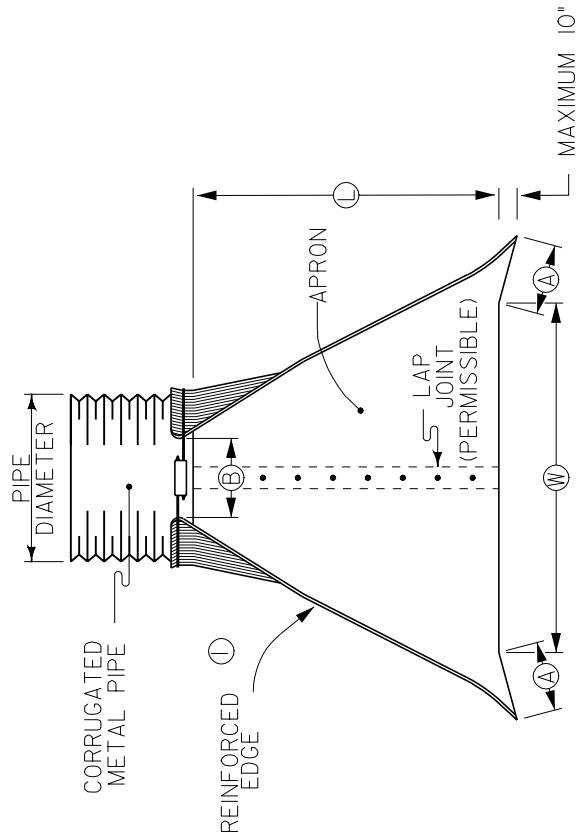
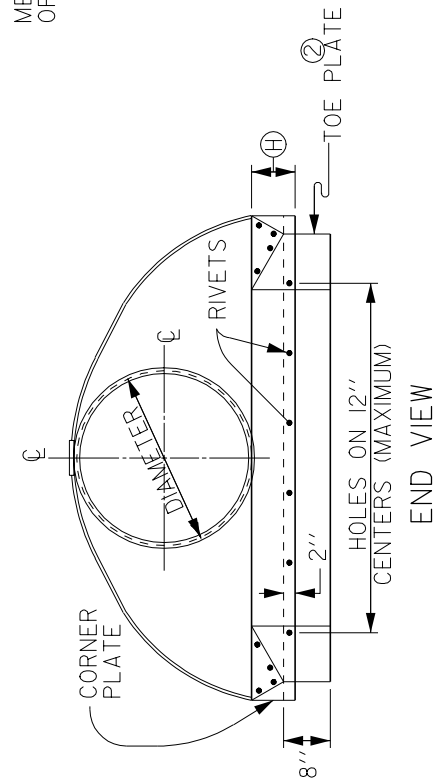


DIMENSIONS					
PIPE DIAM.	A (1")	B MAX.	H (1 1/2")	L (1 1/2")	W (12")
15"	6"	8"	6"	26"	30"
18"	7"	9"	6"	31"	36"
21"	8 1/4"	11"	6"	36"	42"
24"	9 1/2"	12"	6"	42"	48"
30"	12"	15"	7 1/2"	52 1/2"	60"
36"	14"	18"	9"	63"	72"
42"	16"	21"	10 1/2"	73 1/2"	84"
48"	18"	27"	12"	84"	90"
54"	18"	30"	12"	84"	102"
60"	18"	33"	12"	87"	114"
66"	18"	36"	12"	87"	120"
72"	18"	39"	12"	87"	126"
78"	18"	42"	12"	87"	132"
84"	18"	45"	12"	87"	138"
90"	24"	37"	11"	87"	144"
96"	25"	35"	12"	87"	150"



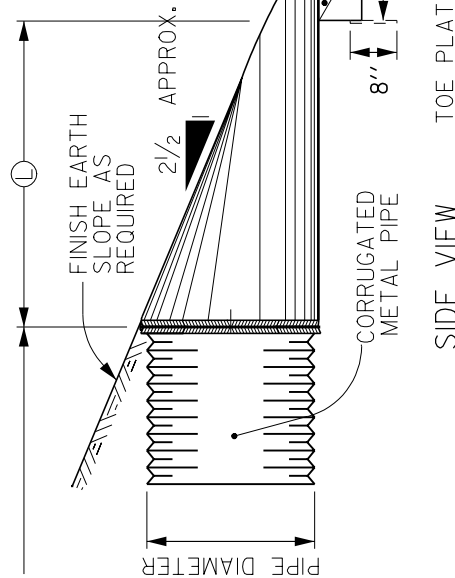
PLAN VIEW



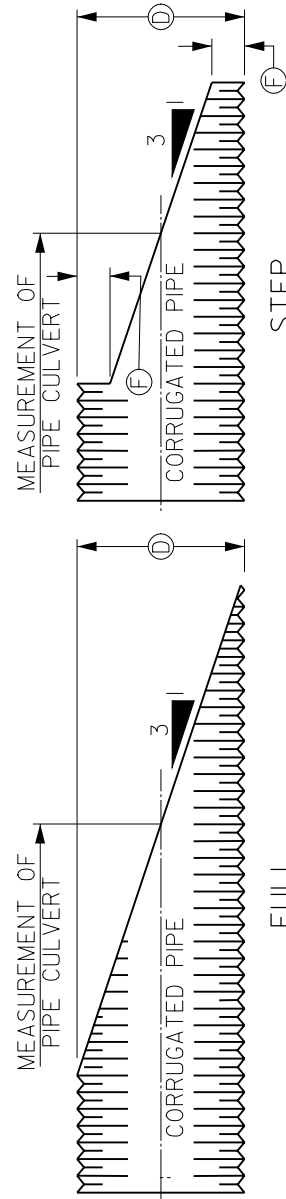
END VIEW

MEASUREMENT (LENGTH) OF PIPE CULVERT

BEVEL 3:1	(D)	(F)
54"	3"	3"
60"	6"	6"
66"	9"	9"
72"	12"	12"
78"	15"	15"
84"	18"	18"
90"	21"	21"
96"	24"	24"



SIDE VIEW



FULL BEVELED ENDS FOR CORRUGATED METAL PIPE

NOTE: WHEN SPECIFICALLY REQUIRED AS PART OF DETAIL PROJECT PLANS, ENDS OF PIPE CULVERT MAY BE PROVIDED WITH BEVELED ENDS AS SHOWN, EITHER FULL BEVEL OR STEP BEVEL MAY BE USED UNLESS ONE TYPE IS SPECIFIED. UNLESS SPECIFIED OTHERWISE, THE SLOPE OF THE BEVEL SHALL BE 3:1.

BEVELED ENDS WILL NOT BE PAID FOR SEPARATELY BUT, WHEN REQUIRED, SHALL BE CONSIDERED INCIDENTAL TO THE PRICE BID OF THE CULVERT.

SEE GENERAL NOTES ON SHEET 2.

REV.	DATE	BY
I	01/25/01	
DATE: 01-01-98		

METAL PIPE APRONS AND BEVELED ENDS

FIGURE: 4020.10

GENERAL NOTES:

METAL PIPE APRONS AND HARDWARE SHALL BE CONSTRUCTED OF GALVANIZED STEEL IN CONFORMANCE WITH SECTION 4020, 2.02, AND AS INDICATED HEREON. REFER TO PROJECT PLANS FOR ADDITIONAL DETAILS OF INDIVIDUAL CULVERT INSTALLATIONS. ALTERNATE DESIGN DETAILS MAY BE SUBMITTED TO THE JURISDICTIONAL ENGINEER FOR APPROVAL.

APRONS MAY BE ATTACHED TO CULVERT PIPE AS FOLLOWS:

- A. IF NORMAL CULVERT IS OF CIRCUMFERENTIAL CORRUGATION TYPE, USE AN APPROVED BOLT OR CLAMP TO FASTEN APRON DIRECTLY TO CULVERT.
- B. IF NORMAL CULVERT IS OF HELICAL CORRUGATION TYPE:
 - 1. USE AN APPROVED SIZING RING SECURELY FASTENED TO THE INSIDE DIAMETER OF APRON TO CONNECT TO THE CULVERT PIPE USING SPECIAL DIMPLE BAND CONNECTOR.
 - 2. DIMPLE BANDS ARE NOT ALLOWED WHEN A POSITIVE JOINT IS SPECIFIED.

ANY DAMAGE TO SPALTER COAT RESULTING FROM INSTALLATION OF CULVERT SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER

PRICE BID FOR "METAL PIPE APRONS" SHALL BE CONSIDERED FULL COMPENSATION FOR FABRICATION AND INSTALLATION OF THE METAL APRON AS DETAILED HEREON.

- ① ON SIZES 60" AND LARGER, THE REINFORCED EDGE SHOULD BE SUPPLEMENTED WITH A GALVANIZED STIFFENER ANGLE ATTACHED WITH BOLTS.
- ② GALVANIZED TOE PLATE (SAME GAGE METAL AS APRON) SHALL BE INSTALLED ON ALL APRONS 24" DIAMETER AND LARGER.

I	01/25/01		METAL PIPE APRONS AND BEVELED ENDS	FIGURE: 4020.10
REV.	DATE	BY		
DATE: 01-01-98				SHEET 2 OF 2