STEEL ROUND PIPE
2 2/3" x ½" CORRUGATIONS

DIAMETER OF PIPE 'D' Inches	MINIMUM COVER ABOVE PIPE ① Inches	(H) MAXIMUM ALLOWABLE COVER IN FEET									
		16 GAGE (0.064")		14 GAGE (0.079")		12 GAGE (0.109")		10 GAGE (0.138")		8 GAGE (0.168")	
		Round	Elongated	Round	Elongated	Round	Elongated	Round	Elongated	Round	Elongated
12	12	70	-	76	-	-	-	-	-	-	-
15	12	56	-	61	-	-	-	-	-	-	-
18	12	40	-	48	-	64	-	-	-	-	-
24	12	23	-	26	-	33	-	-	-	-	-
30	12	-	-	18	30	22	43	25	51	-	-
36	12	-	-	15	25	17	33	19	38	-	-
42	12	-	-	-	-	14	28	16	31	17	34
48	12	-	-	-	-	13	25	14	27	15	29
54	18	-	-	-	-	12	24	13	25	13	26
60	18	-	-	-	-	-	-	12	23	12	25
66	18	-	-	-	-	-	-	11	22	12	23
72	18	-	-	-	-	-	-	11	17	11	21
78	24	-	-	-	-	-	-	-	-	11	17
84	24	-	-	-	-	-	-	-	-	11	13

STEEL ROUND PIPE
3" X 1" and 5" X 1" CORRUGATIONS

DIAMETER OF PIPE 'D' Inches	MINIMUM COVER ABOVE PIPE ① Inches	(H) MAXIMUM ALLOWABLE COVER IN FEET									
		16 GAGE (0.064")		14 GAGE (0.079")		12 GAGE (0.109")		10 GAGE (0.138")		8 GAGE (0.168")	
		Round	Elongated	Round	Elongated	Round	Elongated	Round	Elongated	Round	Elongated
36	12	27	40	31	50	40	74	-	-	-	-
42	12	21	34	23	42	29	58	-	-	-	-
48	12	17	30	19	37	23	46	-	-	-	-
54	12	15	27	16	32	19	38	-	-	-	-
60	12	13	24	15	29	16	33	-	-	-	-
66	12	13	22	13	27	15	30	-	-	-	-
72	12	12	20	12	25	14	27	-	-	-	-
78	12	12	18	12	23	13	26	-	-	-	-
84	12	-	-	12	21	12	24	13	26	-	-
90	12	-	-	-	-	12	24	12	35	13	26
96	12	-	-	-	-	11	23	12	24	12	25
102	24	-	-	-	-	-	-	12	23	12	24
108	24	-	-	-	-	-	-	-	-	12	23
114	24	-	-	-	-	-	-	-	-	11	23
120	24	-	-	-	-	-	-	-	-	11	20

STRUCTURAL STEEL ROUND PIPE
6" X 2" CORRUGATIONS

DIAMETER OF PIPE 'D' Inches	MINIMUM COVER ABOVE PIPE ① Inches	(H) MAXIMUM ALLOWABLE COVER IN FEET													
		12 GAGE (0.109")		10 GAGE (0.138")		8 GAGE (0.168")		7 GAGE (0.187")		5 GAGE (0.218")		3 GAGE (0.250")		1 GAGE (0.281")	
		Round	Elongated	Round	Elongated	Round	Elongated	Round	Elongated	Round	Elongated	Round	Elongated	Round	Elongated
60	12	35	35	43	52	51	67	-	-	-	-	-	-	-	-
66	12	29	32	35	45	41	61	-	-	-	-	-	-	-	-
72	12	25	29	29	43	34	56	-	-	-	-	-	-	-	-
78	12	22	27	25	40	29	52	31	60	-	-	-	-	-	-
84	12	19	25	22	37	25	48	27	53	-	-	-	-	-	-
90	12	18	23	20	34	22	44	23	47	-	-	-	-	-	-
96	12	16	22	18	32	20	40	21	42	-	-	-	-	-	-
102	24	15	21	17	30	18	36	19	38	-	-	-	-	-	-
108	24	14	19	16	29	17	34	18	36	-	-	-	-	-	-
114	24	14	18	15	27	16	32	17	33	18	36	-	-	-	-
120	24	13	18	14	26	15	30	16	31	17	33	-	-	-	-
126	24	13	-	13	25	14	29	15	30	16	31	-	-	-	-
132	24	12	-	13	24	14	27	14	28	15	30	-	-	-	-
138	24	12	-	13	23	13	26	14	27	14	29	-	-	-	-
144	24	12	-	12	22	13	26	13	26	14	27	-	-	-	-
150	24	12	-	12	21	12	25	13	26	13	27	14	28	-	-
156	24	11	-	12	20	12	24	12	25	13	26	13	27	-	-
162	24	11	-	12	19	12	24	12	24	13	25	13	26	13	27
168	24	11	-	11	19	12	23	12	24	12	25	13	25	13	26
174	24	11	-	11	18	12	23	12	23	12	24	12	25	13	25
180	24	11	-	11	17	11	23	11	23	12	24	12	24	12	25

For all sizes and installations of polyethylene culvert pipe:
maximum cover = 24' for 12" - 24" pipes and 20' for 30" - 48" pipes
minimum cover = 2'

Unless specified otherwise, the Contractor may choose the type of corrugated pipe and installation to furnish as long as the selection conforms to the limits indicated for the type specified.

① **Minimum cover for metal roadway culverts is 24 inches. Minimum cover for metal entrance culverts is 12 inches.**

Iowa Department of Transportation

STANDARD ROAD PLAN

REVISION	
11	10-20-09

RF-32

SHEET 1 of 2

REVISIONS: Changed maximum cover heights for polyethylene pipes.

Deanna Maifield
APPROVED BY DESIGN METHODS ENGINEER

DEPTH OF COVER TABLES FOR CORRUGATED PIPE

STEEL ARCH PIPE 2 2/3" X 1/2" CORRUGATIONS								
SPAN	RISE	R_c ②	MINIMUM COVER ABOVE PIPE ①	(H) MAXIMUM ALLOWABLE COVER IN FEET				
				16 GA.	14 GA.	12 GA.	10 GA.	8 GA.
Inches	Inches	Inches	Inches	(0.064")	(0.079")	(0.109")	(0.138")	(0.168")
17	13	3.5	18	6	6	-	-	-
21	15	4.125	18	6	6	-	-	-
24	18	4.875	18	5	5	-	-	-
28	20	5.5	18	5	5	-	-	-
35	24	6.875	18	5	5	-	-	-
42	29	8.25	18	4	4	-	-	-
49	33	9.625	18	-	-	4	4	4
57	38	11.0	18	-	-	4	4	4
64	43	12.375	18	-	-	4	4	4
71	47	13.75	18	-	-	-	4	4
77	52	15.125	18	-	-	-	-	4
83	57	16.5	18	-	-	-	-	4

STEEL ARCH PIPE 3" X 1" and 5" X 1" CORRUGATIONS							
SPAN	RISE	R_c ②	MINIMUM COVER ABOVE PIPE ①	(H) MAX. ALLOWABLE COVER IN FT.			
				16 GA.	14 GA.	12 GA.	10 GA.
Inches	Inches	Inches	Inches	(0.064")	(0.079")	(0.109")	(0.138")
60	46	18.75	18	6	6	-	-
66	51	20.75	18	6	6	-	-
73	55	22.875	18	8	8	-	-
81	59	20.875	18	-	7	7	-
87	63	22.625	18	-	7	7	-
95	67	24.375	18	-	6	6	-
103	71	26.125	24	-	-	6	-
112	75	27.75	24	-	-	5	-
117	79	29.5	24	-	-	5	-
128	83	31.25	24	-	-	-	5

STRUCTURAL STEEL ARCH PIPE 6" X 2" CORRUGATIONS							
SPAN	RISE	R_c ②	MINIMUM COVER ABOVE PIPE ①	(H) MAXIMUM ALLOWABLE COVER IN FEET			
				12 GA.	10 GA.	8 GA.	7 GA.
Inches	Inches	Inches	Inches	(0.109")	(0.138")	(0.168")	(0.187")
73	55	18	18	8	-	-	-
84	61	18	18	7	-	-	-
95	67	18	18	6	-	-	-
106	73	18	24	6	-	-	-
117	79	18	24	5	-	-	-
131	85	18	24	5	-	-	-
142	91	18	24	4	-	-	-
154	100	18	24	4	-	-	-
159	112	31	24	6	-	-	-
170	118	31	24	6	-	-	-
184	124	31	24	-	6	-	-
195	130	31	36	-	5	-	-
206	136	31	36	-	5	-	-
217	142	31	36	-	-	5	-
231	148	31	36	-	-	4	-
239	154	31	36	-	-	4	-
247	158	31	36	-	-	-	4

① Minimum cover for steel roadway culverts is 24 inches. Minimum cover for steel entrance culverts is 12 inches.

② Radius of the lower corners of the arch pipe.

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STANDARD ROAD PLAN

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SHEET 2 of 2

REVISIONS: Changed maximum cover heights for polyethylene pipes.

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DEPTH OF COVER TABLES FOR CORRUGATED PIPE