

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

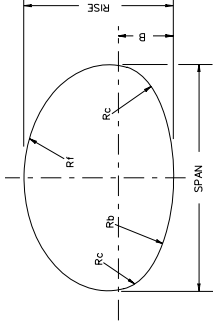
SPAN	PIPE ARCH DIMENSION		MINIMUM SHEET THICKNESS REQUIRED	MAXIMUM ALLOWABLE COVER HEIGHT IN FEET	
	RISE	AREA SO. FT.		GAUGE	MAXIMUM CORNER PRESSURE (LBS./SQ. FT.) (SEE NOTE 4)
13'-3"	9'-4"	97	12	12	18
13'-6"	9'-6"	102	31	12	17
14'-0"	9'-8"	105	31	12	17
14'-2"	9'-10"	109	31	12	16
14'-5"	10'-0"	114	31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

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

SPECIFICATION REFERENCE  
 332  
 302

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

SHEET 11 OF 18  
 REV. 7/05  
 107.15



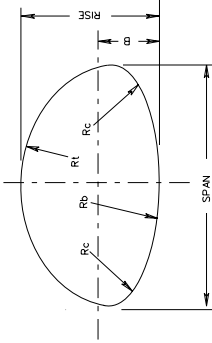
- NOTES:
- COVER HEIGHTS INDICATED IN TABLE ARE FOR FINISHED CONSTRUCTION.
  - TO PROTECT PIPE DURING CONSTRUCTION, MINIMUM HEIGHT OF COVER PRIOR TO ALLOWING CONSTRUCTION TRAFFIC TO CROSS THE COVER SHALL EXTEND THE FULL LENGTH OF THE PIPE ARCH. THE APPROACH FILL AND PUMP ISLANDS TO EXTEND A MINIMUM OF 10 FEET TO EITHER SIDE OF THE STRUCTURE OR TO THE INTERSECTION WITH A CUT.
  - STANDARD MINIMUM FINISHED HEIGHT OF COVER FOR ALL PIPES CANNOT BE ACHIEVED IN ABSOLUTE MINIMUM FINISHED COVER MEANS TO OBTAIN THE STANDARD VALUE HAVE BEEN EXHAUSTED.
  - SEE STANDARD PB-1 FOR PIPE BEDDING AND BACKFILL REQUIREMENTS.
  - STRUCTURAL PLATE PIPE ARCH DIMENSIONS ARE TO INSIDE OF CREST AND ARE SUBJECT TO MANUFACTURING TOLERANCES.
  - WHEN DESIGN HEIGHT OF COVER REQUIRES THE USE OF PIPE ARCHES WITH A COVER HEIGHT GREATER THAN 12 FEET, THE DESIGN SHALL BE APPROVED BY THE ENGINEER.
  - 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 STANDARD SPECIFICATIONS AND THE AASHTO CORRUGATED METAL STRUCTURE INTERACTION SYSTEMS.

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

SPAN	RISE	CORNER RADIUS	MAXIMUM COVER HEIGHT IN FEET						AREA SO. FT.
			0.100"	0.125"	0.150"	0.175"	0.195"	0.215"	
6'-2"	5'-0"	31.8	25	28	36	42	28	42	24.7
6'-7"	4'-11"	31.8	23	26	34	40	26	40	26.6
6'-7"	5'-8"	31.8	23	26	34	40	26	40	29.6
6'-11"	5'-9"	31.8	22	25	32	38	25	38	31.9
7'-3"	5'-11"	31.8	21	24	31	36	24	36	34.3
7'-9"	6'-0"	31.8	20	22	29	34	22	34	36.8
8'-1"	6'-1"	31.8	19	21	28	32	21	32	39.3
8'-5"	6'-3"	31.8	18	20	27	30	20	31	41.9
8'-10"	6'-4"	31.8	17	20	25	29	20	30	44.3
9'-3"	6'-5"	31.8	16	19	24	28	19	28	45.1
9'-7"	6'-6"	31.8	16	18	23	26	18	27	49.9
9'-11"	6'-8"	31.8	15	17	22	25	17	26	52.7
10'-3"	6'-9"	31.8	15	17	22	25	17	25	55.5
10'-9"	6'-10"	31.8	14	16	21	24	16	24	58.4
11'-1"	7'-0"	31.8	14	15	20	23	15	23	61.4
11'-5"	7'-1"	31.8	13	15	19	22	15	23	64.4
11'-9"	7'-2"	31.8	13	15	19	22	15	22	67.5
12'-3"	7'-3"	31.8	12	14	18	21	14	21	70.5
12'-7"	7'-5"	31.8	12	14	18	21	14	21	73.7
12'-11"	7'-6"	31.8	12	13	17	20	13	20	77.0
13'-1"	8'-2"	31.8	11	13	17	19	13	20	83.0
13'-1"	8'-4"	31.8	11	12	16	18	13	20	86.8
13'-11"	8'-5"	31.8	11	12	16	18	12	19	90.3
14'-0"	8'-7"	31.8	11	12	16	18	12	18	94.2
13'-11"	9'-5"	31.8	11	12	16	18	12	18	101.5
14'-3"	9'-7"	31.8	10	12	15	17	12	18	105.7
14'-8"	9'-8"	31.8	10	12	14	17	12	18	109.9
14'-11"	9'-10"	31.8	11	13	14	17	12	17	114.2
15'-4"	10'-0"	31.8	11	12	14	17	11	17	118.6
15'-7"	10'-2"	31.8	11	12	14	17	11	16	123.1
16'-1"	10'-4"	31.8	11	11	14	16	11	16	127.6
16'-4"	10'-6"	31.8	10	11	14	16	10	15	132.1
16'-9"	10'-8"	31.8	10	11	14	16	10	14	136.9
17'-0"	10'-10"	31.8	10	11	14	16	10	13	141.8
17'-3"	11'-0"	31.8	10	10	14	16	10	12	146.8
18'-0"	11'-4"	31.8	9	10	13	15	9	10	152.0

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



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SPECIFICATION REFERENCE  
 332  
 302

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

REVISED	STATE PROJECT	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
VA.					

PLAN NO.	PROJECT	FILE NO.	SHEET NO.

REV. 7/05  
 SPECIAL DESIGN SECTION  
 DRAWING NO. A 166\_6