

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:

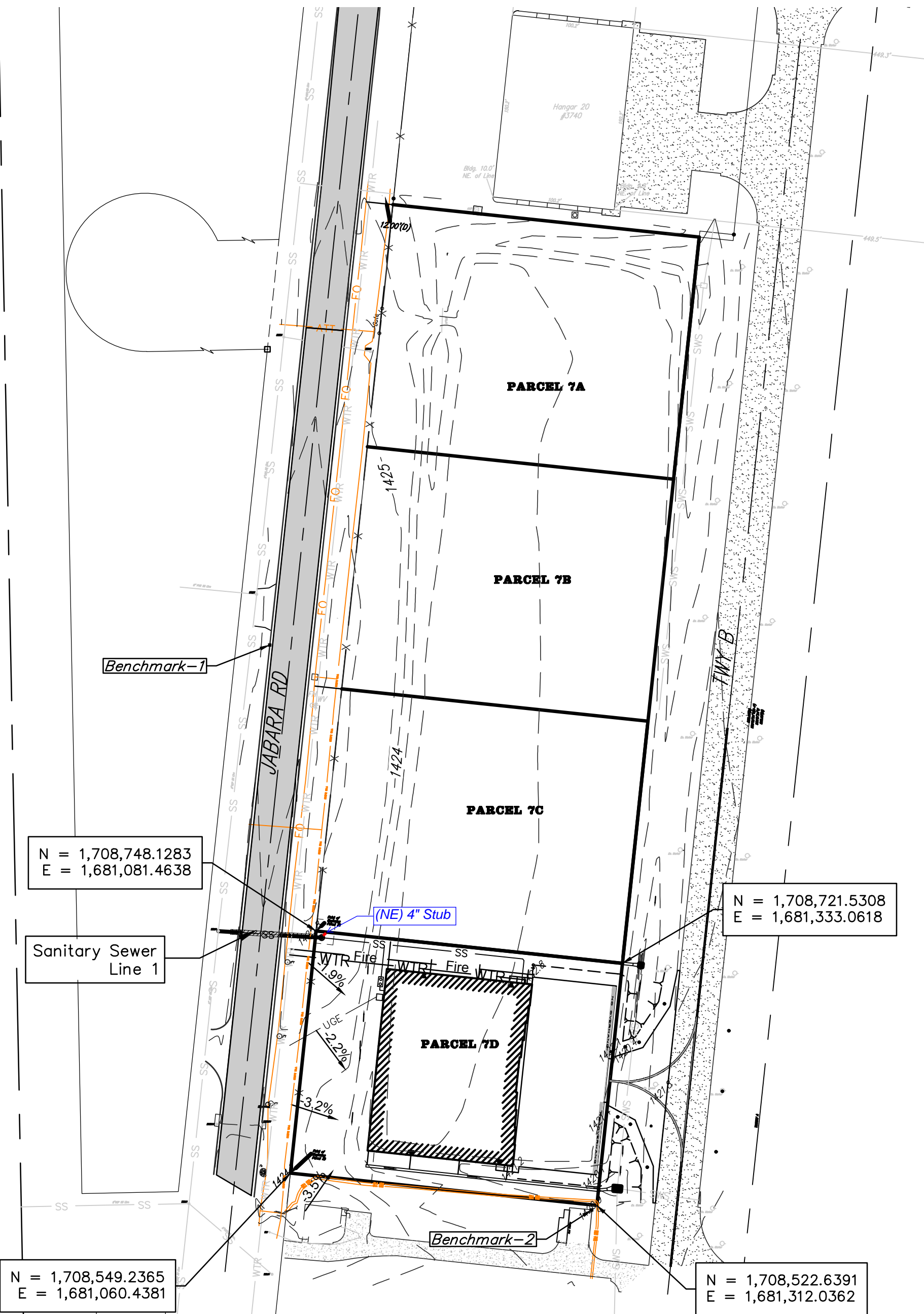
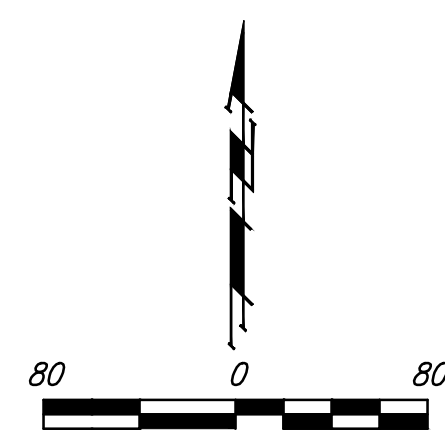
| | |
|-------------------------------|----------------|
| AT&T | 1-800-246-6464 |
| Black Hills Energy | 1-800-694-8989 |
| City of Wichita Water & Sewer | 1-316-219-8921 |
| City of Wichita Stormwater | 1-316-268-4090 |
| City of Wichita Traffic | 1-316-268-4034 |
| Cox Communications | 1-888-249-3530 |
| 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 and 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 will 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 City 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 Engineering Division shall field locate water valves 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 by the contractor.
- The Contractor shall notify the inspecting engineer and Tom Mason at 316-268-4574 with the City of Wichita 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 will be 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 the 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 NAVD 88.
- All areas disturbed during construction that will not be under proposed pavement shall be restored to match existing conditions.

- Any sidewalk, drive approach, 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 applicable fees (tap, equity, in lieu of & main benefit) must be paid before any connections can be made on this project. Quotes can be obtained on fees by calling 316-268-4555.
- City Maintenance of sanitary sewer mains ends at last structure within the easement or right-of-way.
- All stubs and capped pipes shall be located with green plastic tape in the same manner as risers. Contractor shall limit the extent of trench open overnight and weekends to less than 50 feet.
- 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 the stub is unusable due to elevation, grade or alignment, the Contractor shall remove the stub and plug the hole, and reshape the existing manhole invert to provide smooth flow. Where connecting to an existing manhole that does not have an existing stub, the Contractor shall core 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 connecting to existing manholes is incidental to the project.
- Contractor shall limit the extent of trench open overnight and weekend 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.
- The Contractor shall prevent from damage and support existing utilities through construction as approved by the utility owner and the Engineer at the contractors expense.
- 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, mulched, and fertilized as follows (Permanent Seeding):
 Seed: Kansas Premium Fescue Blend: 8 lbs/1000 sq. ft.
 Mulch: Prairie Hay: 2 tons/acre
 Fertilizer: 12-24-12: 850 lbs./acre
 All costs associated with seeding, mulching, and fertilizing shall be included in bid term "Seeding". All seeding operations shall conform to City of Wichita Standard Specifications.
- 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.
- All existing and proposed erosion control measures including silt fences, 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".

Benchmarks

Benchmark - 1
 "X" Chisled on Top of Curb, west of road across from Parcel A-7(II)
 Elev.=1425.75 NAVD 88

Benchmark - 2
 "X" Chisled on Top of Curb at fuel station, south of the SE corner of Parcel B-7
 Elev.=1421.46 NAVD 88



SANITARY SEWER

to serve

LOT 1, BLOCK A, COLONEL JAMES JABARA AIRPORT ADDITION

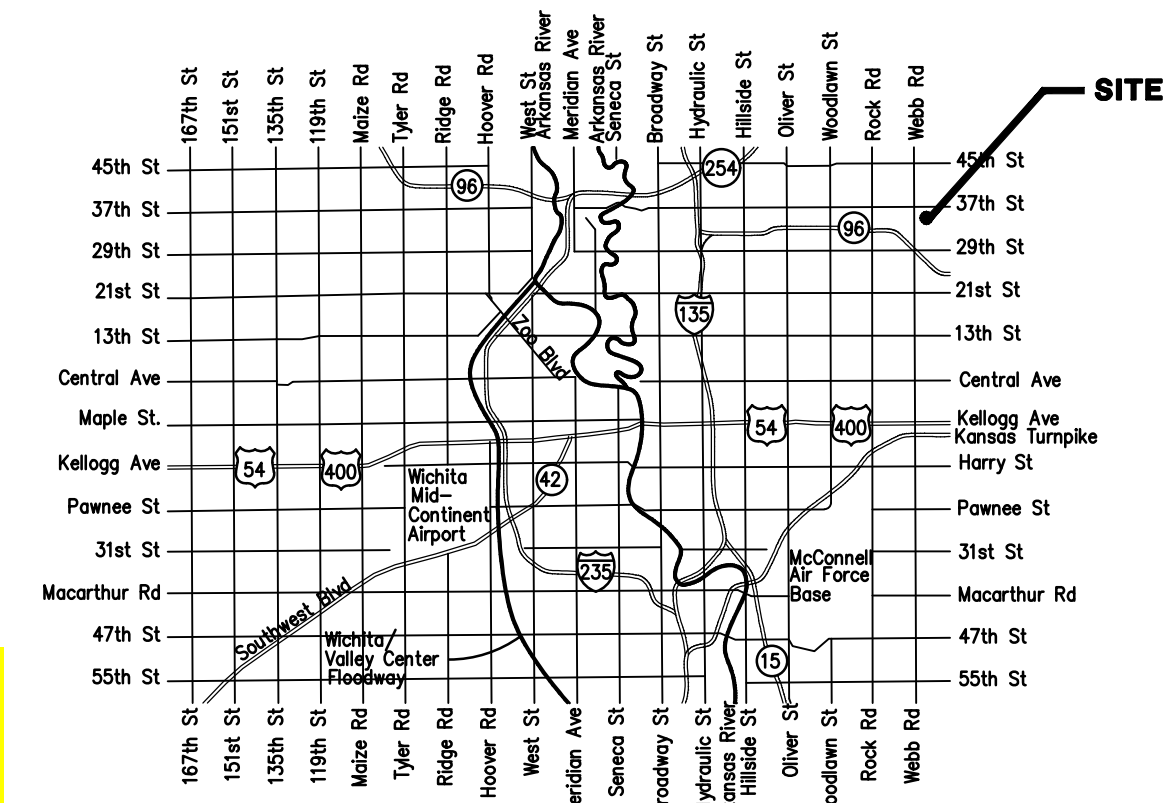
3610 N. JABARA RD.
 CITY OF WICHITA, KANSAS

Gary Janzen, P.E. City Engineer

Project Number
 2361 PPS (184011)

T. Mason - City of Wichita, Inspector
 Release Date: 4/5/2019
 Stub
 : apr 4/5/2019

AS BUILT PLANS
 Contractor: McCullough Excavating
 Inspector: Fred Smith, Baughman Co.
 As Builts by: KEK, 4/3/19



Vicinity Map

Sheet Index

| | |
|------------------------------|---|
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| Precast SS Manhole Detail | 2 |
| Manhole Frame & Cover Detail | 3 |
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| Casing Spacer | 5 |
| Erosion Control Plan | 6 |
| Plat | 7 |

*Current Sanitary Sewer Control Details are available at City of Wichitaweb site at <http://www.wichita.gov/PWU/StandardsConstruction/Forms/WebPageStandardsConstruction.aspx>

APPROVED AS NOTED
 BY WICHITA PUBLIC WORKS
 ENGINEERING DIVISION

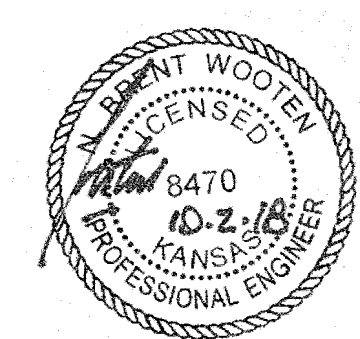
Engineering *Julianne Kallman 10-23-18*

Utilities *[Signature] 11-28-18*

NOTE TO CONTRACTORS

Installation, 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 the City Engineer. All Construction and Materials shall comply with the City of Wichita Specifications and Standards and Special Provisions (on file and available at Wichita.gov).

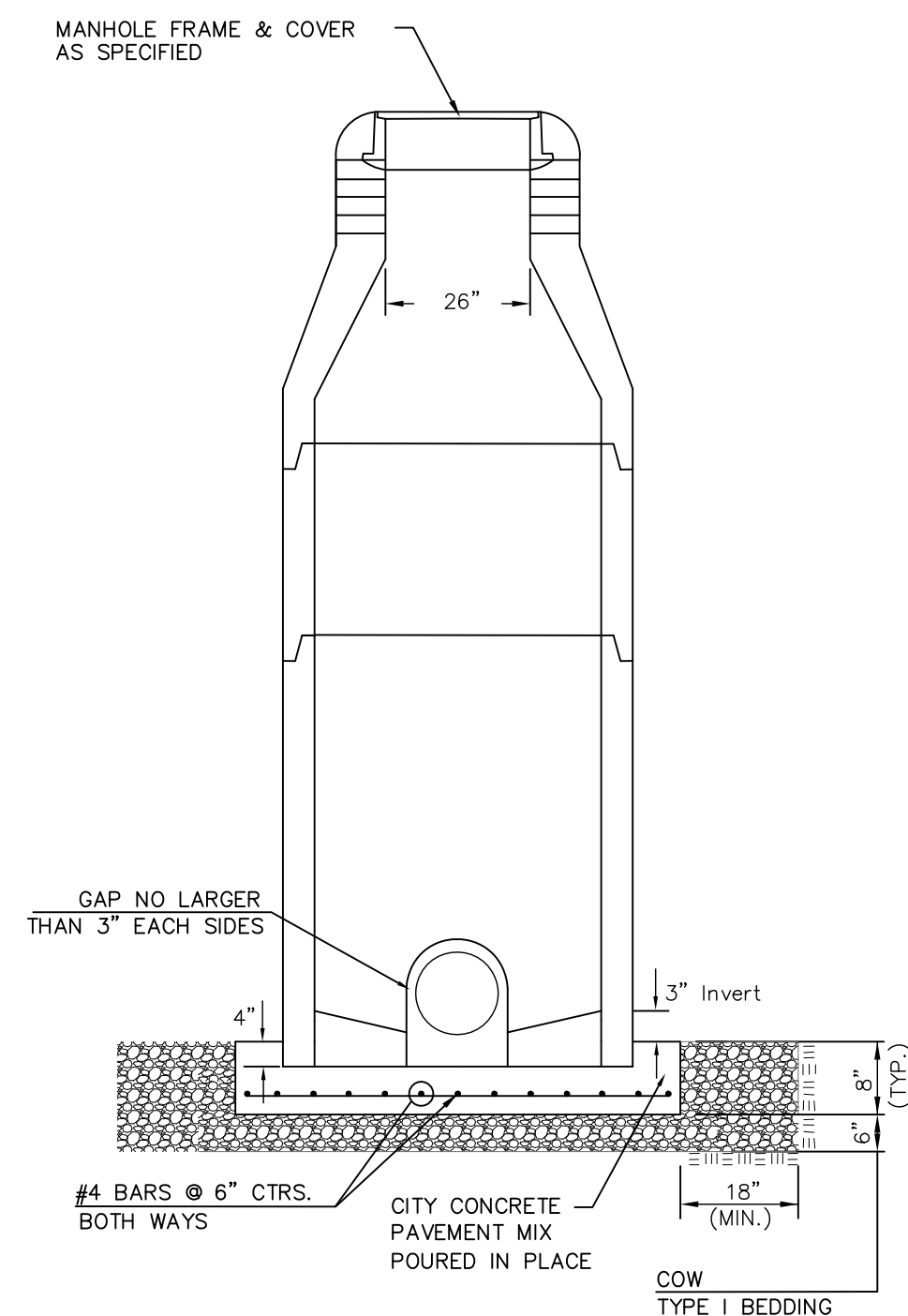
An approved copy of these plans signed by City staff are required on-site.



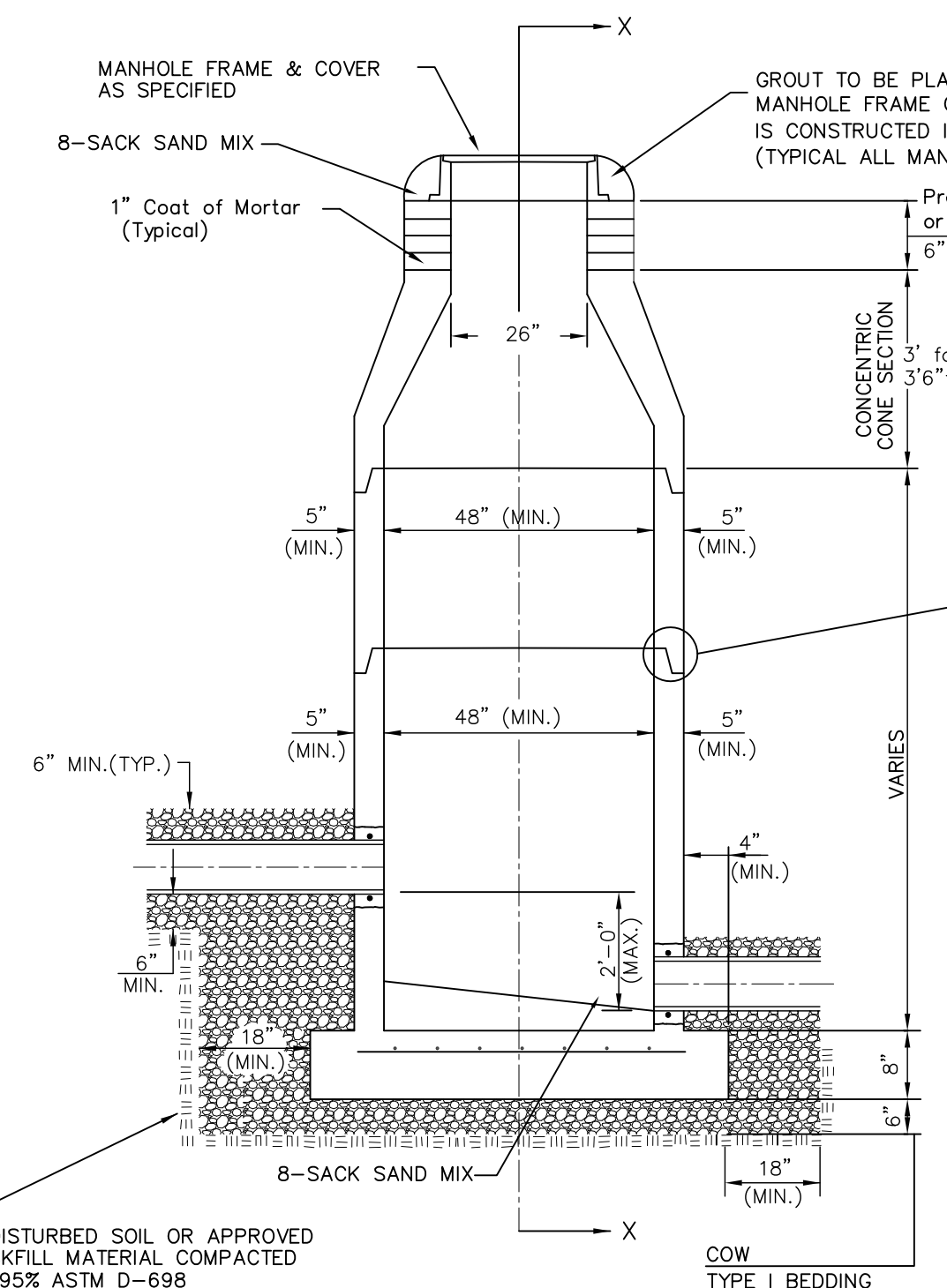
Nov 08, 2018

Baughman
 ENGINEERING | SURVEYING | PLANNING | LANDSCAPE ARCHITECTURE

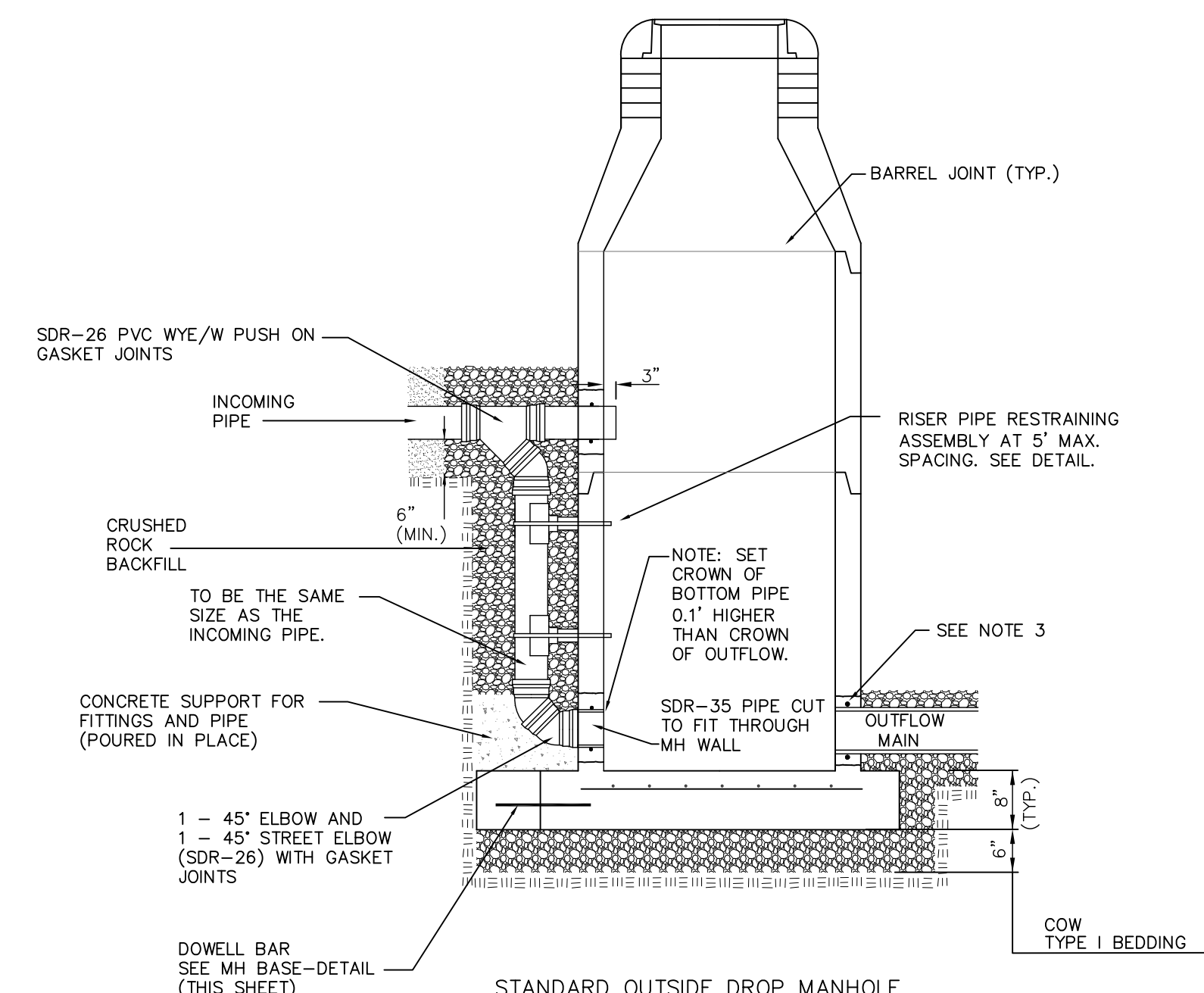
Baughman Company, P.A. 315 Ellis St. Wichita, KS 67211 P 316-262-7271 F 316-262-0145



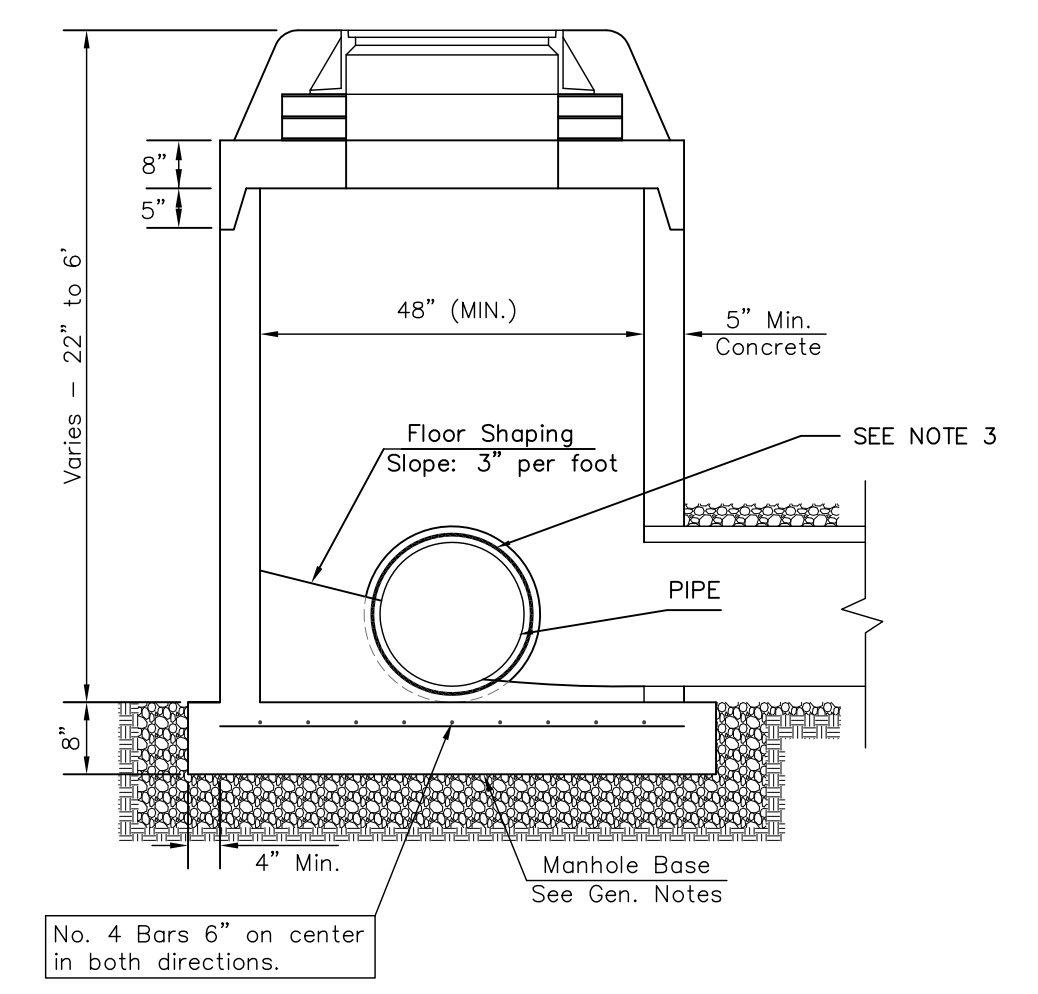
DOG HOUSE MANHOLE
(OVER EXISTING PIPE)
Not to Scale



STANDARD MANHOLE
Not to Scale



STANDARD OUTSIDE DROP MANHOLE
Not to Scale

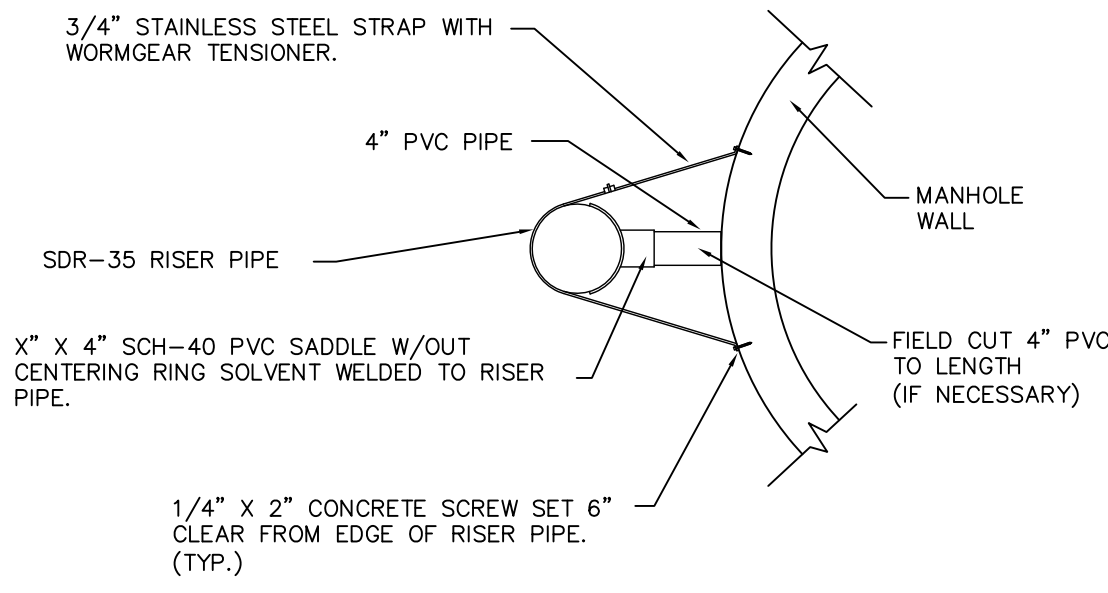


SHALLOW MANHOLE
Not to Scale

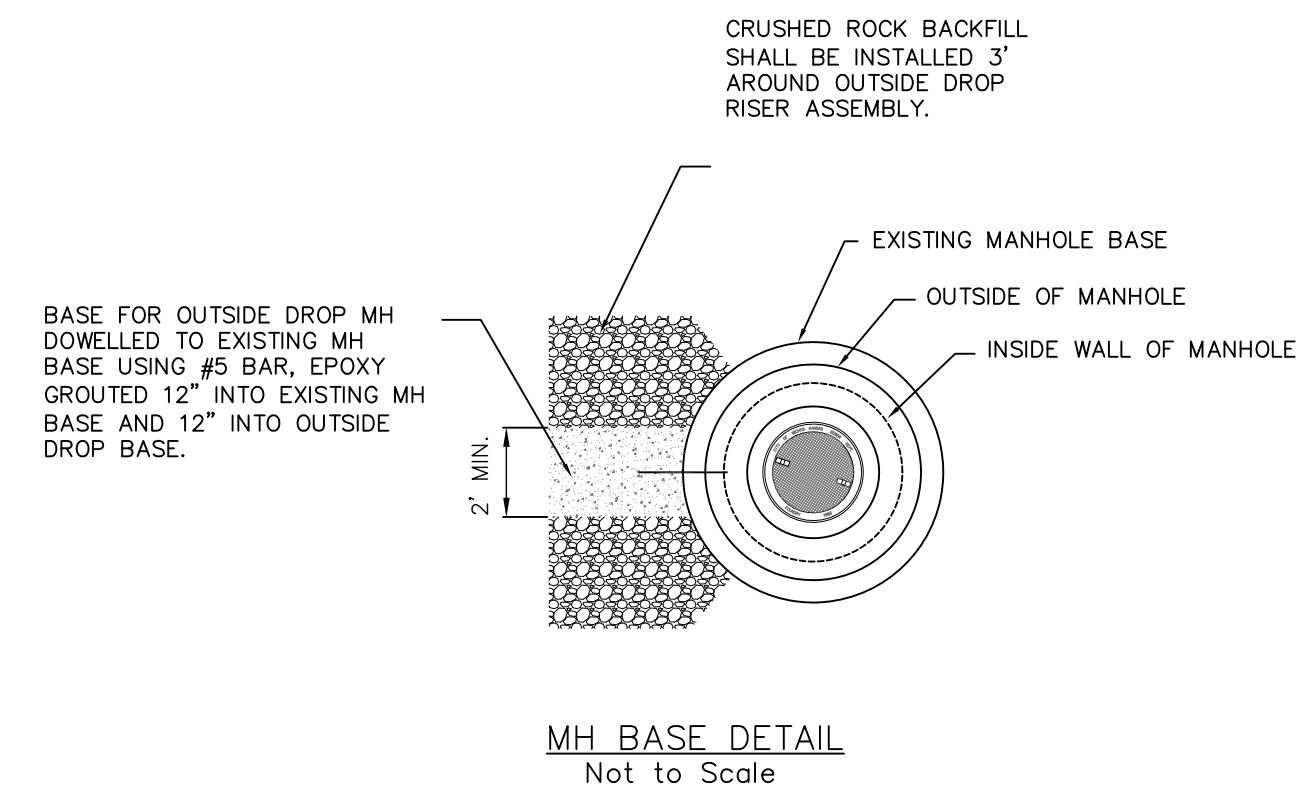
 = COW TYPE I BEDDING
 = UNDISTURBED SOIL

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.




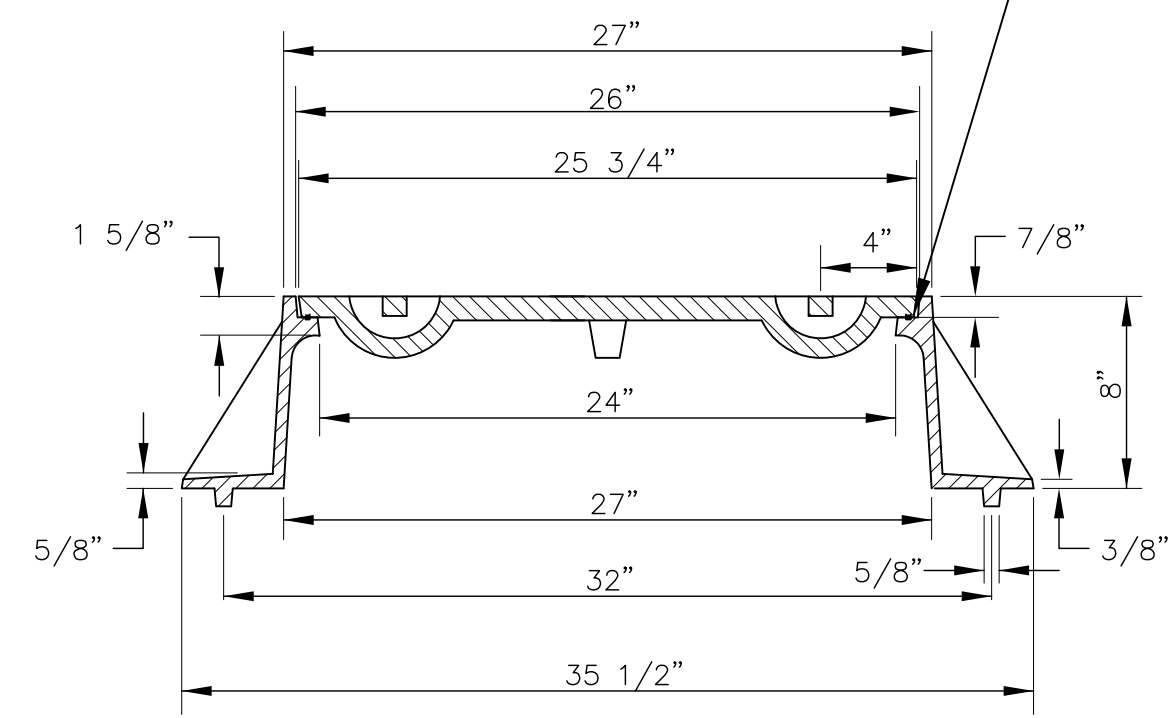
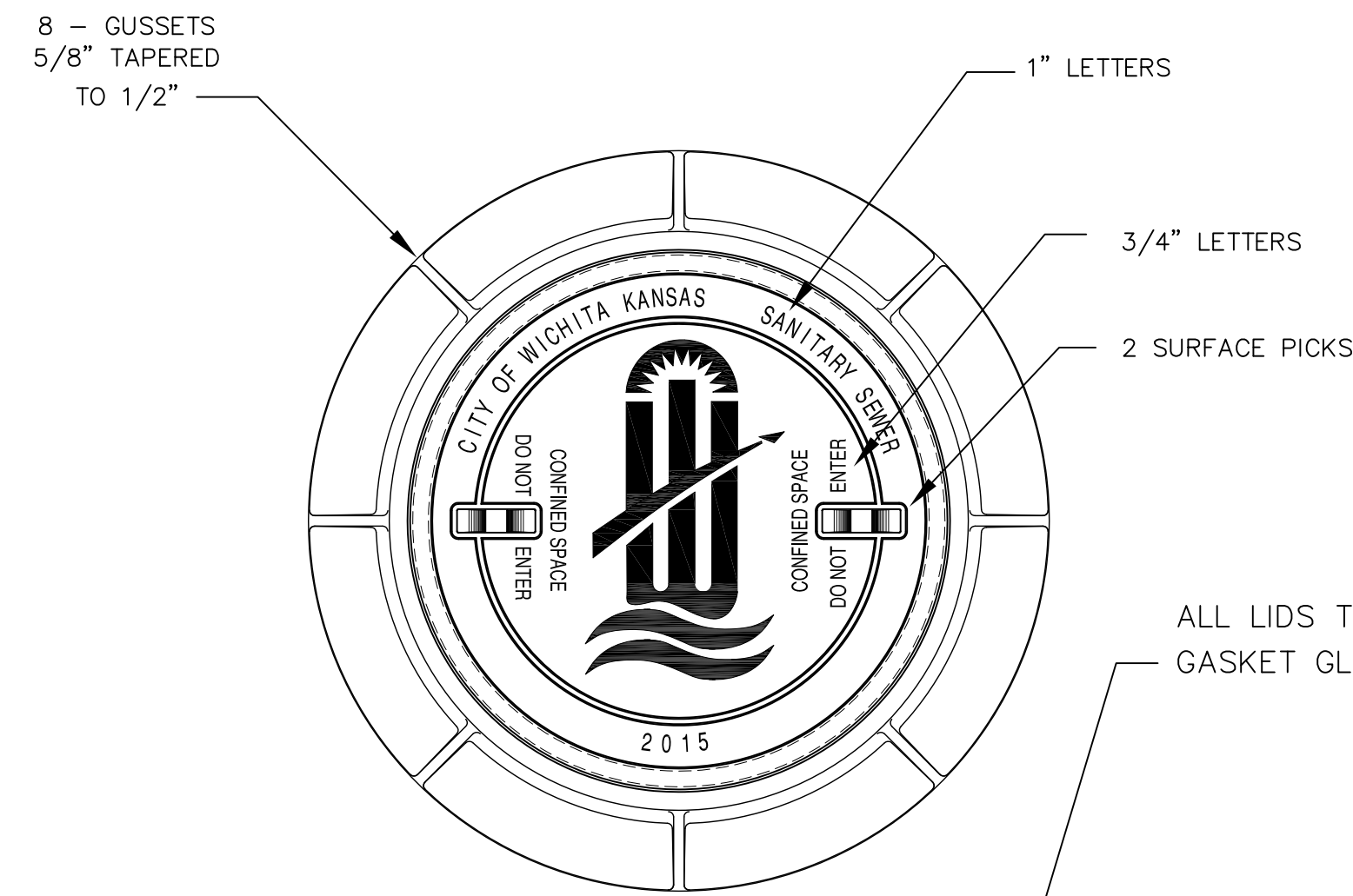
RISER PIPE RESTRAINING ASSEMBLY
Not to Scale



MH BASE DETAIL
Not to Scale

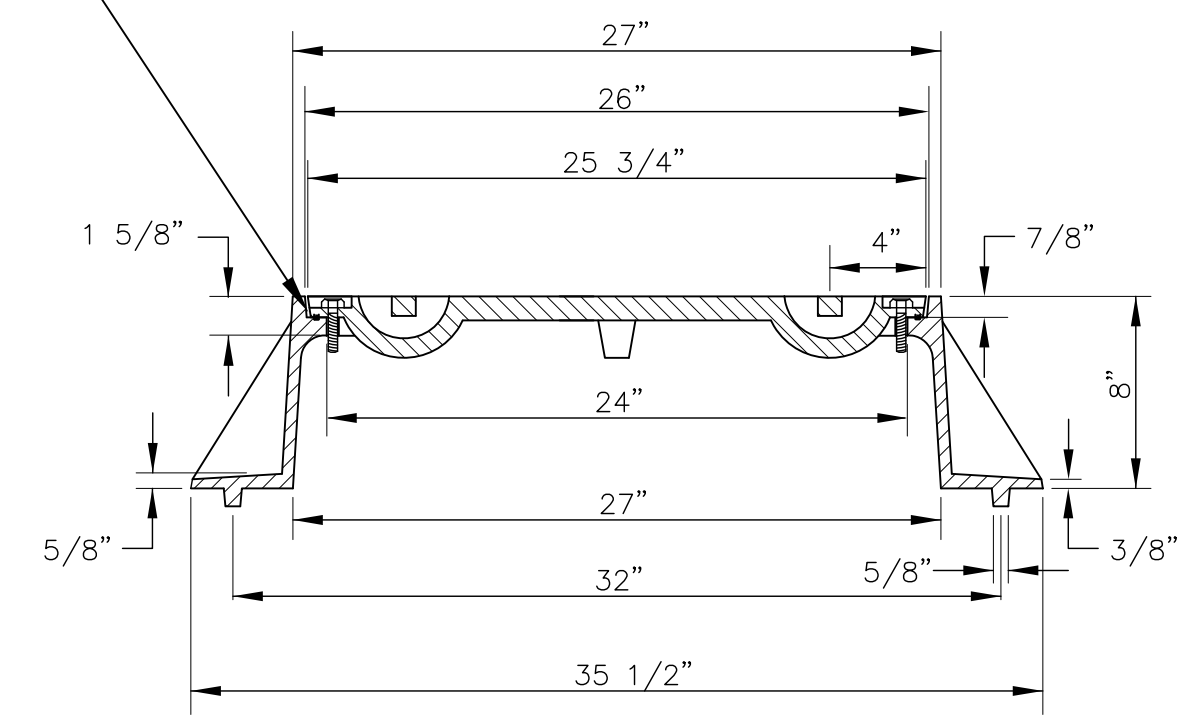
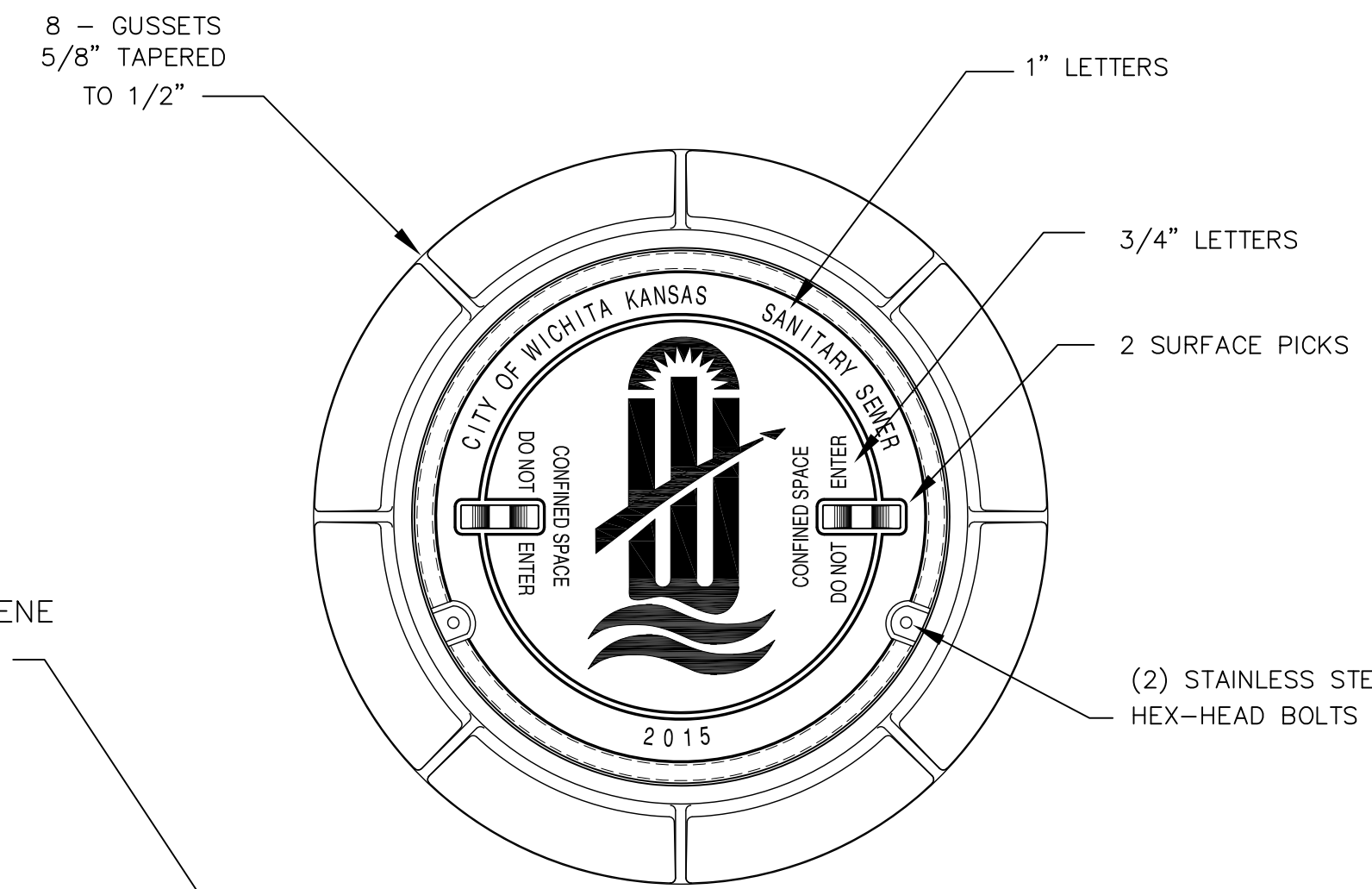
| SANITARY SEWER MANHOLE DIAMETERS | | |
|----------------------------------|----------|-----------|
| DIAMETER | DEPTH | PIPE SIZE |
| 4' | 0'-15' | 8"-18" |
| 5' | >15'-30' | 21"-30" |
| 6' | >30' | 36"-60" |

| | | | |
|---|------------|--|------------------------|
| REVISION APRIL 2017 | | REMOVED CLEANOUT ON OUTSIDE DROP MANHOLE | |
|  | | | |
| PRECAST SANITARY SEWER MANHOLE | | | |
| CITY ENGINEER GARY JANZEN, P.E. | | | |
| PROJECT NUMBER | OCA NUMBER | DATE | |
| CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501 | | | SHEET 2 of 7 |



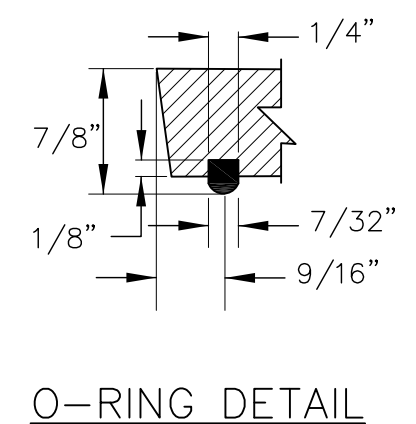
STANDARD MANHOLE FRAME & COVER
DEETER #1261 OR EJIW #1936-Z1

NOTE:
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.

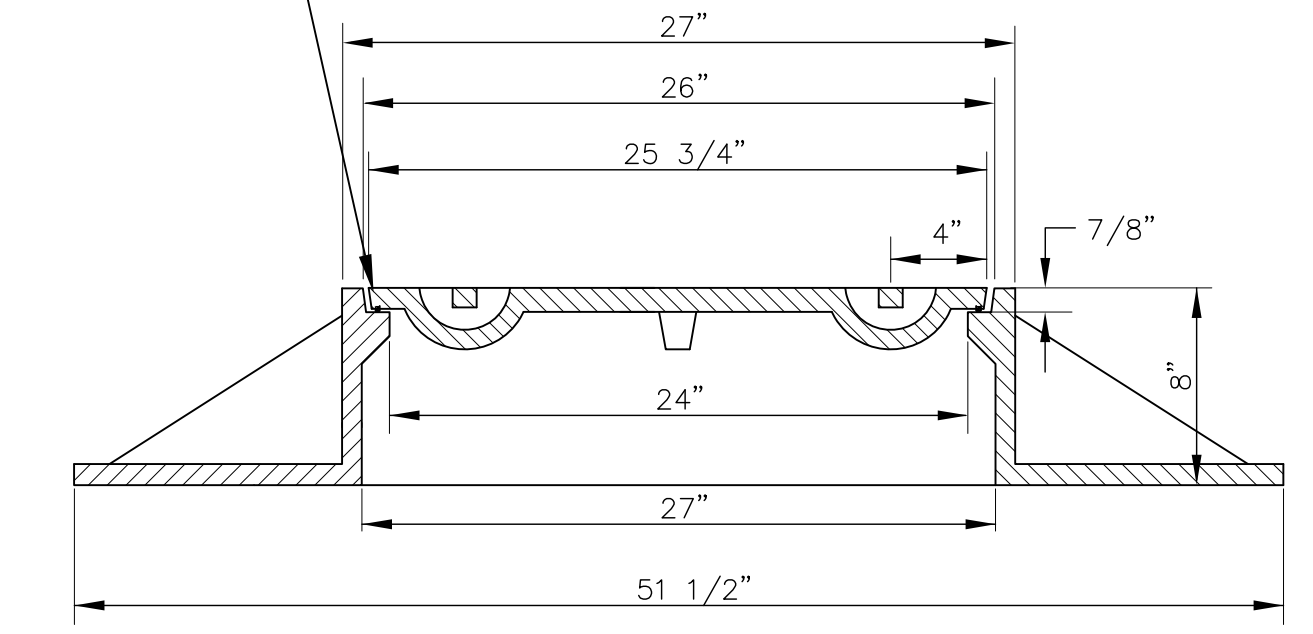
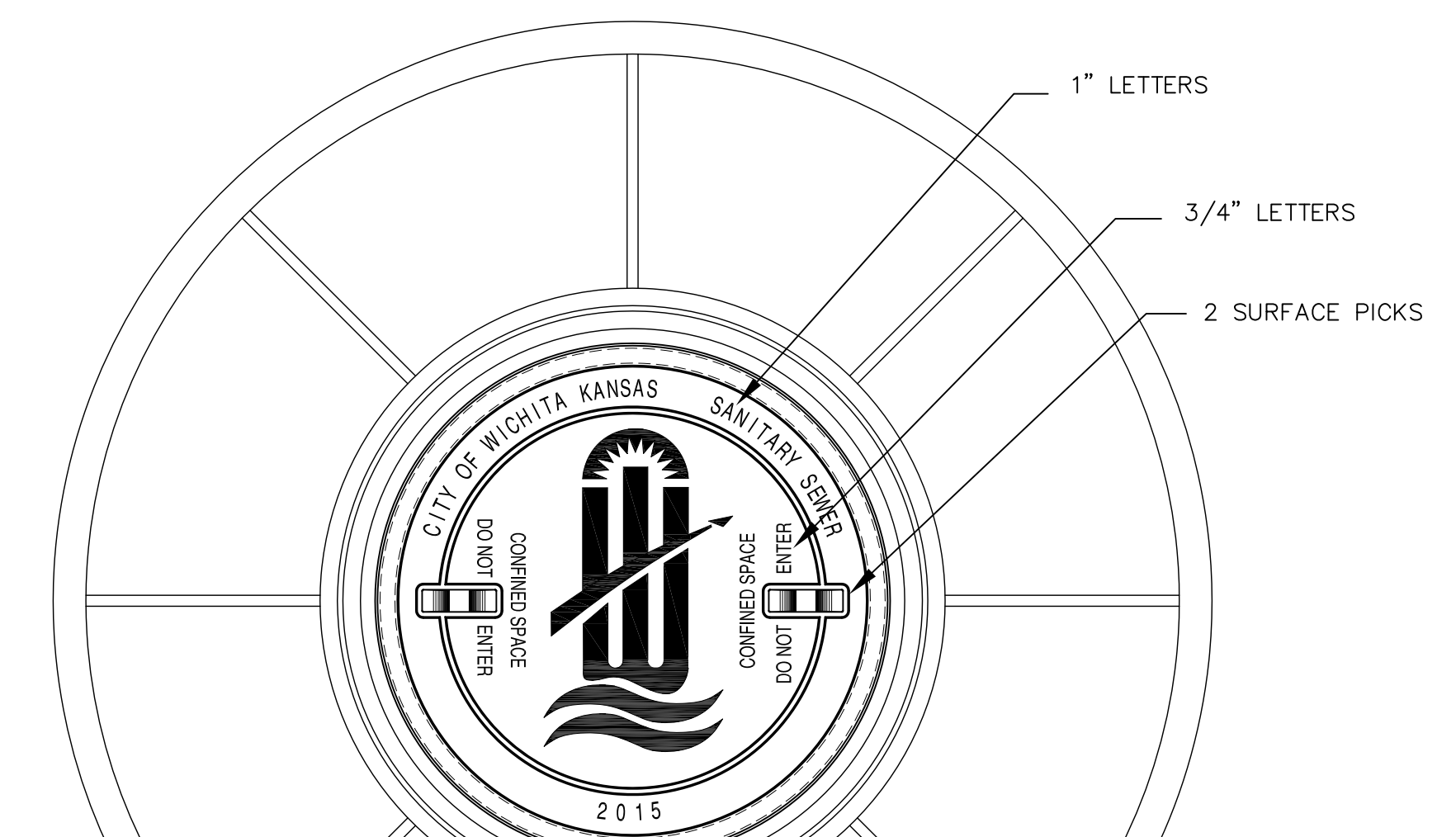


BOLT DOWN MANHOLE FRAME & COVER
DEETER #1261 OR EJIW #1936-Z1

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.



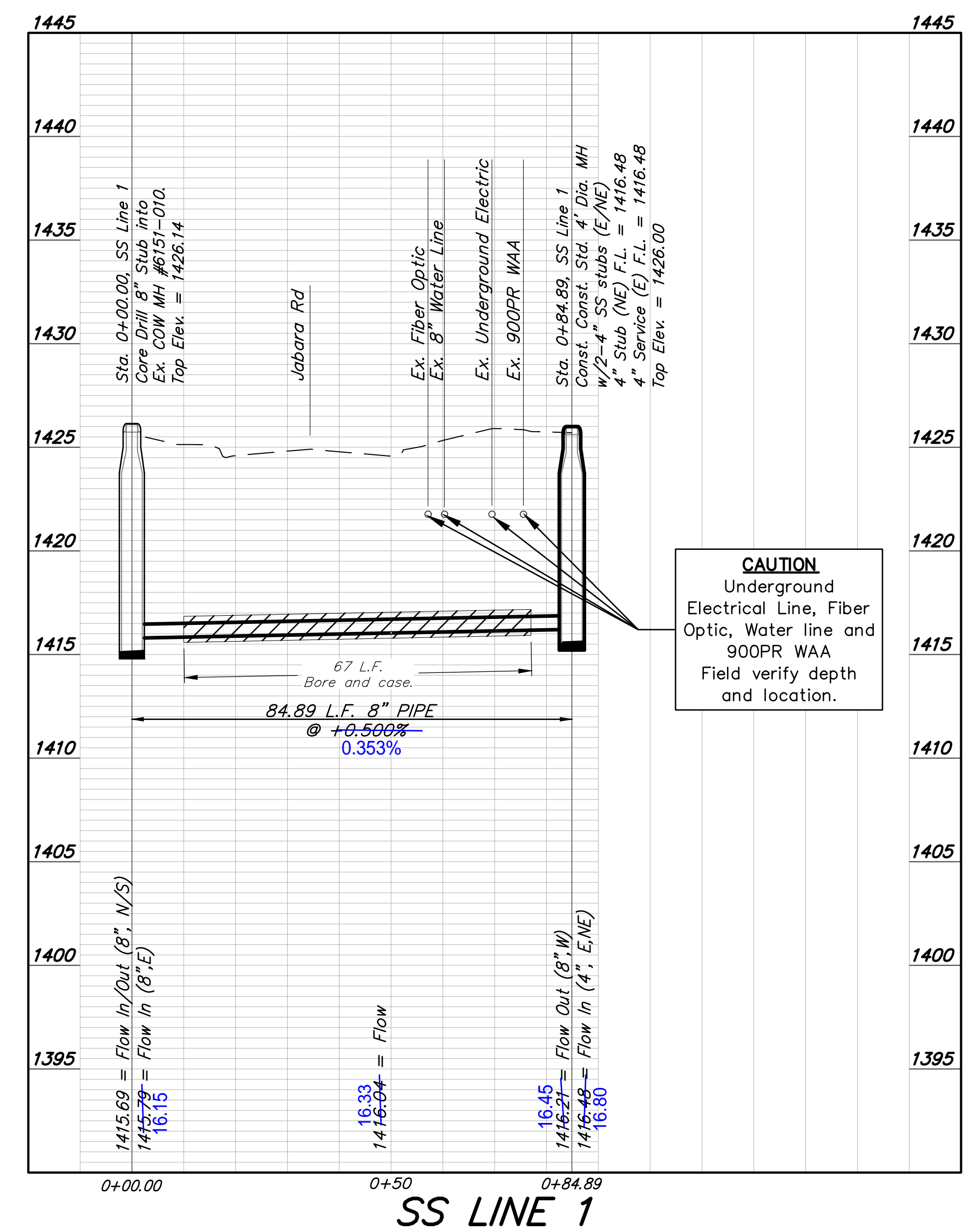
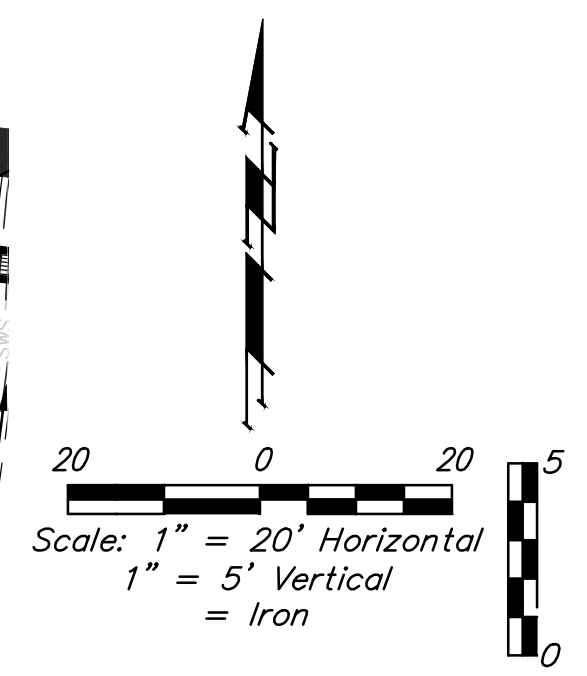
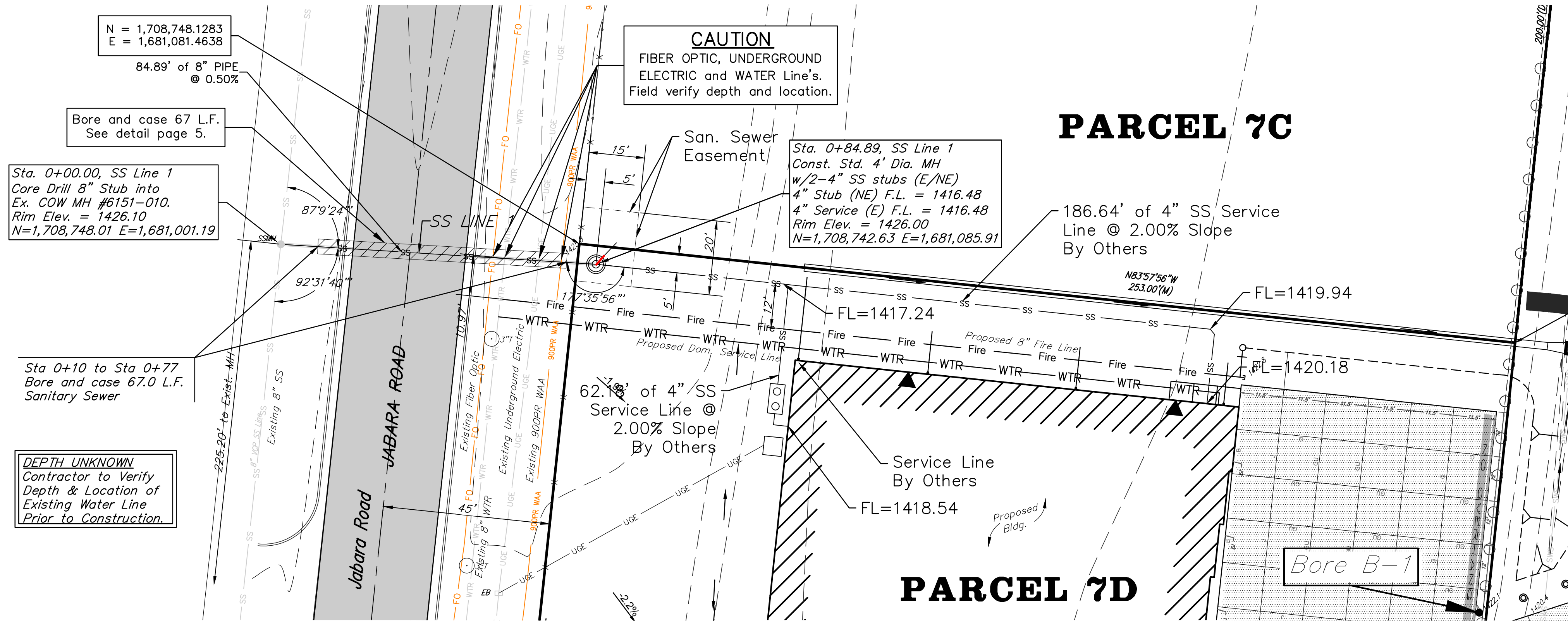
| | | |
|--|------------|------------------------|
| MANHOLE FRAME AND COVER (SANITARY SEWER) | | |
| CITY ENGINEER GARY JANZEN, P.E. | | |
| PROJECT NUMBER | OCA NUMBER | DATE |
| CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501 | | SHEET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

REVISED: MARCH 2016

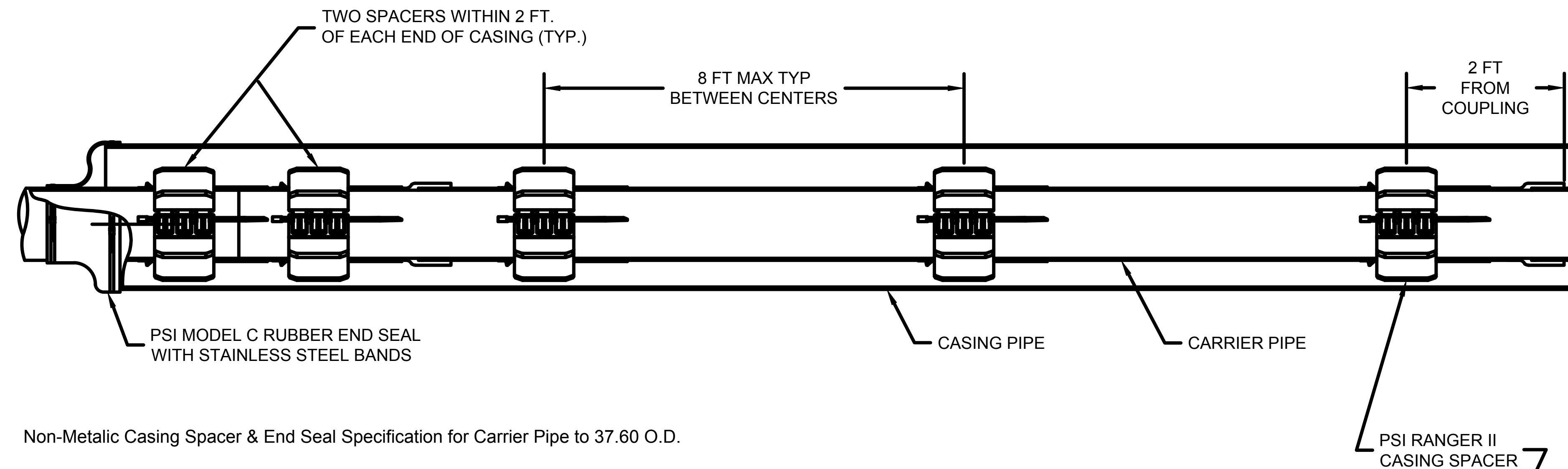
Benchmarks

Benchmark - 1
 "X" Chisled on Top of Curb, west of road across from Parcel A-3
 Elev.=1425.75 NAVD 88

Benchmark - 2
 "X" Chisled on Top of Curb at fuel station, south of the SE corner of Parcel A-1
 Elev.=1421.46 NAVD 88



CASING SPACER DETAIL



Non-Metallic Casing Spacer & End Seal Specification for Carrier Pipe to 37.60 O.D.

A. Casing Spacers

Upon completion of the installation of the steel pipe encasement, the contractor shall furnish and install a Ranger II® boltless casing spacer on the carrier pipe as described below. Casing spacers shall be spaced a maximum of eight (8) feet apart along the length of the carrier pipe with one casing spacer within two (2) feet of each side of a pipe joint and the rest evenly spaced. Wood skids are not an acceptable method of supporting the carrier pipe.

1. Casing spacers shall be all non-metallic (polypropylene), molded in segments for field assembly without any special tools. Spacer segments shall be secured around carrier pipe by insertion of a Slide-Lock. The casing spacer polymer shall contain ultraviolet inhibitors and shall have a minimum compressive strength of 3,000 psi, an 800 Volts/mil dielectric strength and impact strength of 1.5 ft-lbs./inch. Each casing spacer shall have full length, integrally molded skids extending beyond the bell or mechanical joint of the carrier pipe. Casing Spacers shall be specified to "Clear Bell Only" or "Centered/Restrained".

2. Spacers shall be at least as wide as listed below.

| Carrier Pipe Diameter Inches | (mm) | Ranger II Model | Length Inches | (mm) |
|---------------------------------|--------------|--------------------|------------------|-------|
| 0.83 to 3.07" | (21 to 78) | Micro | 2.13" | (54) |
| 2.48 to 5.51" | (63 to 140) | Mini | 3.15" | (80) |
| 5.51 to 16.65" | (140 to 423) | Midi | 5.12" | (130) |
| 16.77 to 25.98" | (426 to 660) | Medi | 6.87" | (175) |
| 21.22 to 37.60" | (539 to 955) | Maxi | 8.86" | (225) |

3. The casing spacers shall be the PSI Ranger II® Casing Spacers as manufactured by Pipeline Seal and Insulator, Inc., Houston, Texas.

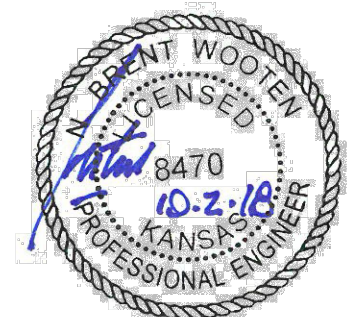
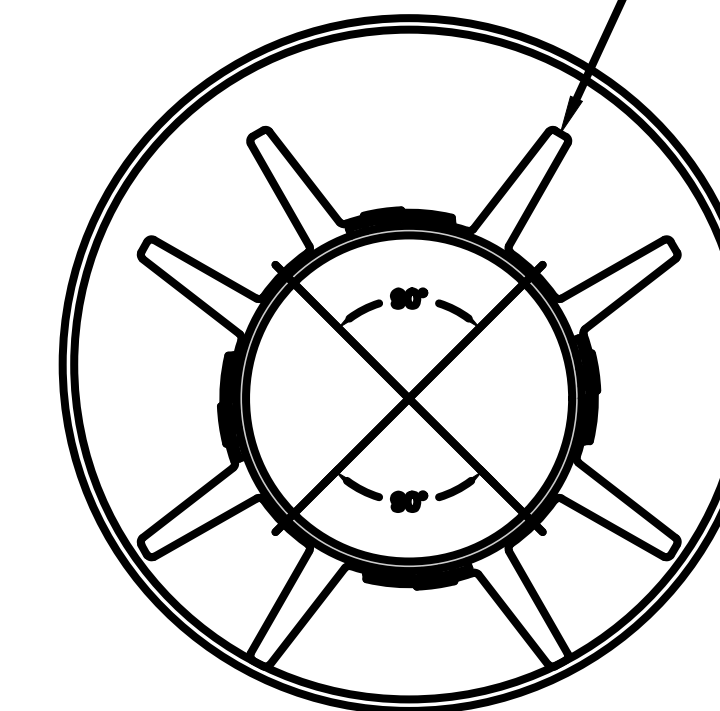
B. End Seals

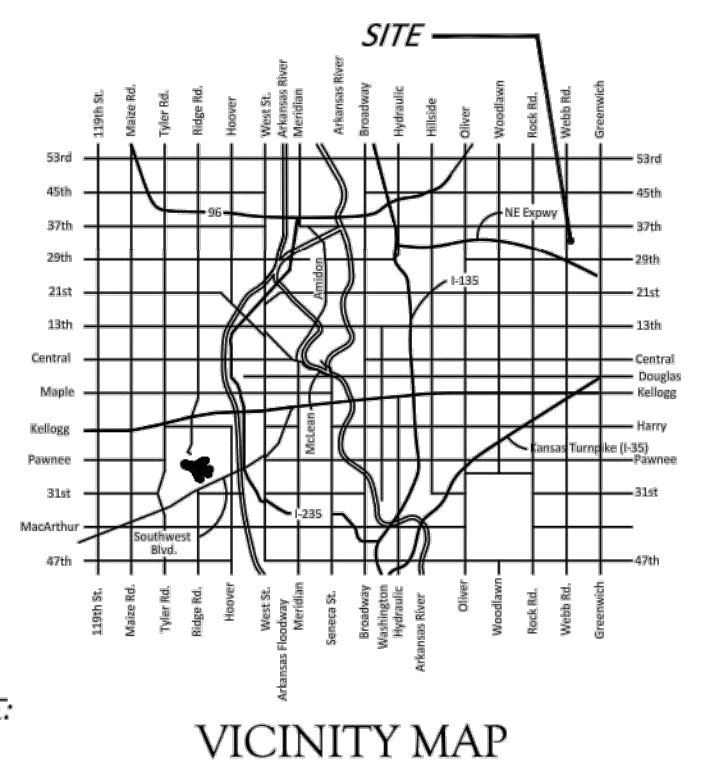
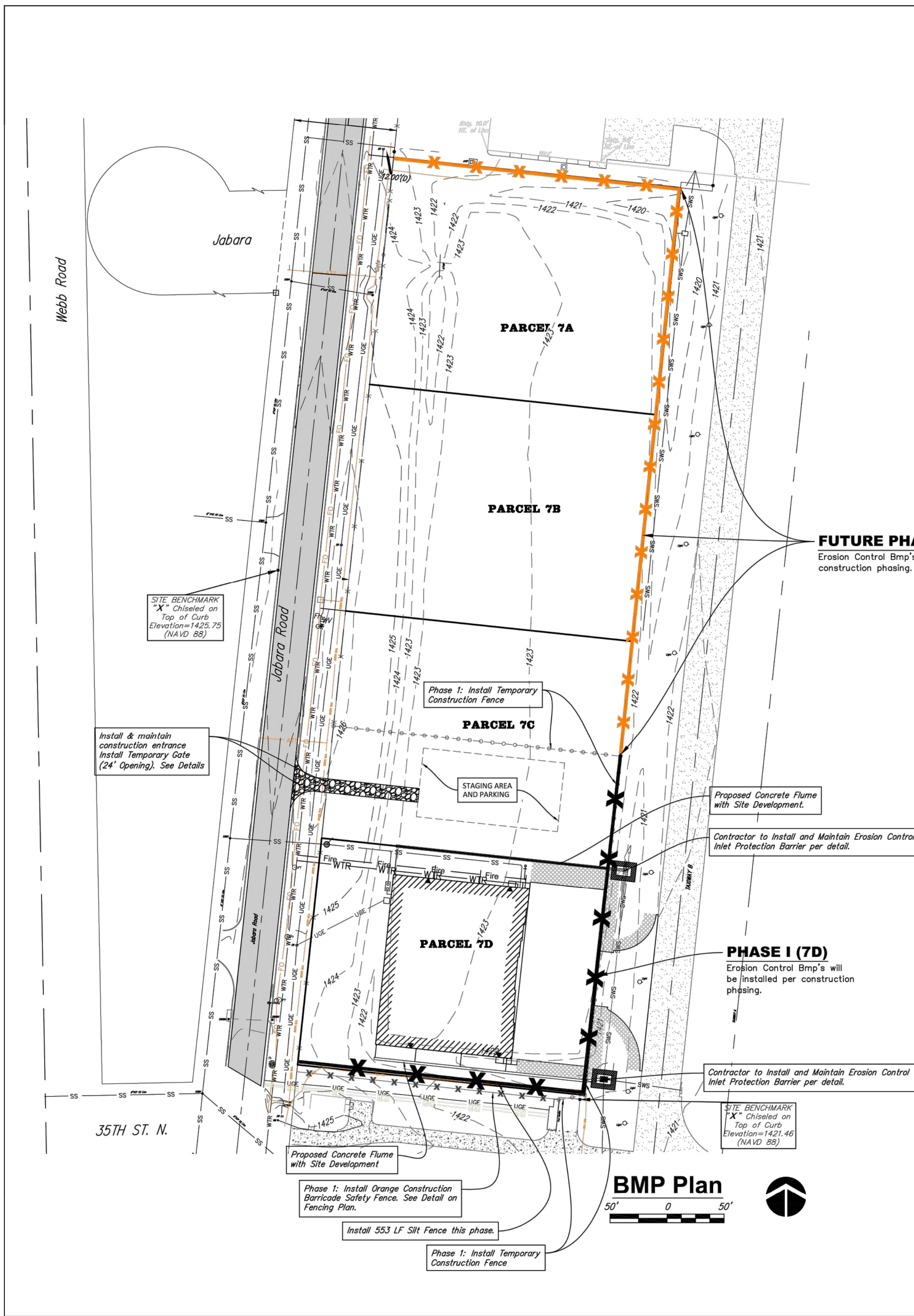
After insertion of the carrier pipe into the casing, the ends of the casing shall be closed by installing 1/8" thick synthetic rubber end seals equal to the PSI Model "C" end seal as manufactured by Pipeline Seal and Insulator, Inc., Houston, Texas.

ISO 9000 Registration

Each casing spacer and end seal shall be manufactured at a facility that has a Registered ISO 9001:2000 Quality Management System. Copy of current ISO 9001:2000 Registration shall be provided with material submittal.

END VIEW

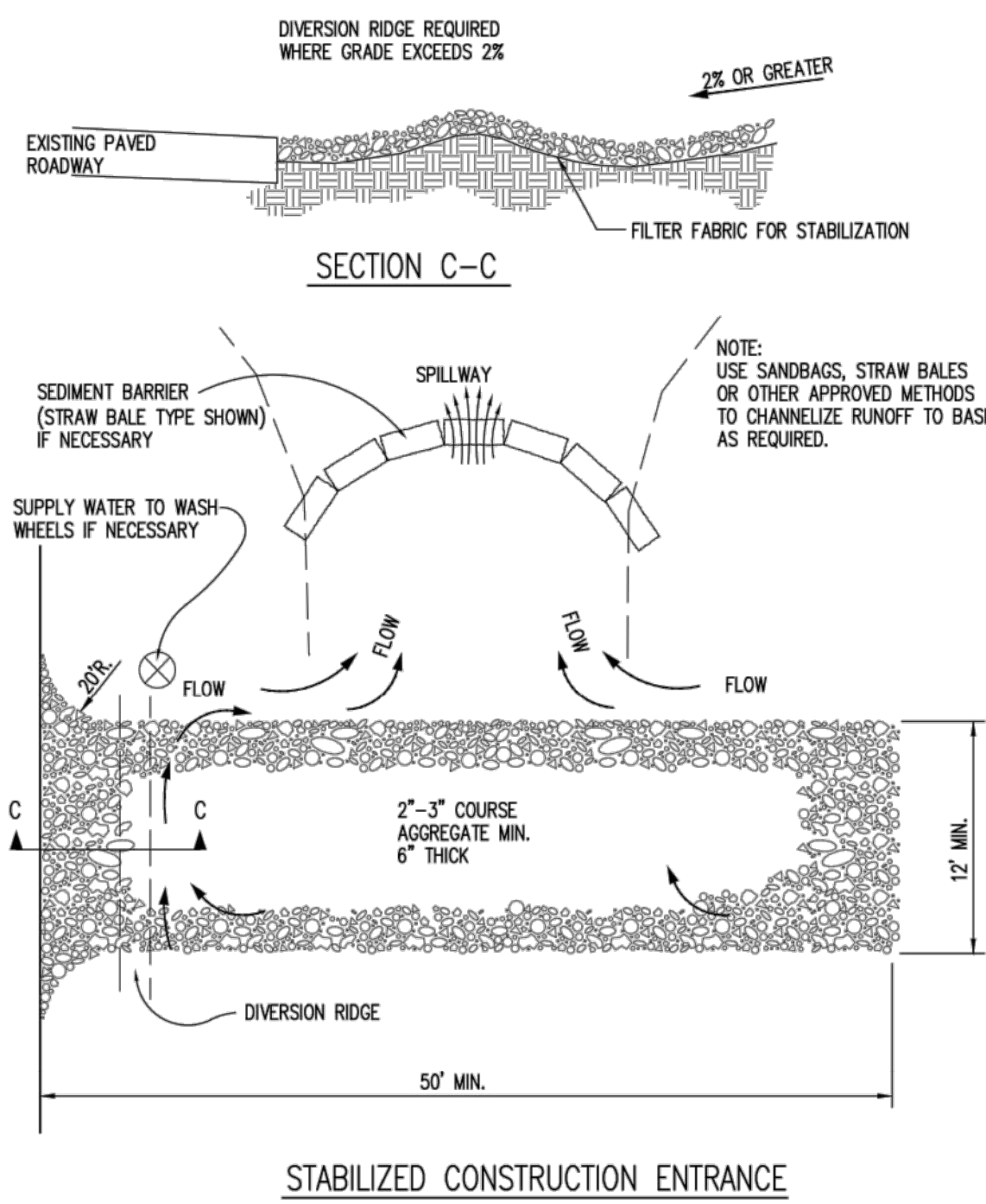




**FOR REFERENCE ONLY
NOT TO SCALE**

FUTURE PHASES (7A to 7C)
Erosion Control Bmp's will be installed per construction phasing.

PHASE I (7D)
Erosion Control Bmp's will be installed per construction phasing.



- GENERAL NOTES**
- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
 - WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
 - WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN, AS SHOWN ABOVE.
 - DRIVE ENTRANCES ONTO RESIDENTIAL LOTS WILL NOT BE REQUIRED TO HAVE THE SEDIMENT BARRIER SHOWN, BUT WHEEL WASHING MAY BE REQUIRED IF STABILIZED ENTRANCE IS NOT SUFFICIENT TO KEEP MUD FROM BEING TRACKED ONTO ADJACENT STREET. ENTRANCE SHALL EXTEND FROM BACK OF CURB TO DWELLING.

CONSTRUCTION ENTRANCE
NOT TO SCALE

BENCHMARK

- Benchmark - 1
"X" Chiseled on Top of Curb, west of road across from Parcel 7B
Elev.=1425.75 NAVD 88
- Benchmark - 2
"X" Chiseled on Top of Curb at fuel station, south of the SE corner of Parcel 7D
Elev.=1421.46 NAVD 88

LEGAL DESCRIPTION (PHASE I)

Parcel 7D
A portion of Lot 1, Block A, Colonel James Jabara Airport Addition to Wichita, Sedgwick County, Kansas, described as commencing at the southwest corner of said Lot 1; thence N01°05'53"W, along the west line of said Lot 1, 250.00 feet to a deflection in the west line of said Lot 1; thence N15°08'03"W, along the west line of said Lot 1, 103.08 feet to a deflection in the west line of said Lot 1; thence N01°05'53"W, along the west line of said Lot 1, 1476.24 feet to a deflection point, also a point in the south Road Right of Way line of Jabara Road as platted in said James Jabara Airport; thence N88°54'07"E, along the south Road Right of Way Line of Jabara Road, 31.5 feet to the P.C. of a curve to the left; thence northeasterly along said curve to the left an arc length of 296.47 feet, said curve having a radius of 205 feet, a chord length of 271.30 feet and a chord bearing of N47°28'15"E, to the P.C. of said curve; thence N06°02'24"E, along the east Road Right of Way line of said Jabara Road, 1637.58 feet to the Point of Beginning; thence N06°02'24"E, along the east Road Right of Way line of said Jabara Road, 200.00 feet; thence S83°57'36"E, 253.00 feet; thence S06°02'24"W, 200.00 feet; thence N83°57'36"W, 253.00 feet to the Point of Beginning.

SITE INFORMATION

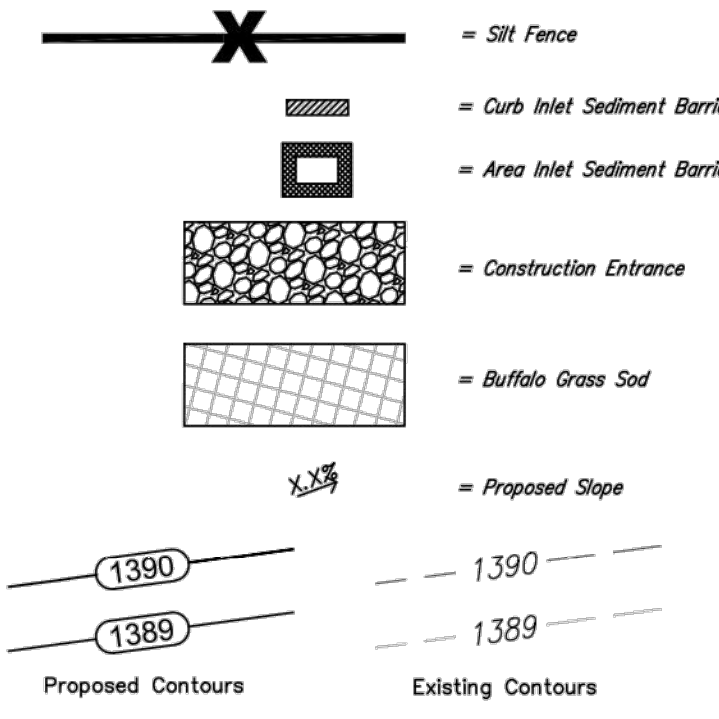
| | |
|----------------------------------|---|
| Total Area of Lease (7A to 7D): | ±202,400 SF (±4.64 AC) |
| Disturbed Area(7A to 7D): | ±50,600 SF (±1.16 AC) |
| Total Impervious Area(7A to 7D): | ±33,739.07 SF (0.77 AC) |
| Building Area(7D to 7D): | 18,000 SF (Including x,xxxSF of office) |

| | |
|----------------------------|---|
| PHASE I (7D) | |
| Total Area of Lease(7D): | ±50,600 SF (±1.16 AC) |
| Disturbed Area(7D): | ±50,600 SF (±1.16 AC) |
| Total Impervious Area(7D): | ±33,739.07 SF (0.77 AC) |
| Building Area(7D): | 18,000 SF (Including x,xxxSF of office) |

EROSION CONTROL NOTES

- No land clearing or grading shall begin until all applicable erosion control measures have been installed. This project is subject to this SWPP Plan. The Contractor shall comply with any unusual requirements as necessary for the site to be in compliance during construction, per this plan and City specs (See #11).
- All exposed areas shall be seeded as specified within 14 days of final GRADING. Seed is to include straw mulch, crimped in place per industry standards.
- Should construction stop for longer than 14 days, the site shall be seeded as specified.
- Maintain erosion control measures after each rain and at least once a week.
- This plan shall not be considered all inclusive as the contractor shall take all necessary precautions to prevent soil sediment from leaving the site.
- Contractor shall comply with all state and local ordinances that apply.
- Additional erosion and sediment control measures will be installed if deemed necessary by on site inspection.
- Land disturbing activities shall not commence until approval to do so has been received by governing authorities.
- If installation of storm drainage system should be interrupted by weather or nightfall, the pipe ends shall be covered with filter fabric.
- Hatch area to be Sodded with Buffalo grass. Planting of Buffalo Grass should take place between April-July. Temporary irrigation shall be installed for the establishment period of see and sod areas. If planting of buffalo grass cannot be completed during the planting season then all areas disturbed by construction operations shall be temporarily seeded with rye grass at a rate of 300 lbs/acre and mulched immediately following construction in that area. Seed is to include straw mulch, crimped in place per industry standards. Buffalo grass to be receive 10 lbs/1000 sq. ft. of 10-10-10 fertilizer or approved equal.
- This SWPP Plan should be in job trailer and/or on site at all times. The Contractor is responsible for any needed changes, updates or maintenance to BMP's on site. This plan may change and updates need to be recorded and documented on the plan. This plan is a flexible plan, due to changing site conditions and weather. Please inform Landscape Architect and/or Engineer of changes to plan.
- ANY substitutions for the sediment control devices shown, must be approved by the Landscape Architect and/or Engineer prior to any uses on site.
- An NPDES Permit Application has been submitted for this property. A copy of this application must be kept at the job site for the duration of the construction process.

EROSION CONTROL LEGEND



Baumhman Company, P.A.
143 E. 10th St., Wichita, KS 67202
Tel: 316.262.2271
Fax: 316.262.2049
www.baumhman.com
Professional Engineer License No. 10-2-16

Colonel James Jabara Airport
BMP PLAN
PFO Hanger

DATE: 10-2-16
SHEET 9 OF 9
PROFESSIONAL ENGINEER
KANSAS
10-2-16
8470

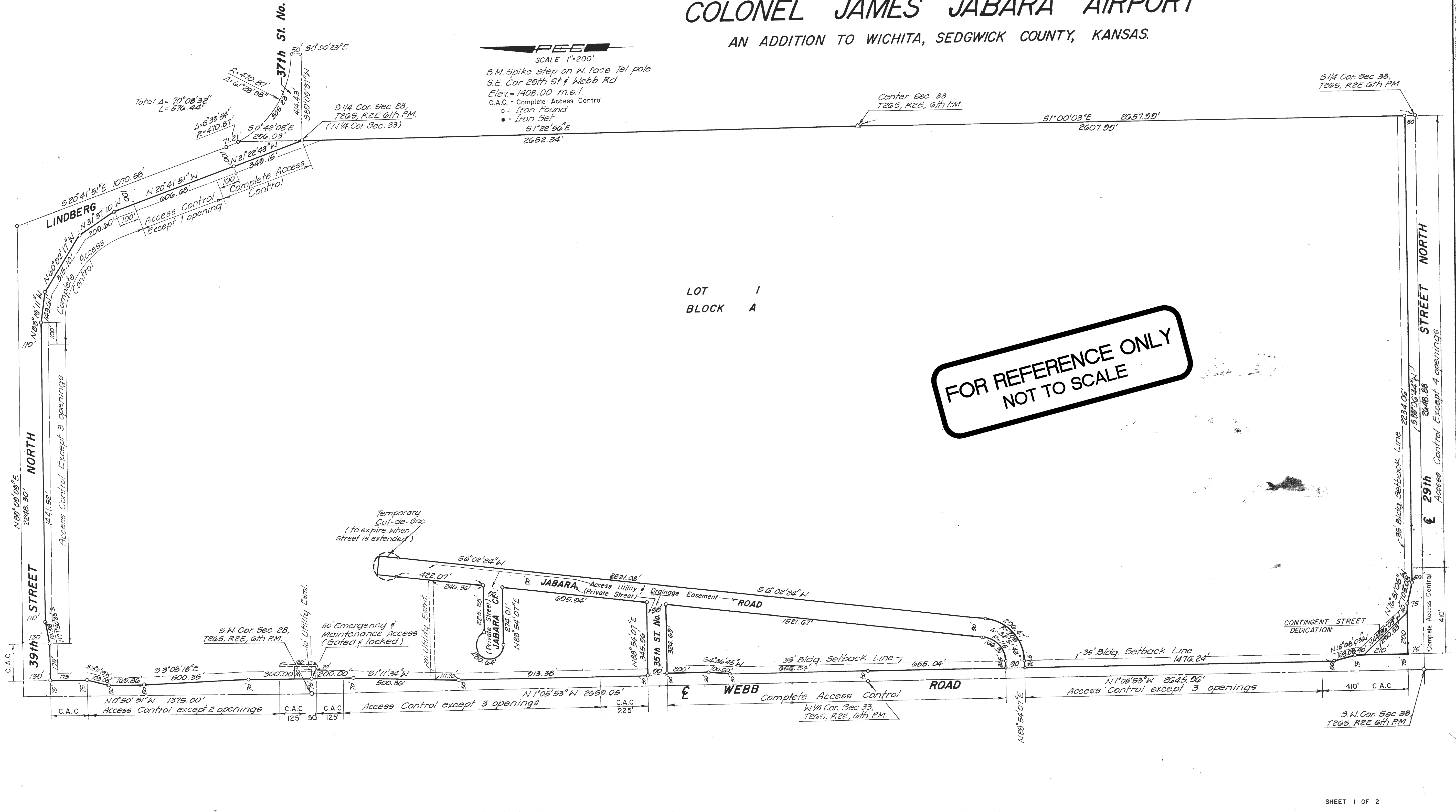
COLONEL JAMES JABARA AIRPORT

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS.



SCALE 1"=200'

B.M. Spike step on W. face Tel. pole
 S.E. Cor 29th St & Webb Rd
 Elev. = 1408.00 m.s.l.
 C.A.C. = Complete Access Control
 ○ = Iron Found
 ● = Iron Set
 51°22'56"E
 2652.34'



LOT 1
 BLOCK A

**FOR REFERENCE ONLY
 NOT TO SCALE**

COURTESY: WILSON JENSEN ARCHITECTS

Baughman Company, P.A.
 1515 S. Wichita St., Suite 200, Wichita, KS 67202
 ENGINEERING, SURVEYING, PLANNING, LANDSCAPE ARCHITECTURE
 Baughman

Colonel James Jabara Airport Addition
Plat
 Sanitary Sewer Improvements