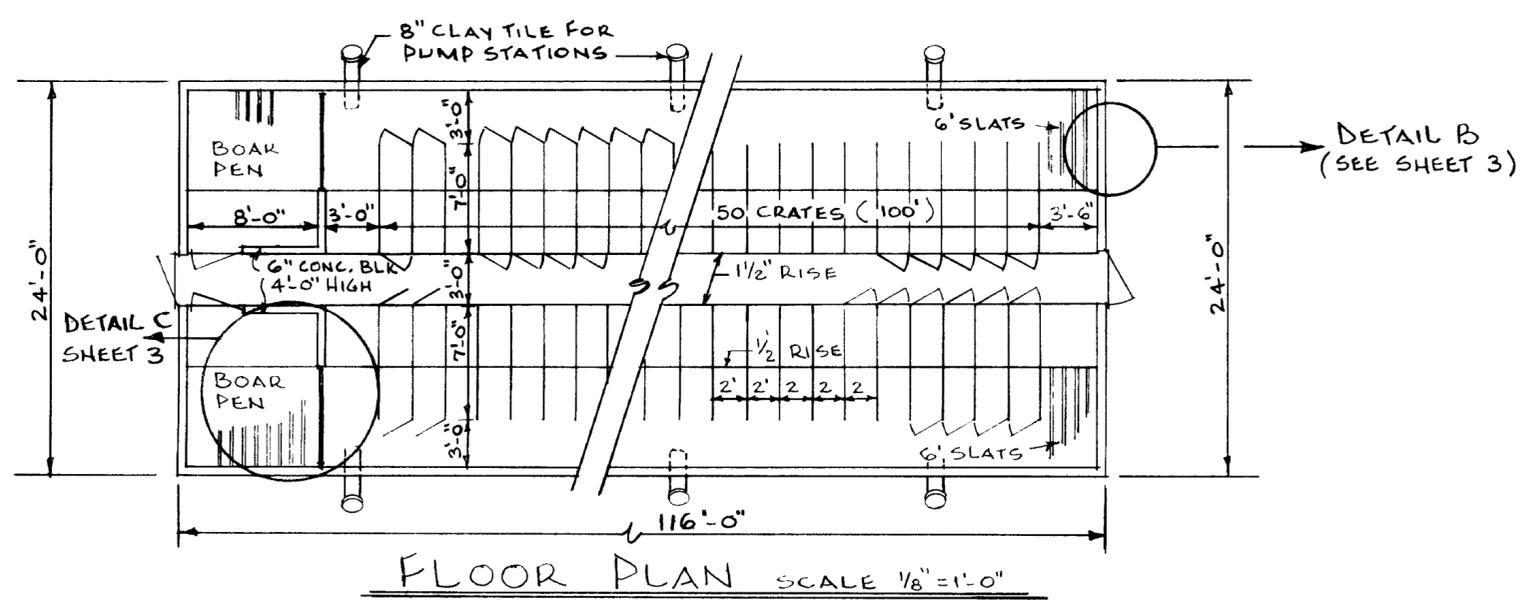


CROSS SECTION
SCALE 1/2" = 1'-0"

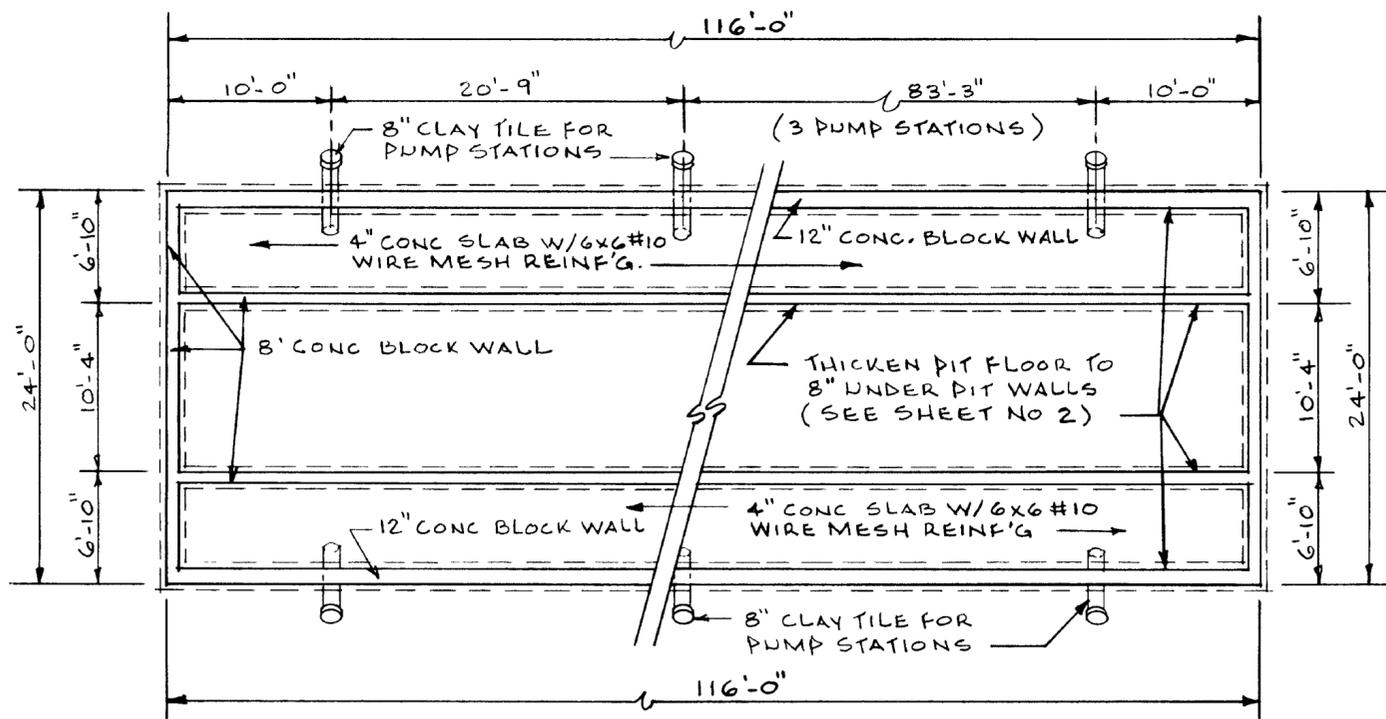


FLOOR PLAN SCALE 1/8" = 1'-0"

SWINE GESTATION BUILDING

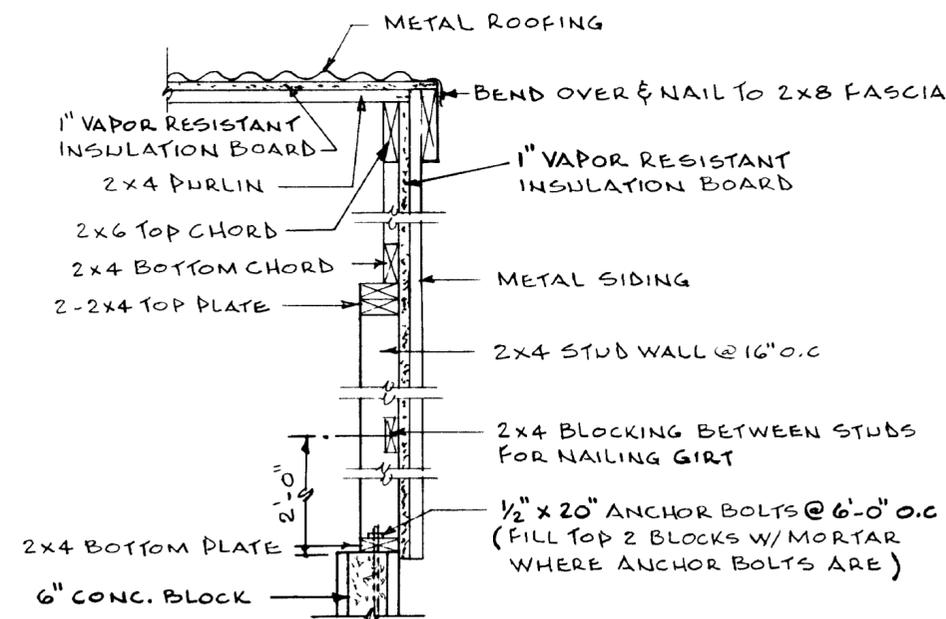
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DESIGNED BY R.F.D.O	SHEET 2 OF 4
CHECKED BY J.N.W.	PLAN NUMBER KY. II. 726-35
DRAWN BY BEP	
DATE 10-78	
REVISIONS 10-81	



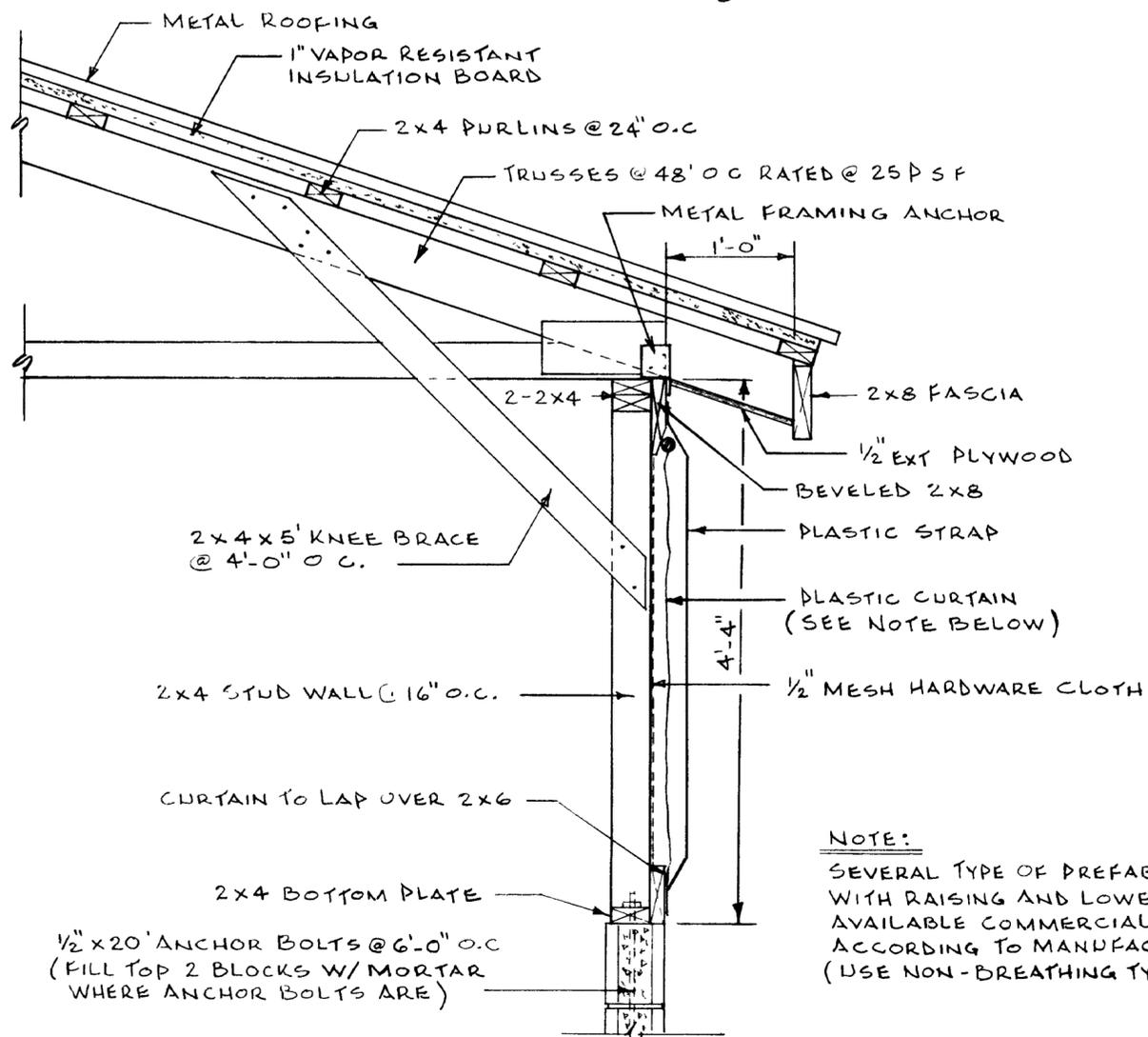
FOUNDATION PLAN

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



DETAIL B

SCALE 1" = 1'-0"

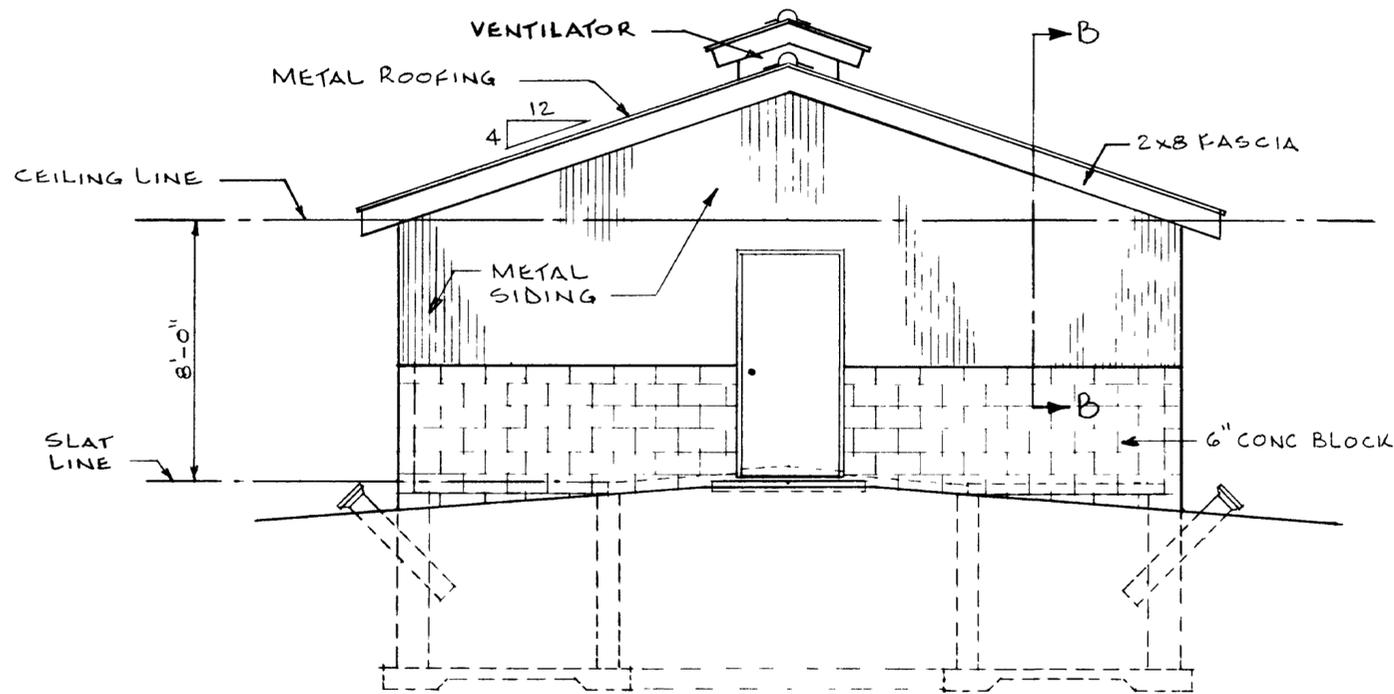


DETAIL A

SCALE: 1" = 1'-0"

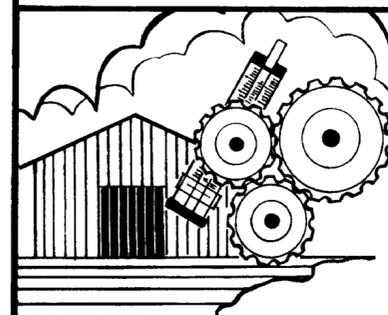
NOTE:

SEVERAL TYPE OF PREFABRICATED CURTAINS WITH RAISING AND LOWERING DEVICES ARE AVAILABLE COMMERCIALY. INSTALL ACCORDING TO MANUFACTURER RECOMMENDATIONS (USE NON-BREATHING TYPE CURTAIN)



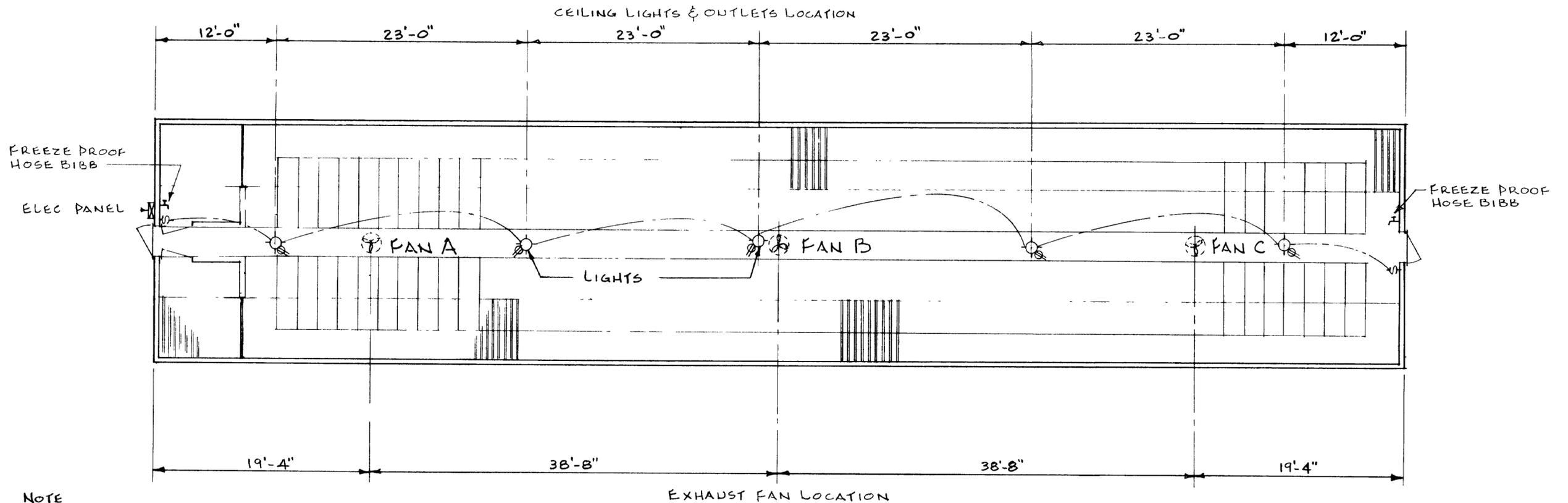
END ELEVATION SCALE 1/4" = 1'-0"

SWINE GESTATION BUILDING



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NOTE
CHECK LOCAL ELECTRICAL CODE REQUIREMENTS
BEFORE CONSTRUCTIONS BEGINS.

ELECTRIC, PLUMBING & VENTILATION LAYOUT

SCALE 1/8" = 1'-0"

FAN TYPE AND RATING

FAN	TYPE	CFM RATING AT 1/8 INCH STATIC PRESSURE
A	SINGLE SPEED	500
B	SINGLE SPEED	500
C	SINGLE SPEED	500

THERMOSTATS

AIR THERMOSTAT'S	TYPE (FOR LINE VOLTAGE APPLICATIONS)
FAN A	CLOSE ON RISE
FAN B	CLOSE ON RISE
FAN C	CLOSE ON RISE
FLOOR HEAT SYSTEM	OPEN ON RISE (WIRED IN SERIES WITH THE CIRCULATING PUMP THERMOSTAT)

AIR THERMOSTAT'S LOCATION NEAR CENTER OF BUILDING AS LOW AS POSSIBLE BUT OUT OF ANIMAL REACH.

CIRCULATING PUMP OPEN ON RISE (REMOTE SENSING) (WIRED IN SERIES WITH THE FLOOR HEAT SYSTEM THERMOSTAT)

WATER HEATER OPEN ON RISE

FLOOR HEAT AND FAN OPERATING SEQUENCE

INSIDE TEMPERATURE	FAN A	FAN B	FAN C	FLOOR HEAT SYSTEM
ABOVE 50°	ON	ON	ON	OFF
BELOW 50°	ON	ON	ON	ON
ABOVE 35°	ON	ON	ON	ON
35°-30°	ON	ON	OFF	ON
30°-25°	OFF	ON	OFF	ON
BELOW 25°	OFF	OFF	OFF	ON

FLOOR TEMPERATURE	CIRCULATING PUMP
ABOVE 70°	OFF
BELOW 70°	ON

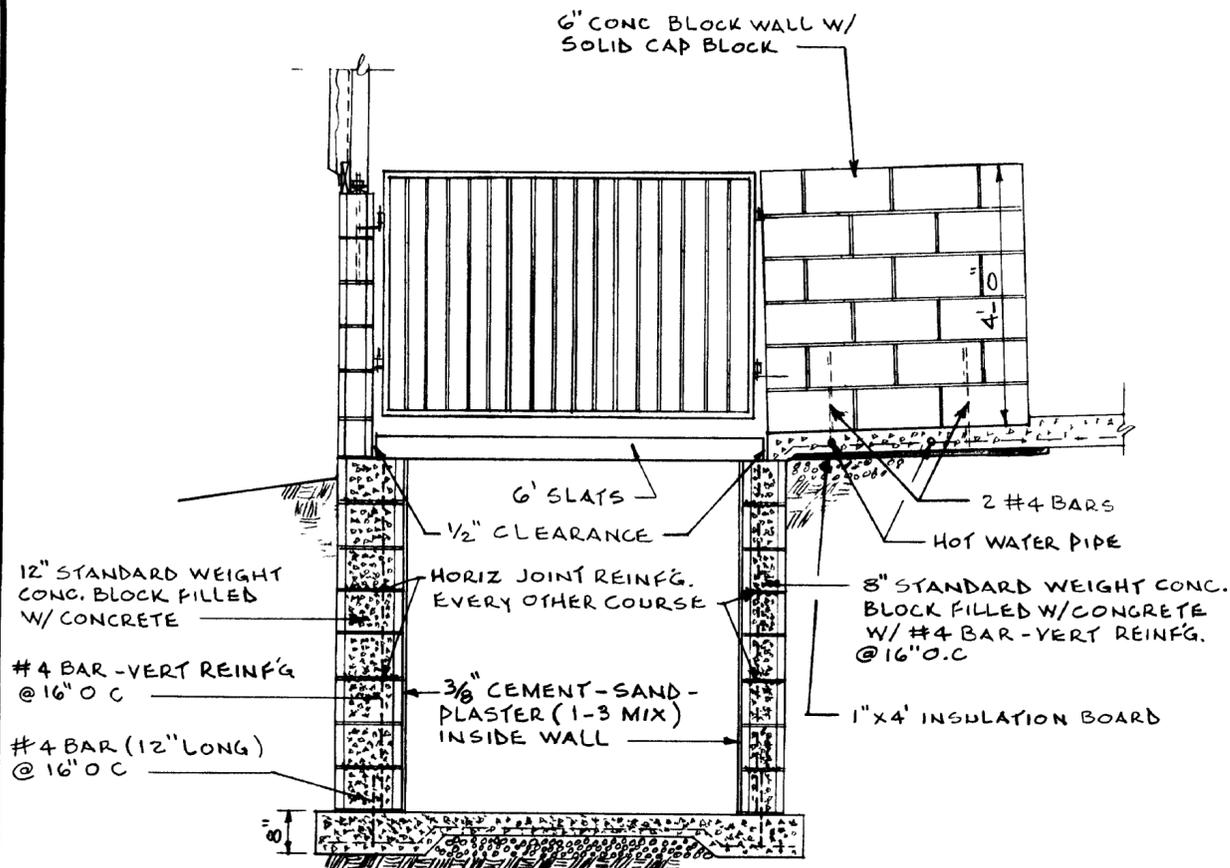
WATER TEMPERATURE WATER HEATER

ABOVE 120°	OFF
BELOW 120°	ON

CIRCULATING PUMP AND WATER HEATER RATING

CIRCULATING PUMP 10 GAL PER MINUTE AT 5 - 10 FEET OF HEAD

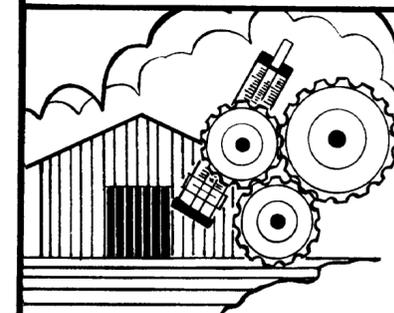
WATER HEATER: 40,000 BTU PER HOUR OR 12 KW



DETAIL C

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

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SHEET 4 OF 4

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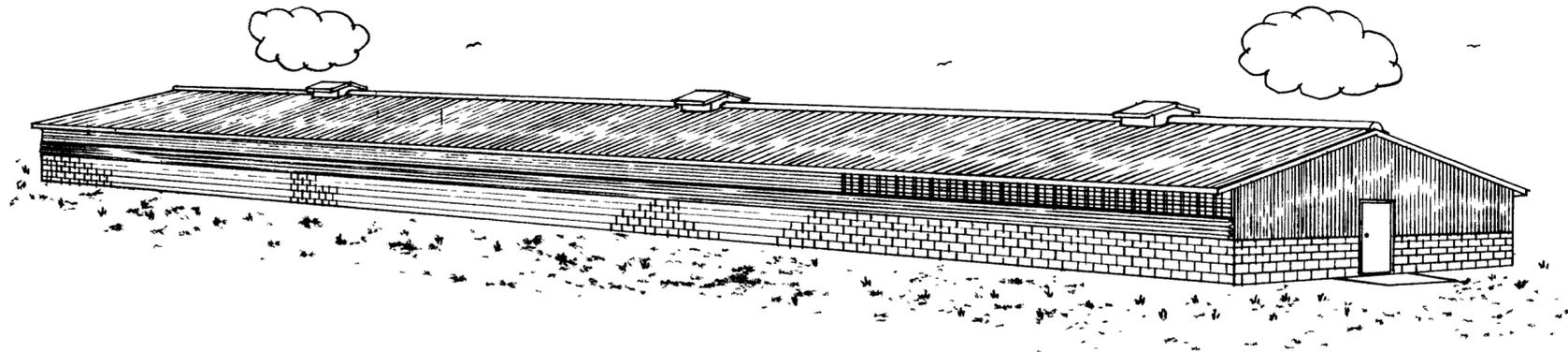
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PLAN NUMBER

KY. II. 726-35



THIS PLAN IS FOR A 24' X 116' BUILDING HOUSING 100 GESTATION STALLS AND 2 BOAR PENS. THE BUILDING IS NATURALLY VENTILATED IN THE SUMMER WITH SMALL FANS IN THE ROOF TO INSURE MINIMUM WINTER VENTILATION. THE ROOF IS INSULATED WITH RIGID INSULATION BOARD TO PREVENT CONDENSATION. MANURE IS STORED IN PITS BENEATH THE PARTIALLY SLATTED FLOORS. SUPPLEMENTAL HEAT IS INSTALLED IN THE FLOOR BENEATH THE SOWS TO INSURE SOME MEASURE OF SOW COMFORT DURING EXTREMELY COLD WEATHER. WHEN THE TEMPERATURE INSIDE THE BUILDING DROPS BELOW 50°, THE PRODUCER WILL NEED TO INCREASE FEEDING RATE FOR THE SOWS AND/OR TAKE OTHER STEPS TO ENSURE SOW COMFORT.

THE PLAN SHOWS GESTATION CRATES WHICH WILL ALLOW THE PRODUCER TO TREAT EACH SOW AS AN INDIVIDUAL. SOWS TEND TO LAST LONGER IN HERD WITH LESS CULLING FOR LAMENESS AND PROBLEMS CAUSED BY FIGHTING. GESTATION CRATES ALSO ENABLE THE PRODUCER TO CONTROL THE FEED INTAKE AND CONDITION OF THE SOW.

THE SWINE GESTATION BUILDING IS NOT INTENDED AS A PRIMARY BREEDING UNIT. SOWS WILL BE MOVED TO THE BUILDING AFTER BREEDING AND THE BOARS HOUSED IN THIS BUILDING ARE USED FOR HEAT CHECKING AND IDENTIFYING SOWS THAT DID NOT CONCEIVE IN THE BREEDING AREA.

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 GESTATION HOUSE TO FIT YOUR PRODUCTION SYSTEM

LITTERS FARROWED PER GROUP*	GESTATION WITH OUTSIDE BREEDING
10	56
12	66
14	78
16	88
18	100
20	110
22	121
24	132

*GROUPS FARROW EVERY THREE WEEKS.

WATER LINES

THE INSTALLATION OF WATER LINES IS DEPENDENT ON THE TYPE OF WATERER YOU USE. MOST WATERER MANUFACTURERS PROVIDE WATER LINE INSTALLATION INFORMATION.

THERMOSTAT ADJUSTMENT

THE THERMOSTAT SETTINGS GIVEN BELOW ALLOW THE BUILDING TEMPERATURE TO REACH A MINIMUM OF 25°F IN THE WINTER UNDER CERTAIN OUTSIDE CONDITIONS.

THERMOSTAT	NORMAL SETTING
FAN A	30°
FAN B	25°
FAN C	35°
FLOOR HEAT SYSTEM	50°
CIRCULATING PUMP	70°
WATER HEATER	120°

NOTE. IF THIS BUILDING IS NOT FILLED WITH ANIMALS DURING THE WINTER, REDUCE THE NUMBER OF FANS OPERATING IN PROPORTION TO THE CAPACITY OF THE BUILDING BEING USED.

WASTE STORAGE REQUIREMENTS

0 5 CUBIC FEET OF STORAGE PER DAY PER SOW
THIS FACILITY PROVIDES 23 DAYS OF MANURE STORAGE PER USEFUL FOOT OF PIT DEPTH, 90 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

15 CFM PER SOW

FEED AND WATER REQUIREMENTS

FEED 4 # PER SOW PER DAY - 2800 # TOTAL PER WEEK

WATER. 4 5 GAL PER DAY PER SOW
450 GAL PER DAY TOTAL
MINIMUM PUMPING RATE 8 GAL PER MINUTE

SPRINKLER SYSTEM

A SPRINKLER SYSTEM PROVIDES AN EFFECTIVE WAY TO PROTECT HOGS FROM HEAT STRESS DURING HOT WEATHER. SPRINKLERS SHOULD BE THERMOSTATICALLY CONTROLLED TO START AT TEMPERATURES ABOVE 83°, AND SHOULD BE SET WITH A TIMECLOCK TO OPERATE ONE OR TWO MINUTES OUT OF TEN. ALL VENTILATION CURTAINS SHOULD BE COMPLETELY OPEN. AS TEMPERATURES DROP, SPRINKLERS SHOULD STOP AT ABOUT 80 TO 83 DEGREES TO KEEP SOWS FROM CHILLING.

ESTIMATED MATERIALS LIST

LUMBER (EXCLUDING TRUSSES) -----	3700	B.F.
24' TRUSSES (4/12 PITCH) -----	32	
6" LIGHT WEIGHT CONCRETE BLOCK (PEN PARTITIONS) -	84	
6" SOLID CONCRETE BLOCK (PEN PARTITIONS) -----	14	
6" LIGHT WEIGHT CONCRETE BLOCK -----	1332	
12" STANDARD WEIGHT CONCRETE BLOCK -----	1488	
CONCRETE (FLOOR, FOOTINGS & BLOCK FILL) -----	105	YDS.
6" SLATS -----	1476	SQ. FT.
1" INSULATION BOARD -----	3600	SQ. FT.
METAL ROOFING & SIDING -----	4000	SQ. FT.
4' HIGH PLASTIC CURTAIN -----	248	L.F.
1/2" MESH HARDWARE CLOTH 4' HIGH -----	248	L.F.
1/2" EXT. PLYWOOD -----	12	PC.
8" STANDARD WEIGHT CONCRETE BLOCK -----	1776	

SLATS

SLOT OPENING 1 INCH

FLOOR HEAT REQUIREMENTS

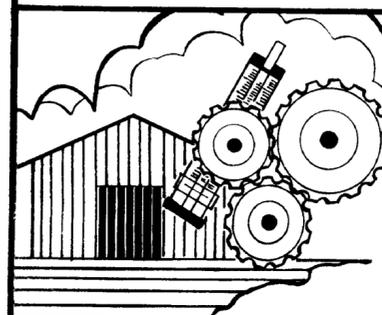
HEATER SIZE 400 BTU PER HOUR PER SOW OR 120 WATTS PER SOW
CIRCULATING PUMP 0 1 GAL PER MINUTE PER SOW @ 5-10 FEET OF HEAD
EXPANSION TANK SIZE 8 - 10 GAL FOR EACH 100 GAL OF WATER

A REMOTE SENSING THERMOSTAT IN THE SYSTEM FOR THE CIRCULATING PUMP IS REQUIRED TO OPERATE THE FLOOR HEAT SYSTEM. THE REMOTE SENSING THERMOSTAT BULB SHOULD BE INSTALLED IN THE CONCRETE BETWEEN THE HOT WATER PIPES. IN ADDITION, IN THE SYSTEM FOR THE CIRCULATING PUMP, FLOOR HEAT SHOULD NOT BE NECESSARY AT BUILDING TEMPERATURES ABOVE 50°F. A CORROSION-INHIBITING ETHYLENE GLYCOL ANTIFREEZE IS RECOMMENDED TO PROTECT THE SYSTEM AGAINST FREEZING IF IT IS SHUT DOWN DURING COLD WEATHER.

NOTE: THIS VENTILATION SYSTEM WAS DEVELOPED TO PROVIDE MOISTURE CONTROL DURING WINTER VENTILATION. A COMPLETE EVALUATION OF THIS SYSTEM HAS NOT BEEN COMPLETED AT THIS TIME. TO AID IN OUR EVALUATION, IF YOU CONSTRUCT THE VENTILATION SYSTEM AS SHOWN, PLEASE INFORM YOUR COUNTY AGENT.

THIS IS A COLD BUILDING, DO NOT ATTEMPT TO KEEP IT WARM BY ADJUSTING THE THERMOSTATS UPWARD.

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