

MINIMUM SHEET THICKNESS AND DESIGN DATA

PIPE ARCH DIMENSION					MINIMUM SHEET THICKNESS REQUIRED (INCHES)	MAXIMUM COVER HEIGHT (FEET)	
NOMINAL SIZE SPAN - RISE (INCHES)	EQUIVALENT PIPE DIAMETER (INCHES)	AREA (SQ. FT.)	MAXIMUM "B" (INCHES)	Rc (INCHES)		MAXIMUM CORNER PRESSURE	
						4000 LBS/SQ. FT.	* 6000 LBS./SQ. FT.
2 2/3" X 1/2" CORRUGATIONS							
17 x 13	15	1.1	5 1/4"	3	.064 (16)	11	17
21 x 15	18	1.6	6"	3	.064 (16)	9	14
24 x 18	21	2.2	7 1/4"	3	.064 (16)	8	12
28 x 20	24	2.8	8"	3	.064 (16)	7	10
35 x 24	30	4.4	9 1/2"	3	.064 (16)	5	8
42 x 29 †	36	6.4	10 1/2"	3 1/2	.064 (16)	5	8
49 x 33 †	42	8.7	11 1/2"	4	.079 (14)	5	8
57 x 38 †	48	11.4	13 1/2"	5	.109 (12)	5	8
64 x 43 †	54	14.3	15"	6	.109 (12)	6	9
71 x 47 †	60	17.6	16 1/2"	7	.138 (10)	6	9
77 x 52 †	66	21.3	18"	8	.168 (8)	6	10
83 x 57 †	72	25.3	20"	9	.168 (8)	7	10
3" X 1" AND 5" X 1" CORRUGATIONS							
40 x 31 †	36	6.4	9 3/4"	5	.109 (12)	8	12
46 x 36 †	42	8.7	11 1/2"	6	.109 (12)	8	12
53 x 41 †	48	11.4	13"	7	.109 (12)	8	13
60 x 46 †	54	14.3	14 3/4"	8	.109 (12)	8	13
66 x 51 †	60	17.6	16 1/2"	9	.109 (12)	9	13
73 x 55 †	66	22.0	21 1/2"	12	.109 (12)	11	16
81 x 59 †	72	26.0	23"	14	.109 (12)	11	17
87 x 63	78	31.0	24 1/2"	14	.109 (12)	10	16
95 x 67	84	35.0	26 1/2"	16	.109 (12)	11	16
103 x 71	90	40.0	27"	16	.109 (12)	10	15
112 x 75	96	46.0	29"	18	.109 (12)	10	16
117 x 79	102	52.0	30 3/4"	18	.109 (12)	10	15
128 x 83	108	58.0	29 1/2"	18	.138 (10)	9	14
137 x 87	114	64.0	30 3/4"	18	.138 (10)	8	13
142 x 91	120	71.0	32 1/2"	18	.168 (8)	8	12

Notes:

* Figures in parenthesis denote corresponding gage to sheet thickness.

Span of Pipe Arches is measured "B" inches above the invert.

Cover heights indicated in tables are for finished construction.

To protect pipe during construction, 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

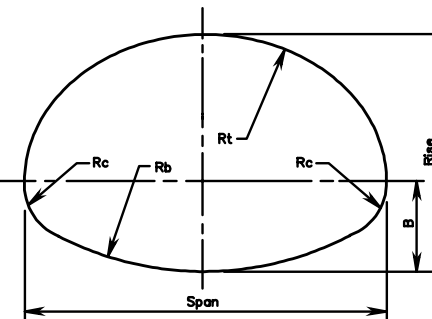
Minimum finished height of cover to be 1/8 Span or 1'-0", whichever is greater.

** 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.

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

† Indicates pipe arches for which dimensions for either corrugation may be used within fill height limitations.

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.



**CORRUGATED STEEL PIPE ARCH
HEIGHT OF COVER TABLE FOR H-20 LIVE LOAD**