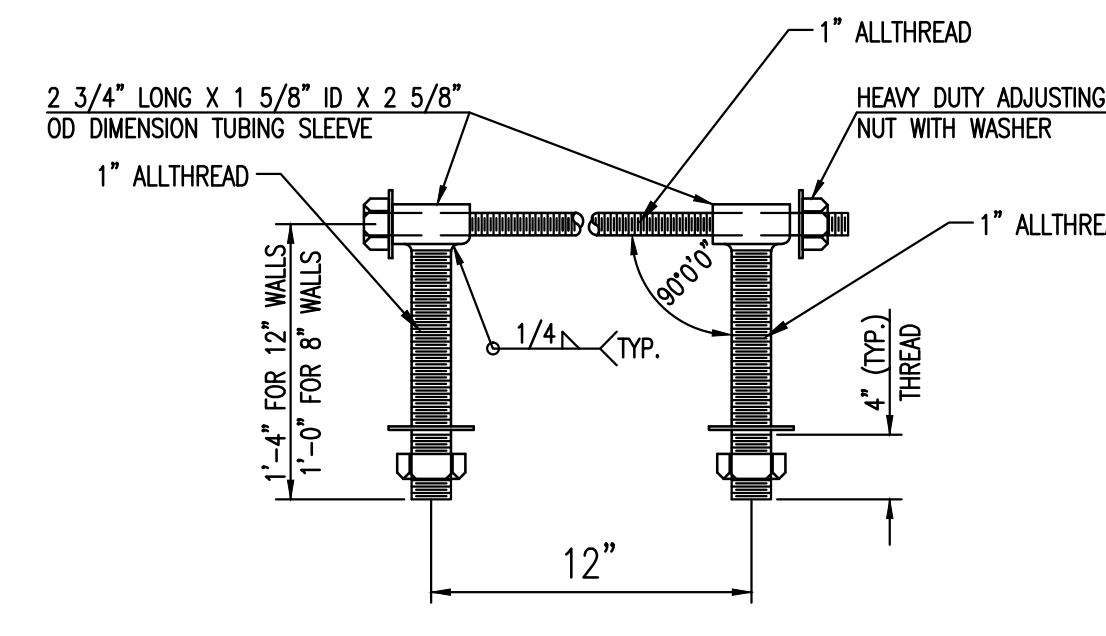


GRATE DIMENSIONS

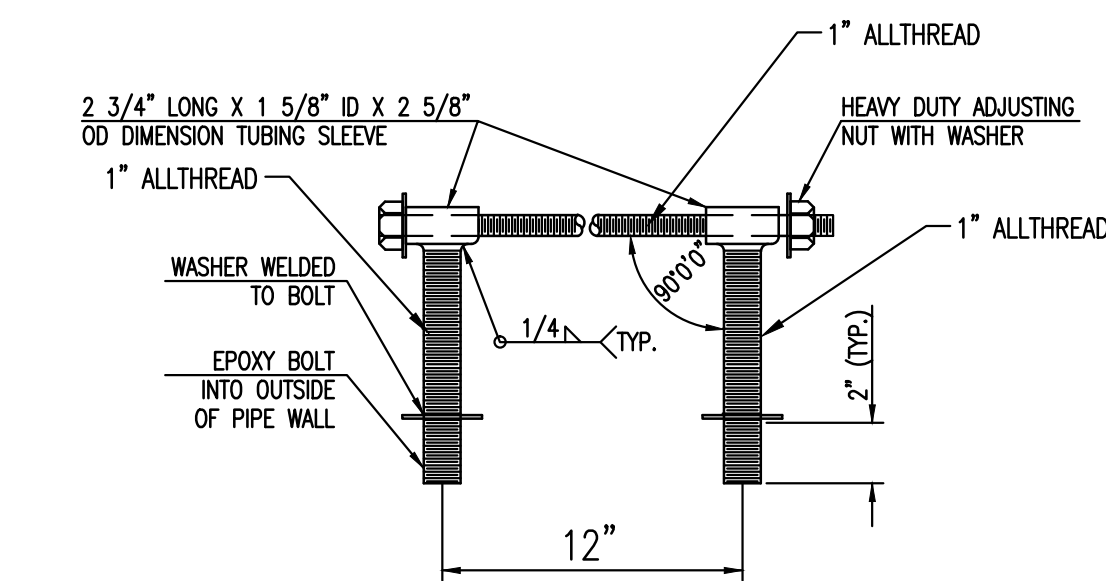
PIPE SIZE	HEAD PLATE	A	B	C	D	E	F	CB-1	CB-2	CB-3	CB-4	SP-1	SP-2
12"	13"	19 1/4"	19 3/8"	-	-	-	27"	10 3/8"	-	-	-	3@4"	3@6"
15"	13"	23 1/2"	25 1/4"	-	-	-	34"	10 3/4"	-	-	-	3@4"	3@8"
18"	13"	25"	26 1/8"	-	-	-	40"	12 7/8"	-	-	-	3@4"	3@9"
24"	17"	41 1/2"	42 1/2"	43 1/2"	-	-	53"	12"	15"	-	-	4@4"	4@9"
30"	19"	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 5/8"	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 5/8"	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

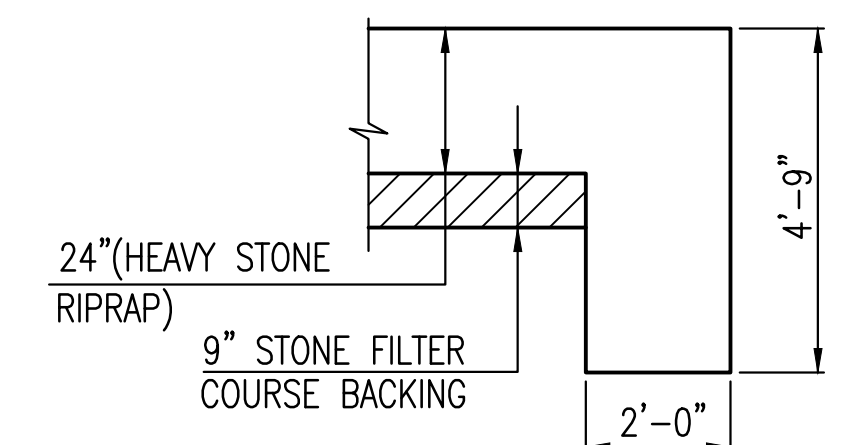
1. BOLTS TO BE A-36 1 1/2" DIAMETER.
2. BOLTS, NUTS, WASHERS AND SLEEVES TO BE ZINC PLATED.
3. WASHERS TO BE 3 1/2" O.D. X 7 GAUGE.
4. SHIP WITH NUTS AND WASHERS PLACED ON BOLTS.



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

NOTES

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

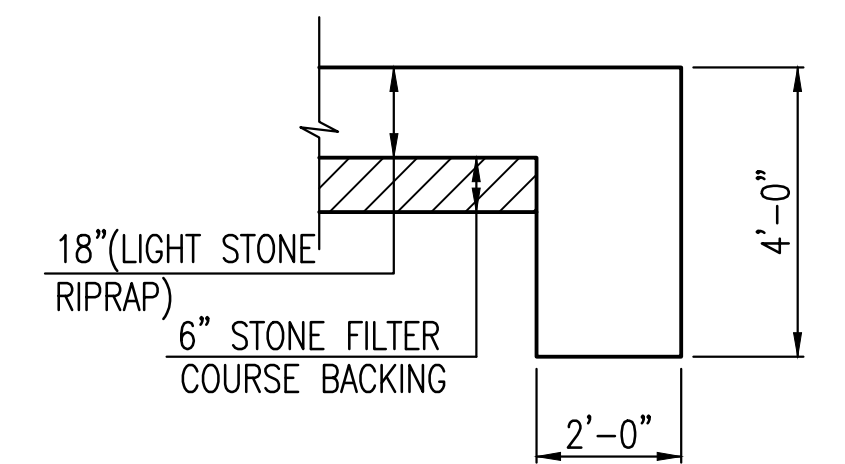


TYPICAL SECTION THRU TOEWALL
NO SCALE

NOTES

1. 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.
2. TOEWALLS SHALL BE INSTALLED ALONG ALL UNPROTECTED EDGES OF STONE RIPRAP.
3. 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

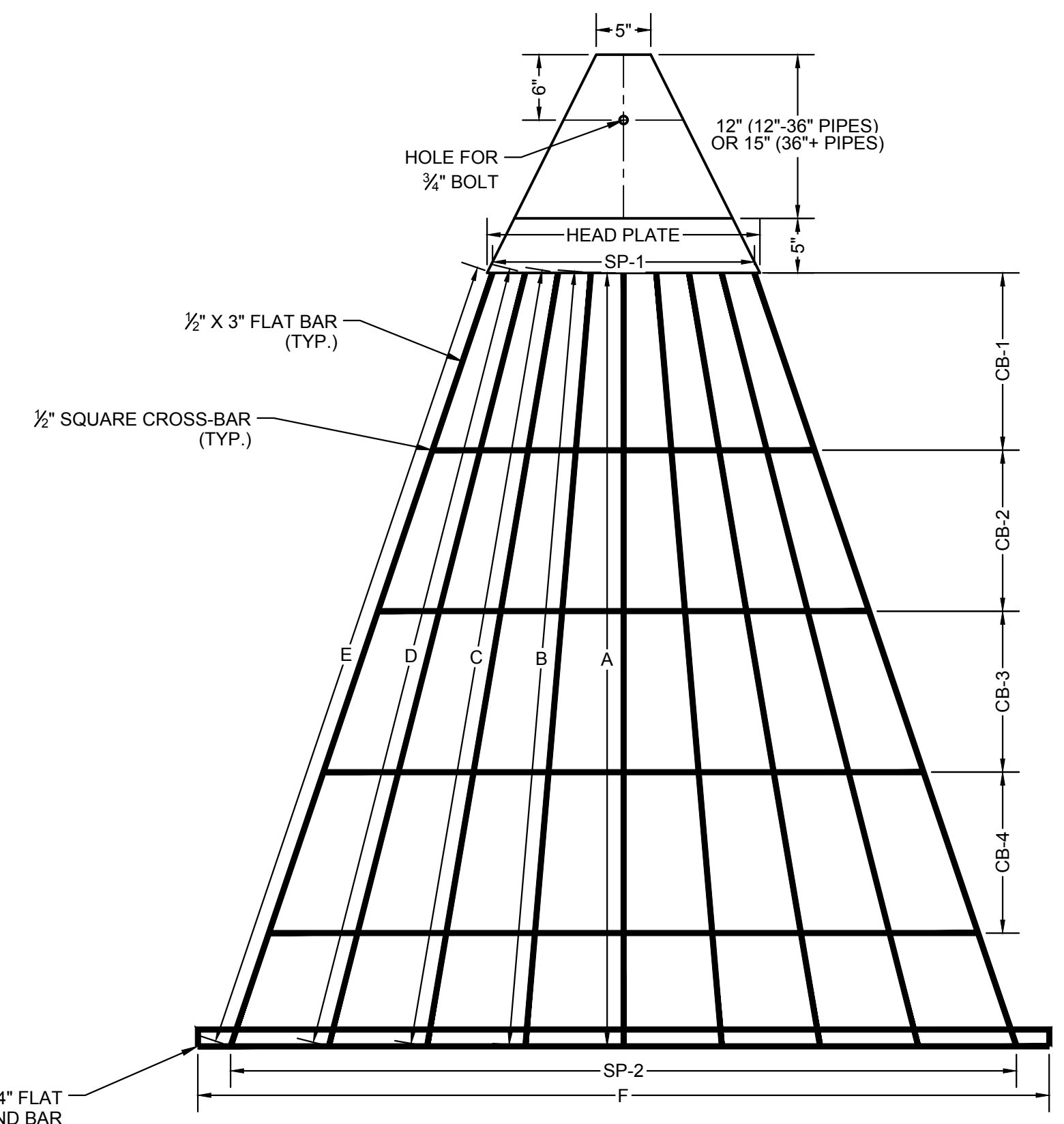


TYPICAL SECTION THRU TOEWALL
NO SCALE

NOTES

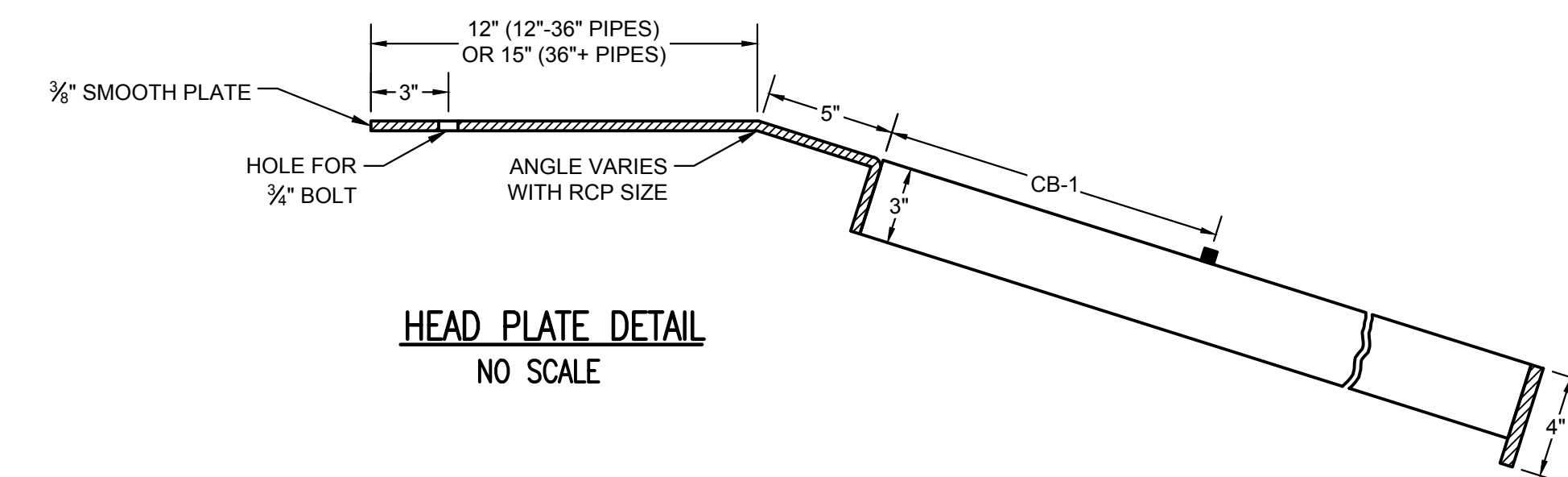
1. ALL RIPRAP FOR THIS PROJECT SHALL BE NATURAL STONE. NEITHER BROKEN CONCRETE, FABRIC ENVELOPE, NOR PREMIXED DRY PACKAGED CONCRETE BAG ALTERNATES WILL BE ALLOWED, UNLESS INDICATED OTHERWISE.
2. TOEWALLS SHALL BE INSTALLED ALONG ALL UNPROTECTED EDGES OF STONE RIPRAP.
3. GROUTING OF THE SURFACE OF THE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

LIGHT STONE RIPRAP DETAILS

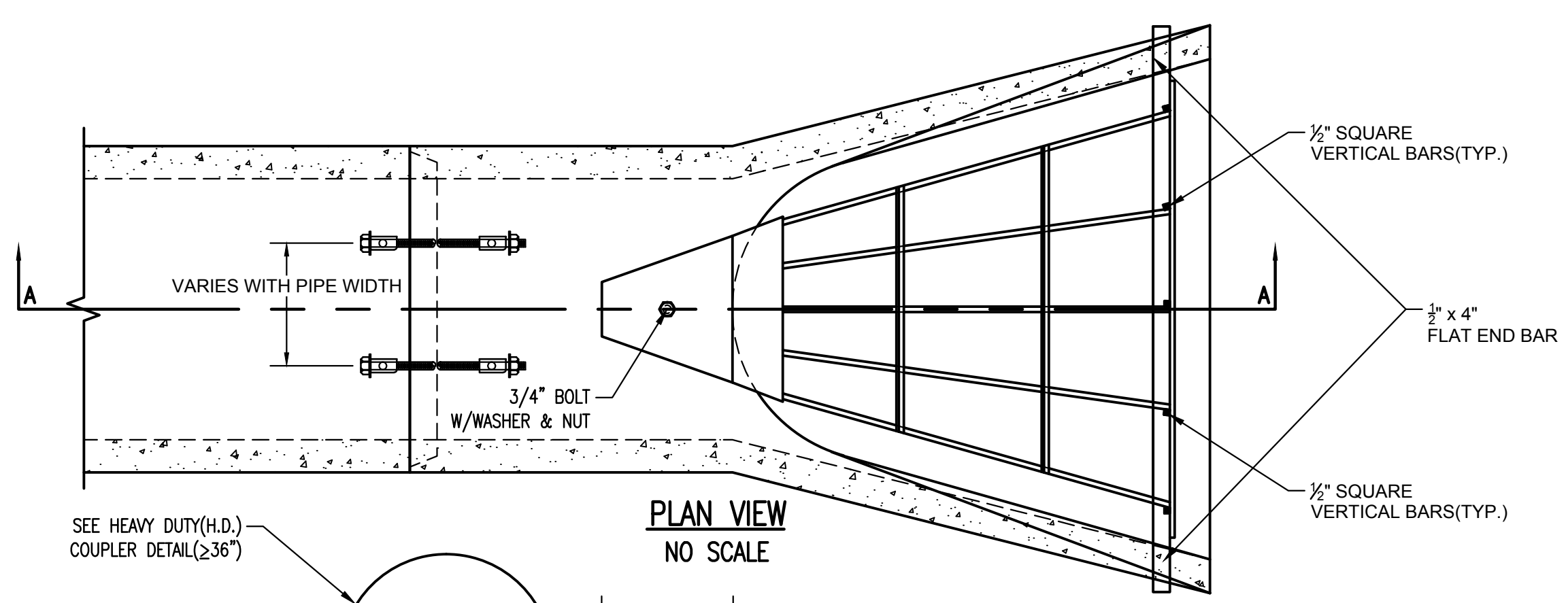


END GRATE DETAIL
NO SCALE

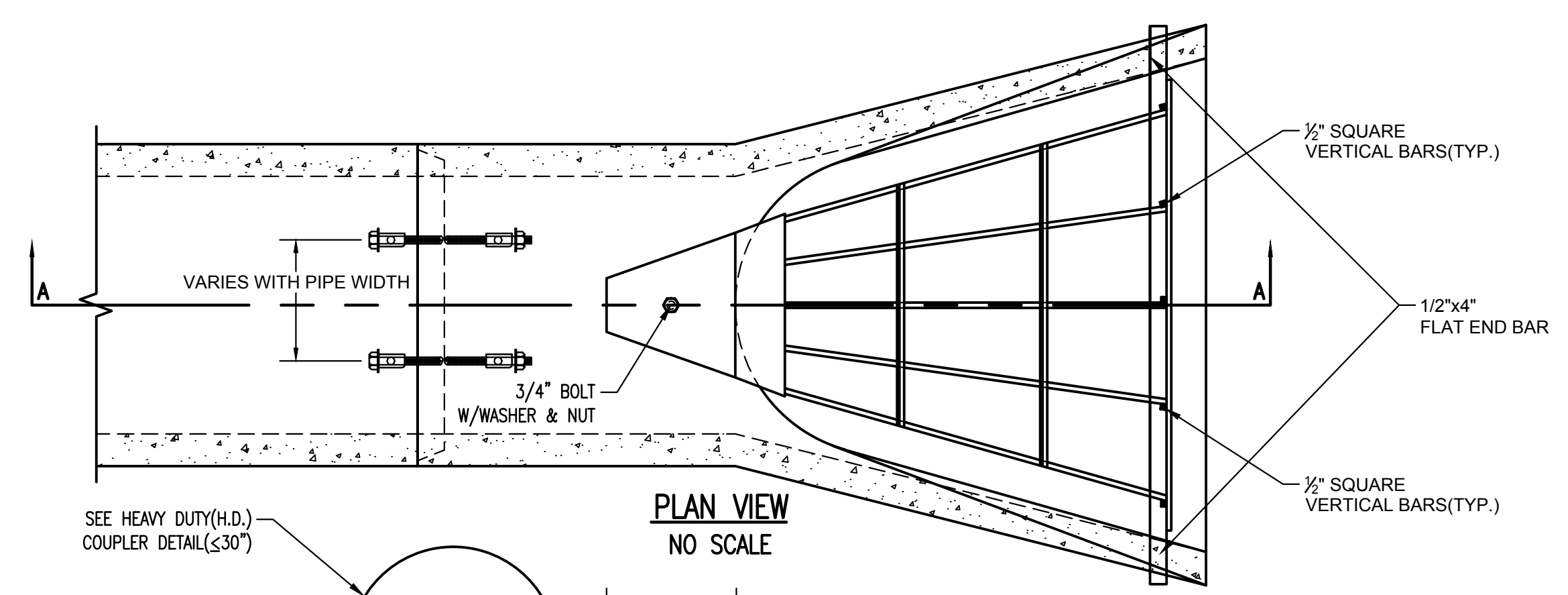
NOTE: GRATE TO BE USED AS DIRECTED BY THE CITY OF WICHITA.



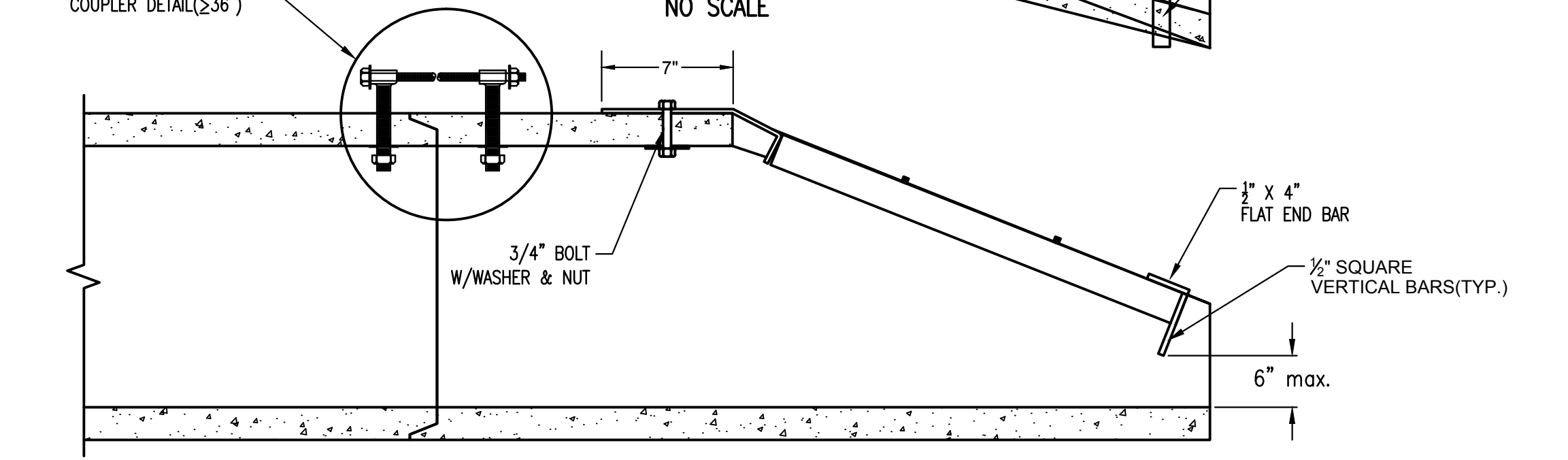
HEAD PLATE DETAIL
NO SCALE



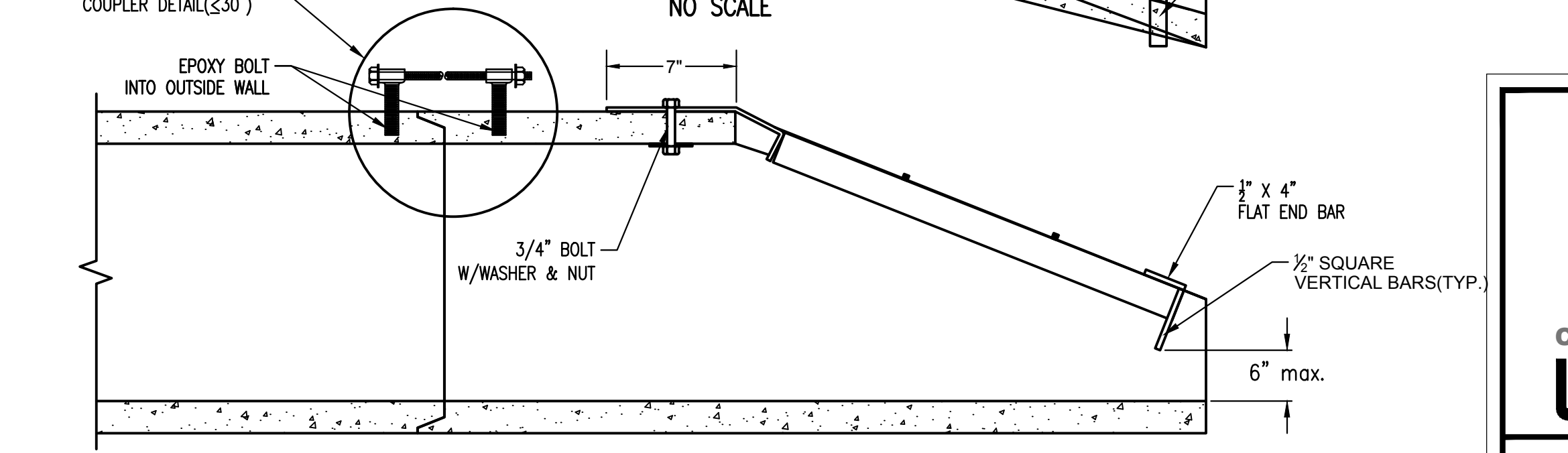
PLAN VIEW
NO SCALE



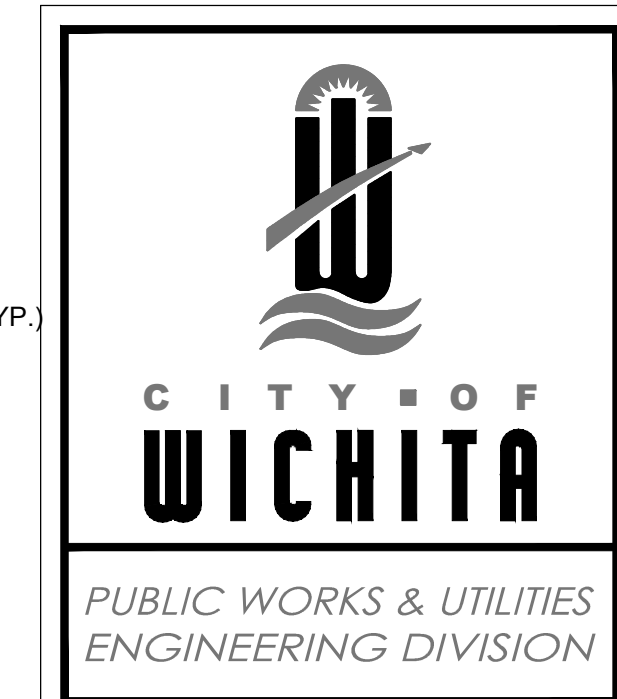
PLAN VIEW
NO SCALE



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
10 of 12

Saved 03-10-2015 8:12:38 AM by CCEWANTES
 Plot Scale 1:1 03-10-2015 8:13:56 AM by CARLOS CERVAANTES
 S:\Drawing Files\Project_CDW 12-7-09\City Details-Stormwater(2012002)\CDW Sid Details - Base(1:2.5:1)