

PC-1		STRUCTURAL PLATE ALUMINUM ALLOY PIPE ARCHES 9" X 2 1/2" CORRUGATIONS									
SPAN	RISE	CORNER RADIUS	MAXIMUM COVER HEIGHT IN FEET								AREA (SQ. FT.)
			MINIMUM SHEET THICKNESS IN INCHES								
			MAXIMUM CORNER PRESSURE IN LBS./SQ. FT.								
			0.100"		0.125"		0.150"		0.175"		
			4000		4000	6000 *	4000	6000 *	4000	6000 *	
6'-2"	5'-0"	31.8	25		28	36	28	42	28	42	24.7
6'-7"	4'-11"	31.8	23		26	34	26	40	26	40	26.6
6'-7"	5'-8"	31.8	23		26	34	26	40	26	40	29.6
6'-11"	5'-9"	31.8	22		25	32	25	38	25	38	31.9
7'-3"	5'-11"	31.8	21		24	31	24	36	24	36	34.3
7'-9"	6'-0"	31.8	20		22	29	22	34	22	34	36.8
8'-1"	6'-1"	31.8	19		21	28	21	32	21	32	39.3
8'-5"	6'-3"	31.8	18		20	27	20	31	20	31	41.9
8'-10"	6'-4"	31.8	17		20	25	20	30	20	30	44.5
9'-3"	6'-5"	31.8	16		19	24	19	28	19	28	45.1
9'-7"	6'-6"	31.8	16		18	23	18	27	18	27	49.9
9'-11"	6'-8"	31.8	15		17	22	17	26	17	26	52.7
10'-3	6'-9"	31.8	15		17	22	17	25	17	25	55.5
10'-9"	6'-10"	31.8	14		16	21	16	24	16	24	58.4
11'-1"	7'-0"	31.8	14		15	20	15	23	15	23	61.4
11'-5"	7'-1"	31.8	13		15	19	15	23	15	23	64.4
11'-9"	7'-2"	31.8	13		15	19	15	22	15	22	67.5
12'-3"	7'-3"	31.8	12		14	18	14	21	14	21	70.5
12'-7"	7'-5"	31.8	12		14	18	14	21	14	21	73.7
12'-11"	7'-6"	31.8	12		13	17	13	20	13	20	77.0
13'-1"	8'-2"	31.8	11		13	17	13	20	13	20	83.0
13'-1"	8'-4"	31.8	11		13	17	13	20	13	20	86.8
13'-11"	8'-5"	31.8	11		12	16	12	19	12	19	90.3
14'-0"	8'-7"	31.8	11		12	16	12	18	12	18	94.2
13'-11"	9'-5"	31.8	11		12	16	12	19	12	19	101.5
14'-3"	9'-7"	31.8	10		12	15	12	18	12	18	105.7
14'-8"	9'-8"	31.8			12	14	12	17	12	18	109.9
14'-11"	9'-10"	31.8			11	13	11	16	11	17	114.2
15'-4"	10'-0"	31.8			11	12	11	14	11	17	118.6
15'-7"	10'-2"	31.8			11	11	11	14	11	16	123.1
16'-1"	10'-4"	31.8			10		10	12	10	15	127.6
16'-4"	10'-6"	31.8					10	12	10	14	132.3
16'-9"	10'-8"	31.8					10	11	10	13	136.9
17'-0"	10'-10"	31.8					10		10	12	141.8
17'-3"	11'-0"	31.8					10		10	12	
18'-0"	11'-4"	31.8							9	10	

Notes:

Cover heights indicated in table are for finished construction. Structural Plate Pipe-Arch dimensions are to inside crest and are subject to manufacturing tolerances.

To protect pipe during construction, minimum height of cover prior to allowing construction traffic to cross installation to be 1/2 Span. This 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 to the intersection with a cut.

Steel bolts only to be used.

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

Bolts are 3/4" diameter, high strength to meet current A.S.T.M. designation M-164 and galvanized to meet current A.S.T.M. designation A-394. Bolts are to be located in the valley and crest of each corrugation in double rows spaced 1 3/4" apart.

★ 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.

**STRUCTURAL PLATE ALUMINUM ALLOY PIPE ARCH
HEIGHT OF COVER TABLE FOR H-20 LIVE LOAD**

SPECIFICATION
REFERENCE

232
302