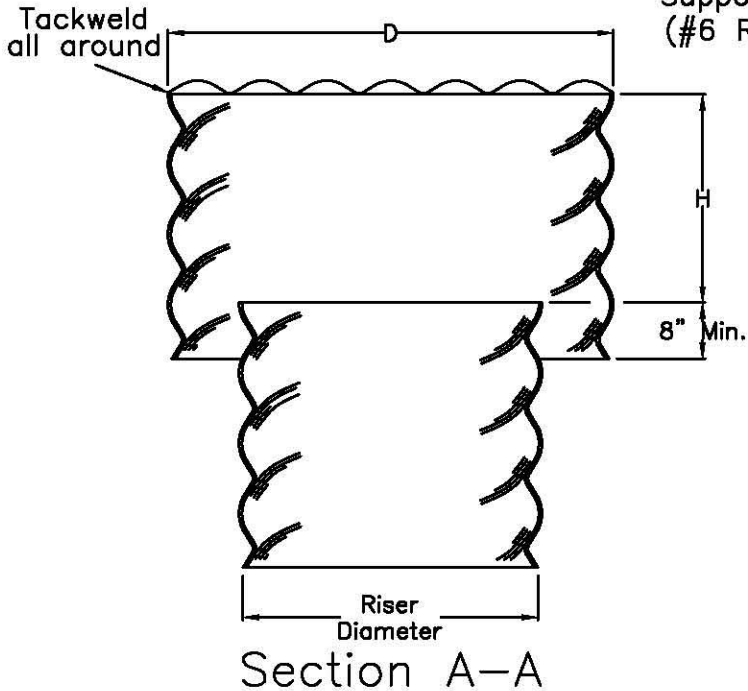


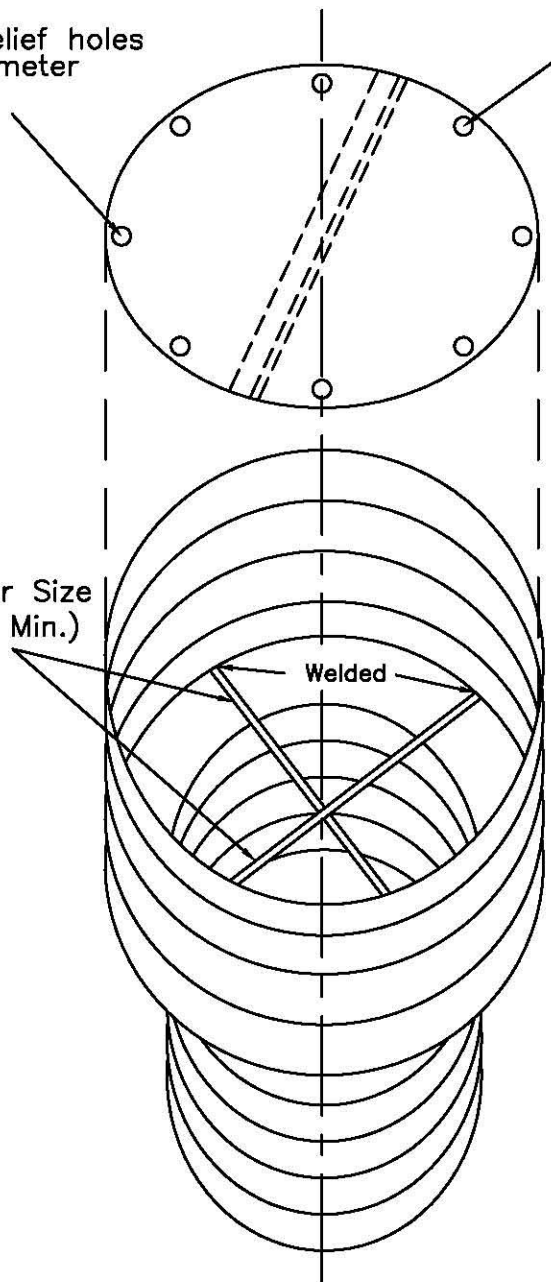
Plan View



Section A-A

Pressure Relief holes
1/2" Diameter

Support Bar Size
(#6 Rebar Min.)



ISOMETRIC VIEW

Top Stiffener (if required) is ___x___x___ angle welded to top and oriented perpendicular to corrugations.

Top is ___ gage corrugated metal or 1/8" steel plate. Pressure relief holes may be omitted, if ends of corrugations are left fully open when the top is attached.

Cylinder is ___ gage corrugated metal pipe or fabricated from 1/8" steel plate.

Notes:

1. The cylinder must be firmly fastened to the top of the riser.
2. Support bars are welded to the top of the riser or attached by straps bolted to top of riser.
3. Dimensions given in design table on Page 2 of 2.



LANE ENTERPRISES, INC.

TITLE
ANTI-VORTEX
DEVICE DESIGN

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Riser Diameter D (in)	Cylinder		Height H (in)	Minimum Size Support Bar	Minimum Top	
	Diameter Inches	Thickness gage			Thickness	Stiffener
12	18	16	6	#6 Rebar or 1 1/2 x 1 1/2 x 3/16 Angle	16 ga (F&C)	" "
15	21	16	7	" "	" "	" "
18	27	16	8	" "	" "	" "
21	30	16	12	" "	16 ga (C) 14 ga (F)	" "
24	36	16	13	" "	" "	" "
27	42	16	15	" "	" "	" "
36	54	14	17	#8 Rebar	14 ga (C) 12 ga (F)	" "
42	60	16	19	" "	" "	" "
48	72	16	21	1 1/4" Pipe or 1 1/4 x 1 1/4 x 1/4 angle	14 ga (C) 10 ga (F)	" "
54	78	16	25	" "	" "	" "
60	90	14	29	1 1/2" Pipe or 1 1/2 x 1 1/2 x 1/4 angle	12 ga (C) 8 ga (F)	" "
66	96	14	33	2" Pipe or 2 x 2 x 3/16 angle	12 ga (C) 8 ga (F) w/stiffener	2 x 2 x 1/4 angle
72	102	14	36	" "	" "	2 1/2 x 2 1/2 x 1/4 angle
78	114	14	39	2 1/2" Pipe or 2 x 2 x 1/4 angle	" "	" "
84	120	12	42	2 1/2" Pipe or 2 1/2 x 2 1/2 x 1/4 angle	" "	2 1/2 x 2 1/2 x 5/16 angle

Notes₁: The criterion for sizing the cylinder is that the area between the inside of the cylinder and the outside of the riser is equal to or greater than the area inside the riser. Therefore, the above table is invalid for use with concrete pipe risers.

Notes₂: Corrugation for 12" - 36" pipe measures 2 2/3" x 1/2"; for 42" - 84" the corrugation measures 5" x 1" or 8" x 1".

Notes₃: C = Corrugated; F = flat.
5" x 1" or 8" x 1".



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Source: Adapted from USDA-SCS and Carl M. Henshaw Drainage Products Information

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