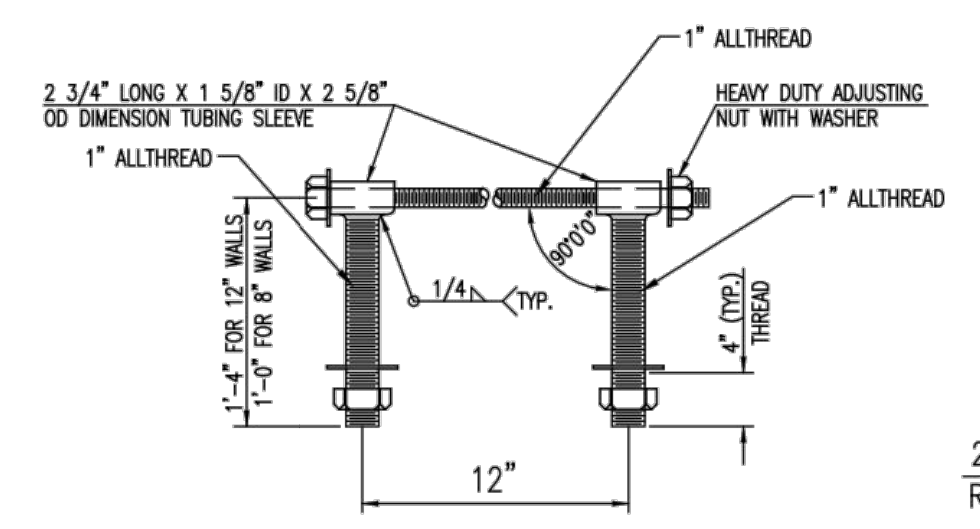
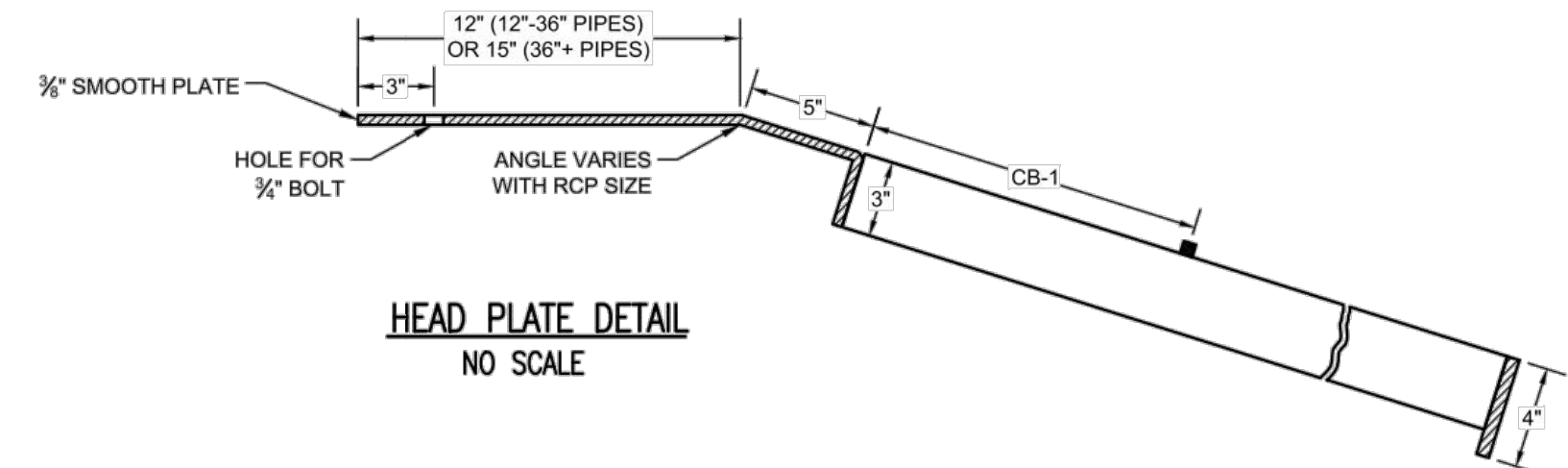


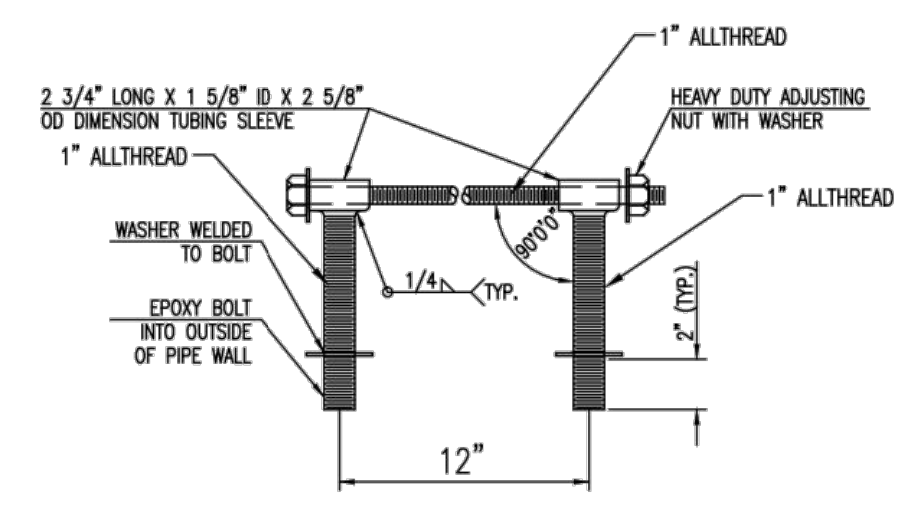
NOTE: GRATE TO BE USED AS DIRECTED BY THE CITY OF WICHITA.

GRATE DIMENSIONS													
PIPE SIZE	HEAD PLATE	A	B	C	D	E	F	CB-1	CB-2	CB-3	CB-4	SP-1	SP-2
12"	13"	19 1/4"	19 3/8"	-	-	-	27"	10 3/8"	-	-	-	3@4"	3@6"
15"	13"	23 1/2"	25 1/4"	-	-	-	34"	10 3/4"	-	-	-	3@4"	3@6"
18"	13"	25"	26 1/8"	-	-	-	40"	12 7/8"	-	-	-	3@4"	3@9"
24"	17"	41 1/2"	42 1/2"	43 1/2"	-	-	53"	12"	15"	-	-	4@4"	4@9"
30"	19"	51 1/2"	52 1/2"	53 1/2"	-	-	65"	16 1/4"	11 3/4"	12"	-	2@3"+3@4"	5@9"
36"	21"	60 1/2"	61 1/2"	62 1/2"	-	-	78"	18 3/8"	14 1/4"	16"	-	2@2"+4@4"	6@9"
42"	22"	65 1/2"	66 1/2"	67 3/8"	68 3/4"	-	86"	13 3/8"	12 3/8"	13"	11 3/4"	7@3"	7@9"
48"	25"	70 7/8"	71"	71 3/4"	73"	74 1/2"	90"	16 1/4"	14 3/4"	14 3/4"	14 3/4"	8@3"	8@9"
54"	26"	71 3/4"	73"	74 1/2"	74 3/4"	76 3/4"	96"	6 7/8"	20 7/8"	17 7/8"	15 5/8"	4@2 3/4"+5@3"	9@9"
60"	28"	61 1/8"	61 3/4"	62 3/4"	64 1/2"	66 5/8"	102"	12"	12"	11 1/2"	13"	2@2"+8@3"	10@9"



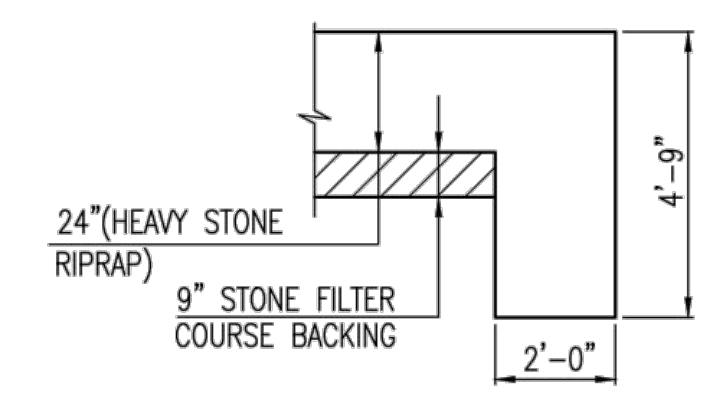
HEAVY DUTY (H.D.) COUPLER (>36") NO SCALE

- NOTES
- BOLTS TO BE A-36 1 1/2" DIAMETER.
 - BOLTS, NUTS, WASHERS AND SLEEVES TO BE ZINC PLATED.
 - WASHERS TO BE 3 1/2" O.D. X 7 GAUGE.
 - SHIP WITH NUTS AND WASHERS PLACED ON BOLTS.



HEAVY DUTY (H.D.) COUPLER (<30") NO SCALE

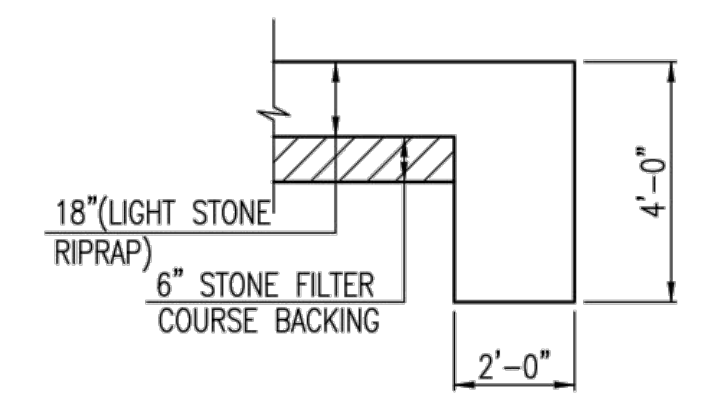
- NOTES
- BOLTS TO BE A-36 1 1/2" DIAMETER.
 - BOLTS, NUTS, WASHERS AND SLEEVES TO BE ZINC PLATED.
 - WASHERS TO BE 3 1/2" O.D. X 7 GAUGE.
 - SHIP WITH NUTS AND WASHERS PLACED ON BOLTS.



TYPICAL SECTION THRU TOEWALL NO SCALE

- NOTES
- ALL RIPRAP FOR THIS PROJECT SHALL BE NATURAL STONE. NEITHER BROKEN CONCRETE, FABRIC ENVELOPE, NOR PREMIXED DRY PACKAGED CONCRETE BAG ALTERNATES WILL BE ALLOWED, UNLESS INDICATED OTHERWISE.
 - TOEWALLS SHALL BE INSTALLED ALONG ALL UNPROTECTED EDGES OF STONE RIPRAP.
 - GROUTING OF THE SURFACE OF THE RIPRAP SHALL NOT BE PERFORMED, UNLESS INDICATED OTHERWISE. GROUTING OF THE TOEWALLS SHALL BE PERFORMED PER CITY SPECIFICATIONS.

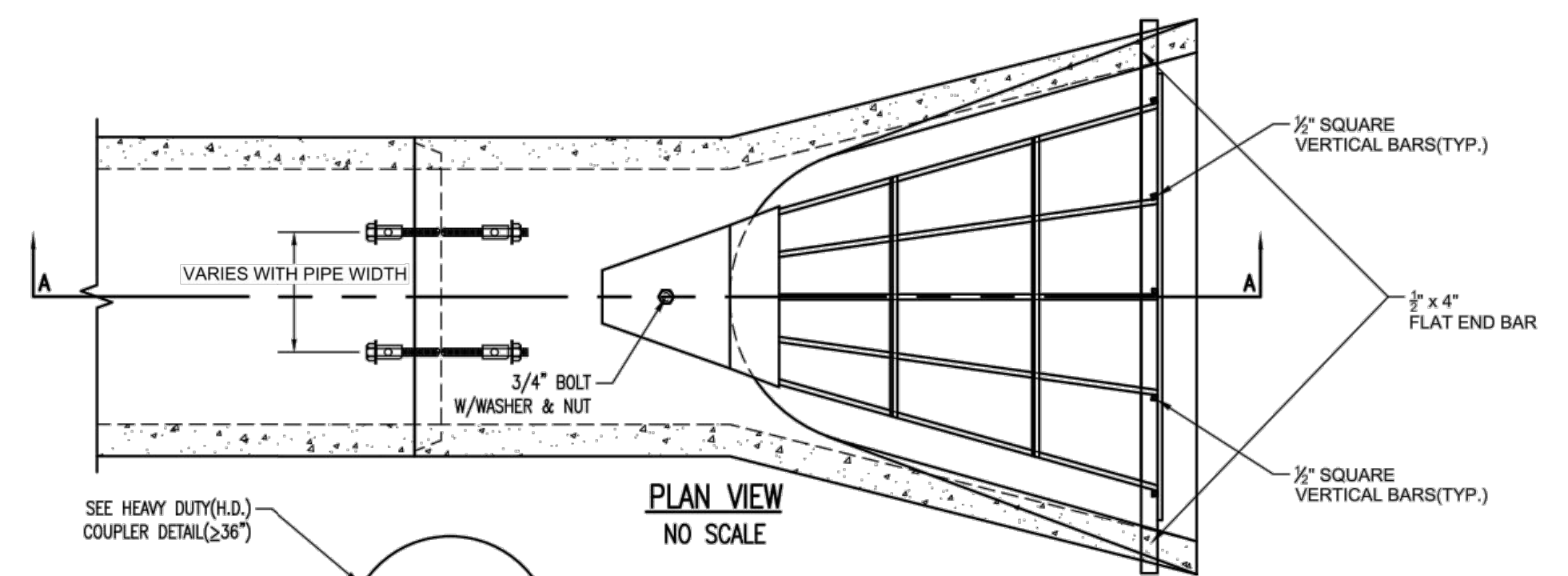
HEAVY STONE RIPRAP DETAILS



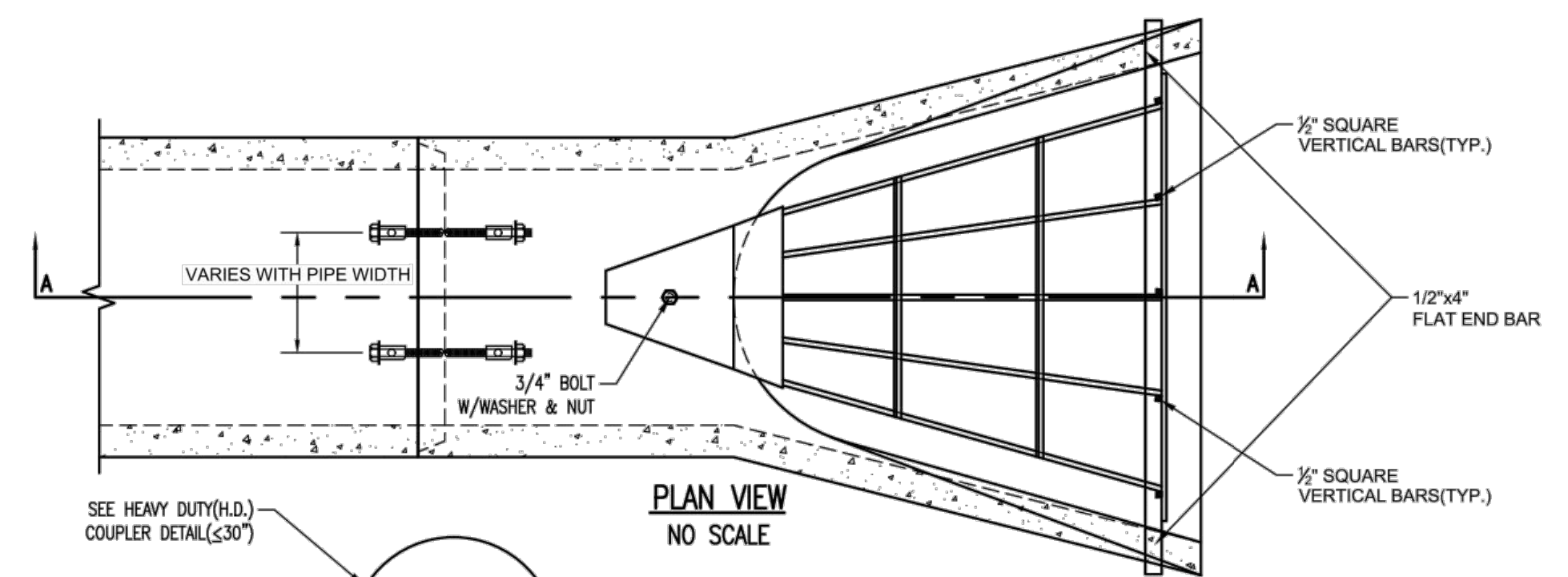
TYPICAL SECTION THRU TOEWALL NO SCALE

- NOTES
- ALL RIPRAP FOR THIS PROJECT SHALL BE NATURAL STONE. NEITHER BROKEN CONCRETE, FABRIC ENVELOPE, NOR PREMIXED DRY PACKAGED CONCRETE BAG ALTERNATES WILL BE ALLOWED, UNLESS INDICATED OTHERWISE.
 - TOEWALLS SHALL BE INSTALLED ALONG ALL UNPROTECTED EDGES OF STONE RIPRAP.
 - GROUTING OF THE SURFACE OF THE RIPRAP SHALL NOT BE PERFORMED, UNLESS INDICATED OTHERWISE. GROUTING OF THE TOEWALLS SHALL BE PERFORMED PER CITY SPECIFICATIONS.

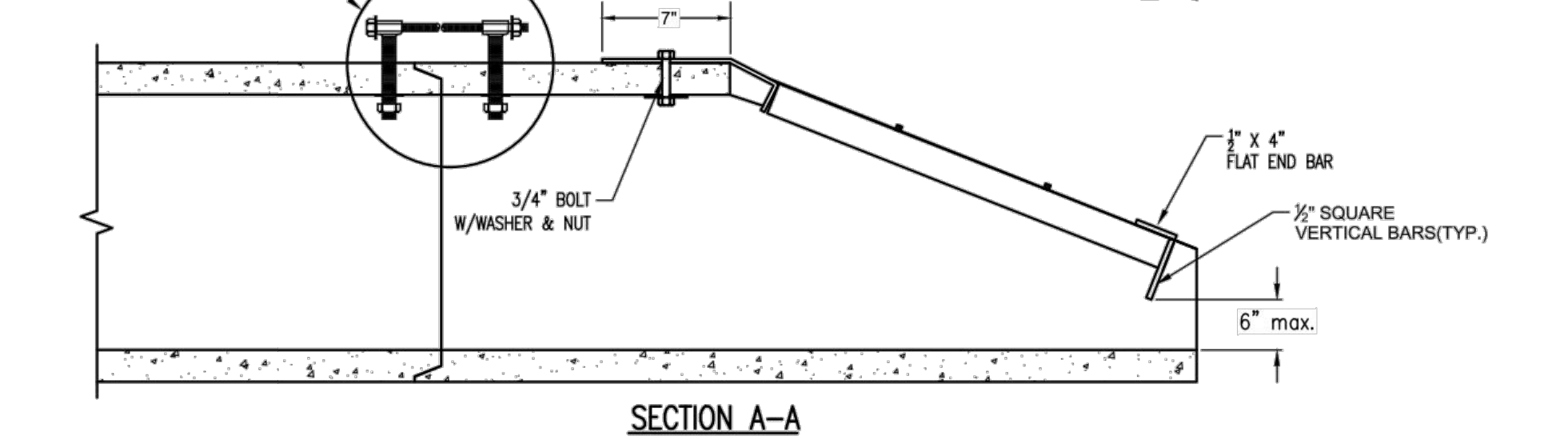
LIGHT STONE RIPRAP DETAILS



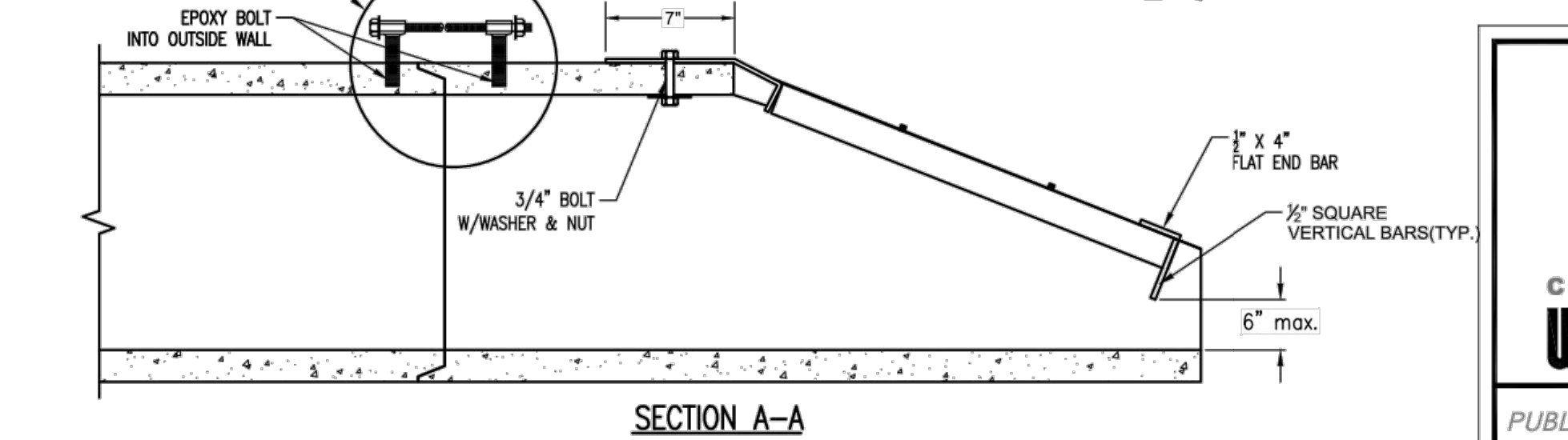
PLAN VIEW NO SCALE



PLAN VIEW NO SCALE



SECTION A-A



SECTION A-A



END SECTION, PIPE RESTRAINT COUPLER & END GRATE

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
		01/2015

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

DESIGN	DRAWN

SHEET
_ of _

Send CD - 10 - 2015 8:12:28 AM by G222295
 S:\Drawing Files\Project CDW 12-7-09\City Parks-Stormwater(20112002)\CDW Sld Details - Base(1,2,3,15)

CS	JML	CC	DSN	DWN	CHK
LDO	LDO	SRB			

REV	DATE	DESCRIPTION
2	06/07/23	ADDENDUM UPDATE
1	05/16/23	ADDENDUM NO. 1
0	03/21/23	INITIAL RELEASE

LEON D. OSBOURN
ENGINEER
KS # 9772

200 N. EMPORIA, SUITE 100
WICHITA, KANSAS 67202
PH. (316) 440-4304
www.kawvalleyeng.com | www.kveing.com

KAW VALLEY ENGINEERING
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY KANSAS STATE CERTIFICATE OF AUTHORIZATION # E-113. EXPIRES 12/31/24

SYCAMORE POND ADDITION
W 50TH STREET S & SYCAMORE AVE
WICHITA, KANSAS

PHASE 3-STORM SEWER IMPROVEMENTS
END SECTION & GRATE DETAIL

PROJ. NO.	G22 2295
DESIGNER	SRB
DRAWN BY	CC
CFN	2295DDET
SHEET	21
REV	2