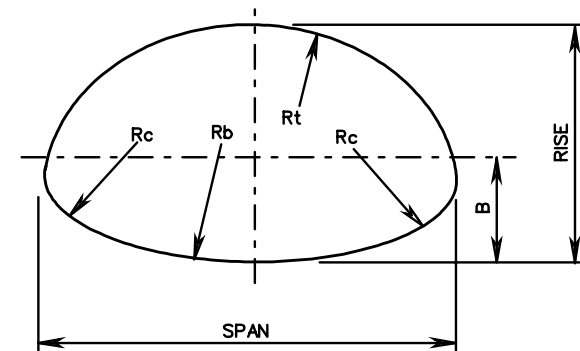


STRUCTURAL PLATE ALUMINUM ALLOY PIPE ARCHES
9' x 2 1/2" CORRUGATIONS

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 (SEE NOTE 4)	4000 (SEE NOTE 4)	6000 (SEE NOTE 6)	4000 (SEE NOTE 4)	6000 (SEE NOTE 6)	4000 (SEE NOTE 6)	6000 (SEE NOTE 6)	4000 (SEE NOTE 6)	6000 (SEE NOTE 6)			
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.
- TO PROTECT PIPE DURING CONSTRUCTION, MINIMUM HEIGHT OF COVER PRIOR TO ALLOWING CONSTRUCTION TRAFFIC TO CROSS INSTALLATION TO BE 1/2 SPAN. THE COVER SHALL EXTEND THE FULL LENGTH OF THE PIPE ARCH. THE APPROACH FILL RAMP IS TO EXTEND A MINIMUM OF 10(RISE + 1/2 SPAN) ON EACH SIDE OF THE PIPE, OR TO THE INTERSECTION WITH A CUT.
- STANDARD MINIMUM FINISHED HEIGHT OF COVER FOR ALL PIPES SHALL BE 2.0' OR 1/4 SPAN, WHICHEVER IS GREATER. IN CASES IN WHICH THESE COVER HEIGHTS CANNOT BE ACHIEVED, AN ABSOLUTE MINIMUM FINISHED COVER HEIGHT OF 1.0' OR 1/8 SPAN, WHICHEVER IS GREATER, WILL BE ALLOWED ONLY IF ALL POSSIBLE MEANS TO OBTAIN THE STANDARD VALUE HAVE BEEN EXHAUSTED.
- SEE STANDARD PB-1 FOR BEDDING AND BACKFILL REQUIREMENTS.
- THE MAXIMUM HEIGHT OF COVER SHOWN IN THE TABLES IS 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.
- WHEN DESIGN HEIGHT OF COVER REQUIRES THE USE OF THIS CATEGORY OF PIPE, BEDDING AND BACKFILL MUST BE APPROVED BY THE ENGINEER.
- 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.
- STRUCTURAL PLATE PIPE-ARCH DIMENSIONS ARE TO INSIDE CREST AND ARE SUBJECT TO MANUFACTURING TOLERANCES.



SPECIFICATION REFERENCE

232
302

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

VIRGINIA DEPARTMENT OF TRANSPORTATION

VDOT

ROAD AND BRIDGE STANDARDS

REVISION DATE

SHEET 12 OF 18

107.16