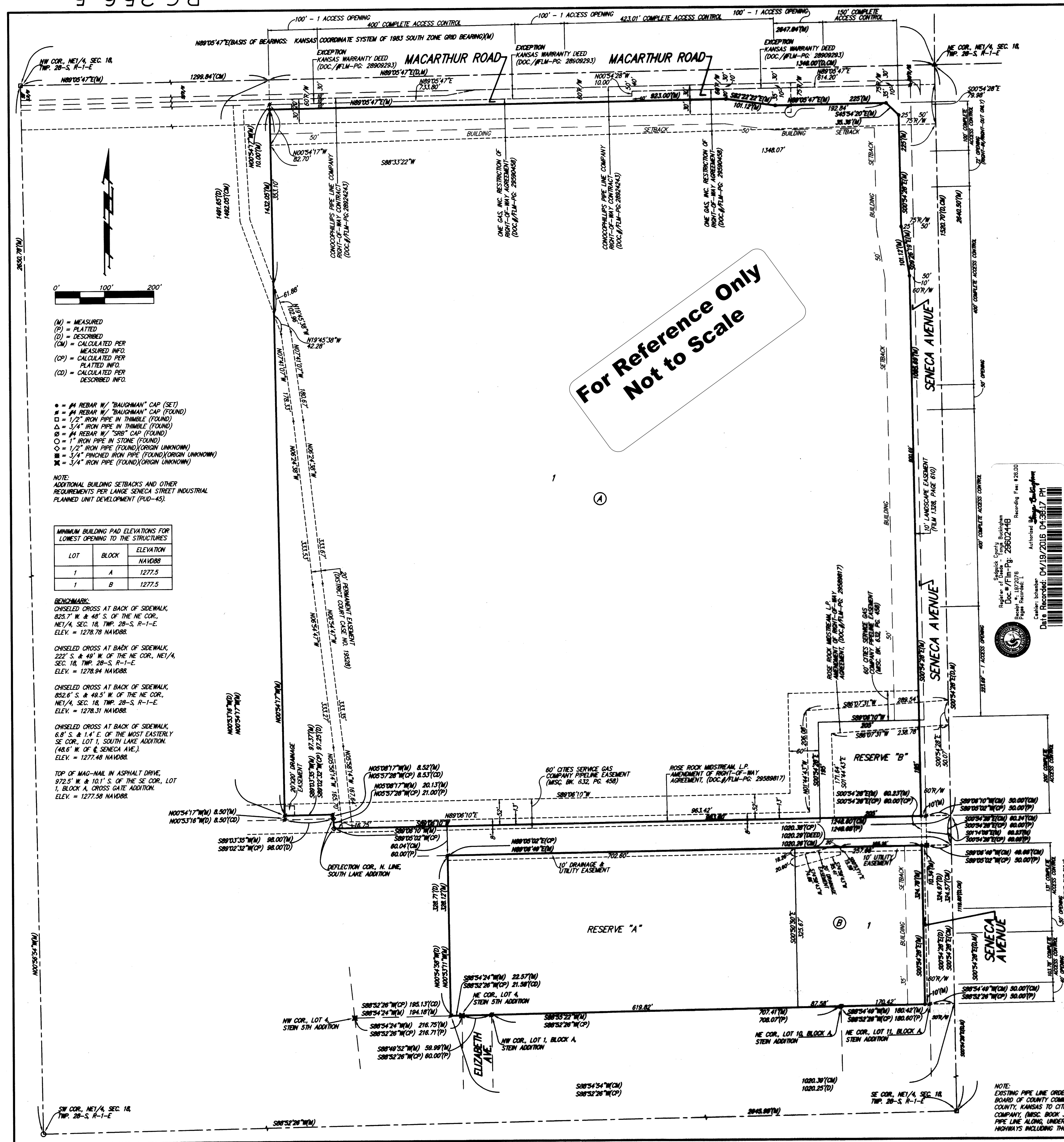
BM #3: CHISELED CROSS AT BACK OF SIDEWALK, 852.6' S. & 49.5' W. OF THE NE COR., NE1/4, SEC. 18, TWP. 28-S, R-1-E. ELEV. = 1278.31 NAVD88

BM #4: CHISELED CROSS AT BACK OF SIDEWALK, 1587.7' S. & 48.6' W. OF THE NE COR., NE1/4, SEC. 18, TWP. 28-S, R-1-E. ELEV. = 1277.48 NAVD88

BM #5: TOP OF MAGNAIL IN ASPHALT PAVEMENT, 982.5' W. & 10.1' S. OF THE MOST EASTERLY NE COR., LOT 1, SOUTH LAKE ADDITION. ELEV. = 1277.58 NAVD88



CROSS GATE ADDITION WICHITA, SEDGWICK COUNTY, KANSAS



- (M) = MEASURED
(P) = PLATTED
(D) = DESCRIBED
(CA) = CALCULATED PER MEASURED INFO.
(CP) = CALCULATED PER PLATTED INFO.
(CD) = CALCULATED PER DESCRIBED INFO.
- = #4 REBAR W/ "BAUGHMAN" CAP (SET)
 - = 1/2" IRON PIPE IN THIMBLE (FOUND)
 - △ = 3/4" IRON PIPE IN THIMBLE (FOUND)
 - = #4 REBAR W/ "TOMB" CAP (FOUND)
 - = 1" IRON PIPE IN STONE (FOUND)
 - = 1/2" IRON PIPE (FOUND) (ORIGIN UNKNOWN)
 - = 3/4" IRON PIPE (FOUND) (ORIGIN UNKNOWN)
 - = 3/4" IRON PIPE (FOUND) (ORIGIN UNKNOWN)
- NOTE:
ADDITIONAL BUILDING SETBACKS AND OTHER REQUIREMENTS PER LARGE SENeca STREET INDUSTRIAL PLANNED UNIT DEVELOPMENT (PUD-45).

LOT	BLOCK	ELEVATION NAVD88
1	A	1277.5
1	B	1277.5

BENCHMARK:
CHISELED CROSS AT BACK OF SIDEWALK 825.7' W. & 48.5' S. OF THE NE COR. NE 1/4, SEC. 18, TWP. 28-S, R-1-E. ELEV. = 1278.29 NAVD88.

CHISELED CROSS AT BACK OF SIDEWALK 222.5' S. & 40.1' W. OF THE NE COR. NE 1/4, SEC. 18, TWP. 28-S, R-1-E. ELEV. = 1278.94 NAVD88.

CHISELED CROSS AT BACK OF SIDEWALK 852.6' S. & 48.5' W. OF THE NE COR. NE 1/4, SEC. 18, TWP. 28-S, R-1-E. ELEV. = 1278.31 NAVD88.

CHISELED CROSS AT BACK OF SIDEWALK 6.8' S. & 14.1' E. OF THE MOST EASTERLY SE COR. LOT 1, SOUTH LAKE ADDITION (48.6' W. OF E. SENeca AVE.). ELEV. = 1277.48 NAVD88.

TOP OF MAC-PAV. IN ASPHALT DRIVE 972.5' W. & 10.1' S. OF THE SE COR. LOT 1, BLOCK A, CROSS GATE ADDITION. ELEV. = 1277.58 NAVD88.

For Reference Only
Not to Scale

State of Kansas) SS We, Baughman Company, P.A., Surveyors in
Sedgwick County) atoresaid county and state do hereby certify that we have surveyed and
plotted "CROSS GATE ADDITION", Wichita, Sedgwick County, Kansas and
that the accompanying plat is a true and correct exhibit of the property
surveyed, described as a portion of the Northeast Quarter of Section 18,
Township 28 South, Range 1 East, of the Sixth Principal Meridian, Sedgwick
County, Kansas described as Beginning at the northeast corner of said
Northeast Quarter, 1520.70 feet, to a point 1119.80 feet north of the
southeast corner of said Northeast Quarter, also being the northeast
corner of South Lake Addition to the City of Wichita, Kansas, Sedgwick
County, Kansas; thence S89°05'02"W, along the north line of Lot 1, in
said South Lake Addition, 1248.85 feet, to a deflection point in the north
line of said Lot 1; thence N05°57'28"E, along an easterly line of said Lot 1
extended north, 29.53 feet; thence S89°02'32"W, parallel with the
northern most north line of said Lot 1, and 8.50 feet normally distant
north of the northern most north line of said Lot 1, 97.25 feet; thence
N00°53'16"W, 1491.65 feet to a point on the north line of said Northeast
Quarter, said point being 1348.00 feet west of the northeast corner of
said Northeast Quarter; thence N89°05'47"E, along the north line of said
Northeast Quarter, 1348.00 feet to the Point of Beginning, EXCEPT that
part deeded to the City of Wichita by Kansas Warranty Deed filed on
DOC.#/FLM-PG: 28908293, all being subject to Road Rights of Way of
Record, TOGETHER with a portion of the Northeast Quarter of Section 18,
Township 28 South, Range 1 East, of the Sixth Principal Meridian, Sedgwick
County, Kansas described as commencing at the northeast corner of said
Northeast Quarter; thence S00°54'28"E (assumed), along the east line of
said Northeast Quarter, 1580.70 feet, to a point 1058.80 feet north of the
southeast corner of said Northeast Quarter, also being the southeast
corner of South Lake Addition to the City of Wichita, Kansas, Sedgwick
County, Kansas and for a point of beginning; thence continue S00°54'28"E,
along the east line of said Northeast Quarter, 324.97 feet to the
northeast corner of Stein Addition, Wichita, Sedgwick County, Kansas;
thence S88°52'26"W, along the north line of said Stein Addition, and Stein
5th Addition, Wichita, Sedgwick County, Kansas, 1020.25 feet; thence
N00°54'58"W, perpendicular to the northern most south line of Lot 1 in
said South Lake Addition, 328.71 feet, to a point on the northern most
south line of Lot 1 in said South Lake Addition; thence N89°05'02"E, along
the northern most south line of Lot 1 in said South Lake Addition,
1020.29 feet calculated per deed, and 1020.38 feet calculated per plat to
the Point of Beginning, subject to Road Rights of Way of record.

Existing public easements, building setbacks,
access controls, and dedications, if any, being
voted by virtue of K.S.A. 12-512b, as amended.

Baughman Company, P.A.

This plat of "CROSS GATE ADDITION",
Wichita, Sedgwick County, Kansas has been submitted to and approved
by the Wichita-Sedgwick County Metropolitan Area Planning Commission,
Wichita, Kansas.
Dated this 4th day of JUNE, 2015.
Wichita-Sedgwick County Metropolitan Area Planning Commission



Carol Chapman Neugent
Chair
Dale Miller
Secretary

This plat approved and all dedications
shown hereon accepted by the City Council of the City of Wichita,
Kansas, this 15th day of April, 2016.

Jeff Longwell
Mayor
Karen Sublett
City Clerk

Reviewed in accordance with K.S.A. 58-2005
on this 15th day of April, 2016.

Tricia L. Robello, L.S. #1246
Deputy County Surveyor
Sedgwick County, Kansas

Michael G. Conroy
3-2016, Surveyor

Know all men by these presents that we,
the undersigned, have caused the land in the surveyors certificate to be
platted into Lots, Blocks, Reserves and Streets, to be known as "CROSS
GATE ADDITION", Wichita, Sedgwick County, Kansas. The utility easement
is hereby granted as indicated for the construction and maintenance of all
public utilities. The drainage and utility easement is hereby granted as
indicated for drainage purposes. The streets are hereby dedicated to and
for the use of the public. Reserve "A" is hereby reserved for landscaping,
open space, lakes, drainage purposes, utilities as confined to easement,
and communication systems and related appurtenances as confined to
easement. Reserve "B" is hereby reserved for landscaping, open space,
lakes, drainage purposes, and pipelines and related appurtenances as
confined to easement. Reserves "A" and "B" shall be owned and
maintained by the owner of Lot 1, Block A. Access controls shall be as
depicted on the face of the plat and are hereby granted to the City of
Wichita, Kansas. The permitted opening locations shall be as determined
by the City Engineer of the City of Wichita, Kansas. The Minimum Building
Pad Elevations for the lowest opening to the structures shall be as
indicated on the face of the plat.

TORS, LLC, a Kansas limited liability company

Jeff M. Lange
President

State of Kansas) SS The foregoing instrument acknowledged before
Sedgwick County) me, this 11th day of March, 2016, by Jeff M. Lange, President of
TORS, LLC, a Kansas limited liability company, on behalf of the company.

Kelly A. Thomas
Notary Public

State of Kansas) SS This is to certify that this plat has been
Sedgwick County) filed for record in the office of the Register of Deeds, this 19th day
of April, 2016, at 11:00 a.m. block 2, and is duly recorded.

Tonya Buckingham
Register of Deeds

We, the undersigned holders of a mortgage on the
above described property, do hereby consent to this plat of "CROSS GATE
ADDITION", Wichita, Sedgwick County, Kansas.

KS StateBank

James D. Ashcraft
SVP

State of Kansas) SS The foregoing instrument acknowledged before
Sedgwick County) me, this 11th day of March, 2016, by *James D. Ashcraft*
of KS StateBank, on behalf of the bank.

Brianna D. Copeland
Notary Public

Brianna D. Copeland
Notary Public
STATE OF KANSAS
My Exp. 5/1/17

Baughman Company, P.A.
115 East St., Wichita, KS 67211 P 316-263-2771 F 316-263-0149