




SLAT LENGTHS	
①	8'-10"
②	7'-4"
③	7'-0"

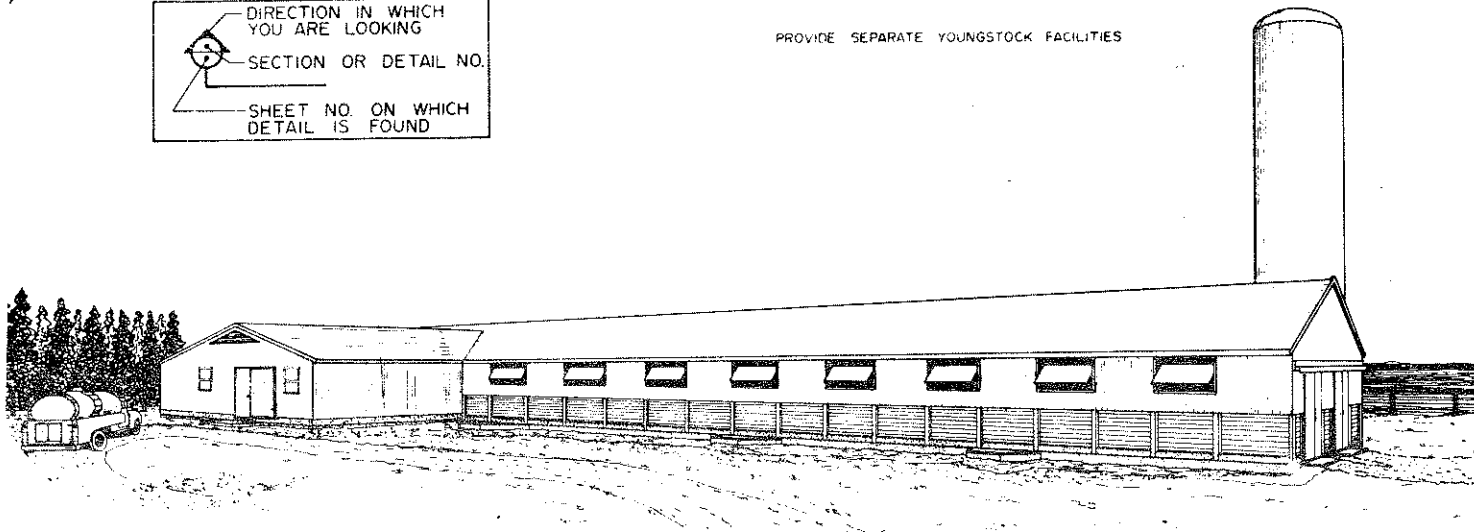
**FLOOR PLAN**

 DIRECTION IN WHICH YOU ARE LOOKING  
 SECTION OR DETAIL NO.  
 SHEET NO. ON WHICH DETAIL IS FOUND

PROVIDE SEPARATE YOUNGSTOCK FACILITIES

**NOTE: 300 DAY MANURE STORAGE SLAT FLOOR**

0 2' 4' 6' 8"  
12' 1' 3' 5' 7"



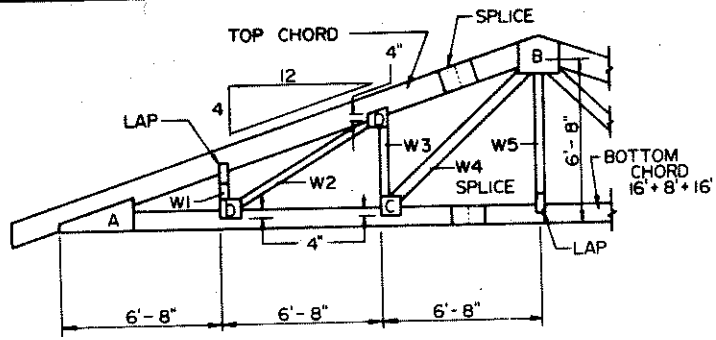
COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS

AND UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

**FREE-STALL DAIRY BARN**  
80 COW

MINN. '77 6281 SHEET 1 OF 12

BASED ON: UNIV. OF MINN. PLAN NO. C-1068



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

ROOF SLOPE	RISE	TOP CHORD	W1	W2	W3	W4	W5
4/12	6'-8"	19' + 4'	2'	8'	5'	9'	7'

4/12 SLOPE

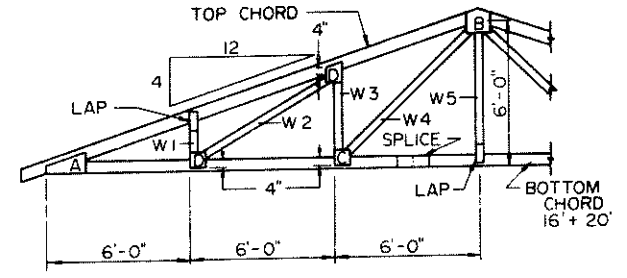
8' TRUSS SPACING

40' SPAN,  
4-WEB

DEAD LOAD	SNOW ZONE	LUMBER TYPE	TOP CHORD	BOTTOM CHORD	GUSSET SIZES, in.					W1 AND W5 ARE 2x4'S	W3	W4	CRANE LOAD lbs.
					A T, H, W,	B H, W,	C H, W,	D H, W,	W2				
LOW	III	Hem	2x12	2x10	1/2x4x36"	16'x20'	10'x10'	10'x10'	10'x10'	2x4	2x4	2x6	1239

40' span, 4-web

GLUED TRUSSES

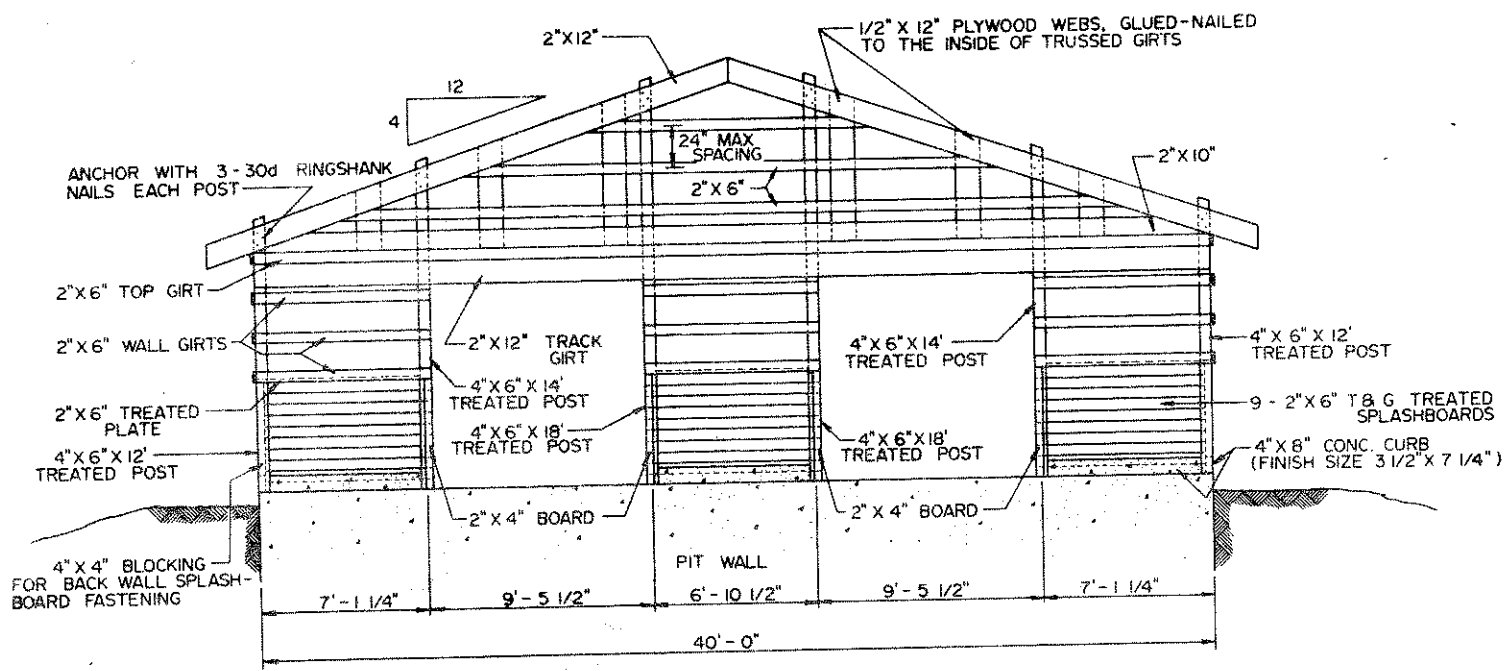


Gussets B, C, and D are 3/8" thick plywood.

ROOF SLOPE	RISE	TOP CHORD	W1	W2	W3	W4	W5
4/12	6'-0"	20'	2'	7'	4'	8'	6'

GLUED TRUSSES

36' span, 4-web



40' END WALL FRAMING 1/2

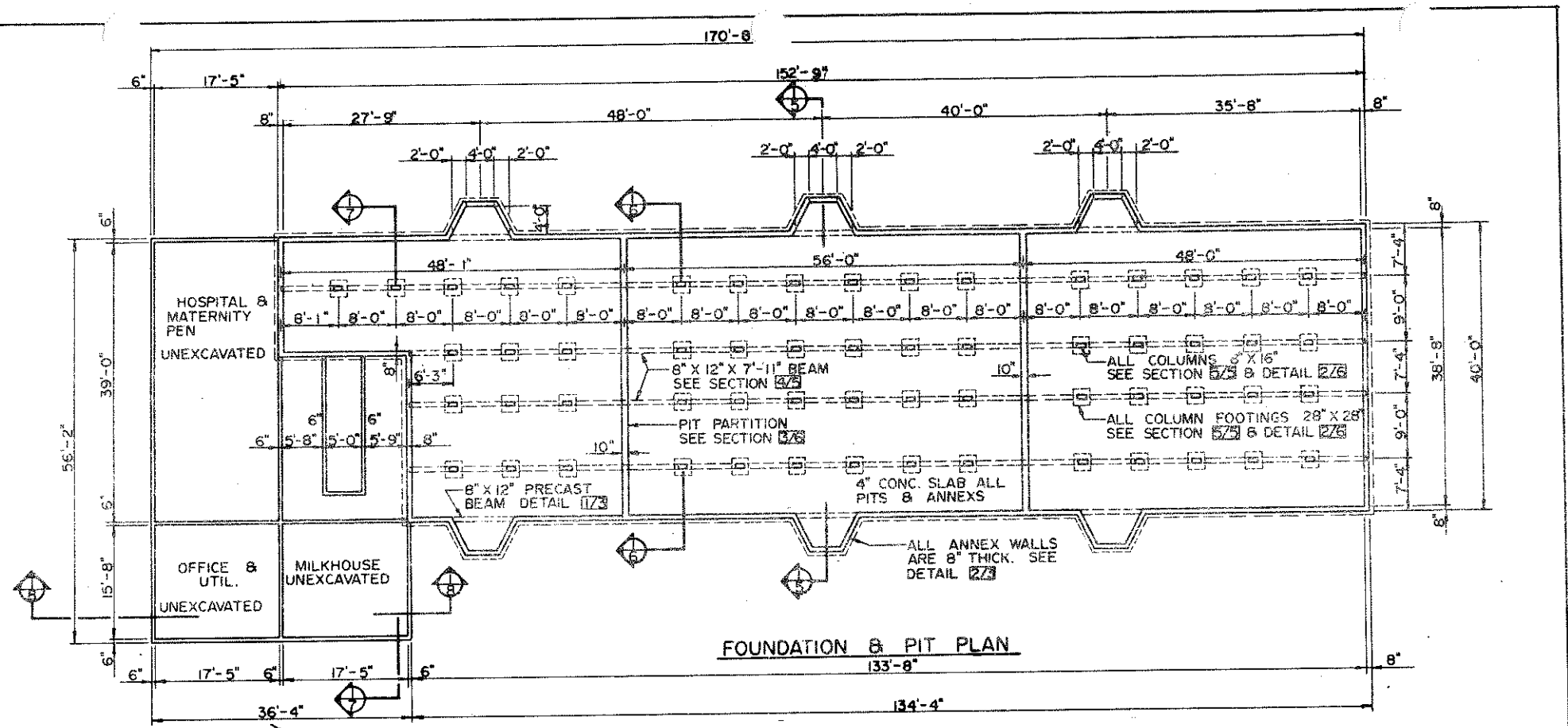


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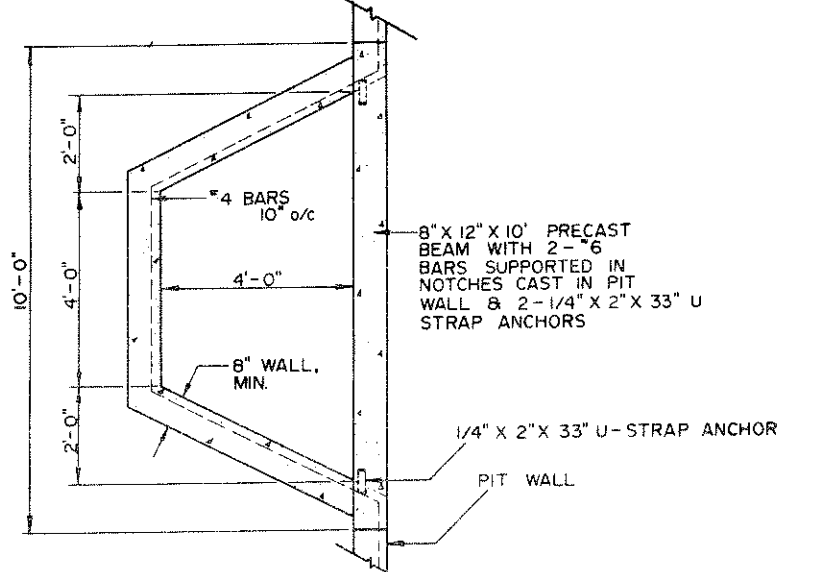
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**FREE-STALL DAIRY BARN**  
80 COW

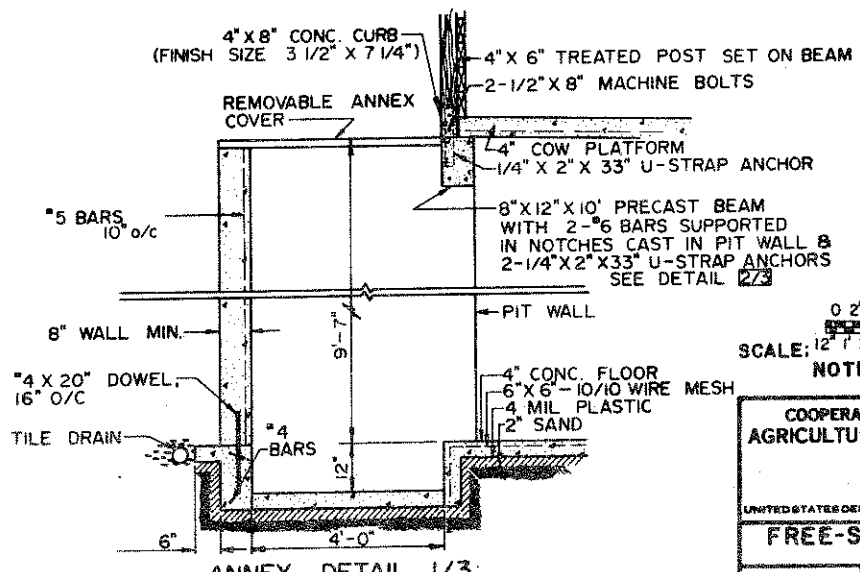
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**FOUNDATION & PIT PLAN**  
133'-8"  
134'-4"



**ANNEX SECTION 2/3**  
SCALE -



**ANNEX DETAIL 1/3**  
SCALE

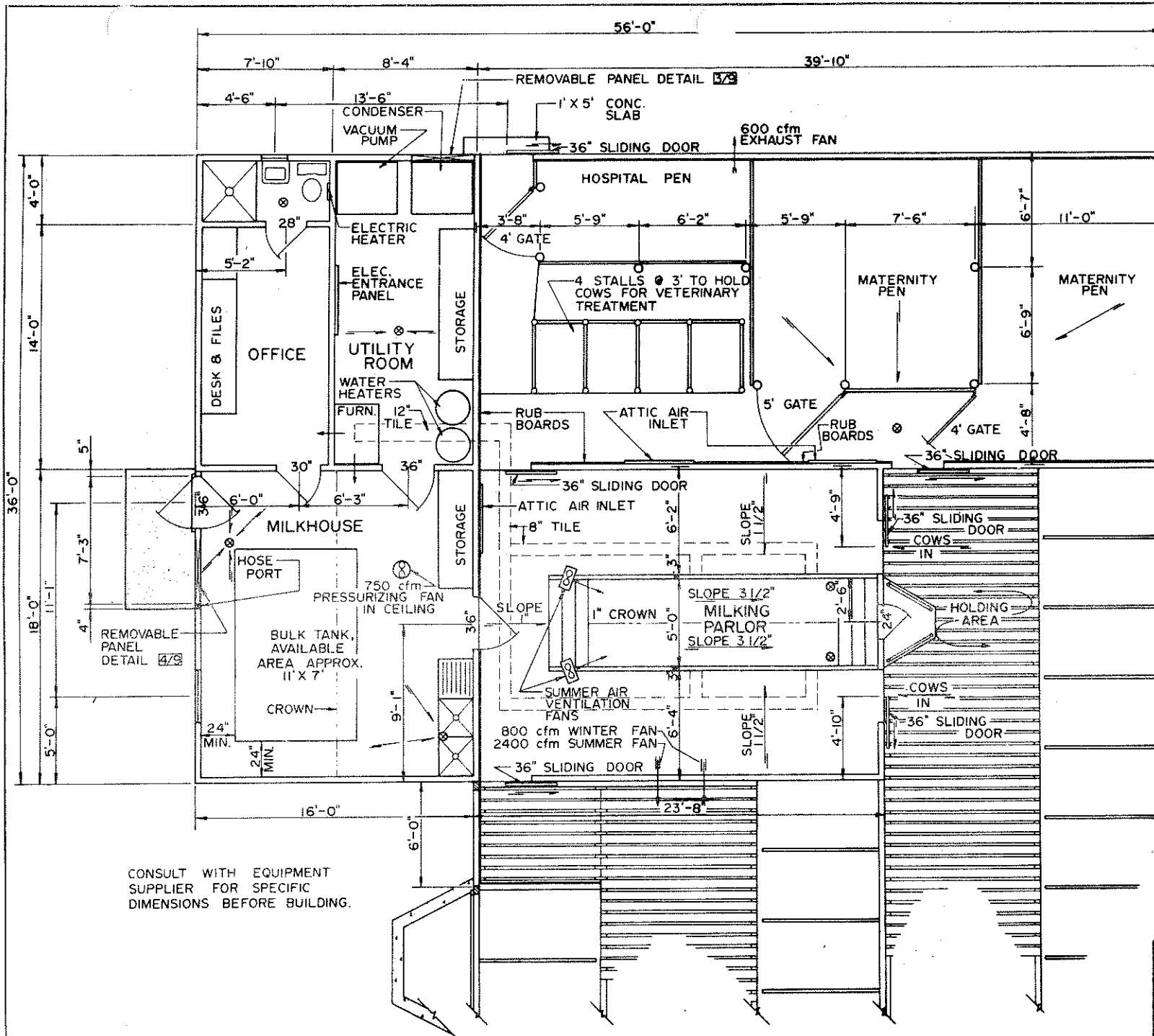
0 2' 4' 6' 8'  
SCALE: 1/2" = 1' 3 5/8" UNLESS OTHERWISE NOTED.

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**FREE-STALL DAIRY BARN**  
80 COW

MINN. '77 6 2 8 1 SHEET 3 OF 12



Milking parlor pit equipped with two suspended ceiling fans for air ventilation.

Control fans with manual switches. Use deep seal floor drains, ⊗. Install 2X12 rub board, centered 36" above floor, along walls cows have access to.

Heating—Duct 15 kw or 50,000 btu downdraft furnace under the floor to milker's alley, milkhouse office and hospital area. Locate cold air returns high in the wall from milking parlor, milkhouse and hospital area. Water heaters—used one 80 gal., 165°F and one 50 gal., 115°F.

Slopes:  
 Milking Parlor—1/4" / ft. to drain  
 Hospital Area—3" from walls to drain  
 Milkhouse—2" from walls and crown to drains  
 Utility—1" from walls to drain

Floor:  
 4" Concrete Slab, thicken to 8" under bulk tank.

Provide 6" to 8" step up from holding area to milking parlor and 2" step up from milking parlor to milkhouse and hospital area. A 1" to 2" sill from milkhouse to utility room, office and milking parlor also may be used to prevent washing between rooms.

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



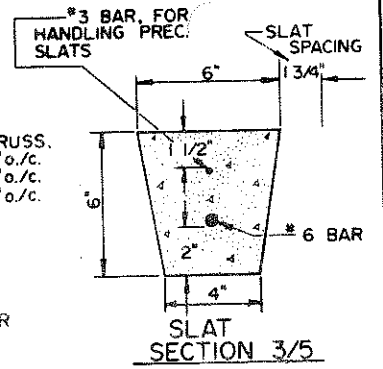
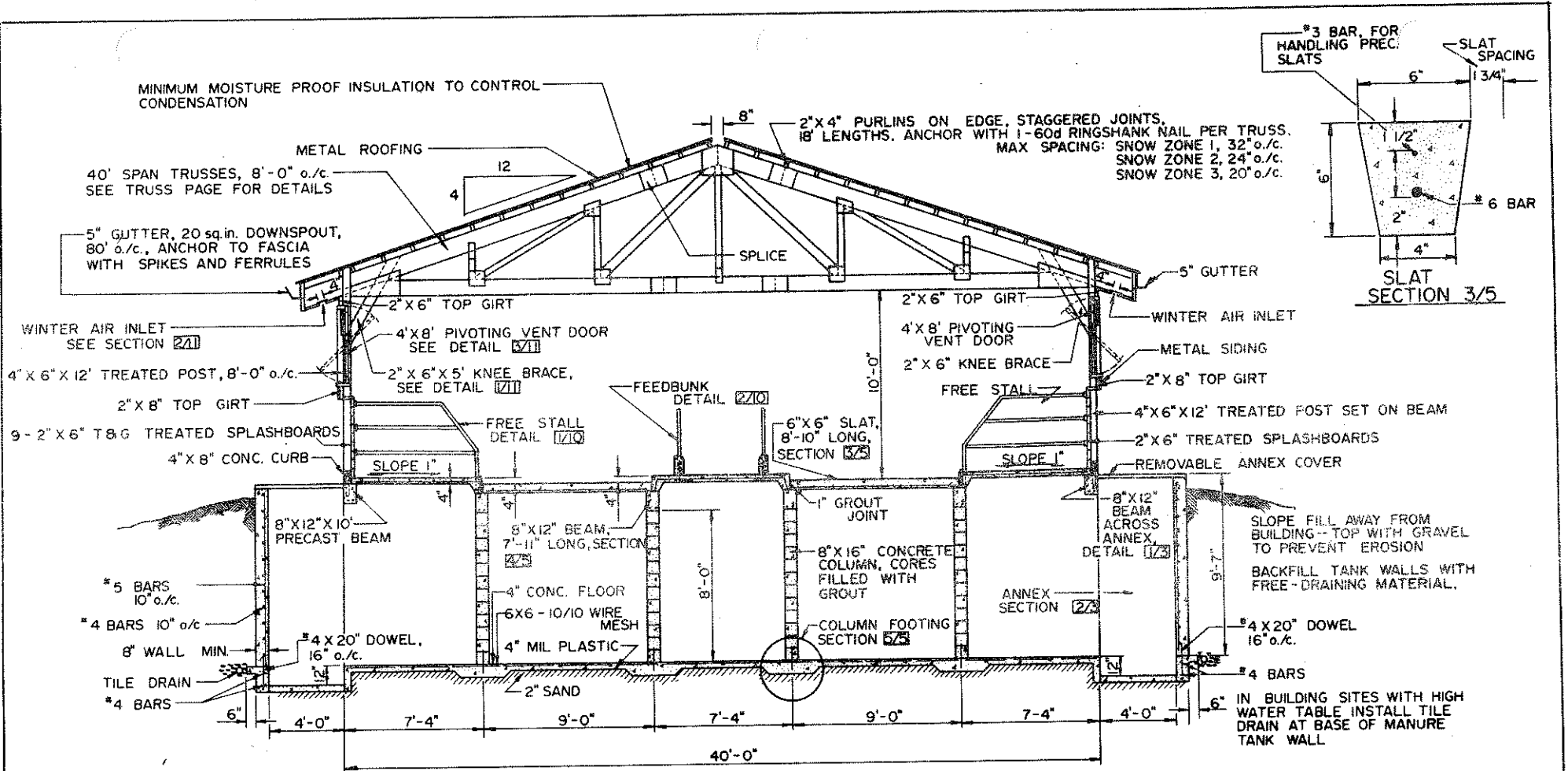
CONSULT WITH EQUIPMENT SUPPLIER FOR SPECIFIC DIMENSIONS BEFORE BUILDING.

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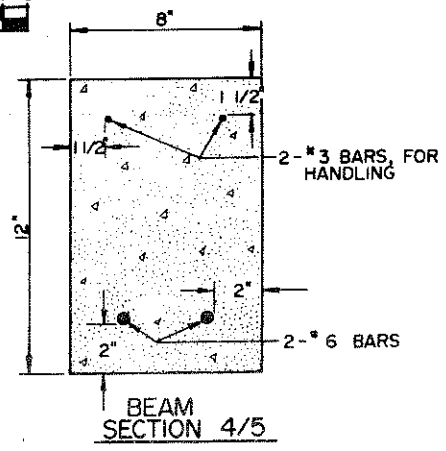
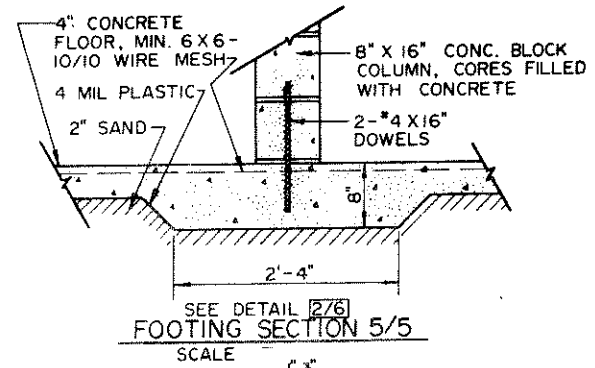
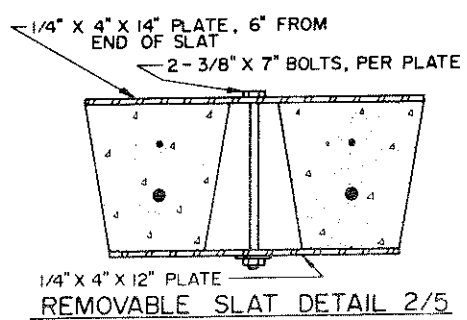
AND  
 UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

**FREE-STALL DAIRY BARN**  
 80 COW

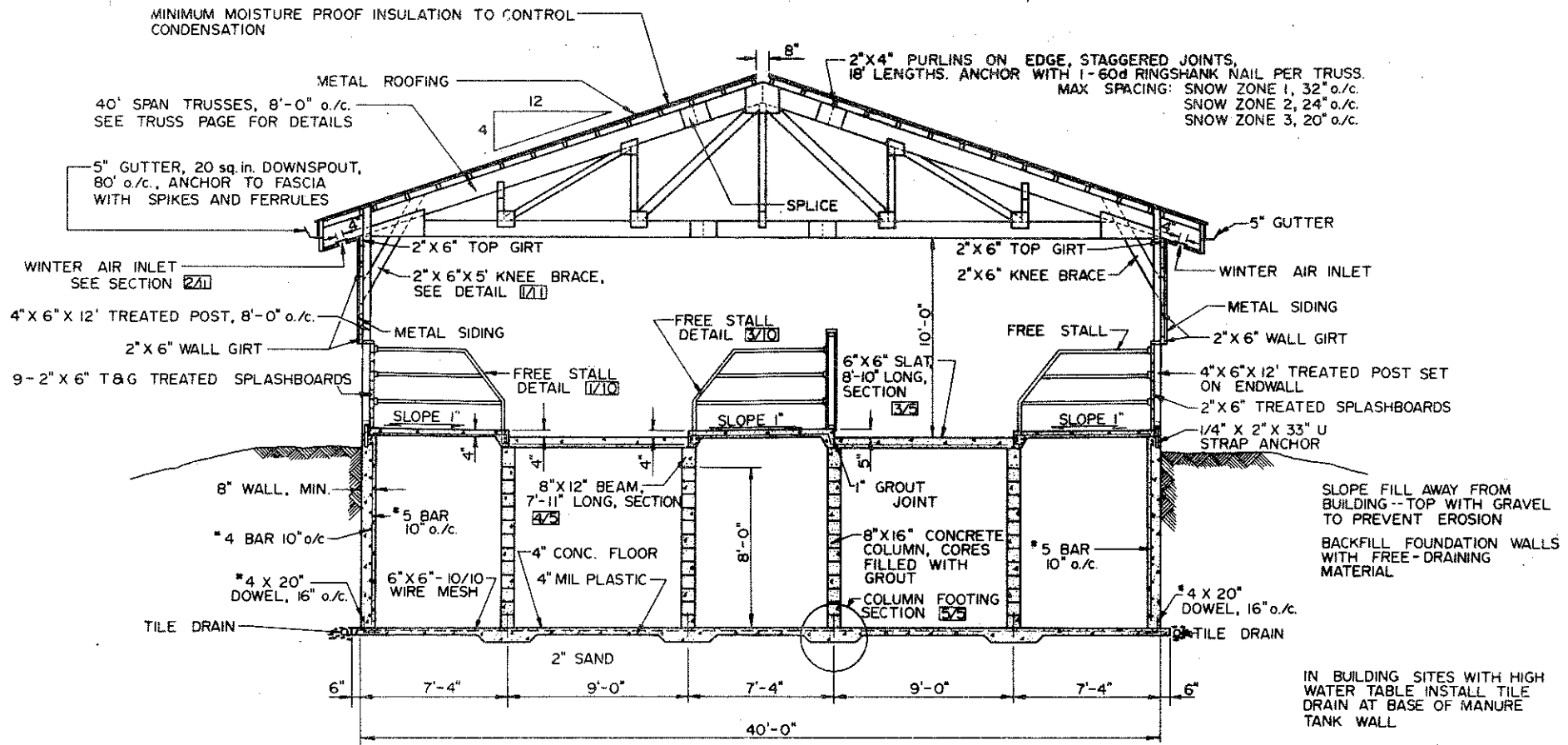
MINN. '77 | 6 2 8 1 | SHEET 4 OF 12



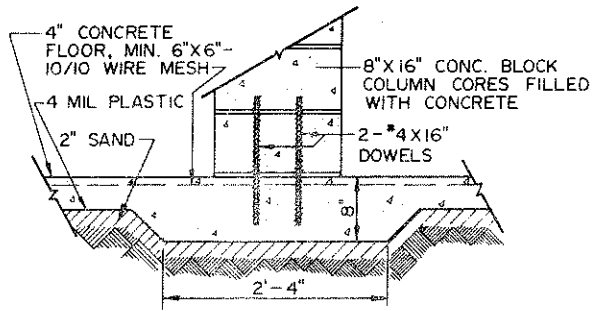
CROSS SECTION 1/5  
SCALE 1" = 2'-0"



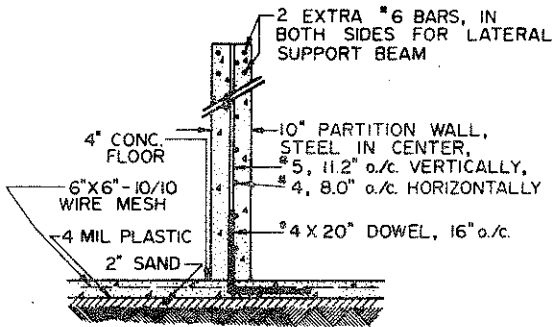
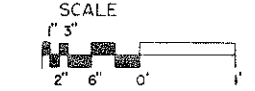
SCALE: UNLESS OTHERWISE NOTED.



CROSS SECTION 1/6



FOOTING DETAIL 2/6

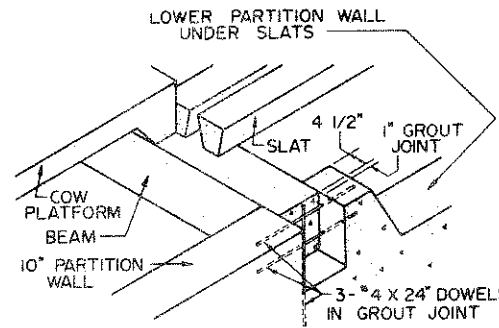
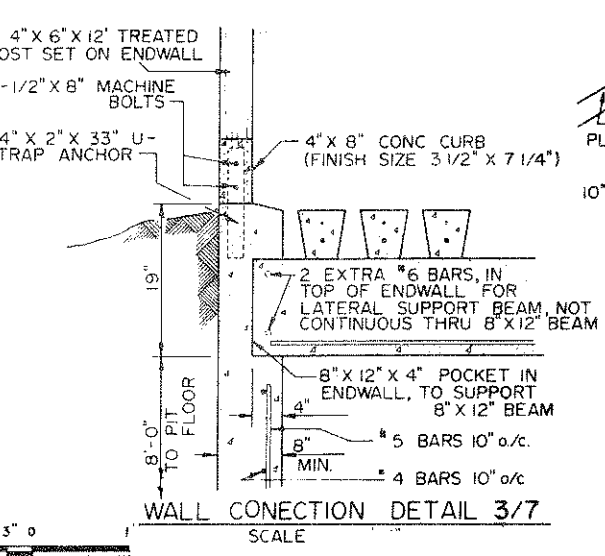
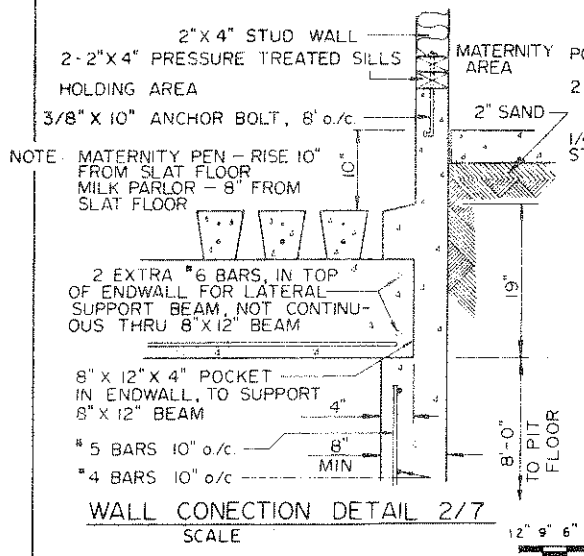
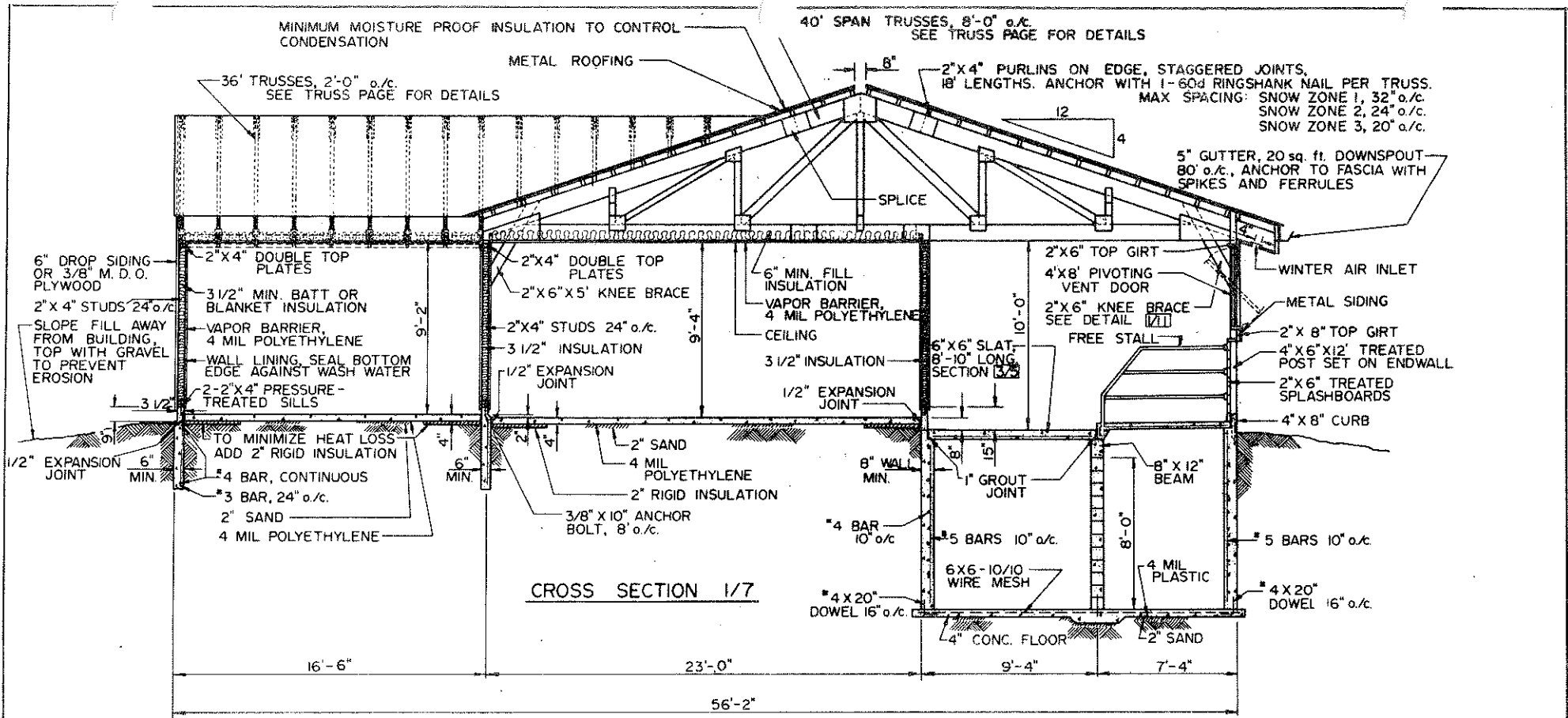


PARTITION WALL SECTION 3/6



SCALE: UNLESS OTHERWISE NOTED.

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FREE-STALL DAIRY BARN		
80 COW		
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**BEAM AND PARTITION**



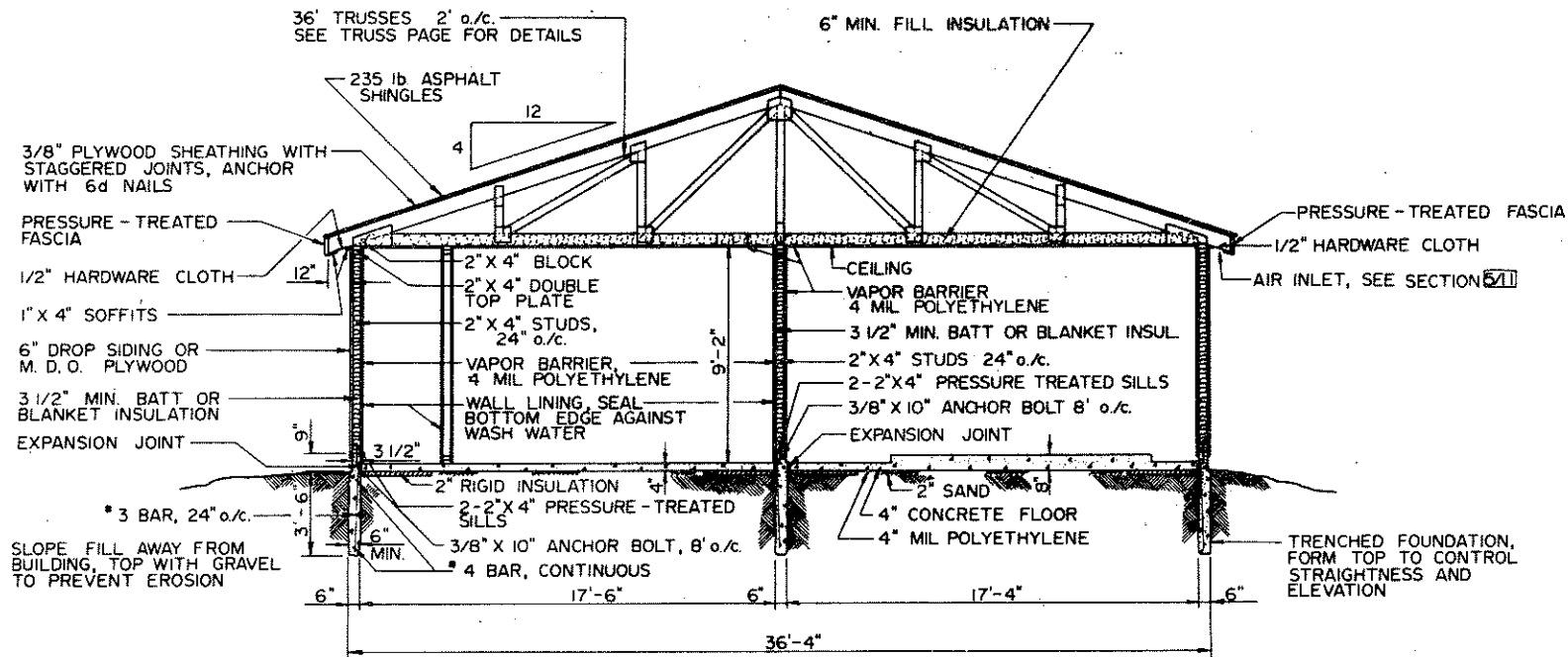
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**FREE-STALL DAIRY BARN**  
80 COW

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WALL SECTION 1/8

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" M.D.O. Plywood
- 3/8" M.D.O. Plywood, painted
- 3/8" Ext. Plywood, painted

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
- Use galv nails except with aluminum. Finish M.D.O. and Ext. Plywood with 2 coat acrylic-latex exterior paint system.

LUMBER SPECIFICATIONS

- Studs  
Construction Grade (Doug Fir, Southern Yellow Pine or Hem Fir).
- Trusses  
No. 1 (Doug Fir, Southern Yellow Pine, or Hem Fir). See truss page.
- Plywood  
Roof Sheathing - 3/8" C-C Ext. Plywood  
Siding - 3/8" C-C Ext. with medium density overlay.
- Sills and Fascia  
Pressure Preservative Treated (Southern Yellow Pine or equivalent).  
Creosote - 8 pcf, Pento - 0.40pcf, ACC - 0.25 pcf, ACA or CCA (Type A or B) - 0.23 pcf.



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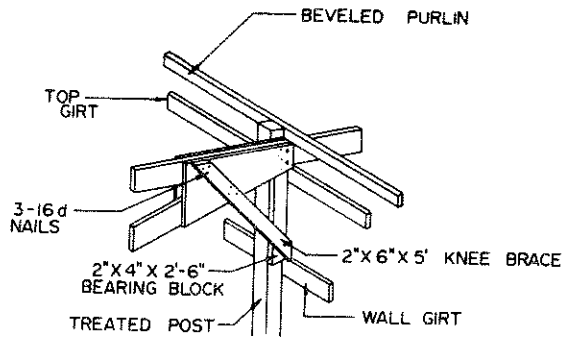
**FREE-STALL DAIRY BARN**  
80 COW

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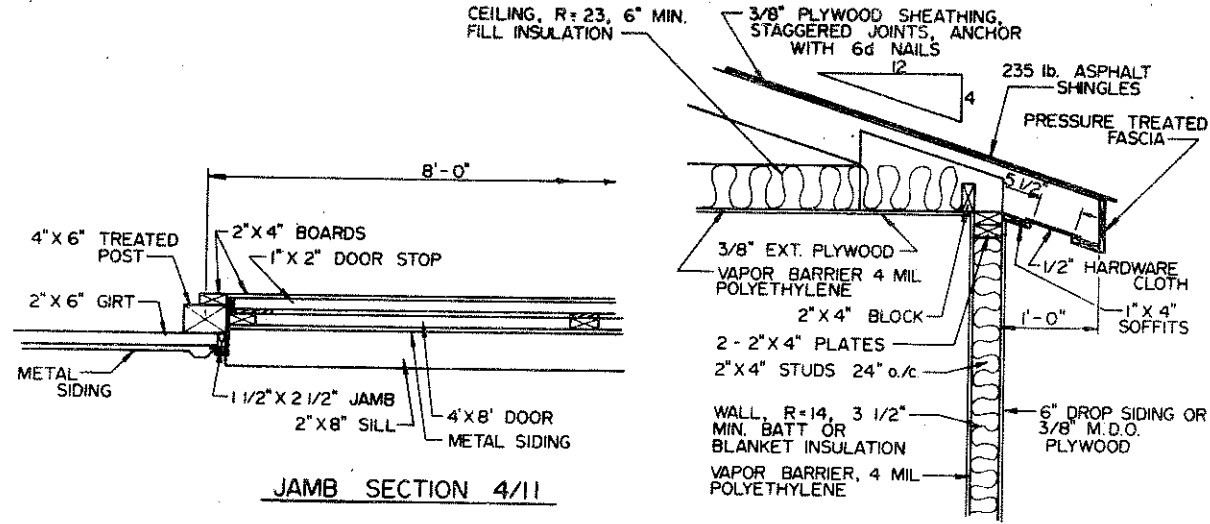






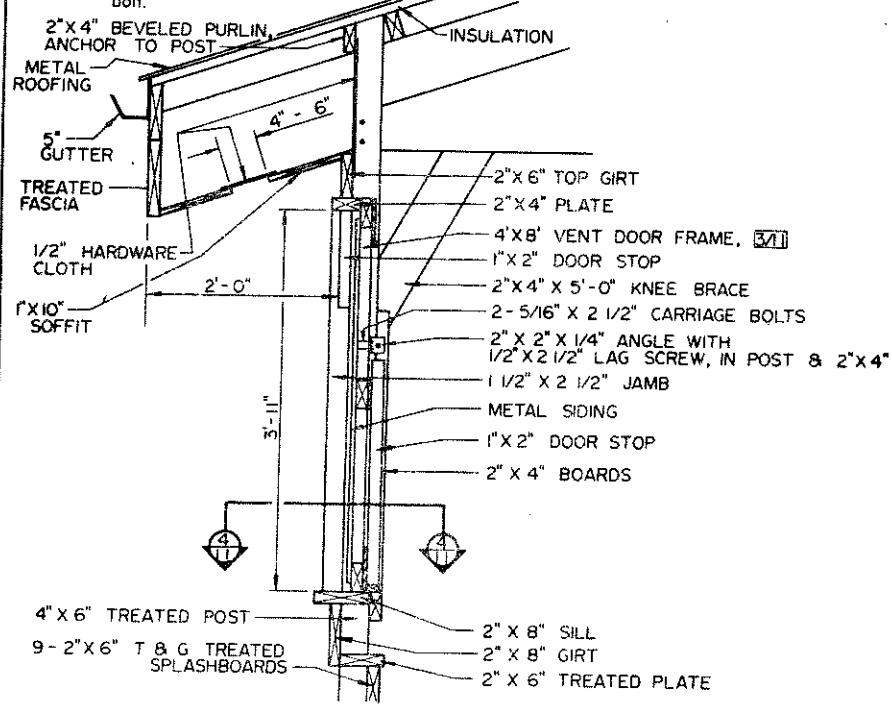
**KNEE BRACE DETAIL 1/11**

NOTE: Post is not notched for truss. Truss to post connection: 2-1/2" bolts + 3-30d ringshank nails.  
 Top girt to post connection: 2-30d ringshank nails.  
 Bearing block to post connection: 1-1/2" bolt + 3-30d ringshank nails.  
 Knee brace to bearing block to post connection: 1-1/2" bolt.



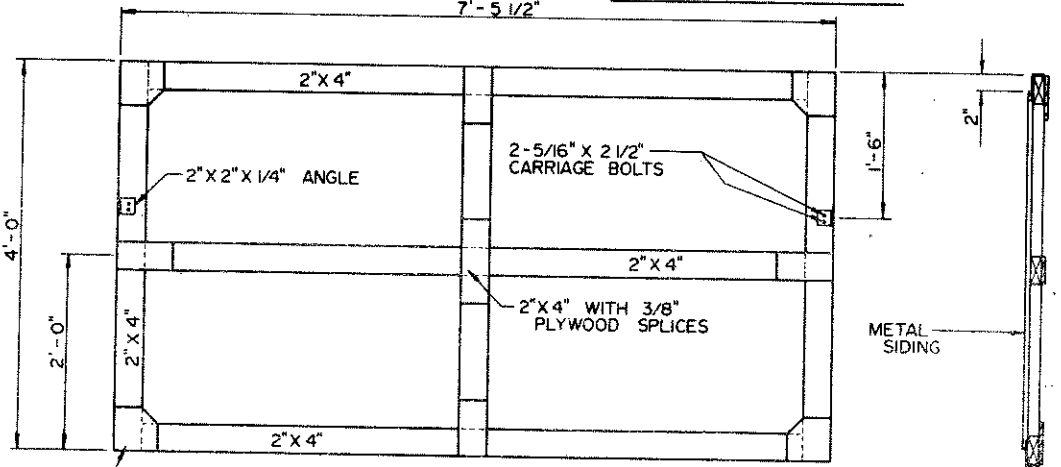
**JAMB SECTION 4/11**

**WALL SECTION 5/11**



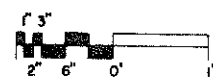
**WALL SECTION 2/11**

Hold vent door open with a light metal chain from the vent door frame to an eye hook in the 2" x 4" below door.



**4' X 8' VENT DOOR FRAME 3/11**

3/8" Exterior Plywood Gussets, nailed and glued, if 3/8" Exterior C-C plywood is used for covering, delete the gussets.

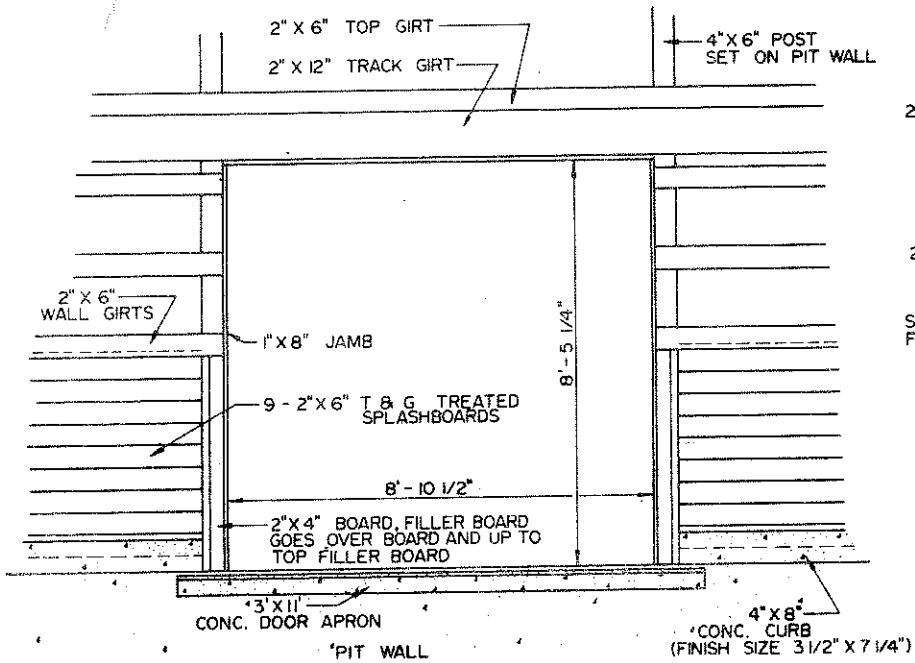


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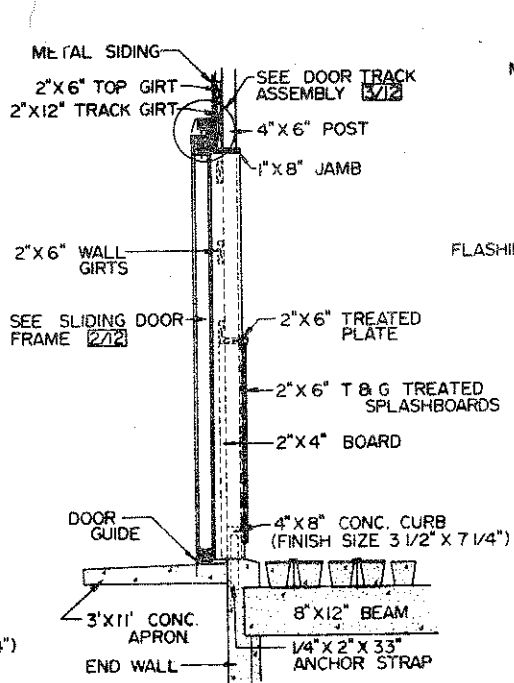
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**FREE-STALL DAIRY BARN**  
 60 COW

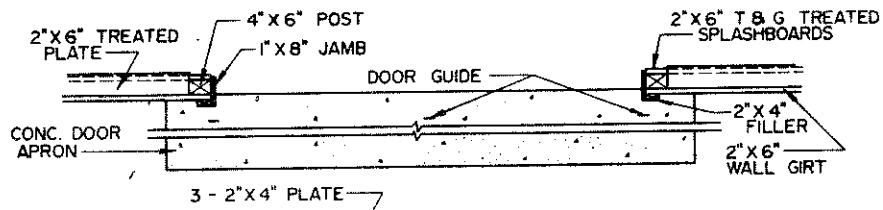
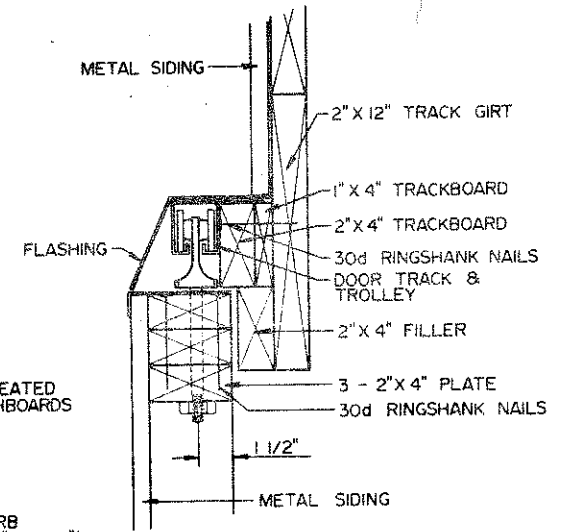
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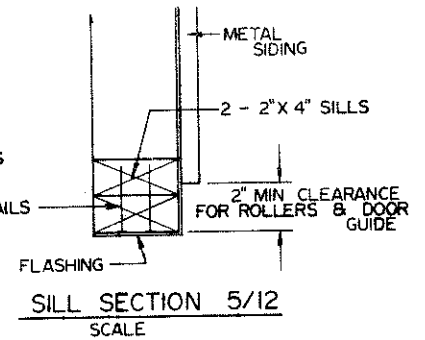
SLIDING DOOR FRAMING 1/12



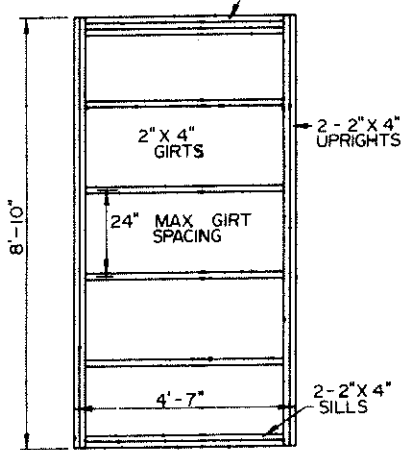
DOOR TRACK ASSEMBLY 3/12  
SCALE - 3" = 1'-0"



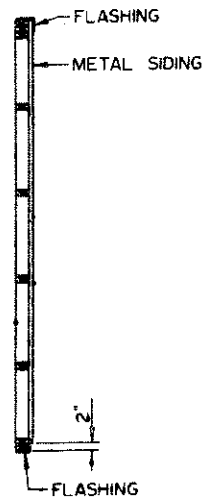
UPRIGHT SECTION 4/12  
SCALE



SILL SECTION 5/12  
SCALE



SLIDING DOOR FRAME 2/12



SCALE: UNLESS OTHERWISE NOTED.

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FREE-STALL DAIRY BARN  
80 COW

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