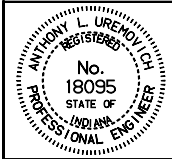


**9' x 2½" STRUCTURAL PLATE ALUMINUM ALLOY PIPE-ARCH (STEEL BOLTED)
HEIGHT OF COVER LIMITS (ft.)**

Rc (in.)	RISE (ft.-in.)	RISE (ft.-in.)	AREA (sft.)	THICKNESS (in.)									
				0.225		0.250							
				MIN.	MAX.	MIN.	MAX.						
31.75	6'-7	5'-8	29	1.0	26.7	1.0	26.7						
31.75	6'-11	5'-9	31	1.0	25.4	1.0	25.4						
31.75	7'-3	5'-11	34	1.0	24.2	1.0	24.2						
31.75	7'-9	6'-0	36	1.0	22.7	1.0	22.7						
31.75	8'-1	6'-1	39	1.1	21.7	1.1	21.7						
31.75	8'-5	6'-3	41	1.1	20.9	1.1	20.9						
31.75	8'-10	6'-4	44	1.1	19.9	1.1	19.9						
31.75	9'-3	6'-5	47	1.2	19.0	1.2	19.0						
31.75	9'-7	6'-6	49	1.2	18.3	1.2	18.3						
31.75	9'-11	6'-8	52	1.2	17.7	1.2	17.7						
31.75	10'-3	6'-9	55	1.3	17.1	1.3	17.1						
31.75	10'-9	6'-10	58	1.3	16.3	1.3	16.3						
31.75	11'-1	7'-0	61	1.4	15.8	1.4	15.8						
31.75	11'-5	7'-1	64	1.4	15.4	1.4	15.4						
31.75	11'-9	7'-2	67	1.5	14.9	1.5	14.9						
31.75	12'-3	7'-3	70	1.5	14.3	1.5	14.3						
31.75	12'-7	7'-5	73	1.6	13.9	1.6	13.9						
31.75	12'-11	7'-6	77	1.6	13.6	1.6	13.6						
31.75	13'-1	8'-2	83	1.6	13.4	1.6	13.4						
31.75	13'-1	8'-4	86	1.6	13.4	1.6	13.4						
31.75	13'-11	8'-5	90	1.7	12.0	1.7	12.0						
31.75	14'-0	8'-7	94	1.8	11.9	1.8	11.9						
31.75	13'-11	9'-5	101	1.7	12.0	1.7	12.0						
31.75	14'-3	9'-7	105	1.8	11.7	1.8	11.7						
31.75	14'-8	9'-8	109	1.8	11.3	1.8	11.3						
31.75	14'-11	9'-10	114	1.9	11.1	1.9	11.1						

NOTE:

1. The tabulated cover depths shall be measured from the bottom of the asphalt or concrete pavement to the top of the pipe.
2. A specific design shall be performed for structures with corner radii other than those tabulated above to determine the appropriate cover depth limits.

INDIANA DEPARTMENT OF TRANSPORTATION	
PIPE HEIGHT OF COVER LIMITS	
JANUARY 1998	
STANDARD DRAWING NO. E 717-PHCL-04	
	DETAILS PLACED IN THIS FORMAT 11-15-99 /s/ Anthony L. Uremovich 11-15-99 DESIGN STANDARDS ENGINEER DATE
DESIGN STANDARDS ENGINEER	/s/ Firooz Zandi 11-15-99 CHIEF HIGHWAY ENGINEER DATE ORIGINALLY APPROVED 1-02-98