

PRIVATE STORM WATER SEWER
TO SERVE

WSU - PERIMETER ROAD & PEDESTRIAN LINKAGE

PROJECT NO. 0213PPD

THE CITY OF WICHITA, KANSAS
GARY JANZEN, P.E. - CITY ENGINEER

OCA NO. 607861

GENERAL NOTES

- UNLESS SHOWN OR OTHERWISE STATED ON THESE DRAWINGS, MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD SPECIFICATIONS.
- THE TOPS OF INLETS AND MANHOLES AS NOTED ON THE PLANS MAY VARY SO AS TO MEET PROPOSED TOP OF CURB ELEVATIONS OR PAVEMENT ELEVATIONS. THE FIELD ENGINEER SHALL LOCATE INLETS AND MANHOLES WITH REFERENCE TO PROPOSED PAVING PLANS OF THE PERTINENT STREETS.
- ALL CONCRETE SHALL BE STANDARD PAVING MIX UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL NOTIFY UTILITY COMPANIES OF CONSTRUCTION SCHEDULING.
- EXISTING UTILITIES AND THEIR LOCATIONS, AS SHOWN ON THE PLANS REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS COMPANIES AND IS EITHER FROM COMPANY UTILITY DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE PLAN LOCATIONS SHOWN ARE NOT GUARANTEED. ADDITIONAL EXISTING UTILITIES MAY ALSO BE ENCOUNTERED.
- CONTRACTOR WILL BE REQUIRED TO PROVIDE A MINIMUM ADVANCE NOTICE OF SEVENTY-TWO (72) HOURS TO UTILITY COMPANIES TO STARTING ANY EXCAVATION AS FOLLOWS:

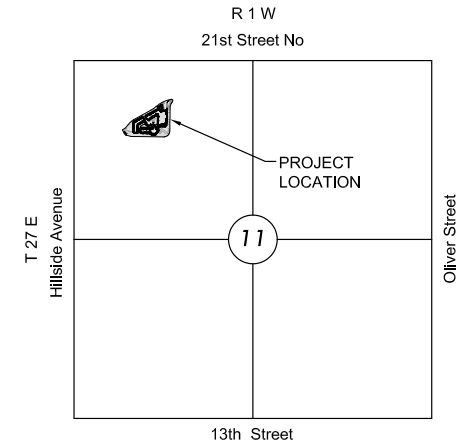
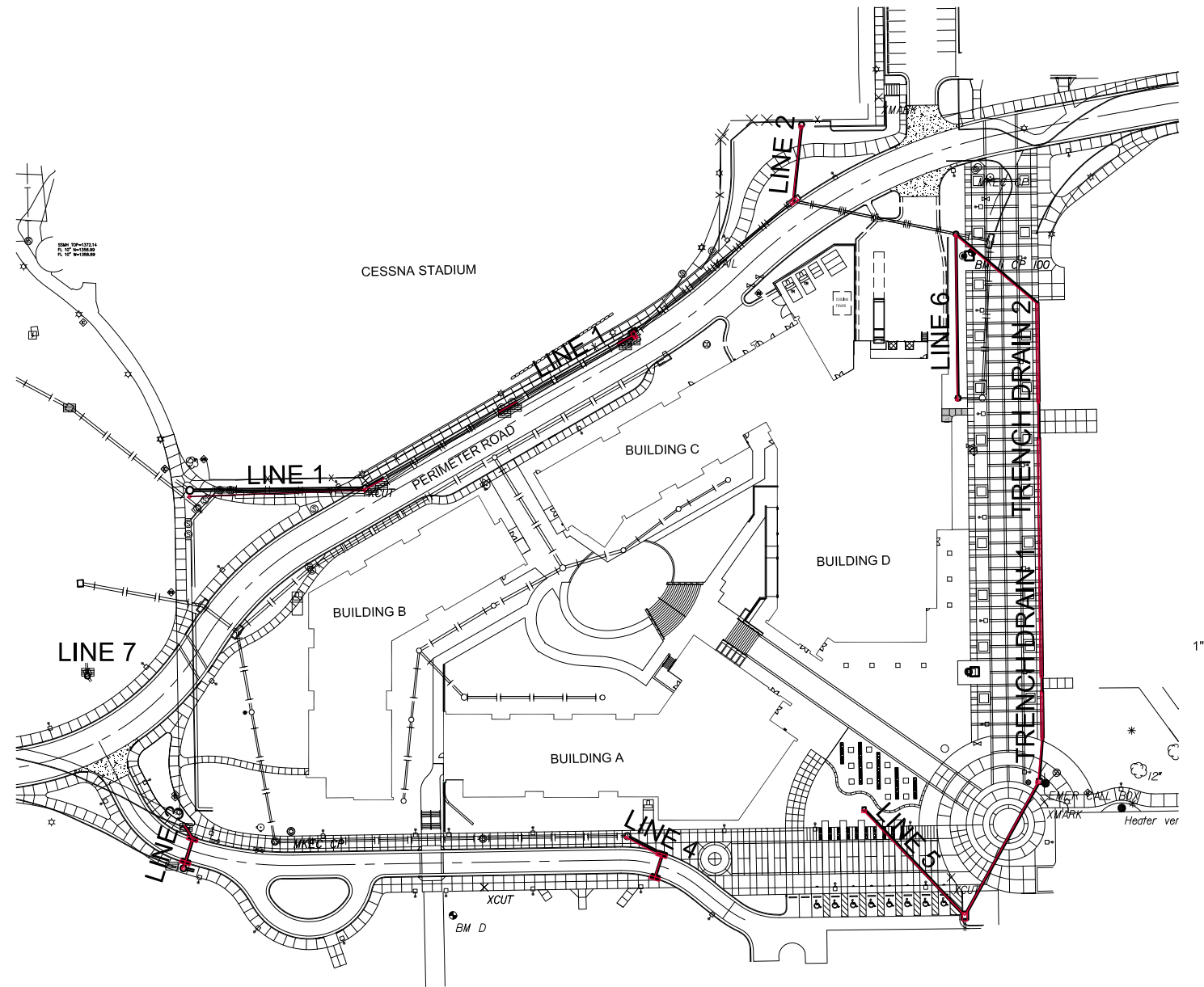
KANSAS ONE-CALL 800-344-7233
OR LOCAL WICHITA 687-2470

THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF EMERGENCY:

COX COMMUNICATIONS (CABLE) 262-0661
WESTAR (ELECTRIC) 383-8600
KANSAS GAS SERVICE (GAS) 832-3101
SBC (TELEPHONE) 800-870-8390
CITY OF WICHITA WATER & SEWER 262-6000
- 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 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 WOULD REQUIRE A KANSAS STATE BOARD OF AGRICULTURE PERMIT. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES OR WETLANDS IS SUBJECT TO U.S. CORPS OF ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS WOULD REQUIRE ADDITIONAL ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.
- CONTRACTOR TO COORDINATE WORK WITH OTHER UTILITY AND/OR PAVING CONTRACTORS ON SITE.
- CONTRACTOR TO REFER TO SWPPP FILED ON SITE FOR EROSION/SEDIMENT CONTROL.
- WORK DONE UNDER THIS PROJECT IS SUBJECT TO THE CITY OF WICHITA REQUIREMENTS FOR "CONSTRUCTION OF INFRASTRUCTURE IMPROVEMENTS BY PRIVATE CONTRACT." THE CONTRACTOR SHALL BE FAMILIAR AND COMPLY WITH ALL OF THE REQUIREMENTS, INCLUDING BONDING, INSPECTION, TESTING, NOTIFICATION, PROVIDING AS-BUILT DRAWINGS, PAYING FOR ALL NECESSARY CONNECTIONS AND/OR STREET REPAIR FEES AND PROVIDING PIPE MATERIAL AND OTHER CERTIFICATIONS.

DISTURBED AREA=6.46 AC.
NEW IMPERVIOUS=(0.67) AC.
EXISTING IMPERVIOUS=5.78 AC.
DETENTION=N/A (LESS THAN 1 AC OF NEW IMPERVIOUS)
WQ_v=0.16 AC.-FT.
CP_v=N/A
THIS OVERALL PROJECT SATISFIES CHAPTER 16.32 OF THE CITY CODE BY THE INSTALLATION OF A PROPRIETARY WATER QUALITY TREATMENT DEVICE. NO DETENTION OR CHANNEL PROTECTION IS REQUIRED.

STORMWATER QUALITY HAS BEEN APPROVED THROUGH CITY PROJECT #0174PPD & STORMWATER ID. NO. SW2013-0019.



VICINITY MAP
No Scale

INDEX TO DRAWINGS

SHEET NO.	DESCRIPTION
42	SWS TITLE SHEET
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50	SWS LINE 2, 3, & 4 PLAN & PROFILE
51	SWS LINE 5 & 7 PLAN & PROFILE
52	T.D. 1 PLAN & PROFILE
53	SWS LINE 6 & T.D. 2 PLAN & PROFILE

APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA,
BY STORMWATER DEPARTMENT

Engineering: *Gene Rath* 1-9-14

Storm Water (Public Works): *Don Dinger* 01/10/14

NOTE TO CONTRACTORS

Public Property:
Inspection and testing for the storm water sewer is to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection to be in accordance with the City of Wichita Standard Construction Engineering Practices and certified by a Professional Engineer licensed in the state of Kansas. No work shall be performed in dedicated easements or public rights-of-way by the Contractor without such inspection, nor shall any work be commenced without written authorization by the City Engineer. All construction and materials shall comply with the City of Wichita Specifications and Standards (on file and available in the City Engineer's Office).

AS-BUILT PLANS - JANUARY 2015

INSPECTED BY: GENE RATH MKEC ENGINEERING
CONSTRUCTED BY: DONDINGER CONSTRUCTION
SUPERINTENDENT: MARK LORENZ, PROJECT MANAGER

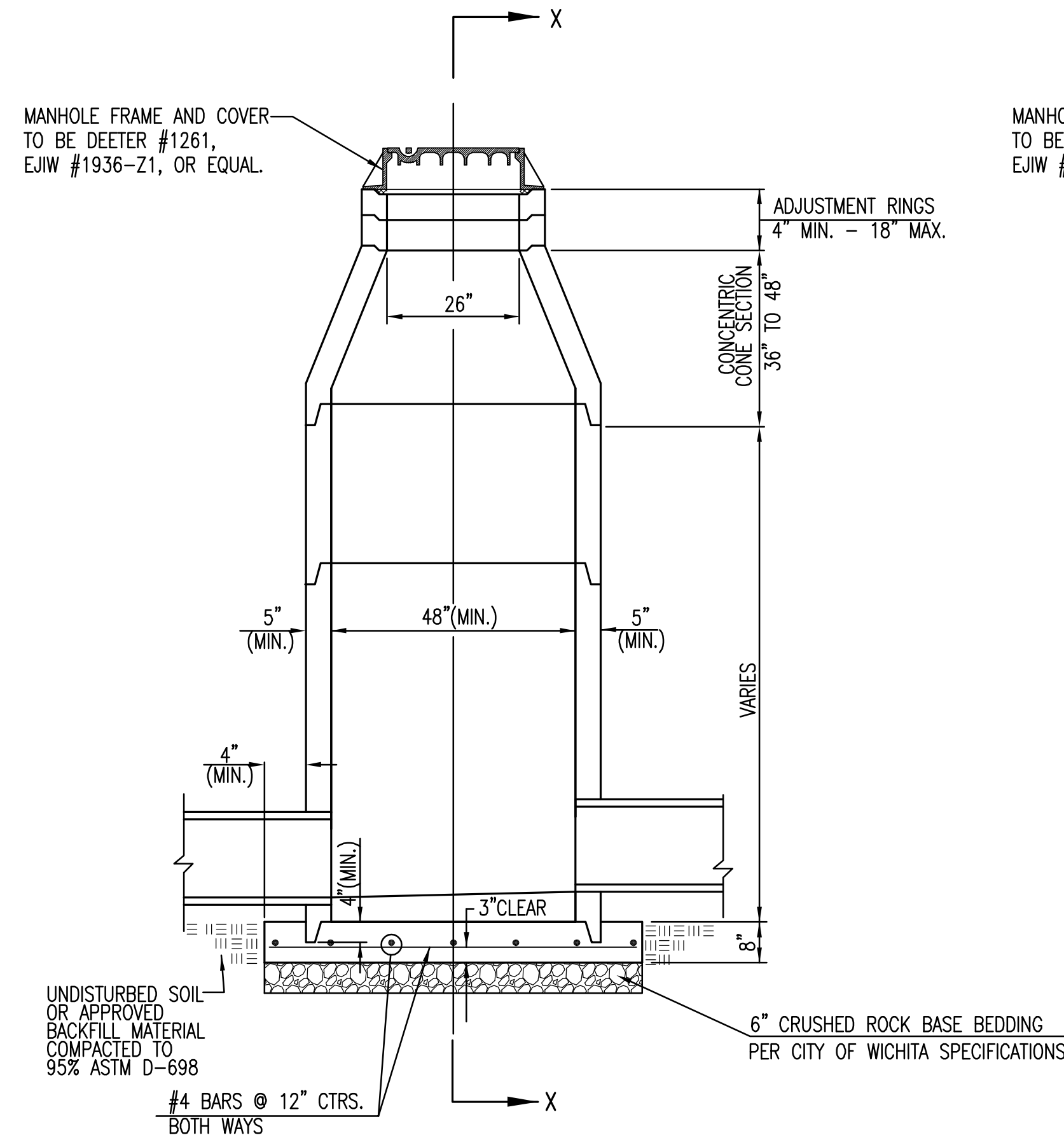


Department of Administration
Office of Facilities & Procurement
Management
Design, Construction & Compliance
800 SW Jackson, Suite 700
Topeka, Kansas 66612-1216
Phone 785-296-8899

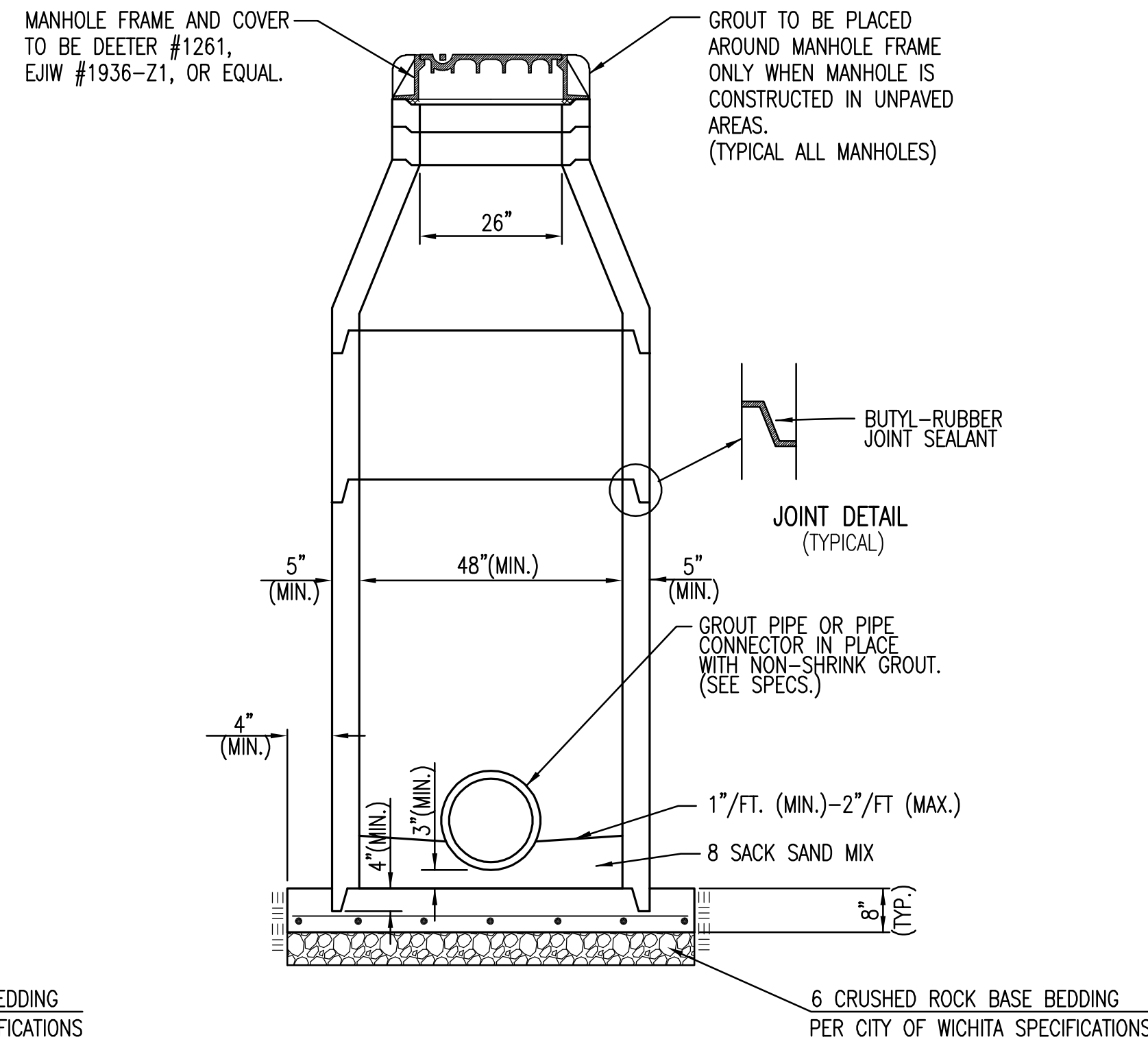
WICHITA STATE UNIVERSITY
NEW PERIMETER ROAD & PEDESTRIAN LINKAGE
WICHITA, KANSAS
DATE: 1/15/2014
DRAWN BY: SPE
CHECKED BY: GJA

SWS TITLE SHEET
A-012273
42 OF 68
ORIGINAL CONTRACT DOCUMENTS

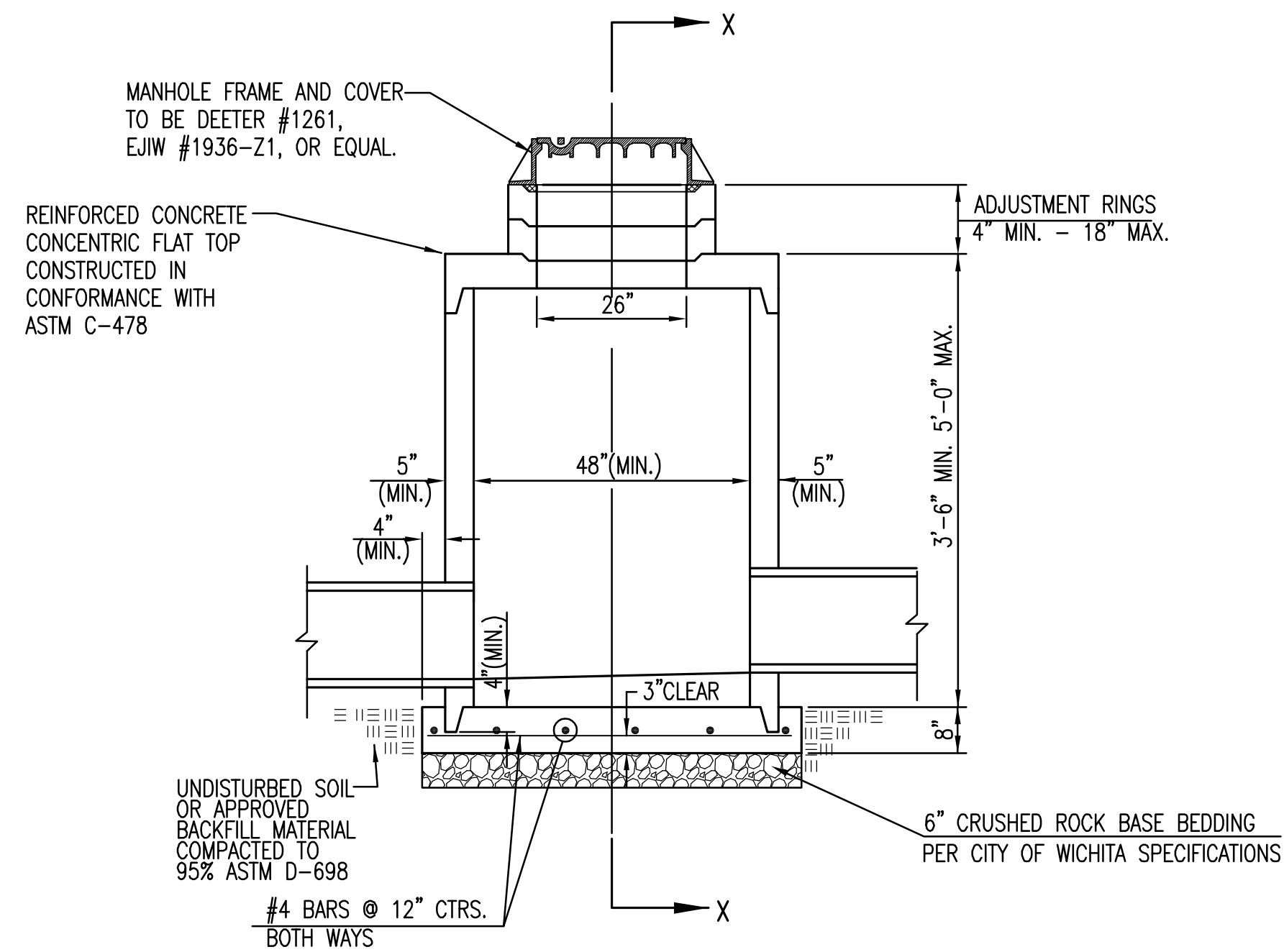
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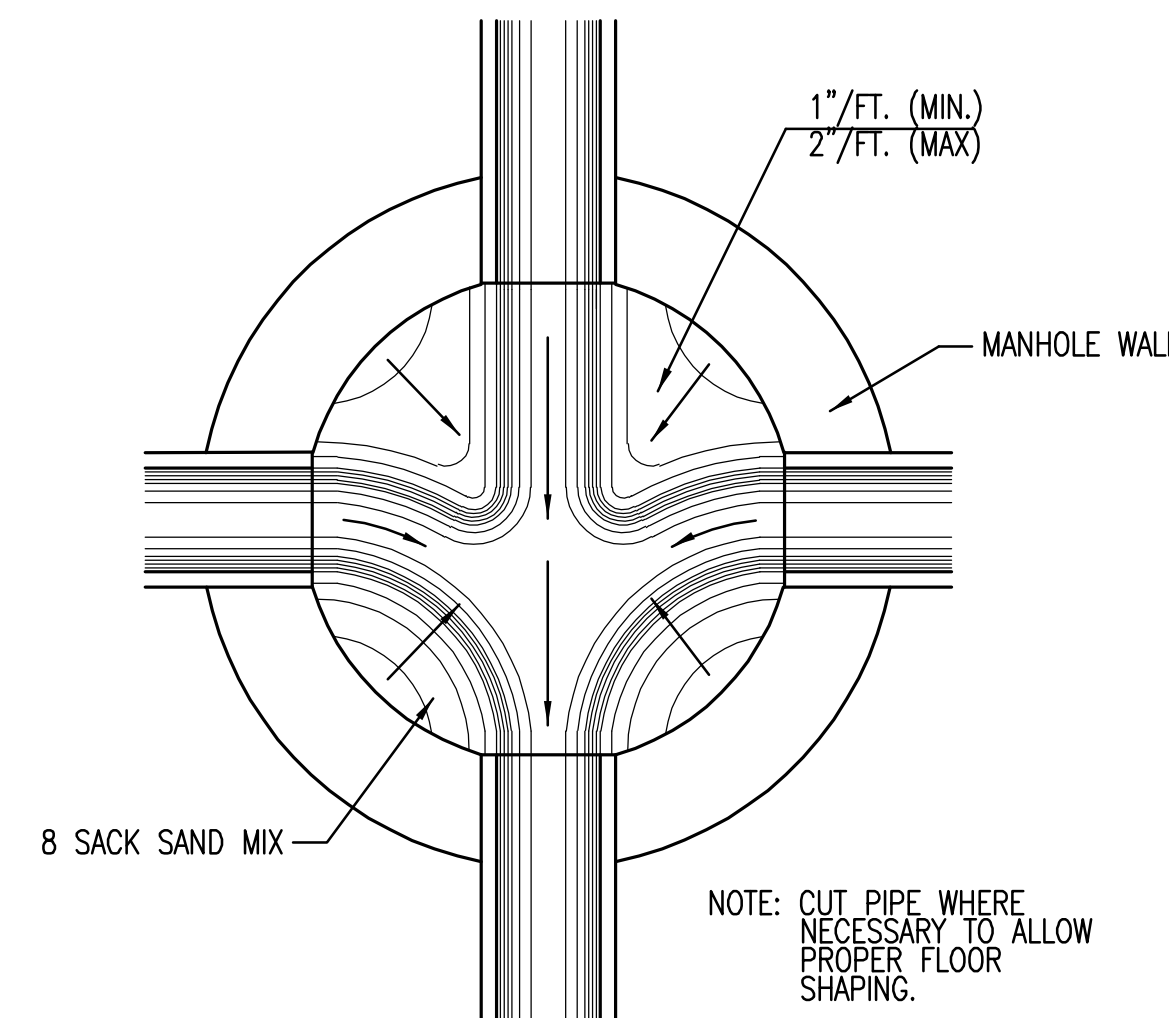
PRECAST
STANDARD MANHOLE
TYPE "A"



SECTION X-X
(TYPICAL)



PRECAST
SHALLOW MANHOLE

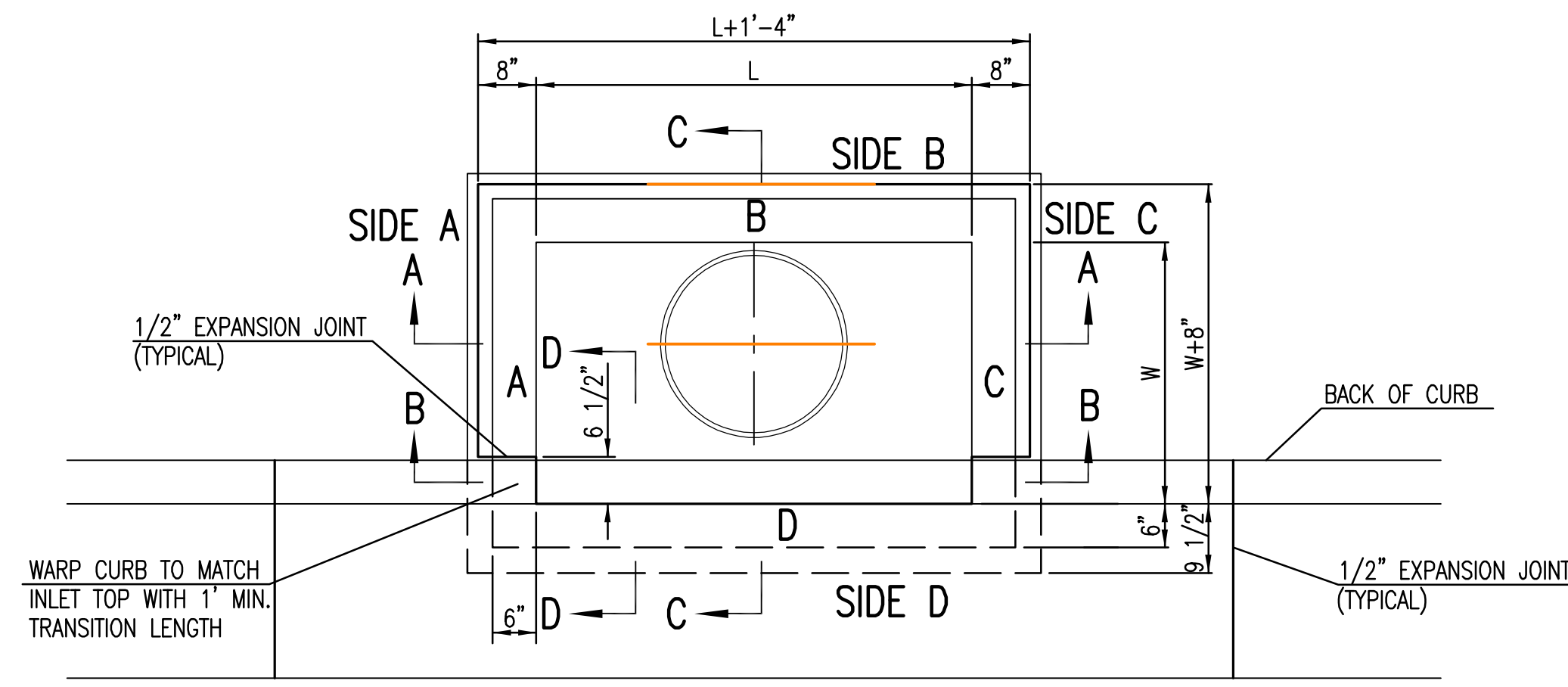


TYPICAL MANHOLE
FLOOR SHAPING

GENERAL NOTES

- IF, IN THE OPINION OF THE ENGINEER, THE MANHOLE SUBGRADE APPEARS UNSTABLE, THE CONTRACTOR SHALL HAVE THE OPTION TO COMPACT SUBGRADE AS SHOWN OR INCREASE THE THICKNESS OF THE MANHOLE BASE AS DIRECTED BY THE ENGINEER.
- STEEL REINFORCING WILL BE REQUIRED IN ALL MANHOLE BASES.
- ALL MANHOLE CONSTRUCTION SHALL BE WATER TIGHT.
- 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.
- ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISION OF ASTM C-478 AS MODIFIED BY THE SPECIFICATIONS.
- CONCRETE USED FOR MANHOLE CONSTRUCTION SHALL CONFORM TO CITY OF WICHITA SPECIFICATIONS FOR CONCRETE PAVEMENT MIX.
- PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO MANHOLE BASE.
- MANHOLES WITH PRECAST BASES MAY BE USED AT THE CONTRACTORS OPTION. THESE MANHOLES SHALL HAVE AN 8" MINIMUM BASE THICKNESS AND SHALL BE PLACED ON AN 8" MIN. CRUSHED ROCK BASE. PIPES SHALL BE ENCASED WITH CRUSHED ROCK TO AT LEAST 3 FEET FROM THE MANHOLE WALL.
- CONTRACTOR SHALL REMOVE LIFTING HOOKS AFTER INSTALLATION. RECESSES IN MANHOLE WALL SHALL BE GROUTED FLUSH TO THE MANHOLE WALL WITH HYDRAULIC CEMENT AFTER THE MANHOLE IS IN PLACE. LIFTING HOLES THRU THE MANHOLE WALL WILL NOT BE ACCEPTED.
- THE ENDS OF ALL PIPES IN MANHOLES SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE MANHOLE WALL.
- MANHOLE INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE MANHOLE WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.
- MANHOLE FRAME AND COVER TO BE DEETER #1261, EJIW #1936-Z1, OR APPROVED EQUAL, SEE SW-303.
- FOR FLAT GRATED INLET APPLICATION, GRATE TO BE DEETER #1933, EJIW #1205 MDI, OR APPROVED EQUAL.

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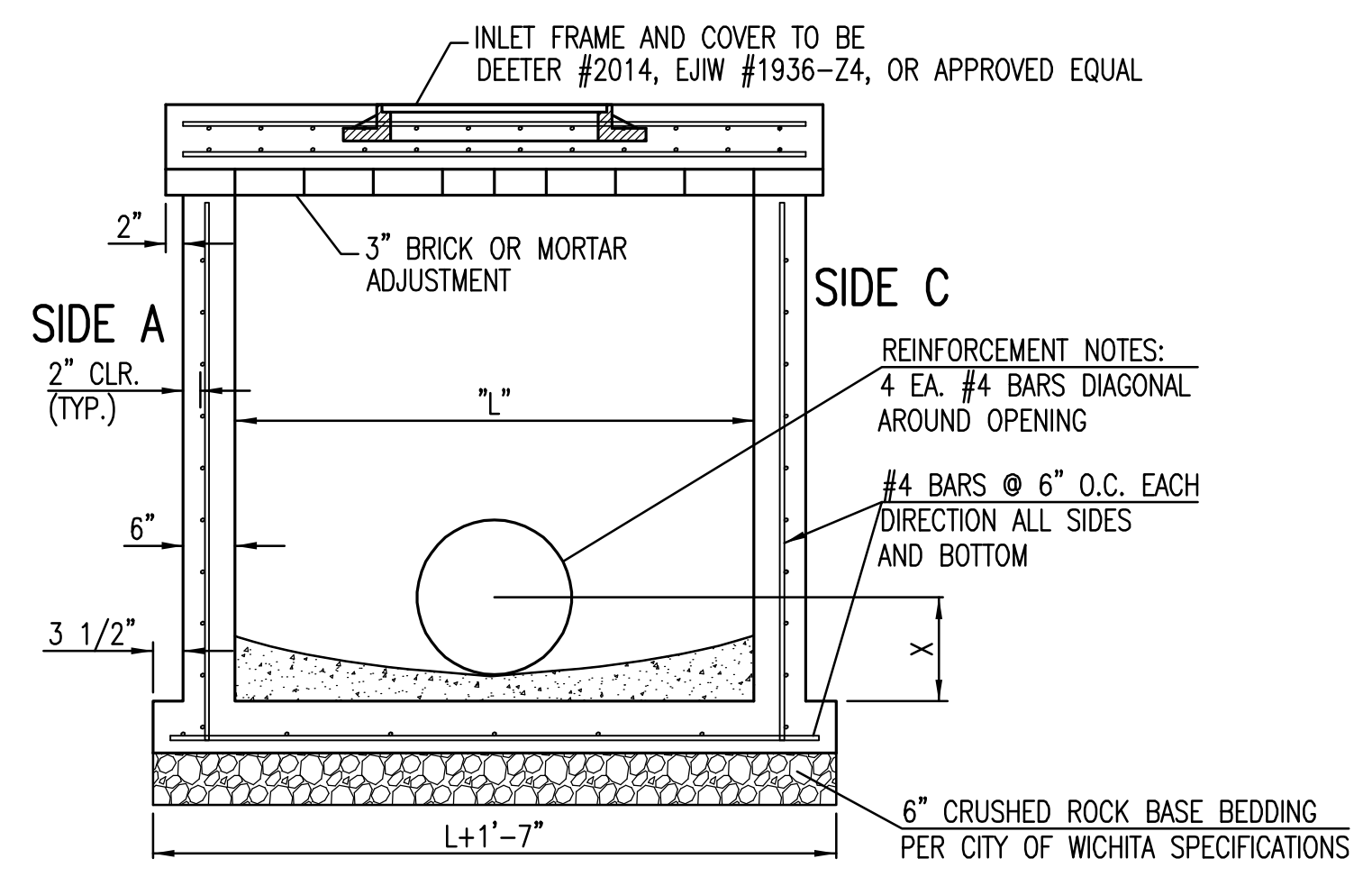
TOP VIEW

BAR SCHEDULE		
INLET OPENING	B1 BARS	SPACING
5'-0"	#4	4"
10'-0"	#6	3.5"

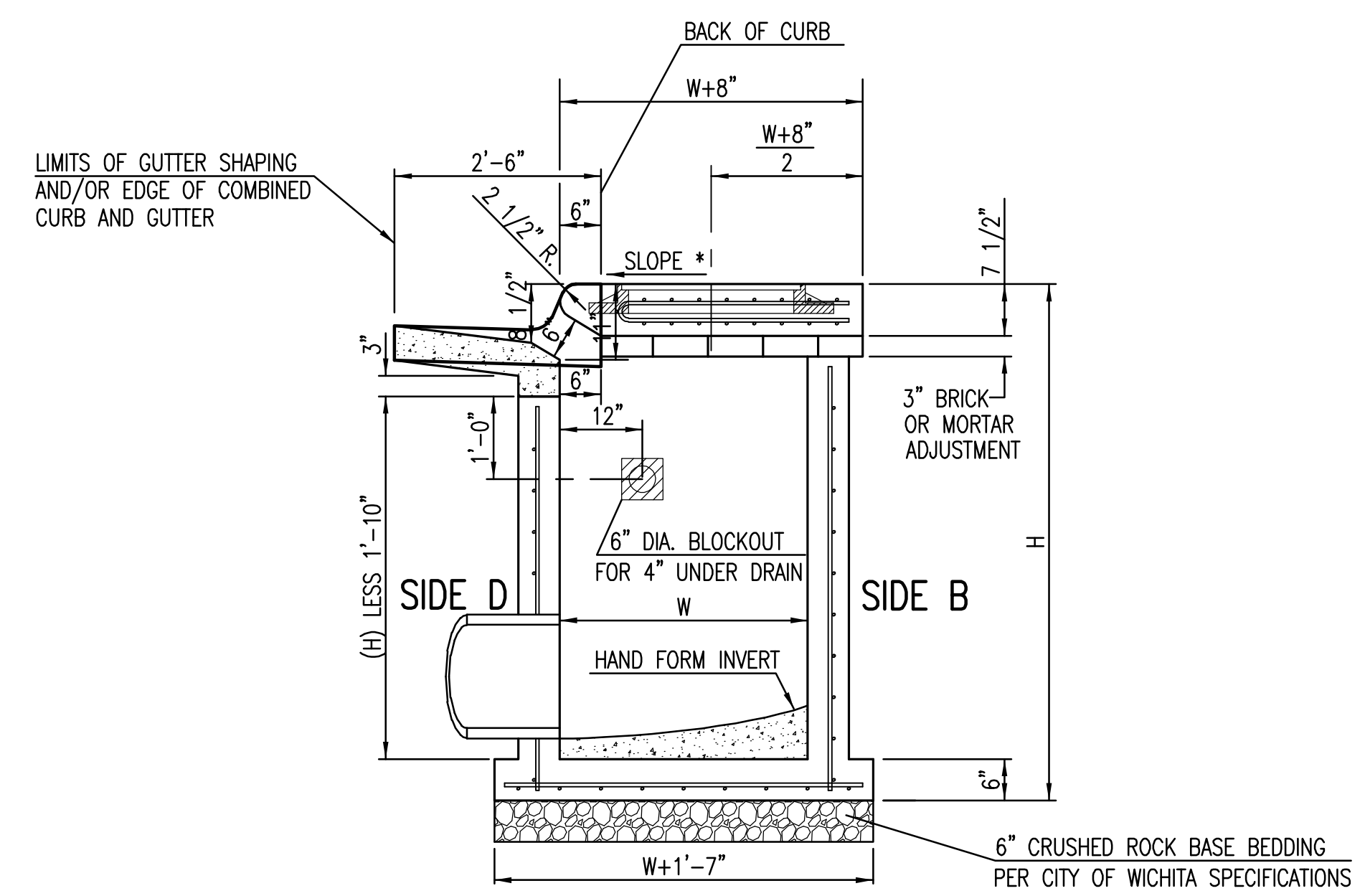
W	PRE-CAST TOP SIZE			PIPE DIA.**
	WIDTH	LENGTH	TOP	
3'-0"	W+8"	L+1'-4"	7 1/2"	21" & SMALLER
4'-0"	W+8"	L+1'-4"	7 1/2"	24" & 30"
5'-0"	W+8"	L+1'-4"	7 1/2"	36" & 42"
6'-0"	W+8"	L+1'-4"	7 1/2"	48" & 54"
7'-0"	W+8"	L+1'-4"	7 1/2"	60" & 66"

** FOR PIPES PERPENDICULAR TO INLET WALL

WARP CURB TO MATCH INLET TOP WITH 1' MIN. TRANSITION LENGTH

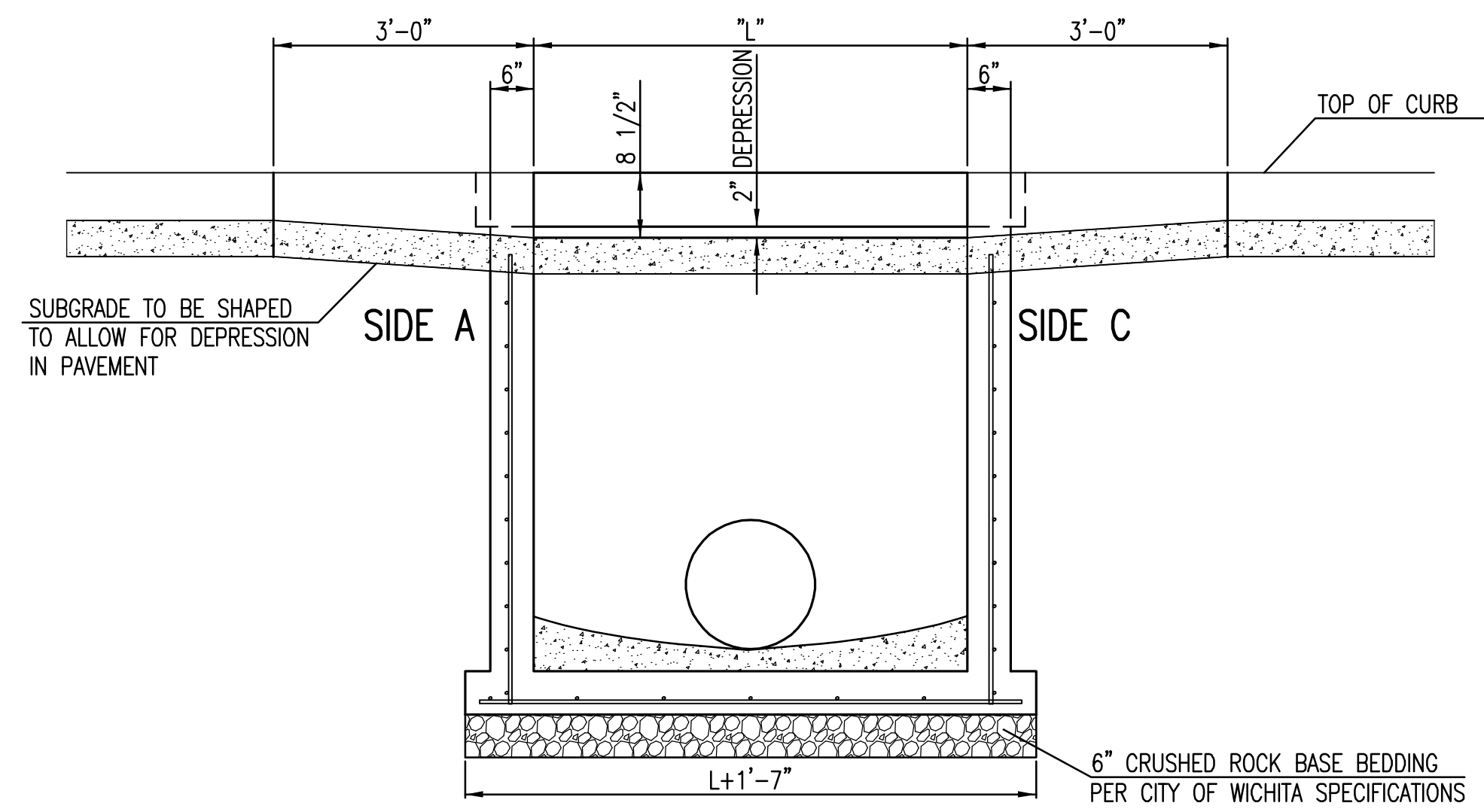
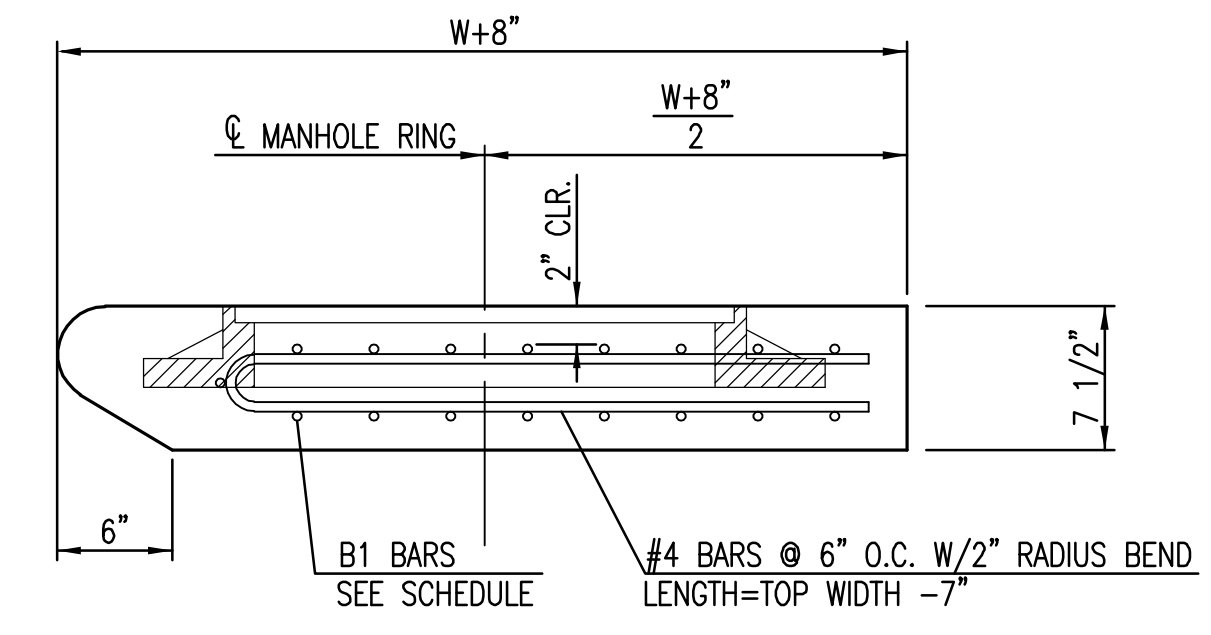


SECTION "A-A"

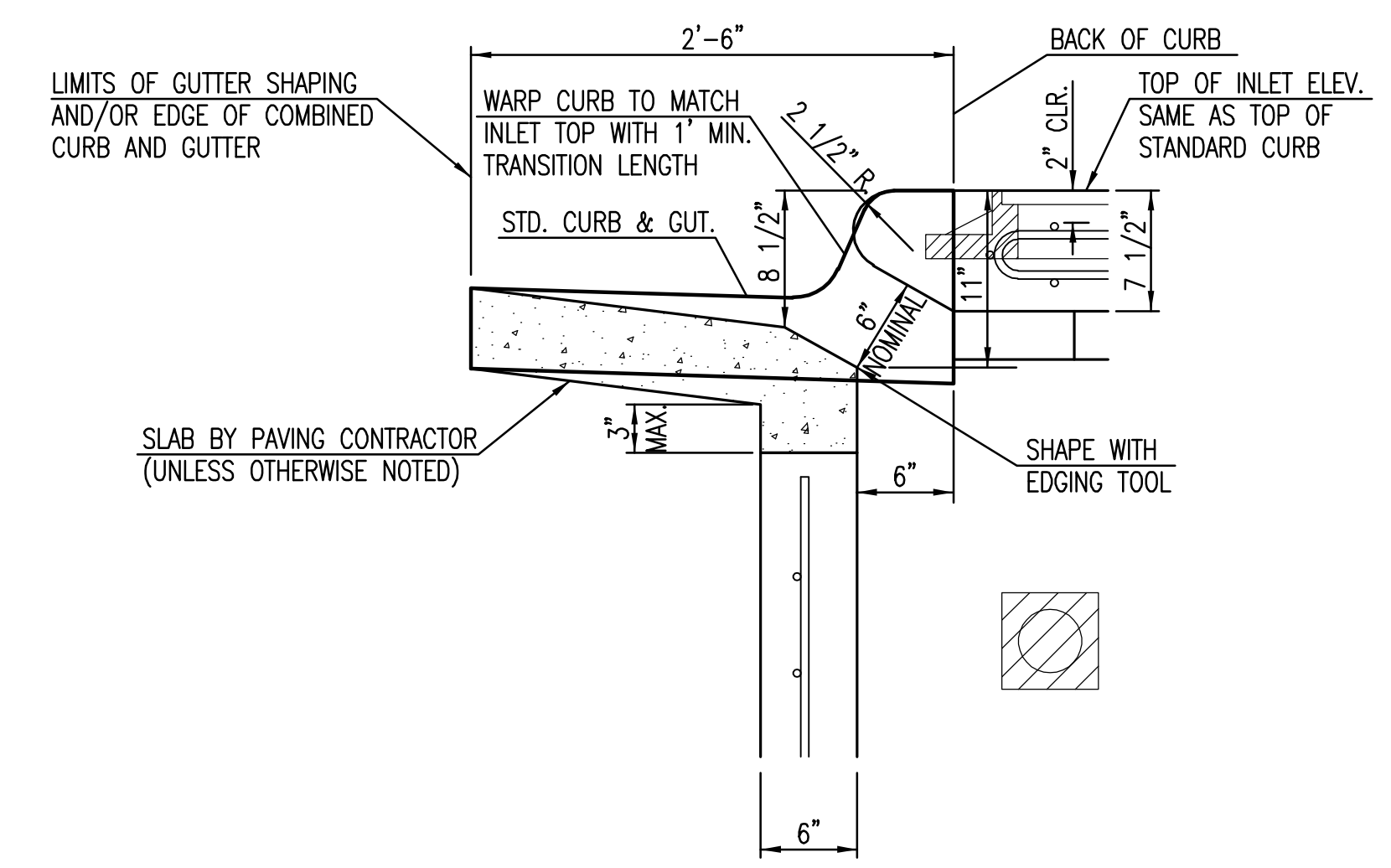


SECTION "C-C"

NOTES:
* SLOPE OF INLET TOP TO MATCH SIDEWALK OR PARKING SLOPES WITHIN LIMITS INDICATED.



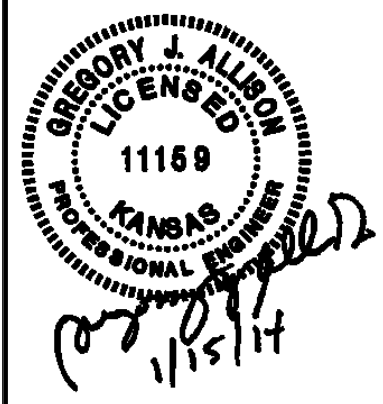
SECTION "B-B"



SECTION "D-D"

GENERAL NOTES

1. CONCRETE TOPS TO BE INSTALLED ON THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK. CONCRETE TOPS MAY BE CAST IN PLACE OR PRECAST. CONCRETE USED FOR INLET CONSTRUCTION SHALL CONFORM TO CITY OF WICHITA SPECIFICATIONS FOR CONCRETE PAVEMENT MIX.
2. CONTRACTOR SHALL HAVE THE OPTION OF CONSTRUCTING 8" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP OF THIS INLET WHEN W=5'-0" AND H=7'-0" OR LESS.
3. INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.
4. THE ENDS OF ALL PIPES INSTALLED IN INLETS SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE INLET WALL.
5. INLET FRAME AND COVER TO BE DEETER #2014, EJIW #1936 Z4, OR APPROVED EQUAL, SEE SW-303.
6. CONTRACTOR SHALL REMOVE LIFTING HOOKS AFTER INSTALLATION. RECESSES IN INLET WALL SHALL BE GROUTED FLUSH TO THE INLET WALL WITH HYDRAULIC CEMENT AFTER THE INLET IS IN PLACE. LIFTING HOLES THRU THE INLET WALL WILL NOT BE ACCEPTED.



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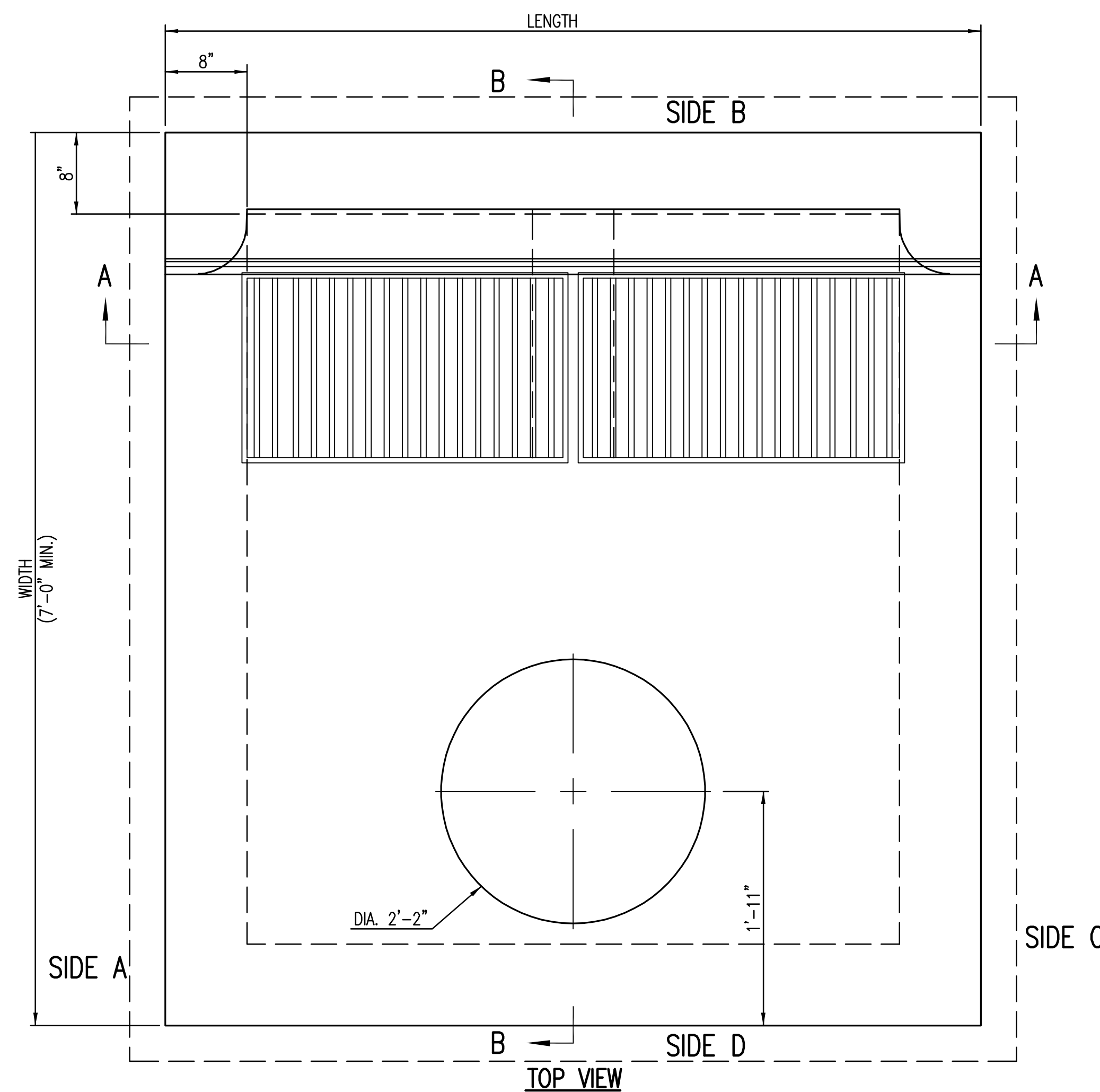
CURB INLET DETAILS

A-012273

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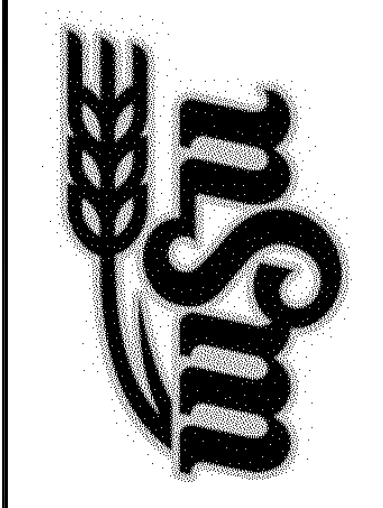
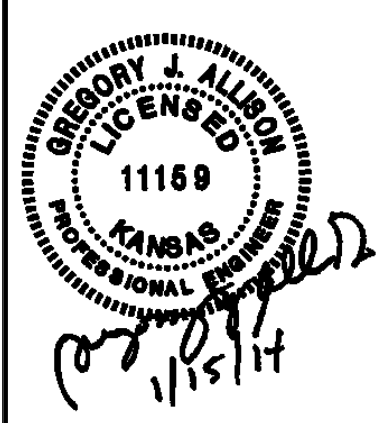
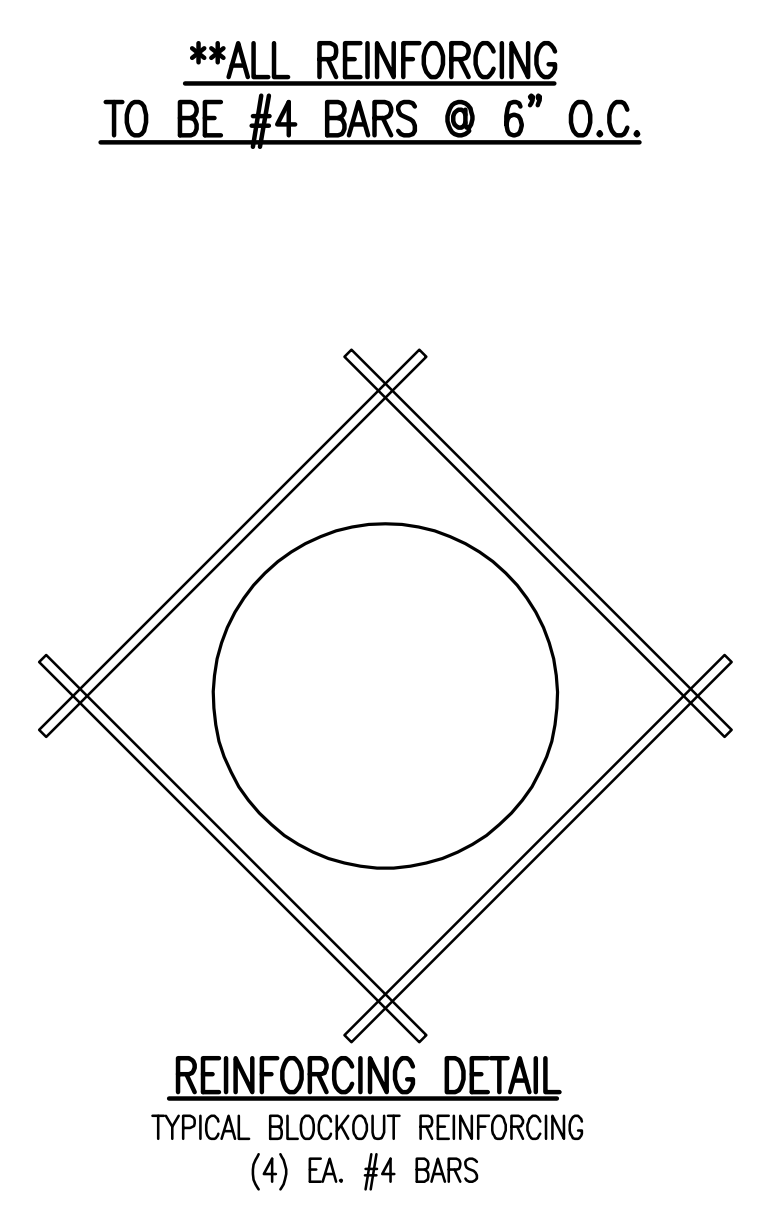
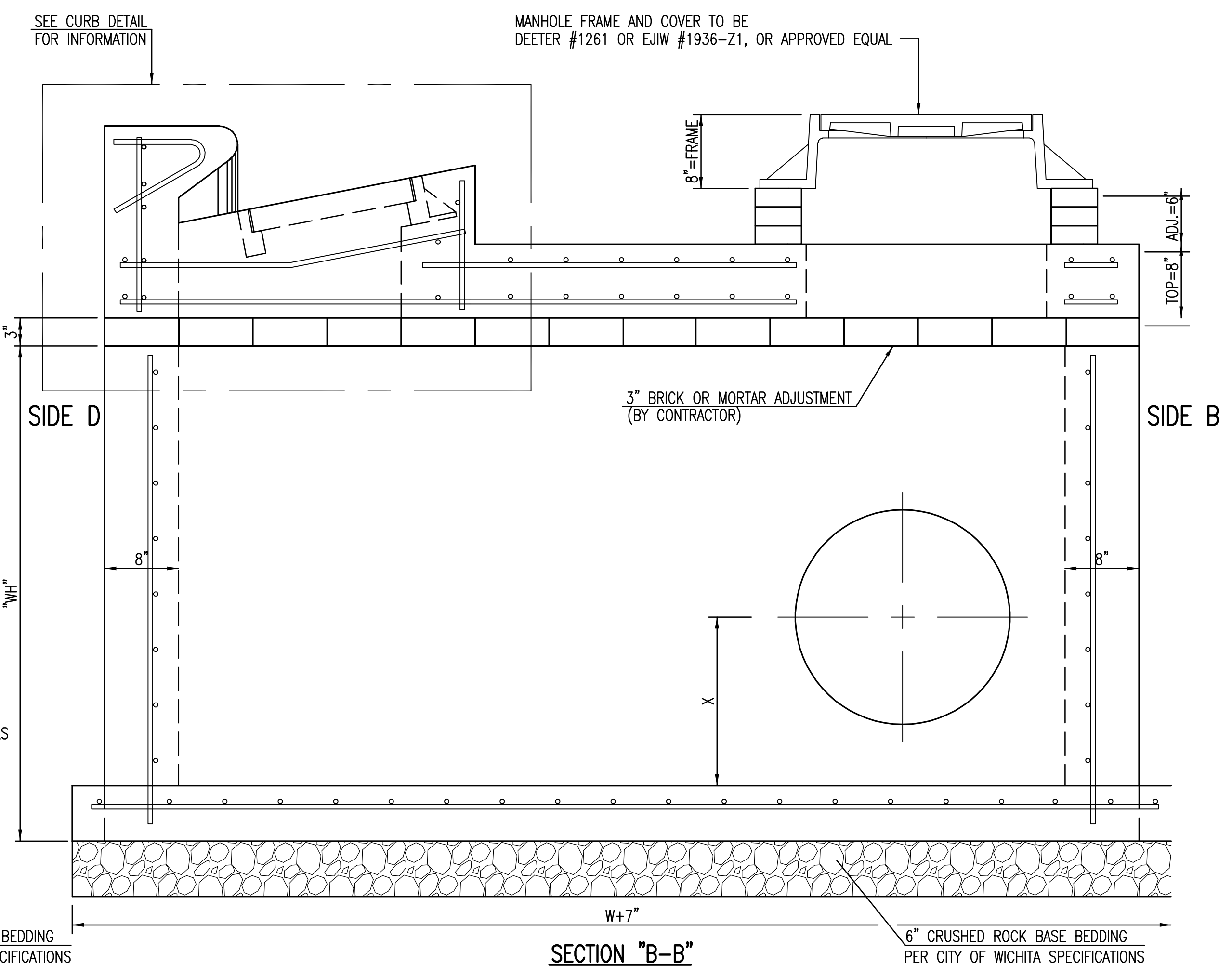
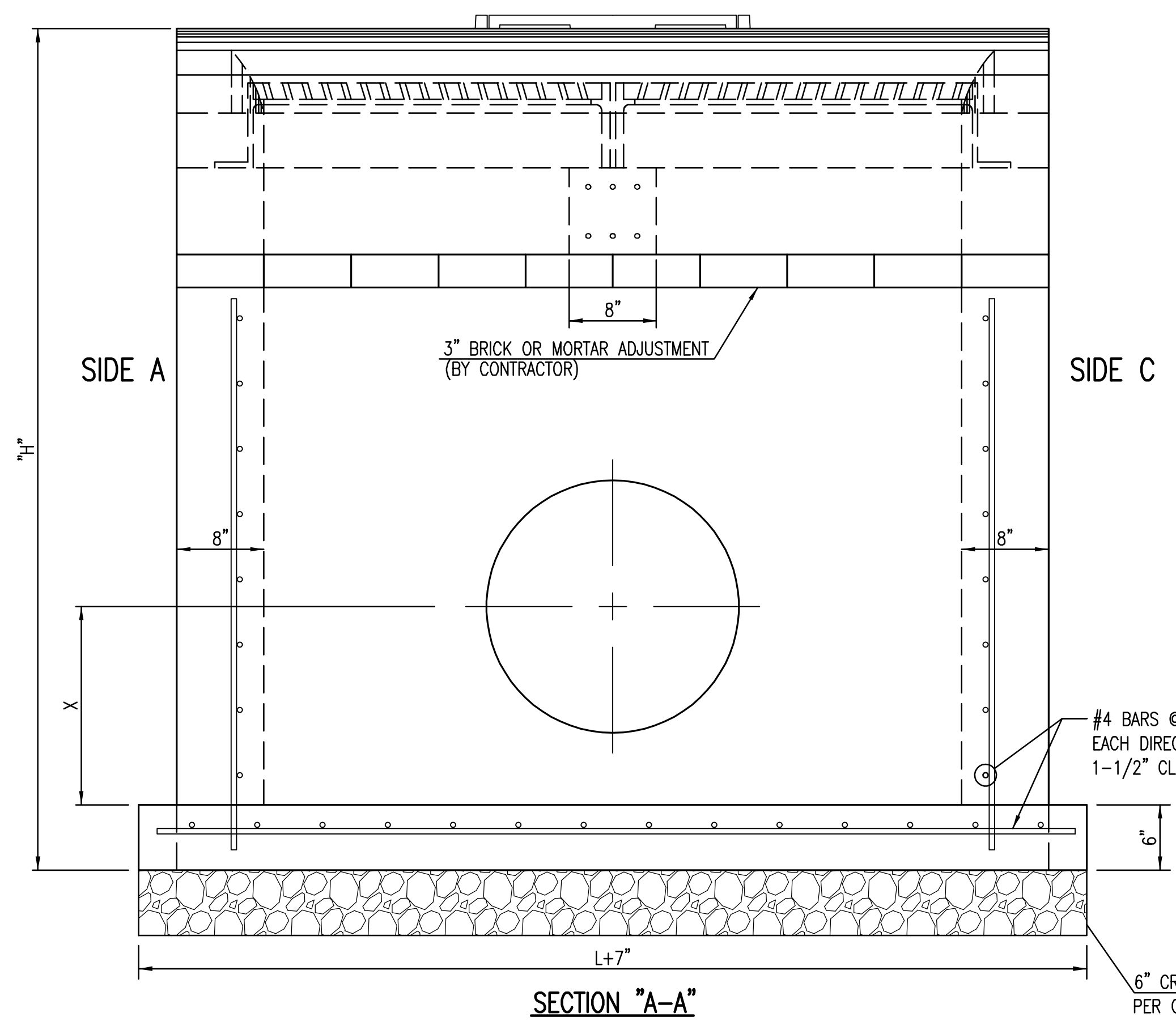
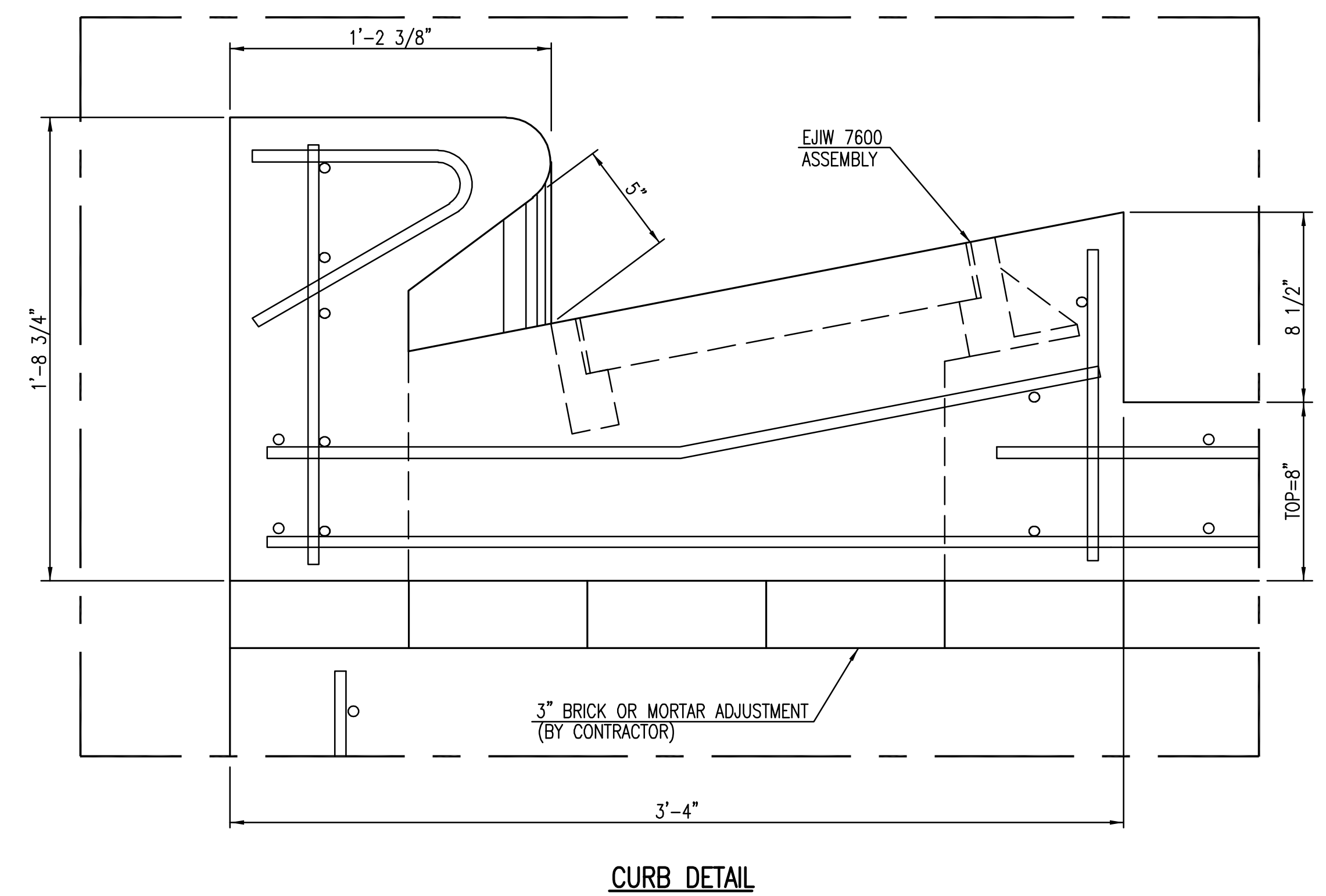
ORIGINAL CONTRACT DOCUMENTS

J:\PROJECTS\2013\1301010249_WSU PERIMETER AND SERVICE ROAD\5-CIVIL\CAD\SW513249_02Z.DWG



GENERAL NOTES

1. USE THE CONCRETE MIX SPECIFIED FOR THE CITY OF WICHITA CONCRETE PAVEMENT THROUGHOUT. ALL EXPOSED EDGES SHALL BE FINISHED WITH AN EDGING TOOL. REINFORCING BARS SHALL BE BENT AROUND PIPE.
2. INLET/MANHOLE INVERT SHALL BE SHAPED WITH 8 SACK MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.
3. ALL BARS ARE #4 WITH 6" SPACING AND SHALL HAVE A MINIMUM CLEARANCE OF 1 1/2" INCHES UNLESS OTHERWISE NOTED ON THE PLANS.
4. NO DEDUCTIONS WILL BE MADE IN PAY LENGTH OF CURB, GUTTER, OR CURB AND GUTTER THROUGH THE INLET AREA.
5. USE DEETER FOUNDRY, INC. CASTING NO. 2442/43 OR EJIW 7600Z LEFT SIDE, 7600 RIGHT SIDE IN INLET FRAME AND GRATE WITH STYLE H GRATE. INLET FRAME TO BE PROOF LOAD TESTED TO 40,000 LBS. ON UNSUPPORTED SIDE.
6. RING AND COVER SHALL BE DEETER #1261 OR EJIW #1936-Z1, OR APPROVED EQUAL, SEE SW-303.
7. REINFORCING BARS SHALL BE CUT OR BENT AROUND PIPES. NO DEDUCTION IN CONCRETE QUANTITIES SHALL BE MADE FOR PIPE OPENINGS.
8. THE VANES OF THE GRATE SHALL BE ORIENTED WITH RESPECT TO THE FLOW ARROWS SHOWN ON THE PLANS.
9. AROUND INLET/MANHOLE OPENING IN TOP SLAB USE #5 BAR @ 45 ANGLE TO OTHER BARS. LENGTH = MH OPENING + 2'-0"
10. CONTRACTOR SHALL REMOVE LIFTING HOOKS AFTER INSTALLATION. RECESSES IN INLET/MANHOLE WALL SHALL BE GROUTED FLUSH TO THE INLET/MANHOLE WALL WITH HYDRAULIC CEMENT AFTER THE INLET/MANHOLE IS IN PLACE. LIFTING HOLES THRU THE INLET/MANHOLE WALL WILL NOT BE ACCEPTED.



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Topeka, Kansas 66612-1216
Phone 785-296-8899

WICHITA STATE UNIVERSITY
NEW PERIMETER ROAD & PEDESTRIAN LINKAGE
WICHITA, KANSAS
DATE: 1/15/2014 DRAWN BY: SPE CHECKED BY: GJA

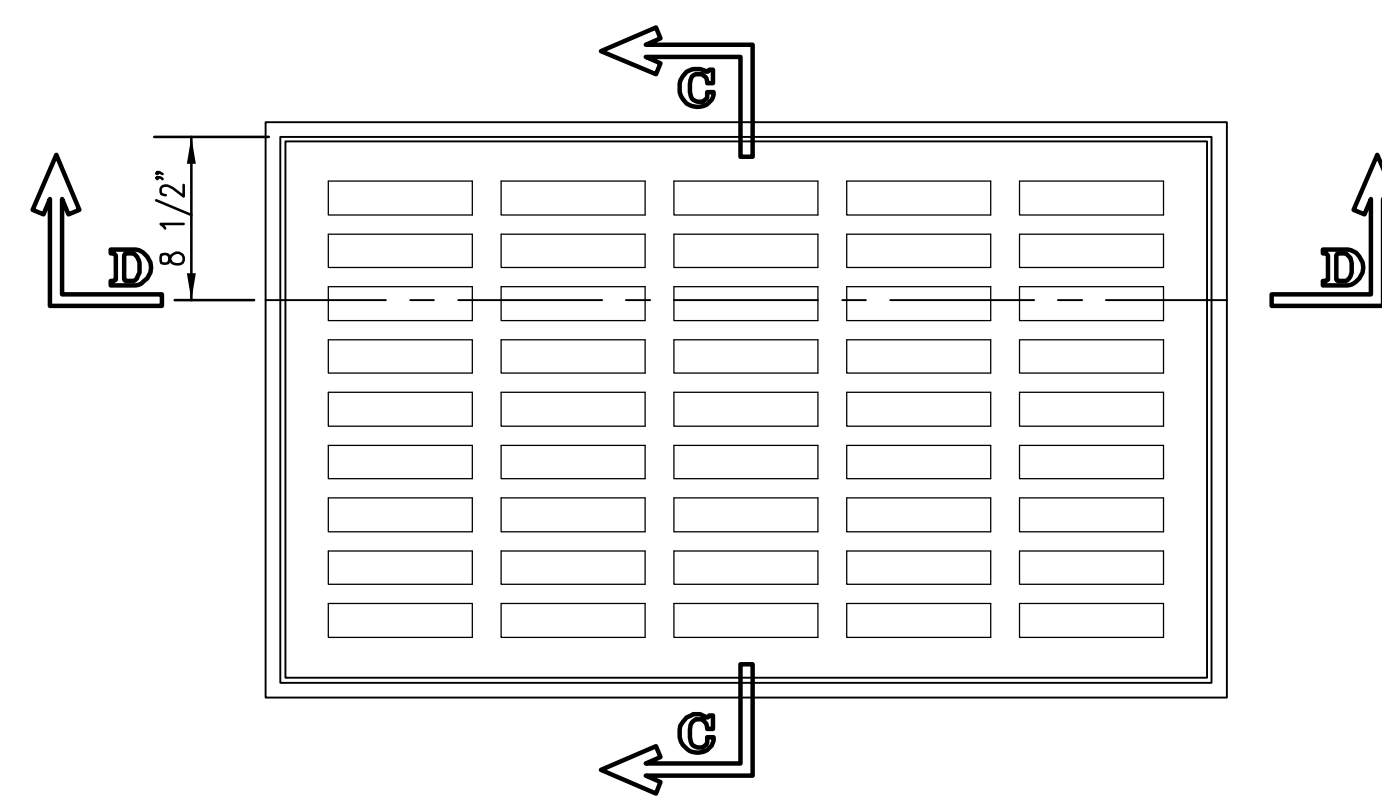
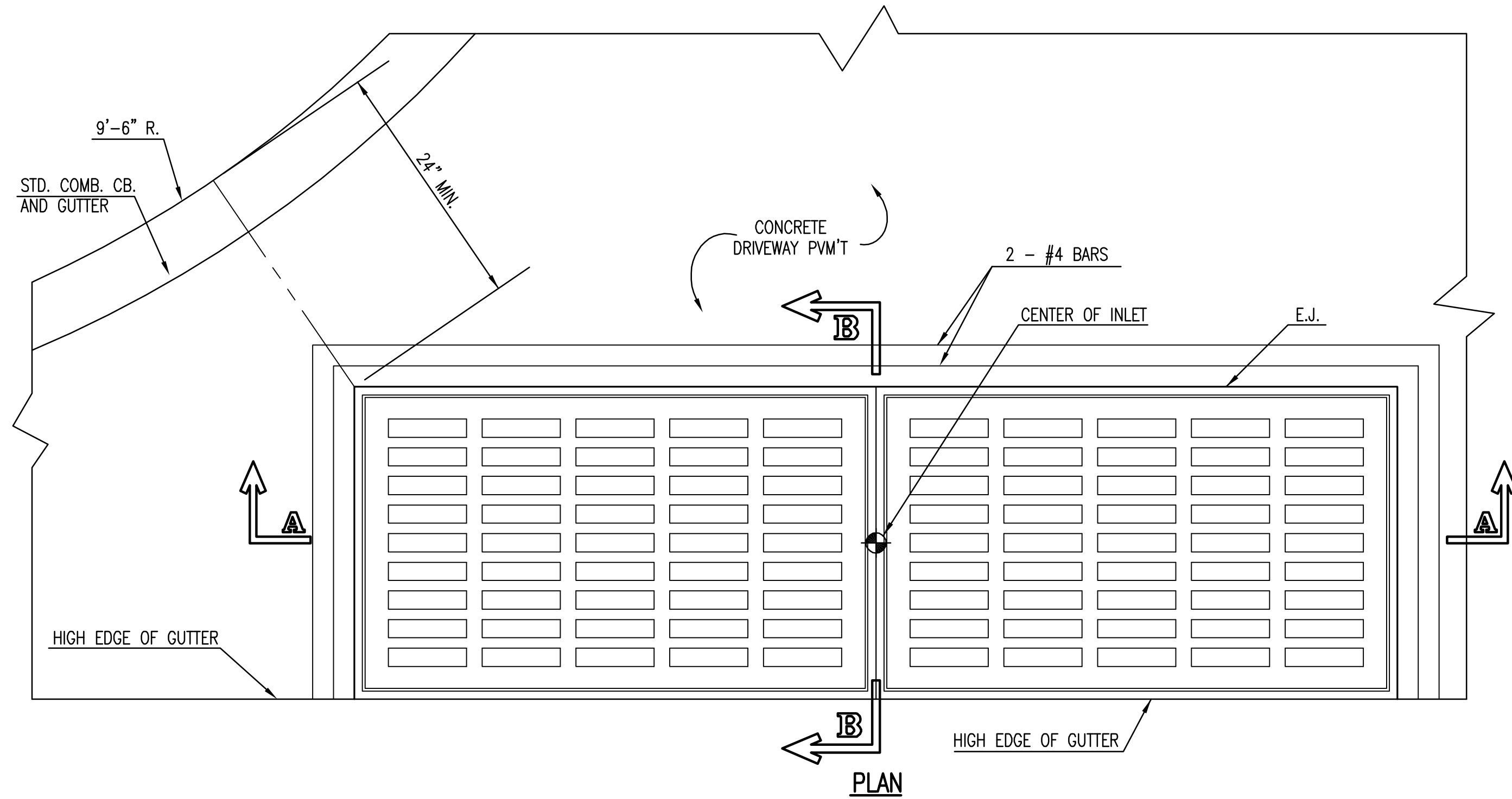
SPECIAL TYPE 2 CURB INLET DETAILS

A-012273

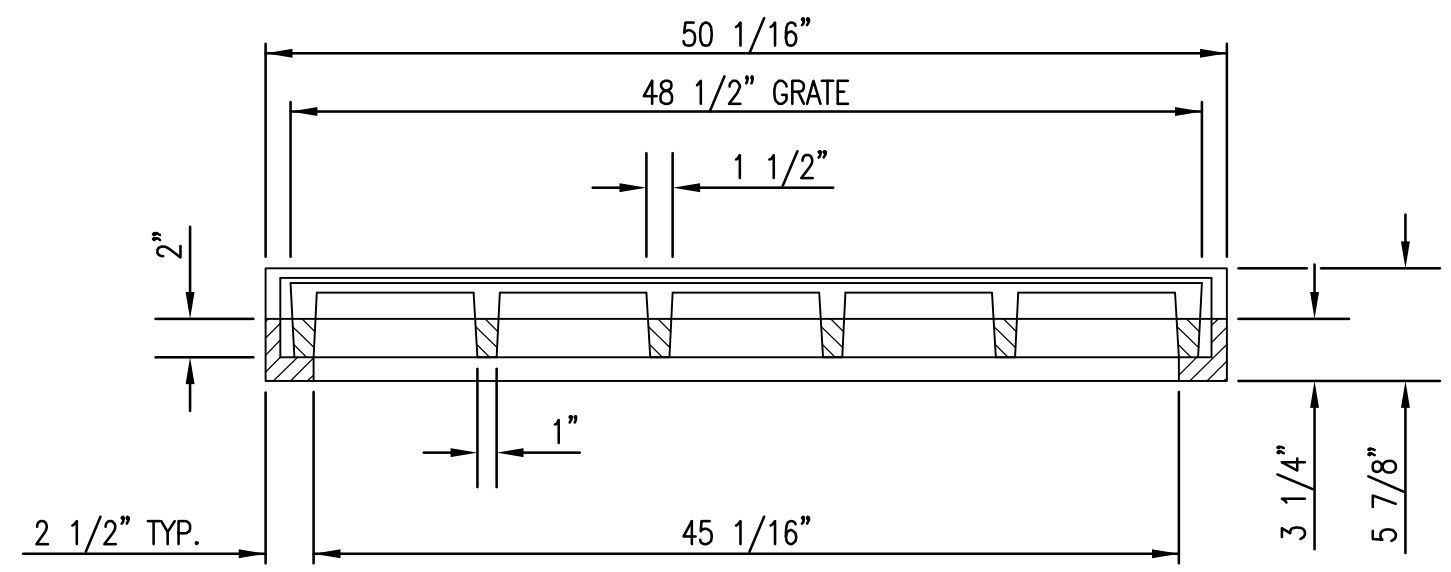
45 OF 68

ORIGINAL CONTRACT DOCUMENTS

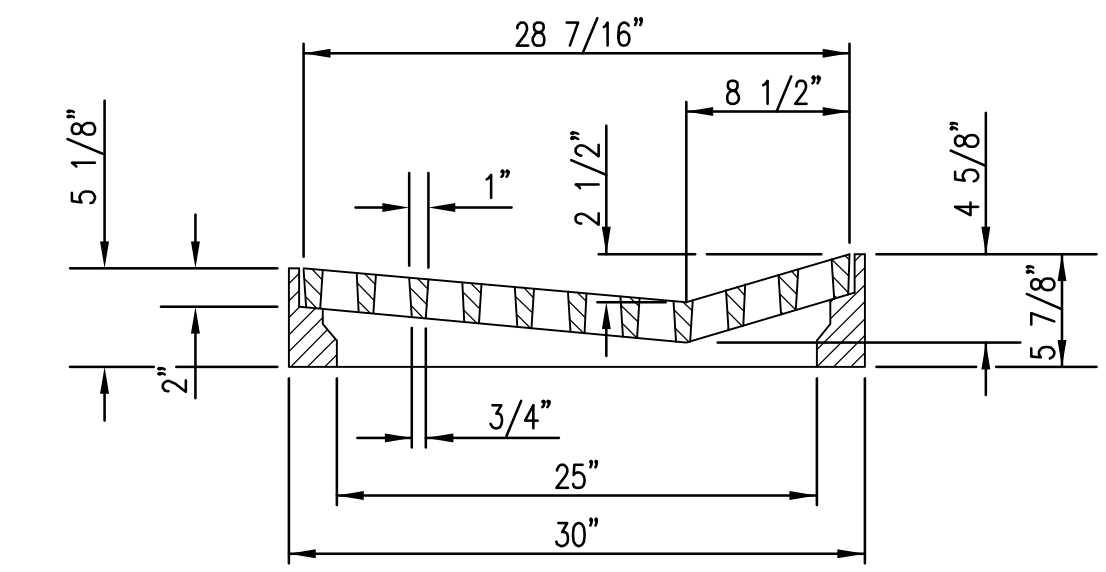
PLOTTED: Tuesday, January 14, 2014 @ 09:58AM



PLAN
DEETER #2095 FRAME & GRATE
 TOTAL WEIGHT: 705 LBS.
 (2 EACH REQUIRED)
 OR EJIW #7392



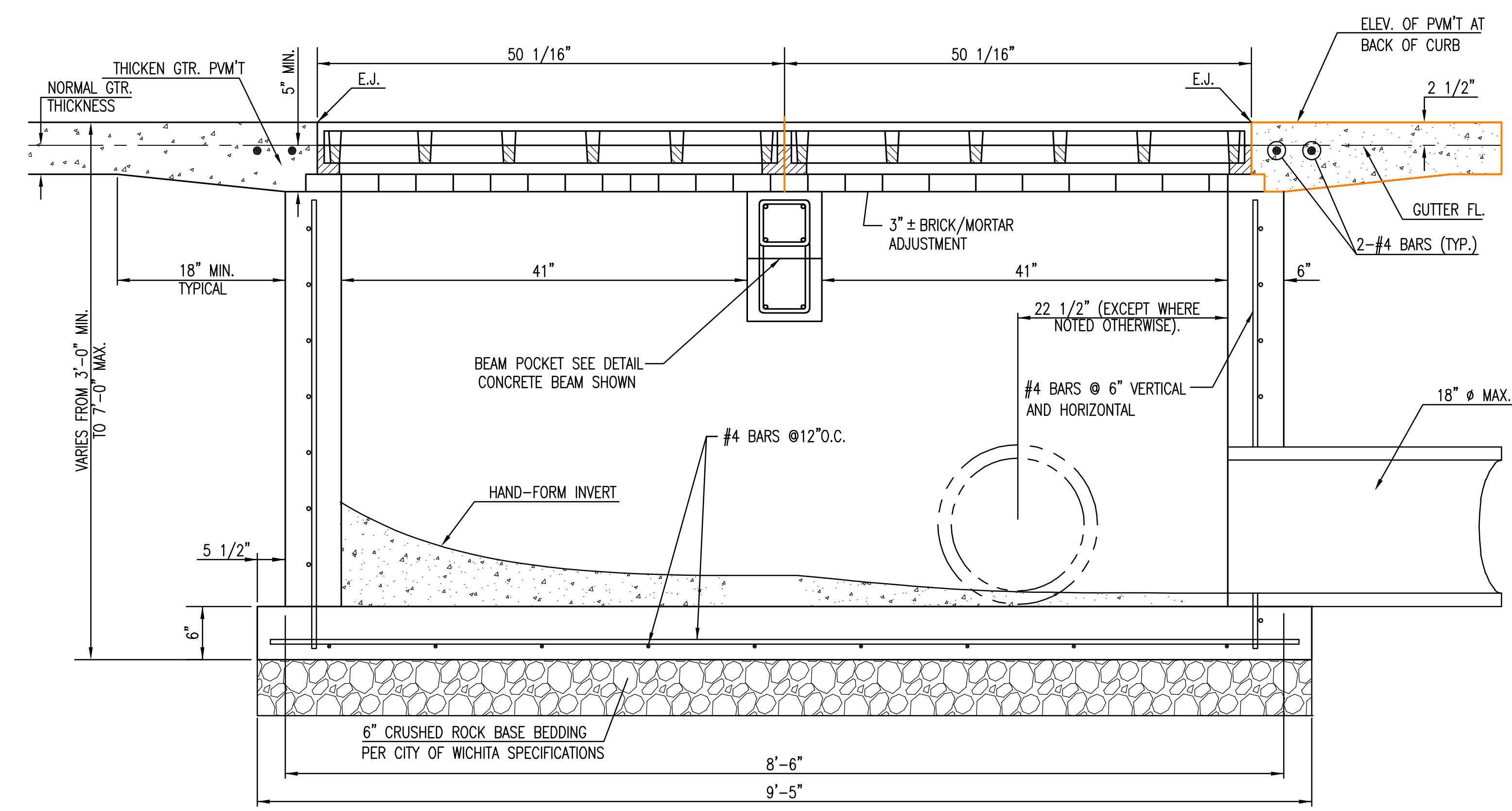
SECTION D-D



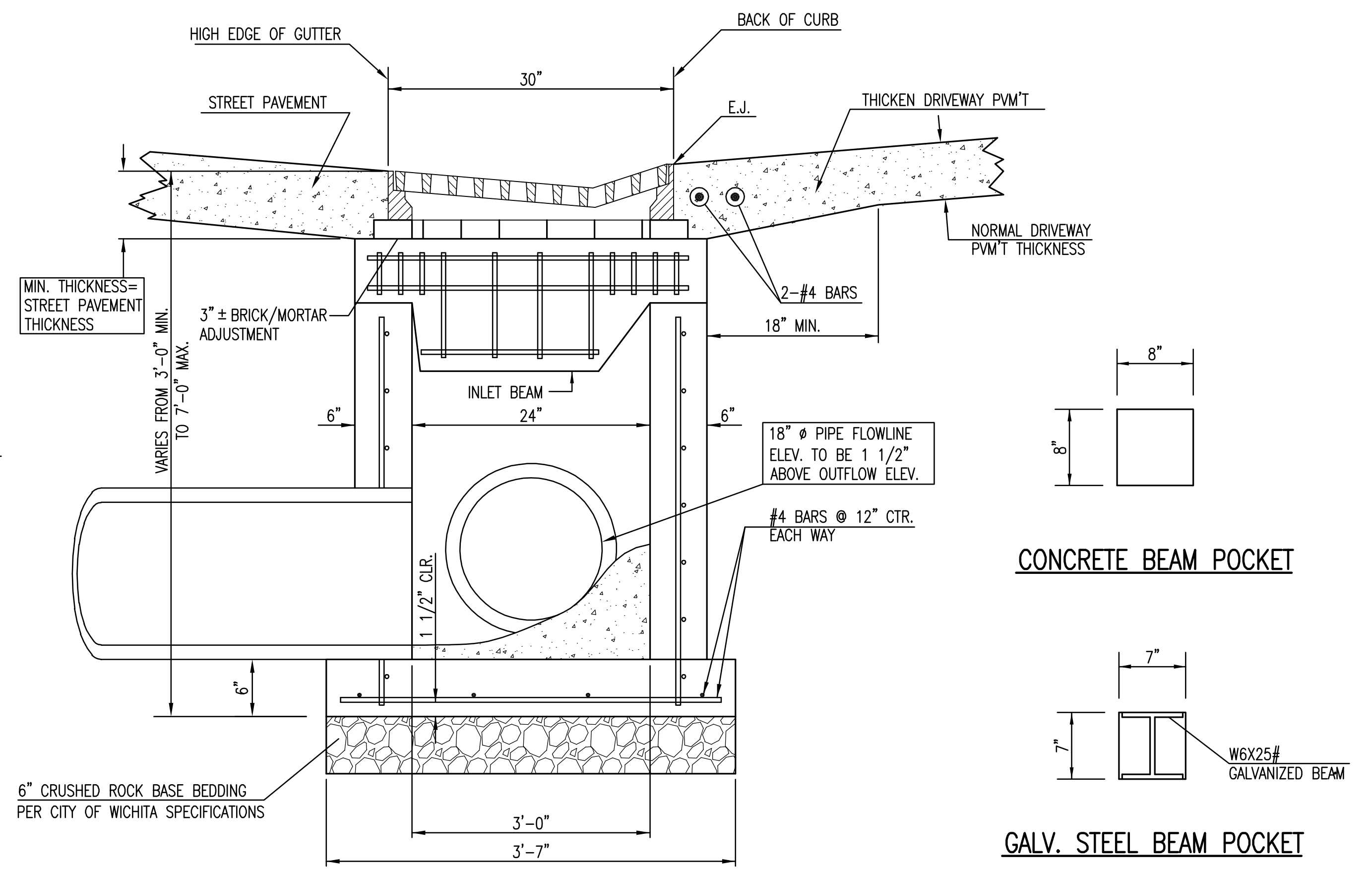
SECTION C-C

GENERAL NOTES

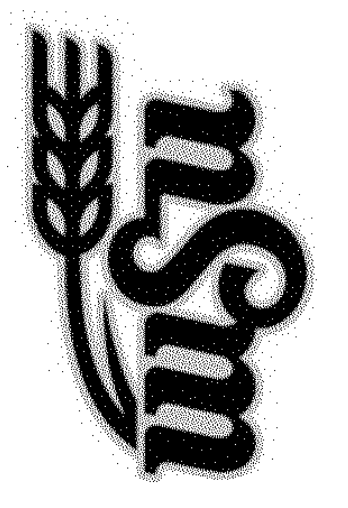
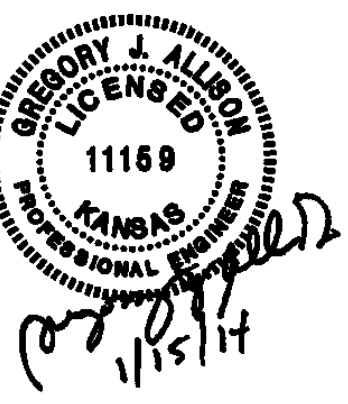
1. GRATE FRAME TO BE INSTALLED ON THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK. CONCRETE USED FOR INLET CONSTRUCTION SHALL CONFORM TO CITY OF WICHITA SPECIFICATIONS FOR CONCRETE PAVEMENT MIX.
2. CONTRACTOR SHALL HAVE THE OPTION OF CONSTRUCTING 8" BRICK MASONRY WALL BETWEEN THE CONCRETE INLET BASE AND TOP OF THIS INLET WHEN H=7'-0" OR LESS.
3. INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.
4. THE ENDS OF ALL PIPES INSTALLED IN INLETS SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE INLET WALL.
5. INLET FRAME AND GRATE TO BE DEETER #2095, EJIW #7392, OR APPROVED EQUAL.
6. CONTRACTOR SHALL REMOVE LIFTING HOOKS AFTER INSTALLATION. RECESSES IN INLET WALL SHALL BE GROUTED FLUSH TO THE INLET WALL WITH HYDRAULIC CEMENT AFTER THE INLET IS IN PLACE. LIFTING HOLES THRU THE INLET WALL WILL NOT BE ACCEPTED.



SECTION A-A



SECTION B-B



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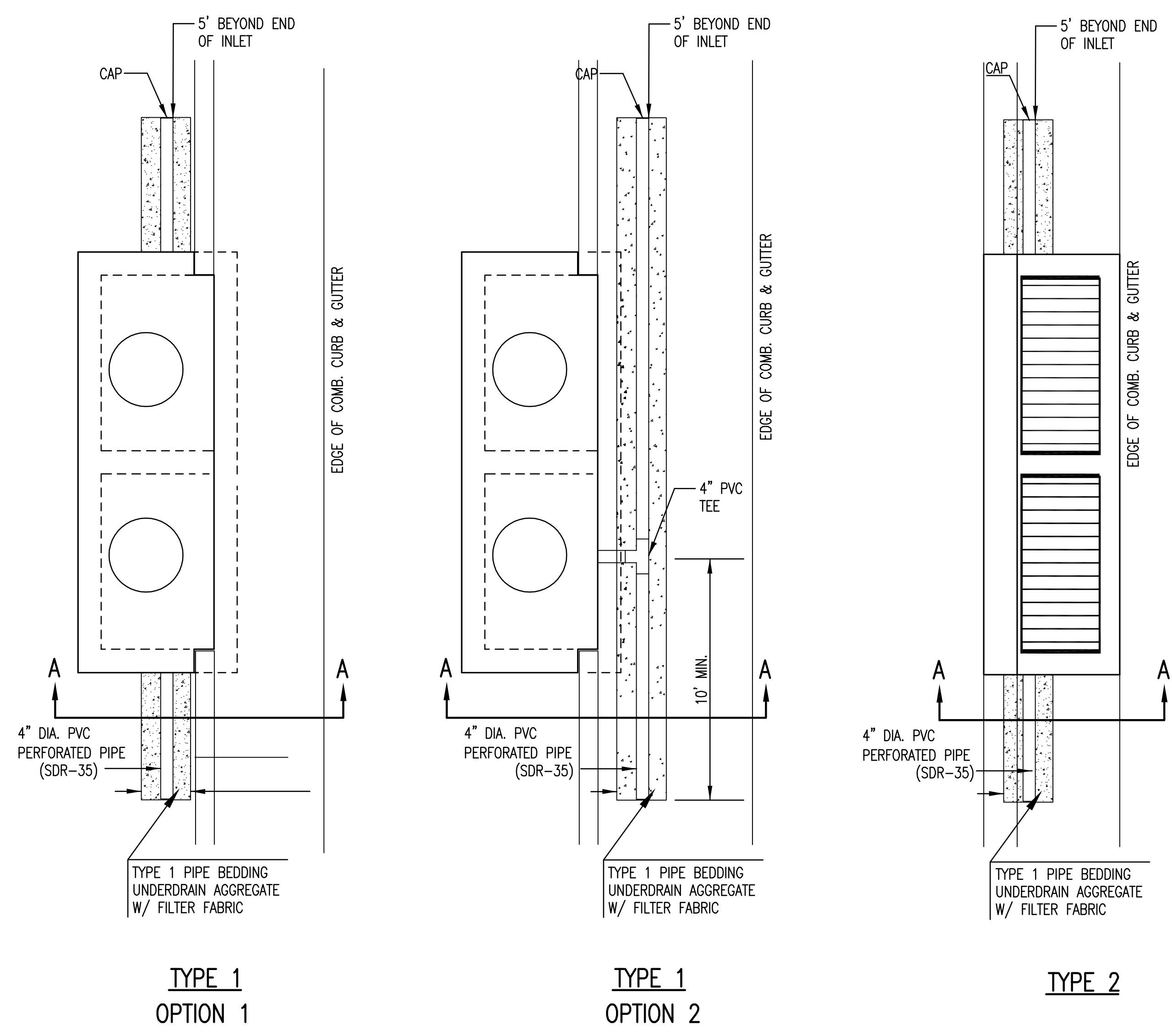
WICHITA STATE UNIVERSITY
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DRIVEWAY INLET
 DETAILS
A-012273
 46 OF 68
 ORIGINAL CONTRACT
 DOCUMENTS

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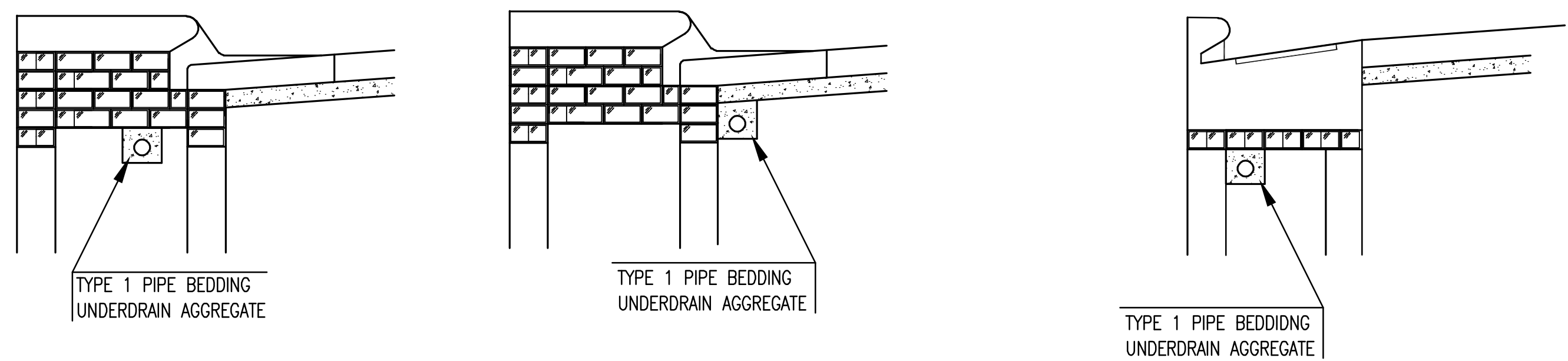
PAVEMENT UNDERDRAIN SHALL BE INSTALLED ON ALL CURB INLETS.



TYPE 1
OPTION 1

TYPE 1
OPTION 2

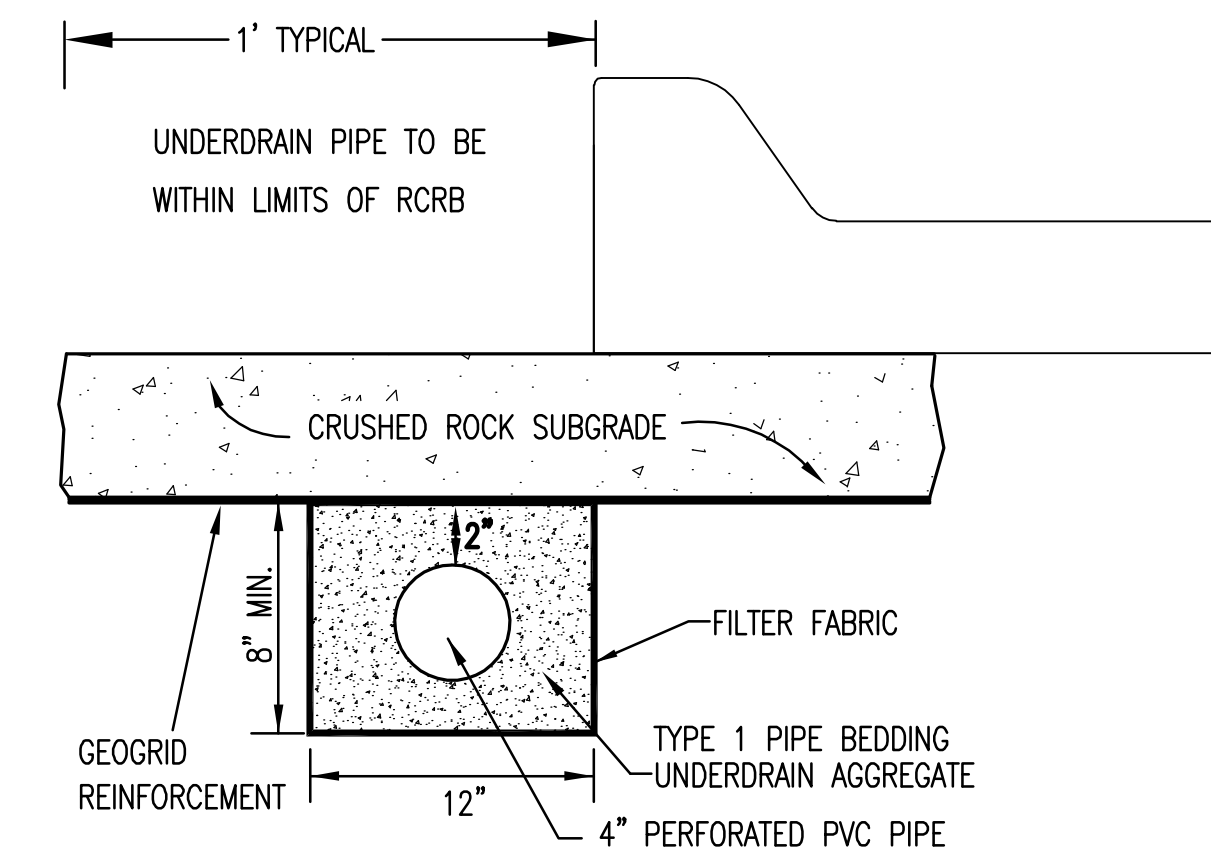
TYPE 2



(MIN. 16 PERFORATIONS PER LIN. FT. @ 1/4" DIA.)
PERFORATIONS TO BE ON BOTTOM HALF

SECTION A-A

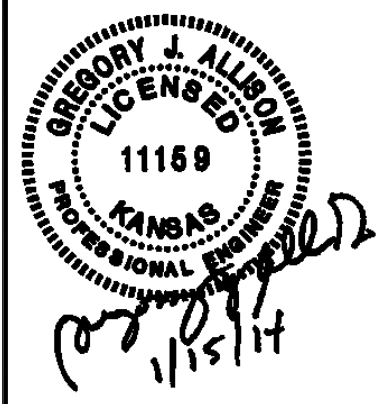
SECTION A-A



SECTION A-A (TYPICAL)

GENERAL NOTES

1. PAVEMENT CONTRACTOR WILL BE REQUIRED TO INSTALL SDR 35, 4" PERFORATED DRAIN PIPE AND TEE AS INDICATED IN THE DETAILS.
2. WHEN SWS CONSTRUCTED BY SEPARATE PROJECT, SWS CONTRACTOR SHALL INSTALL SDR 35, 4" DRAIN PIPE STUB ONLY THROUGH WALLS OF CURB INLETS AND CAP TO ALLOW FUTURE CONNECTION OF TEE AND ADDITIONAL DRAIN PIPE BY OTHERS.
2. UNDERDRAIN PIPE SHALL BE PAID AS A MEASURED QUANTITY BY THE LINEAL FOOT.

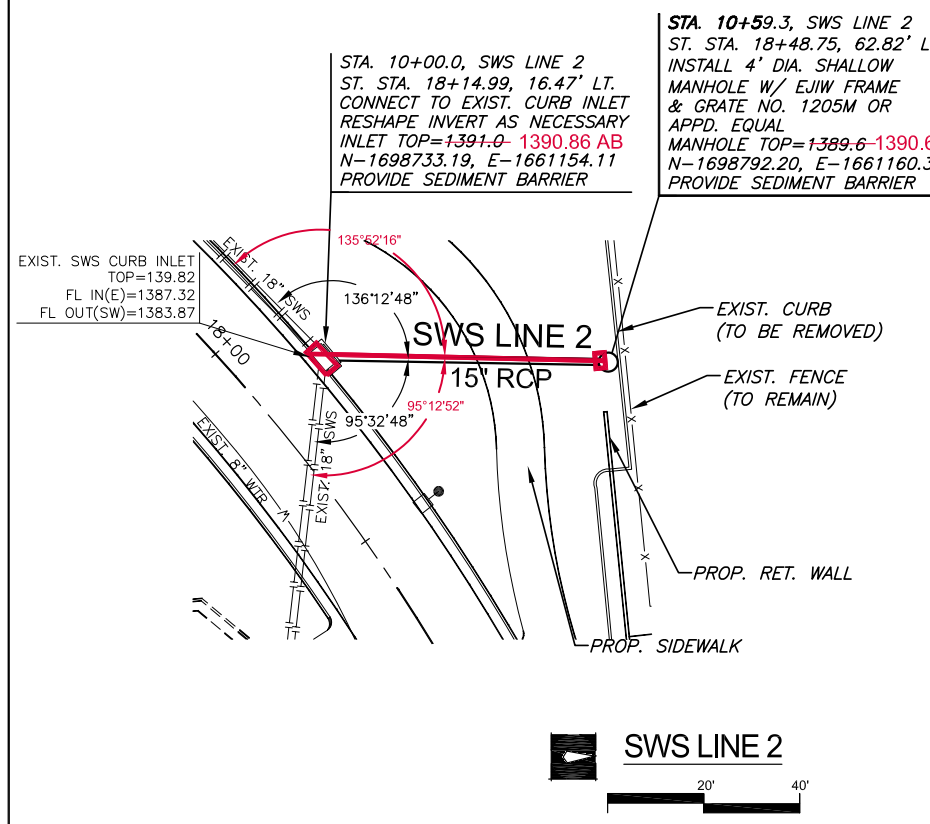


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Phone 785-296-8899

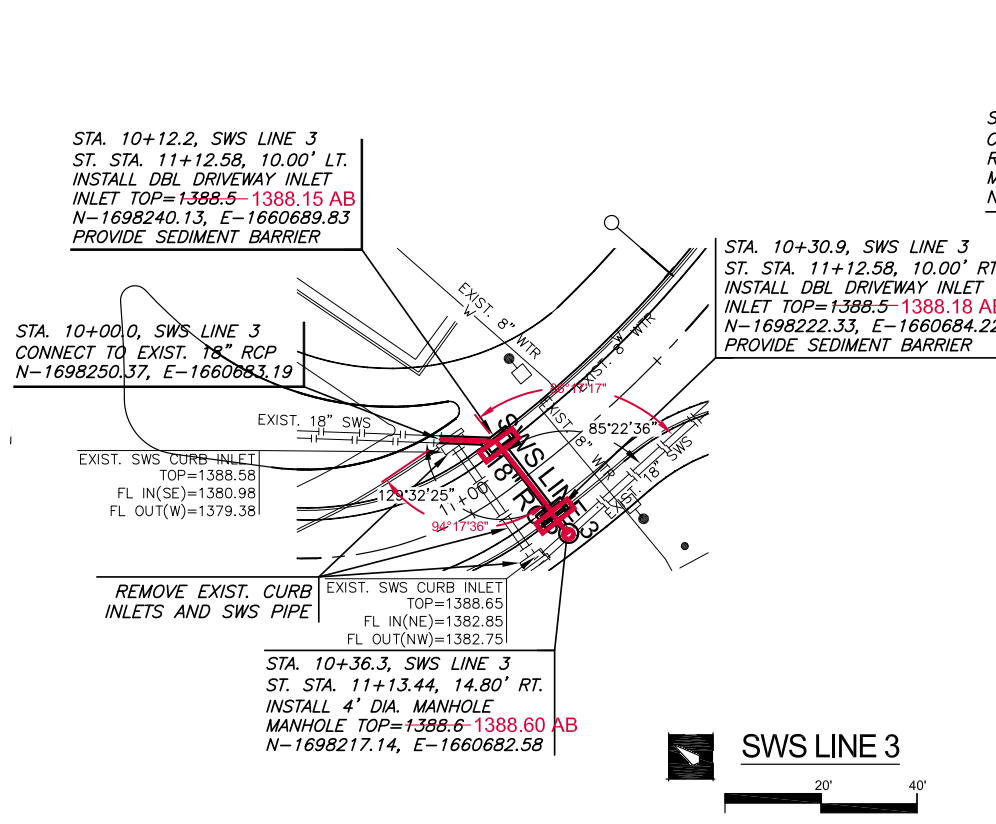
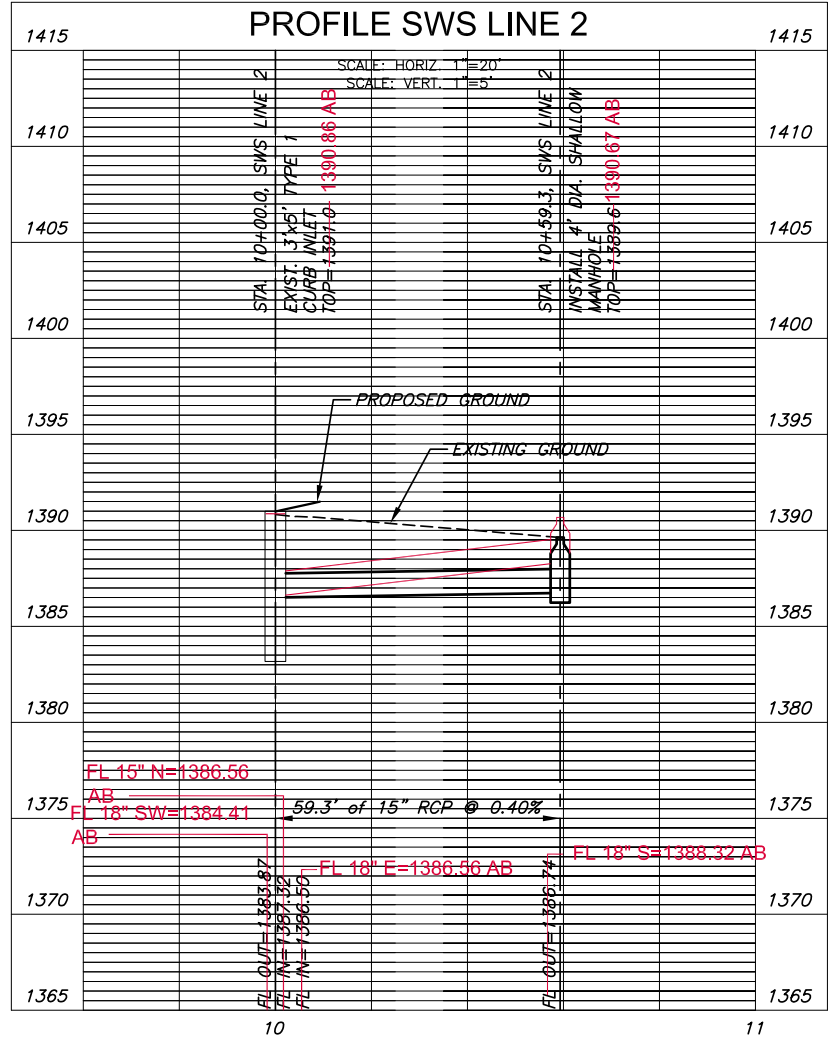
WICHITA STATE UNIVERSITY
NEW PERIMETER ROAD &
PEDESTRIAN LINKAGE
WICHITA, KANSAS
DATE: 1/15/2014 DRAWN BY: SPE CHECKED BY: GJA

PAVEMENT UNDERDRAIN DETAILS
A-012273
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ORIGINAL CONTRACT DOCUMENTS

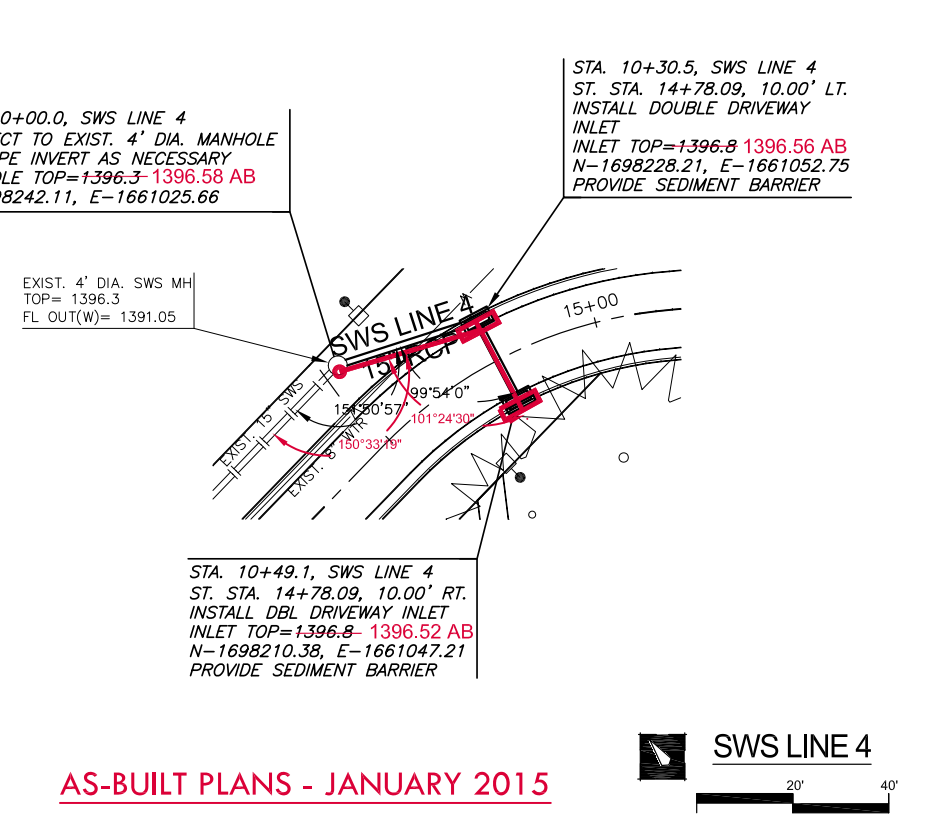
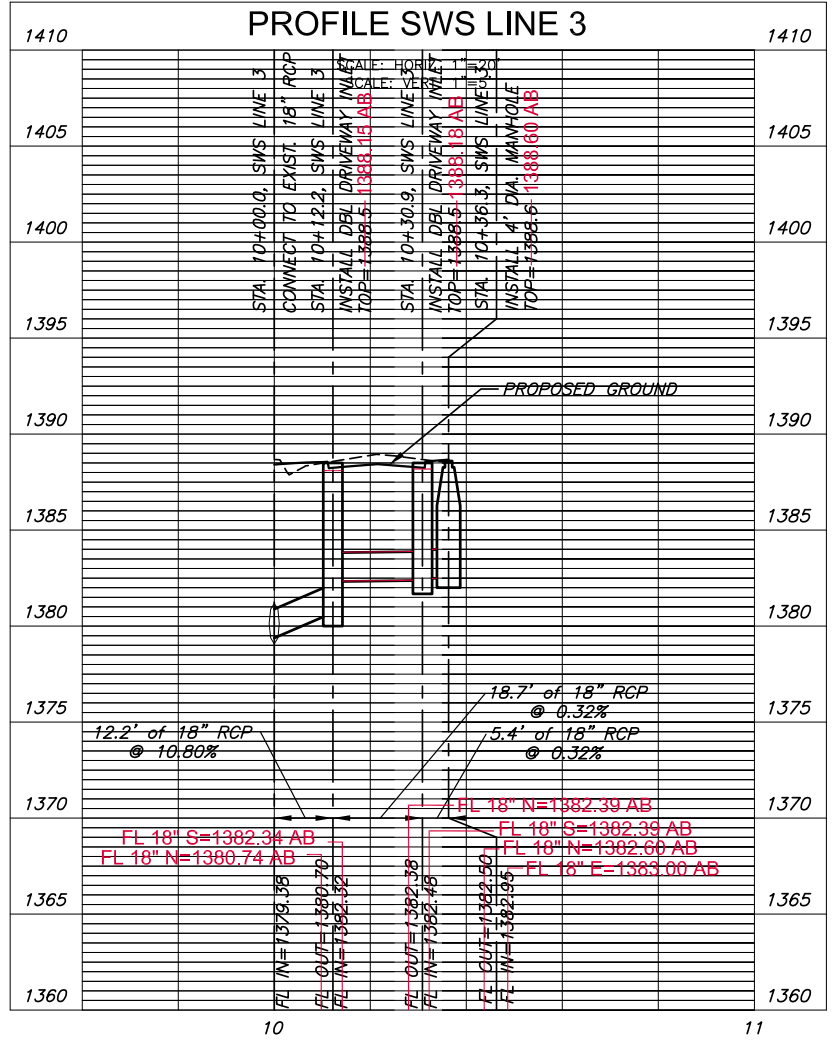
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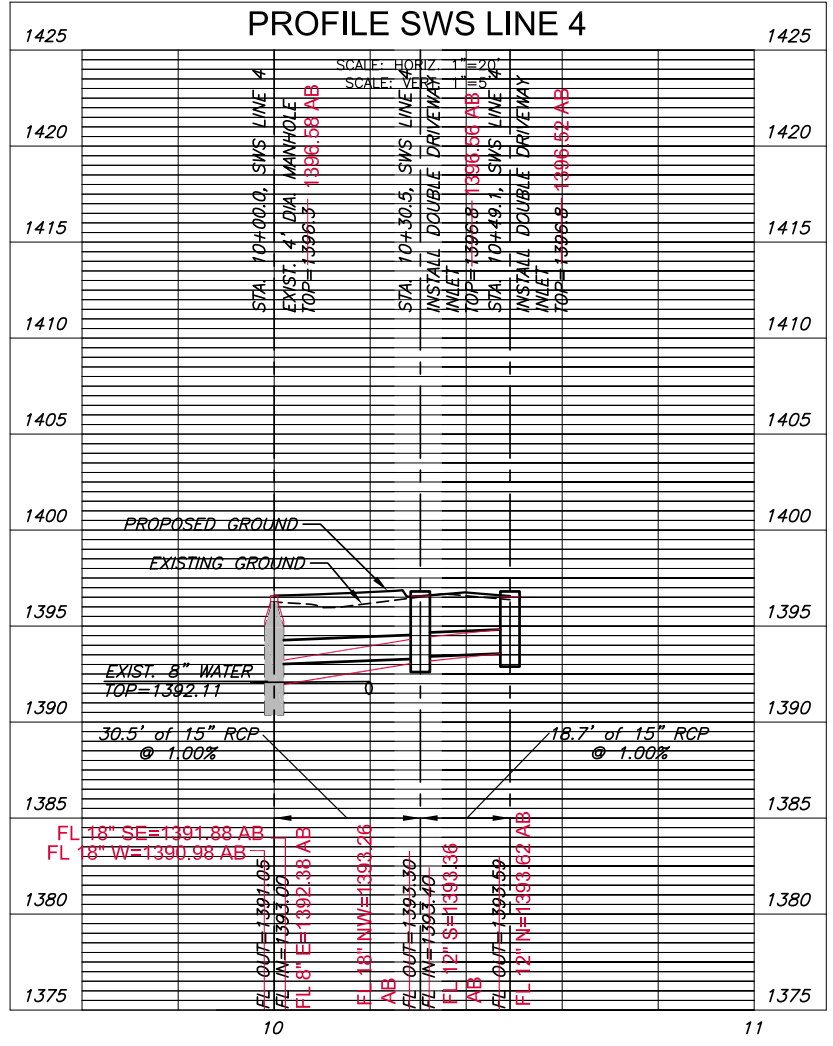


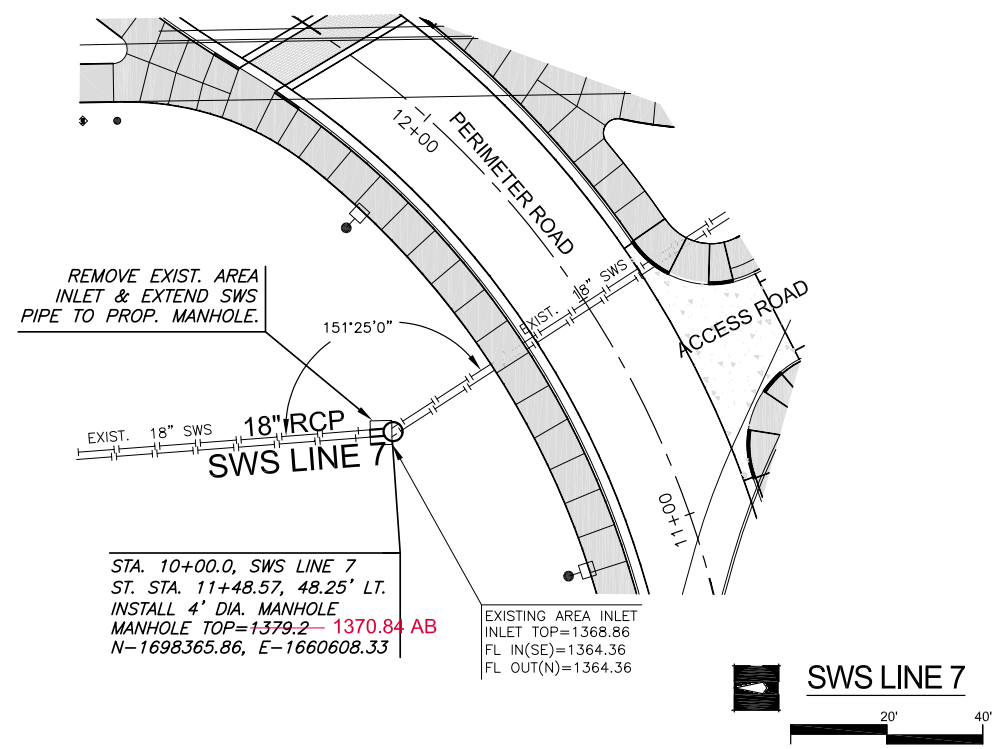
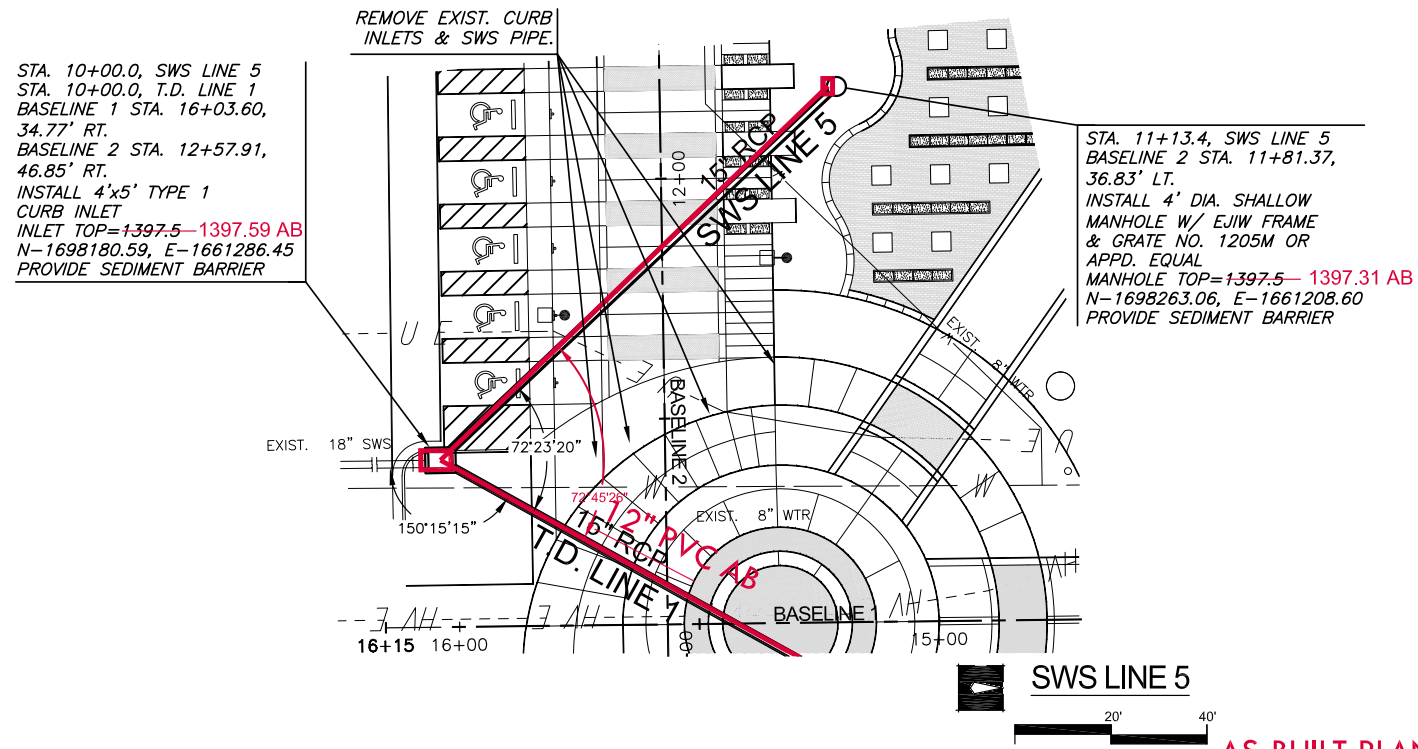
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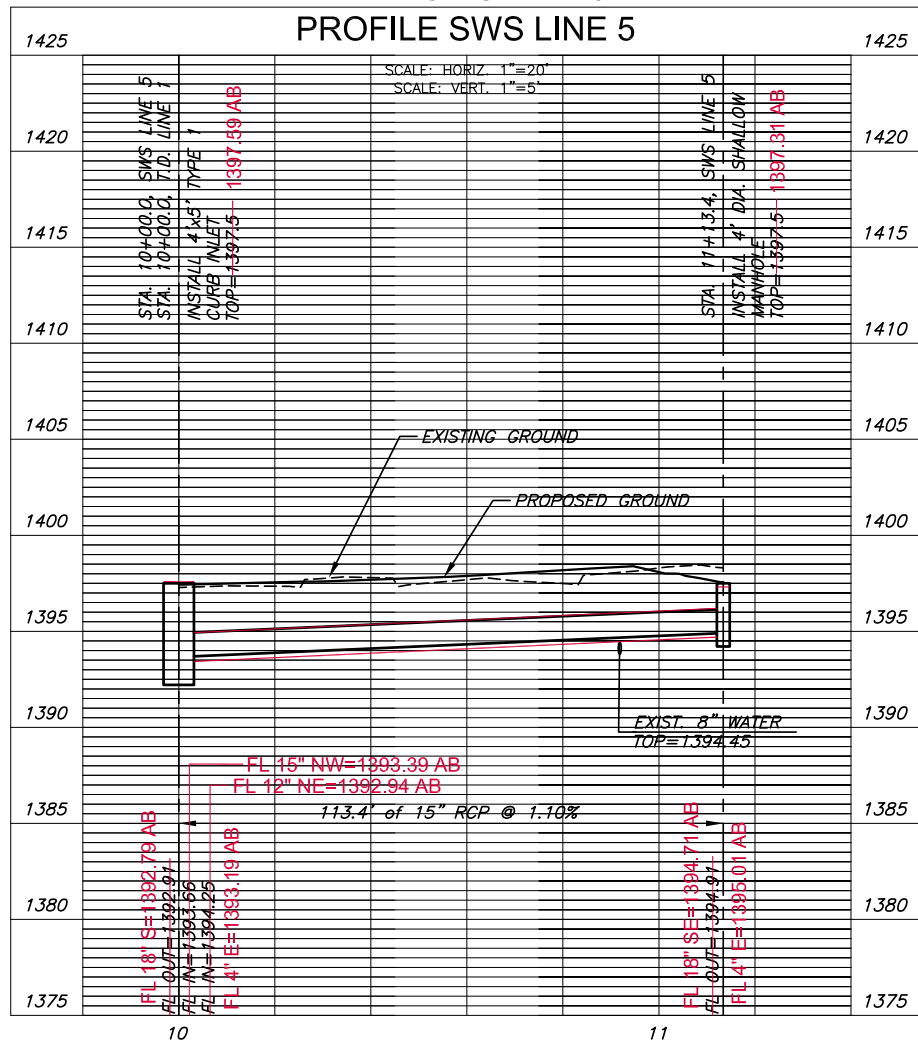
AS-BUILT PLANS - JANUARY 2015

PLAN SWS LINE 4
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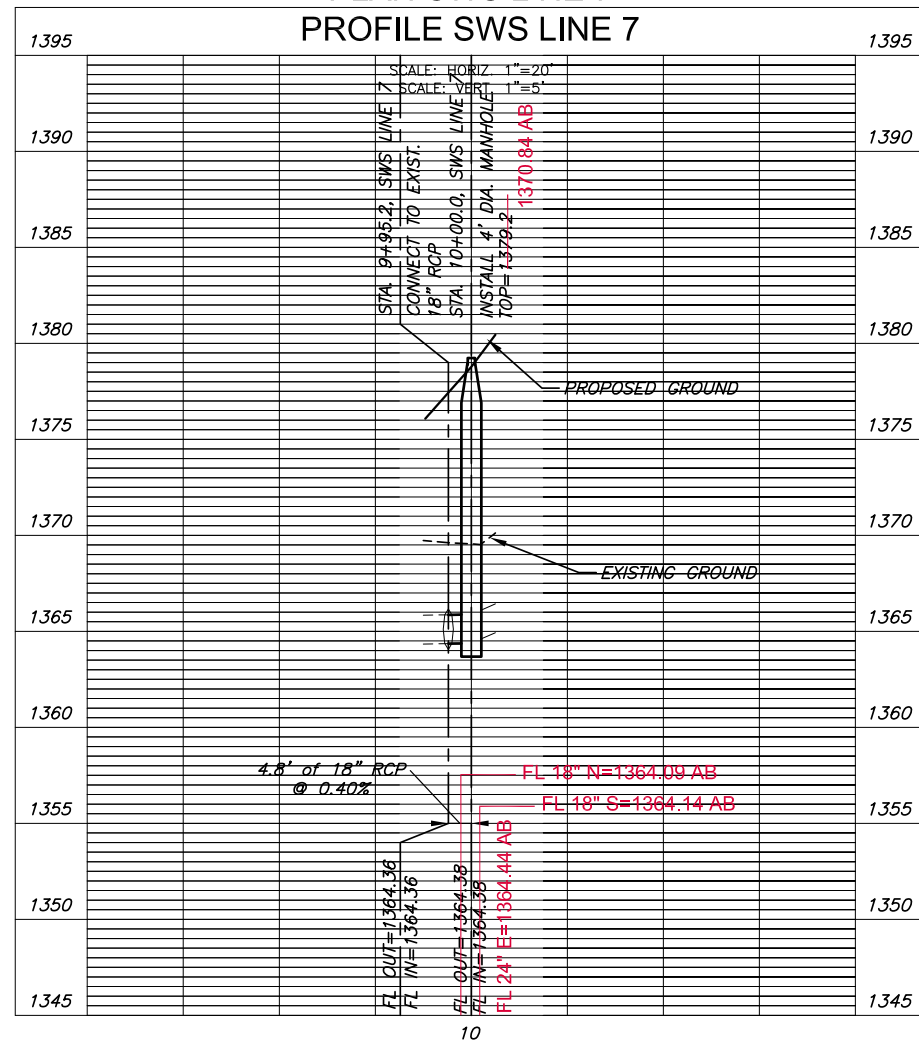




PLAN SWS LINE 5
PROFILE SWS LINE 5



PLAN SWS LINE 7
PROFILE SWS LINE 7



AS-BUILT PLANS - JANUARY 2015