

NOTES:

1. USE 24 GA GALV. SHEET METAL FOR VANES AND VENTURI. CLEAN WITH VINEGAR AND DETERGENT. PRIME WITH GALV. PRIMER AND PAINT FLAT BLACK. PAINT INTERIOR OF LIGHT TRAP FLAT BLACK.
2. PERFORMANCE DATA:
 - A. LIGHT REDUCTION: 25,000 TO 1.
 - B. PRESSURE DROP (ΔP , INCHES WATER GAUGE) FOR AIR VELOCITY (V, FT/MIN) THROUGH LIGHT TRAP:

$$\Delta P = 1.63 \left[\frac{V}{4005} \right]^2$$
 - C. VENTURI INCREASES FAN DISCHARGE BY 7 TO 11%.

VANES SPACED 5/8" APART FOR ALL FAN DIAMETERS

24 GA. SHEET METAL INLET VENTURI

1/4 FAN DIA. (9" FOR 36" FAN)

ROUGH OPENING OF FAN (APPROX. 42" FOR 36" FAN)
 ROUGH OPENING OF FAN + 1/2 DIA. OF FAN - 1" (APPROX. 59" FOR 36" FAN)

1/2" x 1/2" x 1/8" ANGLE IRON FRAME ALL AROUND VENTURI, POP RIVETED

1/4 FAN DIA. 5/8" x 5/8" SPACER BLOCKS
 5/8" x 5/8" VANE STOPS

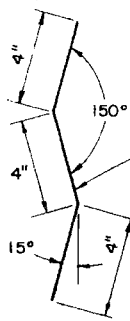


ROUGH OPENING OF FAN HOUSING

VANES

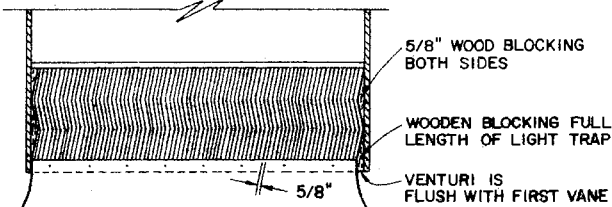
FAN HOUSING FASTENED TO PLYWOOD WITH BOLTS
 1/2" AC EXT PLYWOOD, A SURFACE ON THE INSIDE

SECTION A-A

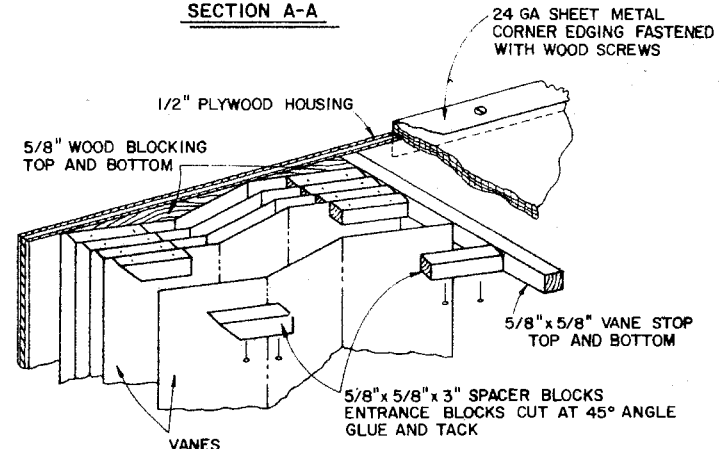


Z VANE DETAIL
 NOT TO SCALE

24 GA SHEET METAL VANE BENT TO SHAPE SHOWN. 12" WIDE x ROUGH OPENING OF FAN

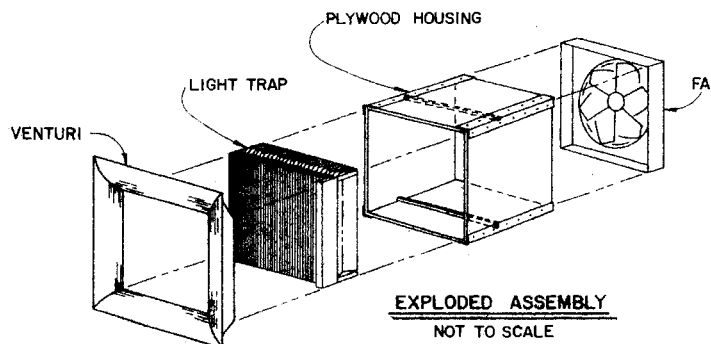


SECTION B-B



VANE ASSEMBLY
 NOT TO SCALE

LIST OF MATERIALS FOR A 36" FAN		
QUANTITY	ITEM	MATERIAL
4	HOUSING	PLYWOOD, 1/2" AC EXT., 31" x 43"
65	VANES	SHEET METAL, 24 GA GALV., 12" x 42"
4	VENTURI	SHEET METAL, 24 GA GALV., 14" x 60"
4	CORNERS	SHEET METAL, 24 GA GALV., 3" x 31"
4	STIFFENER	ANGLE IRON, 1/2" x 1/2" x 1/8" x 60"
	BLOCKING	PINE
1	BLOCKING	PINE, 1" x 6" x 42"
	FASTENERS	SCREWS, NAILS, BOLTS & NUTS, RIVETS, GLUE
	PAINT	FLAT BLACK



EXPLODED ASSEMBLY
 NOT TO SCALE

SCALE 1" = 1'-0"
 0 3" 6" 1'
 UNLESS OTHERWISE NOTED



LIGHT TRAP FOR MECHANICAL VENTILATION

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Disclaimer

This site makes available conceptual plans that can be helpful in developing building layouts and selecting equipment for various agricultural applications. These plans do not necessarily represent the most current technology or construction codes. They are not construction plans and do not replace the need for competent design assistance in developing safe, legal and well-functioning agricultural building system. The LSU Agriculture Center, the Mid-West Plan Service, the United States Department of Agriculture and none of the cooperating land-grant universities warranty these plans.