

# REPLACEMENT OF THE RIVERSIDE PARK SIPHON ACROSS THE LITTLE ARKANSAS RIVER

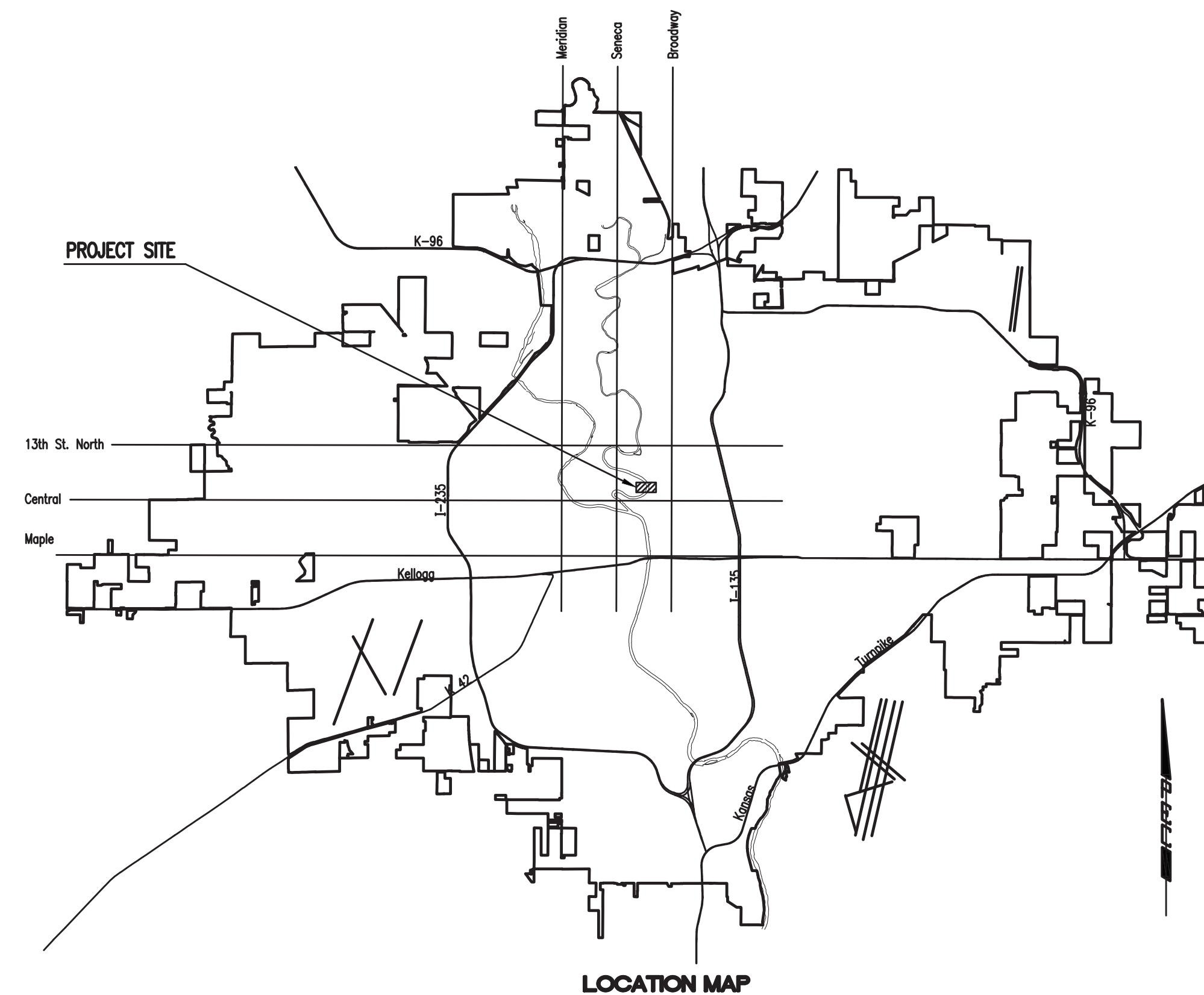
IN  
THE CITY OF WICHITA, KANSAS

CITY OF WICHITA PROJECT NO. 468-84936

OCA NO. 620724

GARY JANZEN, P.E. - CITY ENGINEER

*Dondlinger & Sons - Contractor*  
*G. Baalman - City of Wichita, Field Project Engineer*  
*Z. Regnier - City of Wichita, Inspector*  
*As-built*  
*Release Date: 03/02/2017*  
*pdf: apr 04/07/2017*



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**FEBRUARY 2016**

PLANS PREPARED BY  
**PROFESSIONAL ENGINEERING CONSULTANTS, P.A.**  
ENGINEERS  
WICHITA, KANSAS



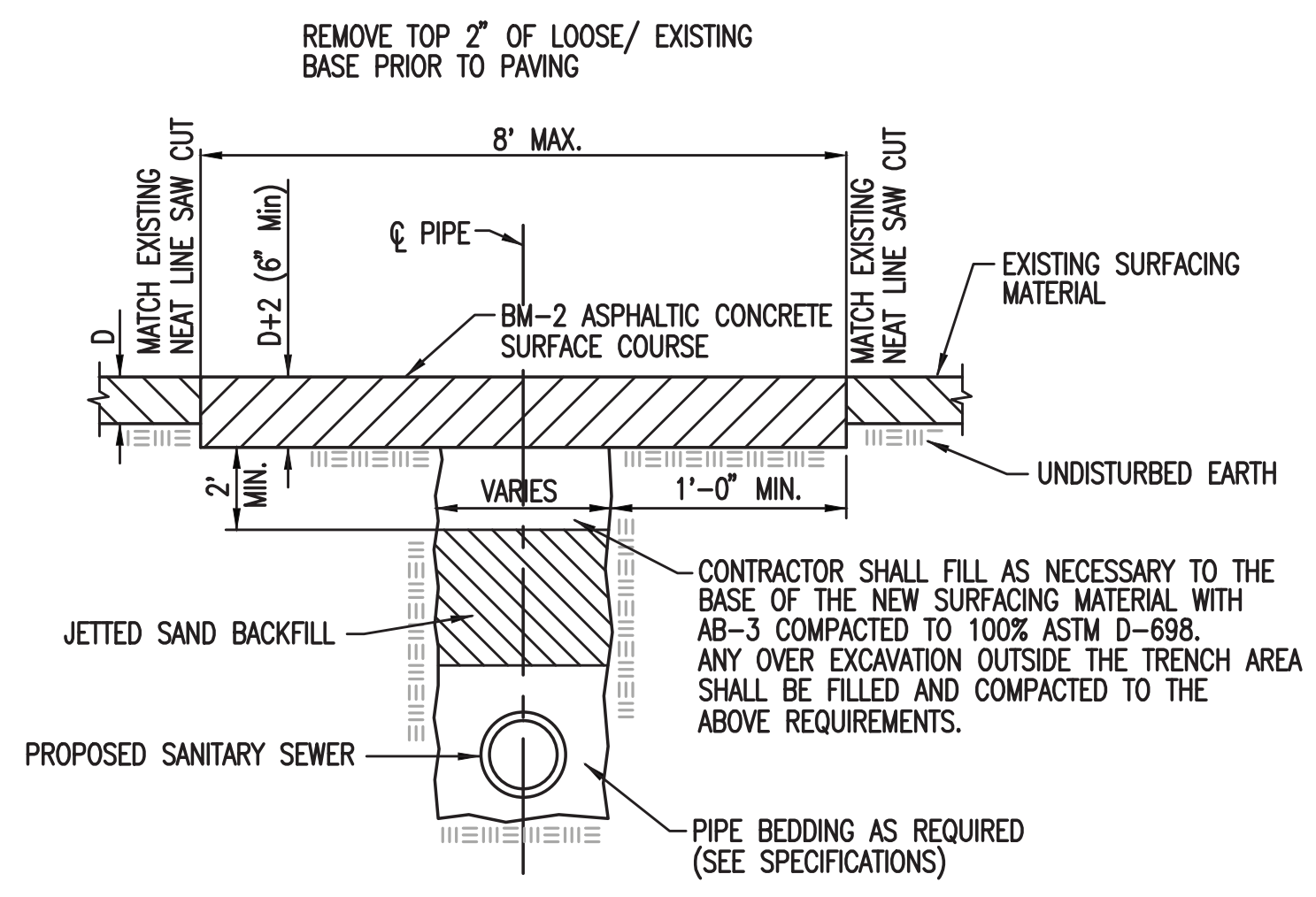


- LEGEND**
- EXISTING SANITARY SEWER
  - PROPOSED SANITARY SEWER
  - EXISTING SANITARY SEWER w/MANHOLE
  - PROPOSED SANITARY SEWER w/MANHOLE
  - PROPOSED SIPHON STRUCTURE

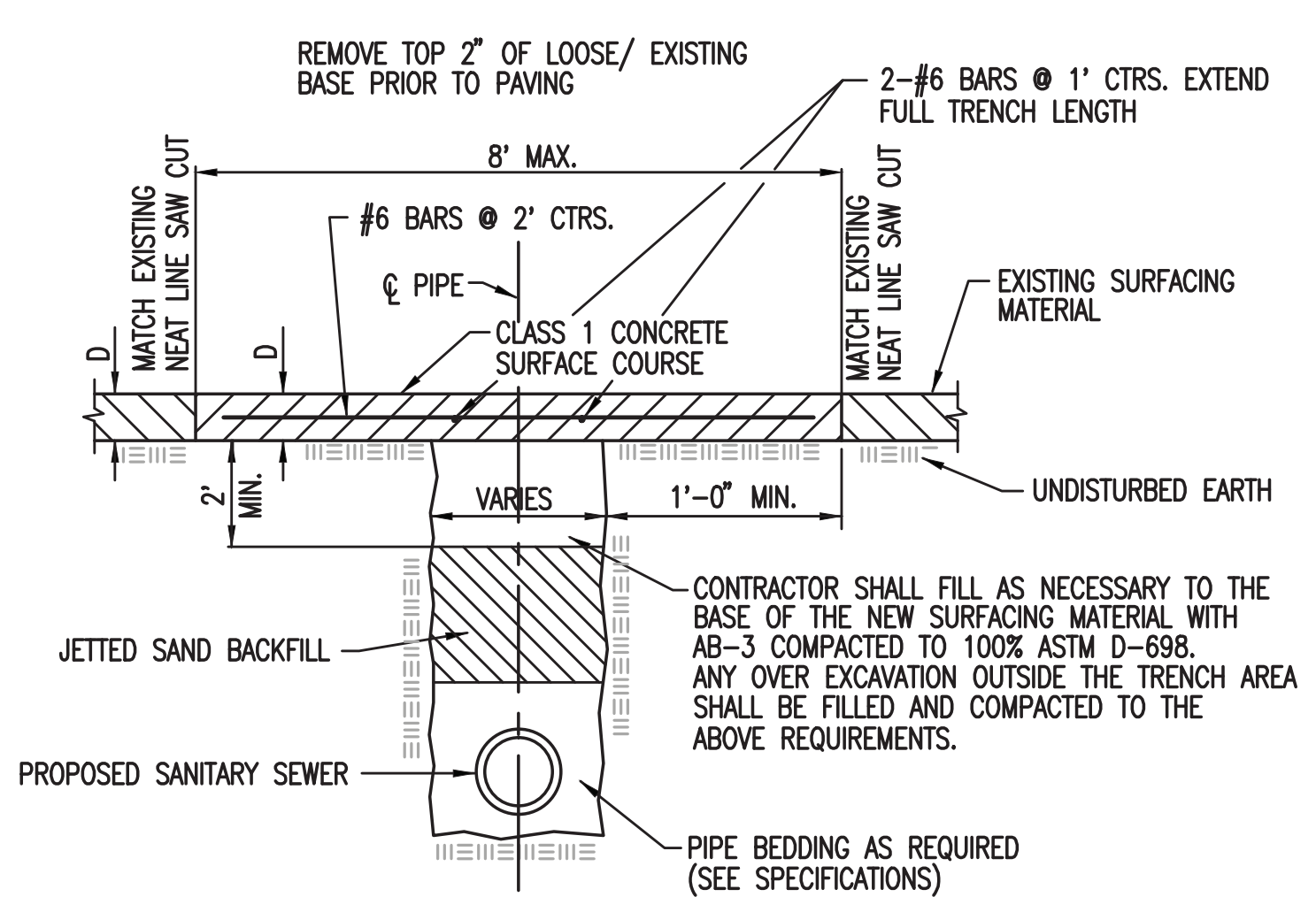
- CONTROL POINTS**
- Pt. No. 1001  
N: 1,689,412.5516, E: 1,646,812.5232  
Set #1/2" bar in grass  
1. 10.00' WNW to NE corner concrete pad  
2. 14.00' W to SE corner concrete pad  
3. 43.5' N to 10" Chinese Elm tree
  - Pt. No. 1002  
N: 1,689,589.9045, E: 1,646,705.8240  
Set #1/2" bar in grass  
1. 3.0' W to back of curb  
2. 37.0' E to West face of 30" Sycamore  
3. 39.5' S to N to South edge of wheel chair ramp  
4. East Side of Stackman Drive
  - Pt. No. 1005  
N: 1,689,293.7233, E: 1,647,117.5024  
Set #1/2" bar in grass  
1. 20.0' E to West edge of sidewalk  
2. 13.0' S to North edge of sidewalk  
3. 10.0' S to South face of building extended  
4. 29.5' SE to Southwest corner of building
  - Pt. No. 1006  
N: 1,689,157.3299, E: 1,647,171.8262  
Set PK Nail in Asphalt  
1. 24.5' SE to wood fence  
2. 23.5' S to wood fence  
3. in SE corner of parking lot

**GENERAL NOTES**

1. ALL CONSTRUCTION AND MATERIALS TO COMPLY WITH CITY OF WICHITA SPECIFICATIONS AND STANDARDS.
2. ALL ELEVATIONS SHOWN ARE BASED ON NAVD88 DATUM.
3. CONTRACTOR WILL BE REQUIRED TO PROVIDE A MINIMUM ADVANCE NOTICE OF SEVENTY-TWO (72) HOURS TO UTILITY COMPANIES PRIOR TO STARTING ANY EXCAVATION AS FOLLOWS:  
KANSAS ONE-CALL 687-2470 or 811  
THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:  
EMERGENCY DISPATCH 911  
COX COMMUNICATIONS 800-778-9140  
KANSAS GAS SERVICE 888-482-4950  
WESTAR ENERGY 800-383-1183  
BLACK HILLS ENERGY 800-694-8989  
AT&T 800-286-8313  
WICHITA WATER UTILITIES (SS AND WL) 262-6000
4. THE CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH TO REMAIN OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET. ANY OPEN TRENCH SHALL BE BARRICADED/PROTECTED WITH ORANGE CONSTRUCTION FENCING.
5. AT LEAST 72 HOURS PRIOR TO BEGINNING EXCAVATION (EXCLUDING WEEKENDS AND HOLIDAYS), THE CONTRACTOR SHALL CONTACT THE KANSAS ONE-CALL SYSTEM, A UTILITY LOCATION SERVICE, AT (316) 687-2470 AND CITY OF WICHITA UTILITY LOCATES, WWW.WICHITA.GOV/LOCATE (268-4260) TO REQUEST THE LOCAL UTILITY COMPANIES MARK ANY EXISTING LINES WITHIN THE PROJECT AREA.
6. UNDERGROUND UTILITY SERVICE LINES AND OVERHEAD UTILITY POLE LINES ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE DRAWINGS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY THE CONTRACTOR OR UNLESS THE DRAWINGS SPECIFICALLY IDENTIFY A UTILITY TO BE ADJUSTED BY ITS OWNER DURING CONSTRUCTION. EXISTING UTILITIES AND THEIR LOCATIONS, AS SHOWN ON THE DRAWINGS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR THE DESIGN. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.
7. 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.
8. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL MANHOLE COVERS.
9. MANHOLES SHALL BE TYPE "P" MANHOLES. MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS.
10. RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES INCLUDING ANY TREES REMOVED, TREE TRIMMINGS, AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITES PROVIDED BY THE CONTRACTOR. THESE SITES SHALL ALSO BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE, AND SITE LOCATION. LOCATIONS THAT, IN THE OPINION OF THE ENGINEER, WILL LEAVE AN UNSIGHTLY APPEARANCE WILL NOT BE APPROVED. ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A FLOOD PLAIN WILL 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 MAY REQUIRE ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED DISPOSAL LOCATION.
11. ALL LAWN/TURF AREAS DISTURBED BY CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE RESTORED WITH THE SAME GRASS/SOD AS EXISTING. RESTORATION OF DISTURBED AREAS SHALL INCLUDE, BUT NOT BE LIMITED TO, TOP SOIL PREPARATION, SEEDING, MULCH, AND/OR RESEEDING. ALL SEEDING/SODDING WORK SHALL BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD SPECIFICATIONS AND THE CITY OF WICHITA ADMINISTRATIVE REGULATION NO. AR6.5 WHICH GOVERNS CLEANUP AND RESTORATION OR REPLACEMENT FOLLOWING CONSTRUCTION.
12. THE CONTRACTOR SHALL SEED ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES WITH TEMPORARY RYE GRASS. RYE GRASS SEED SHALL BE PLANTED AT A MINIMUM RATE OF SIX (6) POUNDS PER ONE THOUSAND (1,000) SQUARE FEET. THIS TEMPORARY SEEDING MAY BE OMITTED ONLY IF OTHER SEEDING IS REQUIRED IN ACCORDANCE WITH GENERAL NOTE NO. 11 ABOVE. TEMPORARY SEEDING OR PERMANENT SEEDING/SODDING SHALL BE APPLIED WITHIN 14 DAYS AFTER THE AREA HAS BEEN DISTURBED.
13. THE CONTRACTOR SHALL AVOID REMOVAL OR TRIMMING OF ANY TREES OR SHRUBS WHERE POSSIBLE. WHERE THE CONTRACTOR BELIEVES THE REMOVAL OR TRIMMING IS UNAVOIDABLE, HE SHALL COORDINATE SUCH WORK WITH THE ENGINEER.
14. THE CONTRACTOR SHALL PREVENT ANY CONSTRUCTION DEBRIS FROM ENTERING THE EXISTING SANITARY SEWER DURING CONSTRUCTION.
15. THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY ABBUTTING THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF TEN (10) DAYS ADVANCE NOTICE PRIOR TO START OF CONSTRUCTION.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONTINUOUS FLOW OF SEWAGE THROUGH CONSTRUCTION. THE COST OF MAINTAINING FLOW OF SEWAGE THROUGH CONSTRUCTION WILL NOT BE PAID FOR DIRECTLY AND THIS COST SHALL BE CONSIDERED AS SUBSIDIARY TO THE OTHER RELATED ITEMS OF WORK.
17. THE CONTRACTOR SHALL NOT BURY MANHOLES THAT HAVE RIM ELEVATIONS WHICH ARE LOWER THAN EXISTING GROUND AT THE MANHOLE. THE GROUND AROUND SUCH MANHOLES AND ALONG THE SEWER ALIGNMENT SHALL BE BACKFILLED TO THE APPROXIMATE ELEVATION OF THE PROPOSED GROUND ELEVATION SHOWN ON THE PLAN/PROFILE SHEETS. THE CONTRACTOR SHALL PROVIDE DRAINAGE AWAY FROM THESE MANHOLES AND SEWER LINES BY CONSTRUCTION OF TEMPORARY DITCHES OR SLOPING THE GROUND AS REQUIRED. ALL COSTS FOR THIS WORK SHALL BE CONSIDERED SUBSIDIARY TO THE INSTALLED BID PRICE FOR MANHOLES OR PIPE.
18. THE CONTRACTOR SHALL PROVIDE MOUNDED EARTH AT MANHOLES AND CLEANOUTS THAT HAVE TOP ELEVATIONS GREATER THAN 1 FOOT ABOVE EXISTING GRADE, AS SHOWN ON THE DRAWINGS.
19. INTERURBAN TRAFFIC GENERATED OUTSIDE THE PROJECT AREA AND LOCAL BUSINESS OR RESIDENTIAL TRAFFIC GENERATED WITHIN THE PROJECT AREA ARE TO BE CARRIED THROUGH CONSTRUCTION AS FURTHER PROMULGATED BY PROJECT SPECIAL PROVISIONS. THE CONTRACTOR SHALL UTILIZE BARRICADES, SIGNS, GUARDS, AND FLAGMEN IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
20. WHERE INDICATED IN THE DRAWINGS, THE SANITARY SEWER EXCAVATION SHALL BE SAND FILLED AND FLUSHED (JETTED AND VIBRATED) WITH WATER PER THE REQUIREMENTS LISTED IN THE STANDARD SPECIFICATIONS FOR THE CITY OF WICHITA, UNLESS FLOWABLE FILL OR OTHER IMPROVED BACKFILL MATERIAL IS OTHERWISE SPECIFIED.
21. THE CONTRACTOR SHALL INSTALL AND/OR MAINTAIN EROSION CONTROL METHODS AS SPECIFIED. THE GENERAL LOCATION OF THE REQUIRED EROSION CONTROL IS ILLUSTRATED ON THE PLANS. THE SANITARY SEWER CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE EROSION CONTROL SHOWN THROUGH THE COMPLETION OF THIS PROJECT. INSTALLATION OF THESE BMP'S DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF ABATING SOIL EROSION.
22. EACH BIDDER SHALL VISIT THE SITE OF THE PROJECT BEFORE SUBMITTING THE PROPOSAL FOR THIS WORK SO THAT HE WILL BE FULLY INFORMED OF THE EXISTING FIELD CONDITIONS AND THE OBSTACLES WHICH MIGHT BE ENCOUNTERED. UPON AWARD OF THE CONTRACT THE CONTRACTOR WILL NOT BE GRANTED ANY ADDITIONAL COMPENSATION WITH REGARDS TO TIME AND MONEY FOR CONDITIONS THAT MAY HAVE BEEN EVALUATED DURING ANY INSPECTION OF THE SITE.
23. ALL INTERIOR SURFACES OF THE SIPHON STRUCTURES AND MANHOLES INSTALLED WITH THE PROPOSED IMPROVEMENTS SHALL HAVE SPECIALIZED INTERIOR COATING. CONTRACTOR SHALL USE AN INTERIOR COATING SYSTEM IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD SPECIFICATIONS.
24. WHEN REMOVING/ABANDONING SANITARY SEWER LINES AS SHOWN IN THE PLANS, THE CONTRACTOR SHALL THOROUGHLY FLUSH AND CAP OR PLUG THE ENDS OF THE PIPES REMAINING IN PLACE PRIOR TO REMOVAL/ABANDONMENT. ALL COSTS FOR THE REMOVAL/ABANDON OF EXISTING SANITARY SEWER LINES AS PART OF CONSTRUCTION SHALL INCLUDED IN THE PRICE BID FOR "MANHOLE REMOVED".
25. CONTRACTOR SHALL COORDINATE WITH LARRY HOETMER, WICHITA PARKS DEPARTMENT (316) 268-4179 DURING CONSTRUCTION ON THE WEST SIDE OF THE LITTLE ARKANSAS RIVER.
26. CONTRACTOR SHALL MARK WORK LIMITS IN THE FIELD IN THE PRESENCE OF PARK DEPARTMENT PERSONNEL. CONTACT LARRY HOETMER, WICHITA PARK DEPARTMENT AT (316) 268-4179.
27. THE CONTRACTOR SHALL INSTALL FENCING FOR EACH TREE THAT MAY BE IMPACTED WITHIN THE CONSTRUCTION AREA. THE FENCING WILL REPRESENT THE SAFETY ZONE. THE CONTRACTOR SHALL COORDINATE WITH THE CITY'S ARBORIST TO DELINEATE THE SAFETY ZONE PRIOR TO CONSTRUCTION.



**PAVEMENT REMOVAL AND REPLACEMENT DETAIL**



**PAVEMENT REMOVAL AND REPLACEMENT DETAIL**

- BENCHMARK LIST**
- BM #201 - CHIS. SQUARE ON CURB INLET, FIRST INLET SOUTH OF ROUND-A-BOUT ON EAST SIDE OF STACKMAN DRIVE. ELEV. = 1303.578 (NAVD88)
  - BM #202 - CHIS. SQUARE ON SOUTH END OF RETAINING WALL, 50% SOUTHWEST CORNER OF BUILDING, 17.50' EAST TO WEST FACE OF BUILDING. ELEV. = 1302.448 (NAVD88)
  - BM #203 - CHIS. SQUARE ON LIGHT POLE BASE, 58% NORTH NORTHEAST TO SOUTHEAST CORNER OF BUILDING LOCATED ON WEST END OF ISLAND. ELEV. = 1306.098 (NAVD88)

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 Q:\2013\13648\000\13648-002-SS Key Map

**REPLACEMENT OF THE  
RIVERSIDE PARK SIPHON ACROSS THE LITTLE ARKANSAS RIVER  
KEY MAP AND GENERAL NOTES**

GARY JANZEN, P.E. - CITY ENGINEER  
CITY OF WICHITA PROJECT NO. 468-84936

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.  
303 SOUTH TOPEKA WICHITA, KS 67202  
316-262-2691 www.pec1.com

| No. | Revision | By | Date |
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|     |          |    |      |

Designed by CSB, SAD  
Drawn by CSL, KTD

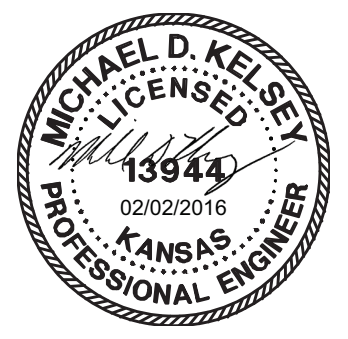
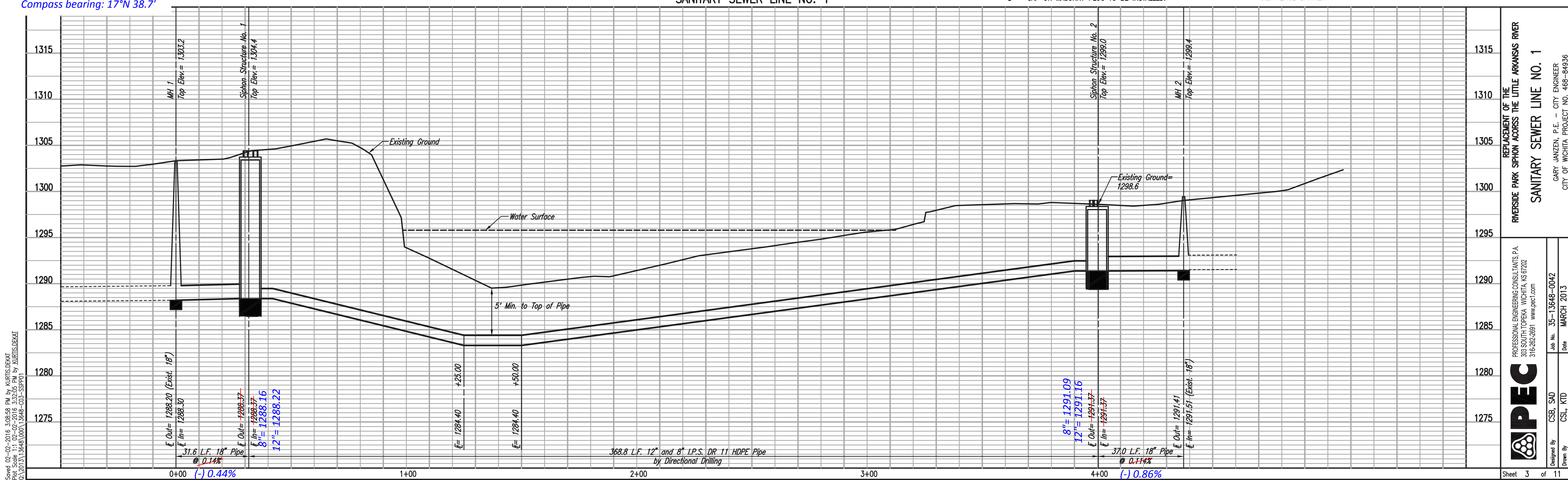
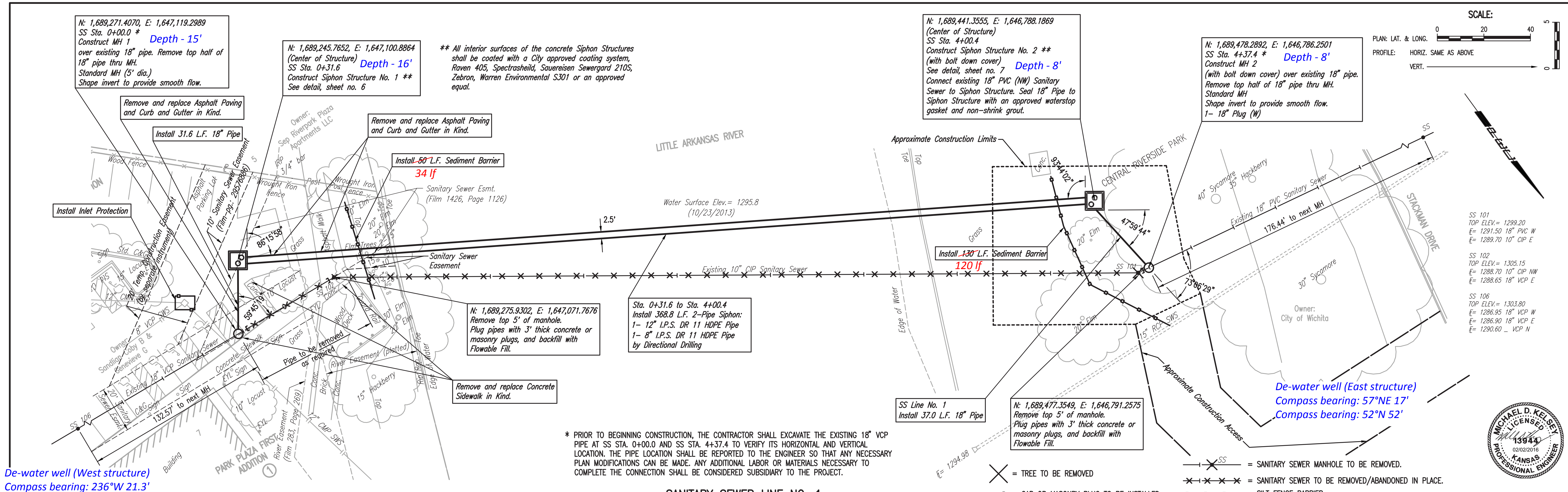
Job No. 35-13648-0042  
Date MARCH 2013

Sht. 2 of 11

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REPLACEMENT OF THE  
 RIVERSIDE PARK SIPHON ACROSS THE LITTLE ARKANSAS RIVER  
**SANITARY SEWER LINE NO. 1**  
 GARY JANZEN, P.E. - CITY ENGINEER  
 CITY OF WICHITA PROJECT NO. 468-84936

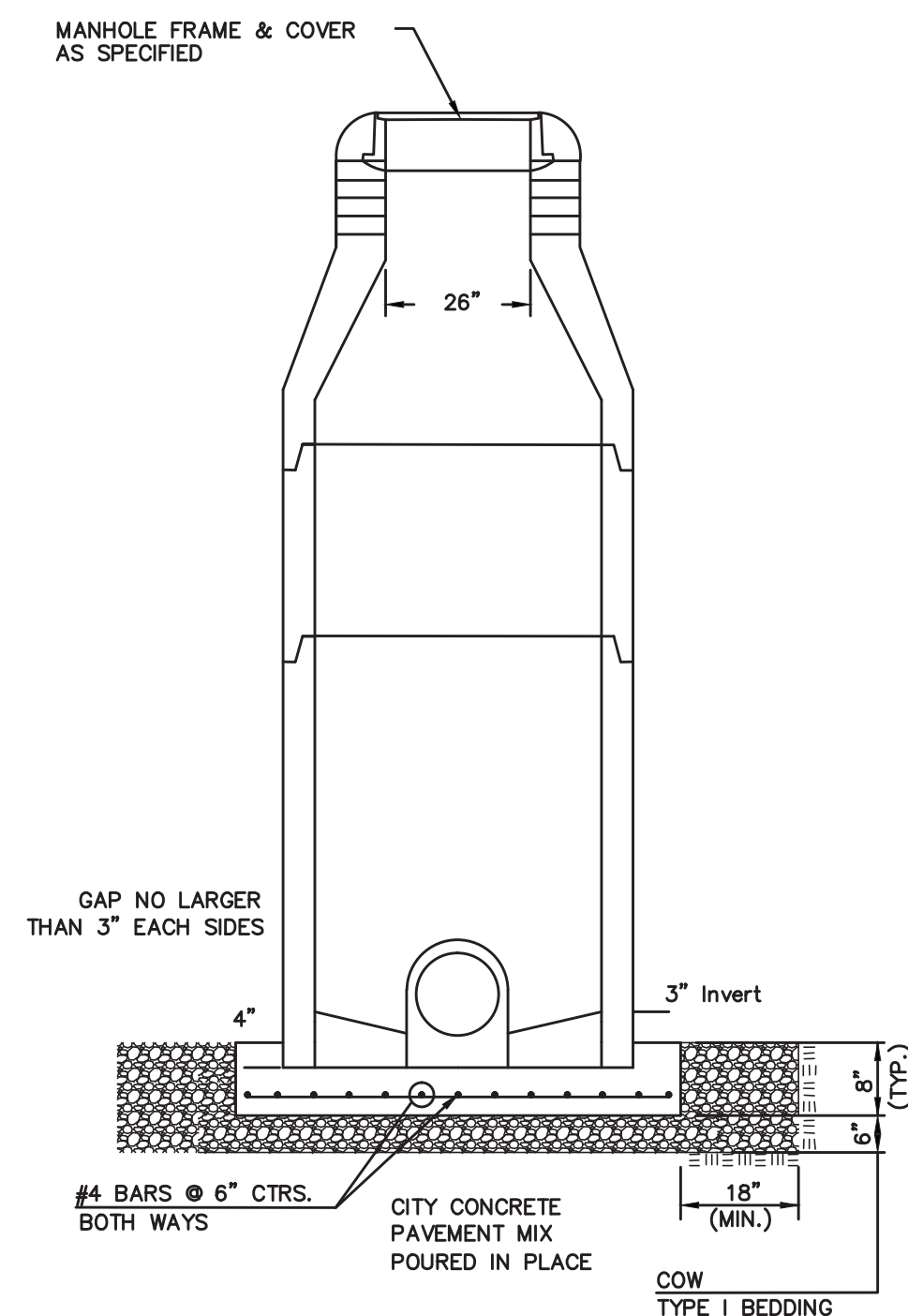
PROFESSIONAL ENGINEERING CONSULTANTS P.A.  
 303 SOUTH TOPEKA WICHITA, KS 67202  
 316-262-2691 www.pec1.com

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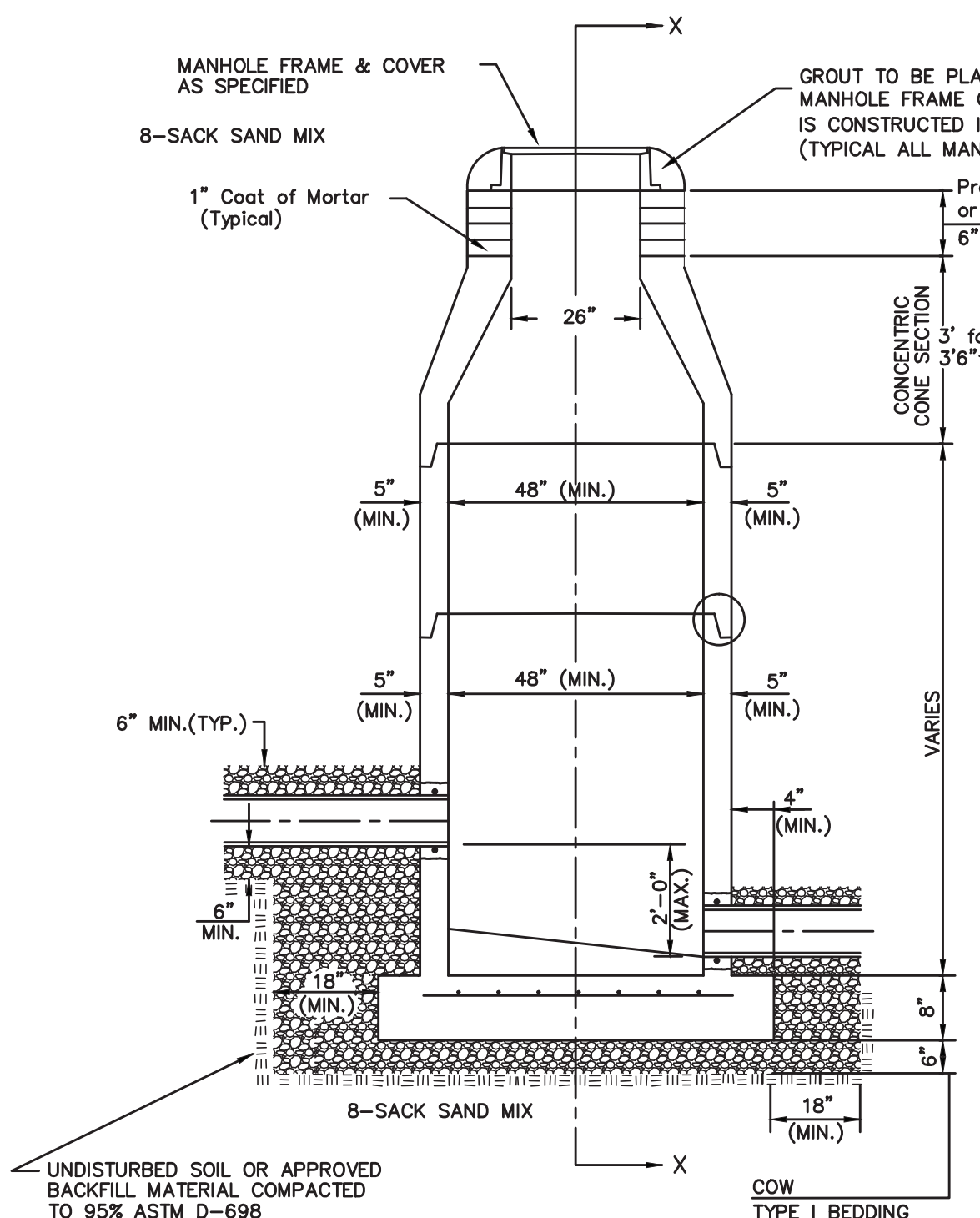
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 Drawn By: CSL, KTD

Job No. 35-13648-0042  
 Date MARCH 2013

Sheet 3 of 11

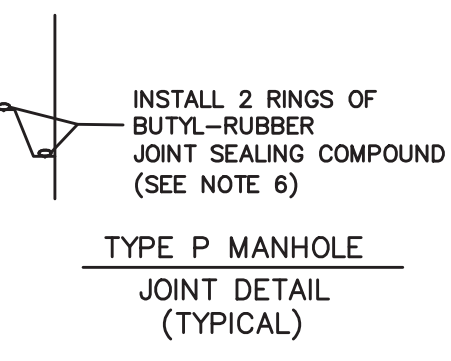


**DOG HOUSE MANHOLE**  
(OVER EXISTING PIPE)  
Not to Scale

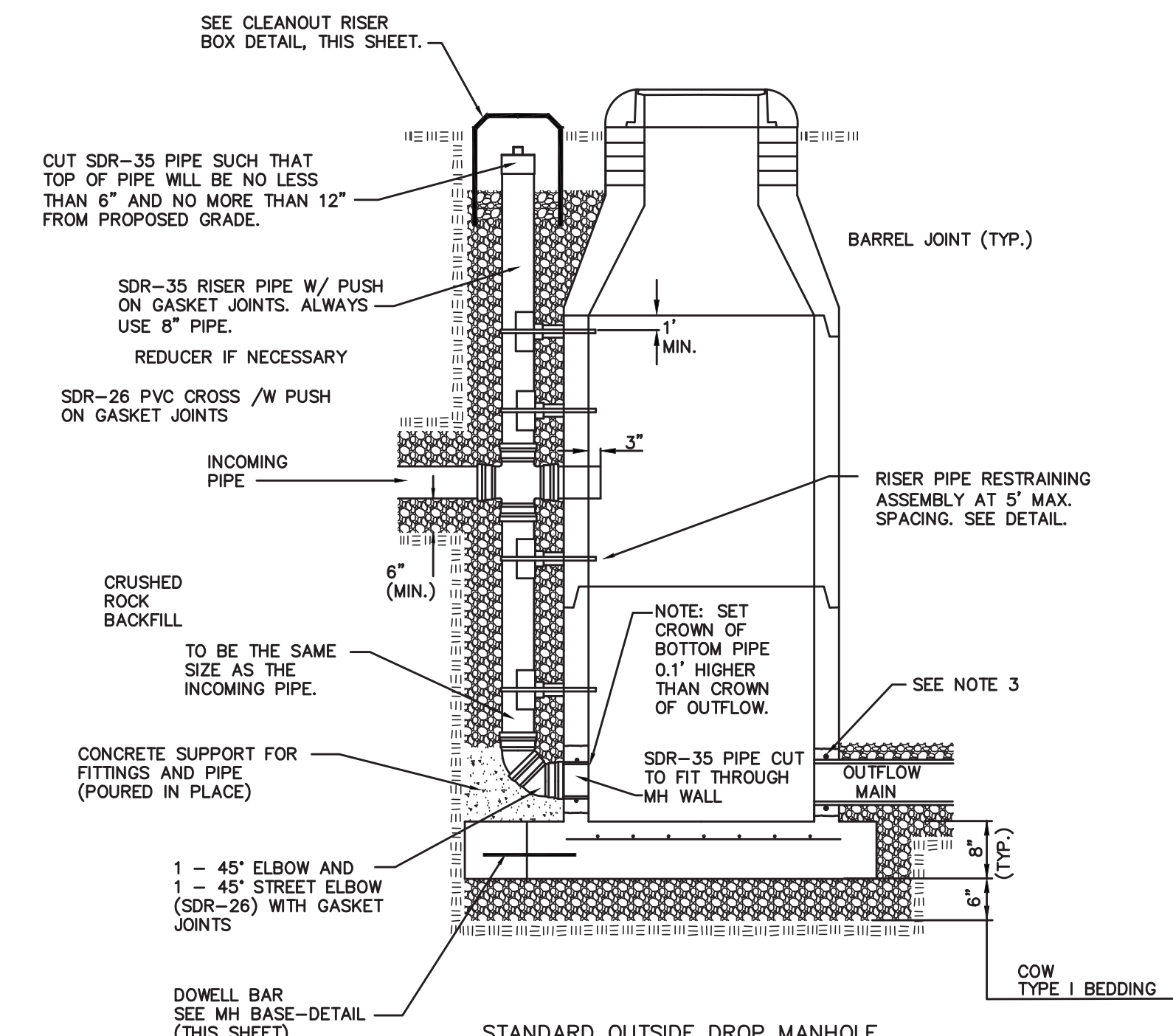


**STANDARD MANHOLE**  
Not to Scale

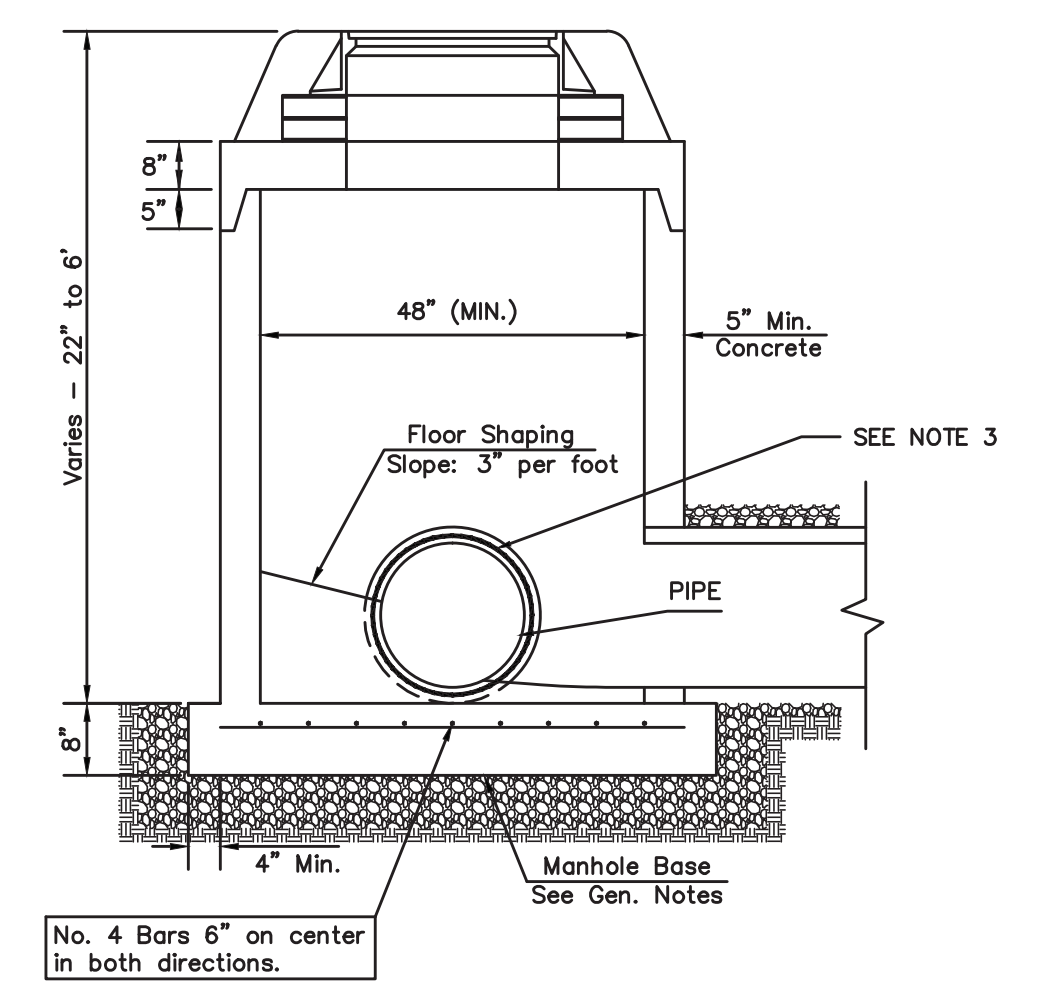
= COW TYPE I BEDDING  
 = UNDISTURBED SOIL



**TYPE P MANHOLE**  
JOINT DETAIL  
(TYPICAL)

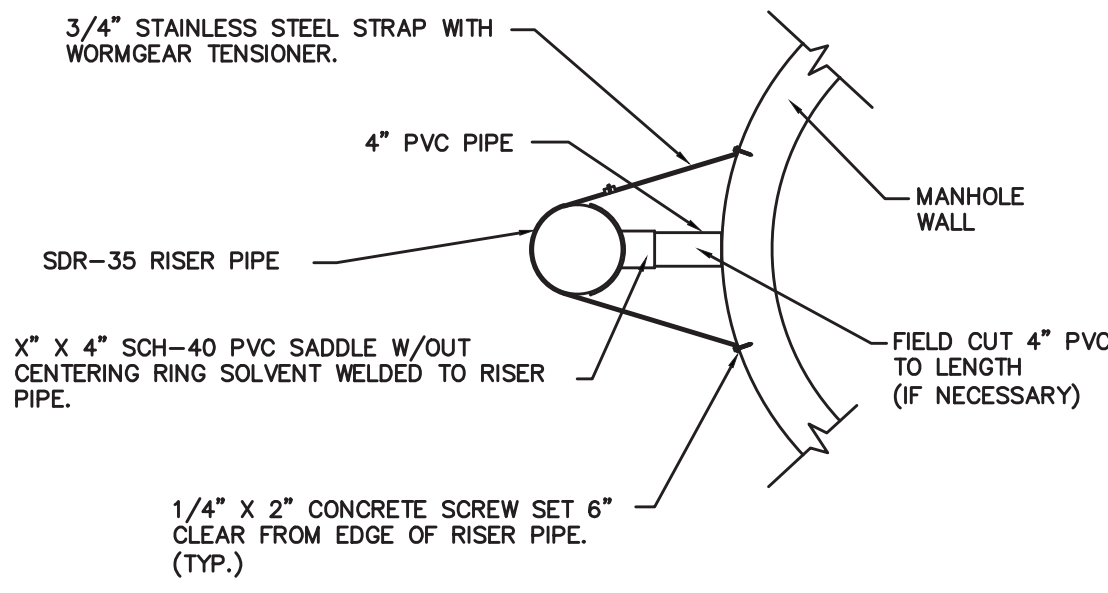


**STANDARD OUTSIDE DROP MANHOLE**  
Not to Scale



Not to Scale

ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED WITH A CITY APPROVED EPOXY COATING SYSTEM SUCH AS RAVEN 405 SPECTRASHIELD, WARREN ENVIRONMENTAL S301, SAUERISEN SEWERGARD 210S, ZEBRON, OR AN APPROVED EQUAL. PRODUCTS SHALL BE APPLIED AT A MINIMUM THICKNESS OF 90 MILS, OR TO THE MINIMUM THICKNESS REQUIRED BY THE MANUFACTURER'S SPECIFICATIONS, WHICHEVER IS THICKER. PLASTIC LINING OF THE MANHOLE WILL NOT BE ALLOWED.



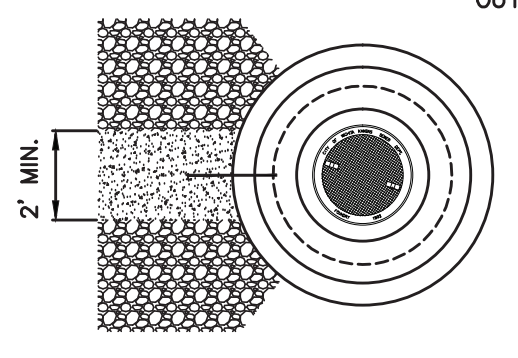
**RISER PIPE RESTRAINING ASSEMBLY**  
Not to Scale

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

**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.

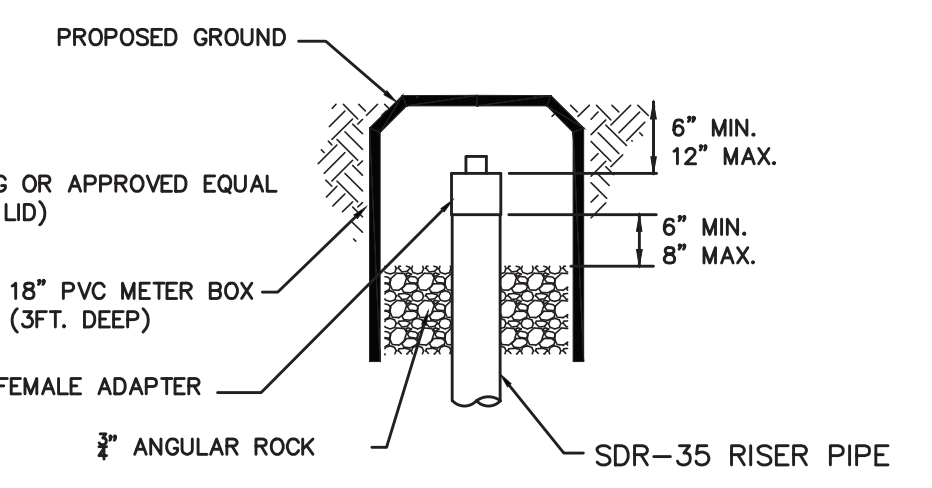
BASE FOR OUTSIDE DROP MH DOWELED TO EXISTING MH BASE USING #5 BAR, EPOXY GROUTED 12" INTO EXISTING MH BASE AND 12" INTO OUTSIDE DROP BASE.



**MH BASE DETAIL**  
Not to Scale

CRUSHED ROCK BACKFILL SHALL BE INSTALLED 3" AROUND OUTSIDE DROP RISER ASSEMBLY.

EXISTING MANHOLE BASE  
OUTSIDE OF MANHOLE  
INSIDE WALL OF MANHOLE



**CLEANOUT RISER BOX DETAIL**  
Not to Scale



REVISED JANUARY 2015

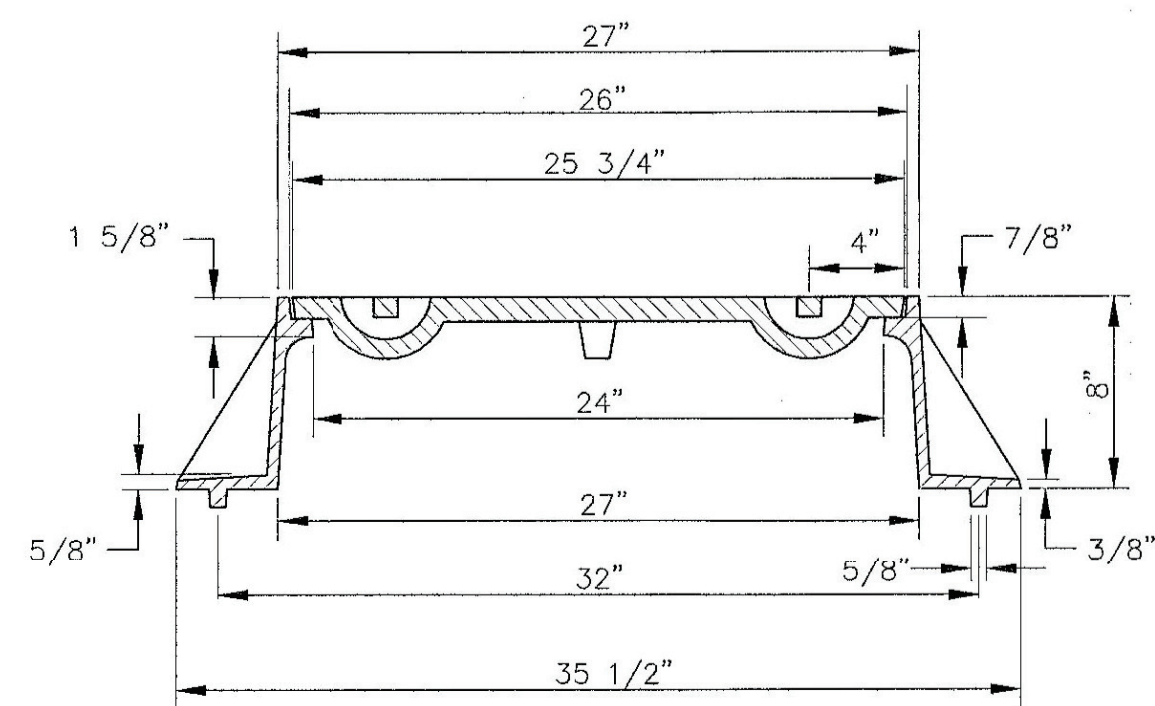
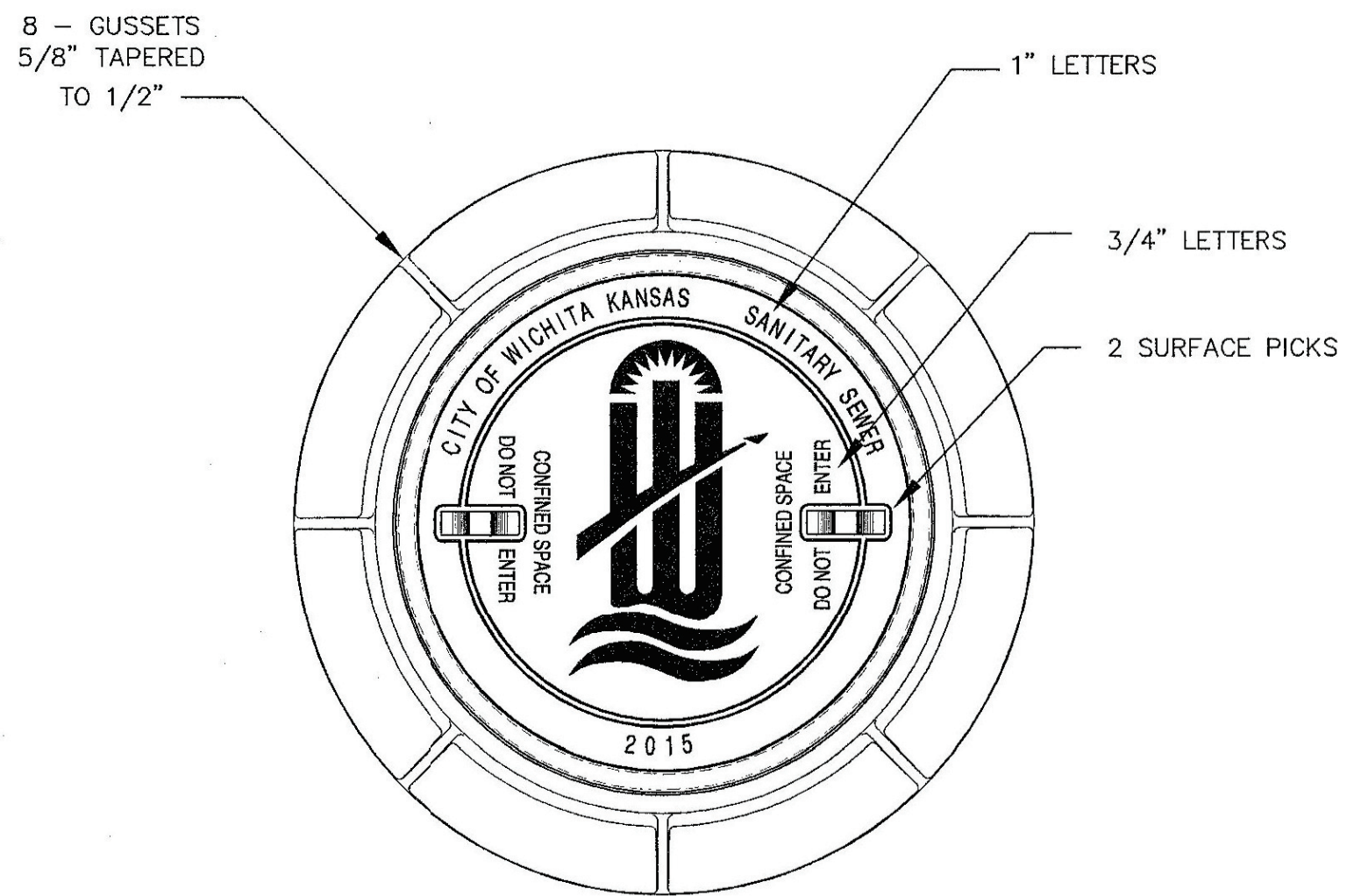
**PRECAST SANITARY SEWER MANHOLE**

CITY ENGINEER  
**GARY JANZEN, P.E.**

|                                    |                             |      |
|------------------------------------|-----------------------------|------|
| PROJECT NUMBER<br><b>468-84936</b> | OCA NUMBER<br><b>620724</b> | DATE |
|------------------------------------|-----------------------------|------|

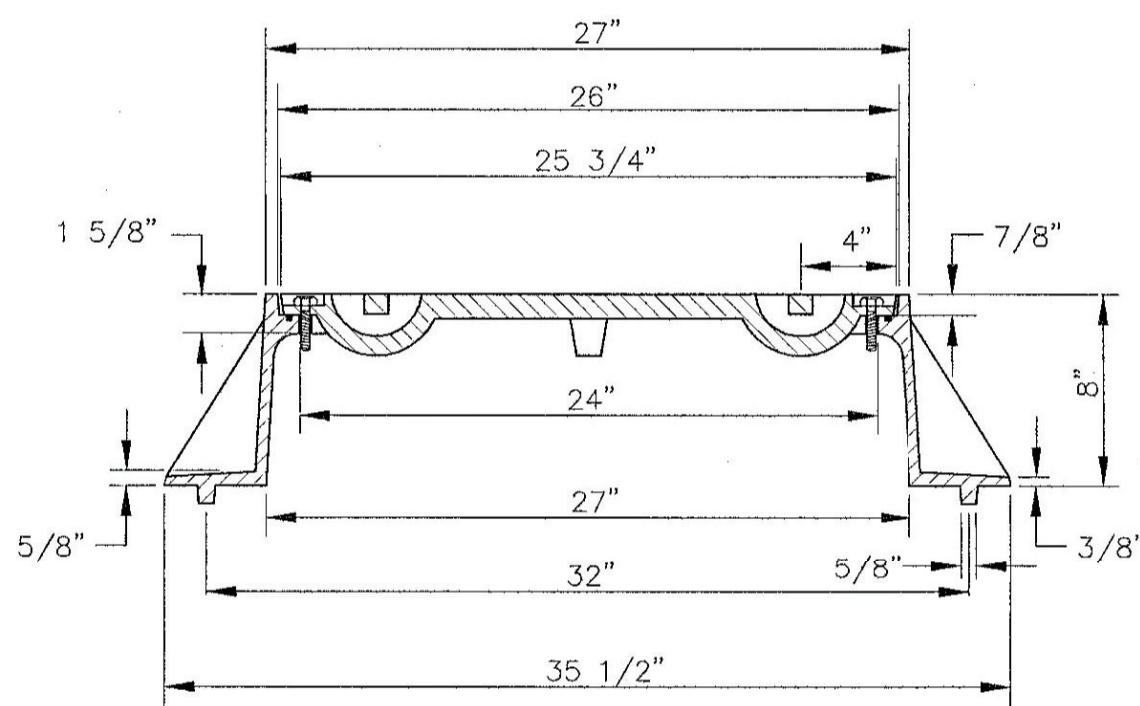
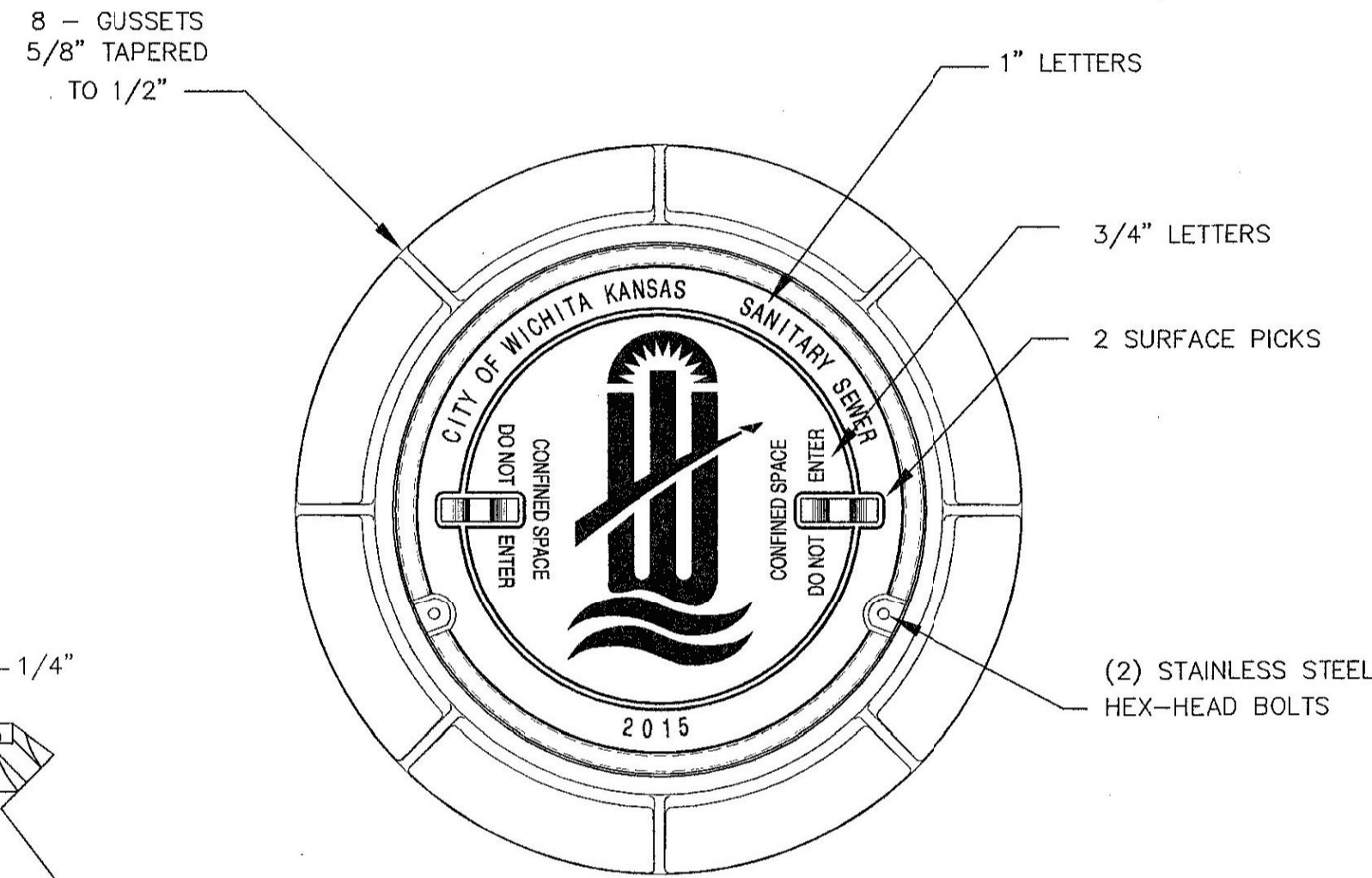
CITY ENGINEER'S OFFICE  
CITY HALL - SEVENTH FLOOR  
455 NORTH MAIN STREET  
WICHITA, KANSAS 67202-1620  
(316) 268-4501

SHEET  
**4 of 11**



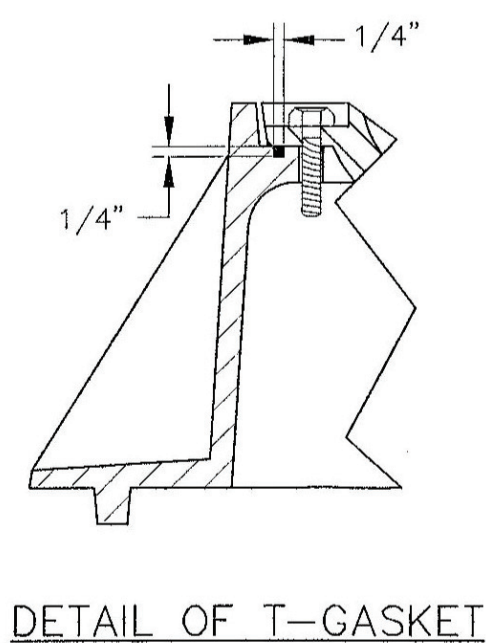
STANDARD MANHOLE FRAME & COVER  
DEETER #1261 OR EJIW #1936-Z1

NOTE:  
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.

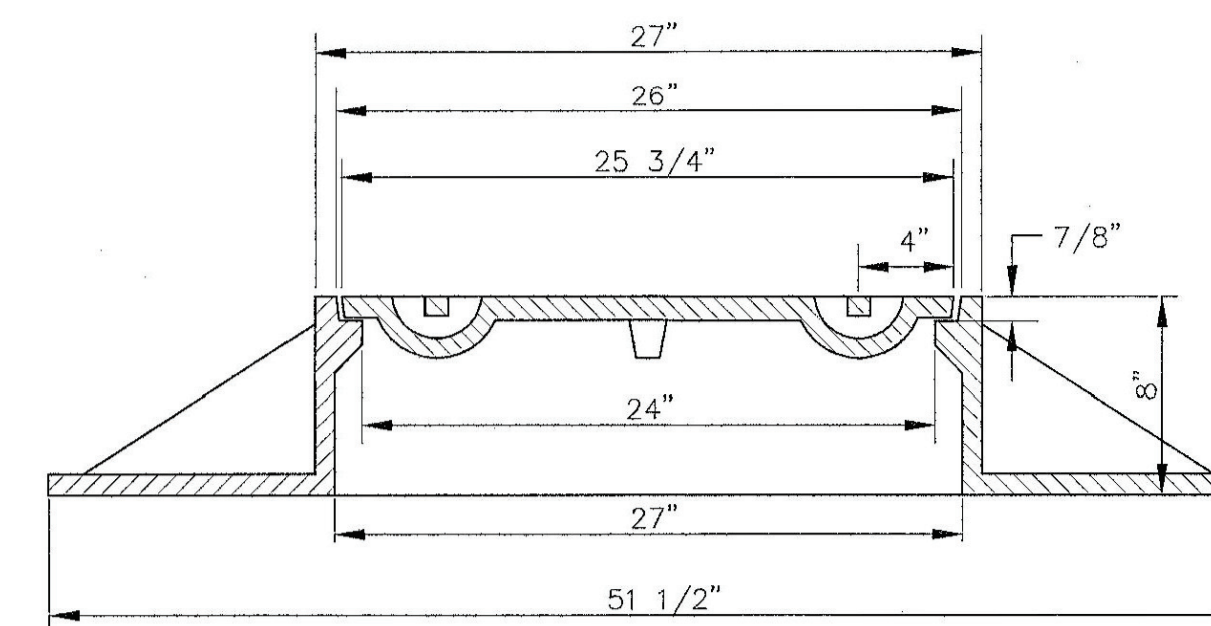
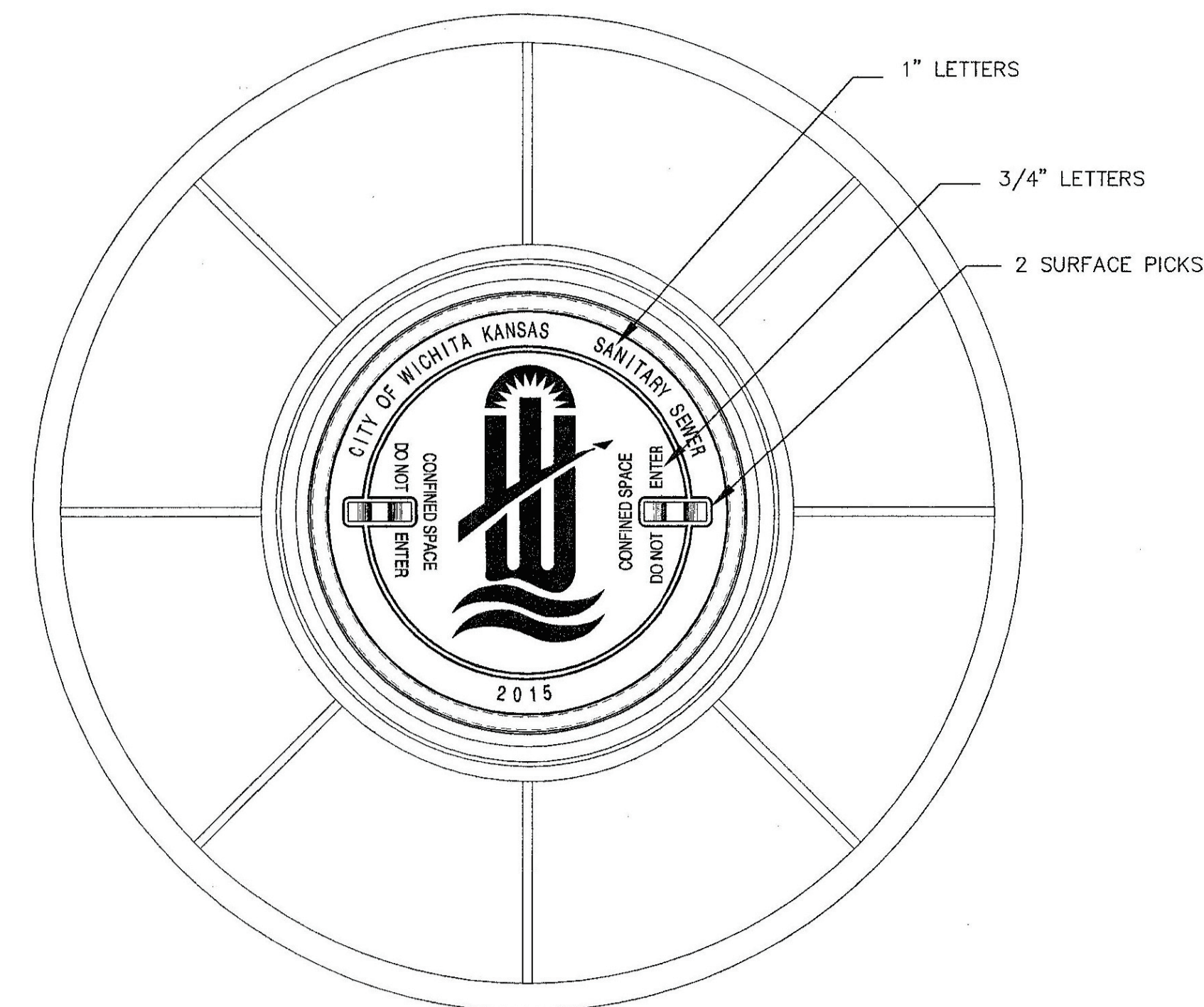


BOLT DOWN MANHOLE FRAME & COVER  
DEETER #1261 OR EJIW #1936-Z1

NOTE:  
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.  
2. FURNISHED WITH A T-GASKET IN THE FRAME.



DETAIL OF T-GASKET

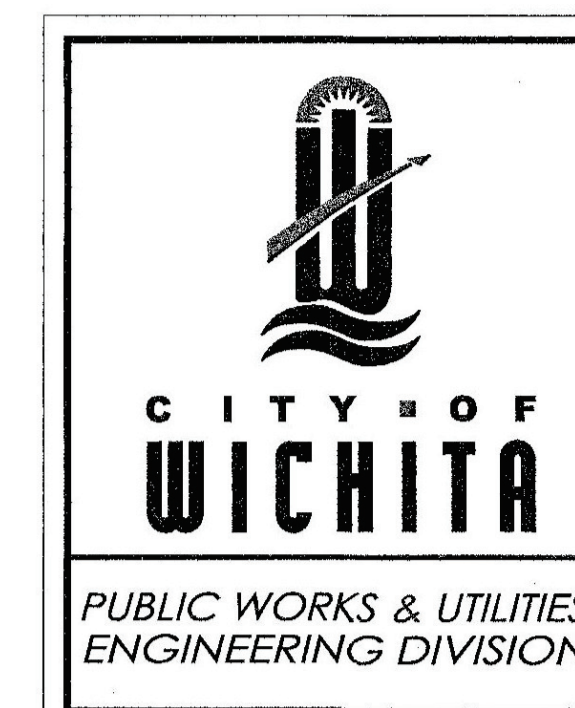


WIDE FLANGED FRAME & COVER  
DEETER #1261A

NOTE:  
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.

GENERAL NOTES

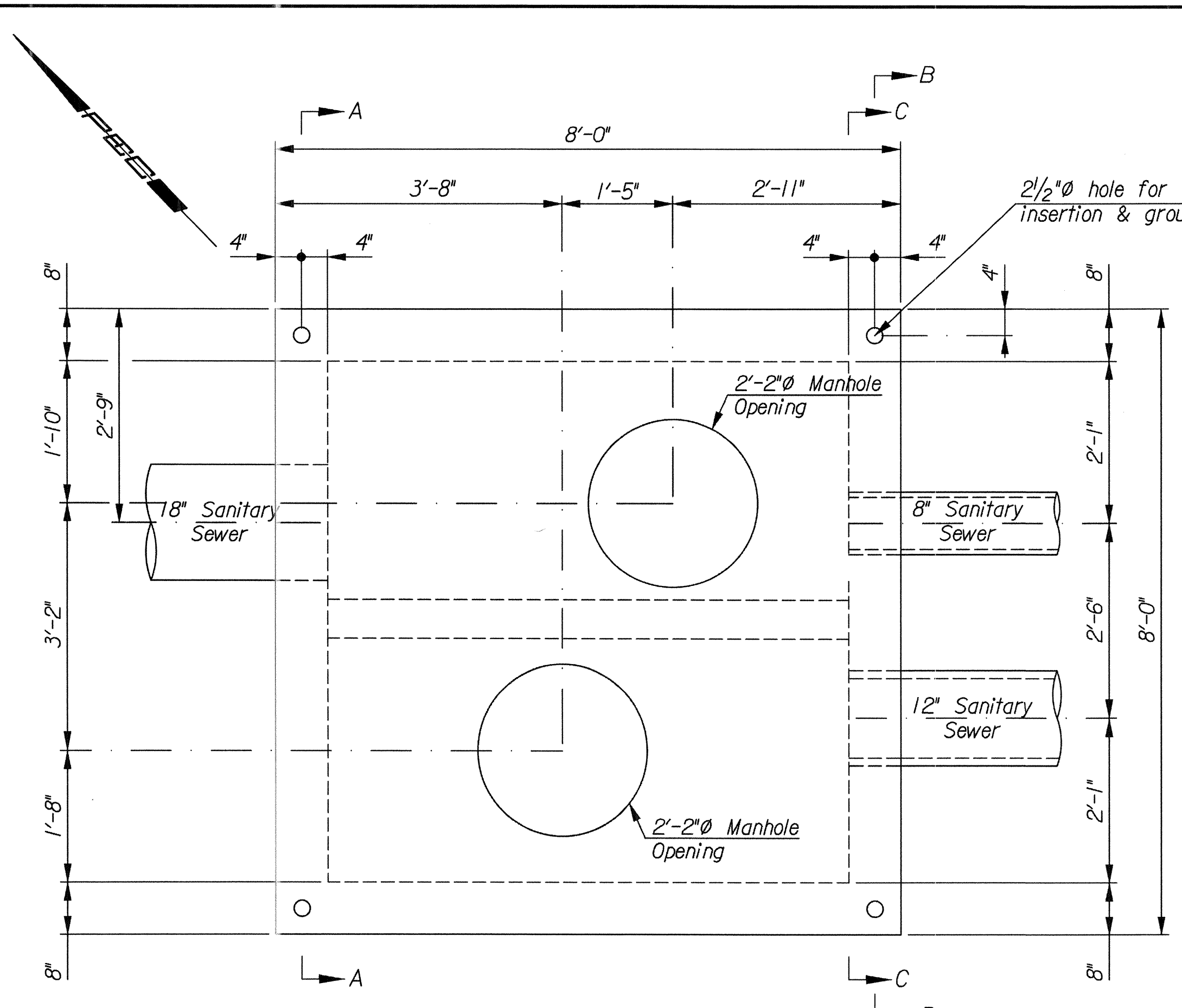
- MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A-48. DIMENSIONS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS 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 INCH 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.



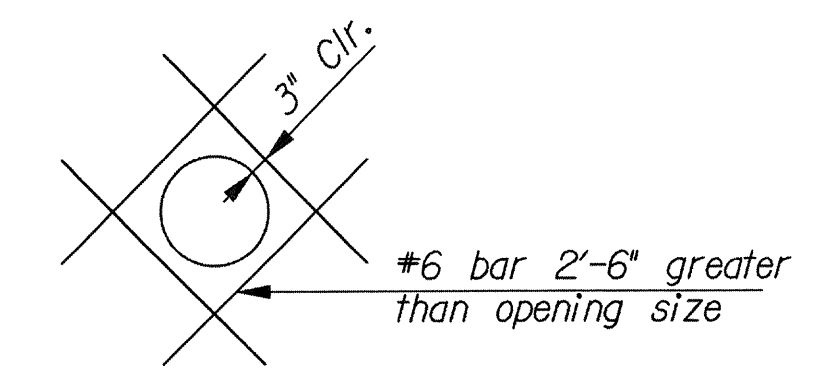
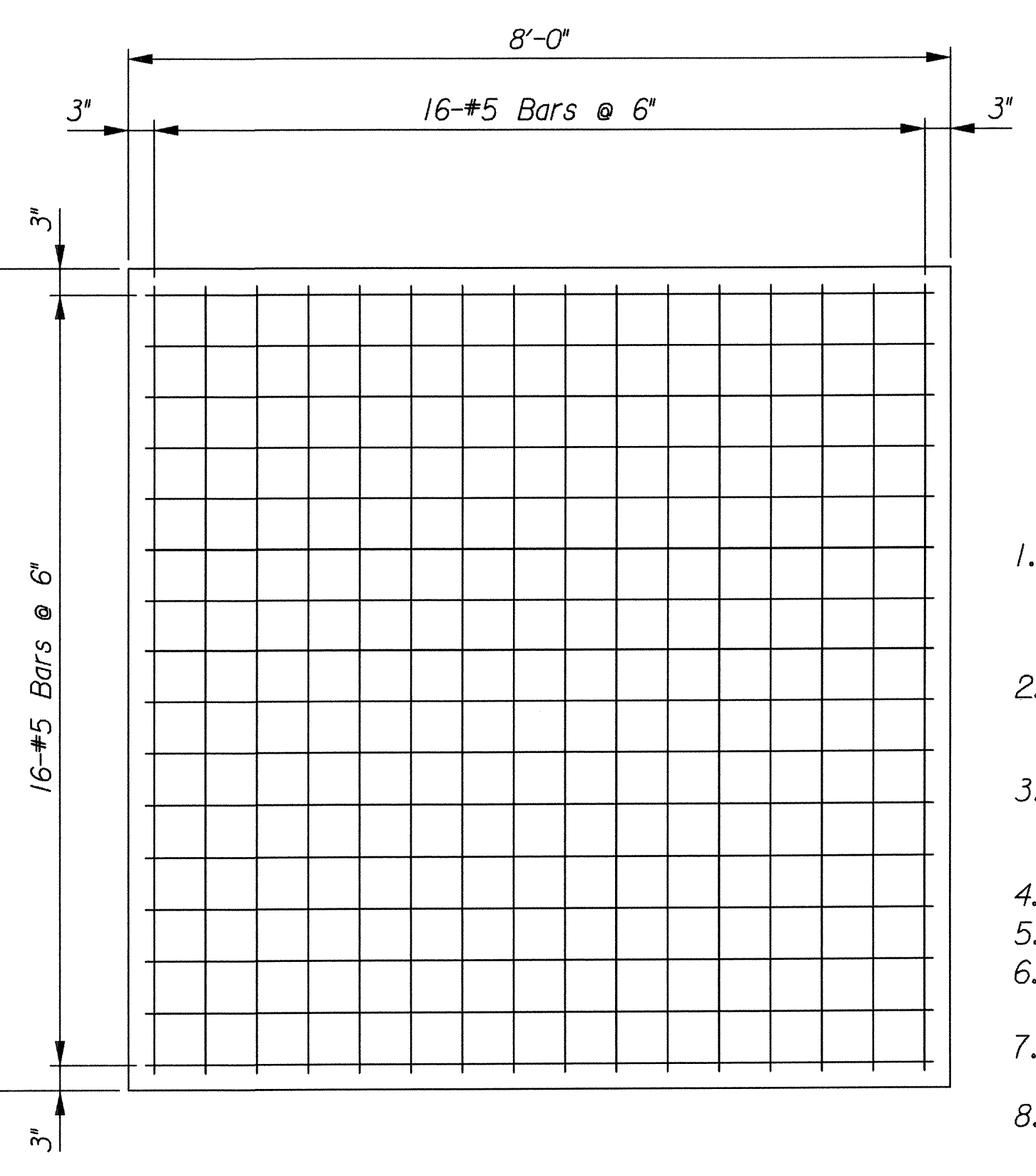
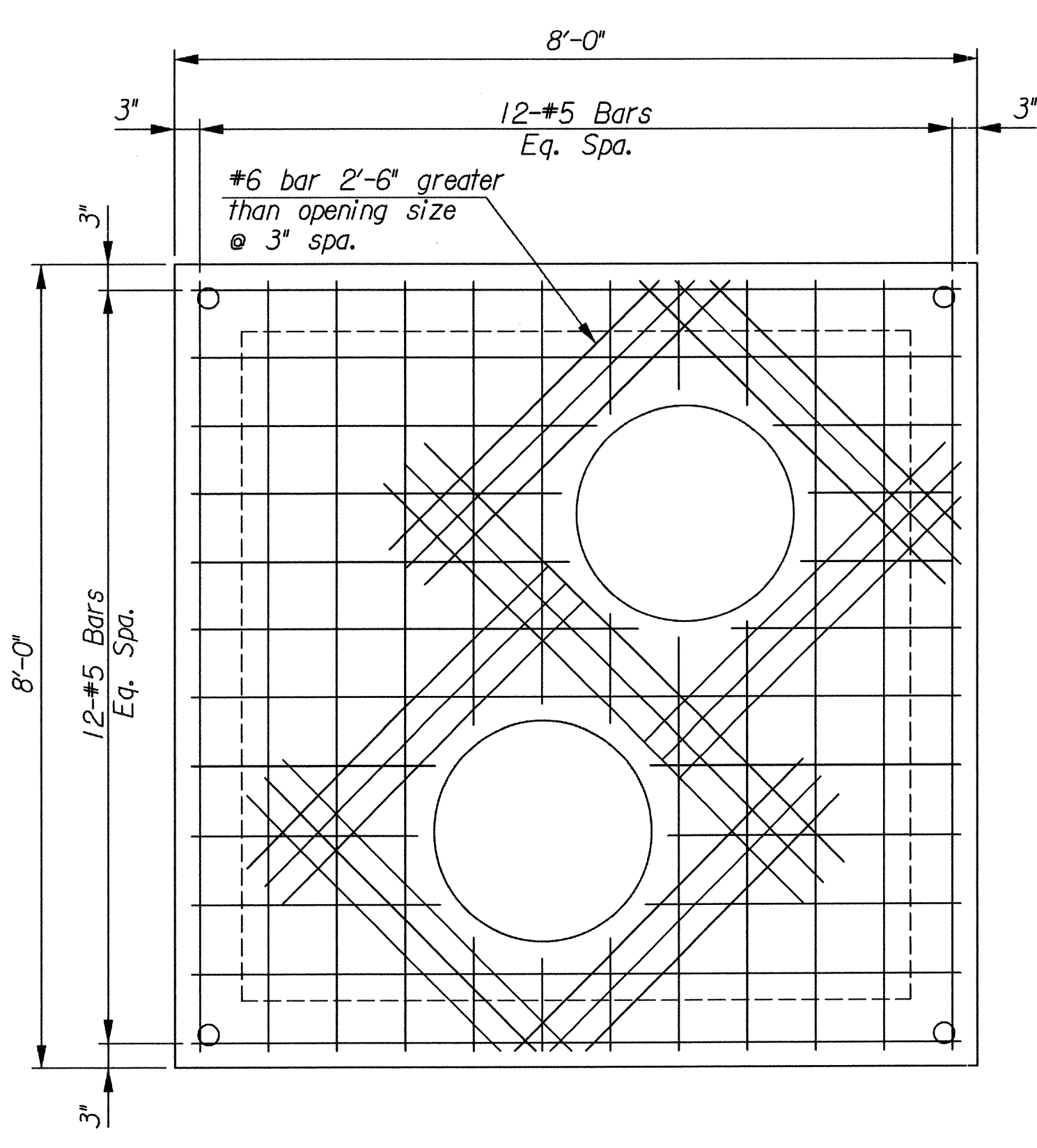
|  |                      |                         |
|--|----------------------|-------------------------|
| <b>MANHOLE<br/>FRAME AND COVER<br/>(SANITARY SEWER)</b>  |                      |                         |
| CITY ENGINEER<br><b>GARY JANZEN, P.E.</b>  |                      |                         |
| PROJECT NUMBER<br>468-84936  | OCA NUMBER<br>620724 | DATE                    |
| CITY ENGINEER'S OFFICE<br>CITY HALL - SEVENTH FLOOR<br>455 NORTH MAIN STREET<br>WICHITA, KANSAS 67202-1620<br>(316) 268-4501 |                      | SHEET<br><b>5 of 11</b> |

REVISED: JUNE 2015





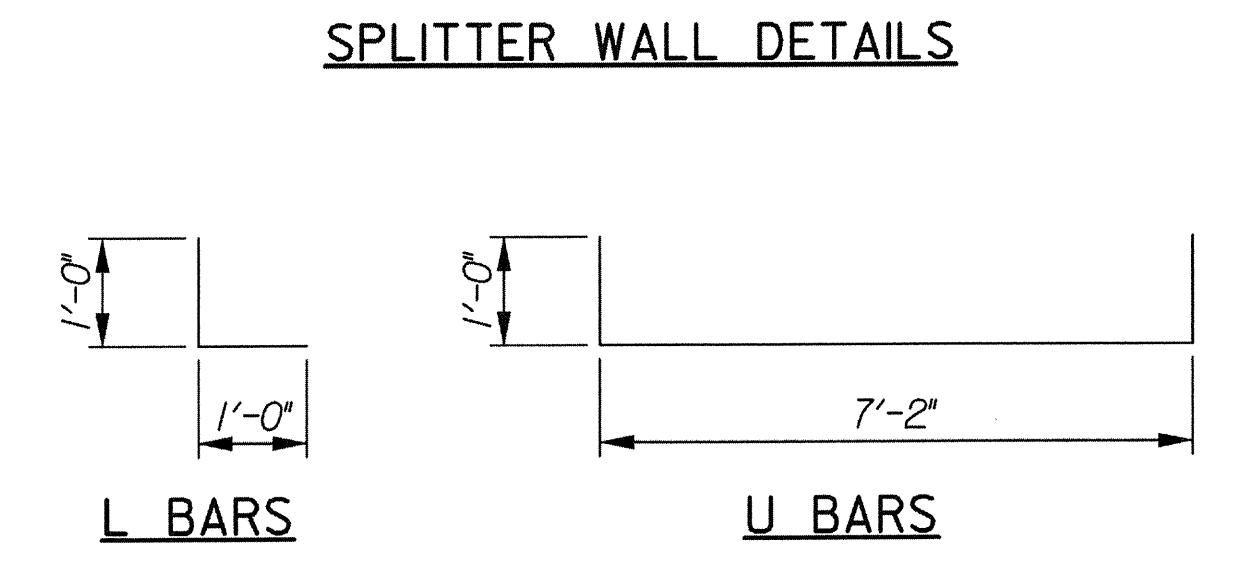
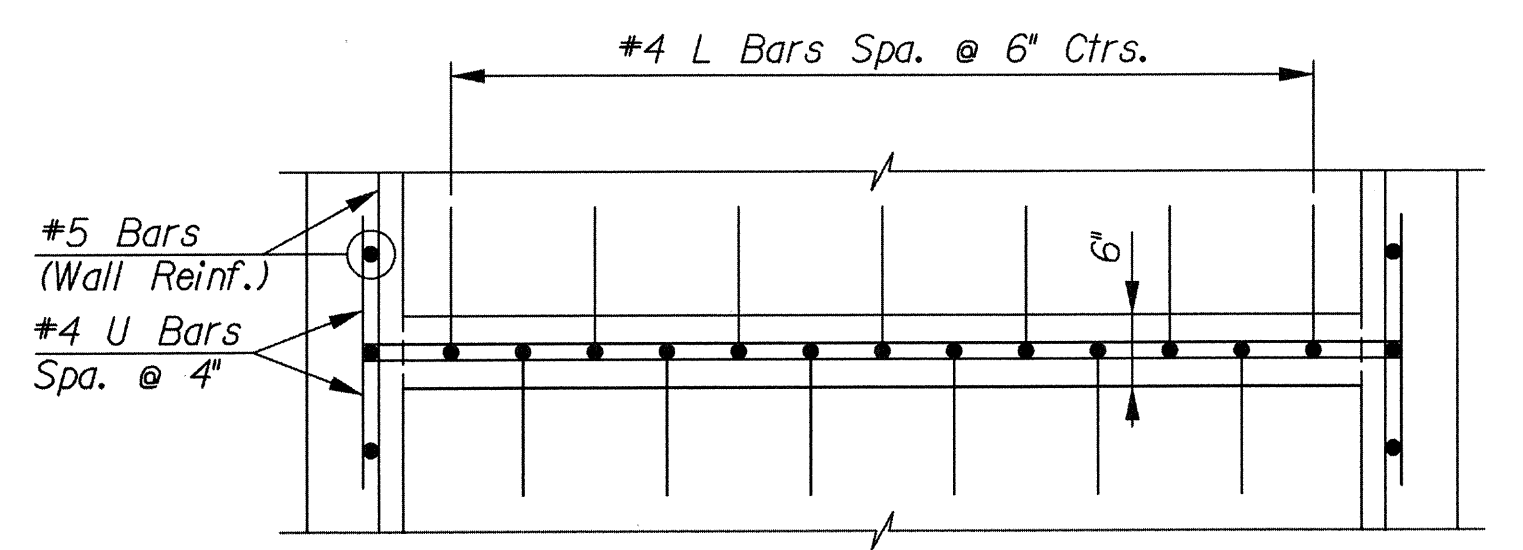
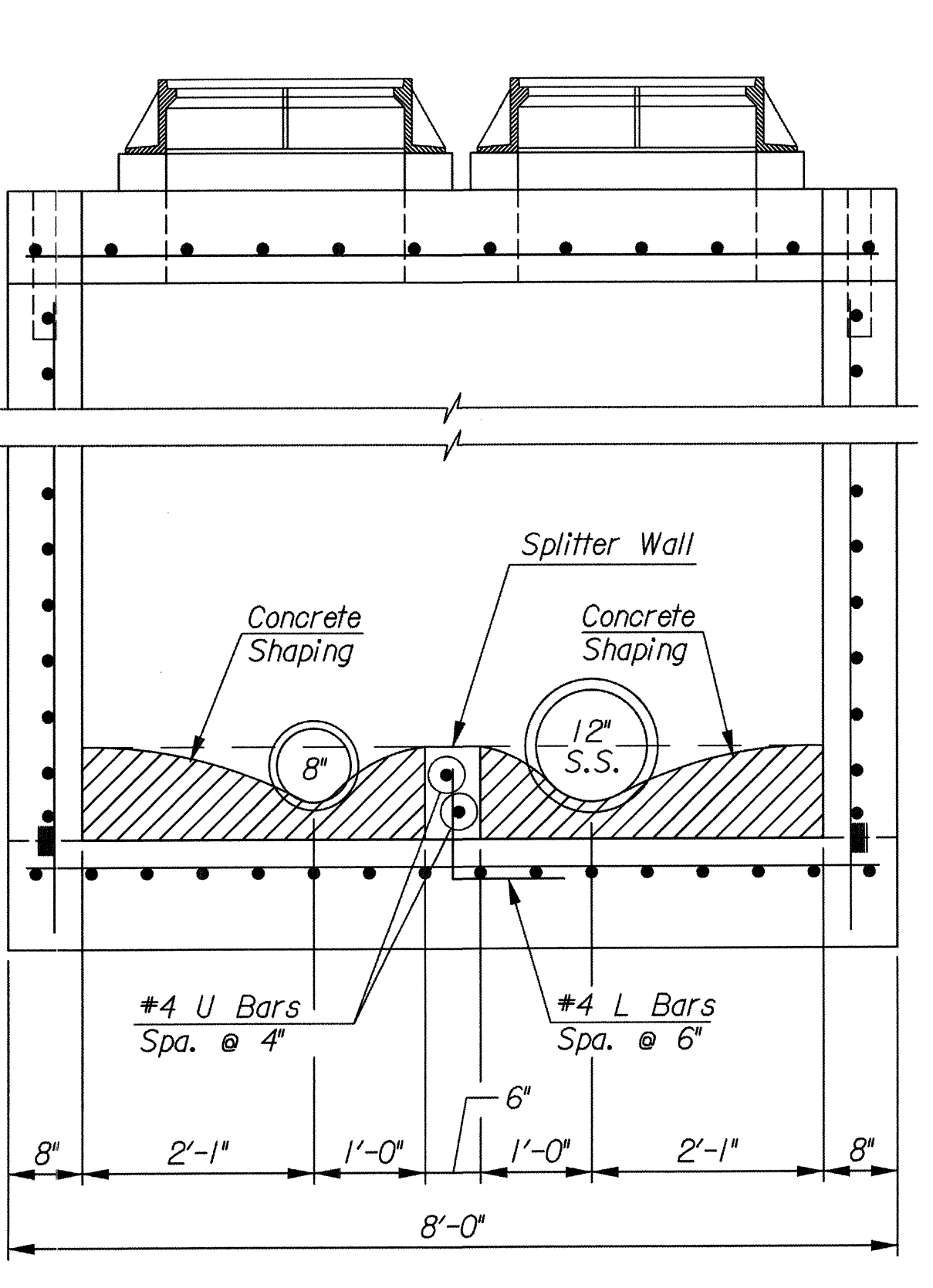
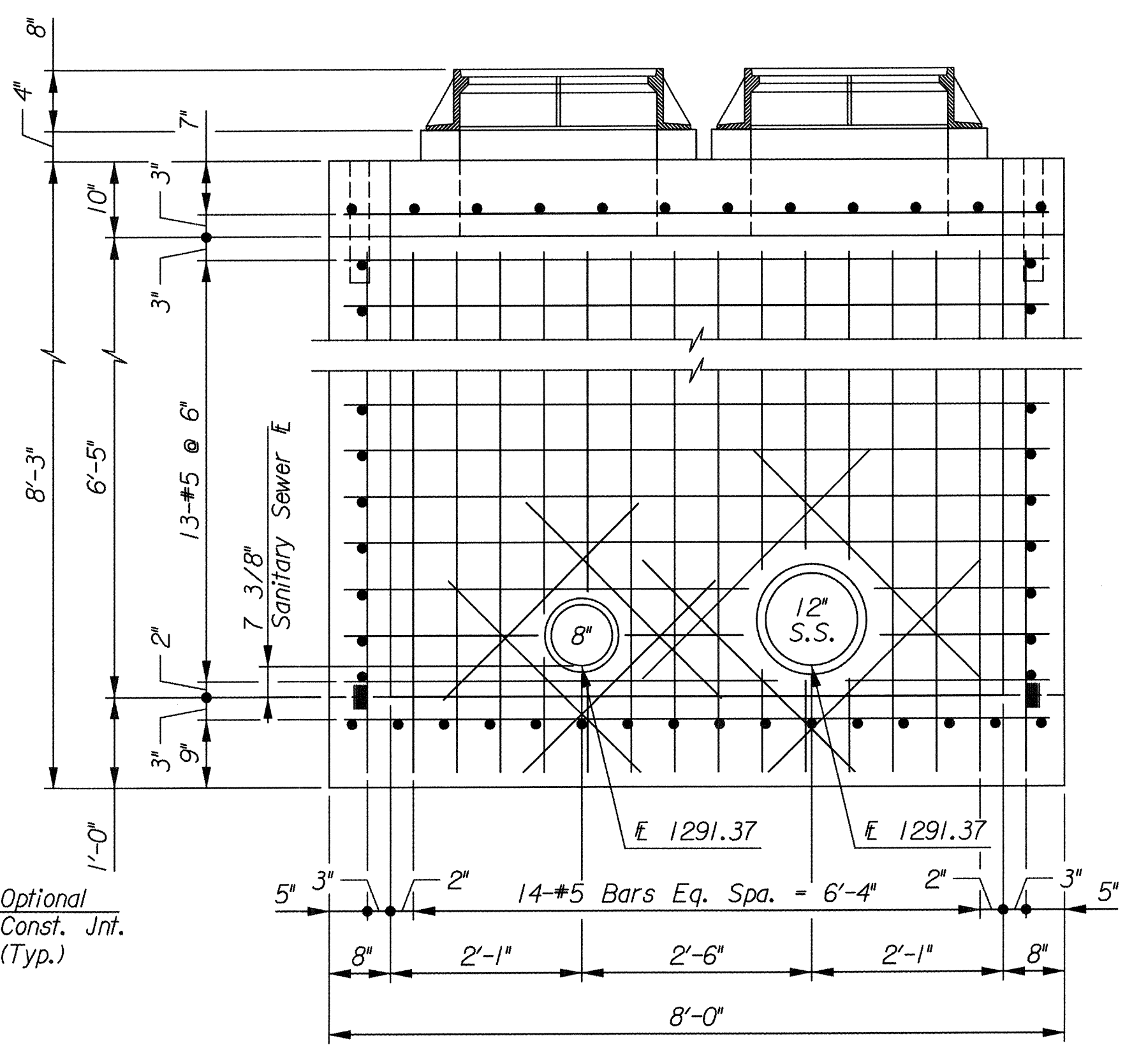
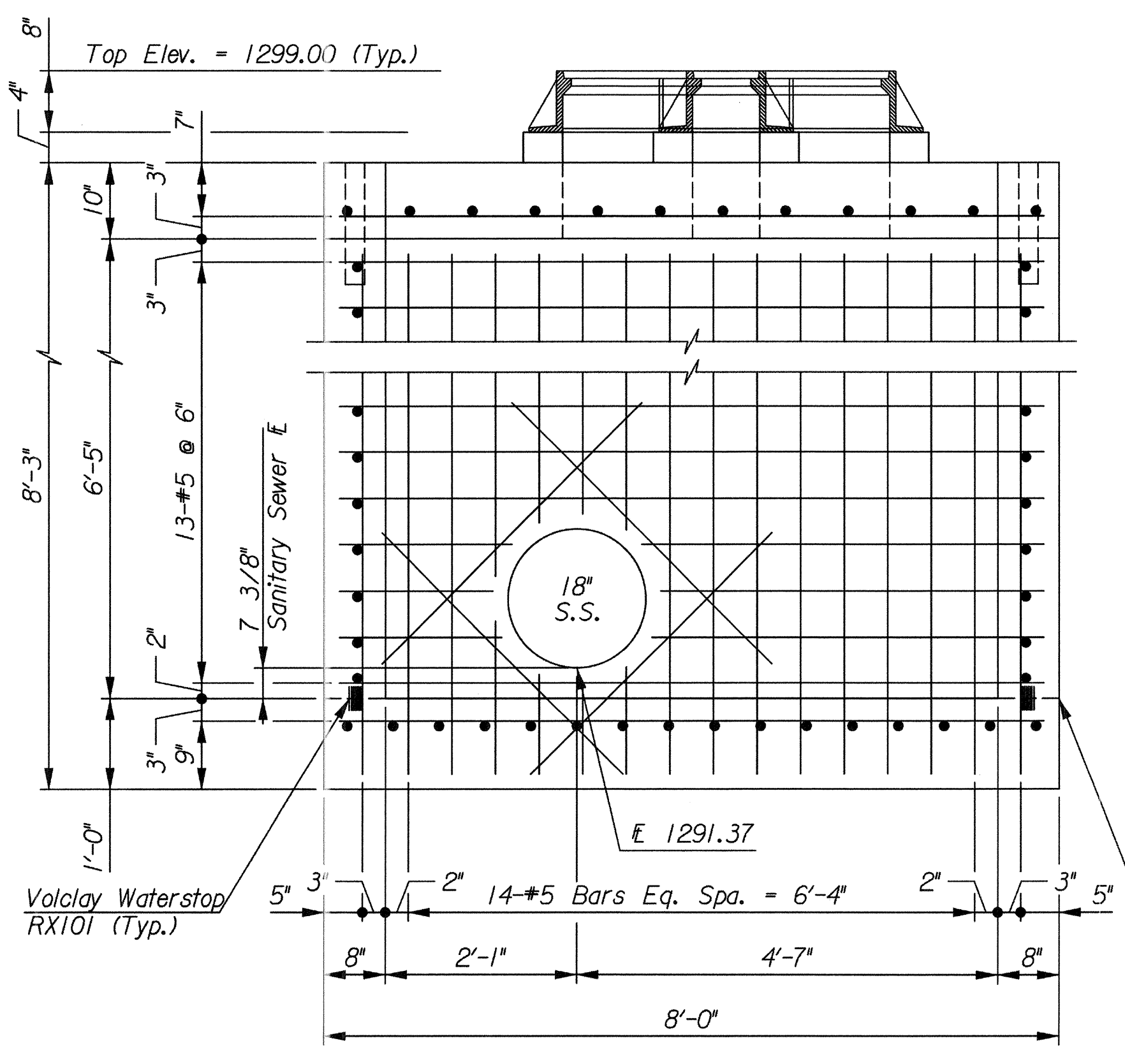
Drill and grout 1'-0" #6 bar 6" into walls at referenced locations. Final grout 2 1/2" holes with an approved mixture.



ADDITIONAL REINFORCING AT WALL CIRCULAR OPENINGS

GENERAL NOTES

1. Use 4000 p.s.i. compressive strength concrete throughout. All exposed edges shall be finished with an edging tool. All Reinforcing shall conform to ASTM A615, Grade 60.
2. In general, pipes will enter and leave manhole at various positions. Where possible bend bars around pipes.
3. Manhole opening shall be placed to afford easy access to equipment. Top reinforcing bars shall be adjusted accordingly.
4. All castings shall be cast iron.
5. Design Loading is AASHTO H 20-44.
6. All reinforcing to have 3" edge and 2" end clearance unless otherwise noted.
7. A-LOK seal type shall be suitable for type of pipe materials used.
8. All reinforced steel shall be #5 bars with a 6" center to center spacing, unless otherwise noted.



Printed By: \$USERNAME\$ Date: \$DATE\$ \$TIME\$ \$FILE\$

Save: 02-02-2016 3:05:56 PM by CSI  
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 J:\SENDOUT\2013\13644\2016-02-02 to City (Tom Mason)\DWG\13644-007-Siphon Structure No 2 Details

REVISION

| No. | Revision | By | Date |
|-----|----------|----|------|
|     |          |    |      |

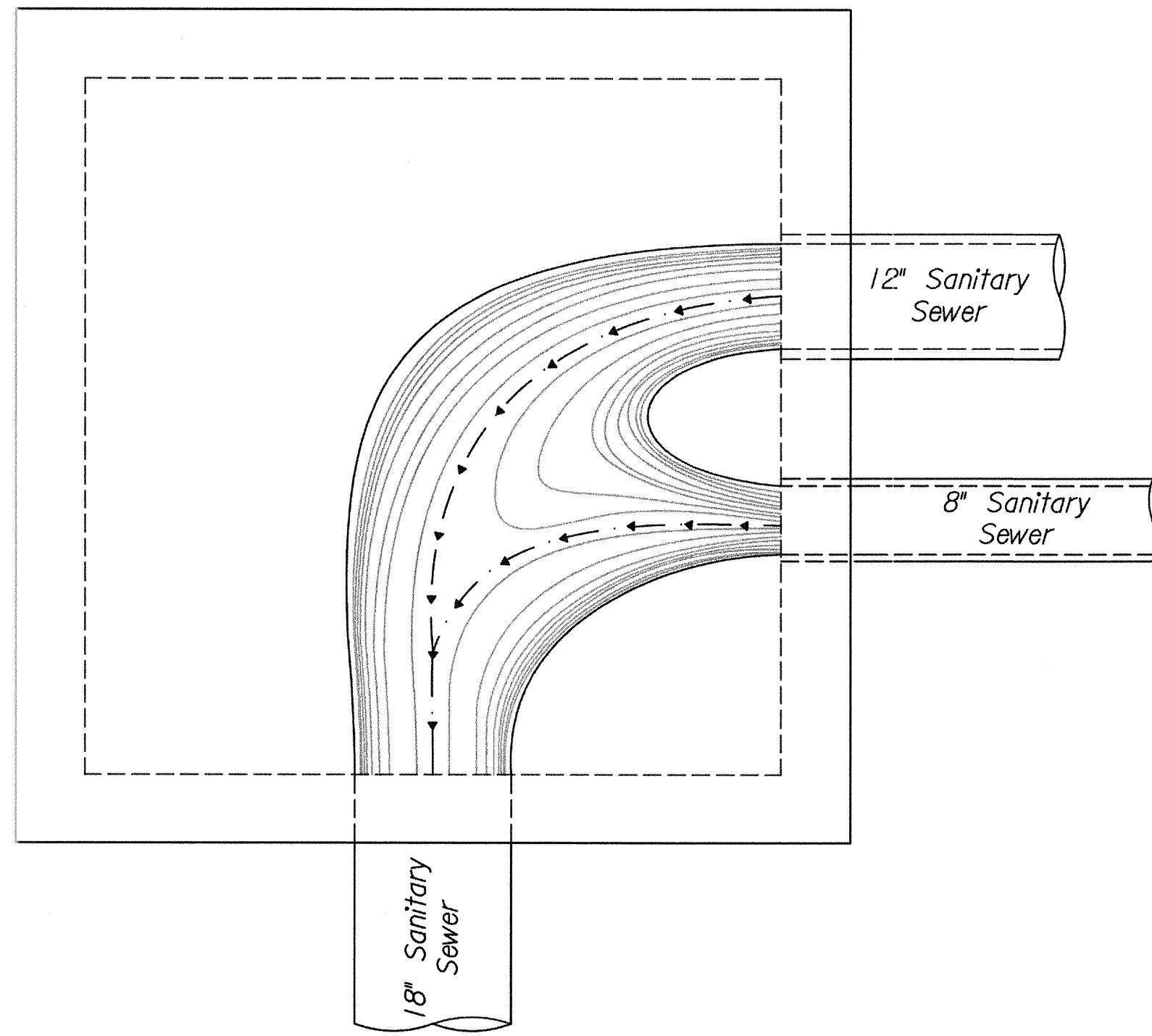
REPLACEMENT OF THE RIVERSIDE PARK SIPHON ACROSS THE LITTLE ARKANSAS RIVER  
**SIPHON STRUCTURE NO. 2 DETAILS**

GARY JANZEN, P.E. - CITY ENGINEER  
 CITY OF WICHITA PROJECT NO. 468-84936

**PEC** PROFESSIONAL ENGINEERING CONSULTANTS, P.A.  
 303 SOUTH TOPEKA WICHITA, KS 67202  
 316-262-2691 www.pec1.com

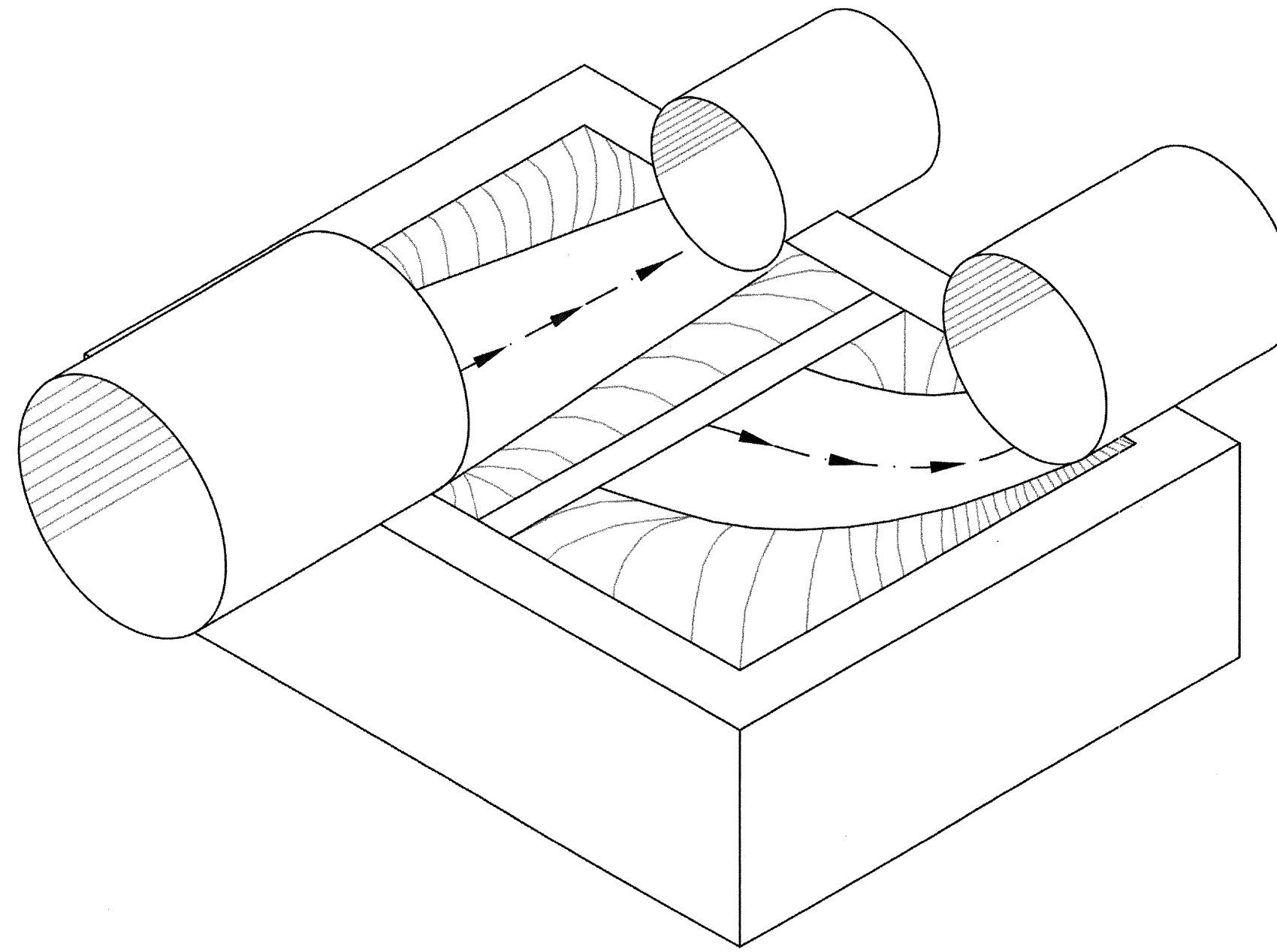
Designed by RAS Job No. 35-13648-0042 Sht. 7 of 11  
 Drawn by EMH Date March, 2013

**SHAPING DETAILS**  
SIPHON STRUCTURE NO 1



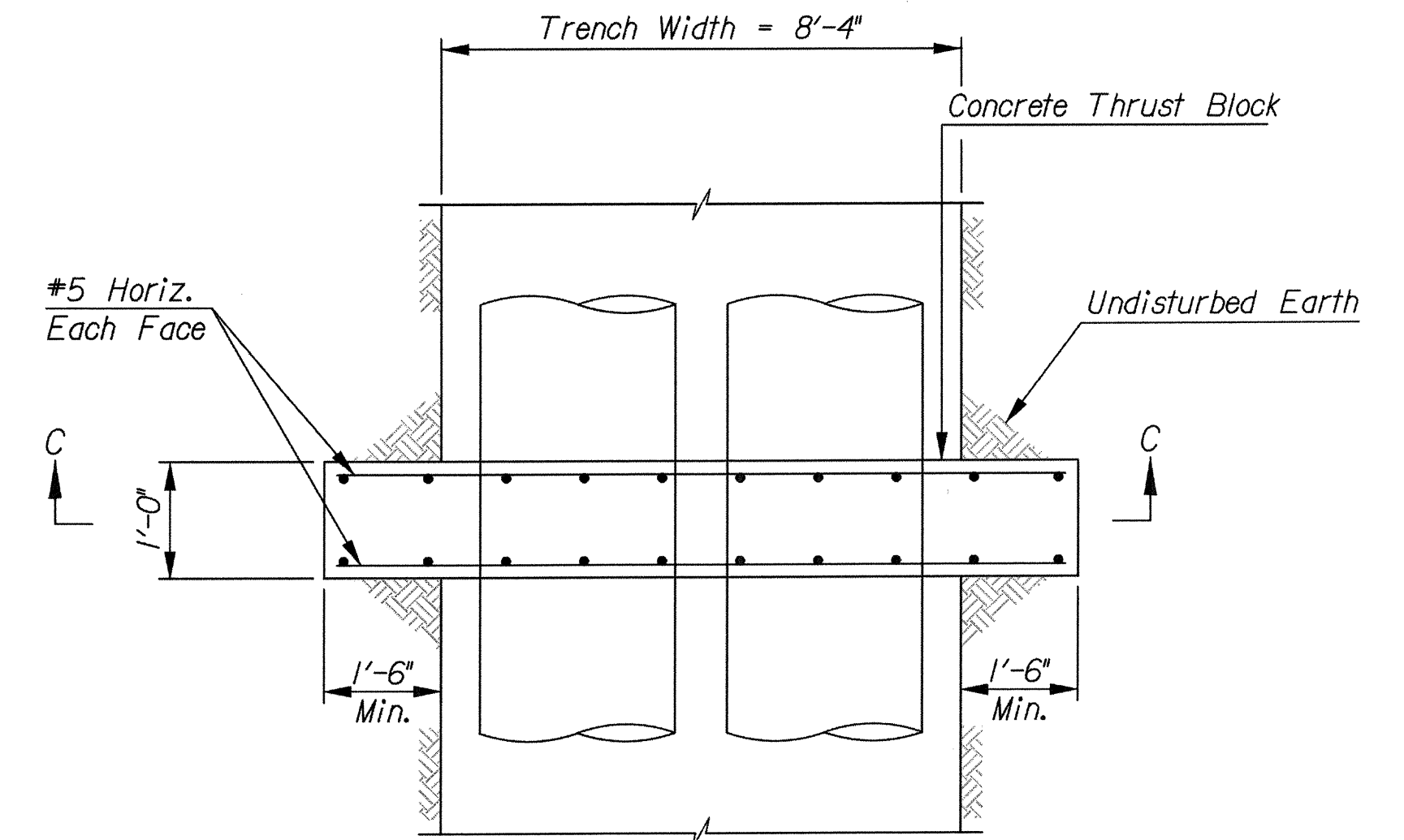
PLAN - FLOOR

Note: Use 4000 p.s.i. compressive strength concrete throughout.  
In general, pipes will enter and leave manhole at various positions. Where possible bend bars around pipes.  
Floor of manhole shall be shaped as shown with unreinforced concrete.  
The top of the manhole shall be sloped slightly to approximately fit the ground line or other condition as directed by the engineer.  
The contractor has the option of using precast structures as approved by the Engineer.



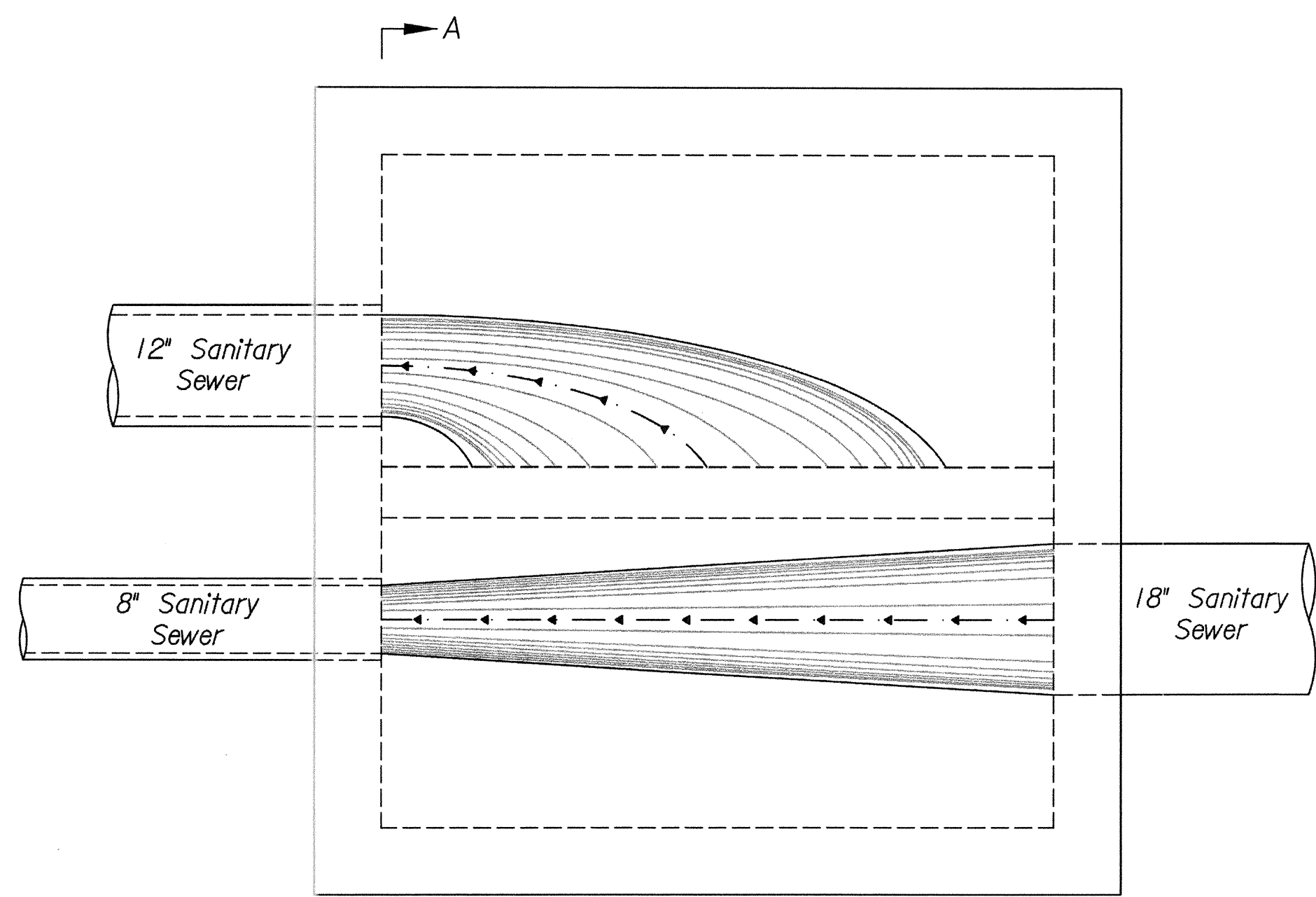
ISOMETRIC VIEW

**CONCRETE THRUST COLLAR DETAIL**

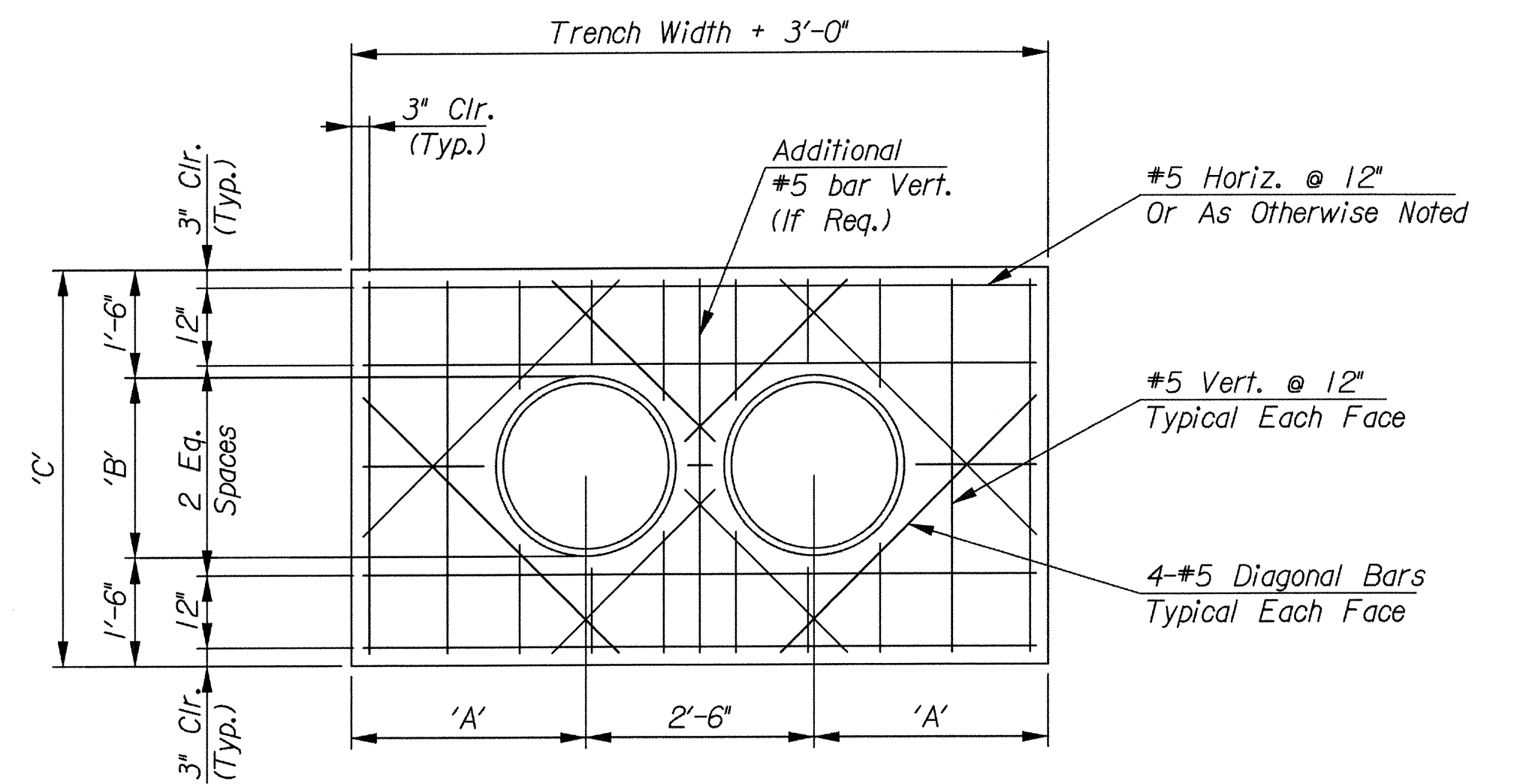


PLAN

**SHAPING DETAILS**  
SIPHON STRUCTURE NO 2



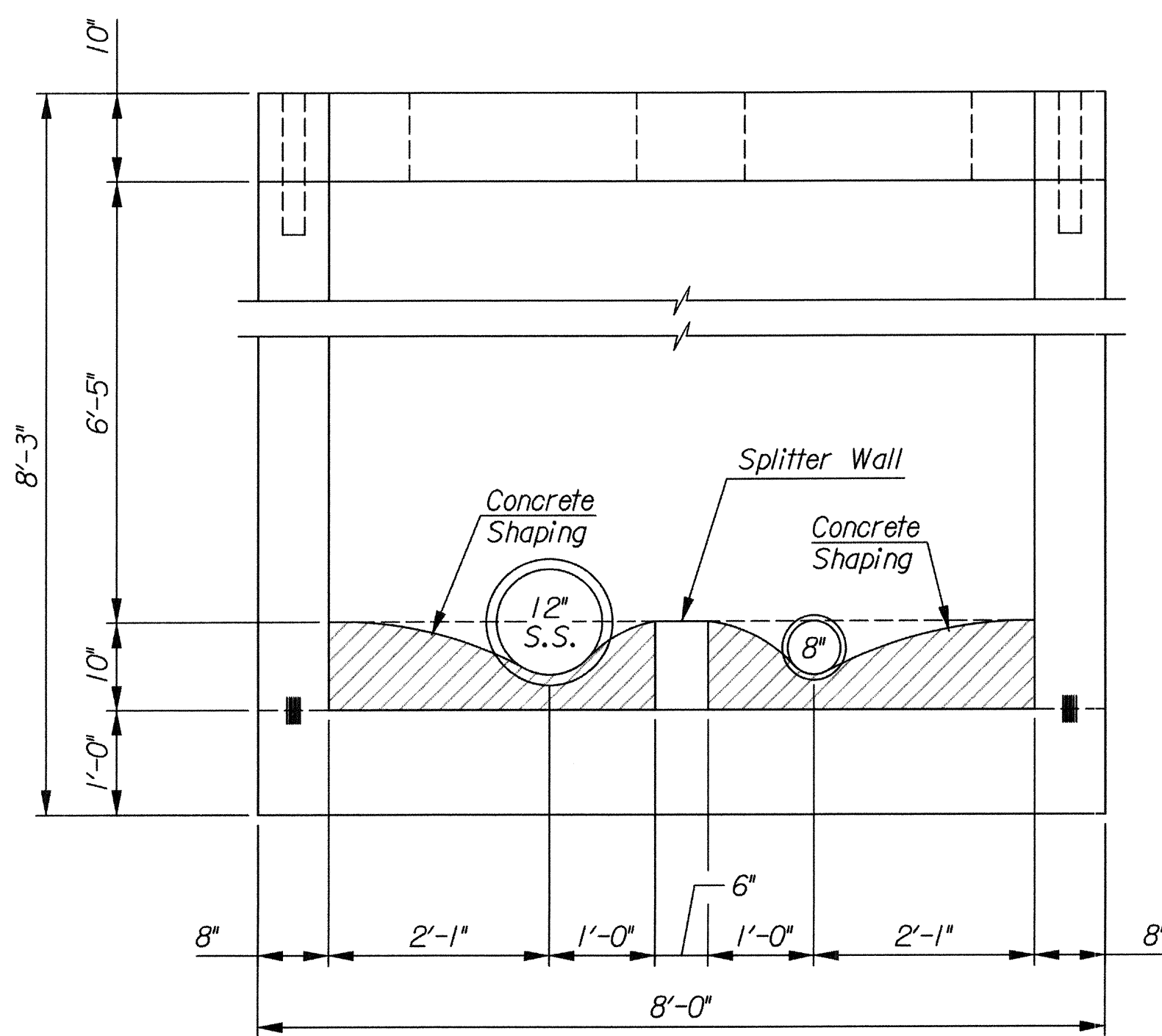
PLAN - FLOOR



SECTION C-C

NOTE: 1 required at Siphon Structure No. 1 and No. 2

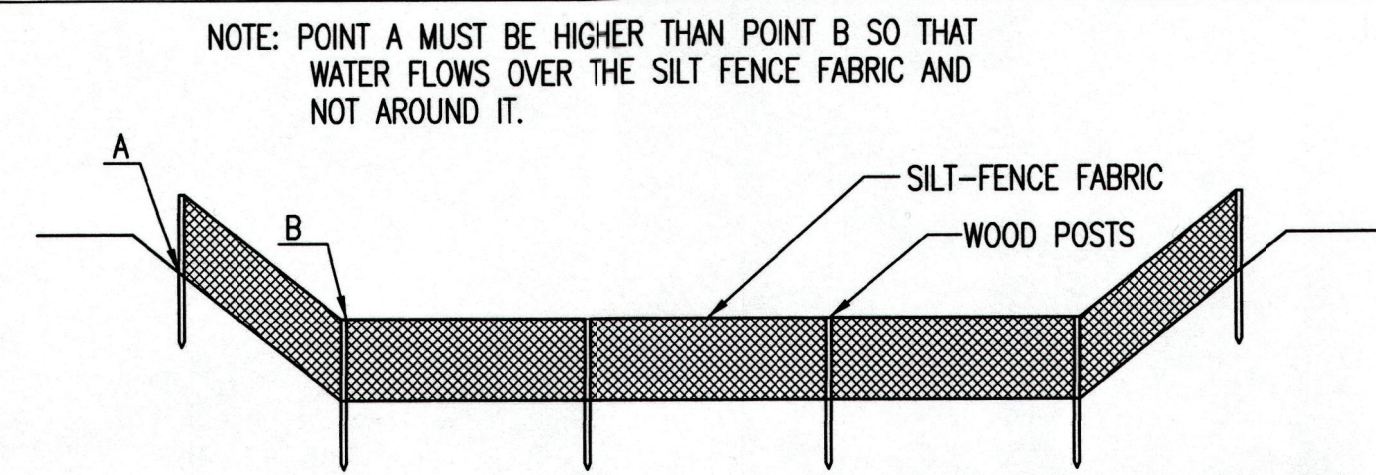
NOTE: Dimension 'A' shall be equal to:  $(Trench\ Width + 3'-0'' - 2'-6'')/2$   
Dimension 'B' shall be equal to: Pipe OD  
Dimension 'C' shall be equal to: Pipe OD + 3'-0''



SECTION VIEW A-A

Plotted By: \$USERNAME\$ Date: \$DATE\$ \$TIME\$  
FILE: \$FILE\$  
Saved: 02-02-2016 3:17:21 PM by CSL  
Plot Scale: 1:1,3333 02-02-2016 3:22:11 PM by CSL  
J:\S\N\OUT\2013\13648\2016-02-02 to City (Tom Mason)\DWG\13648-008-Shaping and Collar Details

|             |   |   |               |              |
|-------------|---|---|---------------|--------------|
|             | Revision  |   | By            | Date         |
|             | REPLACEMENT OF THE<br>RIVERSIDE PARK SIPHON ACROSS THE LITTLE ARKANSAS RIVER<br><b>SHAPING AND COLLAR DETAILS</b><br>GARY JANZEN, P.E. - CITY ENGINEER<br>CITY OF WICHITA PROJECT NO. 468-84936 |   |               |              |
|             |   | PROFESSIONAL ENGINEERING CONSULTANTS, P.A.<br>303 SOUTH TOPEKA WICHITA, KS 67202<br>316-262-2691 www.pec1.com |               |              |
| Designed by | RAS   | Job No.   | 35-13648-0042 | Sht. 8 of 11 |
| Drawn by    | EMH   | Date  | March, 2013   |              |



**ELEVATION**  
**SILT FENCE DITCH CHECKS**  
(STREAM PROTECTION)

**MATERIAL SPECIFICATION:**

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION. THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. SILT FENCE FABRIC SHOULD BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

**PLACEMENT:**

PLACE SILT FENCE IN DITCHES WHERE IT IS UNLIKELY THAT IT WILL BE OVERTOPPED. WATER SHOULD FLOW THROUGH A SILT FENCE DITCH CHECK, NOT OVER IT. SILT FENCE DITCH CHECKS OFTEN FAIL WHEN OVERTOPPED. SILT FENCE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH. THE SILT FENCE SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE FENCE IS HIGHER THAN THE TOP OF THE LOW POINT OF THE FENCE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK. SILT FENCE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED. ROCK CHECKS SHOULD BE USED INSTEAD. SILT FENCE SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED.

THE FOLLOWING TABLE PROVIDES CHECK SPACING FOR A GIVEN DITCH GRADE:

| DITCH CHECK GRADE (%) | SPACING CHECK SPACING (FEET) |
|-----------------------|------------------------------|
| 0.5                   | 200                          |
| 1.0                   | 200                          |
| 2.0                   | 100                          |
| 3.0                   | 65                           |
| 4.0                   | 50                           |
| 5.0                   | 40                           |
| 6.0                   | 30                           |

**PROPER INSTALLATION METHOD:**

EXCAVATE A TRENCH PERPENDICULAR TO THE DITCH FLOWLINE THAT IS AT LEAST 12" DEEP BY 6" WIDE. EXTEND THE TRENCH IN A STRAIGHT LINE ALONG THE ENTIRE LENGTH OF THE PROPOSED DITCH CHECK. PLACE THE SOIL ON THE UPSTREAM SIDE OF THE TRENCH FOR LATER USE. ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC ON THE DOWNSTREAM SIDE OF THE TRENCH. PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSTREAM EDGE OF THE TRENCH. LINE TWO SIDES OF THE TRENCH WITH THE FABRIC AS SHOWN ON DETAIL. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT FENCE FABRIC SHOULD REMAIN EXPOSED. LAY THE EXPOSED SILT FENCE ON THE UPSTREAM SIDE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSTREAM OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 24". PLACE POSTS NO MORE THAN 4' APART. ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

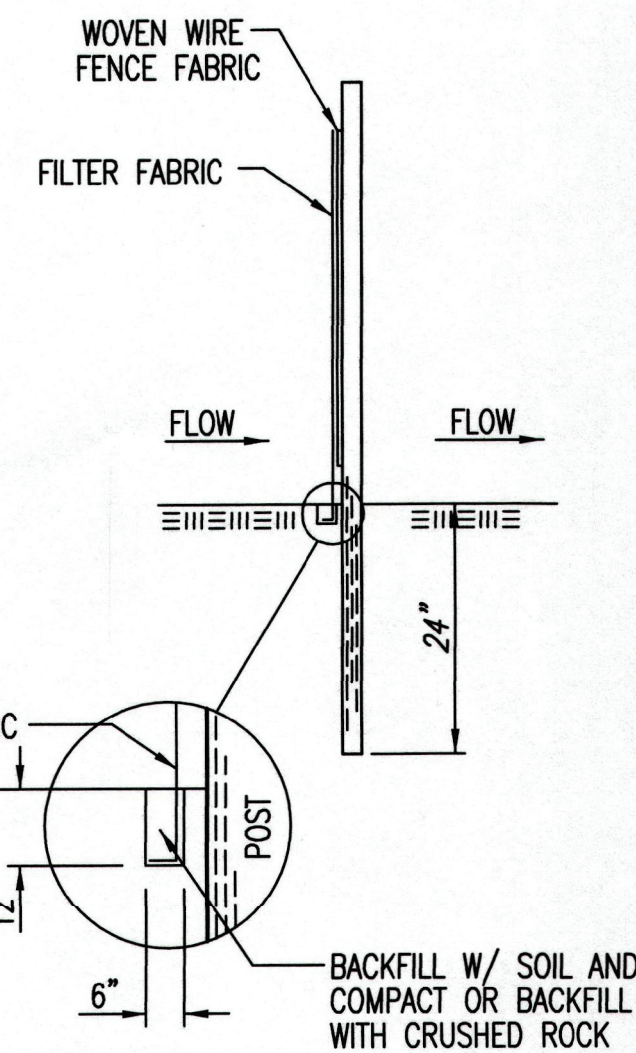
**LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:**

WATER SHOULD FLOW THROUGH A SILT FENCE DITCH CHECK—NOT OVER IT. PLACE SILT FENCE IN DITCHES WHERE IT IS UNLIKELY THAT IT WILL BE OVERTOPPED. SILT FENCE INSTALLATIONS QUICKLY DETERIORATE WHEN WATER OVERTOPS THEM. DO NOT PLACE SILT FENCE POSTS ON THE UPSTREAM SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL. DO NOT PLACE A SILT FENCE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW. DO NOT PLACE SILT FENCE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW. FOLLOW PRESCRIBED DITCH CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS. DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE FENCE IS HIGHER THAN THE LOW POINT ON THE TOP OF THE FENCE. DO NOT PLACE SILT FENCE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.

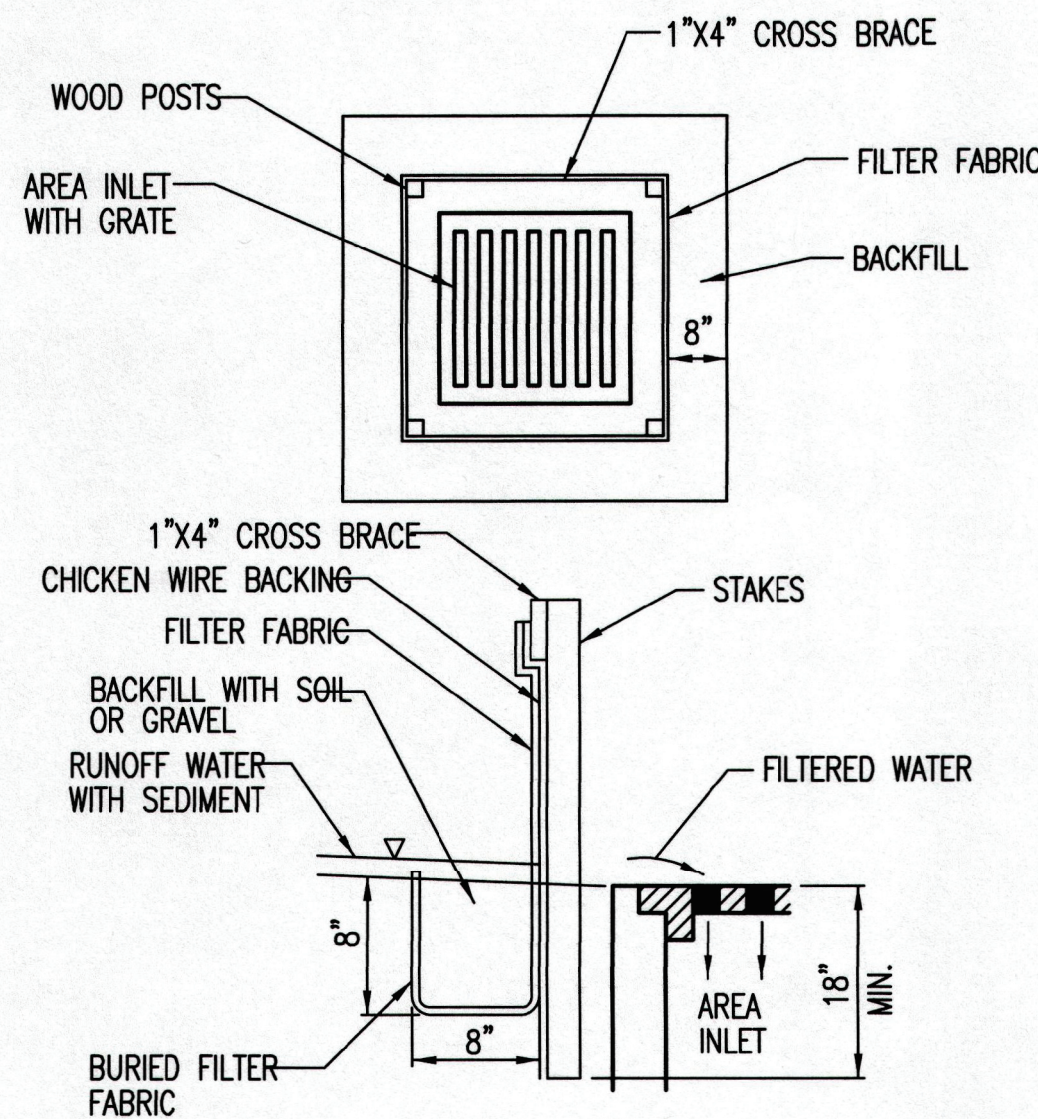
**INSPECTION AND MAINTENANCE:**

SILT FENCE DITCH CHECKS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

- DOES WATER FLOW AROUND THE DITCH CHECK?
- DOES WATER FLOW UNDER THE DITCH CHECK?
- DOES THE SILT FENCE SAG EXCESSIVELY?
- HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
- DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE DITCH CHECK?



**ANCHOR TRENCH DETAIL**



**SILT FENCE BARRIERS FOR AREA INLETS**  
(INLET PROTECTION)

**MATERIAL SPECIFICATION:**

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION. THE WIRE OR POLYMERIC MESH BACKING USED TO HELP SUPPORT THE SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION. THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. THE MATERIAL USED TO FRAME THE TOPS OF THE POSTS SHOULD BE 1" BY 4" BOARDS. SILT FENCE FABRIC AND SUPPORT BACKING SHOULD BE ATTACHED TO THE WOODEN POSTS AND FRAME WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

**PLACEMENT:**

PLACE A SILT FENCE DROP INLET BARRIER IN A LOCATION WHERE IT IS UNLIKELY TO BE OVERTOPPED. WATER SHOULD FLOW THROUGH SILT FENCE, NOT OVER IT. SILT FENCE BARRIERS FOR AREA INLETS OFTEN FAIL WHEN REPEATEDLY OVERTOPPED. WHEN USED AS A BARRIER FOR AREA INLETS, SILT FENCE FABRIC AND POSTS MUST BE SUPPORTED AT THE TOP BY A WOODEN FRAME. WHEN A SILT FENCE BARRIER FOR AREA INLETS IS LOCATED NEAR AN INLET THAT HAS STEEP APPROACH SLOPES, THE STORAGE CAPACITY BEHIND THE BARRIER IS DRASTICALLY REDUCED. TIMELY REMOVAL OF SEDIMENT MUST OCCUR FOR A BARRIER TO OPERATE PROPERLY IN THIS LOCATION.

**PROPER INSTALLATION METHOD:**

EXCAVATE A TRENCH AROUND THE PERIMETER OF THE AREA INLET THAT IS AT LEAST 8" DEEP BY 8" WIDE. DRIVE POSTS TO A DEPTH OF AT LEAST 18" AROUND THE PERIMETER OF THE AREA INLET. THE DISTANCE BETWEEN POSTS SHOULD BE 4' OR LESS. IF THE DISTANCE BETWEEN TWO ADJACENT CORNER POSTS IS MORE THAN 4', ADD ANOTHER POST(S) BETWEEN THEM. CONNECT THE TOPS OF ALL THE POSTS WITH A WOODEN FRAME MADE OF 1" BY 4" BOARDS. USE NAILS OR SCREWS FOR FASTENING. ATTACH THE WIRE OR POLYMERIC-MESH BACKING TO THE OUTSIDE OF THE POST/FRAME STRUCTURE WITH STAPLES, WIRE, ZIP TIES, OR NAILS. ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC LONG ENOUGH TO WRAP AROUND THE PERIMETER OF THE AREA INLET. ADD MORE LENGTH FOR OVERLAPPING THE FABRIC JOINT. PLACE THE EDGE OF THE FABRIC IN THE TRENCH, STARTING AT THE OUTSIDE EDGE OF THE TRENCH. LINE ALL THREE SIDES OF THE TRENCH WITH THE FABRIC. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT FENCE FABRIC SHOULD REMAIN EXPOSED. ATTACH THE SILT FENCE TO THE OUTSIDE OF THE POST/FRAME STRUCTURE WITH STAPLES, WIRE, ZIP TIES, OR NAILS. THE JOINT SHOULD BE OVERLAPPED TO THE NEXT POST.

NOTE: WHEN A SILT FENCE BARRIER FOR AREA INLET IS PLACED IN A SHALLOW MEDIAN DITCH, MAKE SURE THAT THE TOP OF THE BARRIER IS NOT HIGHER THAN THE PAVED ROAD. IN THIS CONFIGURATION, WATER MAY SPREAD ONTO THE ROADWAY CAUSING A HAZARDOUS CONDITION.

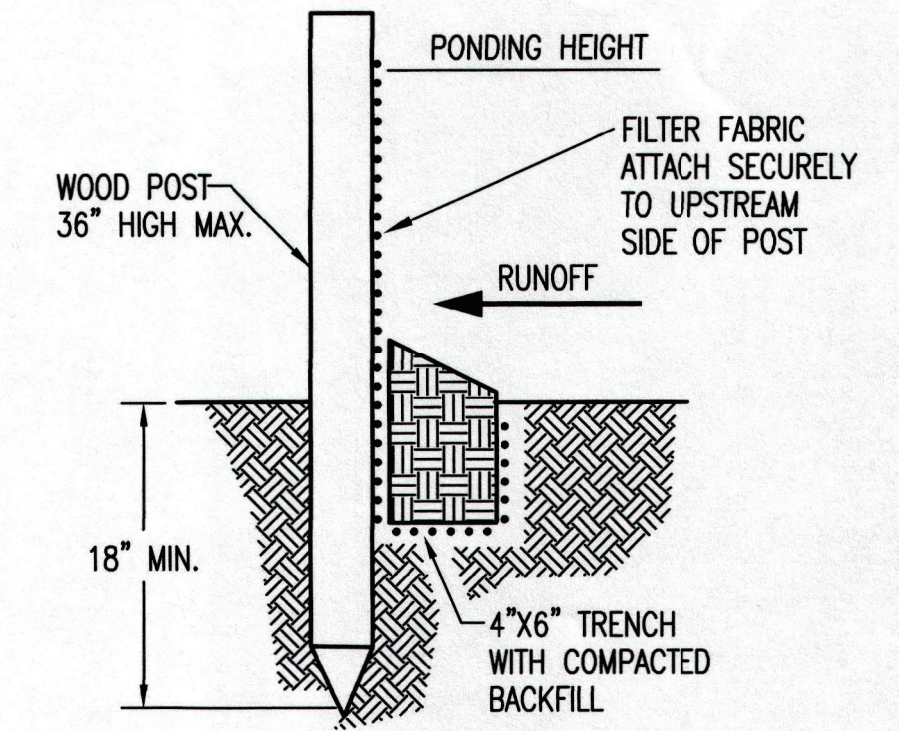
**LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:**

WATER SHOULD FLOW THROUGH A SILT FENCE BARRIER FOR AREA INLET—NOT OVER IT. PLACE A SILT FENCE BARRIER FOR AREA INLET IN A LOCATION WHERE IT IS UNLIKELY TO BE OVERTOPPED. SILT FENCE BARRIER FOR AREA INLETS OFTEN FAIL WHEN REPEATEDLY OVERTOPPED. DO NOT PLACE POSTS ON THE OUTSIDE OF THE SILT FENCE BARRIER FOR AREA INLET. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL. DO NOT INSTALL SILT FENCE BARRIER FOR AREA INLETS WITHOUT FRAMING THE TOP OF THE POSTS. THE CORNER POSTS AROUND AREA INLETS ARE STRESSED IN TWO DIRECTIONS WHEREAS A NORMAL SILT FENCE IS ONLY STRESSED IN ONE DIRECTION. THIS ADDED STRESS REQUIRES MORE SUPPORT.

**INSPECTION AND MAINTENANCE:**

SILT FENCE BARRIER FOR AREA INLETS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

- DOES WATER FLOW UNDER THE SILT FENCE?
- DOES THE SILT FENCE SAG EXCESSIVELY?
- HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
- DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE AREA INLET BARRIER?



**SILT FENCE BARRIERS**

**MATERIAL SPECIFICATION:**

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION. THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. SILT FENCE FABRIC SHOULD BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

**PLACEMENT:**

A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT. WHEN PRACTICABLE, SILT FENCE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. SILT FENCE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT-OF-WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

**PROPER INSTALLATION METHOD:**

EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 6" DEEP BY 4" WIDE. MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE. ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC ON THE DOWNSLOPE SIDE OF THE TRENCH. PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSLOPE EDGE. LINE ALL THREE SIDES OF THE TRENCH WITH THE FABRIC. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT-FENCE FABRIC SHOULD REMAIN EXPOSED. LAY THE EXPOSED SILT FENCE UPSLOPE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSLOPE OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 18". PLACE POSTS NO MORE THAN 4' APART. ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

**LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:**

WHEN PRACTICABLE, DO NOT PLACE SILT FENCE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. WHEN THE FLOW CONCENTRATES, IT OVERTOPS THE BARRIER AND THE SILT FENCE SLOPE BARRIER QUICKLY DETERIORATES. DO NOT PLACE SILT-FENCE POSTS ON THE UPSLOPE SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL. DO NOT PLACE SILT FENCE SLOPE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT SUFFICIENTLY ANCHORED, IT WILL WASH OUT. SILT FENCE SLOPE BARRIERS MUST BE DUG INTO THE GROUND—SILT FENCE AT GROUND LEVEL DOES NOT WORK BECAUSE WATER WILL FLOW UNDERNEATH.

**INSPECTION AND MAINTENANCE:**

SILT FENCE SLOPE BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

- ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?
- DOES WATER FLOW UNDER THE SLOPE BARRIER?
- DO THE SILT FENCES SAG EXCESSIVELY?
- HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
- DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?

REVISION DATE: MAY 2013



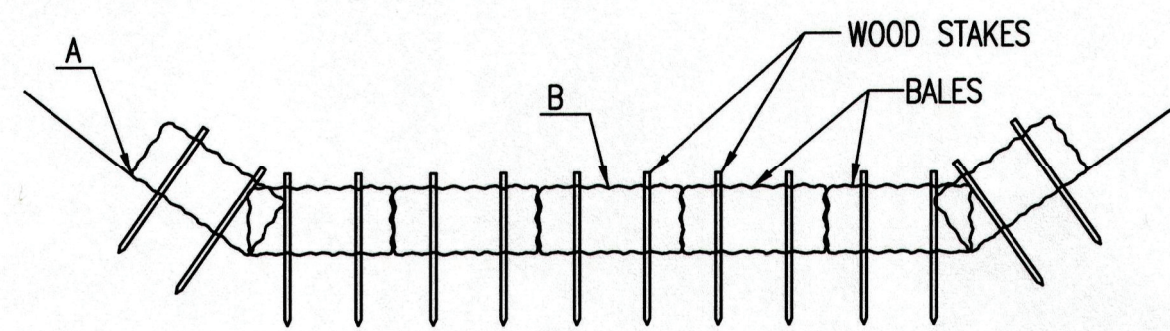
**SILT FENCE DITCH CHECK AND BARRIER DETAILS**

CITY ENGINEER  
**GARY JANZEN, P.E.**

|                             |                      |      |
|-----------------------------|----------------------|------|
| PROJECT NUMBER<br>468-84936 | OCA NUMBER<br>620724 | DATE |
|-----------------------------|----------------------|------|

|  |                         |
|--|-------------------------|
| CITY ENGINEER'S OFFICE<br>CITY HALL - SEVENTH FLOOR<br>455 NORTH MAIN STREET<br>WICHITA, KANSAS 67202-1620<br>(316) 268-4501 | SHEET<br><b>9 of 11</b> |
|--|-------------------------|

NOTE: POINT A MUST BE HIGHER THAN POINT B SO THAT WATER FLOWS OVER THE BALES AND NOT AROUND THEM.



**STRAW BALE DITCH CHECKS**

**MATERIAL SPECIFICATION:**

BALE DITCH CHECKS MAY BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE. THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. OPTIONAL: THE DOWNSTREAM SCOUR APRON SHOULD BE CONSTRUCTED OF A DOUBLE-NETTED STRAW EROSION-CONTROL BLANKET AT LEAST 6' WIDE. OPTIONAL: THE METAL LANDSCAPE STAPLES USED TO ANCHOR THE EROSION-CONTROL BLANKET SHOULD BE AT LEAST 8" LONG.

**PLACEMENT:**

BALE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH. THE DITCH CHECK SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK. STRAW BALE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED. ROCK CHECKS SHOULD BE USED INSTEAD. BALES SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED. THE FOLLOWING TABLE PROVIDES CHECK SPACING FOR A GIVEN DITCH GRADE:

| DITCH CHECK SPACING | DITCH GRADE (%) | CHECK SPACING (FEET) |
|---------------------|-----------------|----------------------|
| 0.5                 | 200             |                      |
| 1.0                 | 200             |                      |
| 2.0                 | 100             |                      |
| 3.0                 | 65              |                      |
| 4.0                 | 50              |                      |
| 5.0                 | 40              |                      |
| 6.0                 | 30              |                      |

**PROPER INSTALLATION METHOD:**

EXCAVATE A TRENCH PERPENDICULAR TO THE DITCH FLOWLINE THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. EXTEND THE TRENCH IN A STRAIGHT LINE ALONG THE ENTIRE LENGTH OF THE PROPOSED DITCH CHECK. PLACE THE SOIL ON THE UPSTREAM SIDE OF THE TRENCH—IT WILL BE USED LATER. OPTIONAL: ON THE DOWNSTREAM SIDE OF THE TRENCH, ROLL OUT A LENGTH OF EROSION-CONTROL BLANKET (SCOUR APRON) EQUAL TO THE LENGTH OF THE TRENCH. PLACE THE UPSTREAM EDGE OF THE EROSION-CONTROL BLANKET ALONG THE BOTTOM UPSTREAM EDGE OF THE TRENCH. THE EROSION CONTROL BLANKET SHOULD BE ANCHORED IN THE TRENCH WITH ONE ROW OF 8" LANDSCAPE STAPLES PLACED ON 18" CENTERS. THE REMAINDER OF THE EROSION-CONTROL BLANKET (THE PORTION THAT IS NOT LYING IN THE TRENCH) WILL SERVE AS THE DOWNSTREAM SCOUR APRON. THIS SECTION OF THE BLANKET SHOULD BE ANCHORED TO THE GROUND WITH 8" LANDSCAPE STAPLES PLACED AROUND THE PERIMETER OF THE BLANKET ON 18" CENTERS. THE REMAINDER OF THE BLANKET SHOULD BE ANCHORED USING TWO EVENLY SPACED ROWS OF 8" LANDSCAPE STAPLES ON 18" CENTERS PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH. PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND. ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSTREAM SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP AND EXTEND UPSTREAM NO MORE THAN 24".

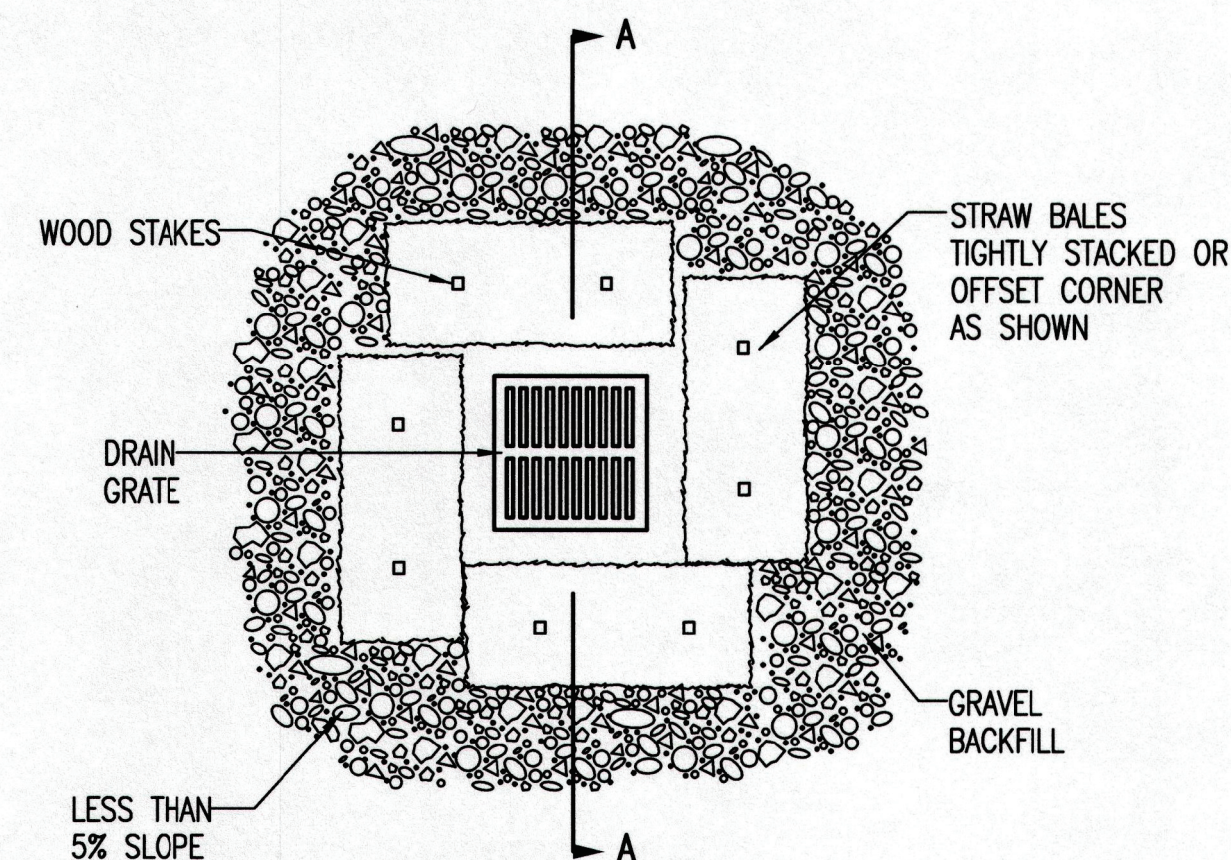
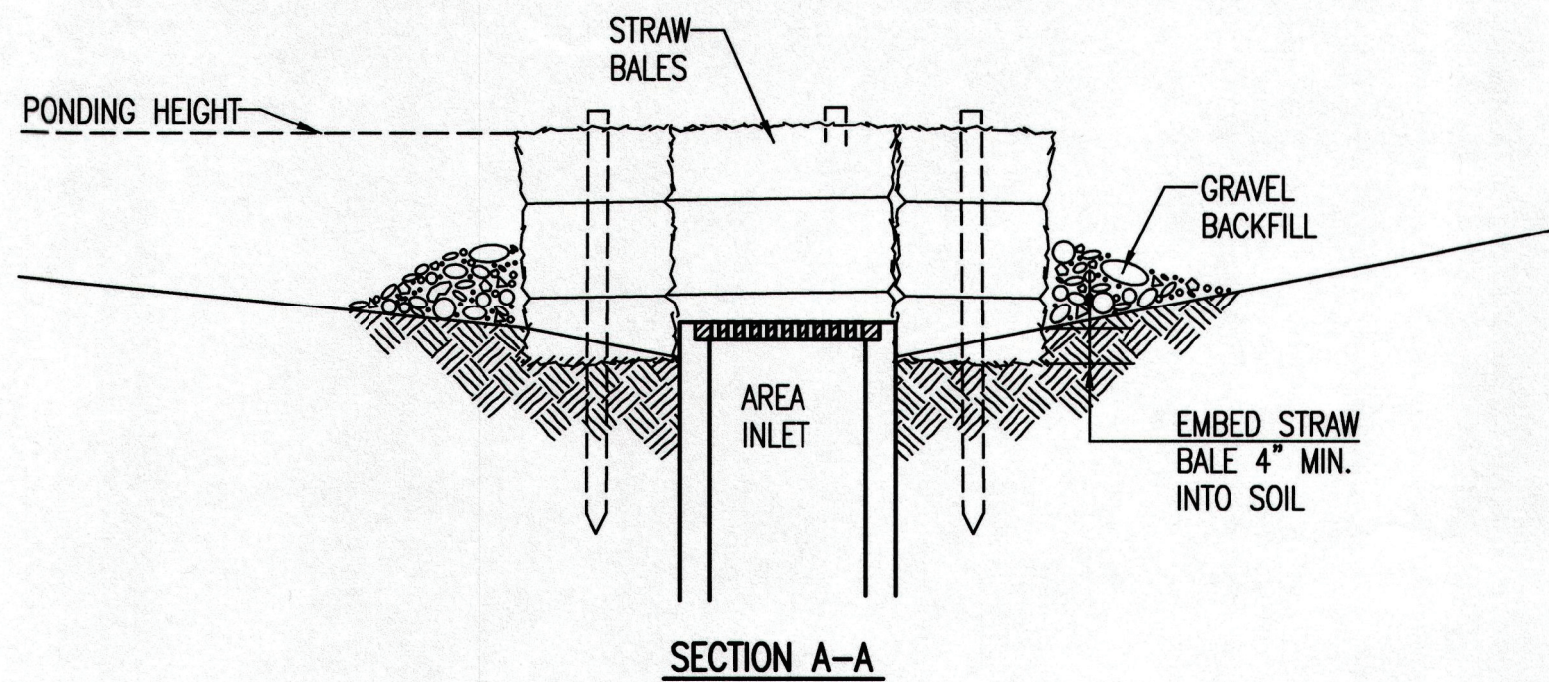
**LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:**

DO NOT PLACE A BALE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW. DO NOT PLACE BALE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW. FOLLOW PRESCRIBED DITCH-CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS. DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE. DO NOT PLACE BALE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT. BALE DITCH CHECKS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE CHECK.

**INSPECTION AND MAINTENANCE:**

BALE DITCH CHECKS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

- DOES WATER FLOW AROUND THE DITCH CHECK?
- DOES WATER FLOW UNDER THE DITCH CHECK?
- DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
- ARE ANY BALES AND/OR SCOUR APRONS (OPTIONAL) DISLODGED?
- ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
- DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE DITCH CHECK?



**STRAW BALE BARRIERS FOR AREA INLETS (INLET PROTECTION)**

**MATERIAL SPECIFICATION:**

BALE AREA INLET BARRIERS SHOULD BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE. THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. TWINE SHOULD BE USED TO BIND BALES. THE USE OF WIRE BINDING IS PROHIBITED BECAUSE IT DOES NOT BIODEGRADE READILY.

**PLACEMENT:**

BALE AREA INLET BARRIERS SHOULD BE PLACED DIRECTLY AROUND THE PERIMETER OF A DROP INLET. WHEN A BALE AREA INLET BARRIER IS LOCATED NEAR AN INLET THAT HAS STEEP APPROACH SLOPES, THE STORAGE CAPACITY BEHIND THE BARRIER IS DRASTICALLY REDUCED. TIMELY REMOVAL OF SEDIMENT MUST OCCUR FOR A BARRIER TO OPERATE PROPERLY IN THIS LOCATION.

**PROPER INSTALLATION METHOD:**

EXCAVATE A TRENCH AROUND THE PERIMETER OF THE AREA INLET THAT IS AT LEAST 4" DEEP BY A BALE'S WIDTH WIDE. PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. SOME BALES MAY NEED TO BE SHORTENED TO FIT INTO THE TRENCH AROUND THE AREA INLET. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND. ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE RECEIVING SIDE OF THE BARRIER AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP. NOTE: WHEN A BALE AREA INLET BARRIER IS PLACED IN A SHALLOW MEDIAN DITCH, MAKE SURE THAT THE TOP OF THE BARRIER IS NOT HIGHER THAN THE PAVED ROAD. IN THIS CONFIGURATION, WATER MAY SPREAD ONTO THE ROADWAY CAUSING A HAZARDOUS CONDITION.

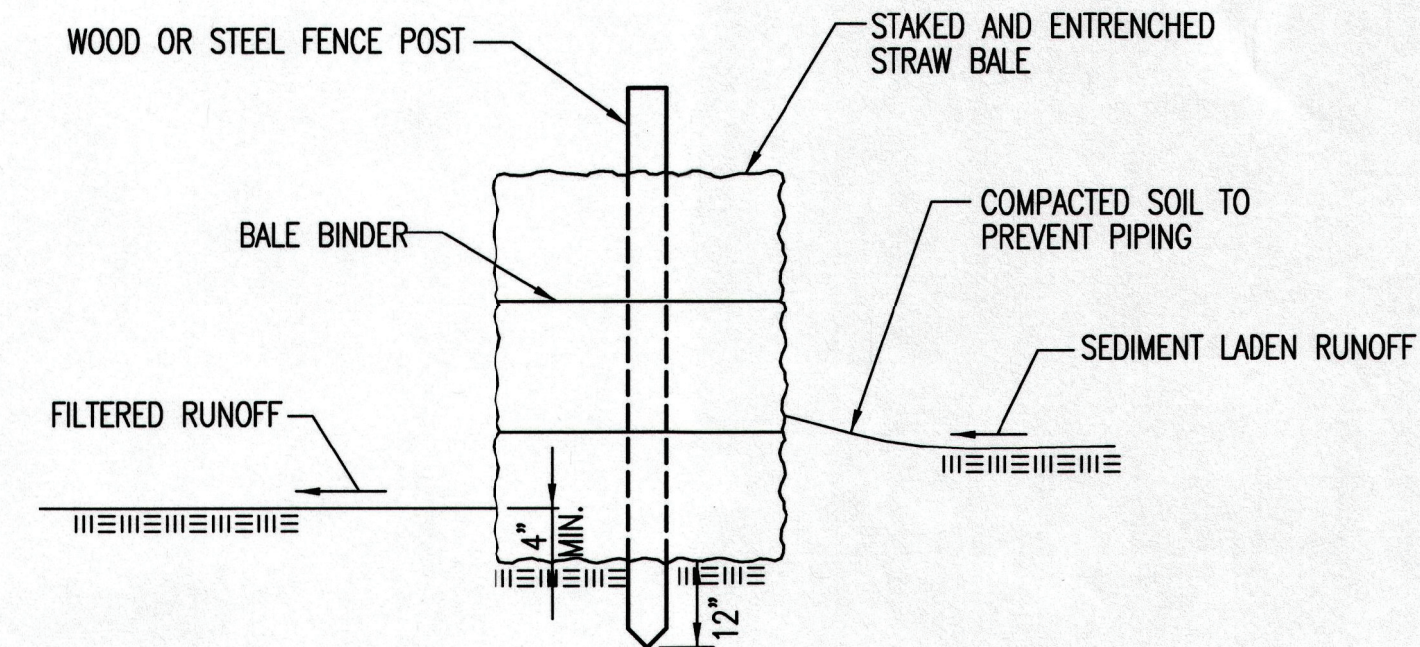
**LIST OF COMMON PLACEMENT INSTALLATION MISTAKES TO AVOID:**

BALES SHOULD BE PLACED DIRECTLY AGAINST THE PERIMETER OF THE AREA INLET. THIS ALLOWS OVERTOPPING WATER TO FLOW DIRECTLY INTO THE INLET INSTEAD OF ONTO NEARBY SOIL CAUSING SCOUR. BALE AREA INLET BARRIERS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE BARRIER.

**INSPECTION AND MAINTENANCE:**

BALE AREA INLET BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

- DOES WATER FLOW UNDER THE AREA INLET BARRIER?
- DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
- ARE ANY BALES DISLODGED?
- ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
- DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE AREA INLET BARRIER?



**STRAW BALE BARRIERS**

**MATERIAL SPECIFICATION:**

BALE SLOPE BARRIERS MAY BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE. THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG. TWINE SHOULD BE USED TO BIND BALES. THE USE OF WIRE BINDING IS PROHIBITED BECAUSE IT DOES NOT BIODEGRADE READILY.

**PLACEMENT:**

A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT. WHEN PRACTICABLE, BALE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. BALE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT-OF-WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

**PROPER INSTALLATION METHOD:**

EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE. PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND. ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSLOPE SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP.

**LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:**

WHEN PRACTICAL, DO NOT PLACE BALE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. CONCENTRATED FLOW OVER A SLOPE BARRIER CREATES A SCOUR HOLE ON THE DOWNSLOPE SIDE OF THE BARRIER. THE SCOUR HOLE EVENTUALLY UNDERMINES THE BALES AND THE BARRIER FAILS. DO NOT PLACE BALE SLOPE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT. BALE SLOPE BARRIERS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE BARRIER.

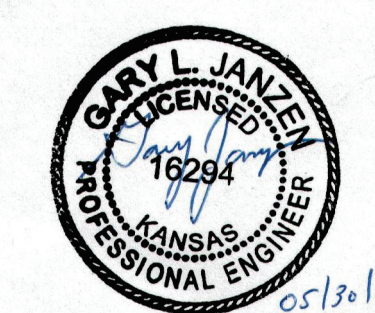
**INSPECTION AND MAINTENANCE:**

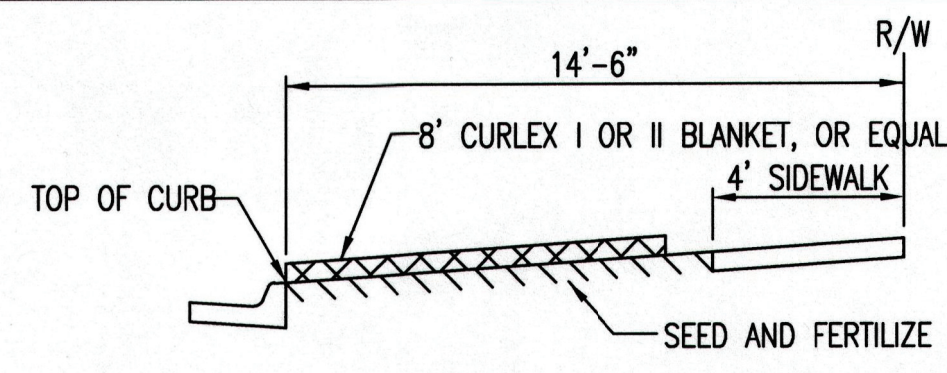
BALE SLOPE BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

- ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?
- DOES WATER FLOW UNDER THE SLOPE BARRIER?
- DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
- ARE ANY BALES DISLODGED?
- ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
- DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?

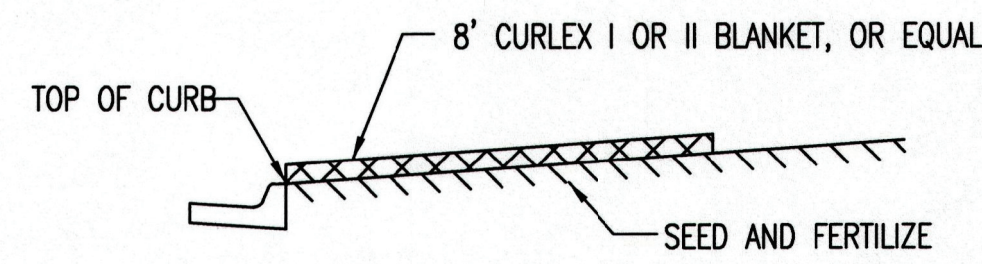
REVISION DATE: MAY 2013

| STRAW BALE DITCH CHECK AND BARRIER DETAILS   |                      |                          |
|--|----------------------|--------------------------|
| CITY ENGINEER<br><b>GARY JANZEN, P.E.</b>  |                      |                          |
| PROJECT NUMBER<br>468-84936  | OCA NUMBER<br>620724 | DATE                     |
| CITY ENGINEER'S OFFICE<br>CITY HALL - SEVENTH FLOOR<br>455 NORTH MAIN STREET<br>WICHITA, KANSAS 67202-1620<br>(316) 268-4501 |                      | SHEET<br><b>10 of 11</b> |



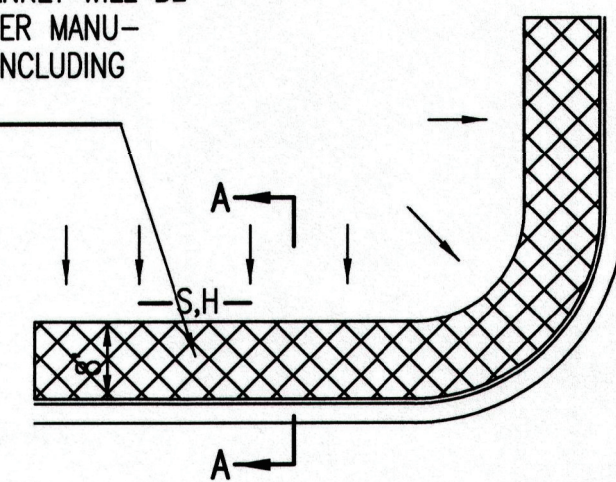


SECTION B-B

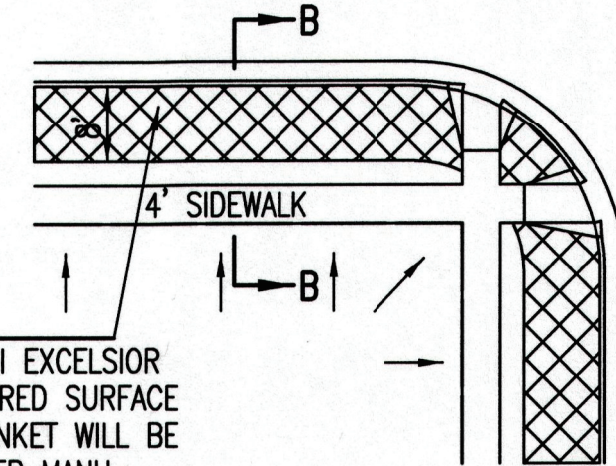


SECTION A-A

INSTALL 8' WIDE CURLEX I OR II EXCELSIOR BLANKET, OR EQUAL, ON PREPARED SURFACE BACK OF CURB. EDGE OF BLANKET WILL BE AT BACK OF CURB. INSTALL PER MANUFACTURERS RECOMMENDATION, INCLUDING STAPLES. (SEE DETAIL)



SOUTH STREET

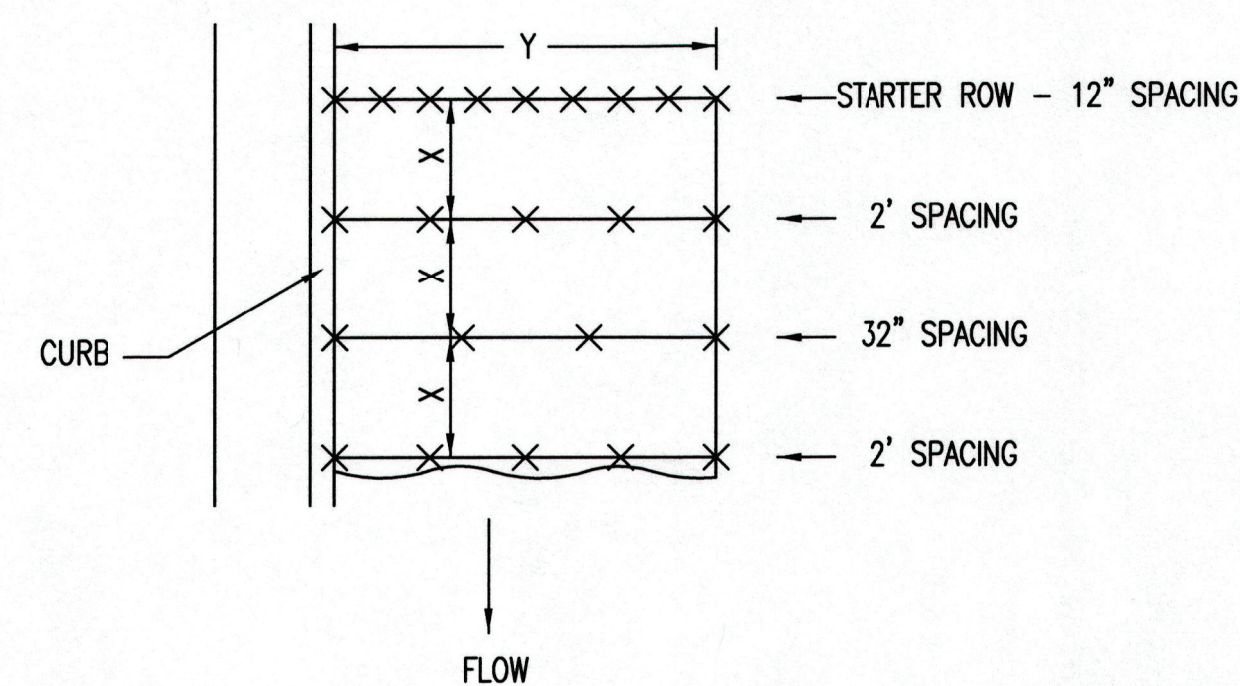


INSTALL 8' WIDE CURLEX I OR II EXCELSIOR BLANKET, OR EQUAL, ON PREPARED SURFACE BACK OF CURB. EDGE OF BLANKET WILL BE AT BACK OF CURB. INSTALL PER MANUFACTURERS RECOMMENDATION, INCLUDING STAPLES. (SEE DETAIL)

**GENERAL NOTES**

- EXCELSIOR MAT TO BE INSTALLED WHEN SOD IS NOT SPECIFIED ON PROJECT.
- EXCELSIOR BLANKET TO BE INSTALLED OVER SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
- AFTER INSTALLATION OF EXCELSIOR BLANKET, AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB AND INTO THE GUTTER, SUPPLEMENTAL EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS NEEDED, TO FIX THE PROBLEM.

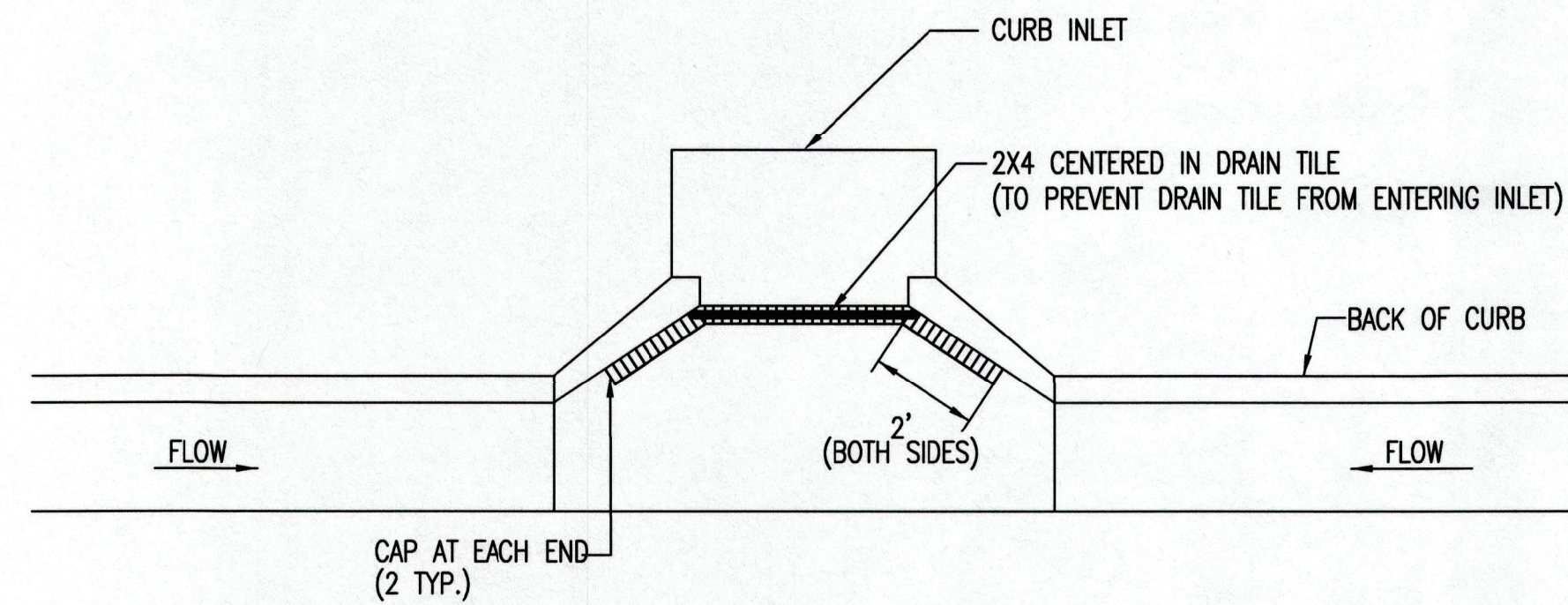
**BACK OF CURB PROTECTION DETAIL**



**STAPLE PATTERN**

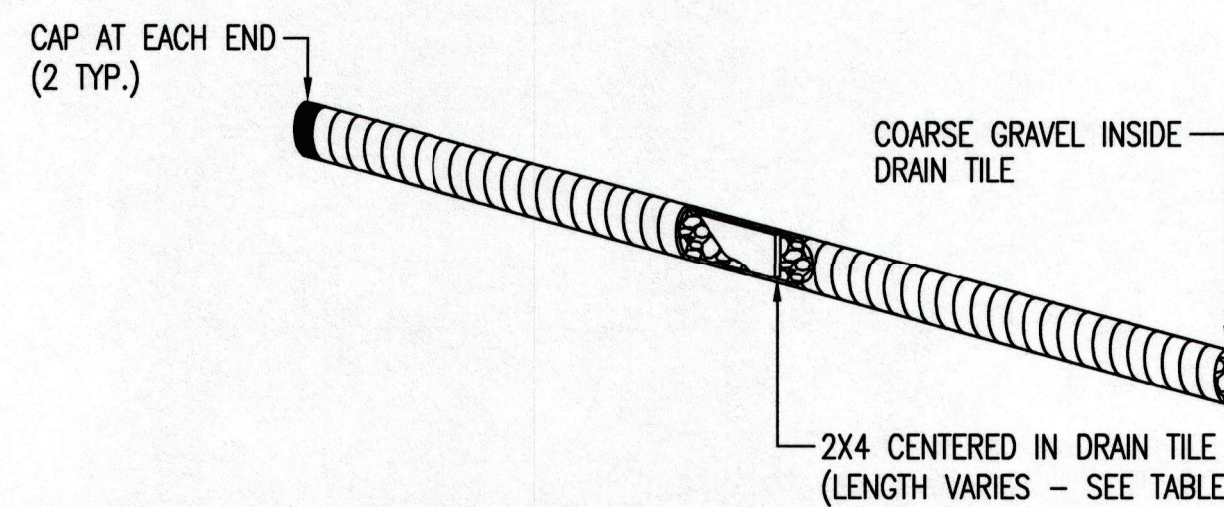
NOTES: USE 6" SEAM OVERLAP  
(X & Y = RECOMMENDED BY MANUFACTURE)

**DETAILS FOR APPROVED EROSION CONTROL MAT**

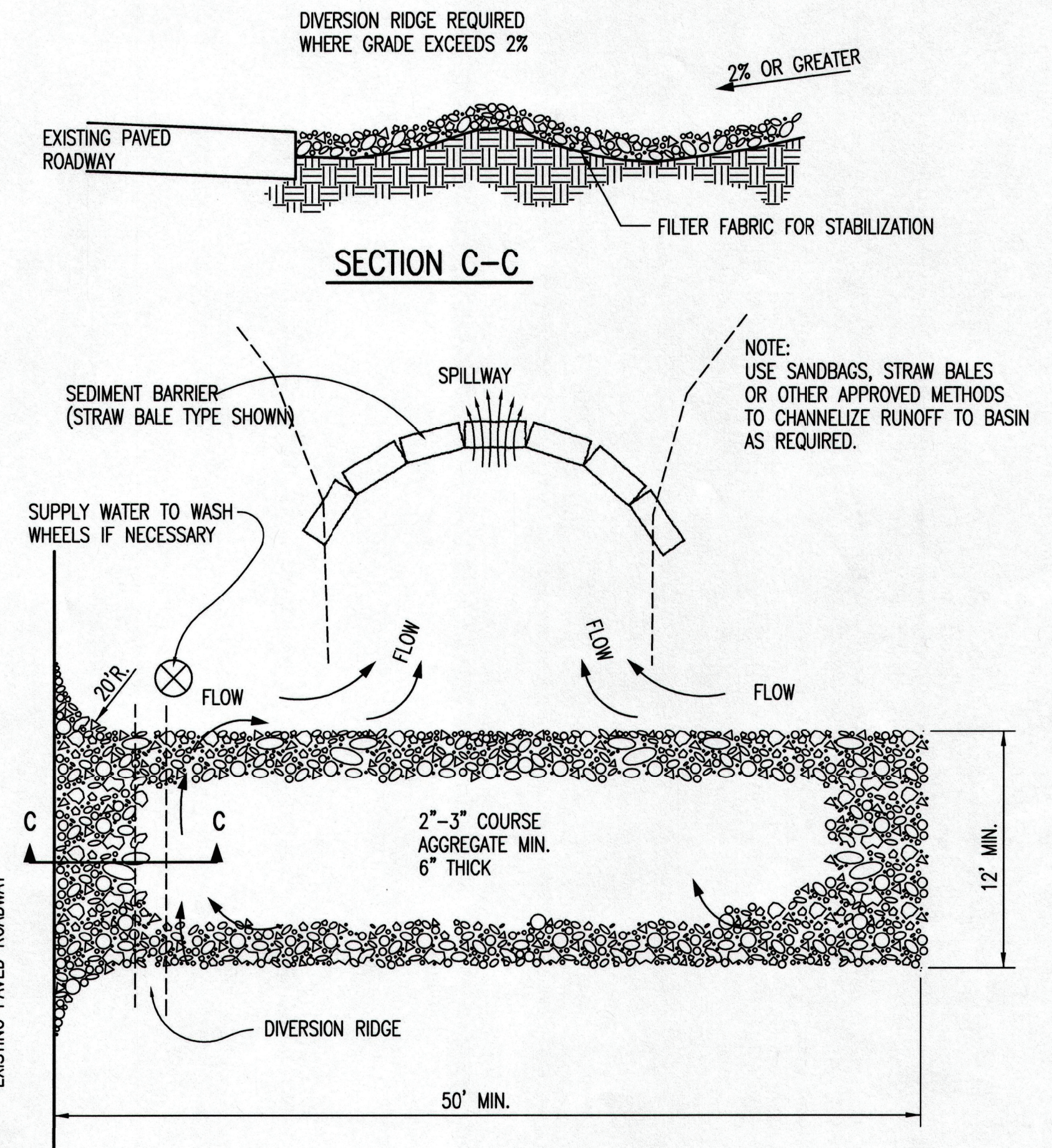


NOTE: PLACE 4" PERFORATED PVC PIPE, FILLED WITH 1/2"-1" DIA. GRAVEL, IN FRONT OF CURB INLET AS SHOWN.

| 2X4 LENGTH | INLET TYPE | INLET OPENING |
|------------|------------|---------------|
| 5'-6"      | 1-A        | 5'-0"         |
| 10'-6"     | 1-A        | 10'-0"        |
| 15'-6"     | 1-A        | 15'-0"        |



**CURB INLET PROTECTION**  
4" PERFORATED PIPE W/ GRAVEL



**STABILIZED CONSTRUCTION ENTRANCE**

**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.

REVISION DATE: MAY 2013



**BACK OF CURB PROTECTION, CURB INLET PROTECTION AND CONSTRUCTION ENTRANCE**

|  |                      |                          |
|--|----------------------|--------------------------|
| CITY ENGINEER<br><b>GARY JANZEN, P.E.</b>  |                      |                          |
| PROJECT NUMBER<br>468-84936  | OCA NUMBER<br>620724 | DATE                     |
| CITY ENGINEER'S OFFICE<br>CITY HALL - SEVENTH FLOOR<br>455 NORTH MAIN STREET<br>WICHITA, KANSAS 67202-1620<br>(316) 268-4501 |                      | SHEET<br><b>11 of 11</b> |



05/30/13