PC-1

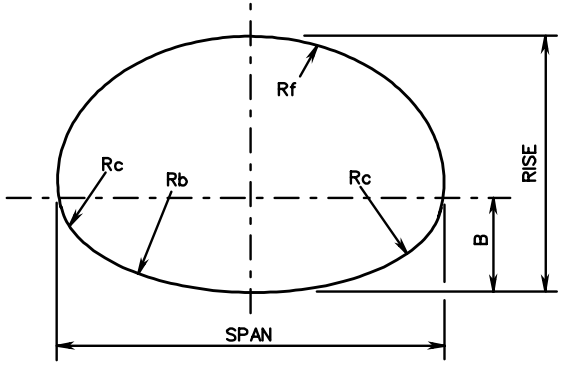
MINIMUM THICKNESS-STRUCTURAL PLATE STEEL PIPE ARCHES 6" x 2" CORRUGATIONS

PIPE ARCH DIMENSION				MINIIMUM SHEET THICKNESS REQUIRED	MAXIMUM ALLOWABLE COVER HEIGHT IN FEET	
					MAXIMUM CORNER PRESSURE	
SPAN	RISE	AREA SQ. FT.	Rc INCHES	GAUGE	4000 LBS./SQ. FT. (SEE NOTE 4)	6000 LBS./SQ. FT. (SEE NOTE 6)
13'-3"	9'-4"	97	31	12	12	18 ❁
13'-6"	9'-6"	102	31	12	12	17 ❁
14'-0"	9'-8"	105	31	12	12	17 ❁
14'-2"	9'-10"	109	31	12	12	16 ❁
14'-5"	10'-0"	114	31	12	11	16 ❁
14'-11"	10'-2"	118	31	12	11	16 ❁
15'-4"	10'-4"	123	31	12	11	15 ❁
15'-7"	10'-6"	127	31	12	11	15 ❁
15'-10"	10'-8"	132	31	12	10	14 ❁
16'-3"	10'-10"	137	31	12	10	14 ❁
16'-6"	11'-0"	142	31	12	10	14 ❁
17'-0"	11'-2"	146	31	12	10	14 ❁
17'-2"	11'-4"	151	31	12	10	13 ❁
17'-5"	11'-6"	157	31	12	9	13 ❁
17'-11"	11'-8"	161	31	12	9	13 ❁
18'-1"	11'-10"	167	31	12	9	13 ❁
18'-7"	12'-0"	172	31	12	9	12 ❁
18'-9"	12'-2"	177	31	12	9	12 ❁
19'-3"	12'-4"	182	31	10	8	13
19'-6"	12'-6"	188	31	10	8	13
19'-8"	12'-8"	194	31	10	8	13
19'-11"	12'-10"	200	31	10	8	12
20'-5"	13'-0"	205	31	10	8	12
20'-7"	13'-2"	211	31	10	8	12

❁ MAXIMUM COVER HEIGHTS SHOWN MAY BE INCREASED BY A MAXIMUM OF 12" IF A SHEET THICKNESS GREATER THAN 12 GAUGE IS USED.

NOTES:

1. COVER HEIGHTS INDICATED IN TABLES ARE FOR FINISHED CONSTRUCTION.
2. TO PROTECT PIPE DURING CONSTRUCTION, MINIMUM HEIGHT OF COVER PRIOR TO ALLOWING CONSTRUCTION TRAFFIC TO CROSS INSTALLATION SHALL 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(HEIGHT + 1/2 SPAN) ON EACH SIDE OF THE STRUCTURE OR TO THE INTERSECTION WITH A CUT.
3. STANDARD MINIMUM FINISHED HEIGHT OF COVER FOR ALL PIPES SHALL BE 1/4 SPAN. IN CASES IN WHICH THIS COVER HEIGHT CANNOT BE ACHIEVED, AN ABSOLUTE MINIMUM FINSHED COVER HEIGHT OF 1/8 SPAN WILL BE ALLOWED ONLY IF ALL POSSIBLE MEANS TO OBTAIN THE STANDARD VALUE HAVE BEEN EXHAUSTED.
4. SEE STANDARD PB-1 FOR PIPE BEDDING AND BACKFILL REQUIREMENTS.
5. STRUCTURAL PLATE PIPE-ARCH DIMENSIONS ARE TO INSIDE OF CREST AND ARE SUBJECT TO MANUFACTURING TOLERANCES.
6. WHEN DESIGN HEIGHT OF COVER REQUIRES THE USE OF THIS CATEGORY OR PIPE, BEDDING AND BACKFILL MUST BE APPROVED BY THE ENGINEER.
7. 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.



VDOT
ROAD AND BRIDGE STANDARDS

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

VIRGINIA DEPARTMENT OF TRANSPORTATION

SHEET 11 OF 18 | REVISION DATE
107.15

SPECIFICATION REFERENCE
232
302