CORRUGATED STEEL PIPE ARCHES
2 2/3" x 1/2" CORRUGATIONS

PIPE DIM. SPAN X RISE inch	CORNER RADIUS inch	MIN. COVER ft.	MIN. THICKNESS inch	MAX. FILL HEIGHT ft.
17 x 13	3	18	0.064	11
21 x 15	3	18	0.064	9
24 x 18	3	24	0.064	7
28 x 20	3	24	0.064	5
35 x 24	4	30	0.064	6
42 x 29	4 1/2	30	0.064	5
49 x 33	5 1/2	30	0.079	5
57 x 38	6 1/2	30	0.109	6
64 x 43	7	30	0.109	5
71 x 47	8	24	0.138	5
77 x 52	8 1/2	24	0.168	5
83 x 57	9	24	0.168	5

SEE NOTE 1

CORRUGATED STEEL PIPE ARCHES
6" x 2" CORRUGATIONS
BOLTED FABRICATION 4 BOLTS/FT 3/4" DIA.

PIPE DIM. SPAN X RISE ft-inch	CORNER RADIUS inch	MIN. COVER ft.	MIN. THICKNESS inch	MAX. FILL HEIGHT ft.
6-1 x 4-7	18	18	0.109	16
7-0 x 5-1	18	18	0.109	14
7-11 x 5-7	18	18	0.109	12
8-10 x 6-1	18	24	0.109	11
9-9 x 6-7	18	24	0.109	10
10-11 x 7-1	18	24	0.109	8
11-10 x 7-7	18	24	0.109	7
12-10 x 7-7	18	24	0.109	6
14-1 x 8-4	18	30	0.109	5
15-4 x 9-3	21	24	0.138	6
15-10 x 9-10	21	24	0.138	5
16-7 x 10-9	21	24	0.138	4
13-3 x 9-4	31	24	0.109	12
14-3 x 9-10	31	24	0.109	11
15-4 x 10-4	31	24	0.138	10
16-3 x 10-10	31	24	0.138	9
17-2 x 11-4	31	30	0.138	9
18-1 x 11-10	31	30	0.168	8
19-3 x 12-4	31	30	0.168	7
19-11 x 12-10	31	30	0.168	7
20-7 x 13-10	31	36	0.188	7

ROUND CORRUGATED STEEL PIPE
3" x 1" CORRUGATIONS

THICKNESS	0.064		0.079		0.109		0.138		0.168	
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	81	12	102	12	143	12	184	12	225
42	12	70	12	87	12	122	12	157	12	193
48	12	61	12	76	12	107	12	138	12	159
54	12	54	12	68	12	95	12	122	12	150
60	12	49	12	61	12	85	12	110	12	135
66	13	44	12	55	12	78	12	100	12	122
72	15	40	13	51	12	71	12	92	12	112
78	16	37	14	47	12	66	12	85	12	104
84	17	35	15	43	13	61	12	78	12	96
90	18	32	16	40	14	57	12	73	12	90
96			17	38	15	53	13	69	12	84
102			18	36	15	50	14	65	13	79
108					16	47	14	61	14	75
114					17	45	15	58	15	71
120					18	42	16	55	15	67
126							17	52	16	64
132							17	50	17	61
138							18	48	18	58
144									18	56

SEE NOTE 1

ROUND CORRUGATED STEEL STRUCTURAL PLATE PIPE
6" x 2" CORRUGATIONS
BOLTED FABRICATION 4 BOLTS/FT 3/4" DIA. THICKNESS

THICKNESS		0.109	0.138	0.168	0.186	0.218	0.249	0.280
PIPE DIAMETER inch	MIN. COVER inch	MAX. FILL ft.	MAX. FILL ft.	MAX. FILL ft.	MAX. FILL ft.	MAX. FILL ft.	MAX. FILL ft.	MAX. FILL ft.
60	12	46	68	90	103	124	146	160
66	12	42	62	81	93	113	133	145
72	12	38	57	75	86	103	122	135
78	12	35	52	69	79	95	112	123
84	12	33	49	64	73	88	104	114
90	12	31	45	60	68	82	97	106
96	12	29	43	56	64	77	91	100
102	13	27	40	52	60	73	86	94
108	14	25	38	50	57	69	81	88
114	15	24	36	47	54	65	77	84
120	15	23	34	45	51	62	73	80
126	16	22	32	42	49	59	69	76
132	17	21	31	40	46	56	66	72
138	18	20	29	39	44	54	63	69
144	18	19	28	37	43	51	61	66
150	19	18	27	36	41	49	58	64
156	20	17	26	34	39	47	56	61
162	21	17	25	33	38	46	54	59
168	21	16	24	32	36	44	52	57
174	22	16	23	31	35	42	50	55
180	23	15	22	30	34	41	48	53
186	24	15	22	29	33	40	47	51
192	24		21	28	32	38	45	50
198	25		20	27	31	37	44	48
204	26		20	26	30	36	43	47
210	27		19	25	29	35	42	45
216	27			25	28	34	41	44
222	28			24	27	33	40	43
228	29			23	27	32	39	42
234	30			23	26	31	38	41
240	30				25	31	37	40
246	31				25	30	36	39
252	32					29	35	38
258	33					28	34	37
264	33					28	34	36
270	34					27	33	35
276	35						32	34
282	36						32	34
288	36						31	33
294	37							32
300	38							32
306	39							31

ROUND CORRUGATED STEEL PIPE
2 2/3" x 1/2" CORRUGATIONS

THICKNESS	0.064		0.079		0.109		0.138		0.168	
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	213	12	266	12	372	12	479	12	586
15	12	170	12	212	12	298	12	383	12	469
18	12	142	12	177	12	248	12	319	12	391
21	12	121	12	152	12	213	12	274	12	335
24	12	106	12	133	12	186	12	239	12	293
27	12	94	12	118	12	165	12	213	12	260
30	12	85	12	106	12	149	12	191	12	234
36	12	71	12	88	12	124	12	159	12	195
42	12	60	12	76	12	106	12	137	12	167
48	12	53	12	66	12	93	12	119	12	146
54			12	59	12	82	12	106	12	130
60					12	74	12	95	12	117
66							13	87	12	106
72							14	79	13	97
78									14	86
84									15	75

SEE NOTE 1

ROUND CORRUGATED STEEL PIPE
3/4" x 1" SPIRAL RIB PIPE

THICKNESS	0.064		0.079		0.109	
PIPE DIAMETER inch	MIN. COVER inch	MAX. FILL ft.	MIN. COVER inch	MAX. FILL ft.	MIN. COVER inch	MAX. FILL ft.
24	12	56	12	70	12	99
30	12	45	12	56	12	79
36	12	37	12	47	12	66
42	12	32	12	40	12	56
48	12	28	12	35	12	49
54		25	15	31	15	44
60		22	15	28	15	39
66			18	25	18	36
72			18	23	18	33
78					21	30
84					21	28

CORRUGATED STEEL PIPE ARCHES
3" x 1" OR 5" x 1" 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	0.109	7
60 x 46	8	24	0.109	7
66 x 51	9	18	0.109	9
73 x 55	12	18	0.109	10
81 x 59	14	18	0.109	11
87 x 63	14	18	0.109	10
95 x 67	16	18	0.109	11
103 x 71	16	24	0.109	10
112 x 75	18	24	0.109	10
117 x 79	18	24	0.109	10
128 x 83	18	24	0.138	8
137 x 87	18	24	0.138	7
142 x 91	18	24	0.168	7

SEE NOTE 1

ROUND CORRUGATED STEEL PIPE
5" x 1" CORRUGATIONS

THICKNESS	0.064		0.079		0.109		0.138		0.168	
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	72	12	90	12	127	12	163	12	200
42	12	62	12	77	12	109	12	140	12	171
48	12	54	12	68	12	95	12	122	12	150
54	12	48	12	60	12	84	12	109	12	133
60	12	43	12	54	12	76	12	98	12	120
66	13	39	12	49	12	69	12	89	12	109
72	14	36	13	45	12	63	12	81	12	100
78	16	33	14	41	12	58	12	75	12	92
84	17	31	15	38	13	54	12	70	12	85
90	18	29	16	36	14	50	12	65	12	80
96			17	34	15	47	13	61	12	75
102			18	32	15	44	14	57	13	70
108					16	42	14	54	14	66
114					17	40	15	51	15	63
120					18	38	16	49	15	60
126							17	46	16	57
132							17	44	17	54
138							18	42	18	52
144									18	50

SEE NOTE 1

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

STRUCTURAL STEEL UNDERPASS
6" x 2" CORRUGATIONS

PIPE DIM. SPAN X RISE ft-inch	CORNER RADIUS inch	MIN. COVER inch	MIN. THICKNESS inch	MAX. FILL HEIGHT ft.
12-2 x 11-0	38	24	0.111	11
13-2 x 11-11	38	24	0.111	10
14-1 x 12-10	38	24	0.111	10
14-10x 13-5	38	24	0.111	10
15-9 x 15-1	38	24	0.111	7
16-5 x 16-1	38	24	0.140	7
17-3 x 17-0	47	36	0.140	9
19-2 x 17-2	47	36	0.170	7
20-4 x 17-9	47	36	0.188	6

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

STANDARD DRAWING TITLE
FILL HEIGHT FOR METAL PIPE (STEEL)

STD DWG
DG 1