CORRUGATED ALUMINUM PIPE ARCHES
9 in x 2½ in CORRUGATIONS
BOLTED FABRICATION

PIPE DIM. SPAN x RISE ft-inch	CORNER RADIUS inch	MIN. COVER inch	MIN. THICKNESS inch	MAX FILL HEIGHT ft.
5-11x 5-5	31.8	13	0.100	24
6-6 x 5-9	31.8	14	0.100	22
7-3 x 6-0	31.8	15	0.100	20
7-11x 6-4	31.8	17	0.100	18
8-7 x 6-7	31.8	18	0.100	17
9-3 x 6-10	31.8	19	0.100	15
10-1 x 7-1	31.8	21	0.100	14
10-8 x 7-5	31.8	22	0.100	13
11-6 x 7-8	31.8	24	0.100	12
12-1 x 7-11	31.8	22	0.125	14
12-10x 8-3	31.8	24	0.150	13
13-7 x 8-6	31.8	23	0.150	12
13-11x 9-5	31.8	24	0.150	12
14-8 x 9-8	31.8	23	0.175	11
15-4 x10-0	31.8	24	0.175	10
16-1 x10-4	31.8	24	0.200	10
16-9 x10-8	31.8	26	0.200	9
17-3 x11-0	31.8	27	0.225	9
18-0 x11-4	31.8	27	0.225	9
18-8 x11-8	31.8	28	0.250	8

USE 5 1/3 BOLTS/FOOT- ¾" DIA STEEL OR ALUMINUM

ROUND CORRUGATED ALUMINUM PIPE
3 in x 1 in CORRUGATIONS

THICKNESS	0.060		0.075		0.105		0.135		0.164	
PIPE DIAMETER inch	MIN. COVER inch	MAX. FILL ft.	MIN. COVER inch	MAX. FILL ft.	MIN. COVER inch	MAX. FILL ft.	MIN. COVER inch	MAX. FILL ft.	MIN. COVER inch	MAX. FILL ft.
36	12	59	12	74	12	101	12	133	12	163
42	12	50	12	63	12	89	12	114	12	140
48	12	44	12	55	12	78	12	100	12	122
54	14	39	14	49	14	69	12	89	12	109
60	15	35	15	44	15	62	14	80	12	98
66	17	32	17	40	17	56	15	73	13	89
72	18	29	18	37	18	52	16	66	15	81
78			20	34	20	43	18	61	16	75
84					21	42	19	57	17	70
90					23	41	20	53	18	65
96					24	38	22	49	19	60
102							23	44	21	54
108							24	40	22	49
114									23	44
120									24	40

SEE NOTE 1

ROUND CORRUGATED ALUMINUM STRUCTURAL PLATE PIPE
9 in x 2½ in CORRUGATIONS
BOLTED FABRICATION 5 1/3 BOLTS/FOOT ¾ in DIA.

THICKNESS	0.100		0.125		0.150		0.175		0.200		0.225		0.250	
PIPE DIAMETER (in)	MIN. COVER inch	MAX. FILL ft.	MIN. COVER inch	MAX. FILL ft.	MIN. COVER inch	MAX. FILL ft.	MIN. COVER inch	MAX. FILL ft.	MIN. COVER inch	MAX. FILL ft.	MIN. COVER inch	MAX. FILL ft.	MIN. COVER inch	MAX. FILL ft.
60	12	29 31	12	38 45	12	49 60	12	58 70	12	68 81	12	68 92	12	68 103
66	12	26 28	12	35 41	12	44 54	12	53 64	12	53 74	12	53 84	12	53 94
72	13	24 25	12	32 37	12	41 50	12	48 58	12	48 67	12	48 77	12	48 86
78	14	22 23	12	29 35	12	37 46	12	45 54	12	45 62	12	45 71	12	45 79
84	15	20 22	13	27 32	12	35 42	12	41 50	12	41 58	12	41 66	12	41 73
90	16	19 20	14	25 30	13	32 40	12	39 47	12	39 54	12	39 61	12	39 68
96	17	18 19	15	24 28	14	30 37	13	36 44	12	36 50	12	36 57	12	36 64
102	18	17 18	16	22 26	15	29 35	14	34 41	13	34 47	13	34 54	13	34 60
108	19	16 17	17	21 25	16	27 33	14	32 39	14	32 45	14	32 51	14	32 57
114	20	15 16	18	20 23	16	25 31	15	30 37	15	30 42	15	30 48	15	30 54
120	21	14 15	19	19 22	17	24 30	16	29 35	15	29 40	15	29 46	15	29 51
126	22	13 14	20	18 21	18	23 28	17	27 33	16	27 38	16	27 44	16	27 49
132	23	13 14	21	17 20	19	22 27	18	26 32	17	26 37	17	26 42	17	26 47
138	24	12 13	22	16 19	20	21 26	18	25 30	18	25 35	18	25 40	18	25 44
144	25	12 12	22	16 18	21	20 25	19	24 29	18	24 33	18	24 38	18	24 43
150			23	15 18	21	19 24	20	23 28	19	23 32	19	23 36	19	23 41
156				14 17	22	18 23	21	22 27	20	22 31	20	22 35	20	22 39
162					23	18 22	21	21 26	21	21 30	21	21 34	21	21 38
168					24	17 21	22	20 25	21	20 29	21	20 33	21	20 36
174					25	17 20	23	20 24	22	20 28	22	20 31	22	20 35
180							24	19 23	23	19 27	23	19 30	23	19 34
186							25	18 22	24	18 26	24	18 29	24	18 33
192									24	18 25	24	18 28	24	18 32
198									25	17 24	25	17 28	25	17 31
204									26	17 23	26	17 27	26	17 30
210											27	16 26	27	16 29
216											27	16 25	27	16 28
222													28	15 27
228													29	15 27

39 — UPPER FIGURE FOR PIPE WITH ALUMINUM BOLTS
47 — LOWER FIGURE FOR PIPE WITH STEEL BOLTS

ROUND CORRUGATED ALUMINUM PIPE
6 in x 1 in CORRUGATIONS

THICKNESS	0.060		0.075		0.105		0.135		0.164	
PIPE DIAMETER inch	MIN. COVER inch	MAX. FILL ft.	MIN. COVER inch	MAX. FILL ft.	MIN. COVER inch	MAX. FILL ft.	MIN. COVER inch	MAX. FILL ft.	MIN. COVER inch	MAX. FILL ft.
30	12	62	12	77	12	108	12	139	12	170
36	12	51	12	64	12	90	12	116	12	142
42	12	44	12	55	12	77	12	99	12	121
48	12	38	12	48	12	67	12	87	12	106
54	14	34	14	43	14	60	13	77	12	94
60	15	31	15	38	15	54	14	69	13	85
66	17	28	17	35	17	49	15	63	14	77
72	18	25	18	32	18	45	17	58	15	71
78			20	29	20	41	18	53	16	65
84					21	38	19	49	17	60
90							21	46	19	56
96							22	43	20	53
102							23	40	21	49
108									22	44
114									24	40

SEE NOTE 1

ROUND CORRUGATED ALUMINUM PIPE
2 2/3 in x ½ in CORRUGATIONS

THICKNESS	0.060		0.075		0.105		0.135		0.164	
PIPE DIAMETER inch	MIN. COVER inch	MAX. FILL ft.	MIN. COVER inch	MAX. FILL ft.	MIN. COVER inch	MAX. FILL ft.	MIN. COVER inch	MAX. FILL ft.	MIN. COVER inch	MAX. FILL ft.
12	12	155	12	193	12	271	12	348	12	426
15	12	124	12	154	12	216	12	279	12	340
18	12	103	12	129	12	180	12	232	12	284
21	12	88	12	110	12	154	12	199	12	243
24	12	77	12	96	12	135	12	174	12	213
27	12	68	12	86	12	120	12	155	12	189
30	12	62	12	77	12	108	12	139	12	170
36	12	51	12	64	12	90	12	116	12	142
42	12	44	12	55	12	77	12	99	12	121
48					12	66	12	86	12	106
54					14	54	14	70	14	87
60							15	57	15	71
66									16	57
72									18	45

SEE NOTE 1

CORRUGATED ALUMINUM PIPE ARCHES
2 2/3 in x ½" in CORRUGATIONS

PIPE DIM. SPAN x RISE inch	CORNER RADIUS inch	MIN. COVER inch	MIN. THICKNESS inch	MAX FILL HEIGHT ft.
17 x 13	3		0.060	11
21 x 15	3	18	0.060	9
24 x 18	3	24	0.060	7
28 x 20	3	24	0.060	5
35 x 24	4	30	0.060	6
42 x 29	4½	30	0.060	5
49 x 33	5½	30	0.075	5
57 x 38	6½	30	0.135	6
64 x 43	7	30	0.135	5
71 x 47	8	24	0.164	5

SEE NOTE 1

CORRUGATED ALUMINUM PIPE ARCHES
3 in x 1in CORRUGATIONS

PIPE DIM. SPAN x RISE inch	CORNER RADIUS inch	MIN. COVER inch	MIN. THICKNESS inch	MAX FILL HEIGHT ft.
53 x 41	7	24	0.105	7
60 x 46	8	24	0.105	7
66 x 51	9	18	0.105	9
73 x 55	12	18	0.105	10
81 x 59	14	18	0.105	11
87 x 63	14	18	0.105	10
95 x 67	16	18	0.105	11
105 x 71	16	24	0.135	10
112 x 75	18	24	0.135	10
117 x 79	18	24	0.164	10

FOR 0.105 THRU 0.164 in THICKNESSES
USE ½ in DIA BOLTS
SEE NOTE 1

NOTE 1:TABLE IS FOR PIPE WITH HELICAL LOCK SEAMS OR HELICAL WELDED SEAMS ONLY.

ROUND CORRUGATED ALUMINUM PIPE
¾ in x ¾ in x 7½ in CORRUGATIONS
SPIRAL RIB PIPE

THICKNESS	0.060		0.075		0.105		0.135	
PIPE DIAMETER inch	MIN. COVER inch	MAX. FILL ft.	MIN. COVER inch	MAX. FILL ft.	MIN. COVER inch	MAX. FILL ft.	MIN. COVER inch	MAX. FILL ft.
18	12	55	12	76				
21	12	47	12	65	12	105		
24	12	41	12	57	12	92		
30	15	33	12	45	12	73		
36	18	27	15	38	12	61	12	86
42			18	32	15	52	12	74
48					18	46	15	65
54					21	40	15	57
60					24	36	18	52
66							21	47
72							24	43

FOR HEAVY CONSTRUCTION LOADS (100 KIPS AXLE LOAD) AT LEAST FOUR FEET OF COMPACTED MATERIAL IS NEEDED OVER THE TOP OF THE PIPE.

REVISIONS

NO.	DATE	APPR.	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
STANDARD DRAWINGS FOR ROAD AND BRIDGE CONSTRUCTION
SALT LAKE CITY, UTAH

RECOMMENDED FOR APPROVAL — JULY 03,2002 DATE
CHAIRMAN STANDARDS COMMITTEE APPROVED — JULY 03,2002 DATE
DEPUTY DIRECTOR

FILL HEIGHT FOR METAL PIPE (ALUMINUM)
STANDARD DRAWING TITLE

STD DWG
DG 2