CORRUGATED STEEL PIPE ARCHES
68 mm × 13 mm CORRUGATIONS

PIPE DIM SPAN X RISE (mm)	CORNER RADIUS (mm)	MIN COVER (m)	MIN THICKNESS (mm)	MAX FILL HEIGHT (m)
425 × 325	76	0.5	1.6	3.4
525 × 375	76	0.5	1.6	2.8
600 × 450	76	0.6	1.6	2.2
700 × 500	76	0.6	1.6	1.6
875 × 600	102	0.8	1.6	1.8
1050 × 725	114	0.8	1.6	1.6
1225 × 825	140	0.8	2.0	1.6
1425 × 950	165	0.8	2.8	1.8
1600 × 1075	178	0.8	2.8	1.6
1775 × 1175	203	0.6	3.5	1.6
1925 × 1300	216	0.6	4.5	1.6
2075 × 1425	229	0.6	4.3	1.6

SEE NOTE 1

CORRUGATED STEEL PIPE ARCHES
152 mm × 51 mm CORRUGATIONS
BOLTED FABRICATION 14 BOLTS/METER 19 mm DIA.

PIPE DIM SPAN X RISE (mm)	CORNER RADIUS (mm)	MIN COVER (m)	MIN THICKNESS (mm)	MAX FILL HEIGHT (m)
1854 × 1397	450	0.5	2.8	4.9
2134 × 1549	450	0.5	2.8	2.3
2413 × 1702	450	0.5	2.8	3.7
2692 × 1854	450	0.6	2.8	3.4
2972 × 2007	450	0.6	2.8	3.1
3327 × 2159	450	0.6	2.8	2.4
3607 × 2311	450	0.6	2.8	2.1
3912 × 2540	450	0.8	2.8	1.8
4293 × 2667	450	0.8	2.8	1.5
4674 × 2819	550	0.6	3.5	1.8
4826 × 2997	550	0.6	3.5	1.5
5055 × 3074	550	0.6	3.5	1.2
4039 × 2845	800	0.6	2.8	3.7
4318 × 2997	800	0.6	2.8	3.4
4674 × 3150	800	0.6	3.5	3.1
4953 × 3302	800	0.6	3.5	2.7
5232 × 3454	800	0.8	3.5	2.7
5512 × 3607	800	0.8	4.3	2.4
5867 × 3759	800	0.8	4.3	2.1
6071 × 3912	800	0.8	4.3	2.1
6274 × 4013	800	0.9	4.8	2.1

ROUND CORRUGATED STEEL PIPE
76 mm × 25 mm CORRUGATIONS

THICKNESS	1.6 mm		2.0 mm		2.8 mm		3.5 mm		4.3 mm	
PIPE DIAMETER (mm)	MIN COVER (m)	MAX FILL (m)	MIN COVER (m)	MAX FILL (m)	MIN COVER (m)	MAX FILL (m)	MIN COVER (m)	MAX FILL (m)	MIN COVER (m)	MAX FILL (m)
900	0.3	24.7	0.3	31.1	0.3	43.6	0.3	56.1	0.3	68.6
1050	0.3	21.3	0.3	26.5	0.3	37.2	0.3	47.9	0.3	58.8
1200	0.3	18.6	0.3	23.3	0.3	32.6	0.3	42.1	0.3	51.5
1350	0.3	16.5	0.3	20.7	0.3	29.0	0.3	37.2	0.3	45.7
1500	0.3	14.9	0.3	18.6	0.3	25.9	0.3	33.5	0.3	41.2
1650	0.4	13.4	0.3	16.8	0.3	23.8	0.3	30.5	0.3	37.2
1800	0.4	12.2	0.4	15.5	0.3	21.6	0.3	28.0	0.3	34.1
1950	0.4	11.3	0.4	14.3	0.3	20.1	0.3	25.9	0.3	31.7
2100	0.5	10.7	0.4	13.1	0.4	18.6	0.3	23.8	0.3	29.3
2250	0.5	9.8	0.4	12.2	0.4	17.4	0.3	22.3	0.3	27.4
2400			0.5	11.6	0.4	16.2	0.4	21.0	0.3	25.6
2550			0.5	11.0	0.5	15.2	0.4	15.2	0.4	24.4
2700					0.4	14.3	0.4	18.6	0.4	22.9
2850					0.5	13.7	0.4	17.7	0.4	21.6
3000					0.5	12.8	0.4	16.8	0.4	20.4
3150							0.5	15.9	0.4	19.5
3300							0.5	15.2	0.5	18.6
3450							0.5	14.6	0.5	17.7
3600									0.5	17.1

SEE NOTE 1

ROUND CORRUGATED STEEL STRUCTURAL PLATE PIPE
152 mm × 51 mm CORRUGATIONS
BOLTED FABRICATION 13 BOLTS/METER 19 mm DIA.THICKNESS

THICKNESS		2.5 mm	3.5 mm	4.5 mm	5.0 mm	5.5 mm	6.5 mm	7.0 mm
PIPE DIAMETER (mm)	MIN COVER (m)	MAX FILL (m)	MAX FILL (m)	MAX FILL (m)	MAX FILL (m)	MAX FILL (m)	MAX FILL (m)	MAX FILL (m)
1524	0.3	14.0	20.7	27.4	31.4	37.8	44.5	48.8
1676	0.3	12.8	18.9	24.7	28.4	34.4	40.5	44.2
1829	0.3	11.6	17.4	22.9	26.2	31.4	37.2	40.5
1981	0.3	10.7	15.9	21.0	24.1	29.0	34.1	37.5
2134	0.3	10.1	14.9	19.5	22.3	26.8	31.7	34.8
2286	0.3	9.5	13.7	18.3	20.7	25.0	29.6	32.3
2438	0.3	8.8	13.1	17.1	19.5	23.5	27.7	30.5
2591	0.4	8.2	12.2	15.9	18.3	22.3	26.2	28.7
2743	0.4	7.6	11.6	15.2	17.4	21.0	24.7	26.8
2896	0.4	7.3	11.0	14.3	16.5	19.8	23.5	25.6
3048	0.4	7.0	10.4	13.7	15.5	18.9	22.3	24.4
3200	0.4	6.7	9.8	12.8	14.9	18.0	21.0	23.2
3353	0.5	6.4	9.5	12.2	14.0	17.1	20.1	22.0
3505	0.5	6.1	8.8	11.9	13.4	16.5	19.2	21.0
3658	0.5	5.8	8.5	11.3	13.1	15.5	18.6	20.1
3810	0.5	5.5	8.2	11.0	12.5	14.9	17.7	19.5
3962	0.5	5.2	7.9	10.4	11.9	14.3	17.1	18.6
4115	0.6	5.2	7.6	10.1	11.6	14.0	16.5	18.0
4267	0.6	4.9	7.3	9.8	11.0	13.4	15.9	17.4
4420	0.6	4.9	7.0	9.5	10.7	12.8	15.2	16.8
4572	0.6	4.6	6.7	9.1	10.4	12.5	14.6	16.2
4724	0.6	4.6	6.7	8.8	10.1	12.2	14.3	15.5
4877	0.6		6.4	8.5	9.8	11.6	13.7	15.2
5029	0.7		6.1	8.2	9.5	11.3	13.4	14.6
5182	0.7		6.1	7.9	9.1	11.0	13.1	14.3
5334	0.7		5.2	7.6	8.8	10.7	12.8	13.7
5486	0.7			7.6	8.5	10.4	12.5	13.4
5639	0.7			7.3	8.2	10.1	12.2	13.1
5791	0.8			7.0	8.2	9.8	11.9	12.8
5944	0.8			7.0	7.9	9.5	11.6	12.5
6096	0.8				7.6	9.5	11.3	12.2
6248	0.8				7.6	9.1	11.0	11.9
6401	0.8					8.8	10.7	11.6
6553	0.9					8.5	10.4	11.3
6706	0.9					8.5	10.4	11.0
6858	0.9					8.2	10.1	10.7
7010	0.9						9.8	10.4
7163	0.9						9.8	10.4
7315	0.9						9.5	10.1
7468	1.00							9.8
7620	1.00							9.8
7772	1.00							9.5

ROUND CORRUGATED STEEL PIPE
19 mm × 25 mm SPIRAL RIB PIPE

THICKNESS	1.6 mm		2.0 mm		2.8 mm	
PIPE DIAMETER (mm)	MIN COVER (m)	MAX FILL (m)	MIN COVER (m)	MAX FILL (m)	MIN COVER (m)	MAX FILL (m)
600	0.3	17.1	0.3	21.3	0.3	30.2
750	0.3	13.7	0.3	17.1	0.3	24.1
900	0.3	11.3	0.3	14.3	0.3	20.1
1050	0.3	9.8	0.3	12.2	0.3	17.1
1200	0.3	8.5	0.3	10.7	0.3	14.9
1350		7.6	0.4	9.5	0.4	13.4
1500		6.7	0.4	8.5	0.4	11.9
1650			0.5	7.6	0.5	11.0
1800			0.5	7.0	0.5	10.1
1950					0.6	9.1
2100					0.6	8.5

CORRUGATED STEEL PIPE ARCHES
76 mm × 25 mm OR 125 mm × 25 mm CORRUGATIONS

PIPE DIM SPAN X RISE (mm)	CORNER RADIUS (mm)	MIN COVER (m)	MIN THICKNESS (mm)	MAX FILL HEIGHT (m)
1325×1025	178	0.6	2.8	2.2
1500×1150	203	0.6	2.8	2.2
1650×1275	229	0.5	2.8	2.8
1825×1375	305	0.5	2.8	3.1
2025×1475	356	0.5	2.8	3.4
2175×1575	356	0.5	2.8	3.1
2375×1675	406	0.5	2.8	3.4
2575×1775	406	0.6	2.8	3.1
2800×1875	457	0.6	2.8	3.1
2925×1975	457	0.6	2.8	3.1
3200×2075	457	0.6	3.5	2.5
3425×2175	457	0.6	3.5	2.2
3550×2275	457	0.6	4.3	2.2

SEE NOTE 1

ROUND CORRUGATED STEEL PIPE
68 mm × 13 mm CORRUGATIONS

THICKNESS	1.6 mm		2.0 mm		2.8 mm		3.5 mm		4.3 mm	
PIPE DIAMETER (mm)	MIN COVER (m)	MAX FILL (m)	MIN COVER (m)	MAX FILL (m)	MIN COVER (m)	MAX FILL (m)	MIN COVER (m)	MAX FILL (m)	MIN COVER (m)	MAX FILL (m)
300	0.3	64.9	0.3	21.1	0.3	113.4	0.3	146.0	0.3	178.6
375	0.3	51.8	0.3	64.6	0.3	90.8	0.3	116.7	0.3	143.0
450	0.3	43.3	0.3	54.0	0.3	75.6	0.3	97.2	0.3	119.2
525	0.3	36.9	0.3	46.3	0.3	64.9	0.3	83.5	0.3	102.1
600	0.3	32.3	0.3	40.5	0.3	56.7	0.3	72.9	0.3	89.3
675	0.3	28.7	0.3	36.0	0.3	50.3	0.3	64.9	0.3	79.3
750	0.3	25.9	0.3	32.3	0.3	45.4	0.3	38.2	0.3	71.3
900	0.3	21.6	0.3	26.8	0.3	37.8	0.3	48.5	0.3	59.4
1050	0.3	18.3	0.3	23.2	0.3	32.3	0.3	41.8	0.3	50.9
1200	0.3	16.2	0.3	20.1	0.3	28.4	0.3	36.3	0.3	44.5
1350			0.3	18.0	0.3	25.0	0.3	32.3	0.3	39.6
1500					0.3	22.6	0.3	29.0	0.3	35.7
1650							0.4	26.5	0.3	32.3
1800							0.4	24.1	0.4	29.6
1950									0.4	26.2
2100									0.4	22.9

SEE NOTE 1

ROUND CORRUGATED STEEL PIPE
125 mm × 25 mm CORRUGATIONS

THICKNESS	1.6 mm		2.0 mm		2.8 mm		3.6 mm		4.3 mm	
PIPE DIAMETER (mm)	MIN COVER (m)	MAX FILL (m)	MIN COVER (m)	MAX FILL (m)	MIN COVER (m)	MAX FILL (m)	MIN COVER (m)	MAX FILL (m)	MIN COVER (m)	MAX FILL (m)
900	0.3	22.0	0.3	27.4	0.3	38.7	0.3	49.7	0.3	61.0
1050	0.3	18.9	0.3	23.5	0.3	33.2	0.3	42.7	0.3	52.1
1200	0.3	16.5	0.3	20.7	0.3	29.0	0.3	37.2	0.3	45.7
1350	0.3	14.6	0.3	18.3	0.3	25.6	0.3	33.2	0.3	40.5
1500	0.3	13.1	0.3	16.5	0.3	23.2	0.3	29.9	0.3	36.6
1650	0.4	11.9	0.3	14.9	0.3	21.0	0.3	27.1	0.3	33.2
1800	0.4	11.0	0.4	13.7	0.3	19.2	0.3	24.7	0.3	30.5
1950	0.4	10.1	0.4	12.5	0.3	17.7	0.3	22.9	0.3	28.0
2100	0.5	9.5	0.4	11.6	0.4	16.5	0.3	21.3	0.3	25.9
2250	0.5	8.8	0.4	11.0	0.4	15.2	0.3	19.8	0.3	24.4
2400			0.5	10.4	0.4	14.3	0.4	18.6	0.3	22.9
2550			0.5	9.8	0.4	13.4	0.4	17.4	0.3	21.3
2700					0.4	12.8	0.4	16.5	0.4	20.1
2850					0.5	12.2	0.4	15.5	0.4	19.2
3000					0.5	11.6	0.4	14.9	0.4	18.3
3150							0.5	14.0	0.4	17.4
3300							0.5	13.4	0.5	16.5
3450							0.5	12.8	0.5	15.9
3600									0.5	15.2

SEE NOTE 1

STRUCTURAL STEEL UNDERPASS
152 mm × 51 mm CORRUGATIONS

PIPE DIM SPAN X RISE (mm)	CORNER RADIUS (mm)	MIN COVER (m)	MIN THICKNESS (mm)	MAX FILL HEIGHT (m)
3708×3353	965	0.6	2.5	3.3
4013×3607	965	0.6	2.5	3.0
4293×3912	965	0.6	2.5	2.9
4521×4267	965	0.6	2.5	2.9
4801×4597	965	0.6	2.5	2.2
5004×4877	965	1.0	3.5	2.1
5258×5182	1194	1.0	3.5	2.6
5817×5232	1194	1.0	4.5	2.2
6198×5410	1194	1.0	5.0	1.8

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

REVISIONS

NO.	DATE		REMARKS
1	12/14/98	FRW	CORRECTED SHEET NUMBER.
2	11/11/00	DS	REVISED ALL TABLES, ELIMINATED RIVETS AND SPOT WELDS AND ADDED STRUCTURAL STEEL UNDERPASS.

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

RECOMMENDED FOR APPROVAL — NOV.14,2000 DATE
CHAIRMAN STANDARDS COMMITTEE APPROVED
DEPUTY DIRECTOR — NOV.14,2000 DATE

(METRIC)
FILL HEIGHT FOR METAL PIPE (STEEL)
STANDARD DRAWING TITLE

STD. DWG. NO.
605-1