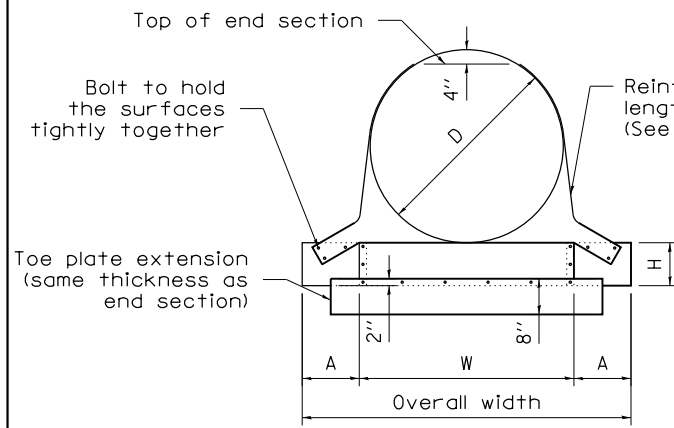


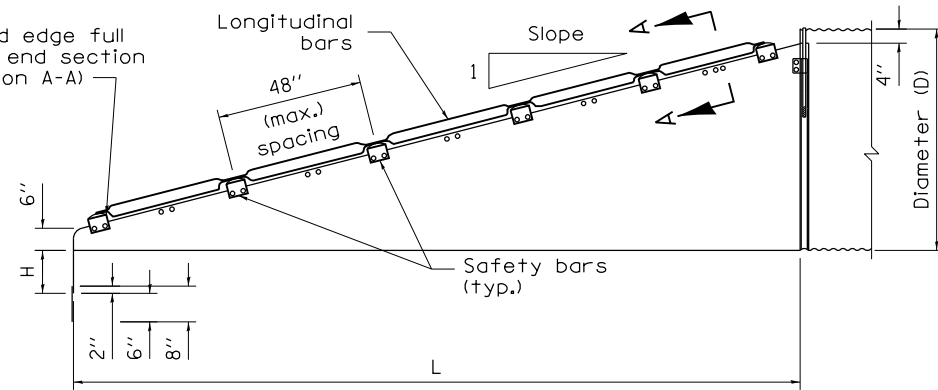
SLOPED METAL END SECTIONS WITH GRATE

GENERAL NOTES

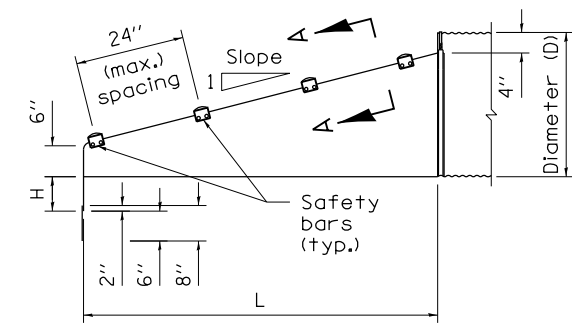
- USE END SECTIONS ON 1V:4H TO 1V:6H SLOPES ONLY. USE TOE PLATE EXTENSION.
- A 1:6 SLOPED END SECTION WILL BE USED FOR ALL PARALLEL DRAINAGE STRUCTURE END SECTIONS.
- FABRICATE SAFETY AND LONGITUDINAL BARS FROM STEEL PIPE CONFORMING TO ASTM A53 SCHEDULE 40 SPECIFICATIONS. GALVANIZE BARS HOT DIPPED AFTER FABRICATION.
- A LONGITUDINAL BAR IS REQUIRED FOR CROSS DRAINAGE END SECTIONS WHEN THE SPAN IS GREATER THAN 30". USE ADDITIONAL LONGITUDINAL BARS IF SPACING EXCEEDS 30" ON LARGER END SECTIONS.
- SAFETY AND LONGITUDINAL BARS ARE NOT REQUIRED ON 30" AND SMALLER CROSS DRAINAGE END SECTIONS.
- THESE END SECTIONS WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR SLOPED METAL END SECTIONS WITH GRATE OF THE DIAMETER SPECIFIED, WHICH SHALL INCLUDE FURNISHING AND INSTALLING THE END SECTION COMPLETE IN PLACE, INCLUDING THE TOE PLATE, EXCAVATING, BACKFILLING, CONNECTING TO THE PIPE, AND CROSS DRAINAGE BARS.



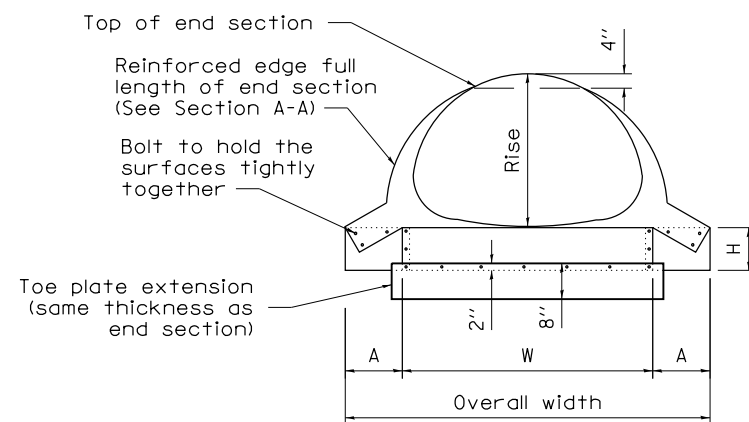
FRONT VIEW
ROUND PIPE CULVERT



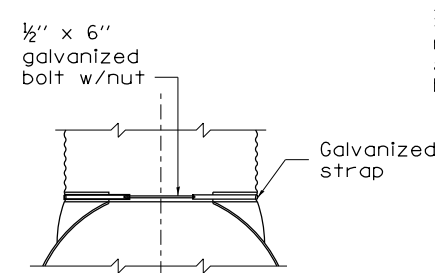
ELEVATION
CROSS DRAINAGE END SECTION



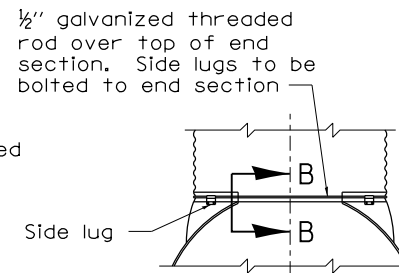
ELEVATION
PARALLEL DRAINAGE END SECTION



FRONT VIEW
PIPE ARCH CULVERT

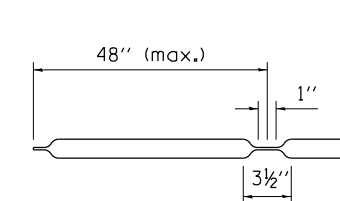


FOR METAL ROUND PIPES
15" THRU 24"
TYPE #1

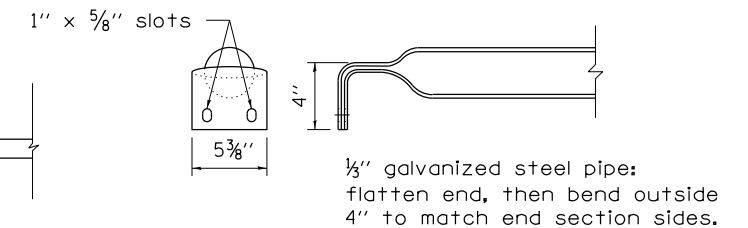


FOR METAL ROUND PIPES 30"
AND LARGER, FOR PIPE ARCHES
21" X 15" AND LARGER
TYPE #2

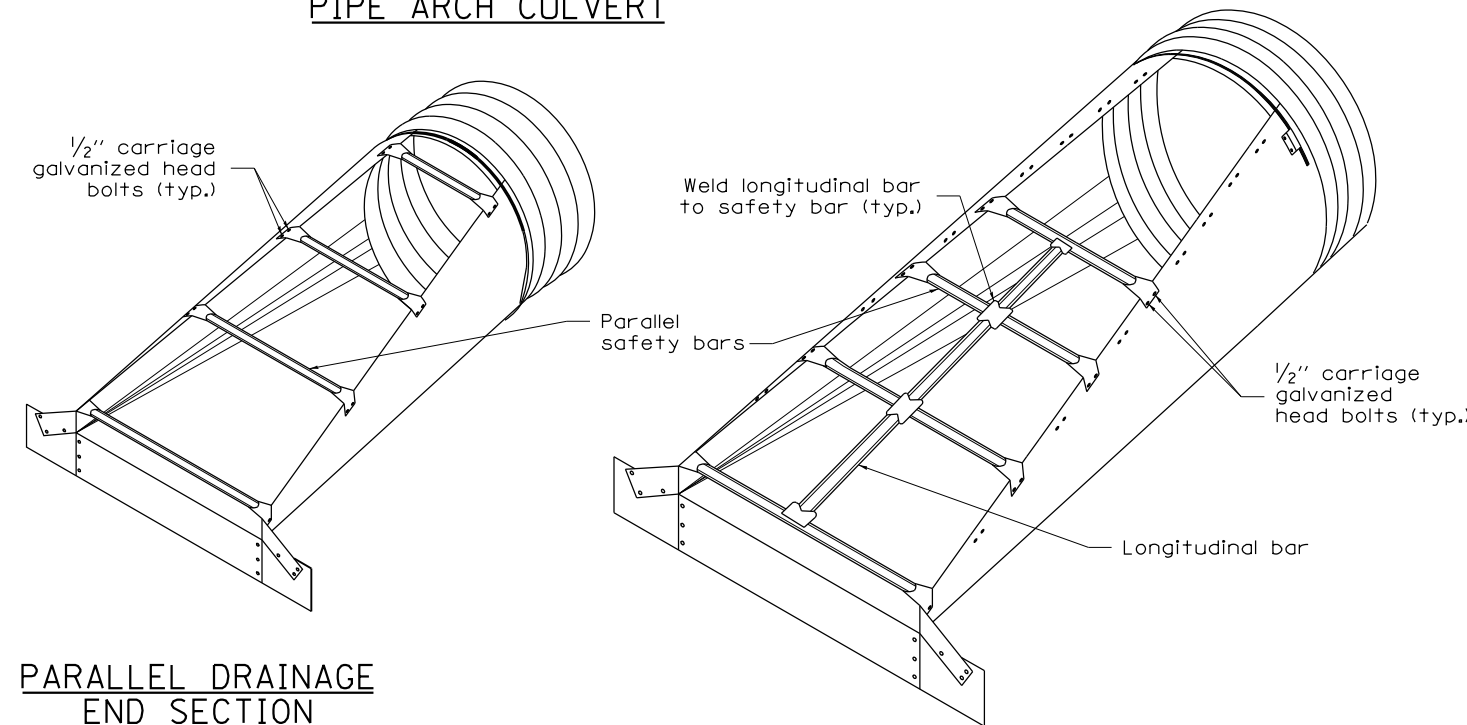
CONNECTOR DETAILS



LONGITUDINAL DRAINAGE BAR



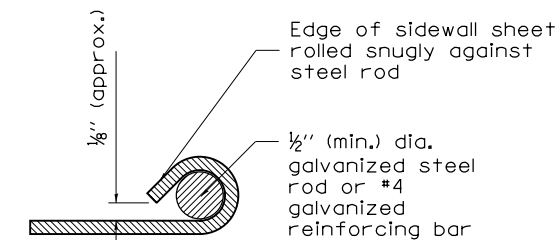
PARALLEL BARS



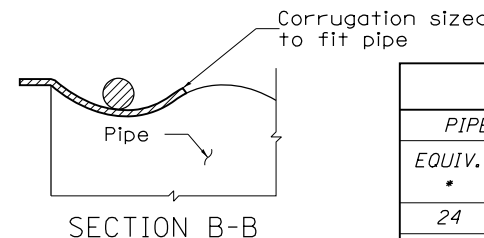
PARALLEL DRAINAGE
END SECTION

CROSS DRAINAGE END SECTION

NO SCALE



SECTION A-A



SECTION B-B

METAL END SECTIONS FOR ROUND PIPE CULVERT								
PIPE SIZE • INCHES	METAL THICK (MIN.) INCH/GAGE	DIMENSIONS IN INCHES						
		A	H	W	OVERALL WIDTH	L		
						Slope=4	Slope=6	
24	0.064/16	8	6	30	46	55	83	
30	0.109/12	12	9	36	60	79	118	
36	0.109/12	12	9	42	66	102	154	
42	0.109/12	16	12	48	80	126	189	
48	0.109/12	16	12	54	86	150	224	
54	0.109/12	16	12	60	92	173	260	
60	0.109/12	16	12	66	98	197	295	

METAL END SECTIONS FOR PIPE ARCH CULVERT									
PIPE SIZE (INCHES)			METAL THICK (MIN.) INCH/GAGE	DIMENSIONS (INCHES)					
EQUIV. •	SPAN	RISE		A	H	W	OVERALL WIDTH	L	
								Slope=4	Slope=6
24	28	20	0.064/16	8	6	33	49	40	60
30	35	24	0.109/12	12	9	40	64	55	83
36	41	29	0.109/12	12	9	47	71	75	112
42	48	32	0.109/12	16	12	54	86	90	136
48	56	37	0.109/12	16	12	62	94	110	165
54	63	42	0.109/12	16	12	69	101	130	195
60	70	46	0.109/12	16	12	76	107	146	218
72	82	56	0.109/12	16	12	88	120	185	278

FILE NAME =	USER NAME = cushmenbw	DESIGNED -	REVISED -
ct:\pw\work\p\dot\cushmenbw\d0333009\p201709-sh-t-details.dgn		DRAWN -	REVISED -
PLOT SCALE = 40.0000' / in.		CHECKED -	REVISED -
PLOT DATE = Fri Aug 01 09:53:45 2014		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REGION 2 / DISTRICT 2 STANDARD

SCALE: SHEET NO. OF SHEETS STA. TO STA.

* 5789 & 5861

F.A.U. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	2R-1	HENRY	235	102
			CONTRACT NO. 64J43	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				