

# MWPS-72507

## 500 Ewe and Lamb Feeding Barn

This plan illustrates a building designed for lambing and lamb finishing of a 500 ewe flock once each year or a 1000 ewe flock on a multiple lambing schedule.

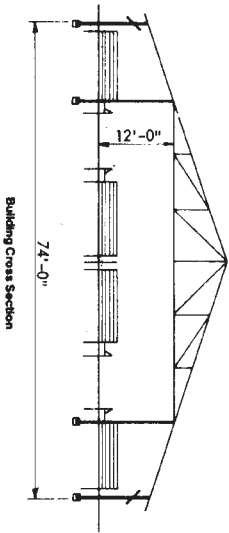
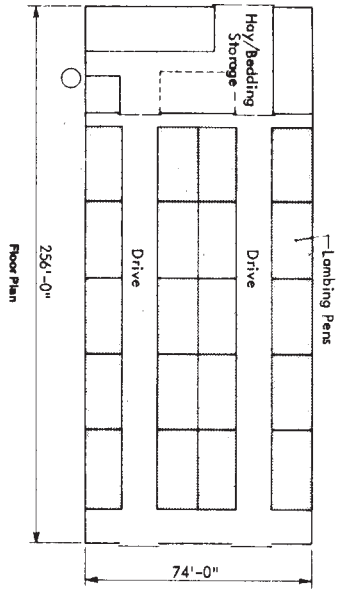
### **CAUTION!**

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.**

### **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.

<b>MIDWEST PLAN SERVICE</b>
Cooperative Extension Work in Agriculture and Home Economics and Agricultural Experiment Stations of North Central Region - USDA Cooperating
500 Ewe and Lamb Feeding Barn
Title Page
MIDWEST PLAN NO. 72507

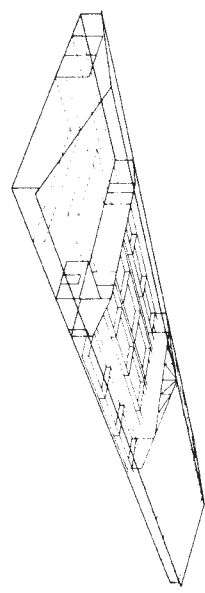


**Plan MWPS-72507**  
 This plan illustrates a building designed for lambing and lamb finishing of a 500 ewe flock once each year or a 1000 ewe flock on a multiple lambing schedule.

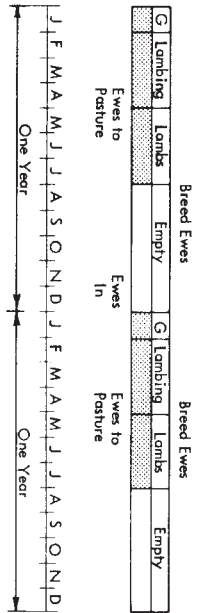
**Building Space and Animal Cycles**  
 Ewes are brought in the building during the last stages of gestation. 14-18 ewes are placed in each 12' x 24' pen. As lambing begins, new lambs and ewes are placed in lambing jugs located in each pen for one or two days and then returned to the pen. After lambing, ewes can be separated into single and twin groups with rations fed accordingly. At weaning, ewes are moved to pasture or separate facilities and lambs are finished out. An alternative management scheme would be to keep ewes in the building year round and raise lambs elsewhere. See building use schedule.

**Manure Management**  
 Use straw, wood shavings or sawdust as bedding material. Clean pens once each week. Pen partitions are portable (or on hinges) to allow access to the pens with the manure handling equipment.  
 Labor for manure handling management is relatively high with this plan.

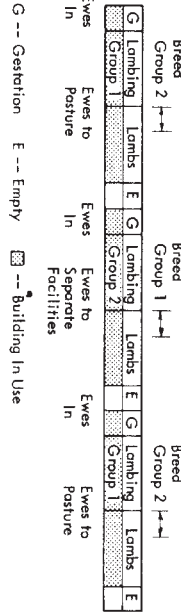
**Feed Management**  
 This plan assumes rations will consist largely of ground hay and grain for both ewes and lambs during finishing. Bunks are designed for group feeding. Bunk space is critical for group feeding—15" ewe or approximately 10" lamb.



**500 Ewe Building Use Schedule—Once a Year Lambing—2 Year Schedule**



**1000 Ewe Building Use Schedule—3 Lambings in 2 Years**



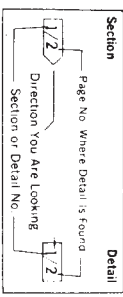
**MWPS MIDWEST PLAN SERVICE**  
 Cooperative Extension & Research in Agriculture & Home Economics in the 12 North Central Universities—USDA Cooperating

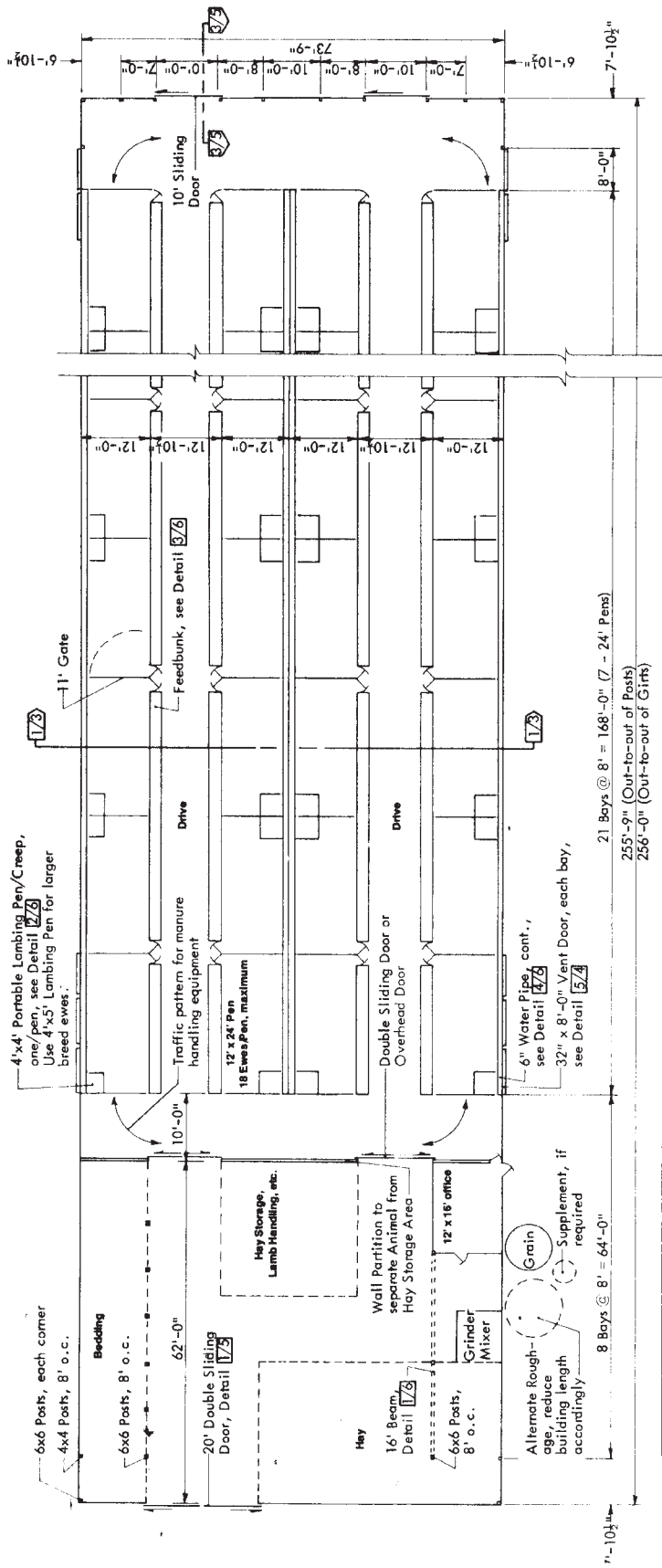
**500 EWES AND LAMB FEEDING BARN**

6 Pages plus 50' Truss Sheet Plan No. MWPS-72507 Page 1 of 8

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See MWPS-3, Sheep Housing and Equipment Handbook, for additional information.

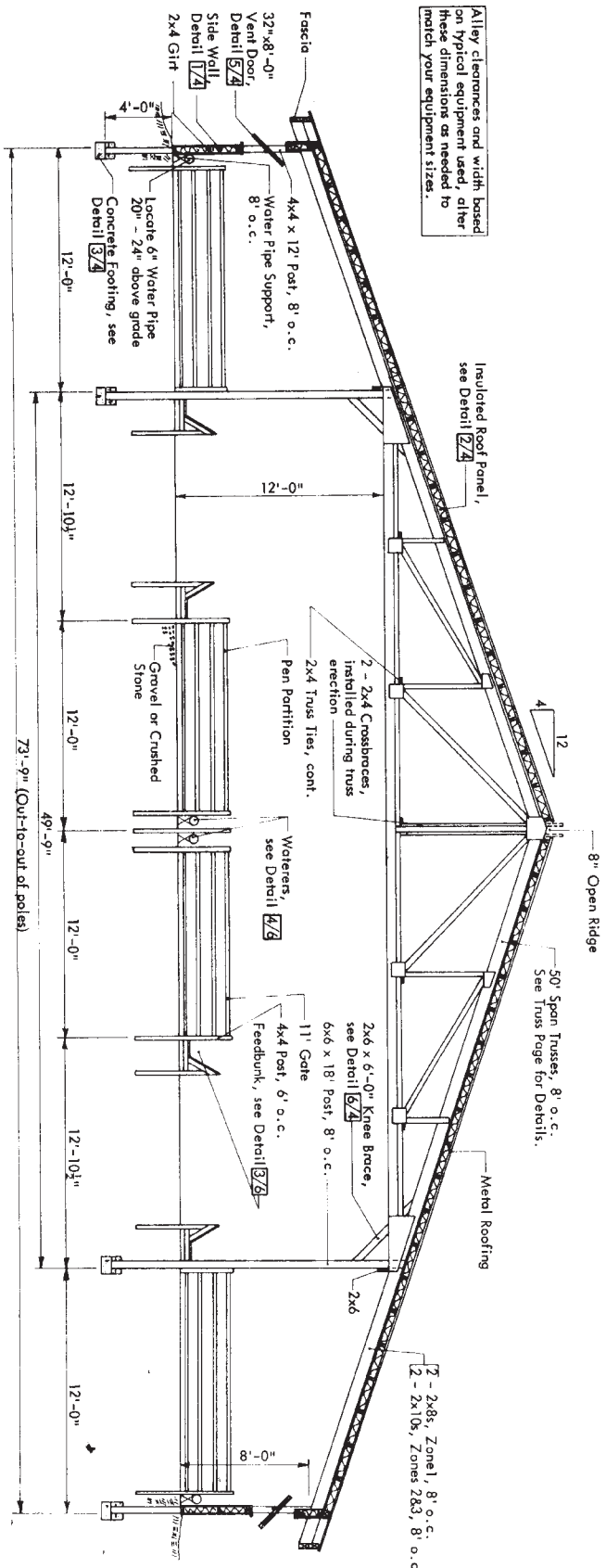




**FLOOR PLAN—1/2**

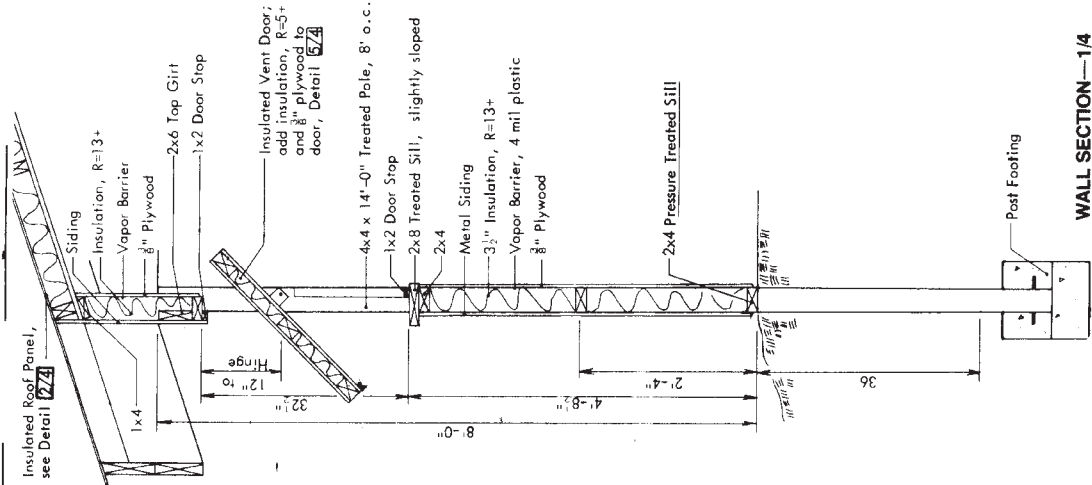
Feed system depends on ration fed. Plan assumes ground hay and grain to be fed at least once daily to gestating and lactating ewes as well as growing finishing lambs.

<b>MIDWEST PLAN SERVICE</b>	
<b>500 EWE and LAMB FEEDING BARN</b>	
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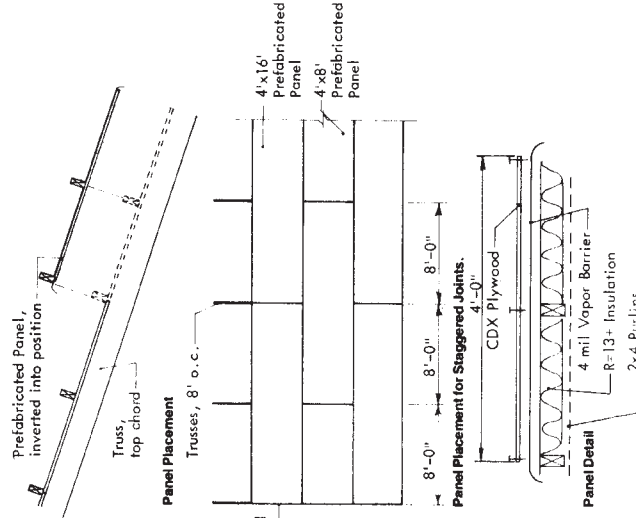


Alley clearances and width based on typical equipment used, alter these dimensions as needed to match your equipment sizes.

CROSS SECTION—1/3



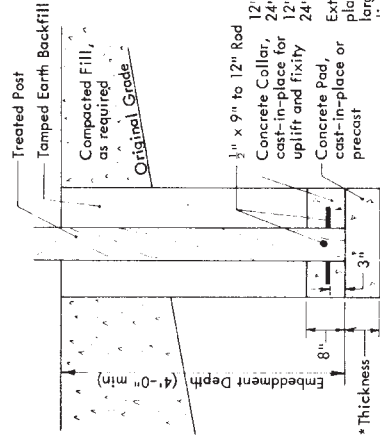
**WALL SECTION—1/4**



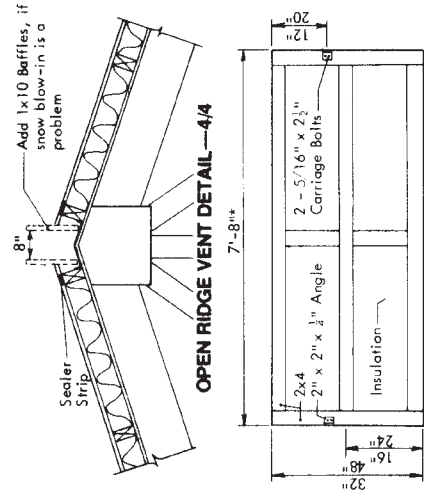
**INSULATED ROOF PANEL DETAILS—2/4**  
Reduce heat gain in summer and heat loss in winter.

Fabricate 4x8 and 4x16 panels upside down. Invert and install the panels, staggering the end joints.

**POST FOOTING DETAIL—3/4**



**POST FOOTING DETAIL—3/4**



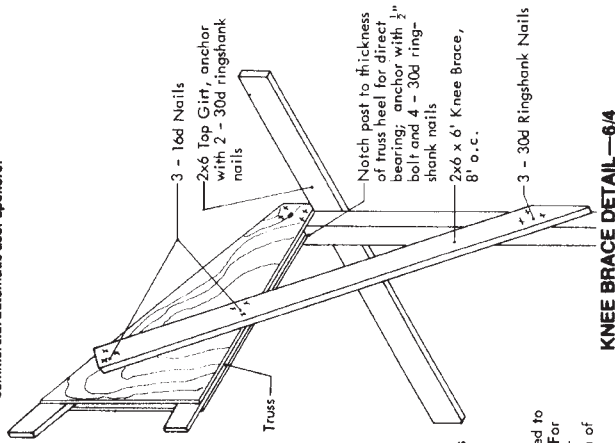
**OPEN RIDGE VENT DETAIL—4/4**

Glue and nail "CC Exterior Plywood on the inside. Install insulation. Nail metal siding on the outside.

\* Alter this dimension for other than 4" wide building posts or other than 8' o.c.

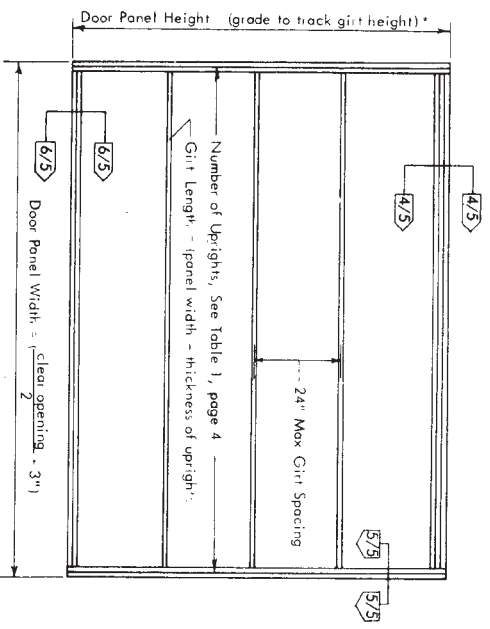
**VENTILATION DOOR—5/4**

Use similar dimensions for 4' x 8' door. Consider commercial automatic door openers.

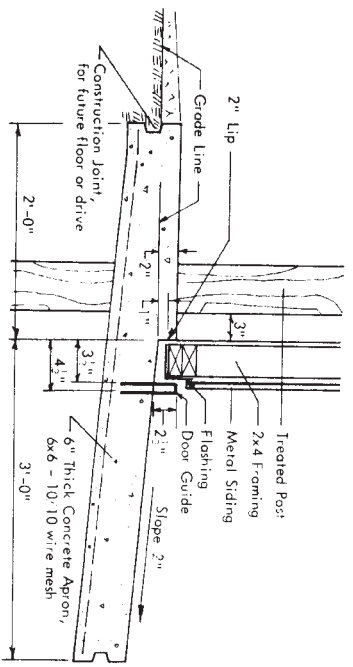


**KNEE BRACE DETAIL—6/4**

\*Footing Size  
12" Dia x 6" Thick @ Endwall Posts  
24" Dia x 7" Thick @ Interior Posts  
12" Dia x 6" Thick @ Rafter Posts  
24" Dia x 7" Thick @ Wide Doors  
Extend embedment depth as required to place footing on undisturbed soil. For large diameter footings, use smaller diameter auger and flare the bottom of the hole with Lineman's spoon.



**DOUBLE SLIDING DOOR—1/5**  
 \*If sliding door apron 2/5 is not installed, reduce door panel height by 2".

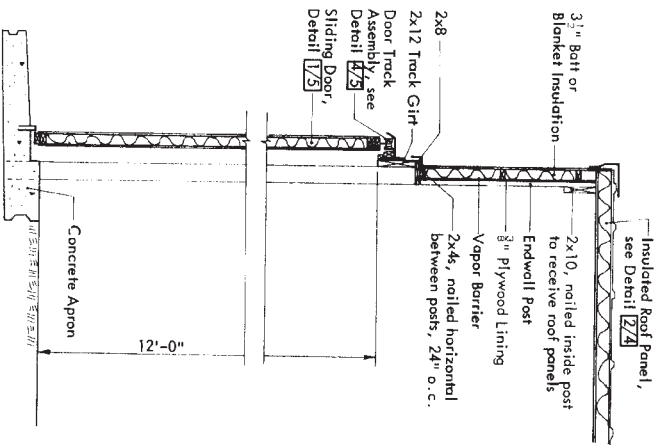


**SLIDING DOOR APRON—2/5**  
 Set adjustable roller guides in the concrete apron door jamb. Use door stops as required.

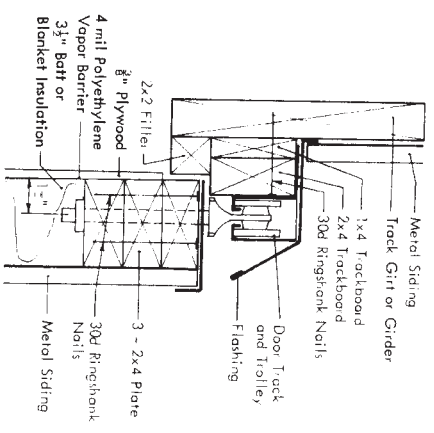
**Table 1. Number of 2x4 uprights, each side of door panel.**

Door Panel Height, ft	Door Panel Width, ft															
	6	7	8	9	10	11	12	13	6	7	8	9	10	11	12	13
8	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2
9	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2
10	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
11	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
12	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
13	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
14	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

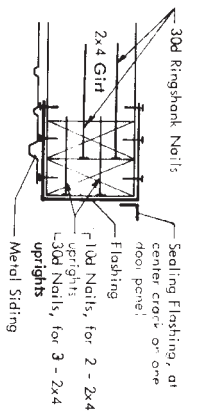
Door Sliding Sheet Length approx. 2" shorter than upright length.



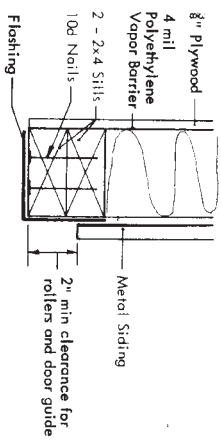
**ENDWALL SECTION THROUGH SLIDING DOOR—3/5**



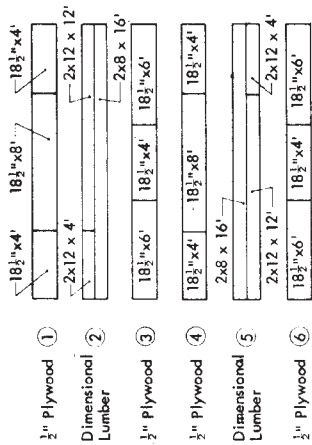
**DOOR TRACK ASSEMBLY—4/5**



**UPRIGHT SECTION—5/5**  
 Extend flashing around uprights and nail to girts and uprights.



**SILL SECTION—6/5**



**MATERIALS**

**Lumber**  
This beam is designed for use of Douglas Fir-Larch (No. 1, MC19) or Southern Yellow Pine (No. 1, MC19).

Use clean and smooth lumber. Do not use cupped or twisted lumber.

**Plywood**  
Use 1/2" C-C Ext. ("Identification Index" = 32/16)

**Glue**  
Casein (MGM-125A, type II, mold resistant) is not waterproof, but is highly water resistant. Resorcinol resin glue is waterproof and should be used if the beam is to be exposed to unusual moisture conditions.

Follow the manufacturer's specifications for mixing, pot life, temperature during use, etc.

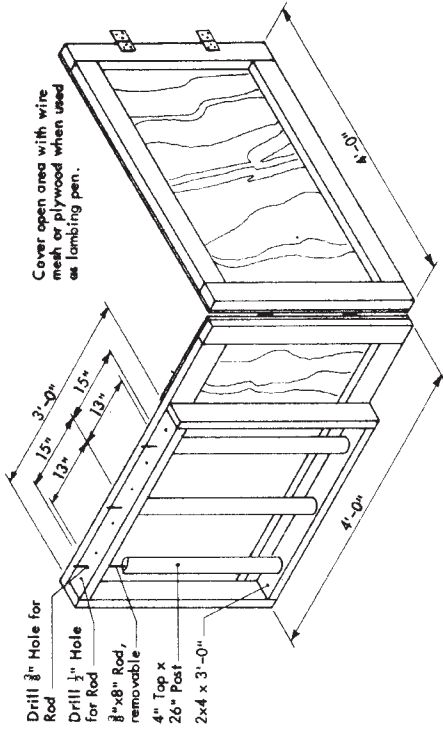
**BEAM CONSTRUCTION**

1. Assemble the beam in two pieces, layers 1, 2, and 3 and layers 4, 5, and 6. Clamp the narrow faces of the dimensional lumber together (Layer #2 = 2x6 + 2x10 + 2x10 = 2x26). Spread glue on the plywood (Layer #1). Nail plywood to Layer #2 and 6d box nails, preferably galvanized or cement coated, 4" o.c. both ways. Glue should squeeze out from the edges of the beam. Remove the clamps, glue and nail Layer #3 plywood to the other side of the dimension lumber in a similar manner. Then assemble layers #4, #5, and #6.
2. Final Assembly—use method a, or b.
  - a. Clamping method.

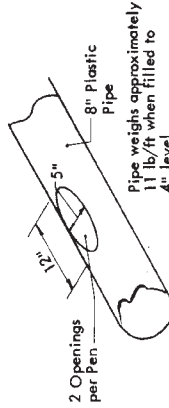
When both halves of the beam have been assembled, apply glue to the two remaining inside surfaces. Place clamps about 2' apart on the fully assembled beam and leave on for 24 hours.

b. Weighting method  
When both halves of the beam have been assembled, apply glue to the two remaining inside surfaces. Lay the beam on a level surface. Place sufficient weight on the fully assembled beam to squeeze glue out from the edges of the beam. Leave on for 24 hours.

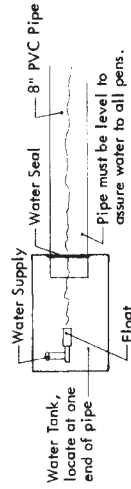
**16' LAMINATED BEAM ASSEMBLY—1/6**



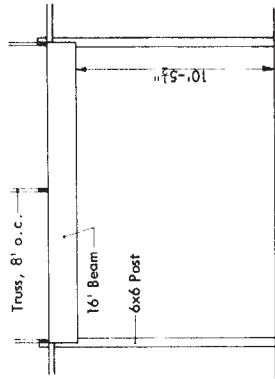
**LAMBING PEN/CREEP DETAIL—2/6**



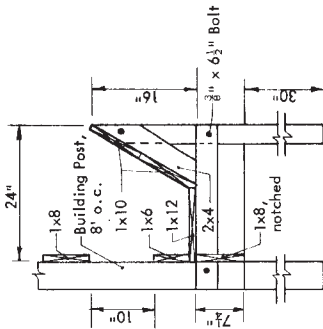
**WATER TROUGH DETAIL—4/6**



**WATER TANK—5/6**



**Beam Elevation**



**FEED BUNK—3/6**