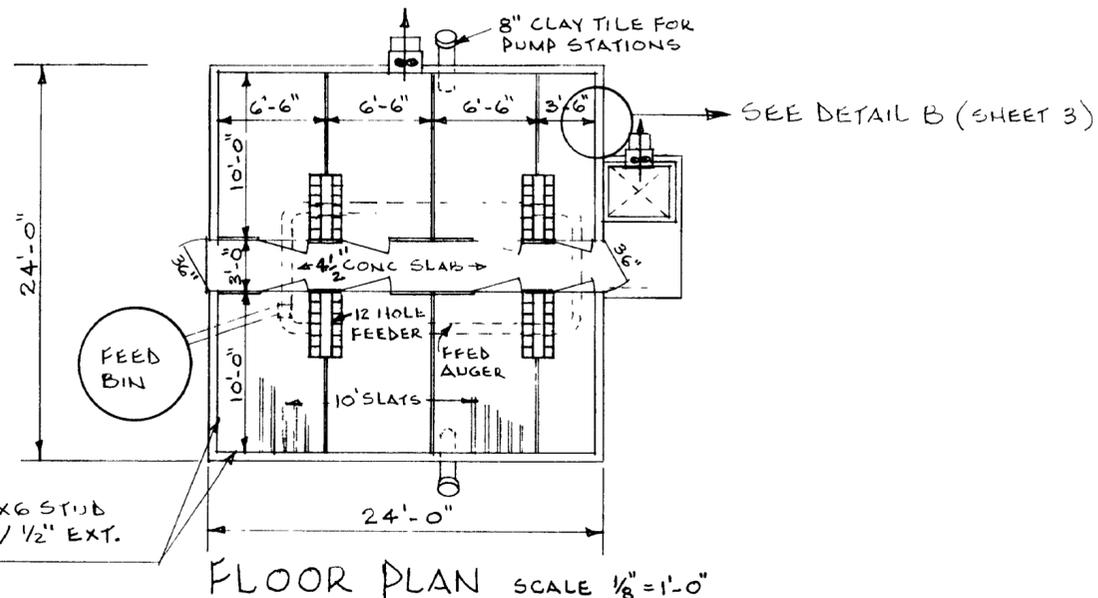
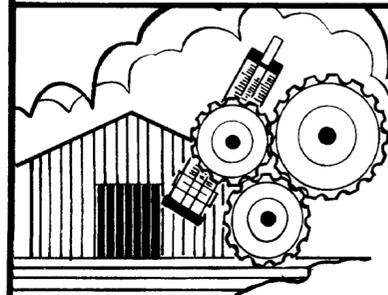


CROSS SECTION SCALE: 1/2" = 1'-0"



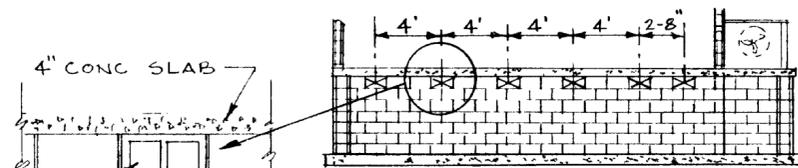
# SWINE NURSERY BUILDING



COOPERATIVE EXTENSION SERVICE  
AGRICULTURE AND HOME ECONOMICS  
DEPARTMENT OF AGRICULTURAL ENGINEERING  
COLLEGE OF AGRICULTURE  
UNIVERSITY OF KENTUCKY  
AND  
U.S. DEPARTMENT OF AGRICULTURE COOPERATING

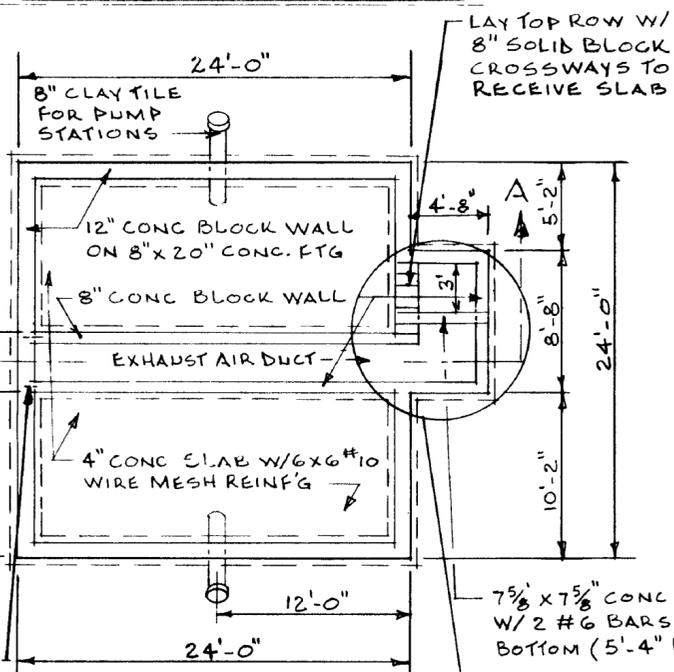
DESIGNED BY R.F. DO  
CHECKED BY J.N.W.  
DRAWN BY B.E.P.  
DATE 6-78  
REVISIONS 1-79 10-81

SHEET 2 OF 4  
PLAN NUMBER  
**KY. II. 726-32**



ELEVATION A-A

4" CONC SLAB  
8" CORNER BLOCK ON EDGE FOR AIR MOVEMENT (45 SQ INCHES OF OPENING PER BLOCK)



FOUNDATION PLAN

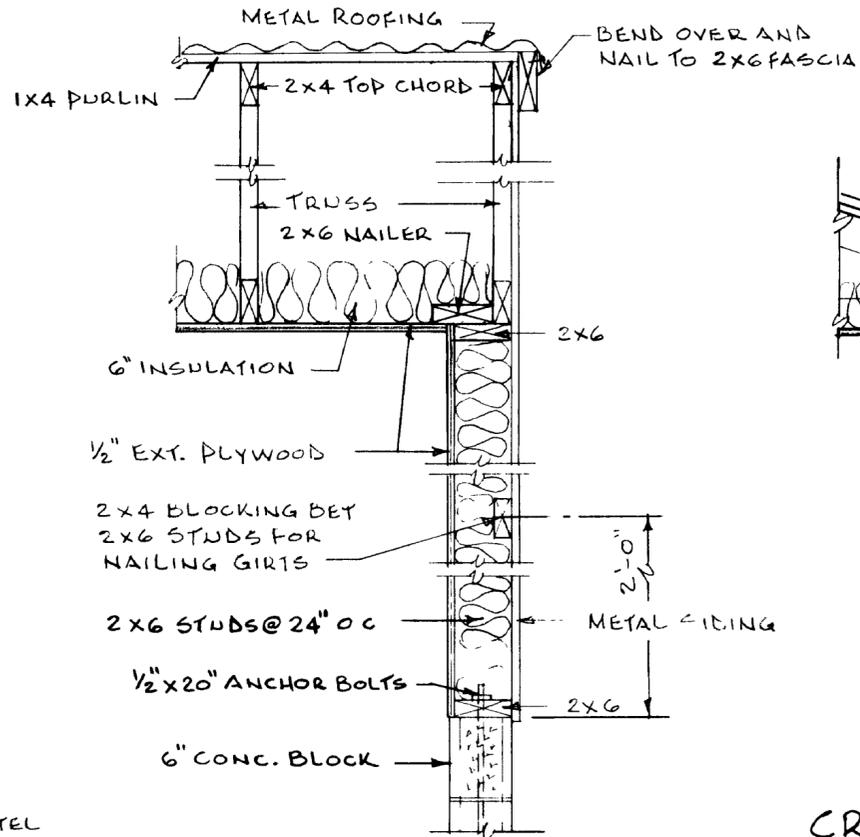
SCALE: 1/8" = 1'-0"

INSTALL METAL TIE BAR AT EACH COURSE FOR LATERAL SUPPORT OF EXHAUST AIR DUCT WALLS

LAY TOP ROW W/ 8" SOLID BLOCK CROSSWAYS TO RECEIVE SLAB

7 5/8" x 7 5/8" CONC LINTEL W/ 2 #6 BARS 1 1/2" FROM BOTTOM (5'-4" LONG)

SEE DETAIL C-C (SHEET 4)

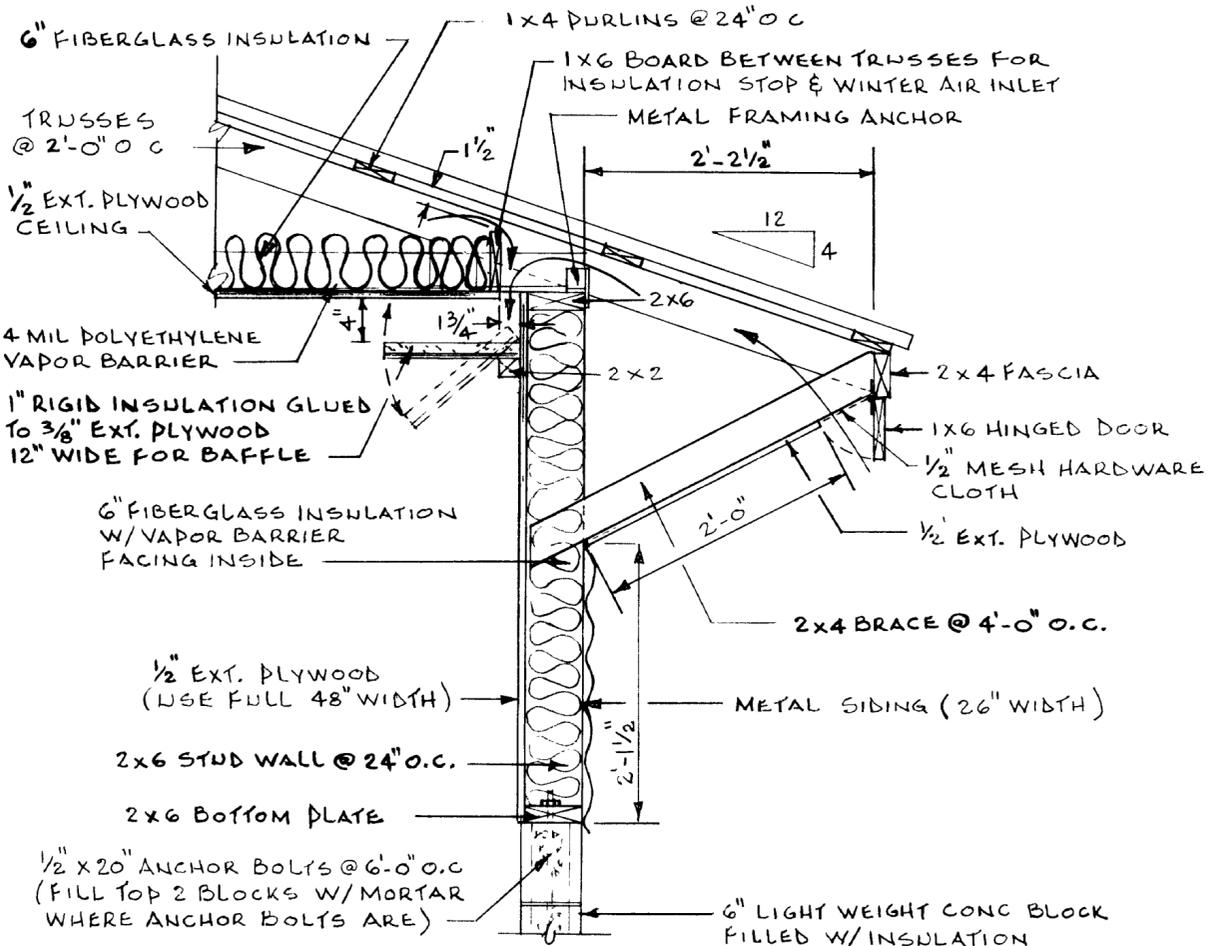


END WALL DETAIL B

SCALE: 1" = 1'-0"

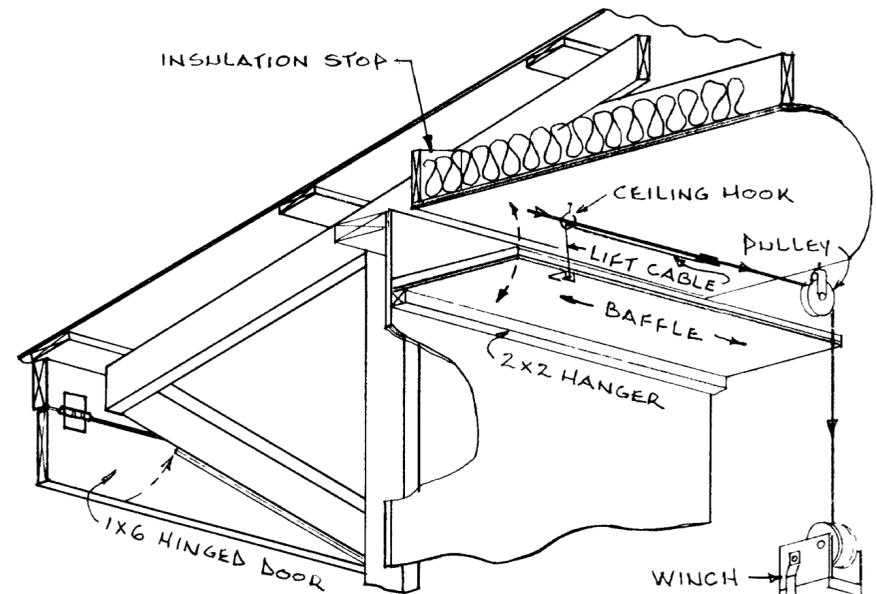
CROSS SECTION AT FAN

SCALE: 3/4" = 1'-0"



DETAIL A

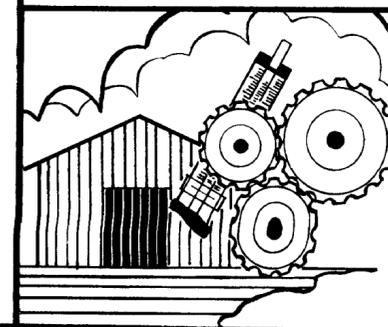
SCALE: 1" = 1'-0"



DETAIL FOR BAFFLE INSTALLATION

N.T.S

SWINE NURSERY BUILDING

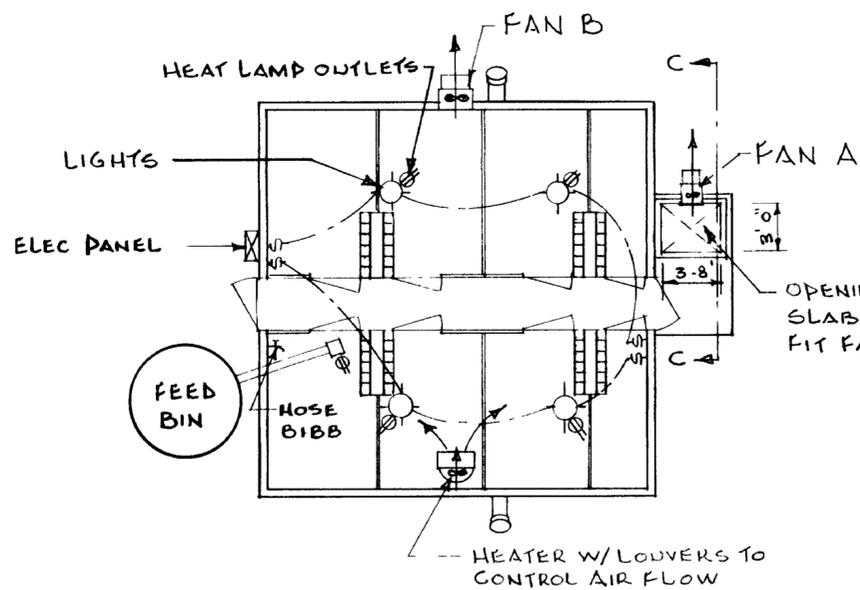


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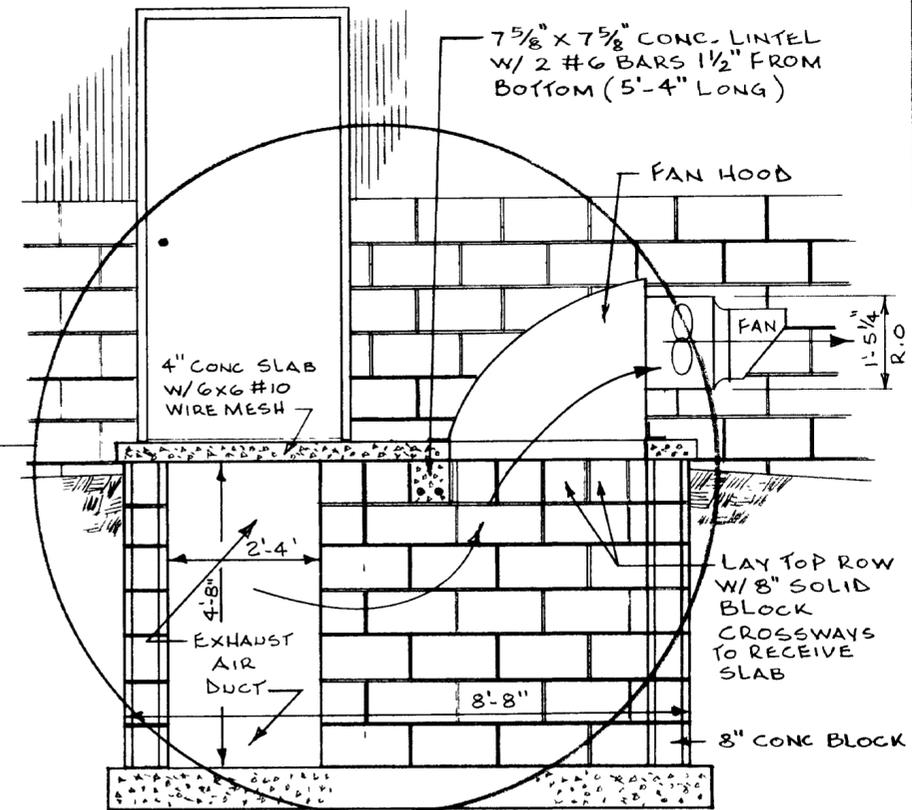
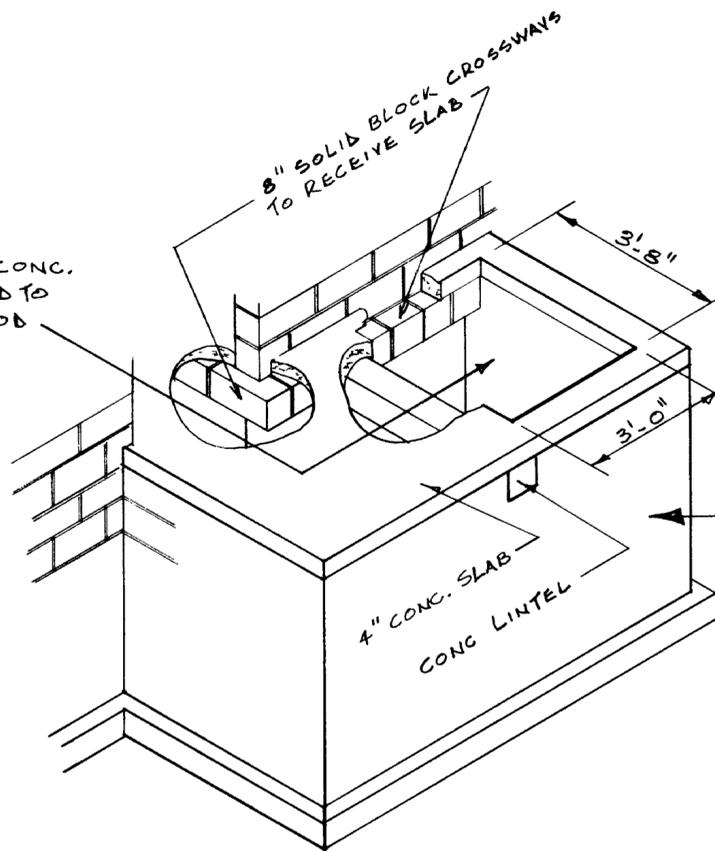
SHEET 3 OF 4  
PLAN NUMBER  
KY. II. 726-32

**NOTE:**  
CHECK LOCAL ELECTRICAL CODE  
REQUIREMENTS BEFORE  
CONSTRUCTION BEGINS



**ELECTRIC, PLUMBING, HEATING &  
VENTILATION LAYOUT**

SCALE: 1/8" = 1'-0"



**CROSS SECTION C-C SCALE: 1/2" = 1'-0"**

**FAN TYPE AND RATING**

FAN	TYPE	CFM RATING AT 1/8 INCH STATIC PRESSURE
A	VARIABLE SPEED	250-1700
B	SINGLE SPEED	2000

**SUPPLEMENTAL HEATERS**

MINIMUM REQUIREMENTS, 20,000 BTU PER HOUR OR 6 KW  
HEATER FANS SHOULD PROVIDE A 20 FT THROW AND HAVE  
A FLOW DIVIDER INSTALLED IN THE OUTLET.

**THERMOSTATS**

**THERMOSTAT TYPE (FOR LINE VOLTAGE APPLICATIONS)**

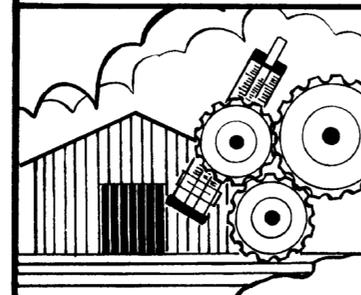
HEATER	OPEN ON RISE
FAN A	SOLID STATE CONTROL, WITH MINIMUM CUTOFF
FAN B	CLOSE ON RISE

**THERMOSTAT LOCATION** NEAR CENTER OF BUILDING  
AS LOW AS POSSIBLE BUT OUT OF  
ANIMAL REACH,  
NOT IN A DIRECT LINE WITH THE  
HEATER OUTPUT.

**FAN AND HEATER OPERATING SEQUENCE, AND BAFFLE SETTING**

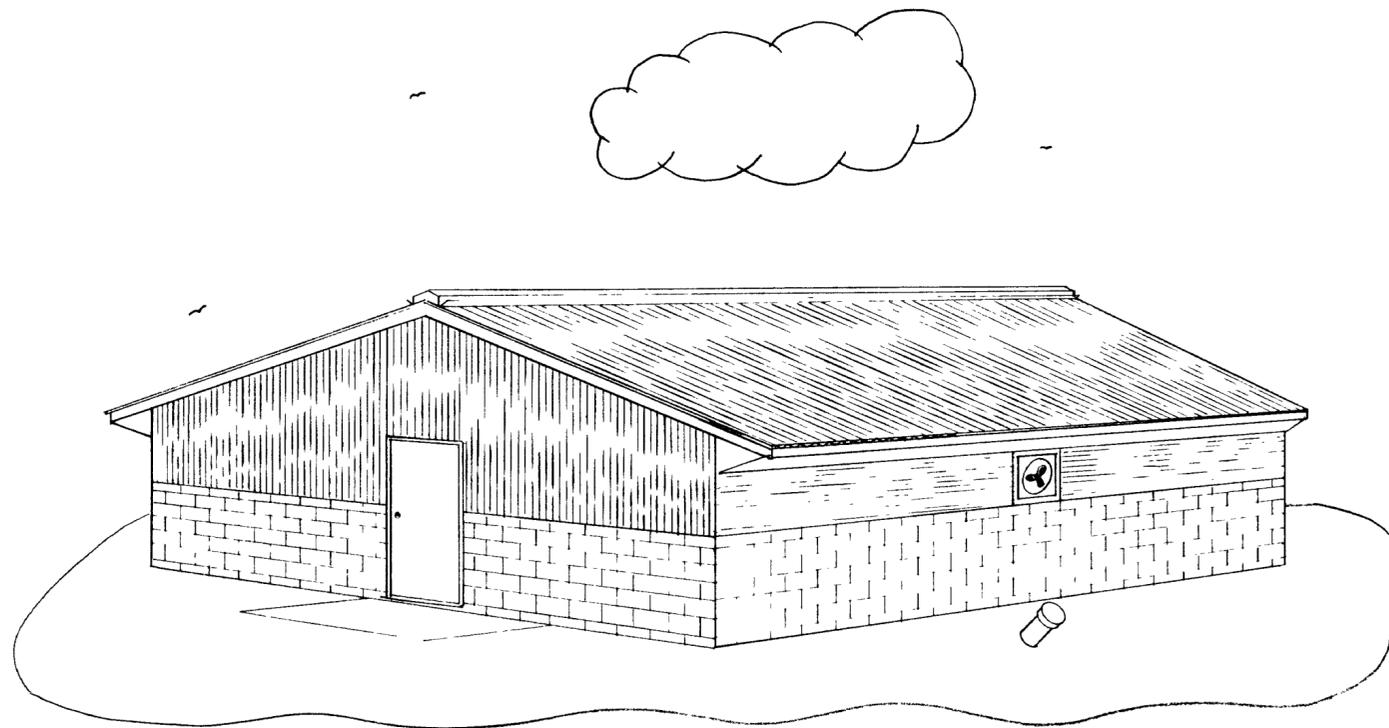
INSIDE TEMPERATURE	FAN A	FAN B	HEATER	BAFFLE SETTING
ABOVE 80°F	MAXIMUM	ON	OFF	12 INCHES
75°-85°	VARIABLE	OFF	OFF	1/4
BELOW 75°	MINIMUM	OFF	ON	1/16

**SWINE NURSERY BUILDING**



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THIS PLAN IS FOR A 24' X 24' BUILDING HOUSING 150 PIGS FROM WEANING AT 4 TO 5 WEEKS OF AGE UNTIL THEY REACH 8 WEEKS OF AGE AND 40 POUNDS. THE BUILDING IS TOTALLY SLATTED AND COMPLETELY FAN VENTILATED WITH BOTH VARIABLE SPEED AND SINGLE SPEED EXHAUST FANS. MANURE IS STORED AS A LIQUID IN A DEEP PIT BENEATH THE SLATS. WINTER VENTILATION AIR IS EXHAUSTED FROM THE MANURE PIT WHICH AIDS IN CONTROLLING ODORS. SUPPLEMENTAL HEAT IS PROVIDED TO ENSURE THE COMFORT OF THE YOUNG PIG.

THE SOLE PURPOSE OF THIS BUILDING IS TO PROVIDE A DESIRABLE ENVIRONMENT FOR THE NEWLY WEANED PIG. THIS PERIOD IS PROBABLY THE MOST STRESSFUL IN HIS LIFE AND A GOOD ENVIRONMENT WILL AID IN THE CONVERSION FROM A LIQUID DIET TO A DRY DIET AND COMMINGLING WITH OTHER PIGS.

THE BUILDING IS DIVIDED INTO 6 LARGE PENS AND 2 SMALL PENS. THE PIGS SHOULD BE SIZED AS THEY ARE PLACED IN THE BUILDING AND THE 2 SMALL PENS ARE FOR THE SMALLEST PIGS. THIS SHOULD REDUCE COMPETITION AND FIGHTING.

THIS BUILDING SHOULD BE OPERATED ON AN ALL IN-ALL OUT BASIS AND BE CLEANED AND DISENFECTED BETWEEN EACH GROUP OF PIGS.

THIS PLAN IS ONE OF A COMPLETE SWINE PRODUCTION SYSTEM WHICH INCLUDES PLANS 11 726-31, FARROWING BUILDING; 11 726-32, NURSERY BUILDING; 11 726-33, GROWING BUILDING; 11 726-34, FINISHING BUILDING; 11 726-35, GESTATION BUILDING; 11 726-36, BREEDING BUILDING.

#### SIZING YOUR NURSERY TO FIT YOUR FARROWING HOUSE:

LITTERS FARROWED PER GROUP*	REQUIRED NURSERY CAPACITY
10	80
12	100
14	117
16	133
18	150
20	167
22	183
24	200

\*GROUPS FARROW EVERY THREE WEEKS; CAPACITY FOR ONE GROUP

#### ELECTRICAL POWER OUTAGES

SERIOUS PROBLEMS CAN BE ENCOUNTERED IN TOTALLY ENCLOSED SWINE BUILDING DURING AN ELECTRICAL POWER OUTAGE, WHEN THE VENTILATION FANS STOP. TO AVOID POSSIBLE PROBLEMS AN ENCLOSED SWINE BUILDING SHOULD BE EQUIPPED WITH AN AUTOMATIC WARNING SYSTEM TO ALERT YOU WHEN A POWER FAILURE HAS OCCURRED AND A STANDBY ELECTRICAL GENERATOR SHOULD BE AVAILABLE.

#### WASTE STORAGE REQUIREMENTS

0.04 CUBIC FEET OF STORAGE PER DAY PER PIG  
THIS FACILITY PROVIDES 70 DAYS OF MANURE STORAGE PER USEFUL FOOT OF PIT DEPTH; 180 DAYS STORAGE TOTAL.  
NOTE: TWO FEET OF PIT DEPTH IS GENERALLY NOT CONSIDERED USABLE STORAGE VOLUME, BECAUSE SOME OF THE SOLIDS ARE NOT REMOVED DURING CLEANING AND THE LIQUID LEVEL SHOULD NOT BE ALLOWED WITHIN ONE FOOT OF THE BOTTOM OF THE SLATS.

#### DESIGN VENTILATION RATES AND SUPPLEMENTAL HEAT

MINIMUM 1 1/2 - 2 CFM PER PIG (VARIABLE SPEED FAN RECOMMENDED)  
MAXIMUM 25 - 30 CFM PER PIG  
SUPPLEMENTAL HEAT 125 - 150 BTU PER HOUR PER PIG

#### FEED AND WATER REQUIREMENTS

FEED: 2 5/8# PER PIG PER DAY - 2,625# TOTAL PER WEEK  
WATER 1/2 GAL PER DAY PER PIG  
75 GAL PER DAY TOTAL  
MINIMUM PUMPING RATE: 8 GAL PER MINUTE

#### PEN AREA REQUIREMENTS

3 SQUARE FEET PER PIG

#### THERMOSTAT ADJUSTMENT

THE THERMOSTAT SETTINGS GIVEN BELOW ALLOW THE BUILDING TEMPERATURE TO VARY FROM A MINIMUM OF 75°F IN THE WINTER TO A MAXIMUM OF 85°F+ IN THE SUMMER. TO RAISE THE INSIDE TEMPERATURE IN THE WINTER, DURING THE FIRST WEEK PIGS ARE MOVING INTO THE BUILDING, ADJUST THE THERMOSTATS AS SHOWN BELOW.

THERMOSTAT	NORMAL SETTING	FIRST WEEK SETTING
FAN A (LOW TEMPERATURE CUT OFF) HEATER	65°F	65°F
FAN A (SET POINT ON VARIABLE SPEED CONTROLLER)	75°	80°
FAN B	80°	85°
	85°	90°

NOTE: CHECK THE AIR TEMPERATURE AT THE LEVEL OF THE PIGS AND ADJUST THE THERMOSTATS IF YOUR READING IS SUBSTANTIALLY DIFFERENT FROM THE DESIRED TEMPERATURE.

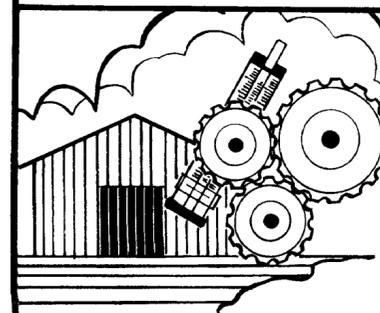
#### SLATS

CHECK WITH THE SLAT MANUFACTURERS ABOUT THE ABILITY OF THE SLATS TO SUPPORT THE FEEDER. A SLAT WITH A HIGH PERCENTAGE OPEN AREA AND IS EASY TO CLEAN IS REQUIRED IN A NURSERY BUILDING.  
SLOT OPENING: 3/8 TO 1/2 INCH

#### ESTIMATED MATERIAL LIST

1/2" EXT PLYWOOD ----- 36 PC.  
3/8" EXT PLYWOOD ----- 2 PC.  
LUMBER (EXCLUDING TRUSSES) ----- 1380 B.F.  
24" TRUSSES (4/12 PITCH) ----- 13  
6" LIGHT WEIGHT CONCRETE BLOCK ----- 420  
8" STANDARD WEIGHT CONCRETE BLOCK ----- 360  
12" STANDARD WEIGHT CONCRETE BLOCK ----- 510  
CONCRETE (FLOOR, FOOTINGS & BLOCK FILL) -- 27 YDS.  
6" INSULATION (CEILING & WALLS) ----- 960 SQ.FT.  
10' SLATS ----- 480 SQ.FT.  
METAL ROOFING AND SIDING ----- 1152 SQ.FT.

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