

Consult with Equipment Supplier before building Milking Center

Before you build this barn consult with and get the approval of the health authorities having control of the sale of your milk.

**FLOOR PLAN**

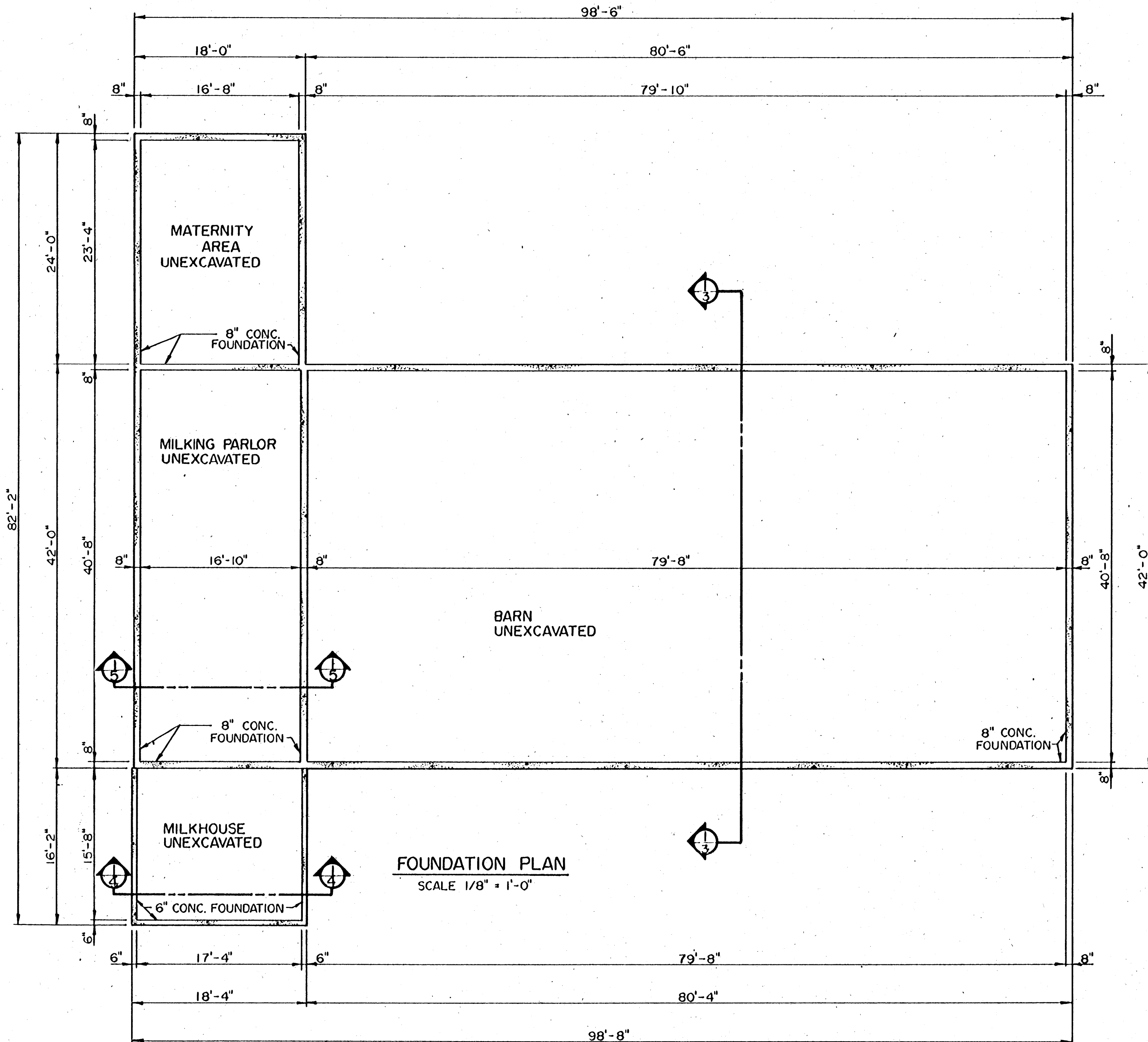
SCALE - 1/8" = 1'-0"  
Provide Separate Youngstock Facilities.

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS  
STATE OF MISSISSIPPI  
MISSISSIPPI STATE UNIVERSITY  
AND UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

**FREE STALL DAIRY BARN**  
40 COW

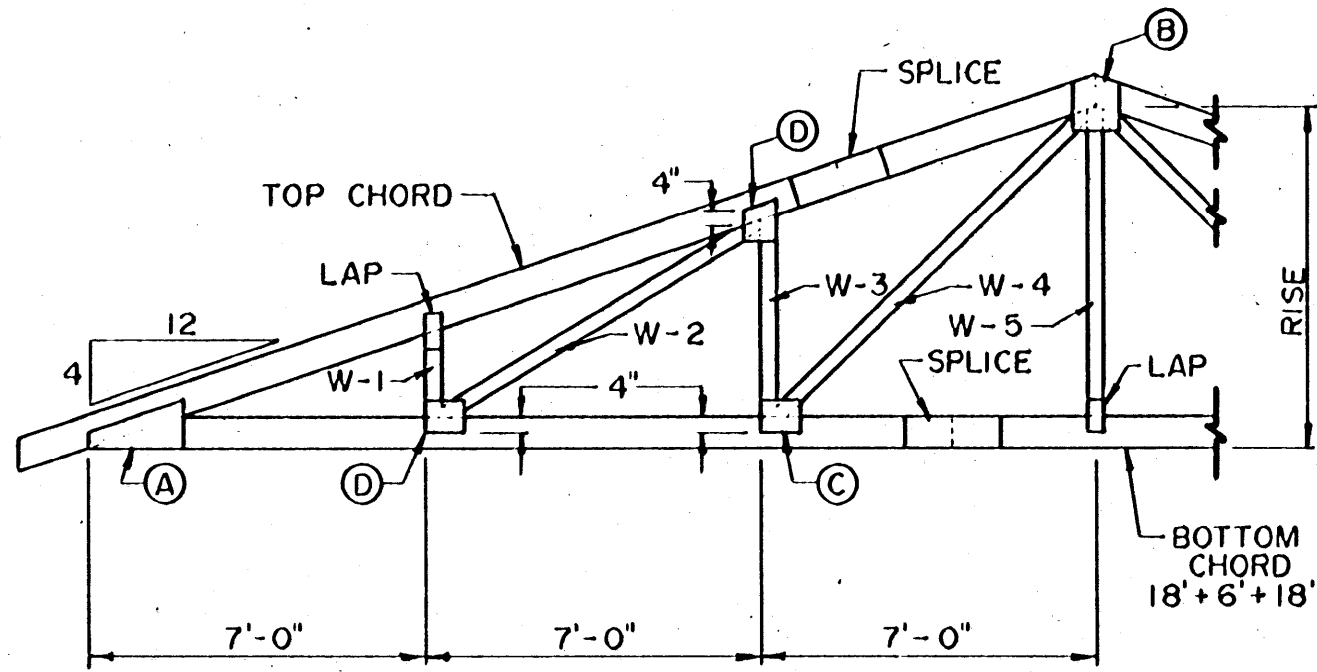
MINN. '78	6292	SHEET 1 OF 7
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BASED ON: UNIV. OF MINN. PLAN



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**FREE STALL DAIRY BARN**  
 40 COW  
 MINN. '78 | 6292 | SHEET 2 OF 7

42' span, 4 - web



4/12 SLOPE

4' TRUSS SPACING

42' SPAN,  
4 - WEB

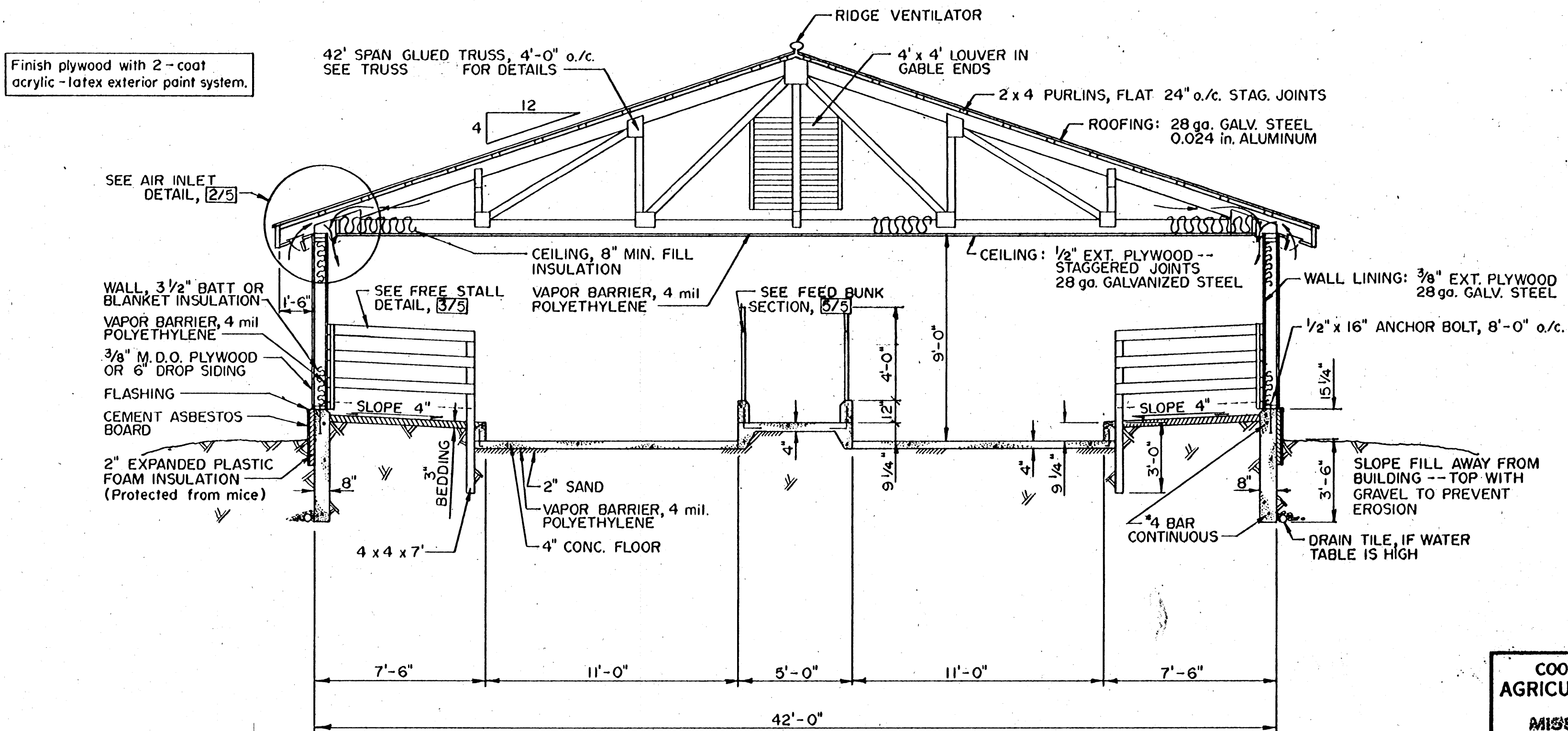
GUSSET SIZES, in.

DEAD LOAD	SNOW ZONE	LUMBER TYPE	TOP CHORD	BOTTOM CHORD	A T, H, W,	B H, W,	C H, W,	D H, W,	W2	W1 AND W5 ARE 2 x 4'S W3	W4	CRANE LOAD lbs.
MED	III	DOUG	2 x 8	2 x 6	1/2"x4"x24"	12"x12"	8"x10"	8"x8"	2x4	2 x 4	2x4	1921

ROOF SLOPE	RISE	TOP CHORD	W1	W2	W3	W4	W5
4/12	7'-0"	18'+6'	2'	8'	5'	10'	7'

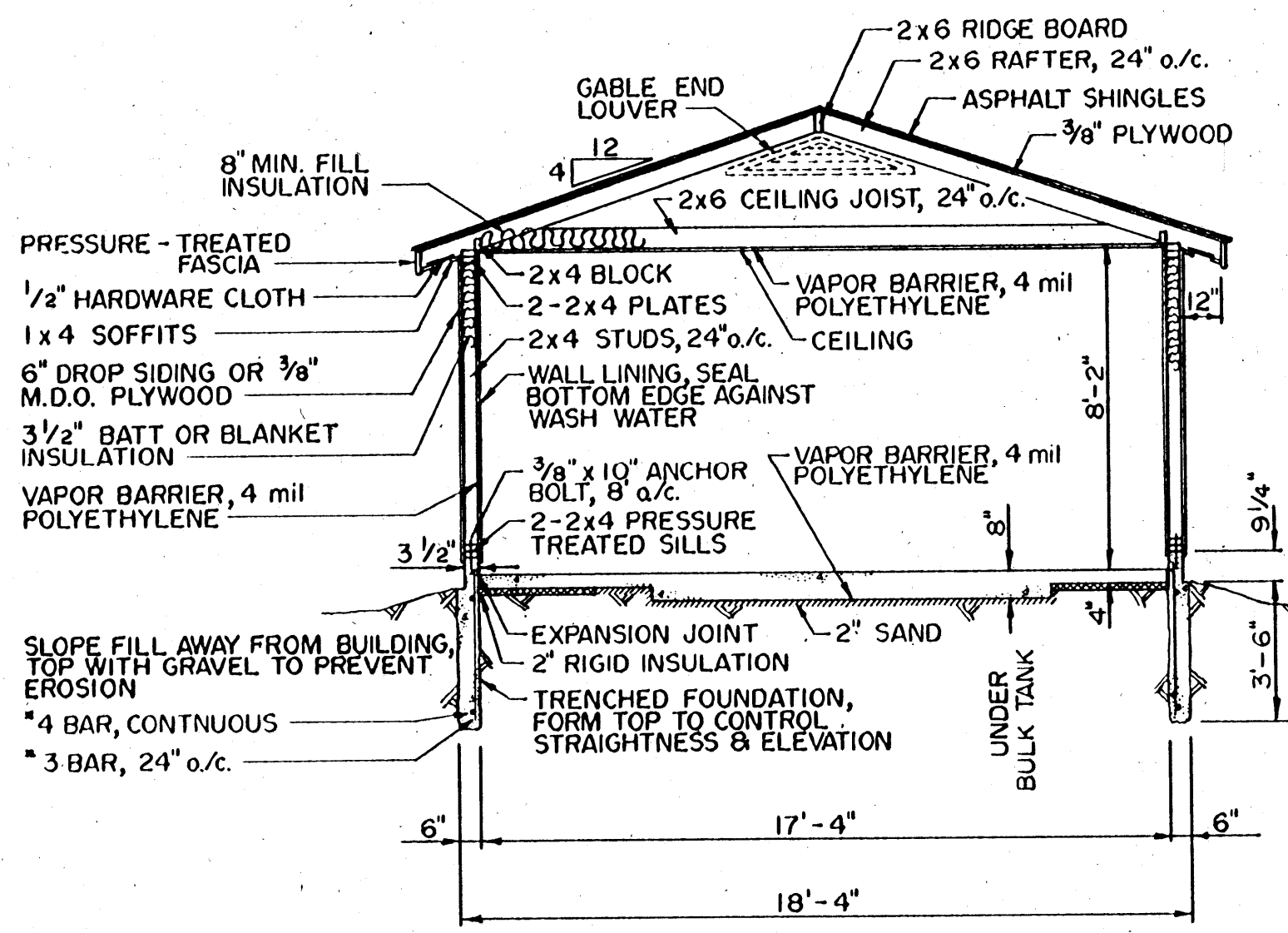
Gussets B, C, and D are 3/8" thick plywood.

GLUED TRUSSES



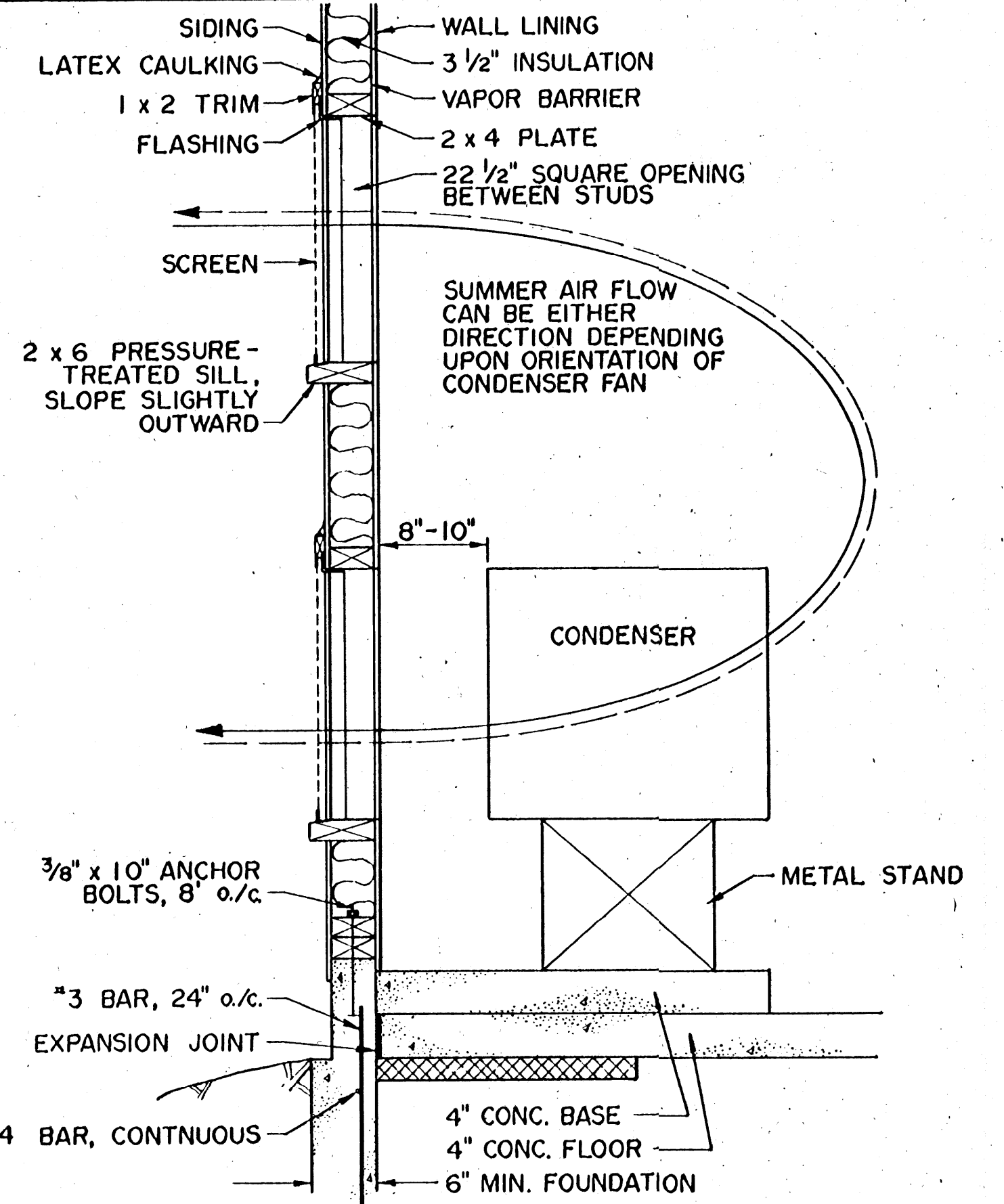
WALL SECTION 1/3  
SCALE - 1/4" = 1'-0"

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**FREE-STALL DAIRY BARN**  
40 COW  
MINN. '78 6292 SHEET 3 OF 7

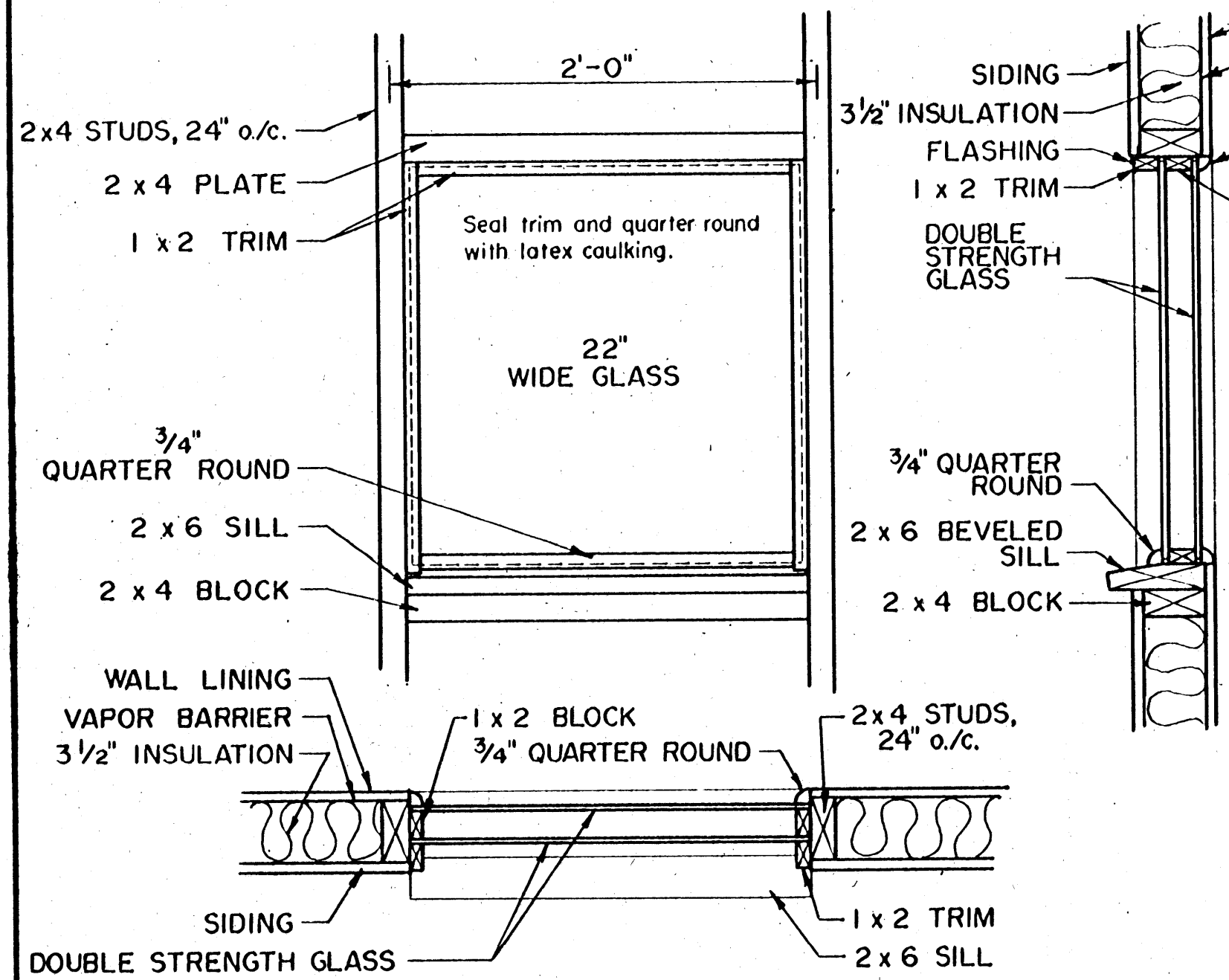


**WALL SECTION 1/4**  
SCALE - 1/4" = 1'-0"

- CEILING ALTERNATIVES:**
- 3/8" M.D.O. Plywood, painted, staggered joints, anchor with 6d nails
  - Fiberglass reinforced plastic surface laminated on 3/8" Ext. Plywood, install similar to 3/8" M.D.O. Plywood
  - 0.024 in. Aluminum
  - 28 ga. Galv Steel, with baked on paint
  - 3/8" Ext. Plywood, painted
- WALL LINING ALTERNATIVES:**
- 28 ga. Galv Steel, with baked on paint, over 3/8" Plywood
  - Structural Glazed Tile
  - Fiberglass Reinforced Polyester Resin Board
  - Fiberglass reinforced plastic surface laminated on 3/8" Ext. Plywood
  - 3/8" M.D.O. Plywood, painted
  - 3/8" Ext. Plywood, painted
  - USE GALV. NAILS EXCEPT WITH ALUMINUM.
  - Finish M.D.O. and Ext. Plywood with 2 coat acrylic-latex exterior paint system.



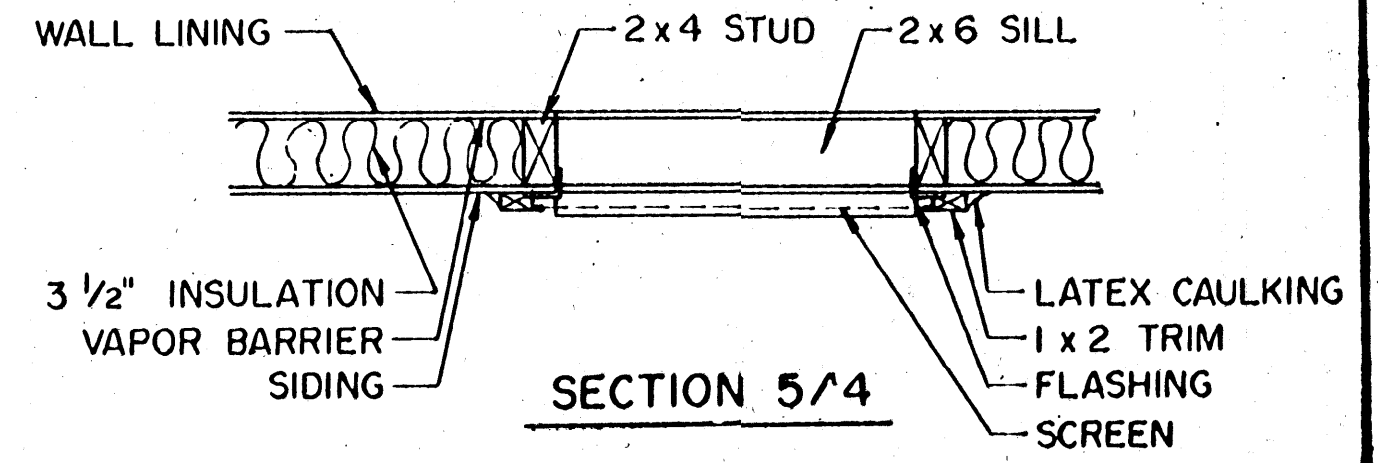
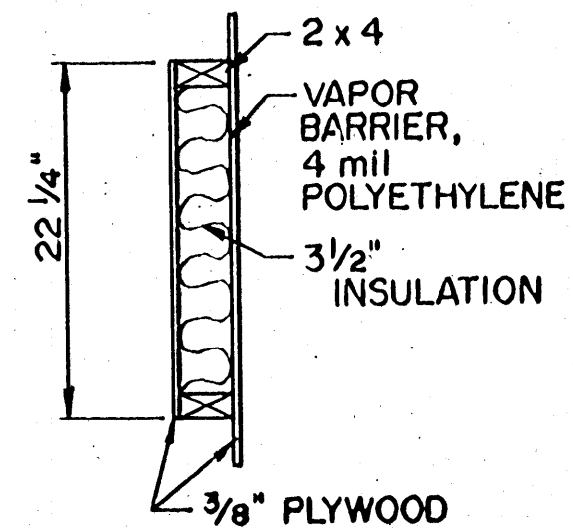
**CONDENSER VENTILATION DETAIL 3/4**  
SCALE - 1" = 1'-0"



**FIXED WINDOW FRAMING 2/4**  
SCALE - 1 1/2" = 1'-0"

**REMOVABLE WALL PANEL 4/4**  
SCALE - 1" = 1'-0"

Install in screened opening in cold weather so condenser heat remains in milkhouse.



**SECTION 5/4**

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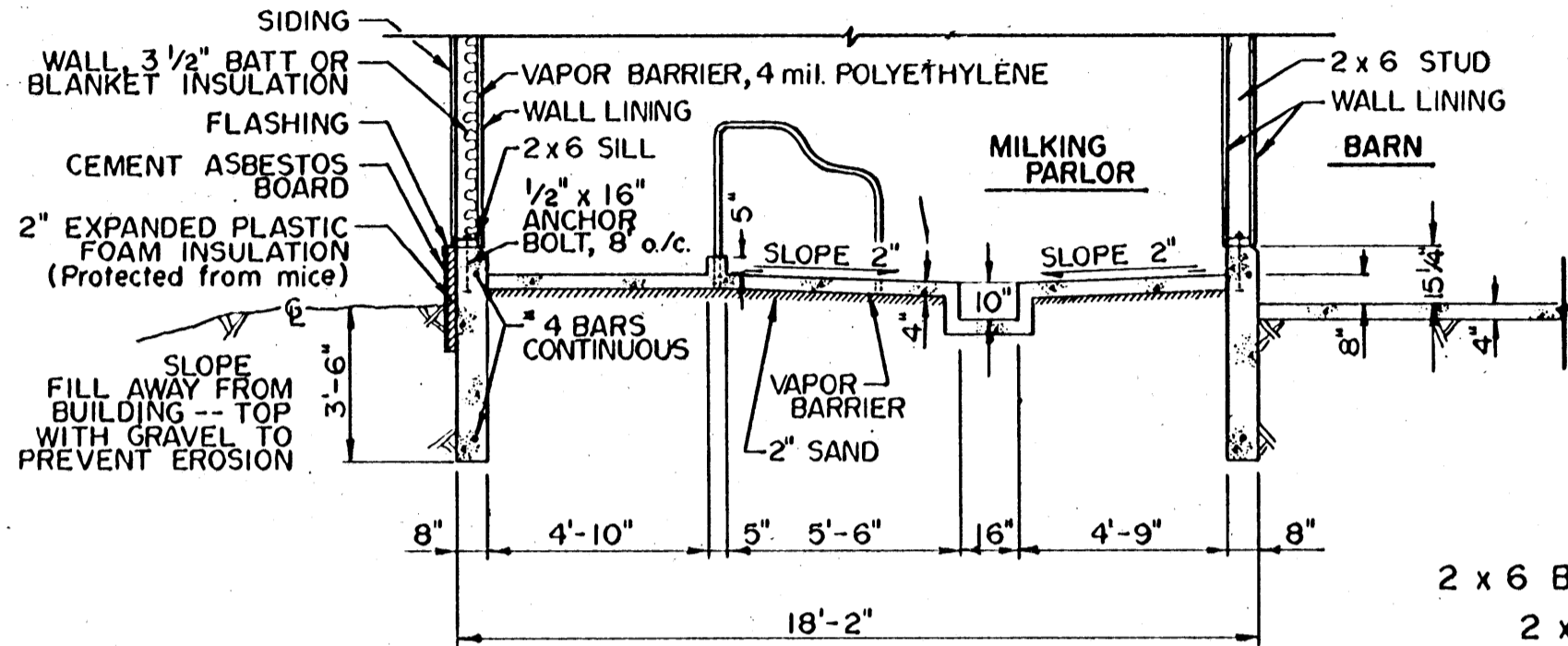
**FREE-STALL DAIRY BARN**  
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FINISH PLYWOOD WITH 2-COAT  
ACRYLIC-LATEX EXTERIOR PAINT SYSTEM.

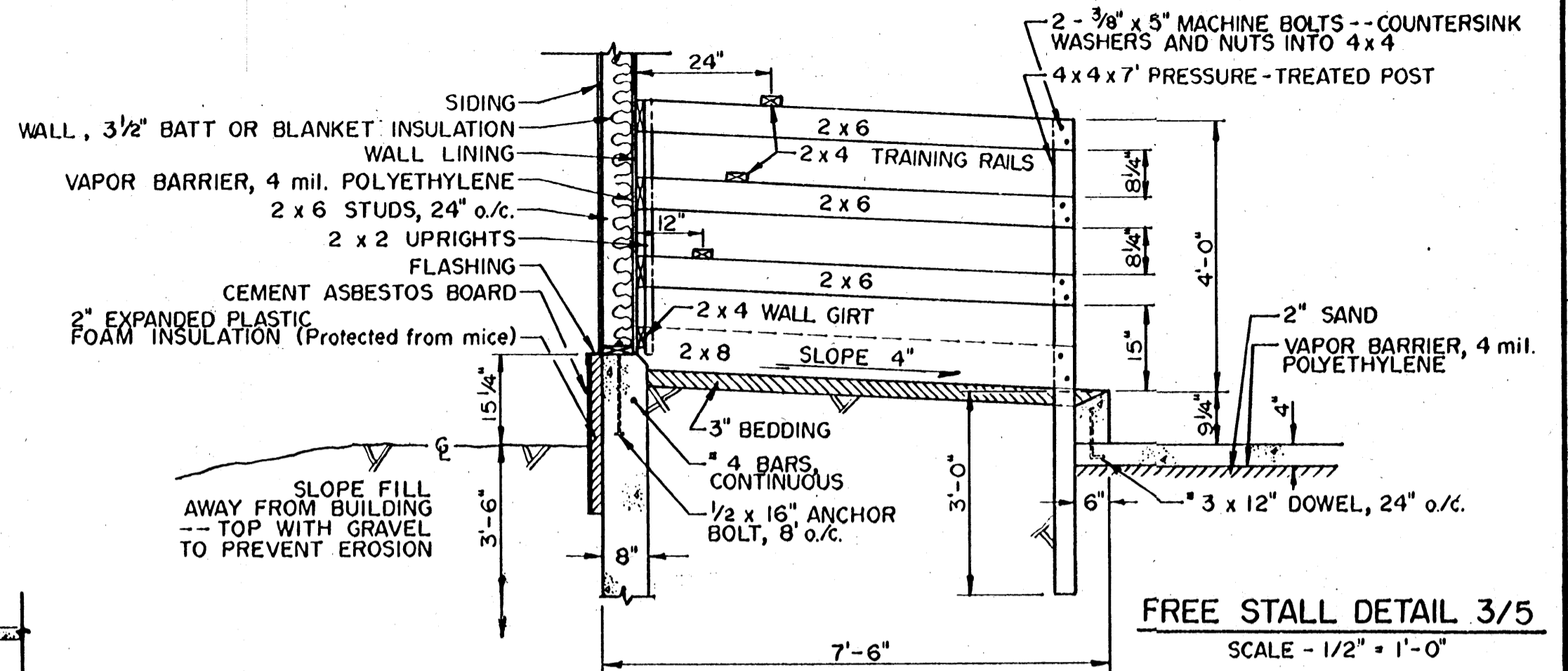
WALL LINING:  $\frac{3}{8}$ " EXT. PLYWOOD  
28 ga. GALV. STEEL

SIDING:  $\frac{3}{8}$ " M.D.O. PLYWOOD  
6" DROP SIDING



**WALL SECTION 1/5**

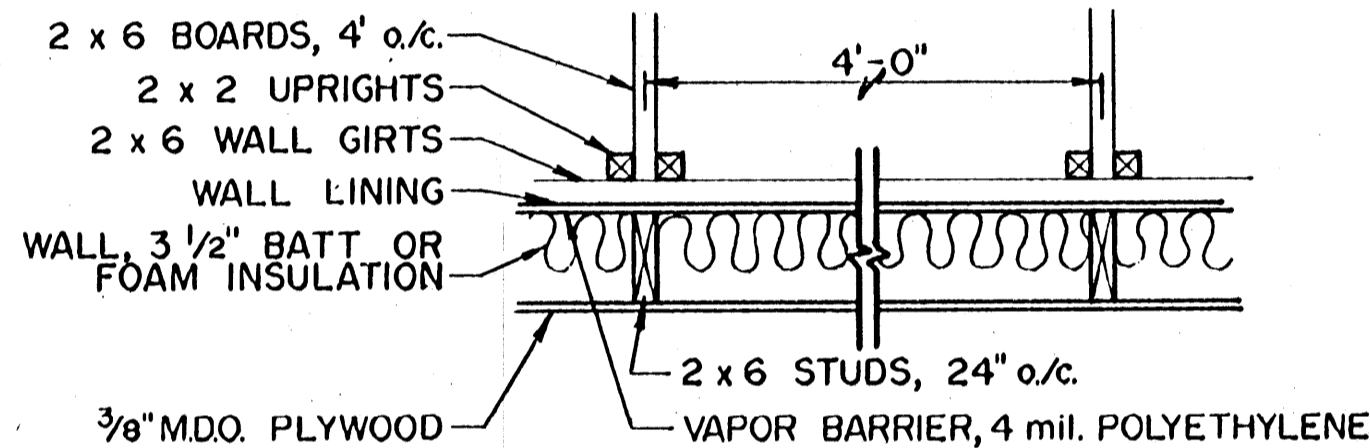
SCALE -  $\frac{1}{4}$ " = 1'-0"



**FREE STALL DETAIL 3/5**

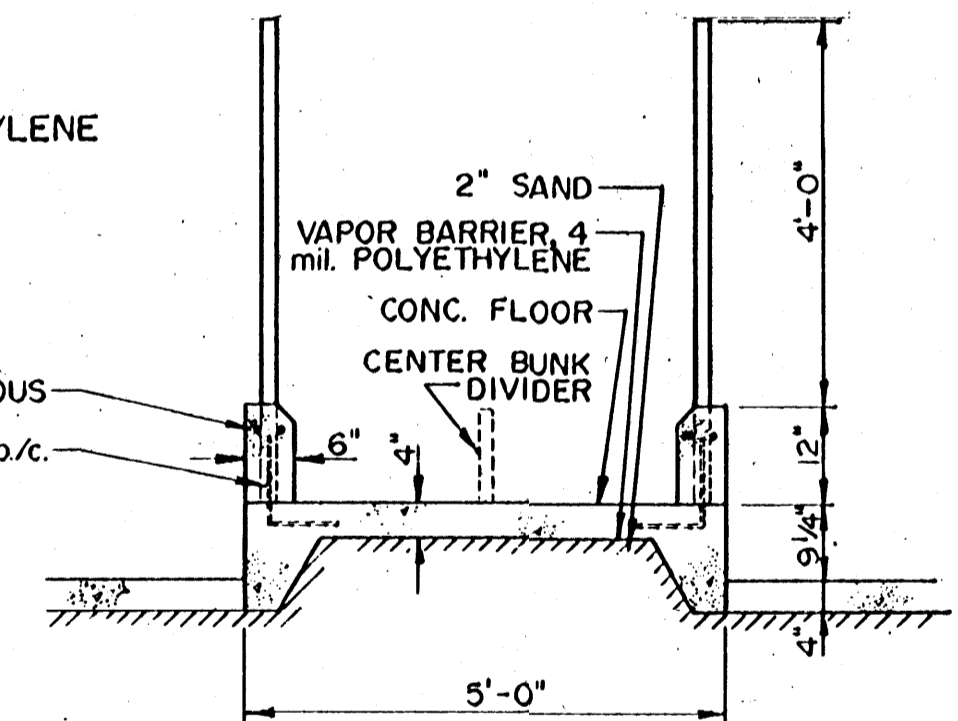
SCALE -  $\frac{1}{2}$ " = 1'-0"

INSTALL 2x4 TRAINING RAILS IF COWS TURN AROUND IN STALLS OR DEPOSIT MANURE AT BACK OF STALL - 3 RAILS WILL FORCE THE COW TO MOVE BACK AS IT GETS UP SO ITS SHOULDERS CAN'T GET CAUGHT UNDER THE TOP RAILS. INSTALL 2x8 BOTTOM STALL PARTITION BOARD TO PREVENT COWS FROM DIGGING HOLES IN EARTH STALL BOTTOMS.



**WALL CONNECTION 4/5**

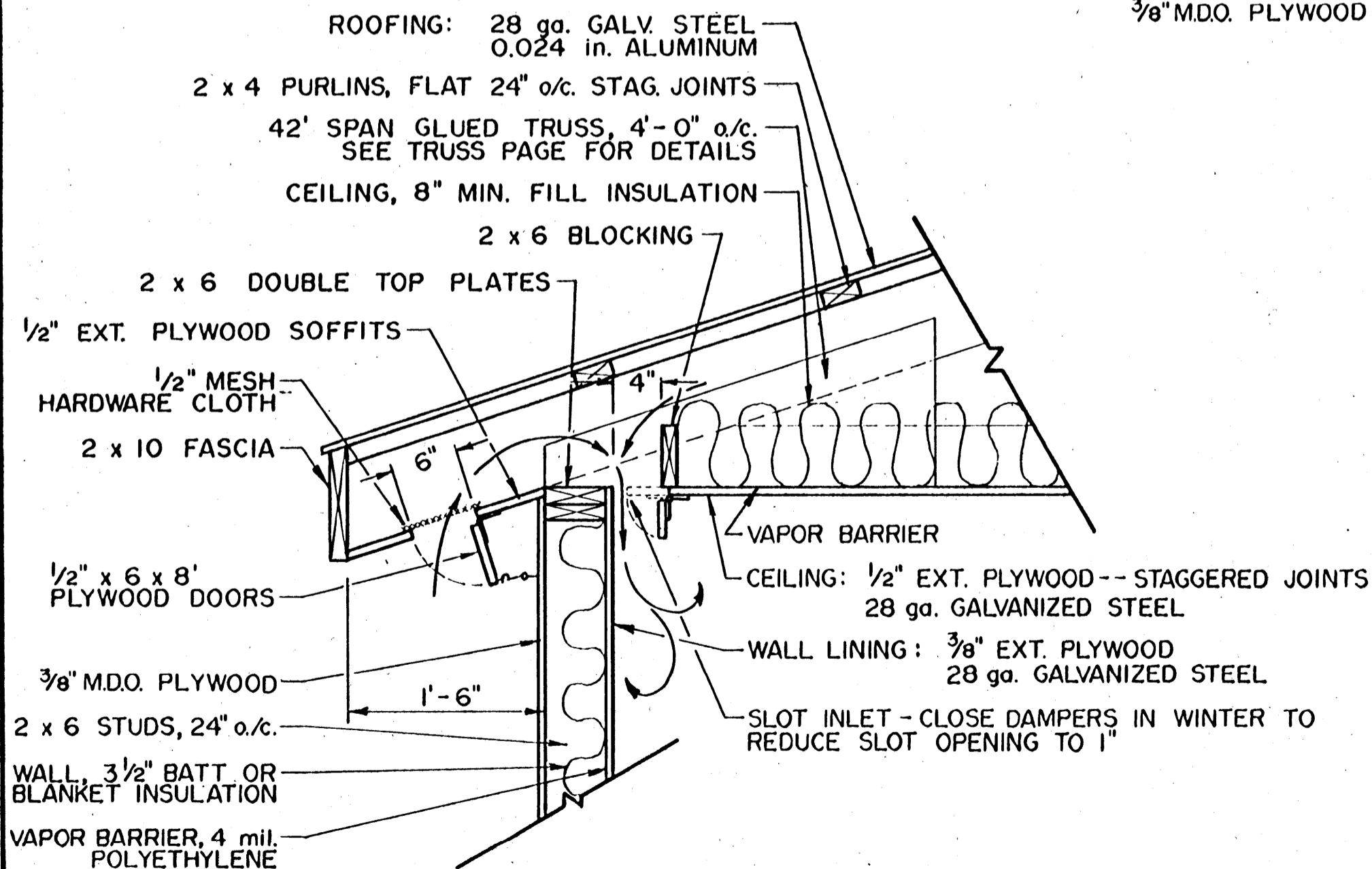
SCALE - 1" = 1'-0"



**FEEDBUNK CROSS SECTION 5/5**

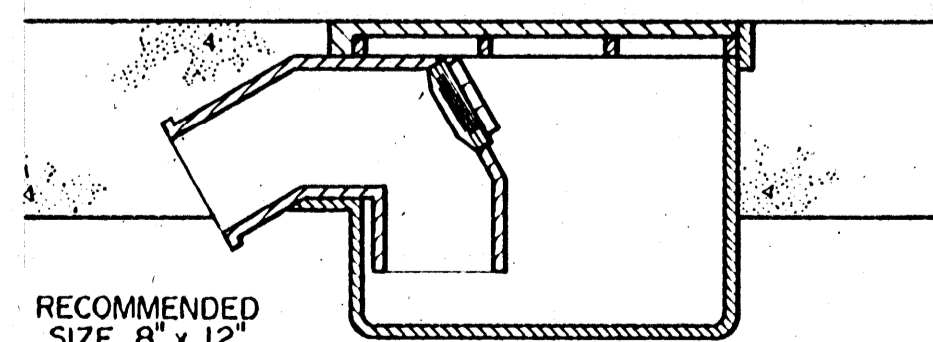
SCALE -  $\frac{1}{2}$ " = 1'-0"

Install center bunk divider if herd is divided and fed different rations.



**AIR INLET DETAIL 2/5**

SCALE - 1" = 1'-0"



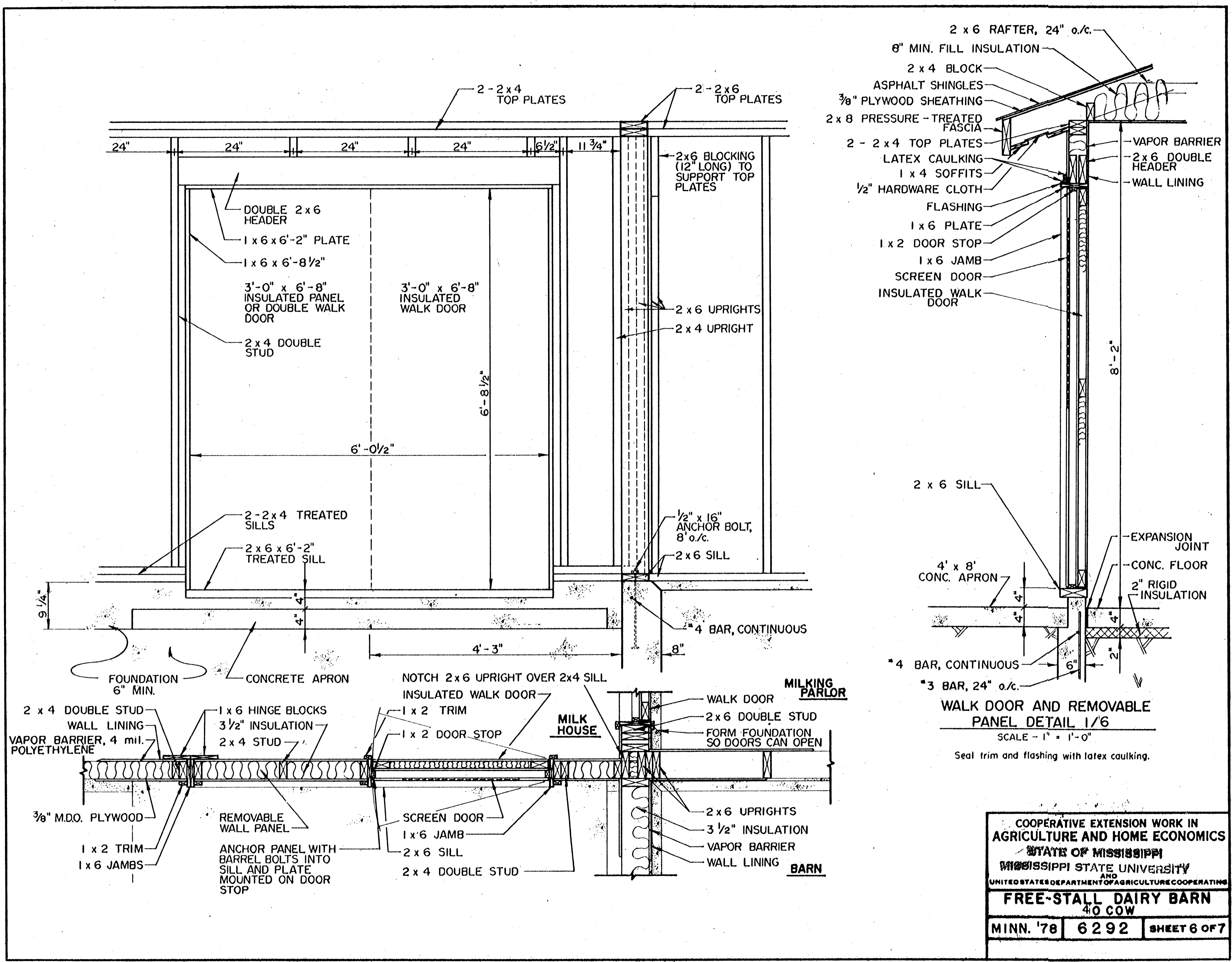
**DEEP SEAL FLOOR DRAIN 6/5**

SCALE - 3" = 1'-0"

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- 2 x 6 RAFTER, 24" o.c.
- 8" MIN. FILL INSULATION
- 2 x 4 BLOCK
- ASPHALT SHINGLES
- 3/8" PLYWOOD SHEATHING
- 2 x 8 PRESSURE-TREATED FASCIA
- 2 - 2 x 4 TOP PLATES
- LATEX CAULKING
- 1 x 4 SOFFITS
- 1/2" HARDWARE CLOTH
- FLASHING
- 1 x 6 PLATE
- 1 x 2 DOOR STOP
- 1 x 6 JAMB
- SCREEN DOOR
- INSULATED WALK DOOR
- VAPOR BARRIER
- 2 x 6 DOUBLE HEADER
- WALL LINING

- 2 x 6 SILL
- 4' x 8' CONC. APRON
- EXPANSION JOINT
- CONC. FLOOR
- 2" RIGID INSULATION
- 4 BAR, CONTINUOUS
- 3 BAR, 24" o.c.

**WALK DOOR AND REMOVABLE PANEL DETAIL 1/6**

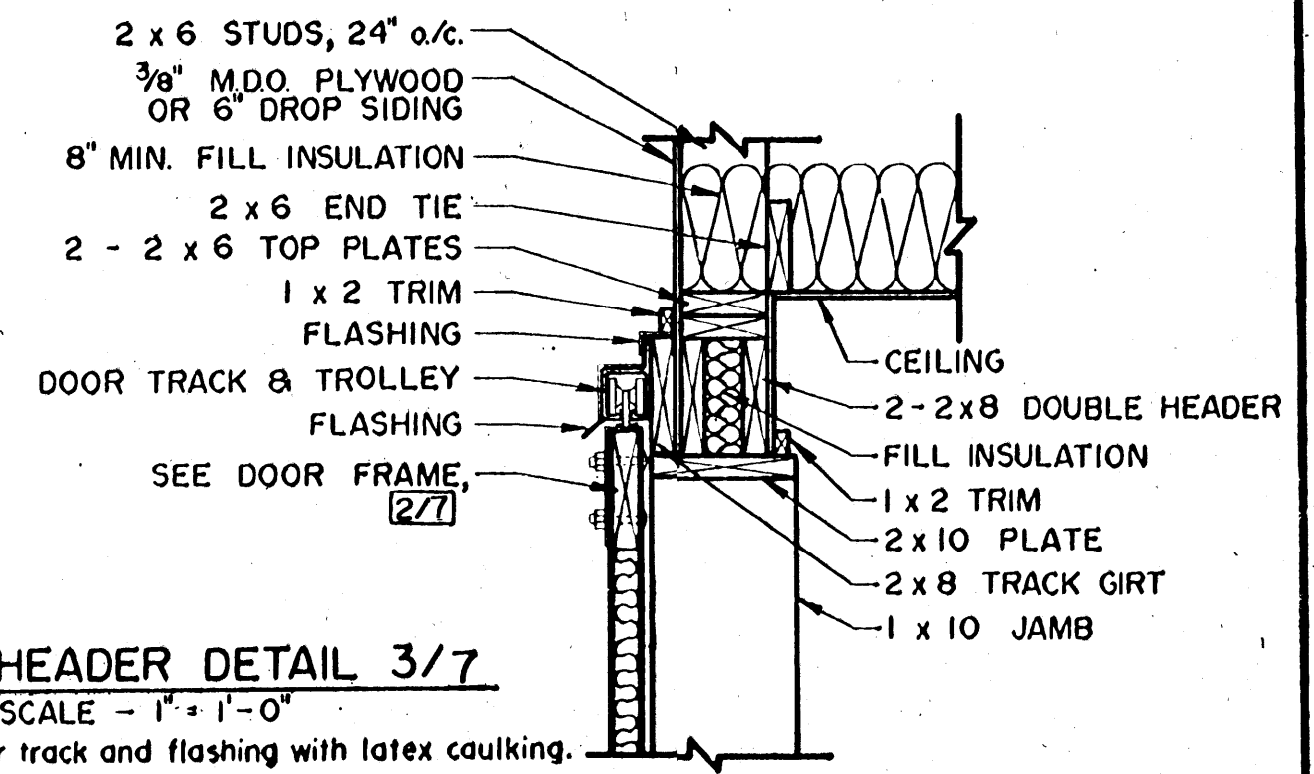
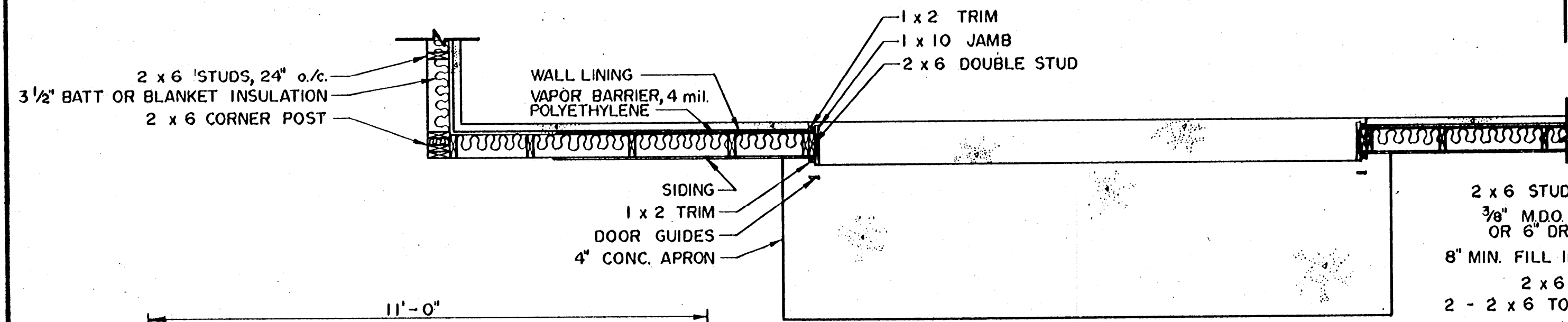
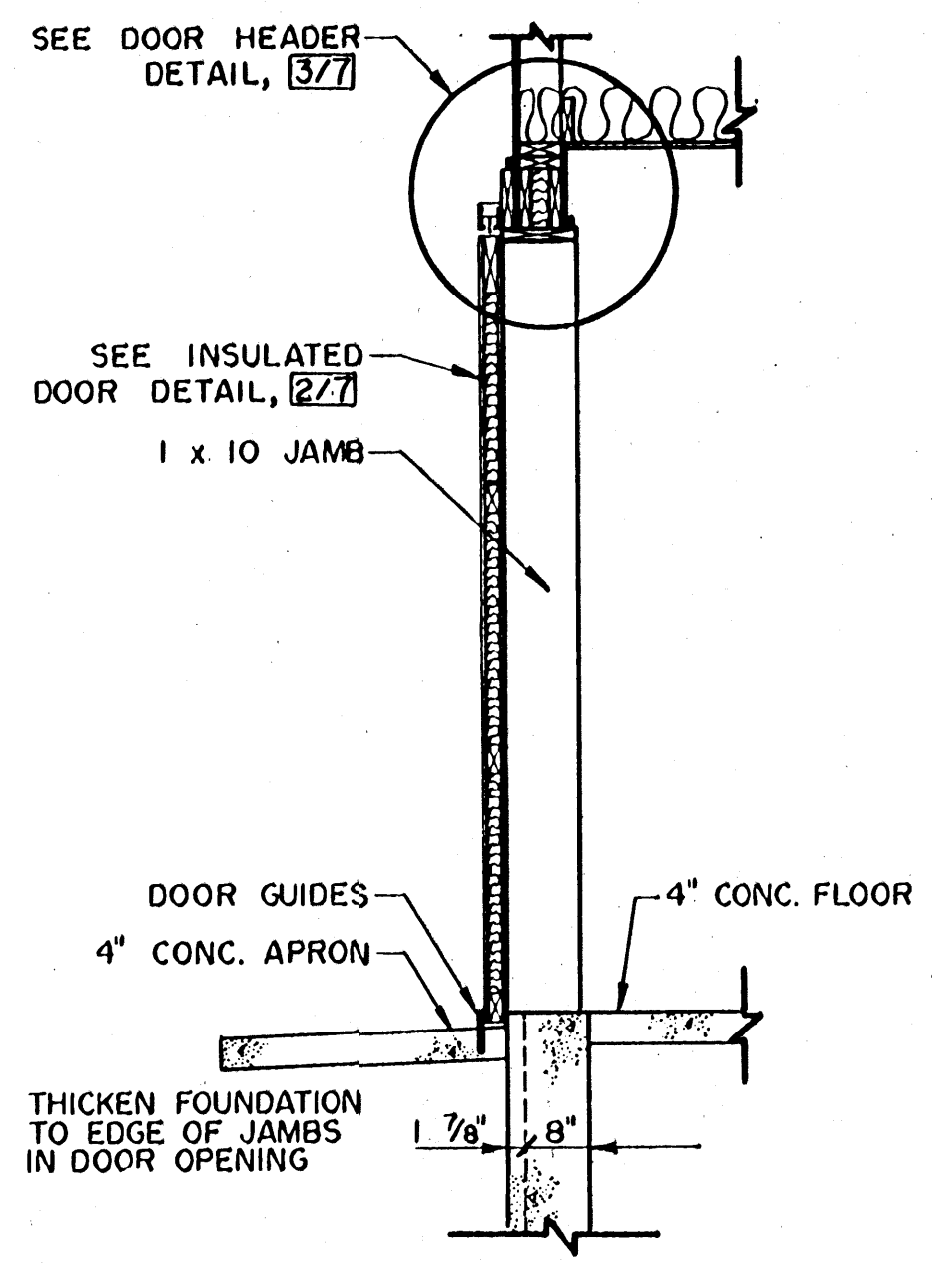
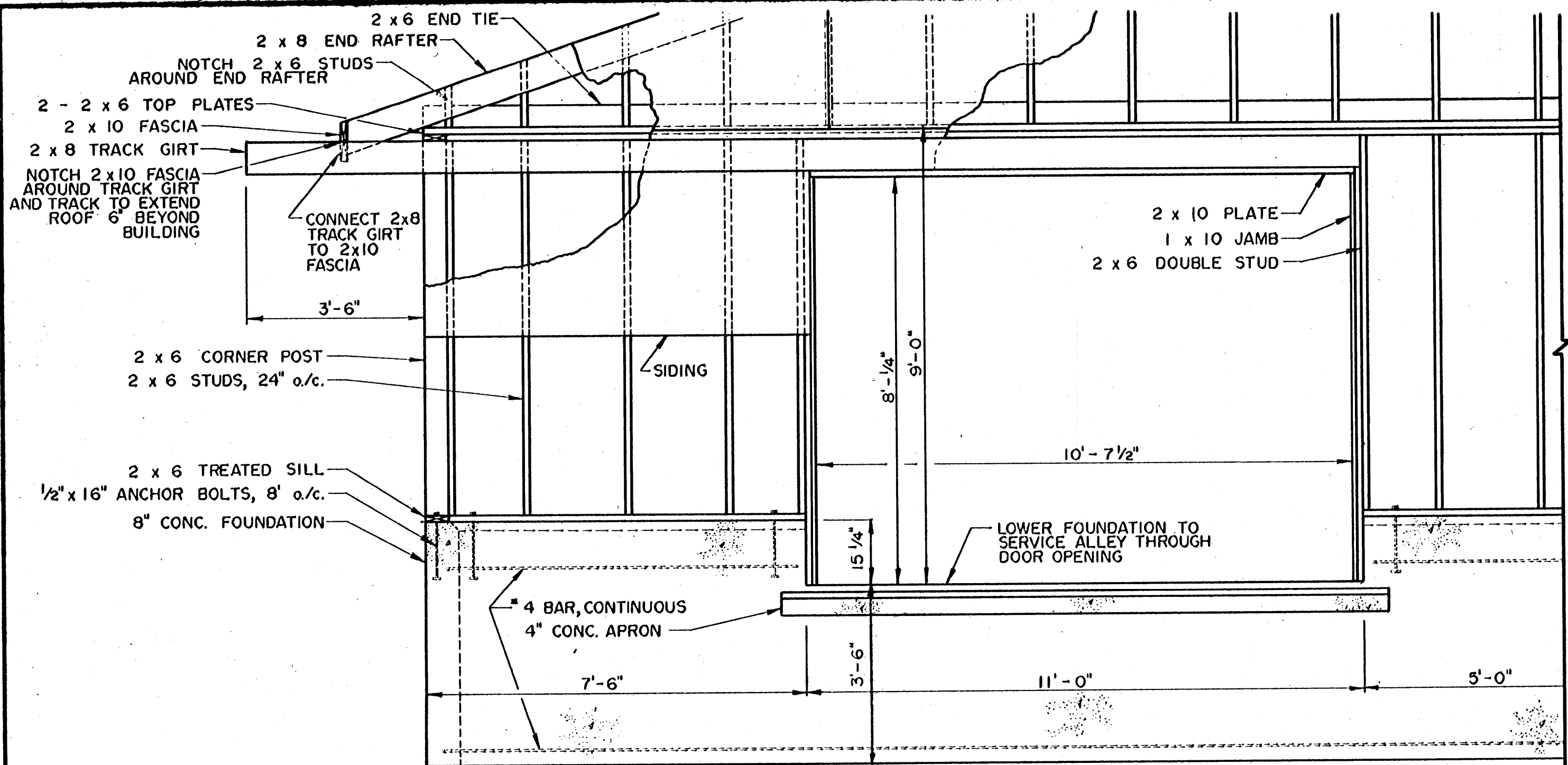
SCALE - 1" = 1'-0"

Seal trim and flashing with latex caulking.

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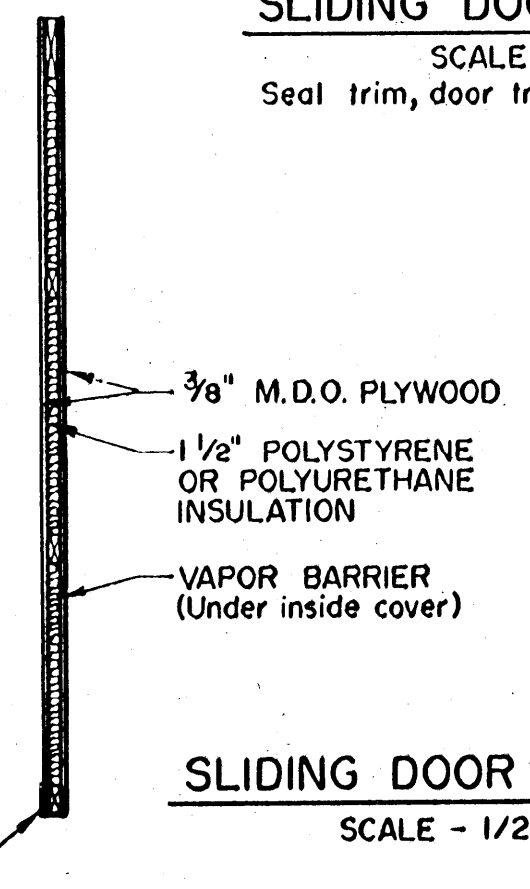
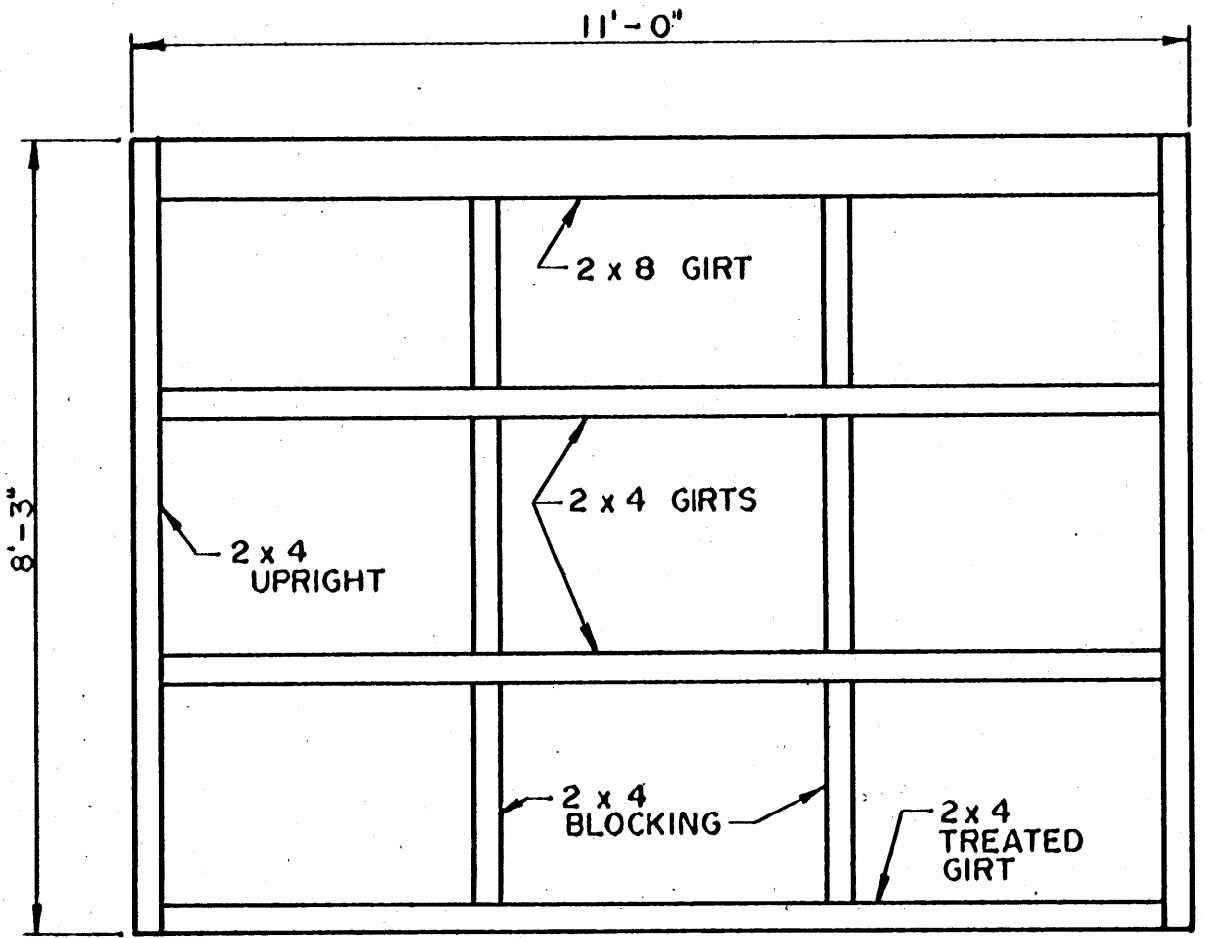
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**SLIDING DOOR FRAMING 1/7**

SCALE - 1/2" = 1'-0"  
Seal trim, door track and flashing with latex caulking.



**SLIDING DOOR FRAME 2/7**

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

**DOOR HEADER DETAIL 3/7**

SCALE - 1" = 1'-0"  
Seal trim, door track and flashing with latex caulking.

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