

MWPS-72355

86' Dairy Barn

206 Free Stalls.

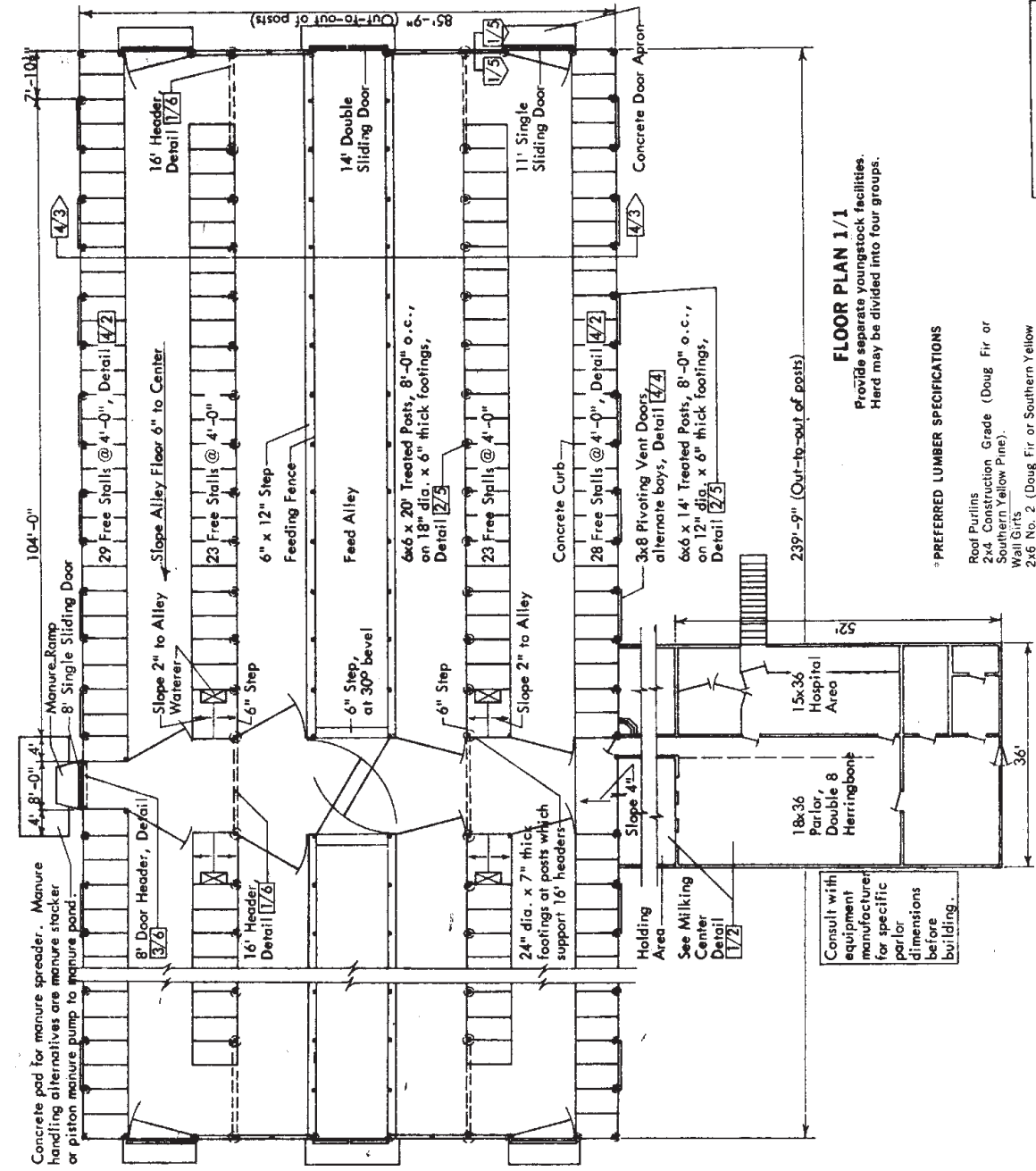
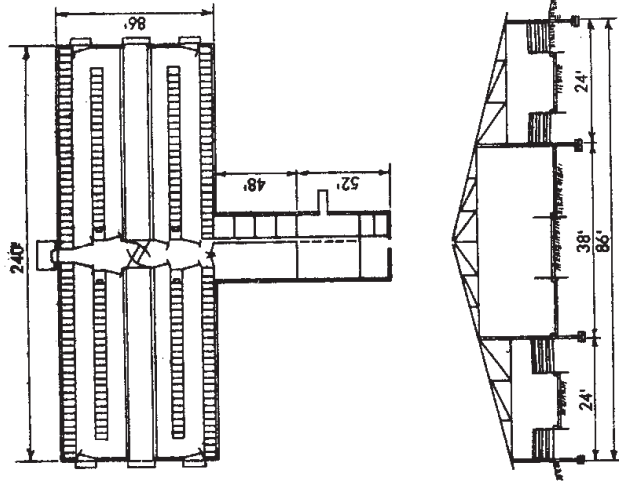
CAUTION!

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.

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Cooperative Extension Work in Agriculture and Home Economics and Agricultural Experiment Stations of North Central Region - USDA Cooperating
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FLOOR PLAN 1/1

Provide separate youngstock facilities.
Herd may be divided into four groups.

PREFERRED LUMBER SPECIFICATIONS

- Roof Purlins 2x4 Construction Grade (Doug Fir or Southern Yellow Pine).
- Wall Girts 2x6 No. 2 (Doug Fir or Southern Yellow Pine).
- Posts and Splashboards Pressure Preservative Treated (Southern Yellow Pine or equivalent) creosote—10 pct, Penlac—0.50 pct, ACA or CCA (Type A or B)—0.40 pct.
- *For alternate member sizes using Hem-Fir and round poles, see page 4 and Truss Page.

Consult with equipment manufacturer for specific parlor dimensions before building.

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

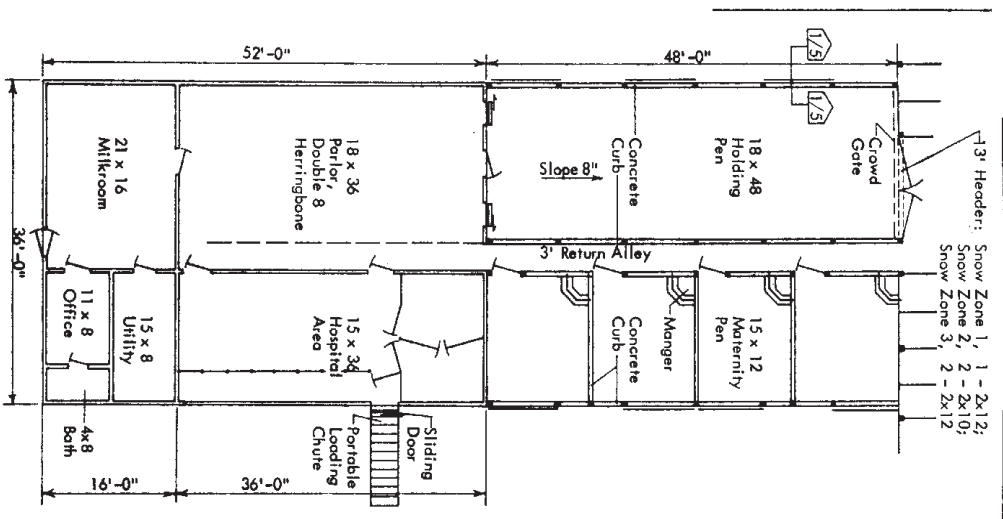
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86' DAIRY BARN
206 Free Stalls

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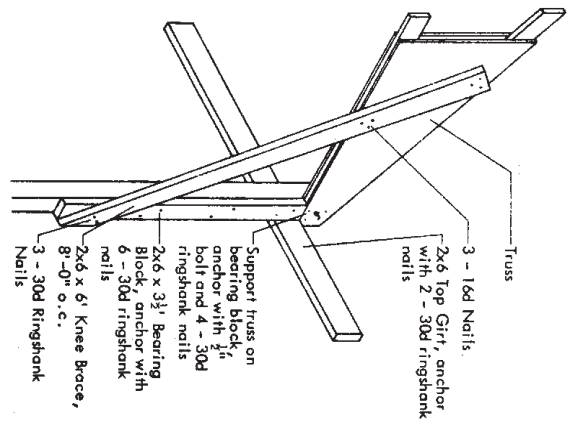
MILKING CENTER DETAIL 1/2

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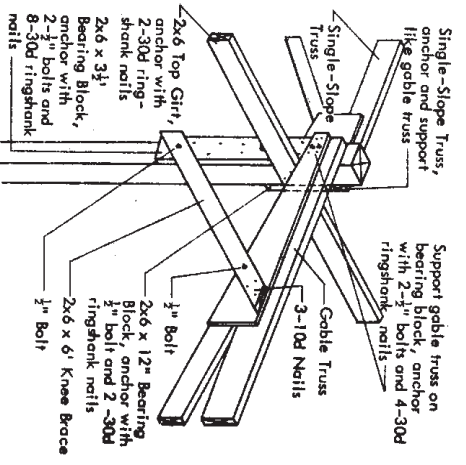
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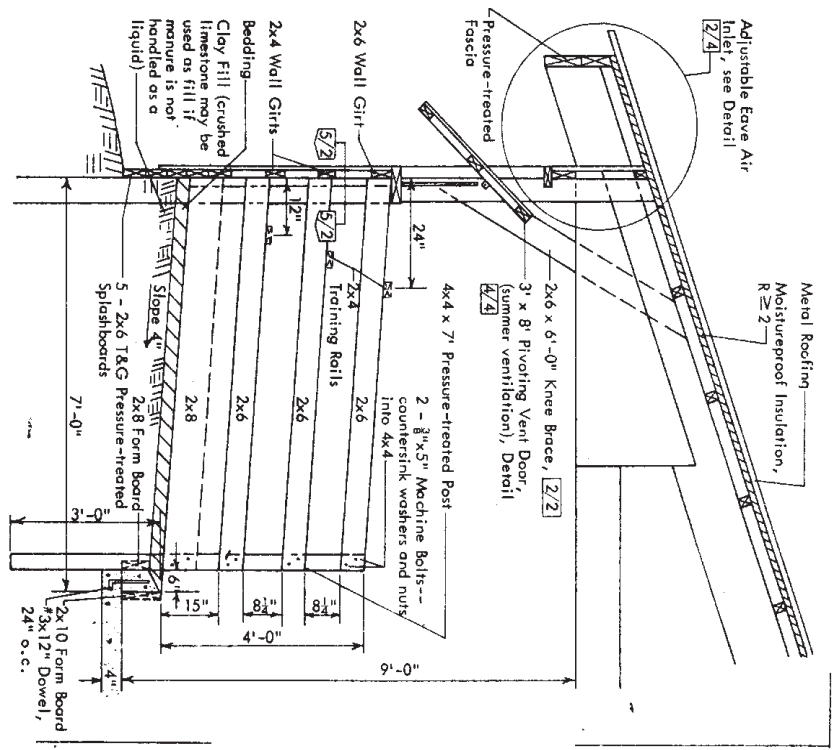
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KNEE BRACE DETAIL 2/2



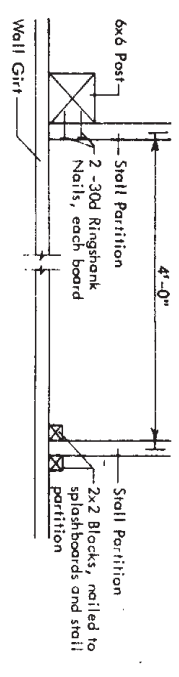
INTERIOR POST CONNECTION 3/2



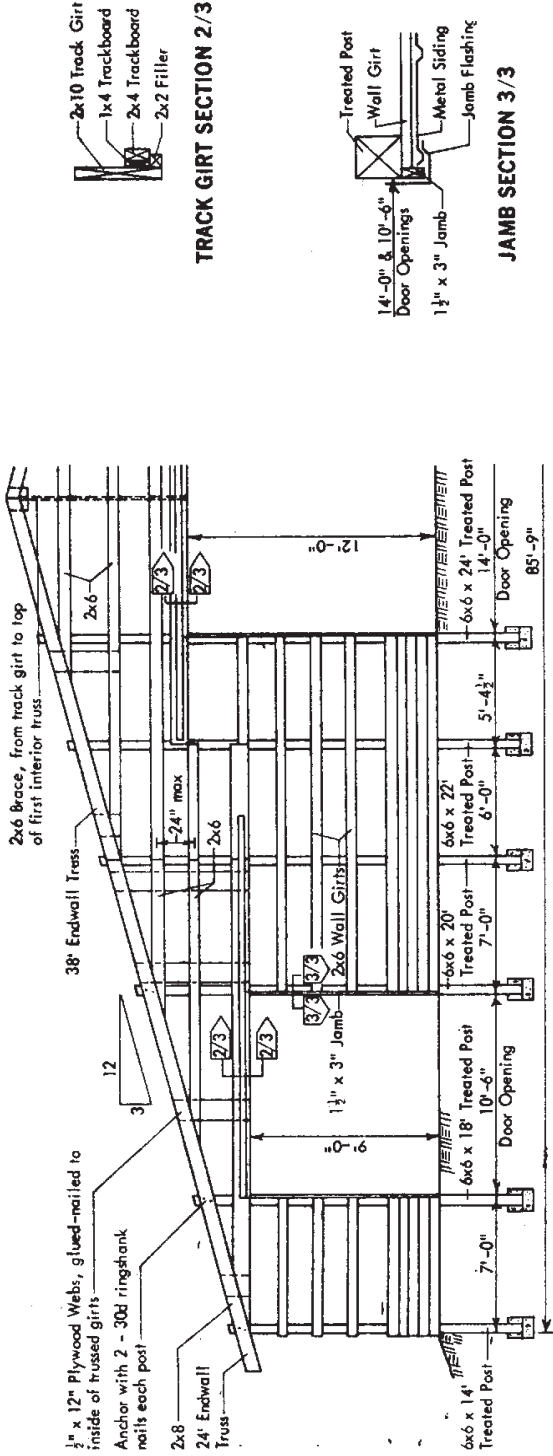
FREE STALL DETAIL 4/2

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 rail. Install 2x8 bottom stall partition board if cows move fill and bedding from stall to stall causing deep holes in stalls.

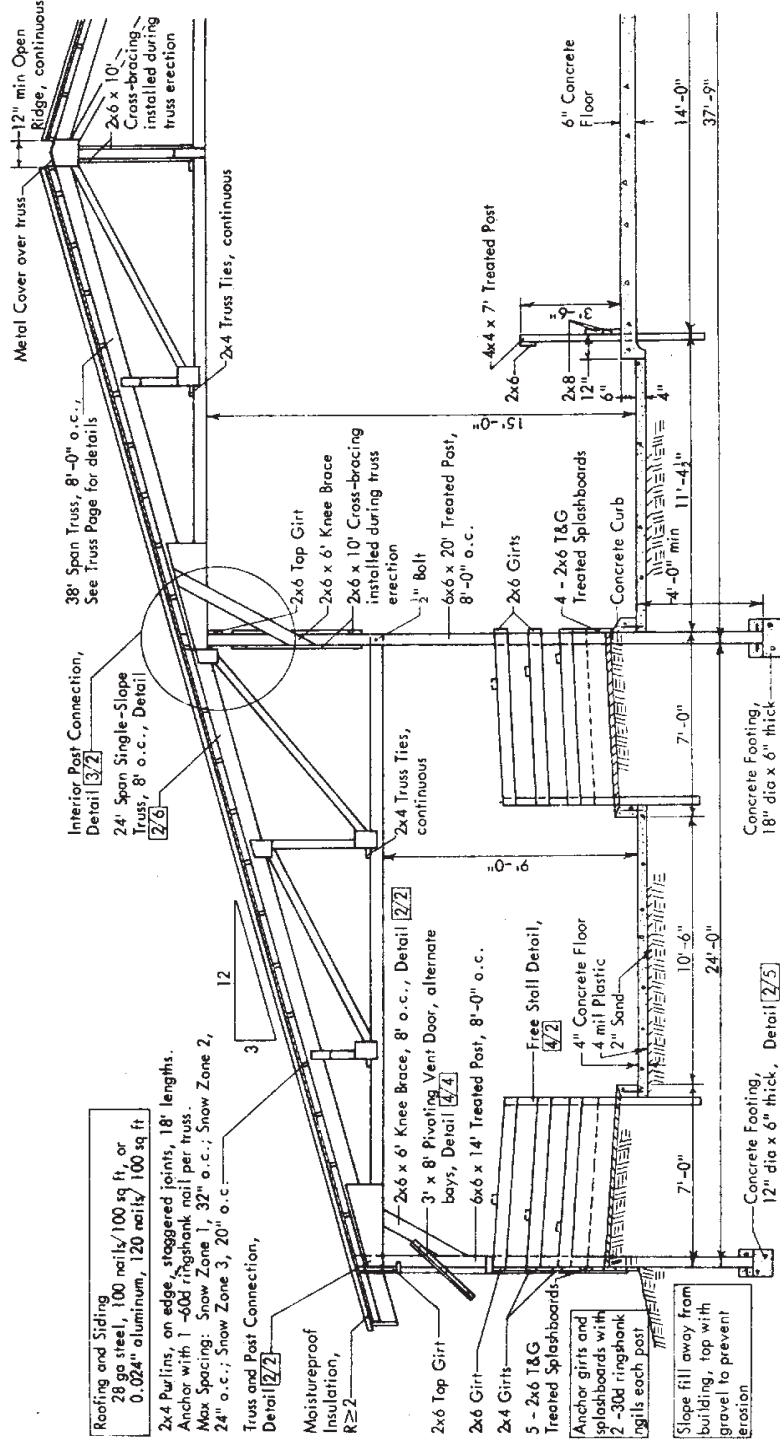
If cows have access to outside of building, use wood siding (treated plywood or splashboards) on bottom 4 feet of wall.



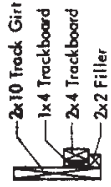
WALL CONNECTION 5/2



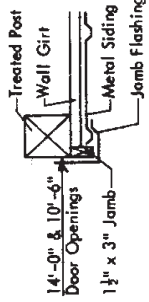
ENDWALL FRAMING 1/3



BUILDING CROSS-SECTION 4/3



TRACK GIRT SECTION 2/3



JAMB SECTION 3/3

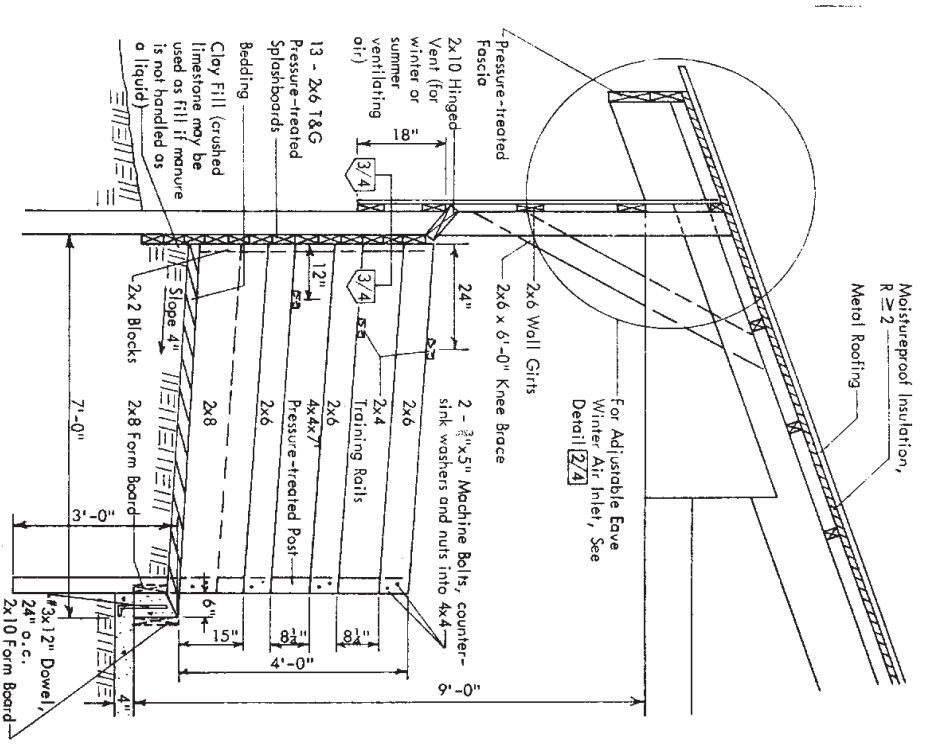
ESTIMATING LIST

Free Stall Barn	230
Concrete	29
Alleys and Curbs, cubic yards	58
Trusses:	2
38' Gable	4
24' Single Slope	625
38' Gable Endwall	2,300
24' Single Slope Endwall	12,750
Headings (Zone 3)	3,900
2x12 S, feet	1,000
Posts (pressure treated)	4,400
6x6 S, feet	22,250
Purlins (Zone 3) and Truss Ties	7,250
2x4 S, feet	24
Girts and Braces	465
2x6 S, feet	206
Splashboards (pressure-treated)	
Roofing and Insulation, sq ft	
Siding, sq ft	
Pivoting Vent Doors (3' x 8')	
Sliding Door	
Feeding Fence, ft	
Free Stalls (4' x 7')	

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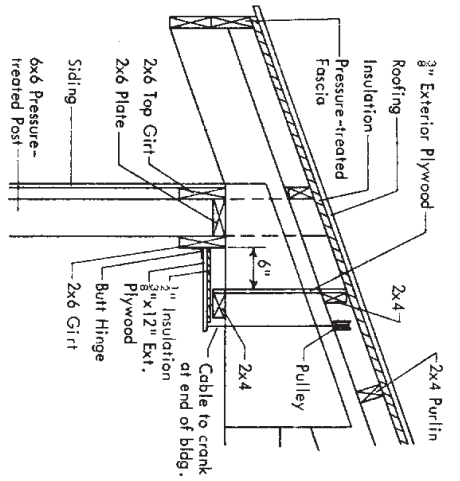
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ALTERNATE FREE STALL DETAIL 1/4

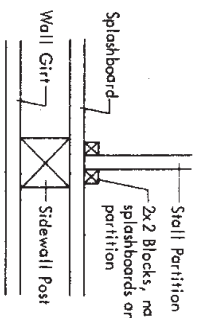
Install 2x4 training rails if cows turn around in stalls or deposit manure at back of stall—3 rails will force the cow to move back as it gets up so its shoulders can't get caught under the top rails. Install 2x8 bottom stall partition board if cows move fill and bedding from stall to stall causing deep holes in stalls.

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DAIRY BARN - 62 FREE STALLS
Mechanical Waste Scraper
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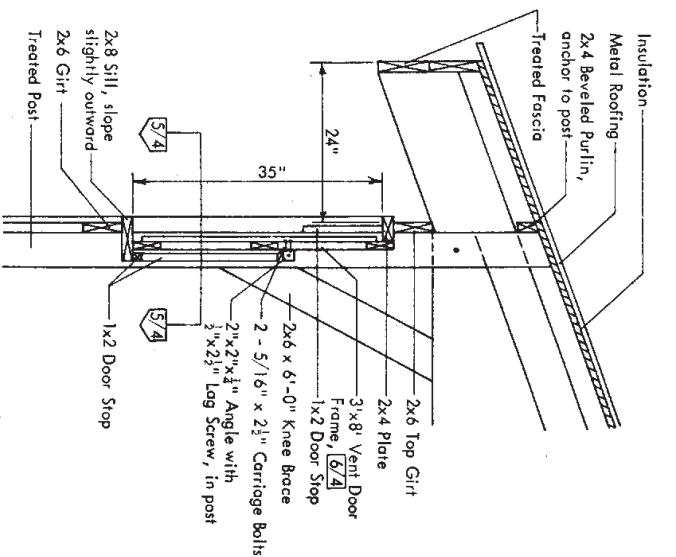


ADJUSTABLE EAVE WINTER AIR INLET 2/4

To be used in combination with pivoting vent doors or 2x10 hinged vent doors for summer air inlets.

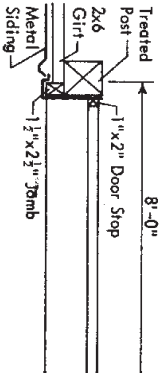


WALL CONNECTION 3/4

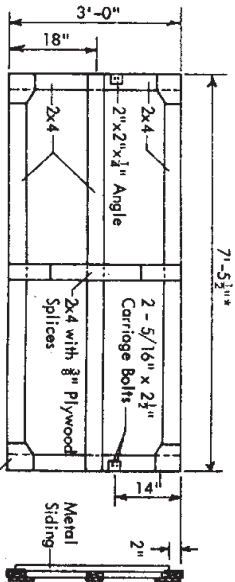


VENT DOOR SECTION 4/4

Hold vent door open with a light metal chain from the vent door frame to an eye hook in the sill.



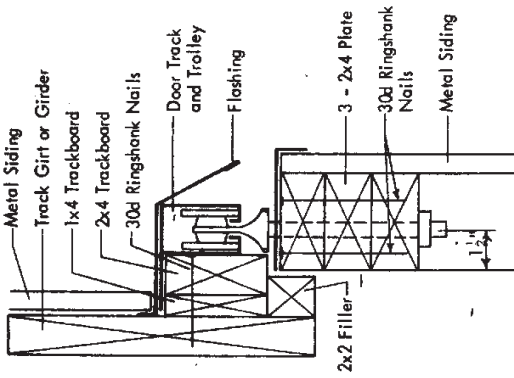
JAMB SECTION 5/4



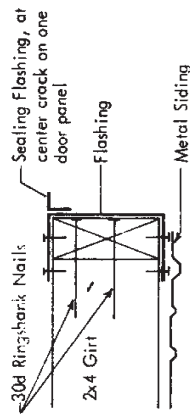
*Alter this dimension for other than 6" wide building posts or other than 8' o.c.

3" x 8" VENT DOOR FRAME 6/4

Alternate Lumber Specifications, Spacing and Sizes.
 2x4 Purline (Construction Grade Hem-Fir) Max Spacing:
 Snow Zone 1: 28' o.c.
 Snow Zone 2: 24' o.c.
 Snow Zone 3: 18' o.c.
 2x6 Girts (No. 2 Hem Fir) Max Spacing: 20' o.c.
 Posts (Round vs Sawn)
 6x6 = ASA or ASAE Class 7, 4.8" Top Diameter
 Trusses (No. 1 Hem-Fir)
 See Truss Page

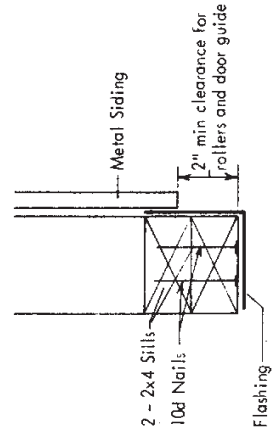


DOOR TRACK ASSEMBLY 1/5

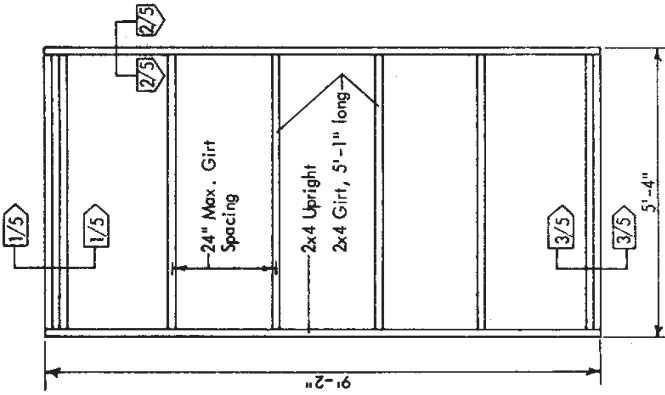


UPRIGHT SECTION 2/5

Extend flashing around uprights and nail to girts and uprights.

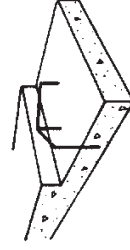


SILL SECTION 3/5



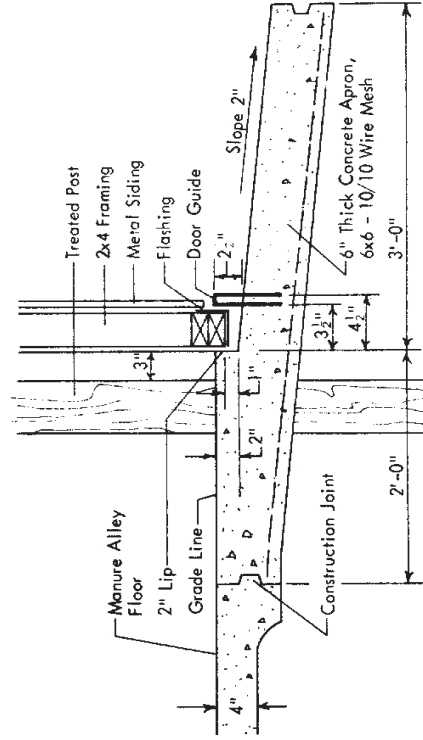
DOUBLE SLIDING DOOR 4/5

2x4 Framing



"U"-Shaped Door Guide

Locate $\frac{3}{4}$ " dia x 20" $\frac{3}{4}$ " U"-shaped door guide at center of door opening. Break at center to force closing door against apron lip. Taper from 4 $\frac{1}{2}$ " end to 3 $\frac{1}{2}$ " center clearance.



SLIDING DOOR APRON 5/5

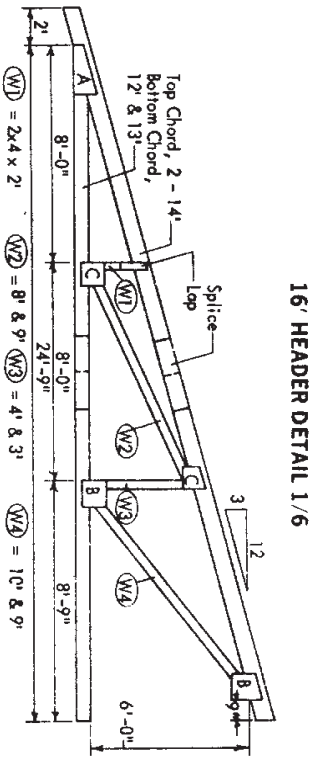
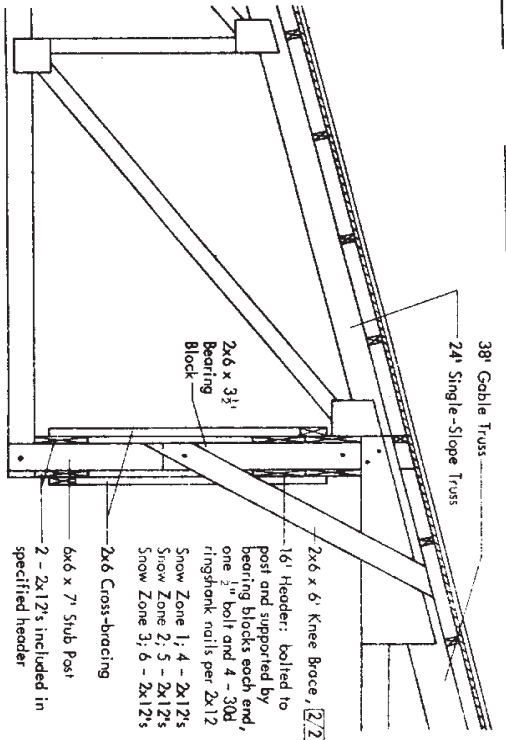
Set adjustable roller guides in the concrete apron at door jamb. Use door stops as required.

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Mechanical Waste Scraper

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Truss Spacing, ft.	Snow Zones	Lumber Type	Top Chord	Bottom Chord	A	B	C	Gusset Sizes, in.
			T, H, H	H, H	H, H	H, H	H, H	W1, W2, W3, W4
4	I, II, III	2x6	2x6	2x4	3/8x6x16	10x10	8x8	2x4, 2x4, 2x6
8	I, II, III	2x8	2x8	2x6	3/8x6x20	"	"	"
11	I, II, III	2x8	2x8	2x6	3/8x6x26	"	"	"
11	I, II, III	2x8	2x8	2x6	3/8x6x28	10x10	8x10	2x4, 2x4, 2x6
11	I, II, III	2x8	2x8	2x6	1/2x6x22	10x12	10x10	2x6x2x4
11	I, II, III	2x12	2x12	2x8	1/2x6x26	12x12	10x12	2x6x2x4

SINGLE-SLOPE TRUSS 2/6

GUSSETS B & C are 3/8" plywood. Low Board Board.
SEE TRUSS PAGE for additional information.

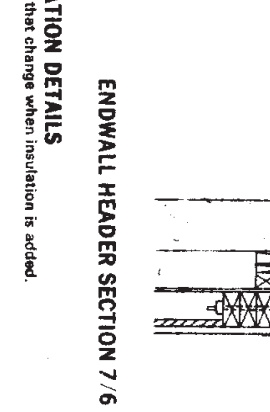
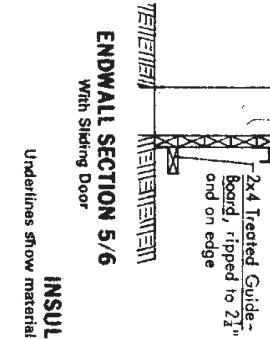
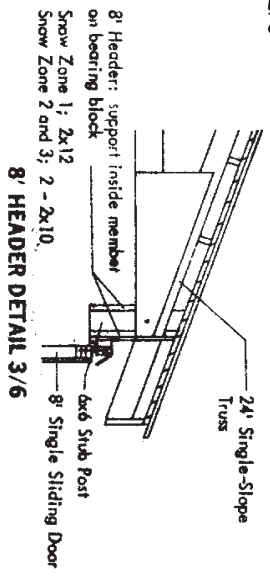
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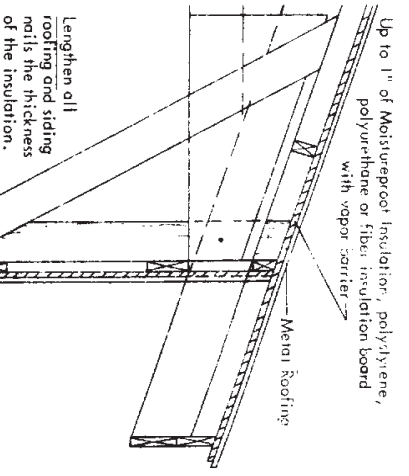
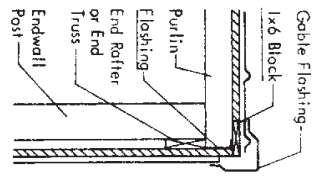
861 DAIRY BARN
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TYPICAL GABLE END SECTION 4/6



TYPICAL WALL SECTION 6/6

Underlines show materials that change when insulation is added.