

ROADWAY DESIGN MANUAL
TABLES 8 & 9

PART 1

5 - 8

CORRUGATED STEEL PIPE ARCHES - HEIGHT OF FILL LIMITATIONS
3" X 1" CORRUGATION
RIVETED, WELDED, OR HELICAL FABRICATION

Equiv. Pipe Dia.	Pipe Arch Dimension	Minimum Cover	Minimum Gage	Maximum Fill Above Top of Pipe for Corner Pressure in Tons/sq. ft.	
				2 tons	3 tons
	Inches	Inches			
36	40 x 31	12	14(.079)	14	21
42	46 x 36	12	12(.109)	14	21
48	53 x 41	12	12(.109)	14	21
54	60 x 46	12	12(.109)	14	21
60	66 x 51	12	12(.109)	14	21
66	73 x 55	12	12(.109)	19	28
72	81 x 59	12	12(.109)	17	26
78	87 x 63	12	12(.109)	16	24
84	95 x 67	12	12(.109)	15	22
90	103 x 71	18	12(.109)	13	20
96	112 x 75	18	12(.109)	13	18
102	117 x 79	18	10(.138)	12	18
108	128 x 83	24	10(.138)	11	16
114	137 x 87	24	10(.138)	10	15
120	142 x 91	24	10(.138)	10	15

Heavier gages may be used where required for durability or other factors, but not for additional fill, as corner pressures govern amount of fill.

5 - 9

CORRUGATED ALUMINUM PIPE

2" x 1/2" or 2-2/3" x 1/2" Corrugations - Riveted, Welded, or Helical Fabrication

Size	Minimum Fill Over Top of pipe	0.060" (16 Ga.)		0.079" (14 Ga.)		0.109" (12 Ga.)		0.138" (10 Ga.)		0.168" (8 Ga.)	
		Cir.	Elong.	Cir.	Elong.	Cir.	Elong.	Cir.	Elong.	Cir.	Elong.
Inches		Maximum Fill Above Top of Pipe									
12"	12"	45		45		77					
18"	12"	30		30		43		50		57	
24"	12"			22		30		34		37	
30"	12"			18		25		27		29	
36"	12"					23		24		25	
42"	12"				25	23	42	23	46	23	46
48"	12"					21	29	22	37	22	44
54"	12"						20	21	26	22	31
60"	12"						15	19	19	22	24
66"	12"							14	14	17	17
72"	12"									13	13

With Method "B" installation increase fill heights allowable by 33%