## MINIMUM SHEET THICKNESS AND DESIGN DATA

PIPE ARCH DIMENSION				MINIMUM	MAXIMUM COVER HEIGHT (FEET)		
NOMBLAL CIZE	EQUIVALENT			SHEET	MAXIMUM CORNER PRESSURE		
NOMINAL SIZE	PIPE	AREA	Rc	THICKNESS			
SPAN - RISE	DIAMETER			REQUIRED	4000	*6000	
(INCHES)	(INCHES)	(SQ. FT. )	(INCHES)	(INCHES)	LBS./SQ. FT.	LBS./SQ. FT.	
2 2/3" X 1/2" CORRUGATIONS							
17 X 13	15	1.1	3"	.060 (16)	11	17	
21 X 15	18	1.6	3"	.060 (16)	9	14	
24 X 18	21	2.2	3"	.060 (16)	8	12	
28 X 20	24	2.8	3"	.075 (14)	7	10	
35 X 24	30	4.4	3"	.075 (14)	5	8	
42 X 29 †	36	6.4	31/2"	.105 (12)	5	8	
49 X 33 †	42	8.7	4"	.105 (12)	5	8	
57 X 38 †	48	11.4	5"	.135 (10)	5	8	
64 X 43 †	54	14.3	6''	.135 (10)	6	9	
71 X 47 †	60	17.6	7"	.164 (8)	6	9	
		3"	X 1" CORR	UGATIONS			
40 X 31 🕇	36	6.4	5"	.060 (16)	8	12	
46 X 36 †	42	8.7	6"	.060 (16)	8	12	
53 X 41 †	48	11.4	7"	.060 (16)	8	13	
60 X 46 †	54	14.3	8"	.075 (14)	8	13	
66 X 51 T	60	17.6	9"	.075 (14)	9	13	
73 X 55	66	22.0	12''	.105 (12)	11	16	
81 X 59	72	26.0	14"	.105 (12)	11	17	
87 X 63	78	31.0	14"	.135 (10)	10	16	
95 X 67	84	35.0	16"	.135 (10)	11	16	
103 X 71	90	40.0	16"	.164 (8)	10	15	
112 X 75	96	46.0	18''	.164 (8)	10	13	
117 X 79	102	52.0	18"	.164 (8)	10	11	

<sup>†</sup> Indicates pipe arches for which demensions for either corrugation may be used within fill height limitations.

## Notes:

\* Figures in parenthesis denote corresponding gage to sheet thickness.

Cover heights indicated in tables are for finished construction.

To protect pipe <u>during construction</u>, minimum height of cover to be as follows prior to allowing construction traffic to cross installation.

Pipe Arch Span	Min. Cover Height During Construction		
17" to 35"	1'-6"		
42" and above	Span 2		

Minimum <u>finished</u> height of cover to be  $\frac{1}{8}$  Span or 1'-0", whichever is greater.

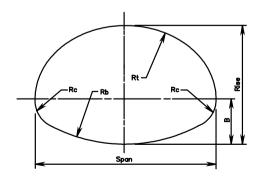
The cover shall extend the full length of the pipe arch. The approach fill ramp is to extend a minimum of (10)(Height + 1/2 Span) on each side of the structure, or the intersection with a cut.

Lapped longitudinal seams shall be staggered so as to alternate on each side of the center of arch top by approximately 15 percent of the periphery.

A tolerance of plus, or minus, 1 inch is permissible for dimensions of span, rise, and corner radius.

■ When design height of cover falls within this category, foundation and backfill must be approved by the engineer.

The allowable cover tables shown are based on a soil modulus of 700 PSI. All other design criteria are in accordance with the AASHTO Specifications and VDOT Modifications for Soil Corrugated Metal Structure Interaction Systems.



Sheet 7 of 17

SPECIFICATION REFERENCE	CORRUGA
232 302	HEIGHT OF

## CORRUGATED ALUMINUM ALLOY PIPE ARCH HEIGHT OF COVER TABLE FOR H-20 LIVE LOAD