

### 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.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR SHALL 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.
- TREES TO BE REMOVED ARE MARKED  $\otimes$  ALL TREES WHICH IN THE OPINION OF THE FIELD ENGINEER CAN BE SAVED, SHALL BE SAVED.
- 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
-CINDY LITTLEJOHN	(316)831-5664
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 SWPP 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.
- DEVELOPER FOR THIS PROJECT IS:  
EQUITY BANK  
7701 E. KELLOGG, SUITE 200  
WICHITA, KS, 67207  
GREG H. KOSSOVER  
(316)858-3122

#### NEW DEVELOPMENT

PROPOSED IMPERVIOUS=0.85 AC. (SECOND ADD. ONLY)  
PROPOSED PERVIOUS=0.27 AC. (SECOND ADD. ONLY)  
WQ<sub>v</sub>=0.09 AC.-FT. (SECOND ADD. ONLY)  
CP<sub>v</sub>=N/A

WQ =0.73 AC.-FT. (WHOLE DEVELOPMENT)  
CP =N/A

THIS OVERALL PROJECT SATISFIES CHAPTER 16-32 OF THE CITY CODE THROUGH TREATMENT PROVIDED BY BEECH LAKE. A COMPLETE STORMWATER REPORT WAS SUBMITTED WITH THE 0183PPD (SW ID NO. SW2013-0026).

### AS BUILTS

Contractor: McCullough Excavation, Inc. 8/5/2014	Project Inspector: Larry Gann <b>KEMILLER</b> ENGINEERING PA 117 E. Lewis, Wichita, KS 67202 (316)264-0242
---	--

## PRIVATE STORM WATER SEWER

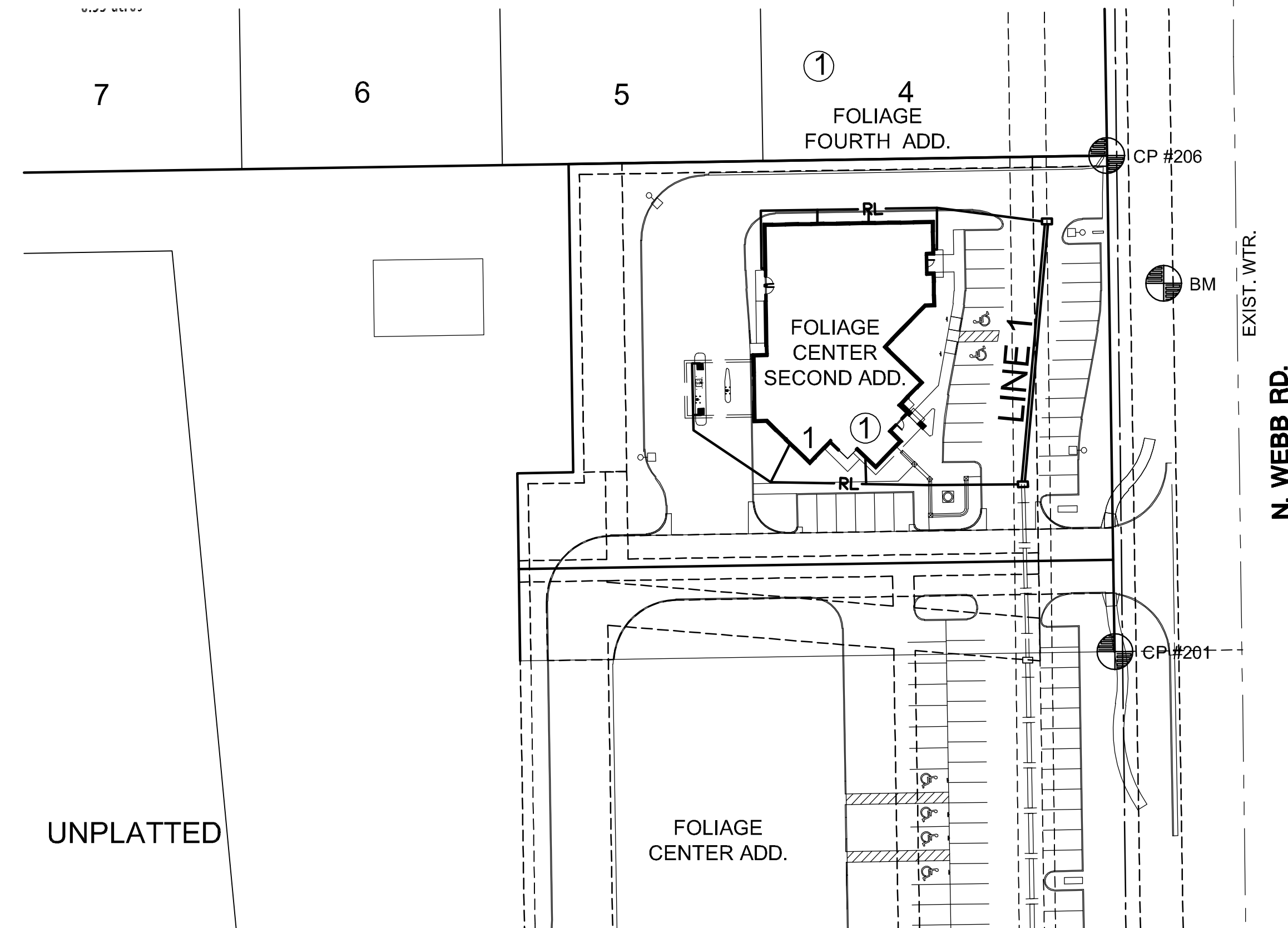
TO SERVE

# EQUITY BANK

PROJECT NO. 209PPD

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

OCA NO. 607861



UNPLATTED

SW corner, SE 1/4, Sec. 8,  
T27S, R2E, 6th P.M.  
Fnd. 3/4" Bar w/ MKEC CLS  
39 cap

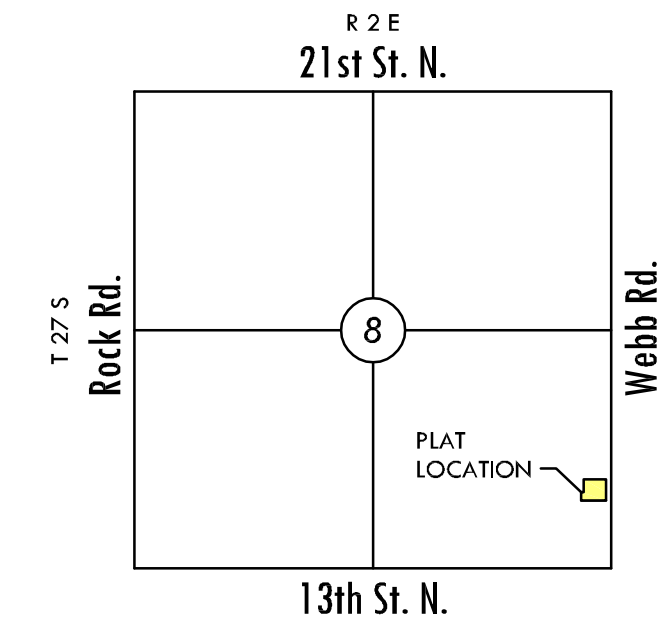
#### BENCHMARKS

- BM SQUARE CUT TOP OF CURB, SOUTHEAST CURB RETURN AT NORTH ENTRANCE TO SITE, WEST SIDE OF WEBB RD. ELEV. = 1375.41 NGVD 29
- CP #201 5/8" REBAR WITH MKEC YELLOW CAP N = 1695142.18 E = 1680936.13 SOUTHEAST PROPERTY CORNER OF SITE.
- CP #206 5/8" REBAR NO CAP N = 1695374.58 E = 1680932.63 NORTHEAST PROPERTY CORNER OF SITE.

#### DATUMS

VERTICAL DATUM= NGVD 29  
HORIZONTAL DATUM= KS 1983 SOUTH ZONE (HORIZONTAL COORDINATES MODIFIED TO THE GROUND USING A SCALE FACTOR OF 1.000120014)

P.O.B.  
SE corner, SE 1/4, Sec. 8,  
T27S, R2E, 6th P.M.  
Fnd. 3/4" Bar



#### VICINITY MAP

#### INDEX TO DRAWINGS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	INLET DETAILS
3	PLAN & PROFILES
C 1.1	GRADING PLAN
C 2.1	EROSION CONTROL PLAN
6-8	EROSION CONTROL DETAILS
9	ERU
10	FINAL PLAT

#### LEGEND

EXISTING SWS  
PROPOSED SWS



SCALE: 1"=50'  
0 50 100

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

Engineering: *[Signature]* 1-8-14  
Storm Water (Public Works): *[Signature]* 01/28/14

#### 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).

NOTE: CONTRACTOR TO VERIFY DEPTH AND LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.



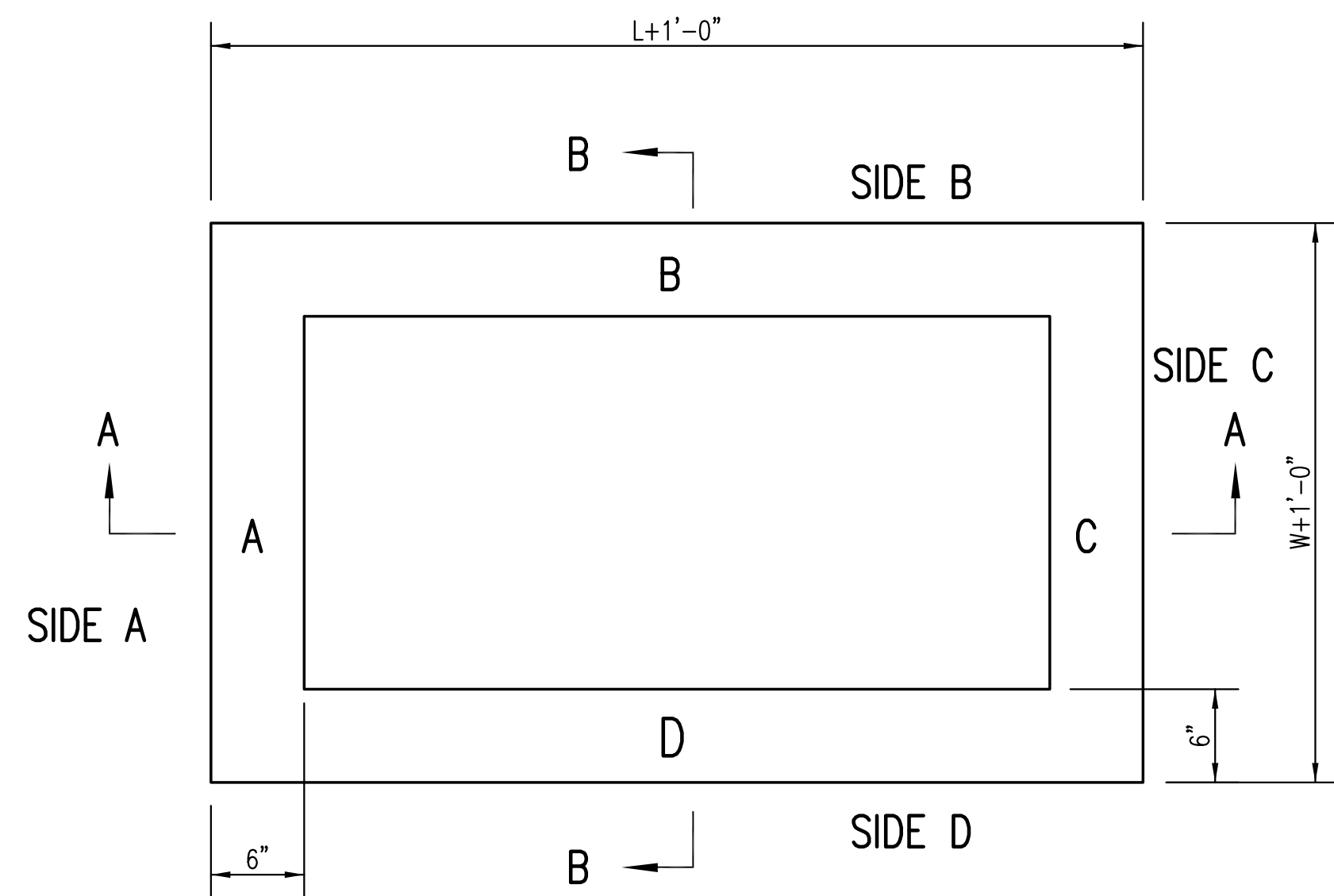
PRIVATE STORM WATER SEWER PLAN FOR  
**EQUITY BANK**  
AT THE WATERFRONT

©2013 MKEC Engineering All Rights Reserved  
These drawings and their contents, including, but not limited to, all concepts, designs, & ideas are the exclusive property of MKEC Engineering (MKEC), and may not be used or reproduced in any way without the express consent of MKEC.

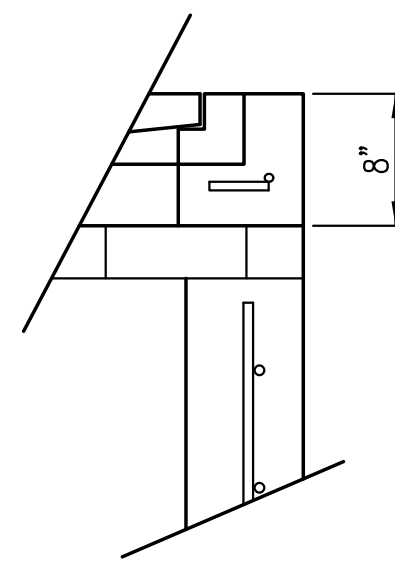
#### TITLE SHEET

PROJECT NO.	209PPD	
DATE	DEC. 2013	
SCALE	AS SHOWN	
DESIGNED	DRAWN	CHECKED
SLF	SLF	JC
#	----	##/##/##
NO.	REVISION	DATE

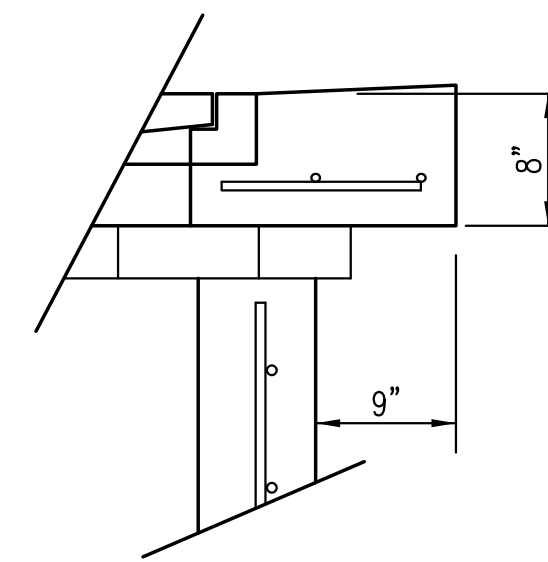
SHEET NO.  
1 OF 10



TOP VIEW

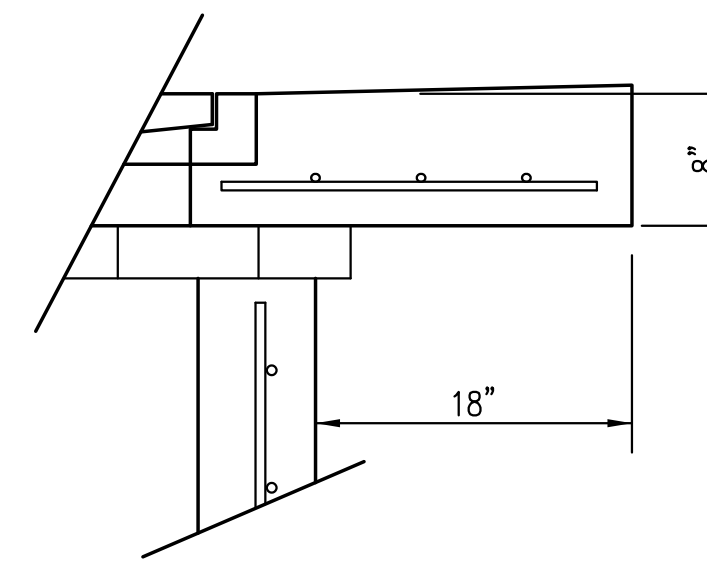


FLUSH STYLE TOP  
NO APRON



9" APRON

\* APRON TO EXTEND ON ALL 4 SIDES OF INLET.  
DESIGNER TO DESIGNATE APRON SIZE.



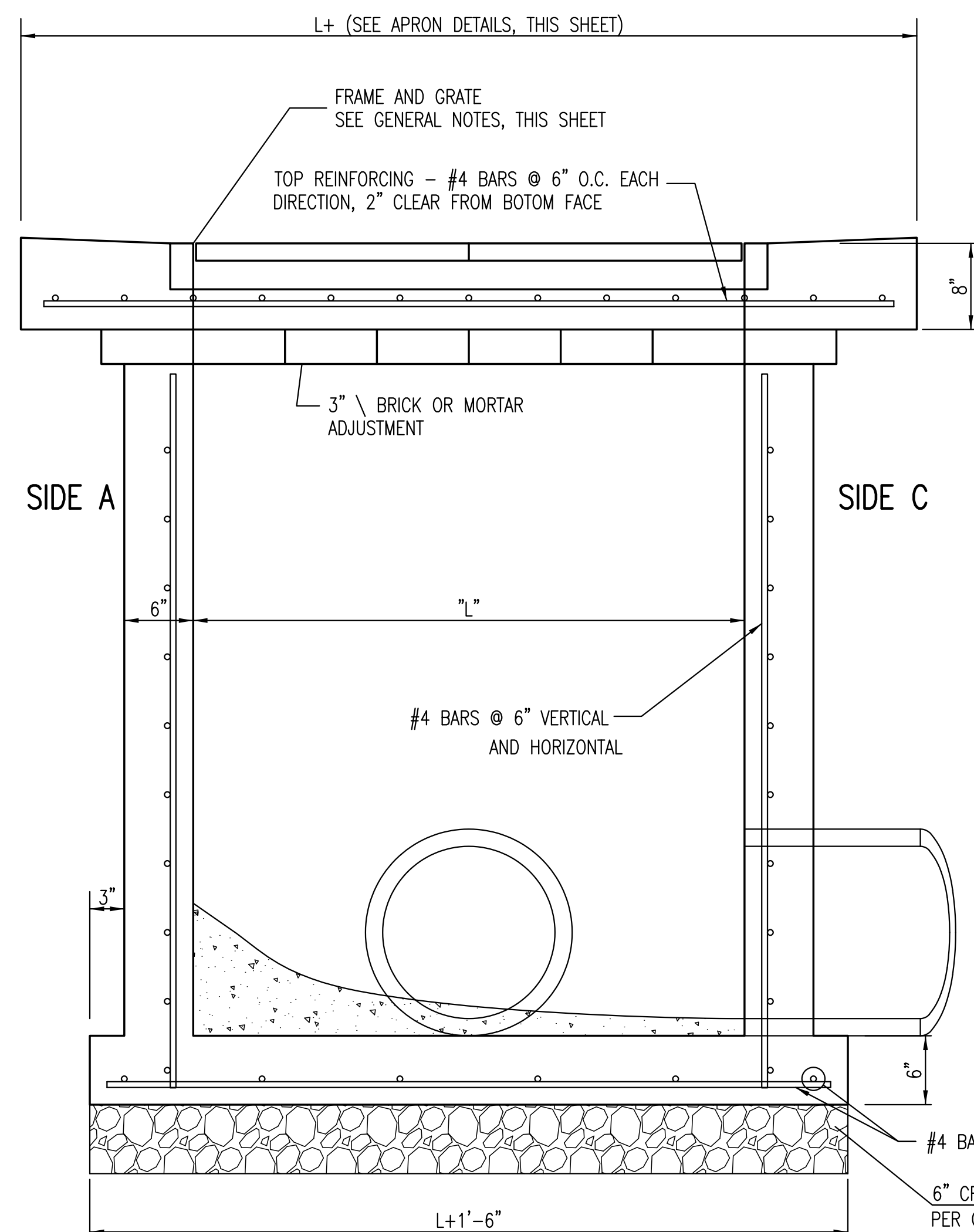
18" APRON

W=2' and L=2' for SINGLE DROP INLET  
W=2' and L=4' for DOUBLE DROP INLET

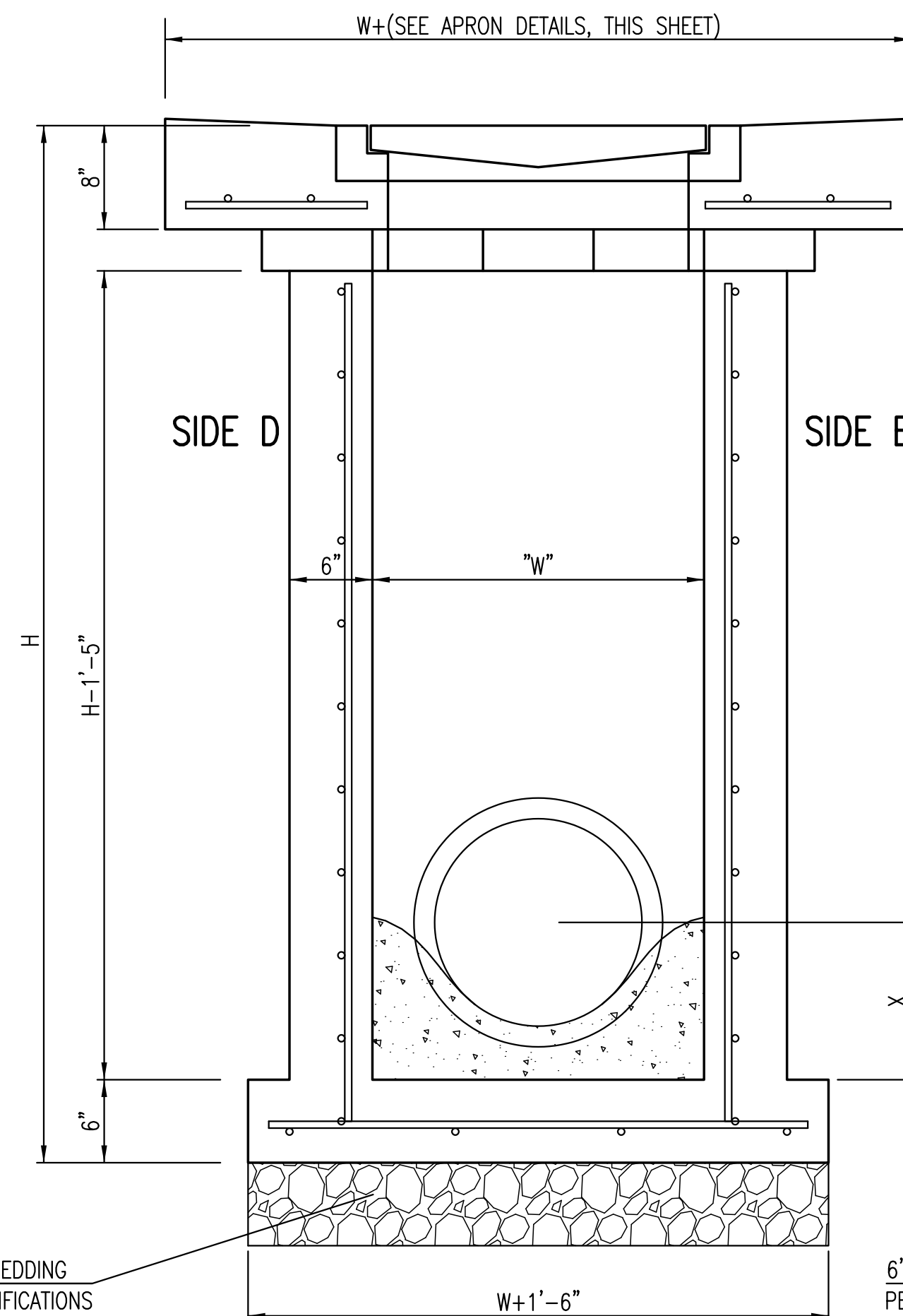
The structure(s) on this detail sheet are designed for HS-20 loading at these specific dimensions only. If larger dimensions are required, the ENGINEER shall provide a project specific structure design for approval by the City Engineer's office.

GENERAL NOTES

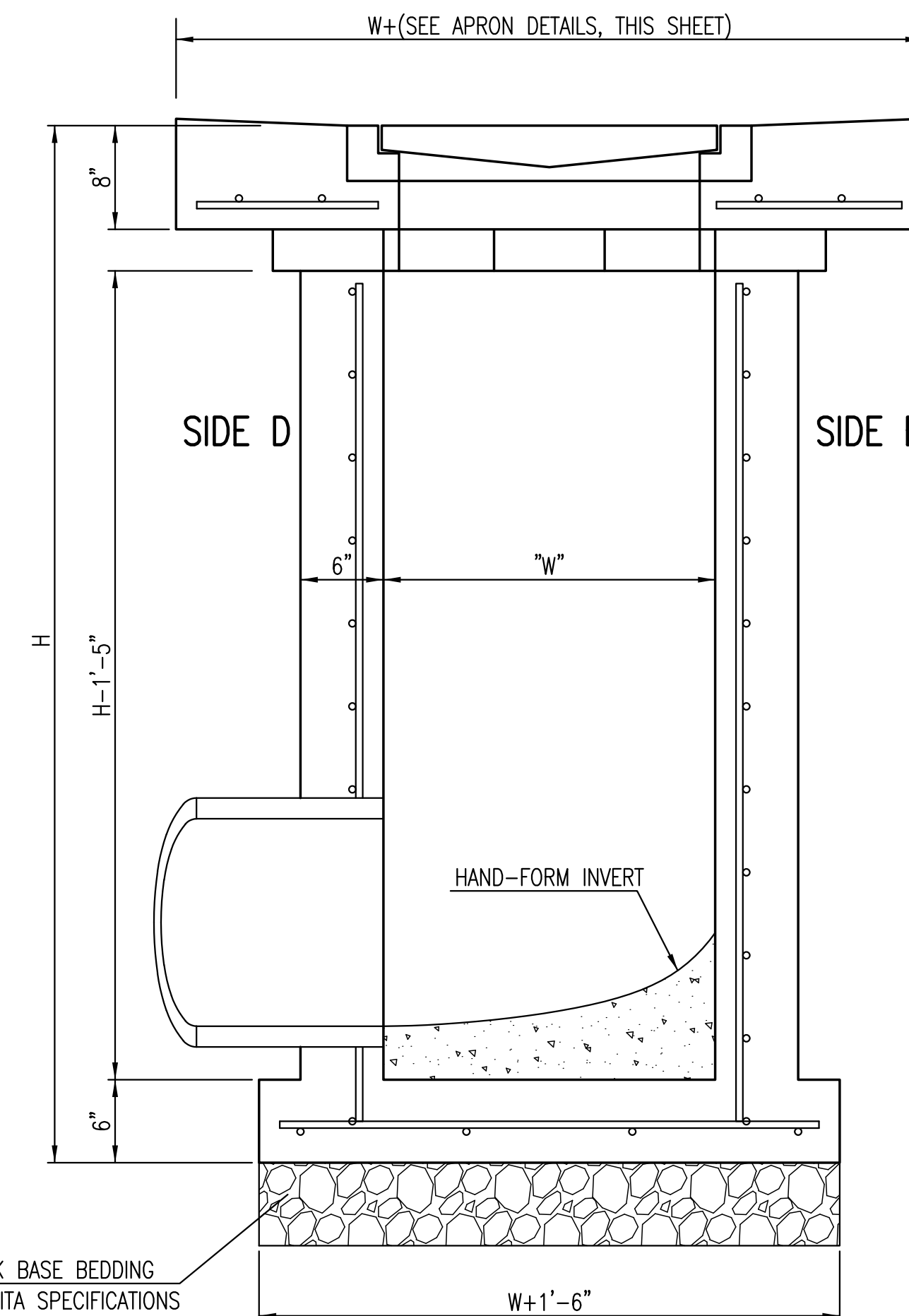
- GRATE FRAME TO BE INSTALLED ON THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK. CONCRETE USED FOR INLET CONSTRUCTION SHALL CONFORM TO CITY OF WICHITA SPECIFICATIONS FOR CONCRETE PAVEMENT MIX.
- INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.
- THE ENDS OF ALL PIPES INSTALLED IN INLETS SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE INLET WALL.
- INLET FRAME AND GRATE TO BE DEETER #2433, EJIW #5391-Z1 OR APPROVED EQUAL FOR 2'x2' SINGLE DROP INLET AND DEETER #2434, EJIW #5391 Z3 OR APPROVED EQUAL FOR 2'x4' DOUBLE DROP INLET.
- 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"  
END OUTLET



SECTION "B-B"  
SIDE OUTLET



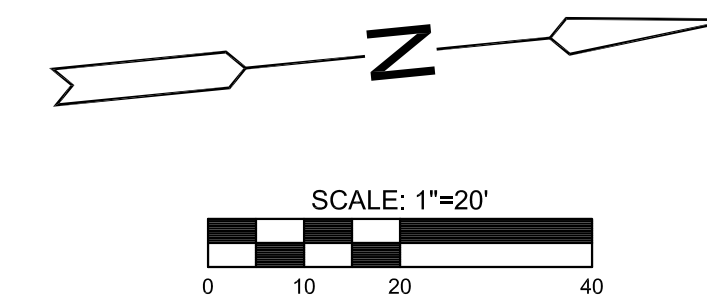
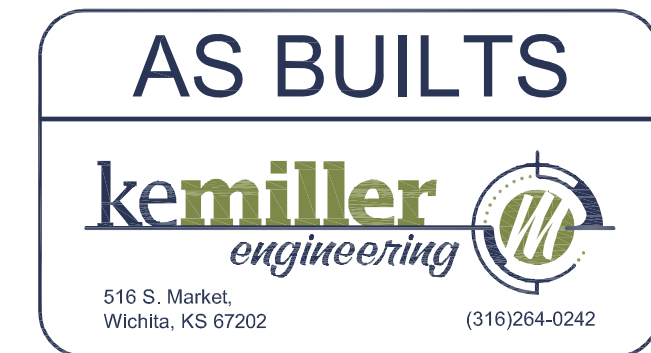
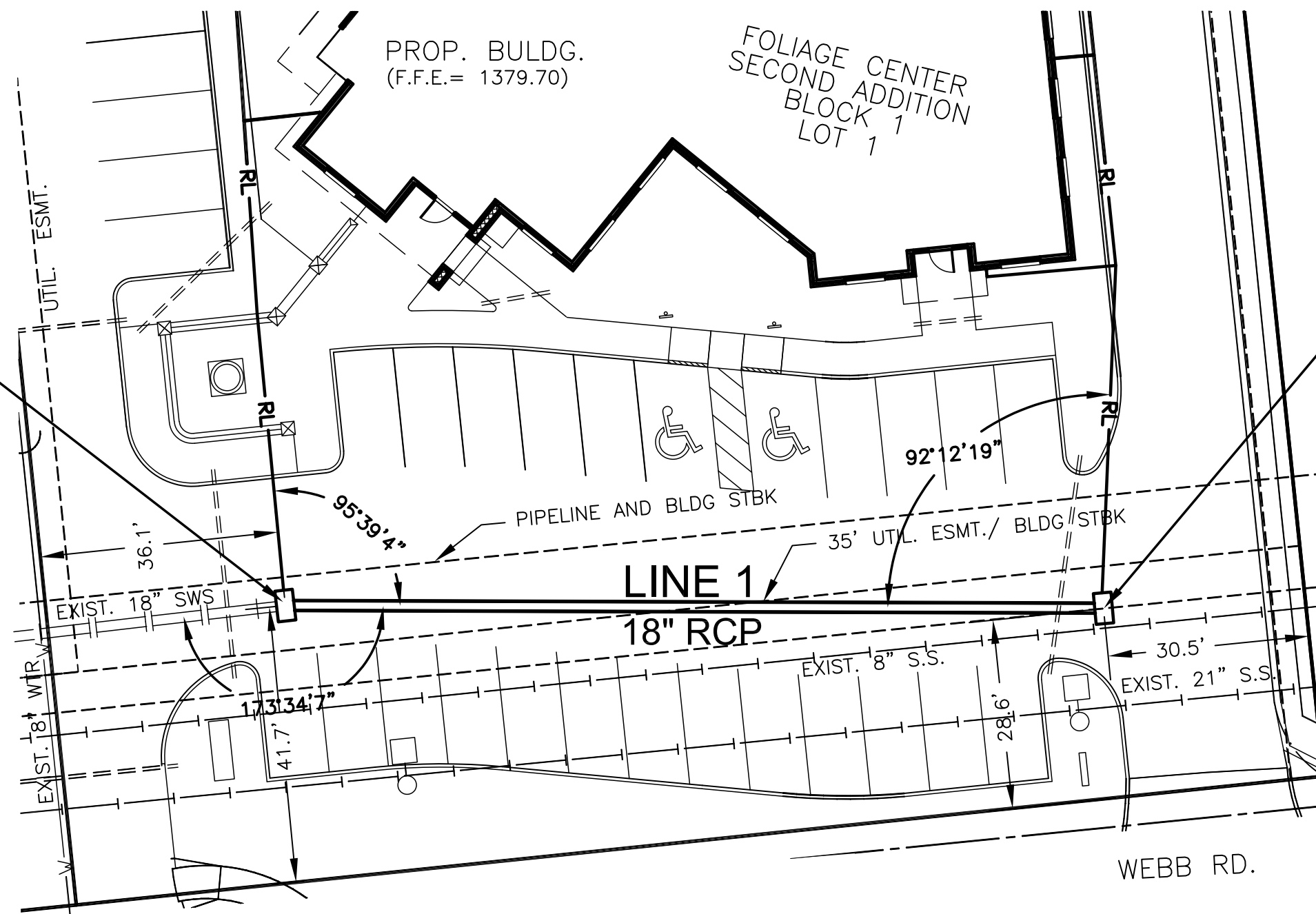
REVISED 05/10/2011 - GJ		
<b>SINGLE/DOUBLE DROP INLET</b>		
CITY ENGINEER <b>GARY L. JANZEN, P.E.</b>		
PROJECT NUMBER 209PPD	OCA NUMBER 607861	DATE 11/2010
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		DESIGN DRAWN SHEET 2 OF 10

Sheet 12-06-2013 2:33:51 PM by STEVEN FRANK  
 Plot Scale 1:0.9808 12-20-2013 4:43:08 PM by STEVEN FRANK  
 J:\Projects\2013\1301010668\_Equity\_Bank\5-Civil\CAD\Draw\13668\_DD1.dwg

J:\Projects\2013\1301010668\_Equity\_Bank\5-Civil\CAD\Draw\13668\_DD1.dwg

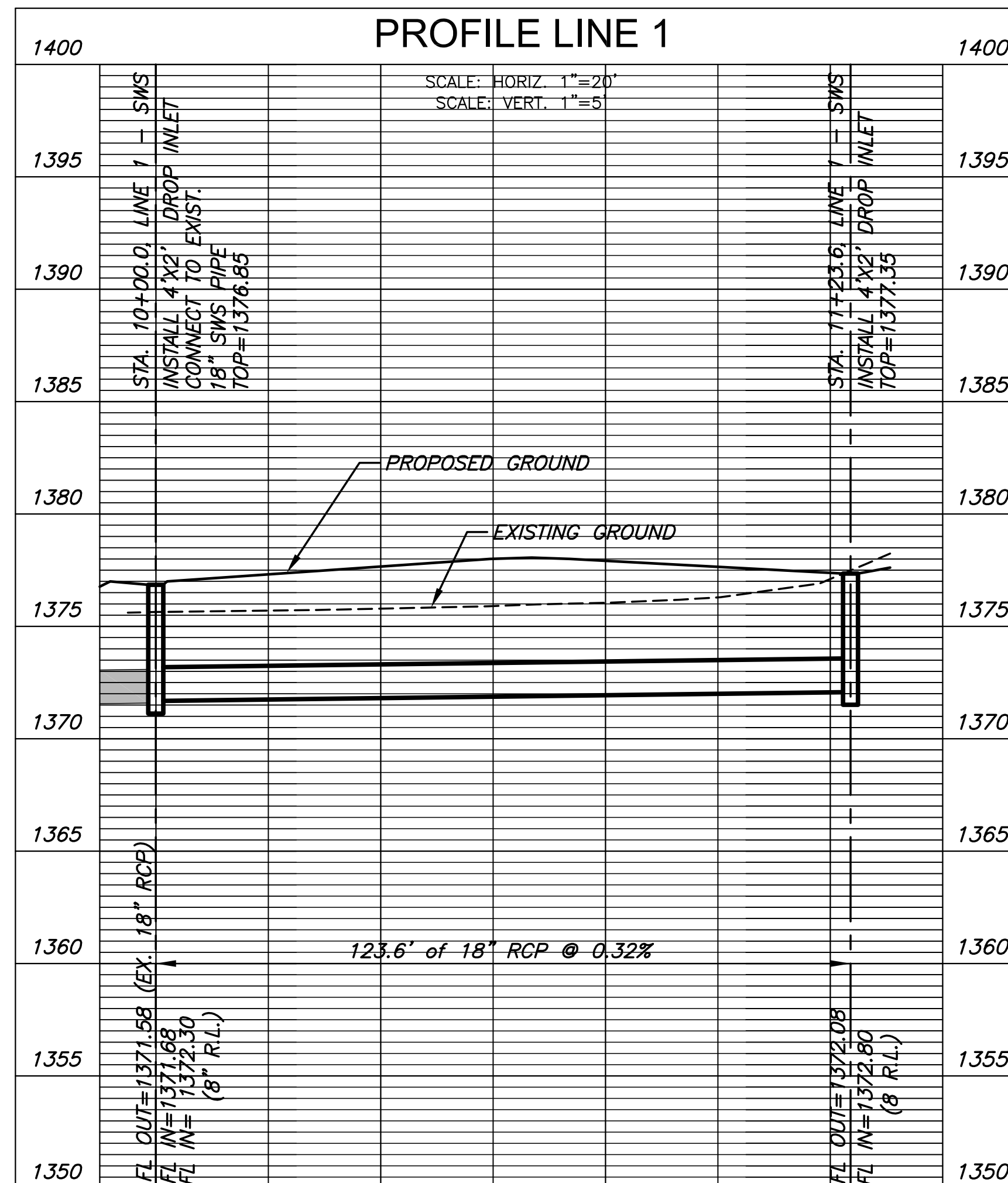
STA. 10+00.0, SWS LINE 1  
 REMOVE EXISTING PLUG AND  
 CONNECT TO EXISTING 18" PIPE  
 INSTALL 4'X2' DROP INLET  
 INLET TOP= 1376.85  
 N=1695220.59, E=1680893.15  
 PROVIDE SEDIMENT BARRIER

STA. 11+23.6, LINE 1  
 INSTALL 4'X2' DROP INLET  
 INLET TOP= 1377.35  
 N=1695343.72, E=1680904.32  
 PROVIDE SEDIMENT BARRIER



- NOTE:**
- CONTRACTOR TO VERIFY THE DEPTH AND LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
  - BEDDING, BACKFILL, AND COMPACTION SHALL COMPLY WITH CITY OF WICHITA STANDARD SPECIFICATIONS SECTION 801.5 AND 801.6.
  - SEE UTILITY PLAN FOR FULL EXTENT OF RAINLEADER LOCATIONS

PLAN LINE 1  
 PROFILE LINE 1



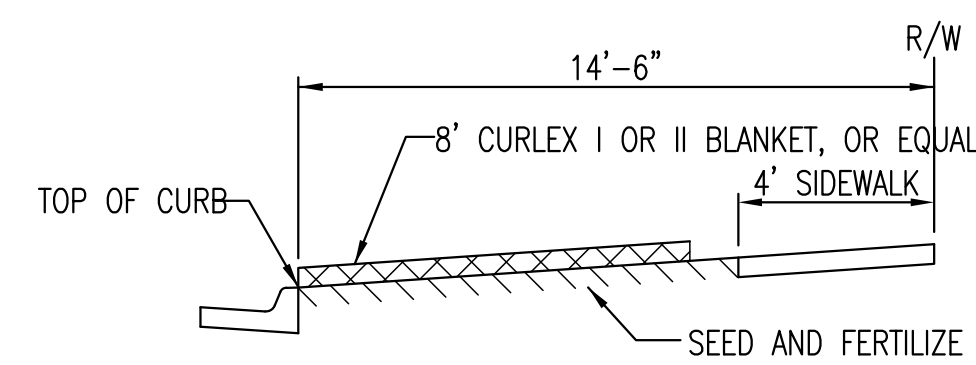
STORM WATER SEWER PLAN FOR  
**EQUITY BANK**  
 AT THE WATERFRONT

©2013 MKEC Engineering All Rights Reserved  
 www.mkec.com  
 These drawings and their contents, including, but not limited to, all concepts, designs, & ideas are the exclusive property of MKEC Engineering (MKEC), and may not be used or reproduced in any way without the express consent of MKEC.

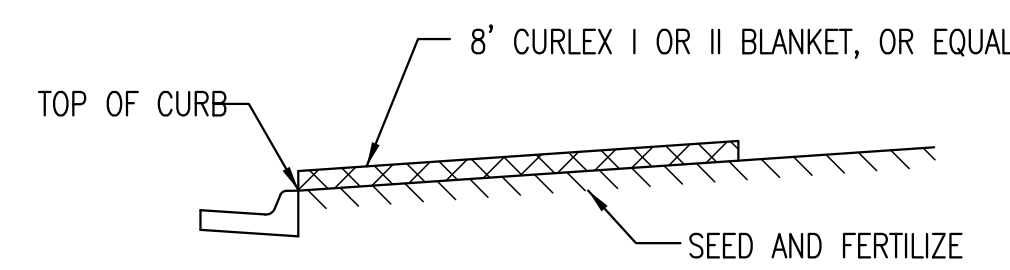
PLAN & PROFILE		
PROJECT NO.	209PPD	
DATE	DEC. 2013	
SCALE	AS SHOWN	
DESIGNED	DRAWN	CHECKED
SLF	SLF	JC
#	REVISION	DATE
NO.		





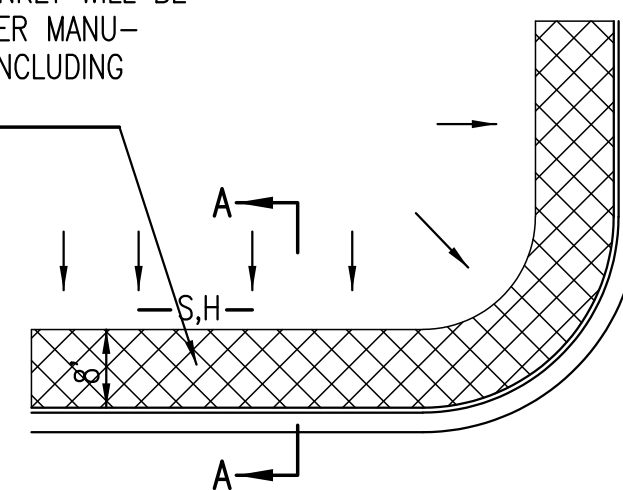


SECTION B-B

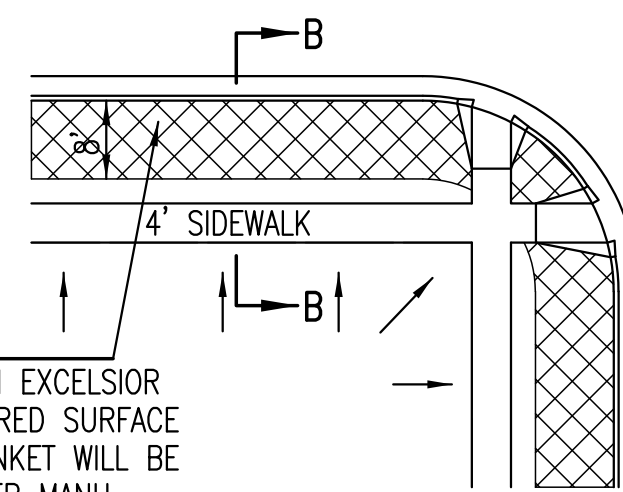


SECTION A-A

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

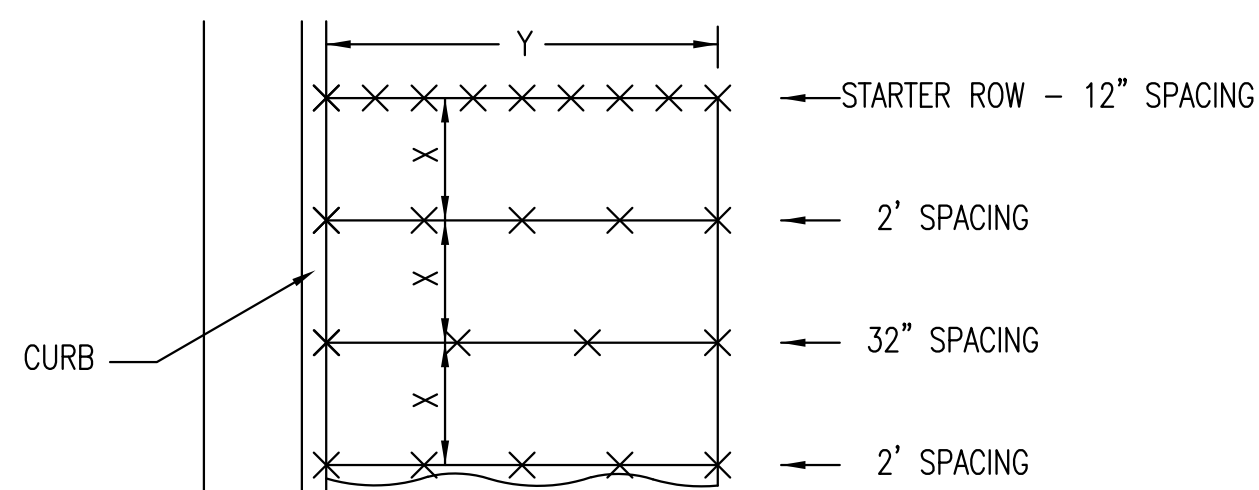


INSTALL 8' WIDE CURLEX I OR II EXCELSIOR BLANKET, OR EQUAL, ON PREPARED SURFACE BACK OF CURB. EDGE OF BLANKET WILL BE AT BACK OF CURB. INSTALL PER MANUFACTURERS RECOMMENDATION, INCLUDING STAPLES. (SEE DETAIL)

**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.

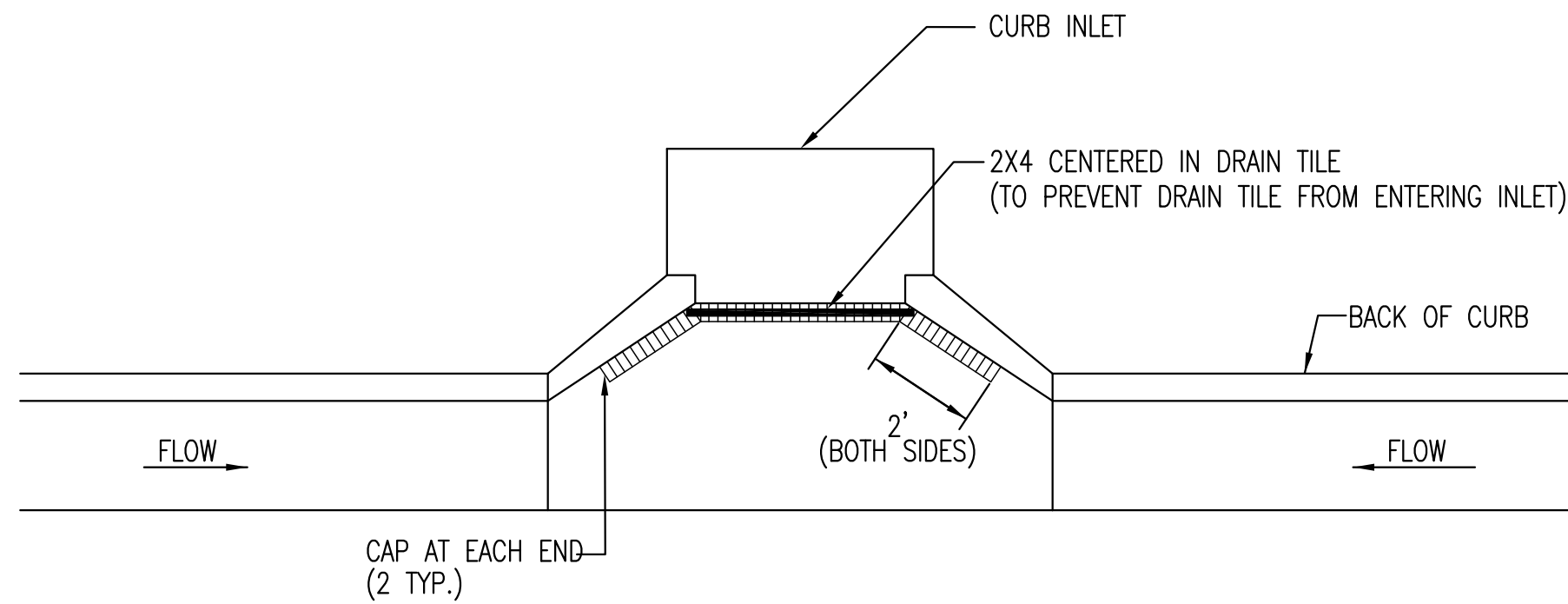
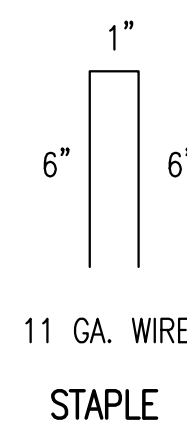
**BACK OF CURB PROTECTION DETAIL**



STAPLE PATTERN

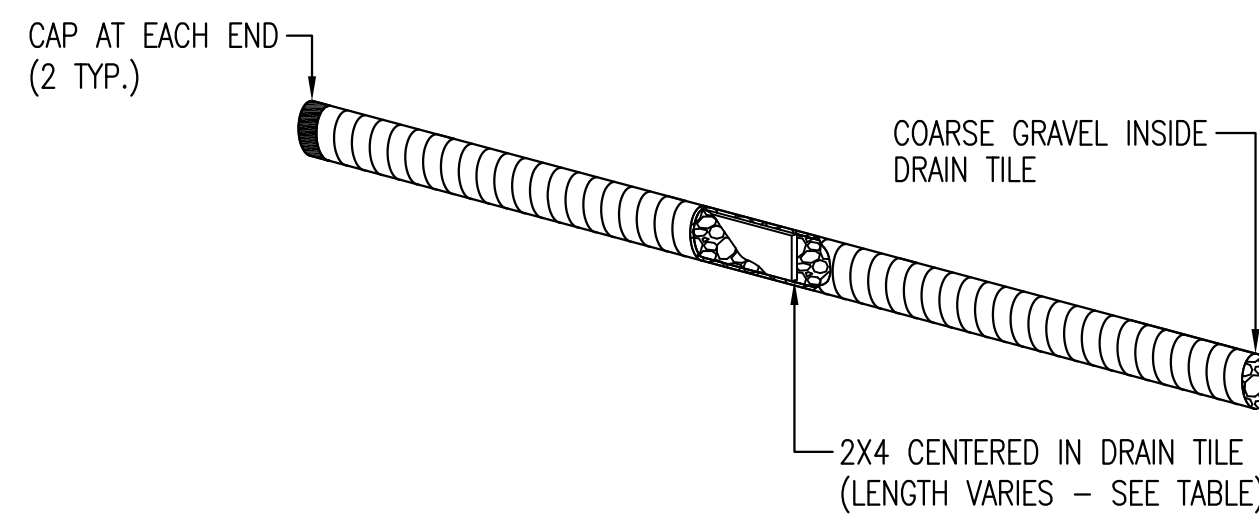
NOTES: USE 6" SEAM OVERLAP  
(X & Y = RECOMMENDED BY MANUFACTURE)

**DETAILS FOR APPROVED EROSION CONTROL MAT**

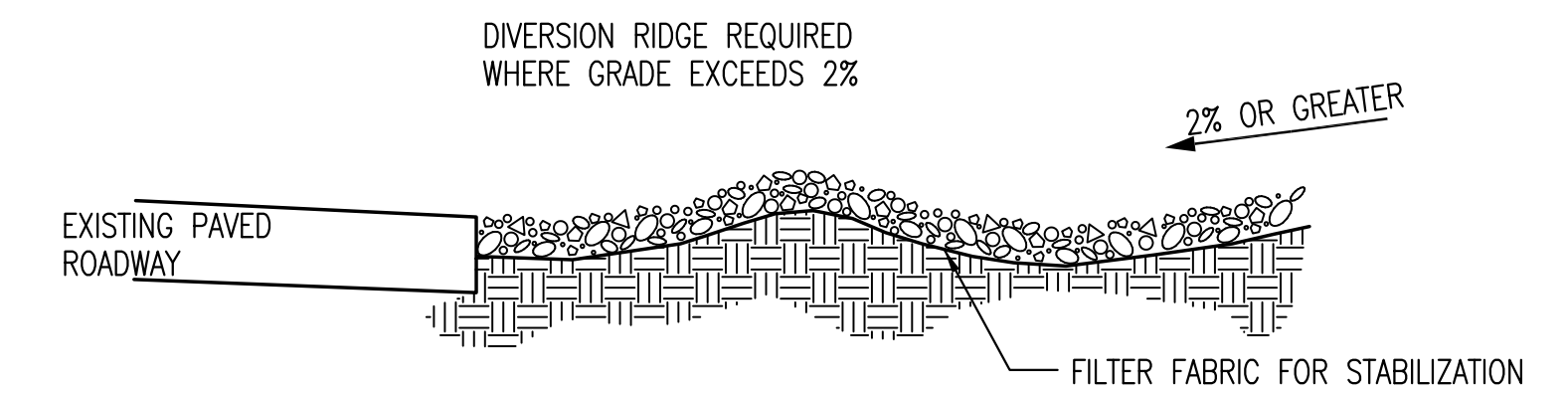


NOTE: PLACE 4" PERFORATED PVC PIPE, FILLED WITH 1/2"-1" DIA. GRAVEL, IN FRONT OF CURB INLET AS SHOWN.

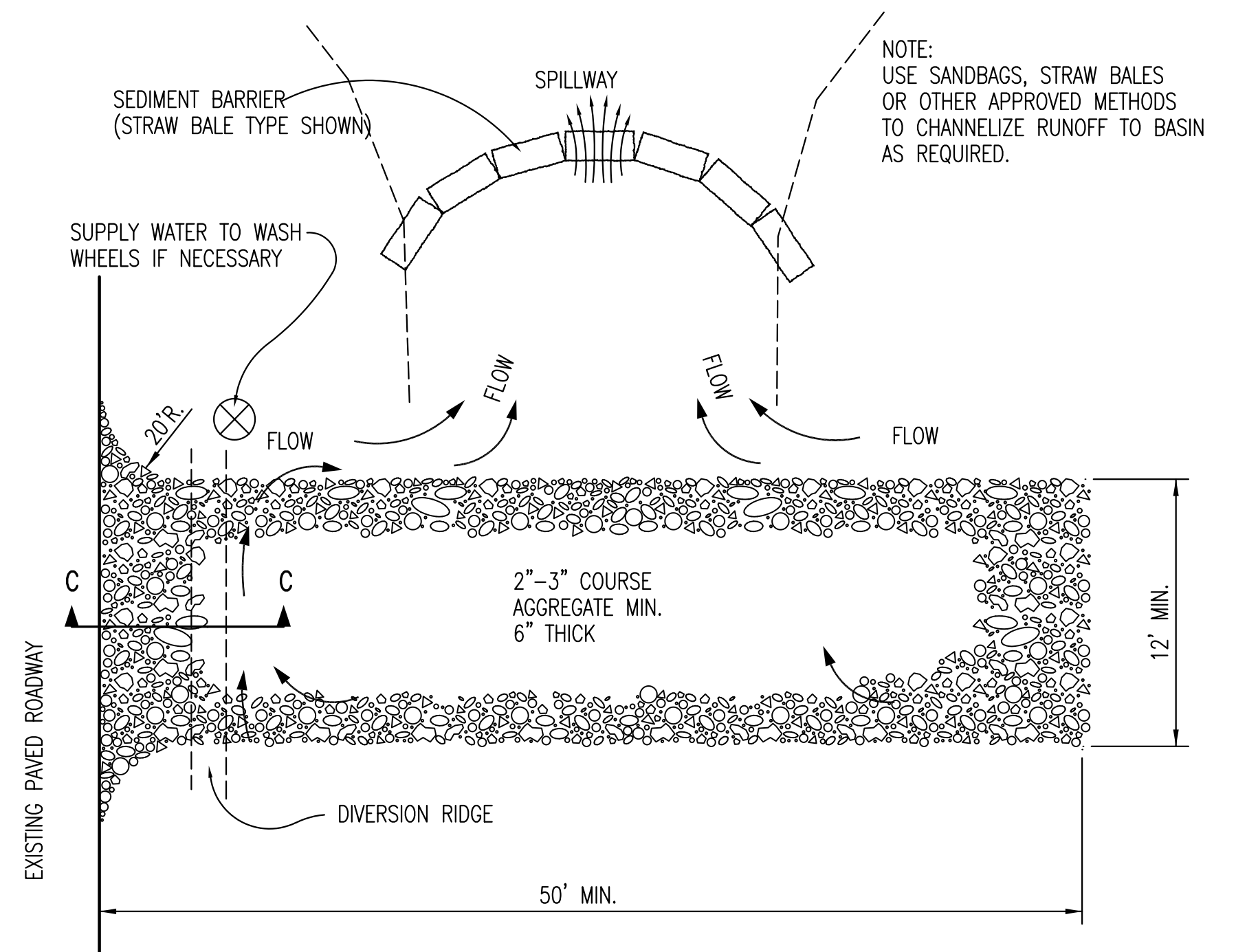
2X4 LENGTH	INLET TYPE	INLET OPENING
5'-6"	1-A	5'-0"
10'-6"	1-A	10'-0"
15'-6"	1-A	15'-0"



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



SECTION C-C



**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  
**GARY JANZEN, P.E.**

PROJECT NUMBER <b>209PPD</b>	OCA NUMBER <b>607861</b>	DATE <b>08/2012</b>
---------------------------------	-----------------------------	------------------------

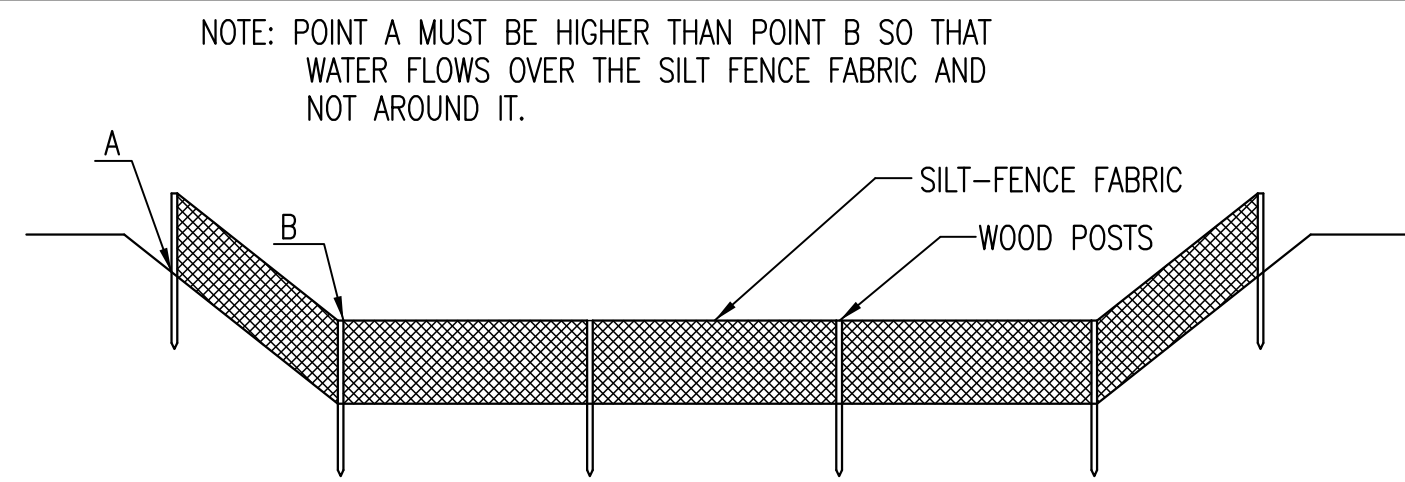
CITY ENGINEER'S OFFICE  
CITY HALL - SEVENTH FLOOR  
455 NORTH MAIN STREET  
WICHITA, KANSAS 67202-1620  
(316) 268-4501

SHEET

6 OF 10



05/13/13



**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 DITCH 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 UPSLOPE 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.

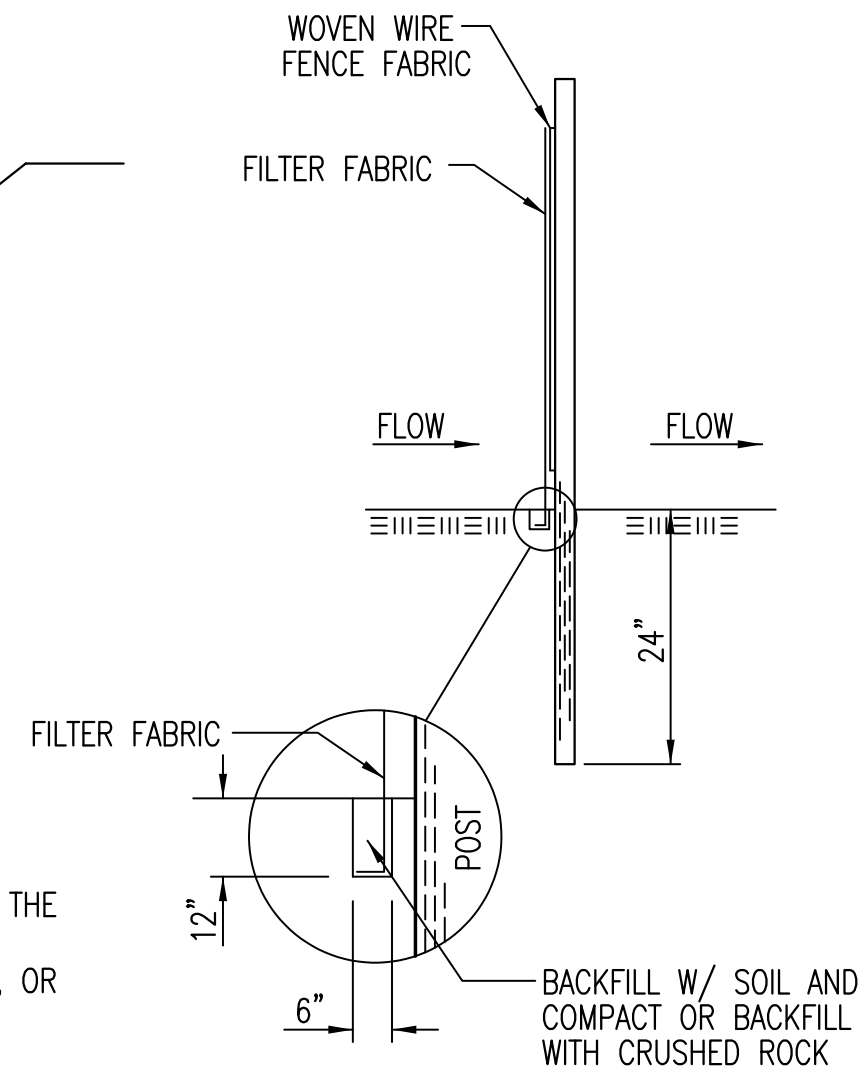
**LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:**

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.

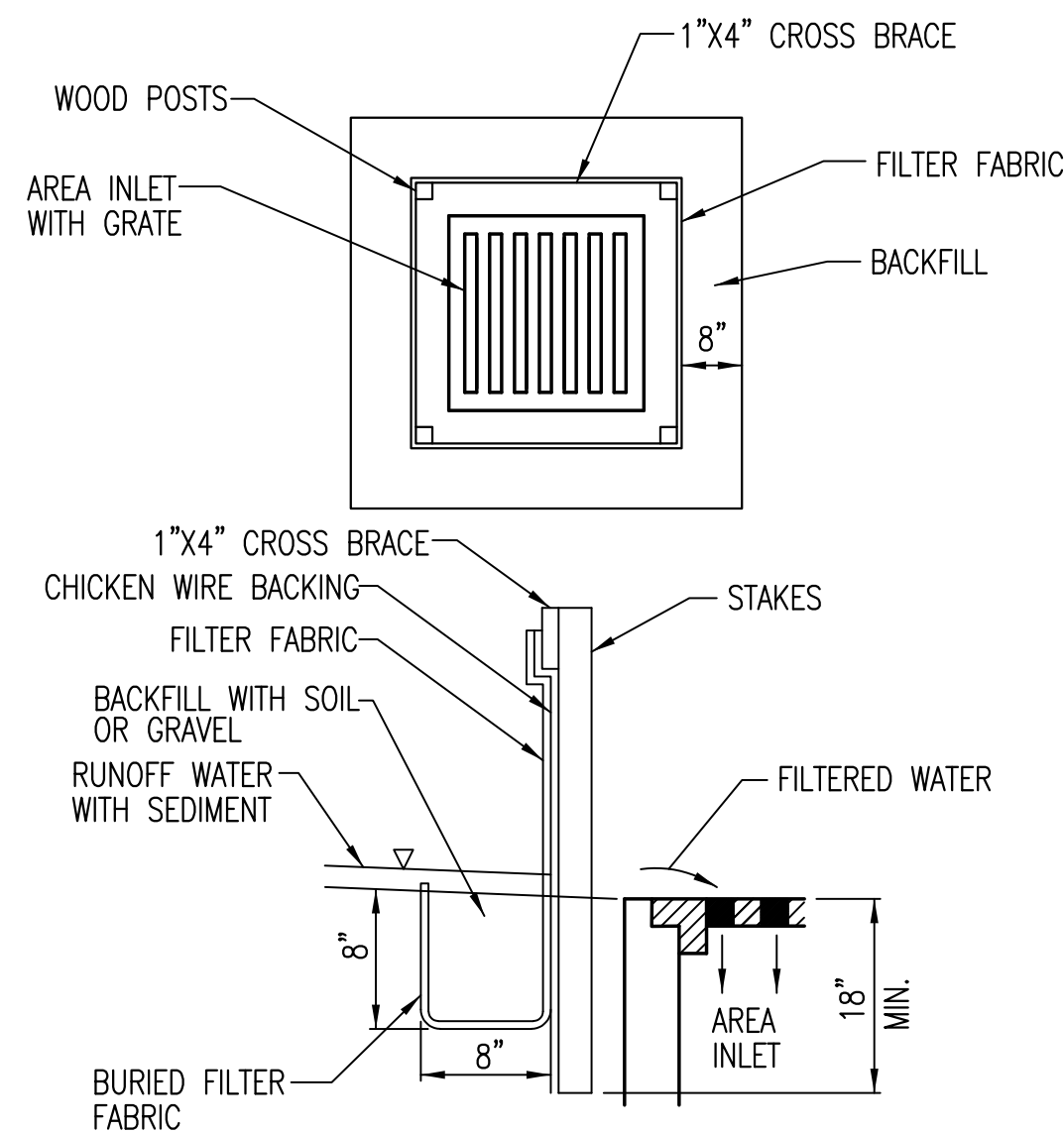
**INSPECTION AND MAINTENANCE:**

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.

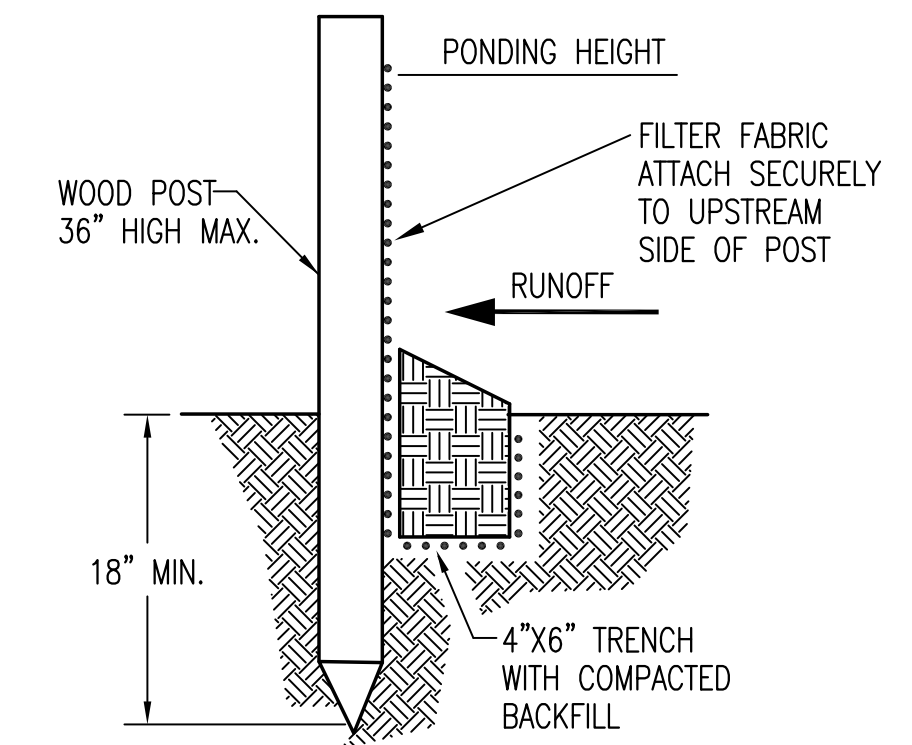
**LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:**

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 RESISTED 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.

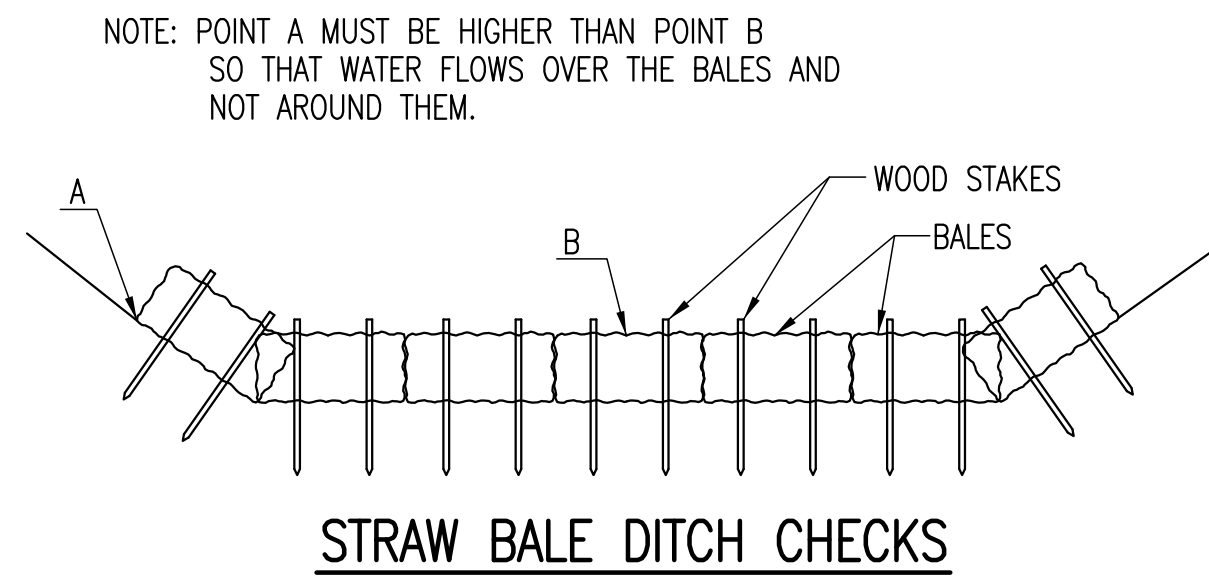
**INSPECTION AND MAINTENANCE:**

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?

<p><b>CITY OF WICHITA</b> PUBLIC WORKS &amp; UTILITIES ENGINEERING DIVISION</p>	<b>SILT FENCE DITCH CHECK AND BARRIER DETAILS</b>		
	CITY ENGINEER <b>GARY JANZEN, P.E.</b>		
	PROJECT NUMBER <b>209PPD</b>	OCA NUMBER <b>607861</b>	DATE <b>11/2010</b>
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET <b>7 OF 10</b>	





**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)	(FEET)
0.5	200	200
1.0	200	100
2.0	100	65
3.0	65	50
4.0	50	40
5.0	40	30
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".

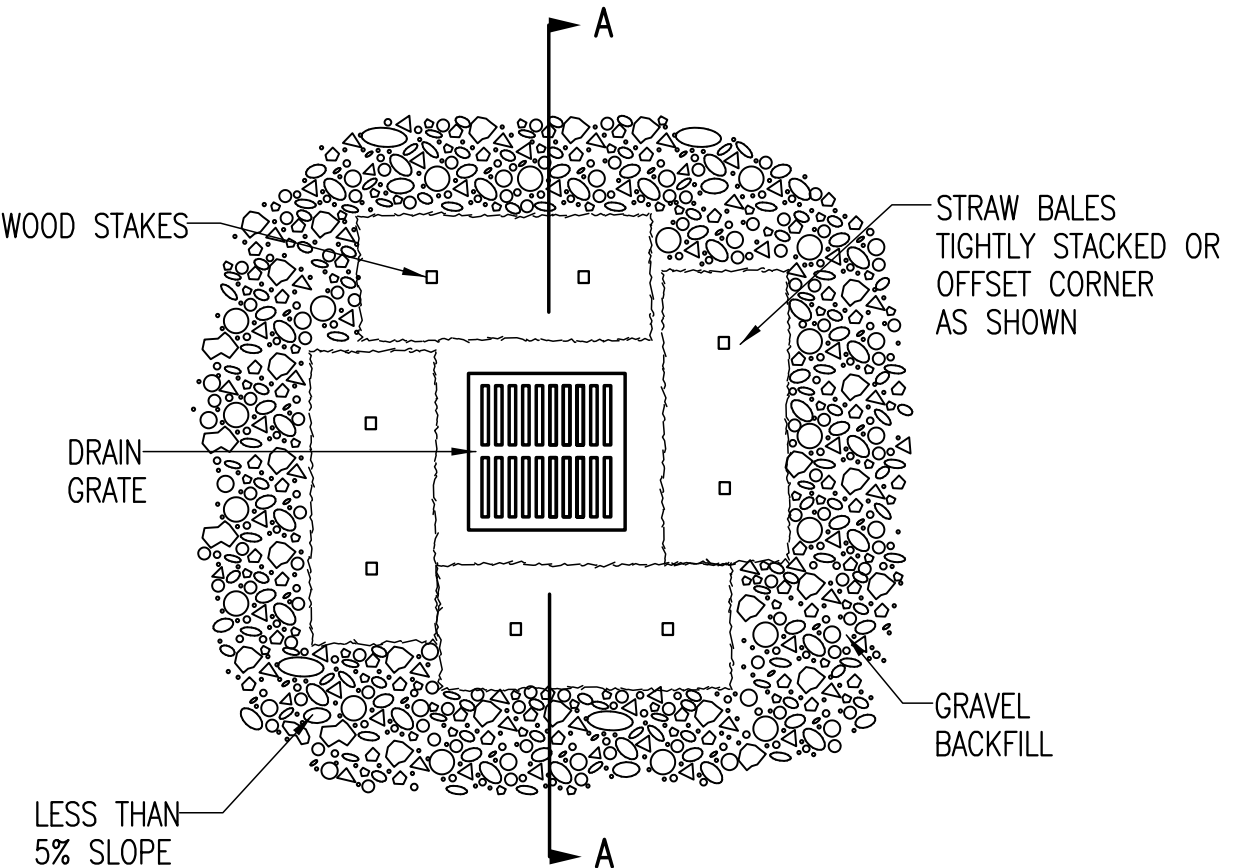
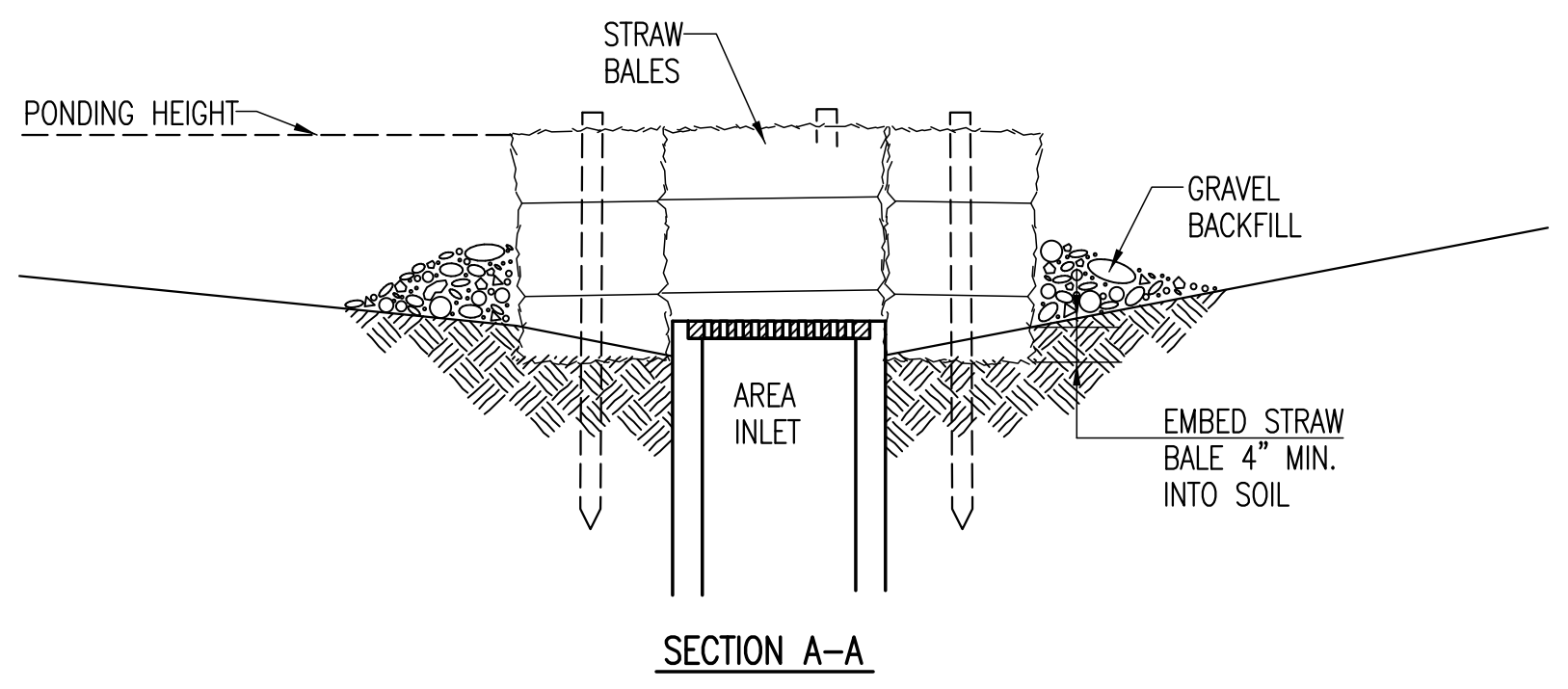
**LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:**

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.

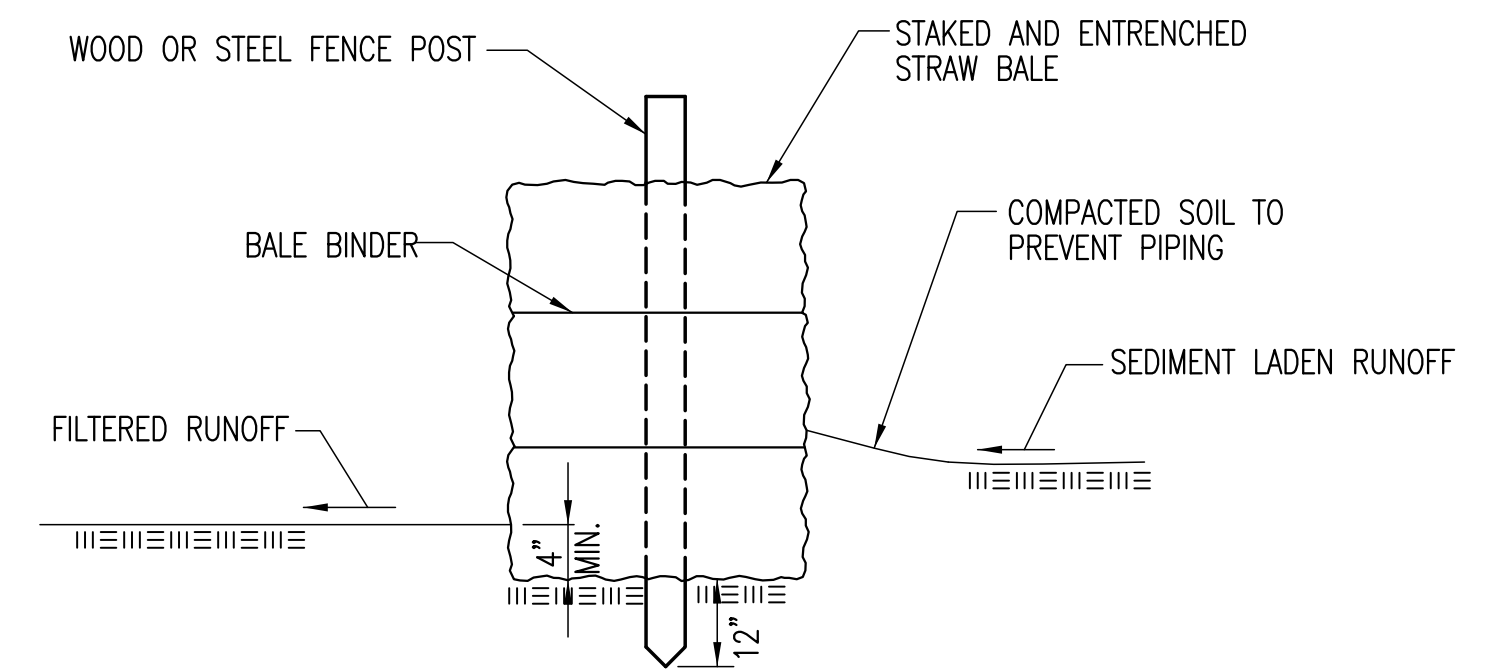
**LIST OF COMMON PLACEMENT INSTALLATION MISTAKES TO AVOID:**

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 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?



 <b>CITY OF WICHITA</b> PUBLIC WORKS & UTILITIES ENGINEERING DIVISION			<b>STRAW BALE DITCH CHECK AND BARRIER DETAILS</b>		
CITY ENGINEER <b>GARY JANZEN, P.E.</b>					
PROJECT NUMBER		OCA NUMBER		DATE	
209PPD		607861		11/2010	
CITY ENGINEER'S OFFICE					SHEET
CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501					8 OF 10

©2013  
MKEC Engineering  
All Rights Reserved  
www.mkec.com  
These drawings and their contents, including, but not limited to, all concepts, designs, & ideas are the exclusive property of MKEC Engineering (MKEC), and may not be used or reproduced in any way without the express consent of MKEC.

ERU PLAN EXHIBIT

PROJECT NO. 1301010668

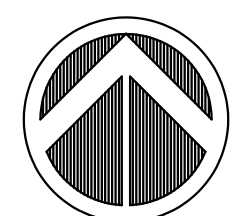
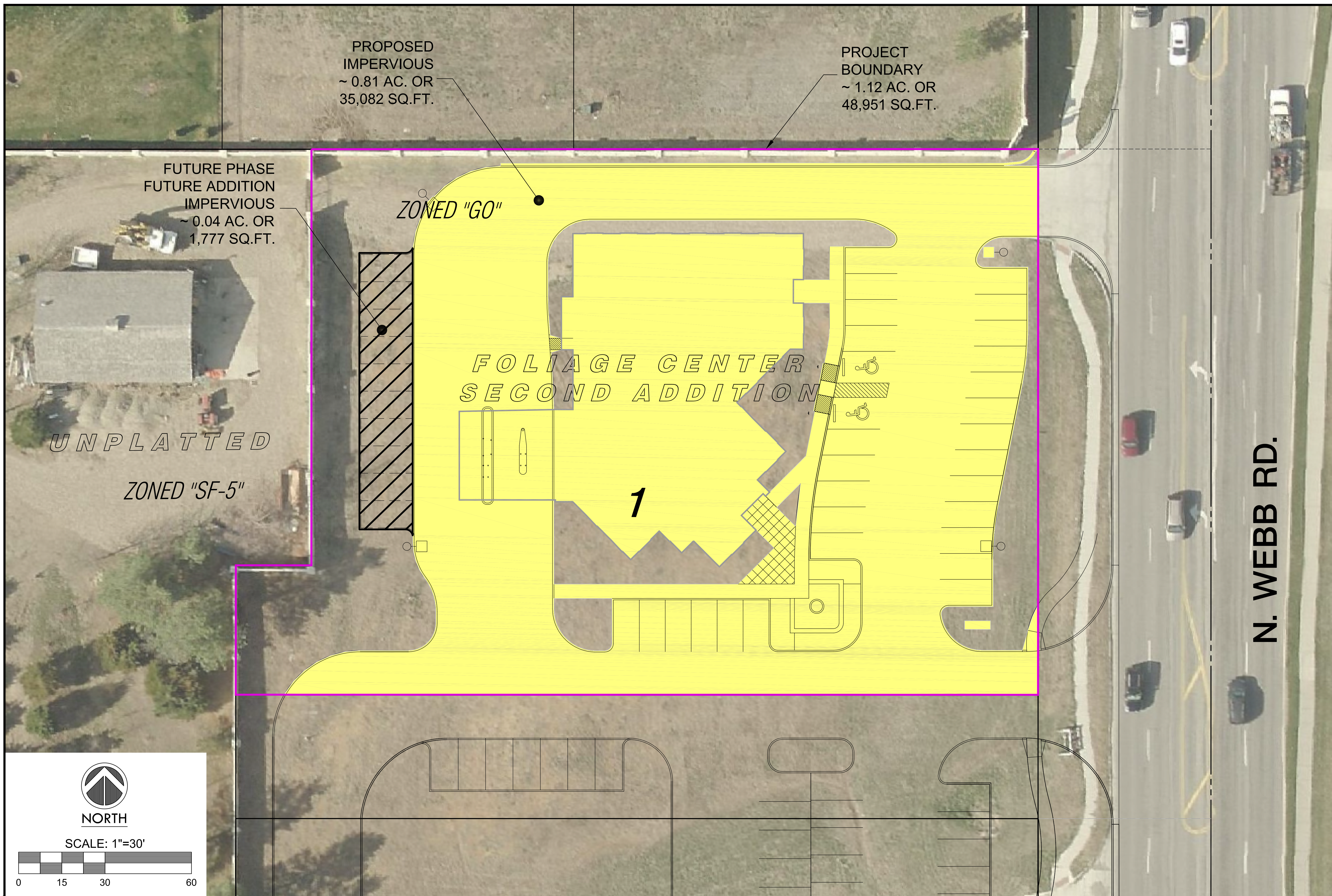
DATE 12/10/13

SCALE 1" = 30'

DESIGNED DRAWN CHECKED  
SLF JGD GJA

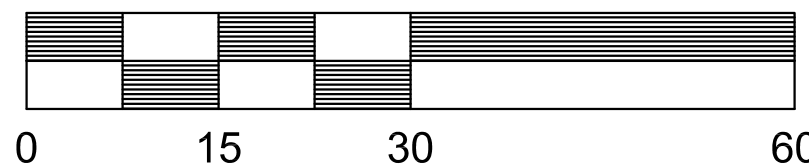
#	REVISION	DATE

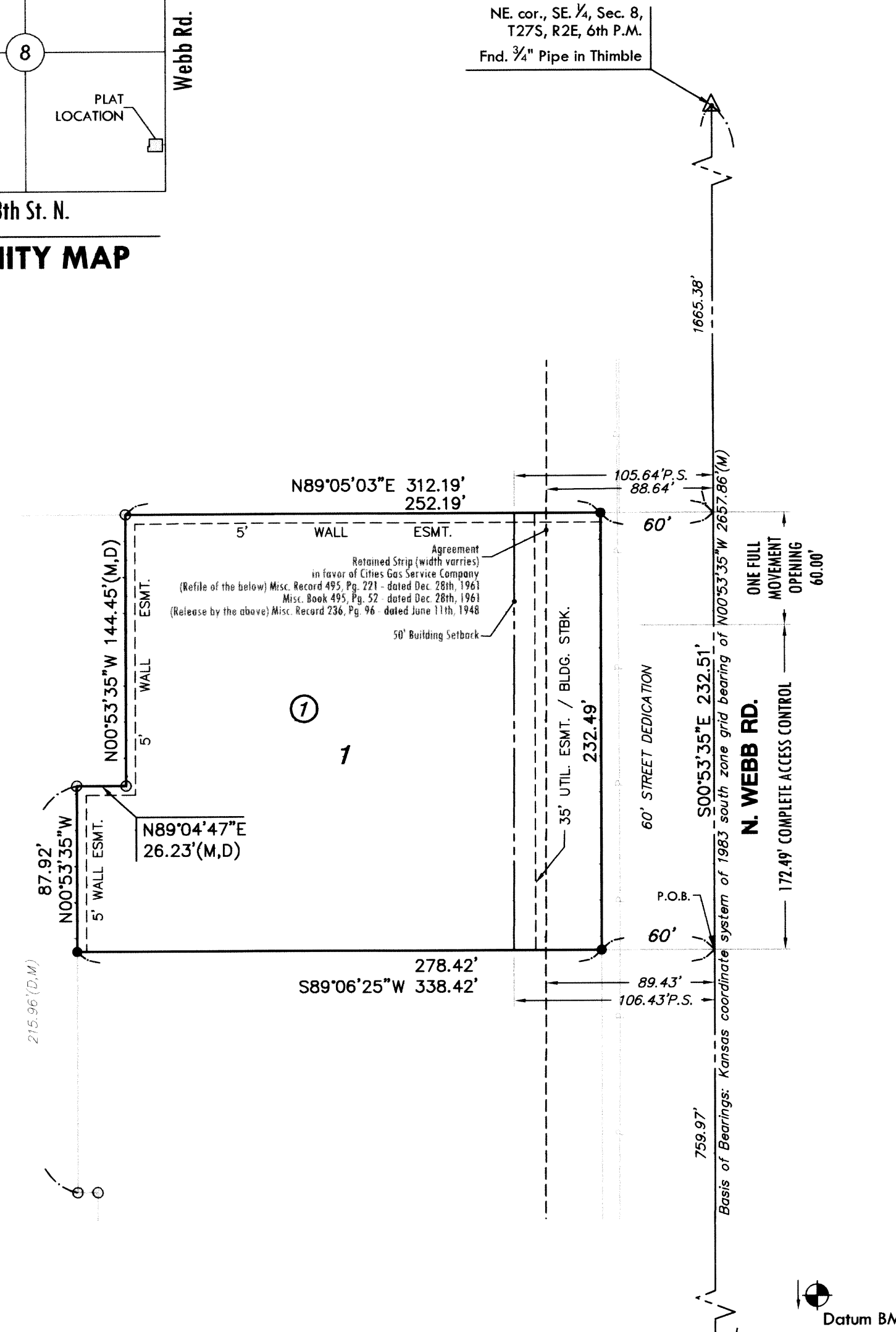
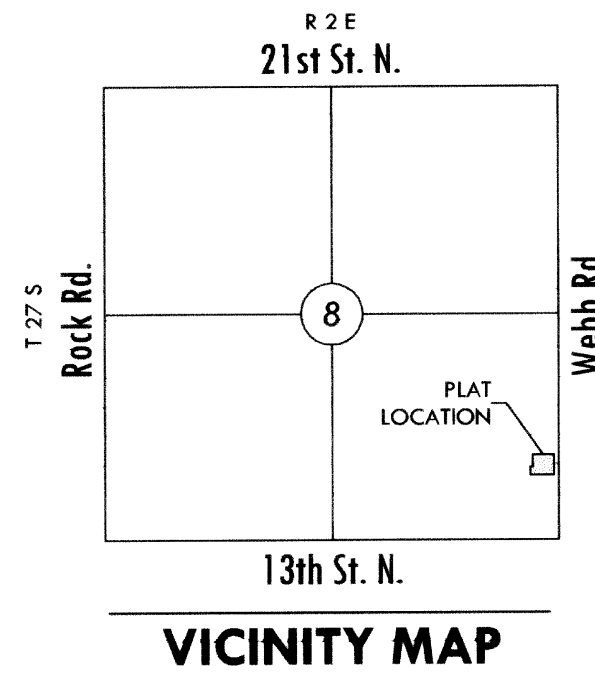
SHEET NO.



NORTH

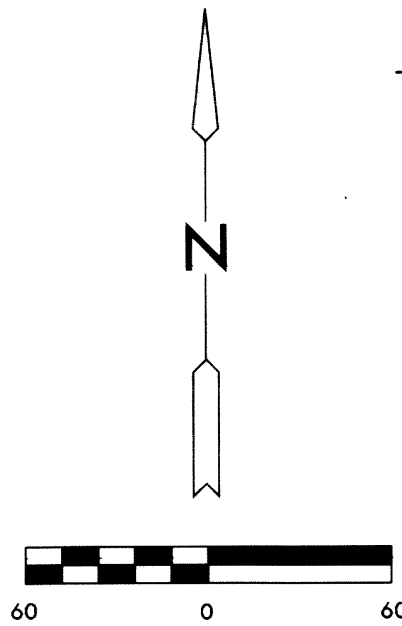
SCALE: 1"=30'





**LEGEND**

- △ = Section Corner Monument Found
- = Found Survey Monument 3/4" rebar w/ MKEC CLS 39 id. cap
- = Set 3/8" rebar w/ MKEC CLS 39 id. cap
- (M) = Measured
- (D) = Described or record description
- P.S. = Pipeline setback



Basis of Bearings: Kansas coordinate system of 1983 south zone grid bearing of N00°53'35"W along the E. line of SE 1/4, Sec. 8, T27S, R2E, 6th P.M.

**BENCH MARK**

Datum BM Square cut on SW corner of signal light pole base at NE corner of Webb Rd. and 13th St. Elev.=1373.345 (NGVD 29)

# FINAL PLAT

## FOLIAGE CENTER SECOND ADDITION

### AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

**CERTIFICATE OF SURVEY**

I, Gregory J. Allison, a registered land surveyor in Kansas, do hereby certify that I have been in responsible charge of surveying and platting of "FOLIAGE CENTER SECOND ADDITION", an addition to Wichita, Sedgwick County, Kansas, into a Lot, a Block, and a Street the same being accurately set forth in the accompanying plat and described herein. A tract of land lying in the Southeast Quarter, Section 8, Township 27 South, Range 2 East, of the 6th Principal Meridian, Wichita, Sedgwick County, Kansas; said tract being described as follows: COMMENCING at the southeast corner of said Southeast Quarter, thence along the east line of said Southeast Quarter on a Kansas coordinate system of 1983 south zone grid bearing of N00°53'35"W, 759.97 feet to the POINT OF BEGINNING, thence S89°06'25"W, 338.42 feet; thence N00°53'35"W, 87.92 feet; thence N89°04'47"E, 26.23 feet; thence N00°53'35"W, 144.45 feet; thence N89°05'03"E, 312.19 feet to said east line; thence along said east line, S00°53'35"E, 232.51 feet to the POINT OF BEGINNING.

All reserves, streets, easements, setbacks, and access controls, together with, that portion of easement recorded on Film 476, Page 289, together with, that portion of easement recorded on Film 843, Page 888, together with, that portion of easement for right-of-way recorded on Film 1624, Page 1442, together with all other public dedications or rights-of-way(s) within the above described property are hereby vacated and replatted by virtue of K.S.A. 12-512(b).

I hereby certify that the details of this plat are correct to the best of my knowledge and belief this 25th day of March, 2008.

Gregory J. Allison, PE, LS #1257  
MKEC Engineering Consultants, Inc.  
411 North Webb Road  
Wichita, Kansas 67206

**OWNER'S CERTIFICATE**

Know all men by these presents that we the undersigned property owners of the land above set forth in the Registered Land Surveyor's Certificate, have caused the same to be surveyed and platted into a Lot, and a Block, and a Street the same to be known as "FOLIAGE CENTER SECOND ADDITION," an addition to Wichita, Sedgwick County, Kansas.

Easements for the construction and maintenance of public utilities, as indicated hereon, are hereby granted to and for the use of the public. The wall easements are non-exclusive and are platted for the construction and maintenance of a private wall; utilities may cross under the private wall.

The streets are hereby dedicated to and for the use of the public.

All abutters rights of access to or from Webb Road over and across the east line of "FOLIAGE CENTER SECOND ADDITION," are hereby granted to the public, provided however, Lot 1 is allowed one full movement connection to Webb Road as indicated hereon. These access controls are hereby granted to the City of Wichita, Kansas.

A drainage plan has been developed for this plat and all drainage easements, right-of-way, or reserves shall remain at established grades or as modified with the approval of the applicable City or County Engineer, and unobstructed to allow for the conveyance of storm water.

BEECH LAKE INVESTMENT, LLC, a Kansas limited liability company

Johnny Stevens, manager  
Stephen L. Clark, manager

STATE OF KANSAS, SEDGWICK COUNTY) ss:

This instrument was acknowledged before me on 16th day of March, 2008, by Johnny Stevens, and Stephen L. Clark, managers, Beech Lake Investment, LLC, a Kansas limited liability company.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

CYNTHIA A WOMACK  
Notary Public, State of Kansas  
My Appt. Expires 2/1/2009

Cynthia A. Womack, Notary Public  
Notary Public: Cynthia A. Womack  
My Term Expires: February 1, 2009

**PLANNING COMMISSION CERTIFICATE**

This plat of "FOLIAGE CENTER SECOND ADDITION" has been submitted to and approved by the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas.

Dated this 25th day of February, 2008

WICHITA-SEDGWICK COUNTY METROPOLITAN AREA PLANNING COMMISSION

M.S. Mitchell, Chair

John L. Schlegel, Secretary



**GOVERNING BODY CERTIFICATE**

The dedications shown on this plat are hereby accepted and this plat is hereby approved by the governing body of the City of Wichita, Kansas.

Dated this 25th day of March, 2008

At the direction of the City Council.

Carl Brewer, Mayor

Karen Sublett, City Clerk

**TRANSFER RECORD**

STATE OF KANSAS, SEDGWICK COUNTY) ss:

Entered on transfer record this 9th day of April, 2008

Don Brace, County Clerk



**REGISTER OF DEEDS CERTIFICATE**

This is to certify that this instrument was filed for record in the Register of Deeds office this 9th day of April, 2008, at 11:11:59 o'clock A.M.; and is duly recorded.

Bill Meek, Register of Deeds

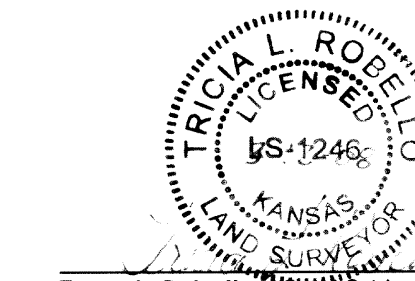
Tonya E. Buckingham, Deputy



Sedgwick County, Register of Deeds - Bill Meek  
DOC #/FLM-PG: 28966155  
Recording Fee: \$20.00  
Date Recorded: 4/9/2008 11:11:59 AM

**COUNTY SURVEYOR**

Reviewed in accordance with K.S.A. 58-2005 on this 16th day of March, 2008.



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

MKEC ENGINEERING CONSULTANTS, INC.

411 N. WEBB ROAD  
WICHITA, K.S. 67206  
316-684-9600



STORM WATER SEWER PLAN FOR  
**EQUITY BANK**  
AT THE WATERFRONT

**FINAL PLAT**

PROJECT NO.	209PPD	
DATE	DEC. 2013	
SCALE	AS SHOWN	
DESIGNED	DRAWN	CHECKED
SLF	SLF	XXX
#	---	###/###/###
NO.	REVISION	DATE

SHEET NO.