

SURVEYED BY \_\_\_\_\_  
 SUPERVISED BY AA  
 DESIGNED BY BB

PC-1

CORRUGATED ALUMINUM ALLOY PIPE - 6" x 1" CORRUGATIONS			
PIPE DIAMETER INCHES	AREA SQ. FT.	SHEET THICKNESS IN INCHES (GAUGE)	MAXIMUM HEIGHT OF COVER IN FEET
36	7.1	16 24	26 30 33
42	9.6	16	21 23 25 27
48	12.6	15 20	21 22 23
54	16.0	15 19	20 21 21
60	19.6	14 18	19 19 20
66	23.8	14 18	18 18 19 19
72	28.3	14 18	18 18 18 19
78	33.2	16 18	18 18 18 18
84	38.5	17 17	18 18 18
90	44.2		15 17 18
96	50.3		16 17
102	56.7		13 16
108	63.6		14
114	70.9		11
120	78.5		

NOTES:

- COVER HEIGHTS INDICATED IN TABLES ARE FOR FINISHED CONSTRUCTION.
- TO PROTECT PIPE DURING CONSTRUCTION, MINIMUM HEIGHT OF COVER TO BE IN ACCORDANCE WITH TABLE A AS FOLLOWS PRIOR TO ALLOWING CONSTRUCTION TRAFFIC TO CROSS INSTALLATION. THE COVER SHALL EXTEND THE FULL LENGTH OF THE PIPE. THE APPROACH FILL RAMP IS TO EXTEND A MINIMUM OF 20 DIAMETERS ON EACH SIDE OF THE PIPE OR TO THE INTERSECTION WITH A CUT.
- STANDARD MINIMUM FINISHED HEIGHT OF COVER FOR ALL PIPES, EXCEPT THOSE UNDER ENTRANCES, SHALL BE 2.0 OR 1/2 SPAN, WHICHEVER IS GREATER. UNDER ENTRANCES, THE APPROACH FILL RAMP SHALL BE 2.0 OR 1/2 SPAN, WHICHEVER IS GREATER. WHERE POLYMER COATED PIPE WILL BE USED, THE COVER HEIGHT SHALL BE GREATER THAN THE STANDARD HEIGHT. MEANS TO OBTAIN THE STANDARD VALUE HAVE BEEN EXHAUSTED.
- 16 GAUGE PIPE LIMITED TO THOSE LOCATIONS WHERE PIPE DIAMETER PLUS COVER IS LESS THAN 20'.
- THE MAXIMUM HEIGHT OF COVER SHOWN IN THE TABLES IS BASED ON A SOIL MODULUS OF 700 P.S.I. ALL OTHER DESIGN CRITERIA ARE IN ACCORDANCE WITH THE AASHTO SPECIFICATIONS AND VDOT MODIFICATIONS FOR SOIL CORRUGATED METAL STRUCTURE INTERSECTION SYSTEMS.

TABLE A

PIPE DIAMETER	MINIMUM COVER HEIGHT DURING CONSTRUCTION (SEE NOTE 2)	EQUAL TO DIAMETER
30" AND OVER		

SHEET 5 OF 18

CORRUGATED ALUMINUM ALLOY PIPE  
 HEIGHT OF COVER TABLE FOR H-20 LIVE LOAD

REV. 7/05  
 107.09

SPECIFICATION REFERENCE
232
302

PC-1

MINIMUM SHEET THICKNESS AND DESIGN DATA

NOMINAL SIZE SPAN - RISE INCHES	EQUIVALENT PIPE DIAMETER INCHES	PIPE ARCH DIMENSION	PIPE ARCH DIMENSION		MINIMUM SHEET THICKNESS REQUIRED INCHES (GAUGE)	MAXIMUM CORNER PRESSURE	MAXIMUM HEIGHT OF COVER IN FEET
			AREA SQ. FT.	MAXIMUM "B" PIPE INCHES (SEE NOTE 7)			
			2' 2 1/3" x 1 1/2" CORRUGATIONS				
17 x 13	15	1.1	5 1/4"	3	0.064 (16)	11	17
21 x 15	18	1.6	6"	3	0.064 (16)	9	14
24 x 18	21	2.2	7 1/4"	3	0.064 (16)	8	12
28 x 20	24	2.8	8"	3	0.064 (16)	7	10
35 x 24	30	4.4	9 1/2"	3	0.064 (16)	5	8
42 x 29	36	6.4	10 1/2"	3 1/2	0.064 (16)	5	8
49 x 33	42	8.7	11 1/2"	4	0.079 (14)	5	8
57 x 38	48	11.4	13 1/2"	5	0.109 (12)	5	8
64 x 43	54	14.3	15"	6	0.109 (12)	6	9
71 x 47	60	17.6	16 1/2"	7	0.138 (10)	6	9
77 x 52	66	21.3	18"	8	0.168 (8)	6	10
83 x 57	72	25.3	20"	9	0.168 (8)	7	10
<b>3" x 1" AND 5" x 1" CORRUGATIONS</b>							
40 x 31	36	6.4	9 3/4"	5	0.109 (12)	8	12
46 x 36	42	8.7	11 1/2"	6	0.109 (12)	8	12
53 x 41	48	11.4	13"	7	0.109 (12)	8	13
60 x 46	54	14.3	14 3/4"	8	0.109 (12)	8	13
66 x 51	60	17.6	16 1/2"	9	0.109 (12)	9	13
73 x 55	66	22.0	21 1/2"	12	0.109 (12)	11	16
81 x 59	72	26.0	23"	14	0.109 (12)	11	17
87 x 63	78	31.0	24 1/2"	14	0.109 (12)	10	16
95 x 67	84	35.0	26 1/2"	16	0.109 (12)	11	16
103 x 71	90	40.0	27"	16	0.109 (12)	10	15
112 x 75	96	46.0	29"	18	0.109 (12)	10	16
117 x 79	102	52.0	30 3/4"	18	0.109 (12)	10	15
128 x 83	108	58.0	29 1/2"	18	0.138 (10)	9	14
137 x 87	114	64.0	30 3/4"	18	0.138 (10)	8	13
142 x 91	120	71.0	32 1/2"	18	0.168 (8)	8	12

INDICATES PIPE ARCHES FOR WHICH DIMENSIONS FOR EITHER CORRUGATION MAY BE USED WITHIN HEIGHT OF COVER LIMITATIONS.

REV. 7/05  
 107.10

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

REV. 7/05  
 107.09

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 107.10

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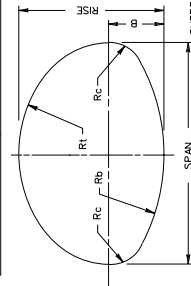
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 SPECIAL DESIGN SECTION  
 DRAWING NO. A 166\_3

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	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
VA.					302

PIPE ARCH SPAN	MINIMUM COVER HEIGHT DURING CONSTRUCTION (SEE NOTE 2)	1/2 SPAN
17" TO 35"	18"	
42" AND ABOVE		



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PLAN NO.	PROJECT	FILE NO.	SHEET NO.