3" x 1" CORRUGATED ALUMINUM ALLOY PIPE-ARCH (RIVETED OR LOCK SEAM) HEIGHT OF COVER LIMITS (ft.)

CORNER RADIUS (in.)	SPAN (in.)	RISE (in.)	AREA (sft)	THICKNESS (in.)									
				0.060		0.075		0.105		0.135		0.164	
				MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
8/183	60	46	15.6	\sim	\bigvee	1.1	20.8	1.1	20.8	1.1	20.8	1.1	20.8
$9/20\frac{3}{4}$	66	51	19.3	\searrow	\bigvee	1.1	20.9	1.1	20.9	1.1	20.9	1.1	20.9
12/227	73	55	23.2	\searrow	$\Big / \Big /$	1.1	20.8	1.1	20.8	1.1	20.8	1.1	20.8
$14/20\frac{7}{8}$	81	59	27.4	\geq	\bigvee	\bigvee	M	1.2	17.1	1.2	17.1	1.2	17.1
$14/22\frac{5}{8}$	87	63	32.1	> <	M	\bigvee	\bigvee	1.2	17.3	1.2	17.3	1.2	17.3
16/24 🖁	95	67	37.0	\searrow	\bigvee	M	\bigvee	\searrow	M	1.2	17.1	1.2	17.1
$16/26\frac{1}{8}$	103	71	42.4	> <	\searrow	\searrow	\bigwedge	><	\nearrow	1.2	16.9	1.2	16.9
$18/27\frac{3}{4}$	112	75	48.0		M	\bigvee	\bigvee		\mathbf{M}	\sim	\mathbf{M}	1.3	16.5

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. Dual entries in the "Corner Radius" column, such as $8/18\frac{3}{4}$ represent the following:
 - 8 minimum corner radius allowed by AASHTO M 196.
 - $18\frac{3}{4}$ corner radius typically available.
- 3. The tabulated cover heights reflect pipe-arches with typically available corner radii. If a pipe-arch with corner radii other than what is typically available is to be used, a specific design shall be performed to verify structural adequacy.

INDIANA DEPARTMENT OF TRANSPORTATION

PIPE HEIGHT OF **COVER LIMITS**

JANUARY 1998

STANDARD DRAWING NO. E 715-PHCL-06

/s/Anthony L. Uremovich 11-15-99
DESIGN STANDARDS ENGINEER DATE

DETAILS PLACED IN THIS FORMAT 11-15-99

/s/ Firooz Zandi

ORIGINALLY APPROVED

DESIGN STANDARDS ENGINEER