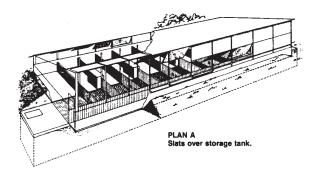
MWPS-72603

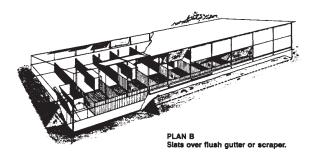
Swine Growing - Finishing Building

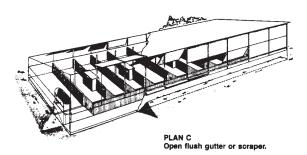
28' x 80' monoslope, modified open-front building to house about 240 pigs. Three plans are included. Plan A shows a 10' wide by 8' deep manure pit under slats. Plan B shows a 10' wide flush gutter under slats. Plan C shows a 5' wide open flush gutter. Natural ventilation.

CAUTION!

Additional professional services will be required to tailor this plan to your situation, including but not limited to: assurance of compliance with codes and regulations; review of specifications for materials and equipment; supervision of site selection, bid letting and construction; and provision for utilities, waste management, roads or other access. Furthermore, any deviation from the given specifications may result in structural failure, property damage, and personal injury including loss of life.







MIDWEST PLAN SERVICE

Cooperative Extension Work in Agriculture and Home Economics and Agricultural Experiment Stations of North Central Region - USDA Cooperating

Swine Growing-Finishing Building Title Page

MIDWEST PLAN NO.

72603

WARRANTY DISCLAIMER

This plan provides conceptual information only. Neither midwest plan service nor any of the cooperating land-grant universities, or their respective agents or employees, have made, and do not hereby make, any representation, warranty or covenant with respect to the specifications in this plan. Additional professional services will be required to tailor this plan to your situation, including but not limited to: assurance of compliance with codes and regulations; review of specifications for materials and equipment; supervision of site selection, bid letting and construction; and provision for utilities, waste management, roads or other access.

Plan MWPS-72603

Swine Growing-Finishing Building

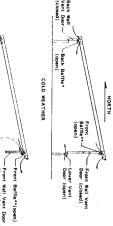
Monoslope, Modified Open Front

This plan is for a $28' \times 80'$ monoslope building housing about 240 pigs. Semi-transparent fiberglass reinforced plastic plazing on the large front doors provide some passive solar

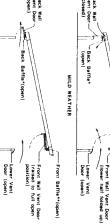
The building shown is sized for a 10 sow farrowing building, scheduled for 7-8 farrowingsyr (80 ptgs produced/farrowing). Double the building length or duplicate the building or a 20 sow farrowing building, astheduled for 7-8 farrowingsyr. False pigs in a nursery to about 75 in (72 wis), then move them to the 6" wide pens of the growing-finishing building. At about 125 in (17-18 wt), move pigs to the 6" wide pens, at about 175 in (22-23 wt), move them to the 10" wide pens.

Plan A shows a 10" wide by 8" deep manue storage pit under stats. Plan B shows a 10" wide put gutter under stats. Plan B shows a 5" wide open flush gutter.

VENTILATION MANAGEMENT



28'-0"



*Close back baffle during extreme cold or blowing snow.
** Front baffle required in 6' wide pens only.

28'-0"

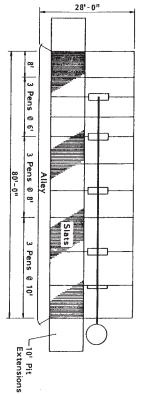
WARM WEATHER

Different size pigs require different ventilation manage-ment. Smaller pigs require higher temperatures and less ven-tilating air. The smaller pigs in the 6 wide parts require hoves (over the back 30% of the pen), floor heat, and a front baffle. Generally, open the vents for small pigs at warmer tempera-tures and open them less than for the larger pigs.

Cold Weather: Adjust the front (south) baffle, back baffle, and lower front vent doors to control moisture. Back wall and front wall vent doors are closed.

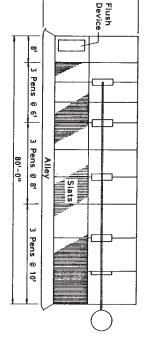
Mild Weather: Fold up the lower half of the front well vent doors to allow more air in to control temperature. Back battle, front battle, and obwer front vent doors are full open. Back wall vent doors are closed.

Warm Weather: Open the back wall vent doors and swing up both nalves of the front wall vent doors to allow full crossflow of air.



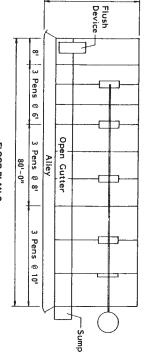
FLOOR PLAN A Slats over storage tank.

PLAN A Slats over storage tank.



FLOOR PLAN B
Stats over flush gutter or scraper.

PLAN B Siats over flush gutter or scraper.

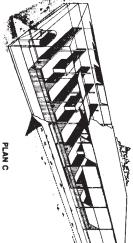


FLOOR PLAN C Open flush gutter or scraper.

Related Midwest Pian Service Publications

- MWPS-8, Swine Housing and Equipment Handbook.
 MWPS Plan-74303, Liquid Manure Tanks.
 MWPS-AED 22, Tilt-up Concrete Construction for Agriculture.

See Page 16 for Utility and Material Specifications



PLAN C
Open flush gutter or scraper.

Page No. Where Detail Is Found Detail

Section

Section & Detail Indicator

Direction You Are Looking

- Section or Detail No. -

MIDWEST PLAN SERVICE

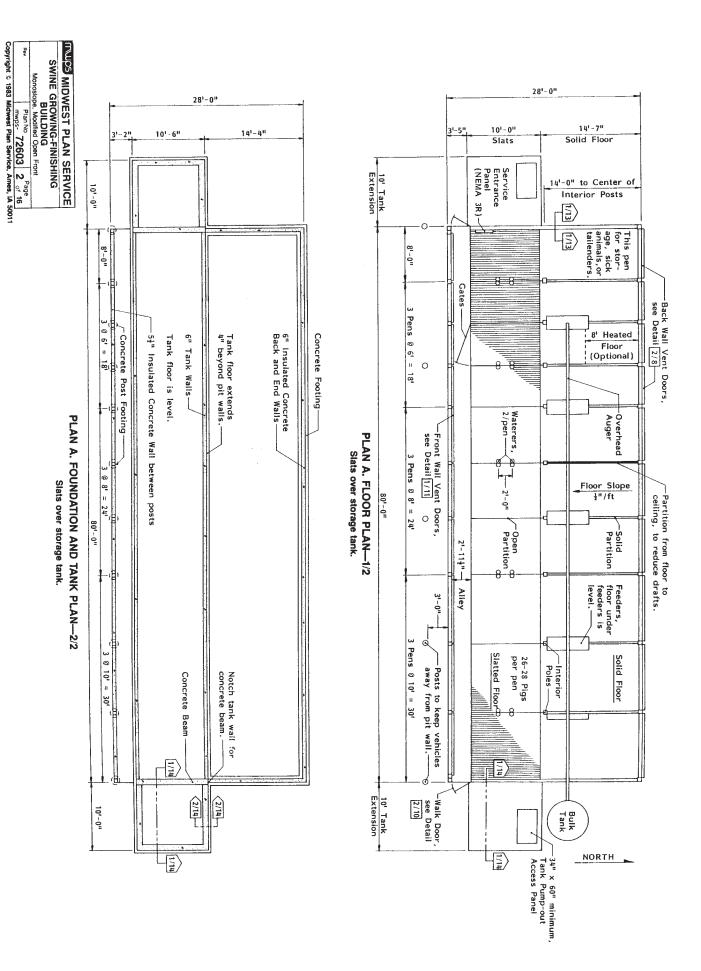
Cooperative Extension & Rysearch in Agriculture & Home Economics in the 12 North Central Universities—USDA Cooperating

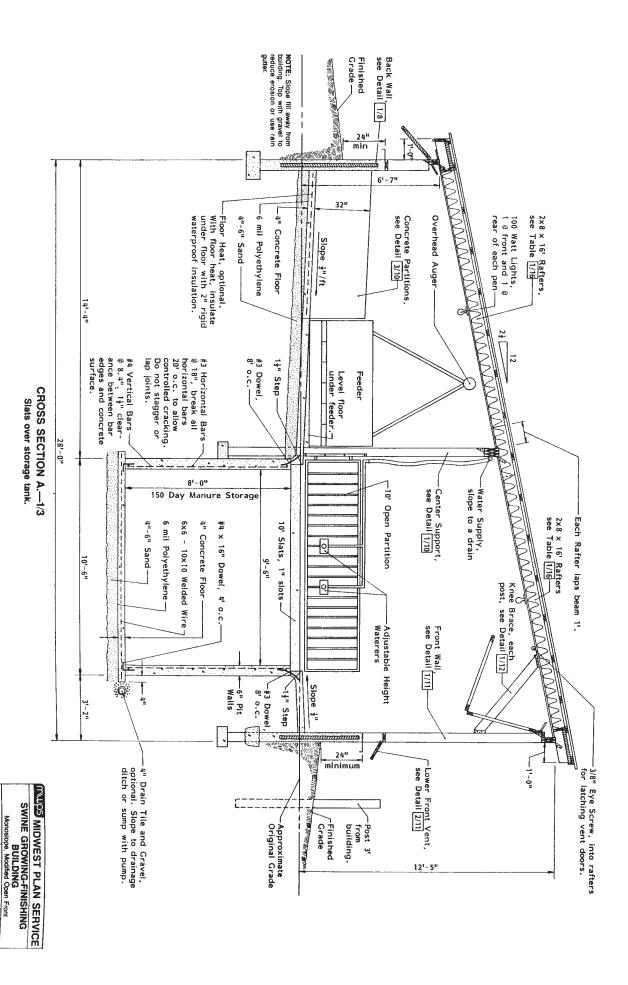
SWINE GROWING-FINISHING
BUILDING
Monoslope, Modified Open Front

opyright © 1983 Midwest Plan Service, Ames, IA 50011 mwps 72603 1 of 16

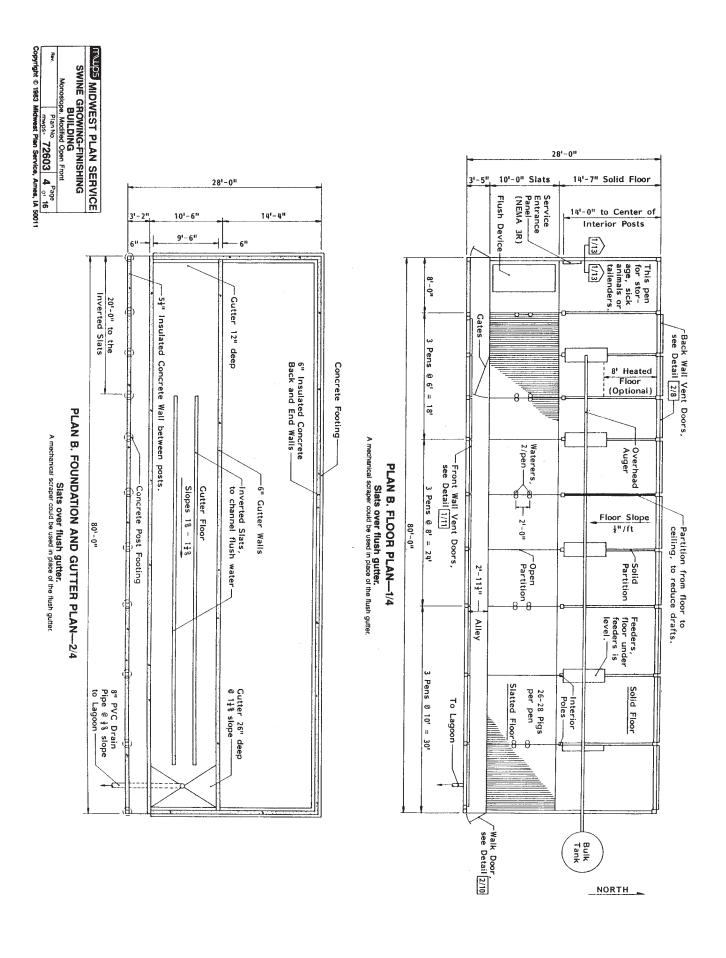
16 Pages

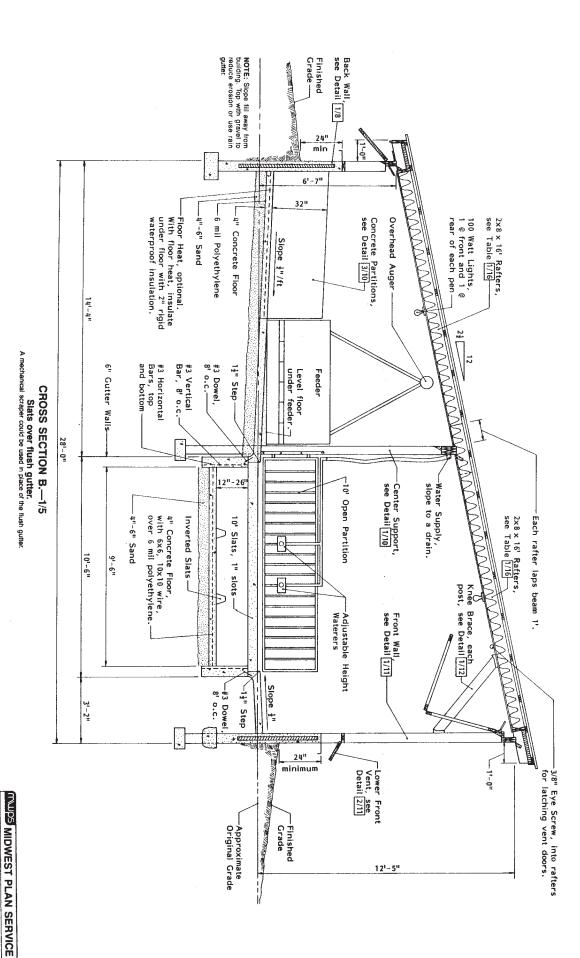
Plan No.





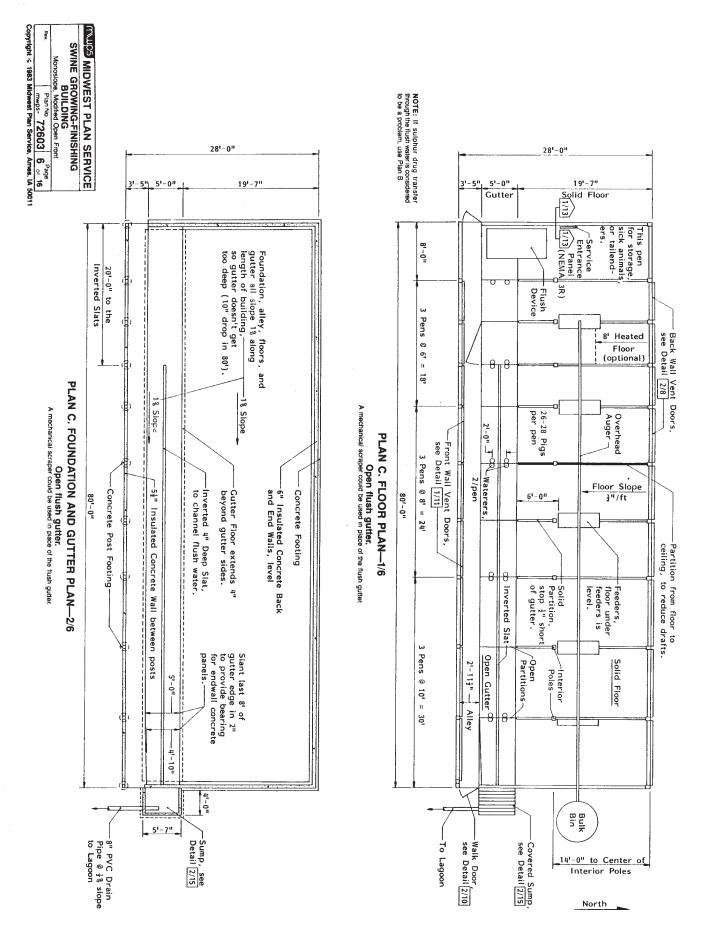
Plan No. 72603 3 Page mwps- 72603 3 of 16 Copyright © 1983 Midwest Plan Service, Ames, IA 50

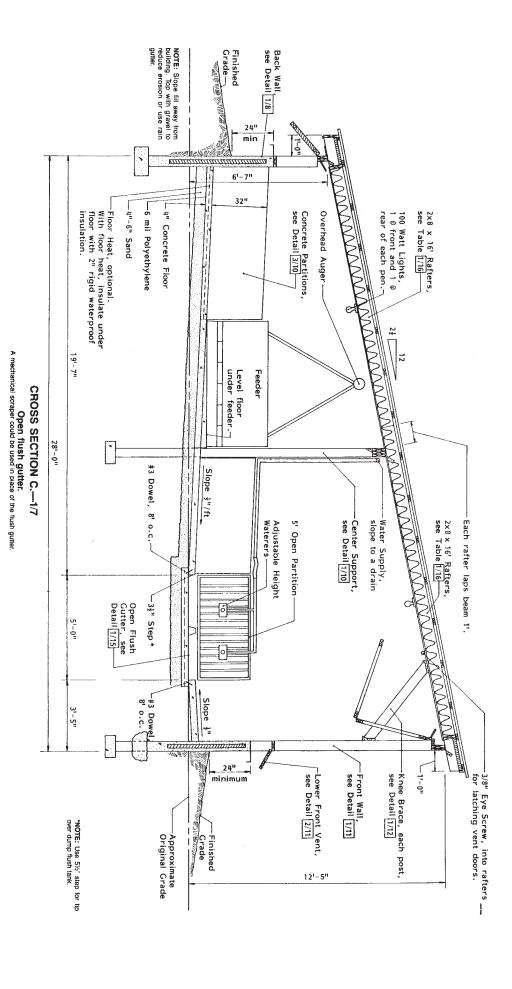




Plan No. 72603 5 or 16 Copyright © 1983 Midwest Plan Service, Ames, IA 50011

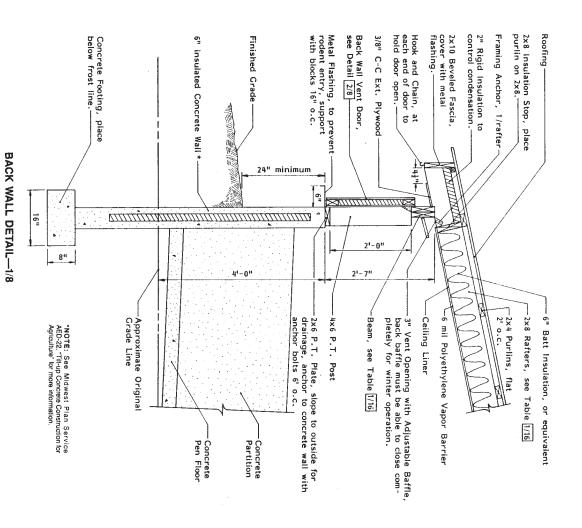
SWINE GROWING-FINISHING
BUILDING
Monoslope, Modified Open Front



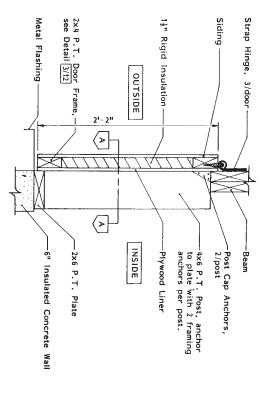


Plan No 72603 7 or 16 mwps- 72603 7 or 16 Copyright © 1983 Midwest Plan Service, Ames, IA 50011

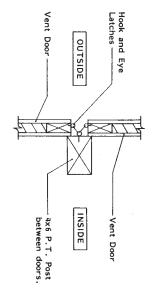
SWINE GROWING-FINISHING
BUILDING
Monoslope. Modified Open Front



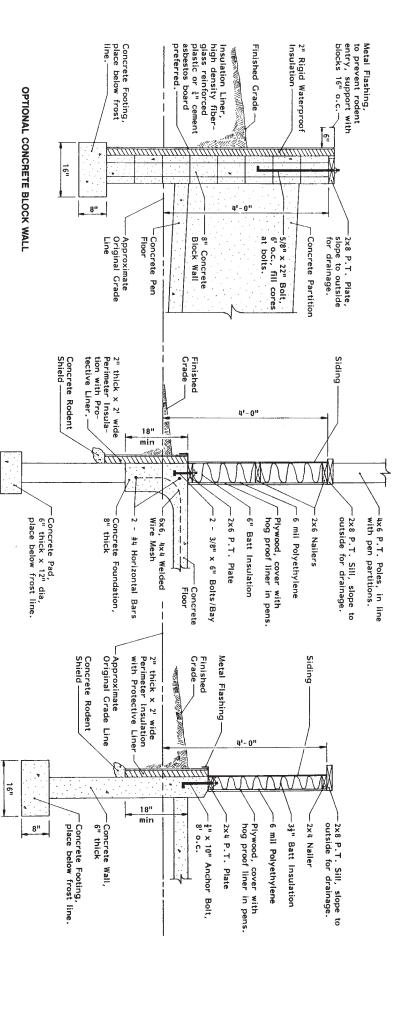




BACK WALL VENT DOOR DETAIL—2/8 Make the back wall vent doors as continuous as possible.



SECTION A-A
Top view of post between back wall vent doors.



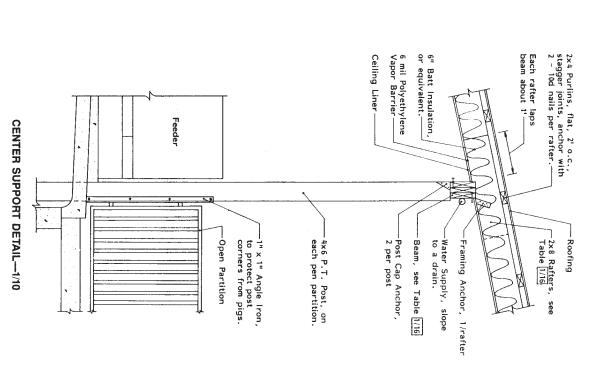
OPTIONAL POLE FRAME WALL

OPTIONAL STUD FRAME WALL

SWINE GROWING-FINISHING
BUILDING
Monosipe. Modified Open Front
Plan No.
Plan No. 72603 9 of 16
Copyright © 1863 Midwest Plan Service, Ames, IA 50011

MIDWEST PLAN SERVICE

BACK WALL OPTIONS—1/9



12"

-2x6 Vent Door Frame

--5}" Insulated Concrete Wall

Apron Concrete

-2x6 Jambs

Vertical Pipe Alley Partitions, hinged both ends.

Alley

*NOTE: Due to endwall framing, vent doors in end bays are 9% shorter than the doors in intermediate bays.

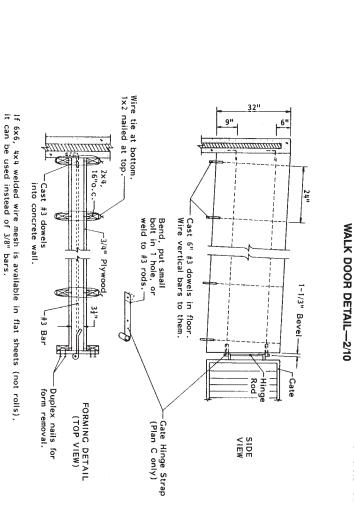
Front Wall Vent Door *

-2×4

-2x6 P.T. Plate, on 6" insulated concrete wall.

-2x4 Insulated Stud Wall

21-811 x 61-811

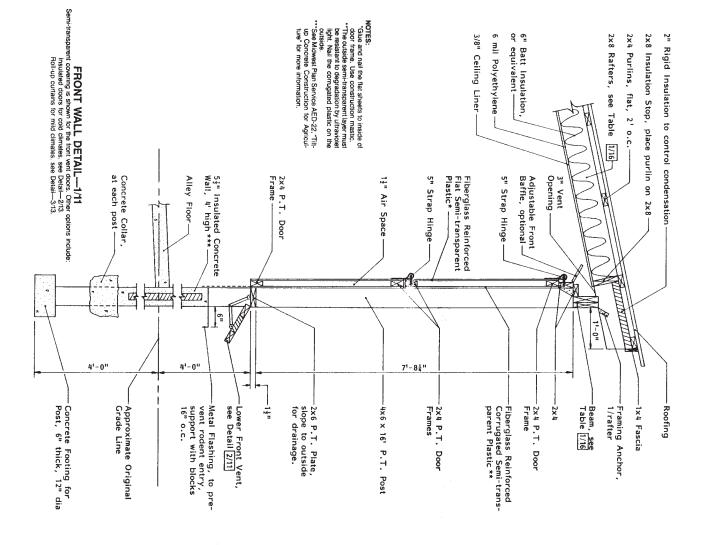


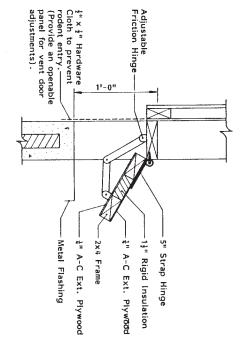
CONCRETE PARTITION DETAIL-3/10

Plan No. Plan No. 72603 10 of 16 Copyright © 1963 Midwest Plan Service, Ames, IA 50011

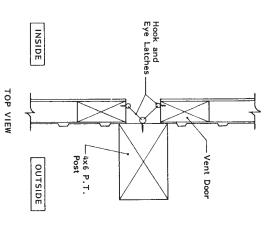
Open Front

MIDWEST PLAN SERVICE SWINE GROWING-FINISHING BUILDING



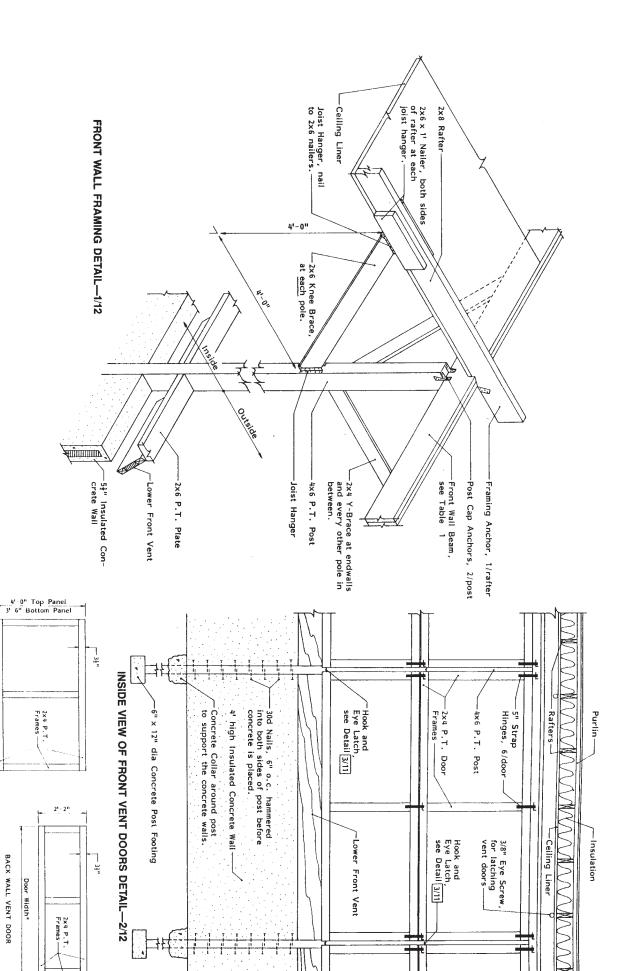


LOWER FRONT VENT DETAIL—2/11



FRONT VENT DOOR LATCHES DETAIL-3/11





Monosiope, Modified Open Front
Plan No. 72603 12 of 16
Copyright © 1983 Midwest Plan Service, Ames, IA 50011

HALF OF FRONT WALL VENT DOOR Bottom panel is shorter than top panel, to make it easier to fold the doors.

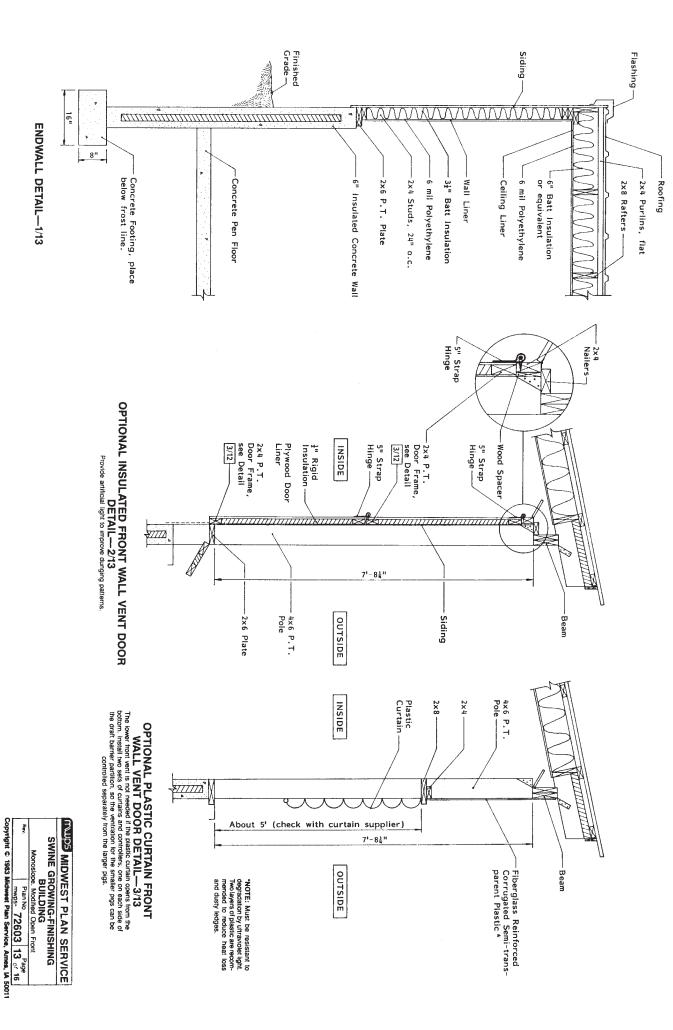
VENT DOOR FRAMES-3/12

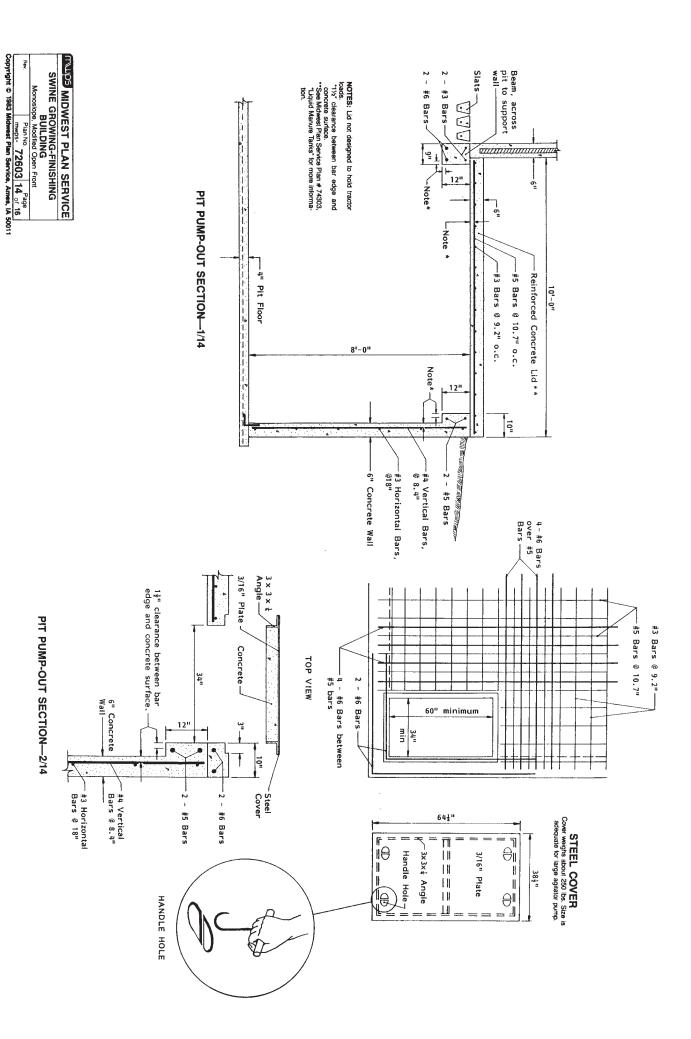
Door Width*

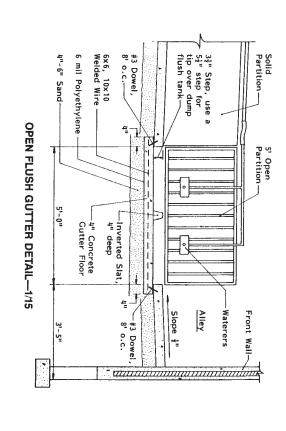
* 5'-10" for 6' Intermediate Bay * 7'-10" for 8' Intermediate Bay * 9'-10" for 10' Intermediate Bay

Make front doors in end bays 9}" shorter.

SWINE GROWING-FINISHING
BUILDING







Gutter

2x4 P.T. Cap Board

2x6 P.T. Boards

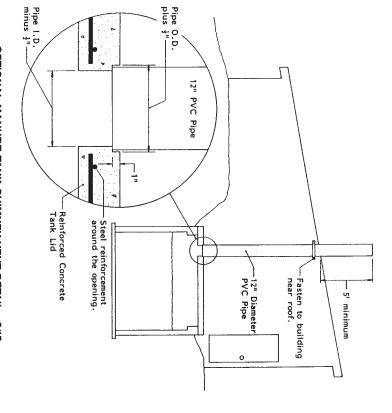
1" Rigid Insulation with Protective Protective Sump Walls 6 Floor

8" PVC Drain

Pipe @ 18 slope

to Lagoon

Floor



OPTIONAL MANURE TANK CHIMNEY VENT DETAIL—3/15 For venting manure gases from tank. Install one in each manure tank extension, for tanks up to 100' long. For tanks over 100', install one at each end plus one at 50' intervals along tank.



SUMP DETAIL-2/15

Note: All wiring devices, boxes, and fittings have to be dust and watertight, and made of corrosion resistant materials.

Service entrance panel: plastic, waterlight, dust-tight type (NEMA-3R).

Lighting and wiring: Install two lights per pen: one centered over the front half; the other centered over the back half. Connect each row of lights on a separate switch. Use 100 watt bulbs.

Use dust and moisture light incandescent light fixtures with a heat resistant globe to cover the light bulbs. If installing fluorescent lights, obtain dust and moisture resistant lixtures with gaskeled covers. Select lighting equipment appropriate for cold environments.

Install a duplex receptacle at least every 4 pens. If heat lamps are needed, install a duplex receptacle over the sleeping area of each pen.

Heat: Keep the building filled to capacity at the recommended density during cold weather. Supplemental heat is usually not needed for swine over 75 lb, if all the pens are kept full at the recommended density, For pigs under 75 lb, provide heat lamps, radiant heaters, heat pads, or floor heat. When pigs are first moved into the 6 bens, provide heat lamps over the sleeping area to warm the pigs and develop good duriging heating.

See MWPS-8, Swine Housing and Equipment Handbook for floor heating methods, Hovers are recommended over the back 30% of the pen area during cold weather especially in the 6" wide pens. (Hovers need not be insulated-by tempered hardboard, sheet metal, or exterior phywood. Heavy clear plastic on a trainer is excellent and allows you to observe the animals.)

Protect exposed water lines from freezing with insulation and heat tape. Bull-in heating units are recommended for cupwaterers. Nighle waterers usually do not require heaters. Provide a strong, durable cover over pipe insulation and heat tape down to the watere to prevent pigs and rodents from chewing. Swine production screduling is discussed in more detail in MWPS-8, Swine Housing and Equipment Handbook.

General Specifications

Pits: Use 3500 psi concrete with 7% air entrainment. Use steel of at least 40,000 psi yield. Install steel and concrete accurately. Refer to MMPS Plan-74303, "Liquid Manure Tanks" for more information.

Pump pits to within 6" of the bottom at least once a year Check for solids buildup; increase egitation and pump from the end nearest to solids buildup; increase egitation and pump from the end nearest to solids buildup; increase egitation and pump from the concrete state side and may need to be adjusted for other to concrete state side dard may need to be adjusted for other designs: Dimensions in these plans are based on the construction variation and growing 3passe salast "1 apart to swine growing-linishing buildings. A 10" long slat could be 5" x 5½" with a lower #5 reinforcement bar.

Manure pit storage: "PI depth is based on 0.14 ff'day manure per pig, 6" left in pit after pumping, and 10" of free-board.

MIDWEST PLAN SERVICE

SWINE GROWING-FINISHING BUILDING

Modified Open Front

Plan No. 72603 16 of 16
Copyright © 1983 Midwest Plan Service, Ames, IA 50011

Materials

Rafters
No. 1 Ham-Fir, or better
Roof Purlins
Construction Grade (Doug fir, southern pine, hem fir, or 2x4, flat, 2' o.c.

Stagger end joints. Fasten purlins at each truss with 2-10d nails.

pine, hem fir, or

Studs Construction Grade (Doug fir, southern

better)
Roofing examples
26-29 ga galv. steel, 100 nails/100 ft²
0,024* alum. 120 nails/100 ft²
1/5* C-C Ext.plywood ("Identification Index" = *%) + 235-lb
asphart shingles

Siding examples

% C-C Ext. phywood, stained

% C-C Ext. phywood, pantled

0.024 alum, or 26-29 ga galv. steel

Wall and Calling Liner

Wal and Calling Liner

% or ½ C-C Ext with Medium Density Overlay

(Paint with 2 coats of good quality oil base ename!)

Pressure Preservative Treated (southern yellow pine or equivalent) Creosote—10 pct.

Penta—0.50 pct, ACC—0.50 pct, ACA or CCA (Type A or B)—0.40 pct.

Sils, and Fascia

Phascure Prescure Treaded (southern yellow pine or equivalent) Cheosofte—8 pdf.

Penia—0,40 pdf, ACC—0,25 pdf, ACA or CCA (Type A or B)—0,25 pdf.

P. T. means lumber pressure preservative treated against sect and fungus attack.

MDO Plywood is C-C Extenor with Medium Density Overlay, It is an excellent base for paint. Paint with 2 coats of good quality is an excellent base for paint. Paint with 2 coats of good quality old base enamel. Live winy "" strings and stincone caulit to set joints between inside wall liners to provent moisture migration.

Perimeter Insulation
Alleast 27x24* waterproof expanded, extruded polystyrene
insulation, install a protective liner.
High density linerglass enriorced plastic or ½" cement
asbestics board prefered. ½" tempered hardboard or ½"
boundation grade phywood resist physical damage but
are not nodent proof.
Install flashing from behind siding to cover top of insulation

and its protective material

Table 1/16. Rafter and beam sizes

Rafters, #1 Hem-Fir or better.

40 pst	30 psr	20 psf	load	Roof design
18" 0.c.	24" O.C.	36" o.c.	Rafter spaci	

Beams,
*
Hem-Fir
윽
better.

Roof design		Span	
load	e,	æ	9
		- How many-size -	
Back wall beam:		,	
psf	1-2x6	2-2x6	3-26
30 psf	2-2x6	2-2x6	3-2x6
40 psf	2-2x6	3-2x6	4-2x6
Center support beam:	∄		
ß	2-2x8	2-2x8	3-2x8
30 psf	2-2x8	3-2x8	3-2x8
40 psf	3-2x8	3-2x8	4-2x8
Front wall beam:			
20 psf	1-2x8	1-2x8	2-2x8
30 psf	1-2x8	2-2x8	3-2x8
40 psf	2-2x8	2-2x8	3-2x8