

MWPS-74149

56' Pole Machine Shed

CAUTION!

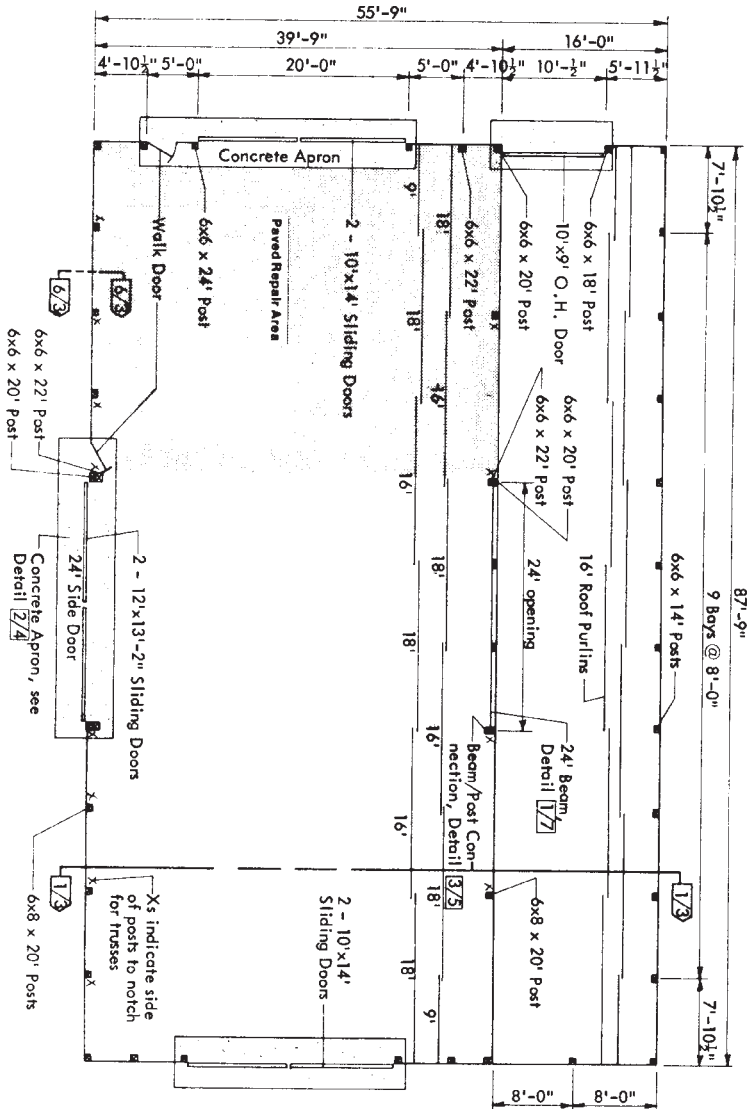
Additional professional services will be required to tailor this plan to your situation, including but not limited to: assurance of compliance with codes and regulations; review of specifications for materials and equipment; supervision of site selection, bid letting and construction; and provision for 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

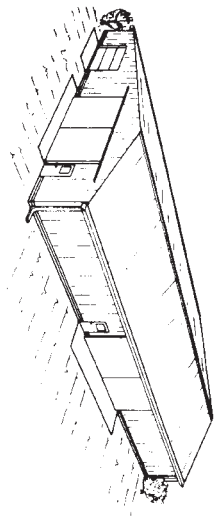
This plan provides conceptual information only. **Neither midwest plan service nor any of the cooperating land-grant universities, or their respective agents or employees, have made, and do not hereby make, any representation, warranty or covenant with respect to the specifications in this plan.** Additional 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.

MIDWEST PLAN SERVICE
Cooperative Extension Work in Agriculture and Home Economics and Agricultural Experiment Stations of North Central Region - USDA Cooperating
56' Pole Machine Shed
Title Page
MIDWEST PLAN NO. 74149

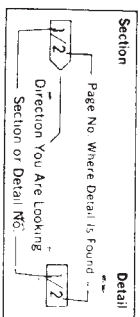
Preferred Lumber Specifications*
 Roof Purlins and Wall Girts
 2x4 Construction Grade (Doug Fir or Southern Yellow Pine)
 Trusses and Headers
 No. 1 or 1500 (machine rated (Doug Fir or Southern Yellow Pine)
 Posts and Siplats/boards
 Pressure Preservative Treated (Southern Yellow Pine or equivalent) creosote—10 pct; Pentac—0.50 pct; ACA or CCA (Type A or B)—0.40 pct.
 Use glue-nailed trusses, 8'-0" o.c. Install 16' and 18' long roof purlins with staggered joints. Locate truss on far side of sliding door opening for knee brace installation.
 *For alternate member sizes using Hair-Fir and round poles, see page 2 and Truss Page.



FLOOR PLAN—1/1
 Endwall posts are for 4/12 slope.



Lighting protection is recommended. Use a "Master Label" approved system. Fiberglass panels installed in the sidewall can provide a degree of natural lighting.



Section & Detail Indicator

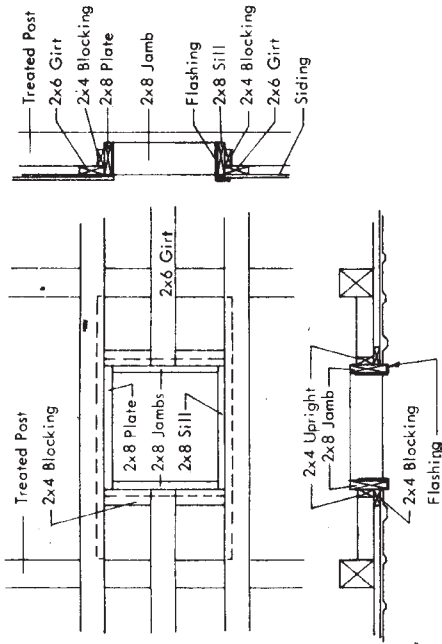
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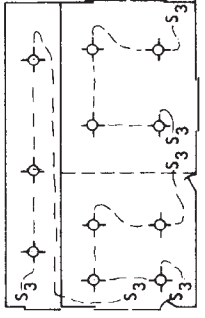
56' POLE MACHINE SHED	Plan No.	Page
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	Imps: 74149	

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FRAMED OPENING DETAIL—1/2
For windows, fans and small vent doors. For a building with an interior lining, extend the jambs, plate and sill to be flush with the inside edges of the posts.

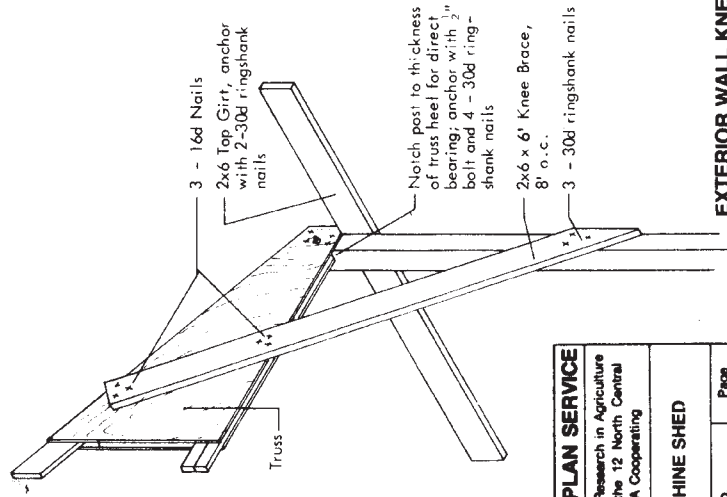
Alternate Lumber Specifications, Spacing and Sizes
2x4 Purlins (Construction Grade Hem-Fir) Max Spacing:
Snow Zone 2: 24" o.c.
Snow Zone 3: 18" o.c.
2x6 Girts (No. 2 Hem-Fir) Max Spacing: 24" o.c.
Headers (No. 1 Hem-Fir) 24" Door
All Zones: 5 1/2" x 24"
Posts (Round vs Sawm) 6x8 = ASA or ASAE Class 5, 6.0" Top Diameter
6x6 = ASA or ASAE Class 7, 4.8" Top Diameter
Trusses (No. 1 Hem-Fir) See Truss Page



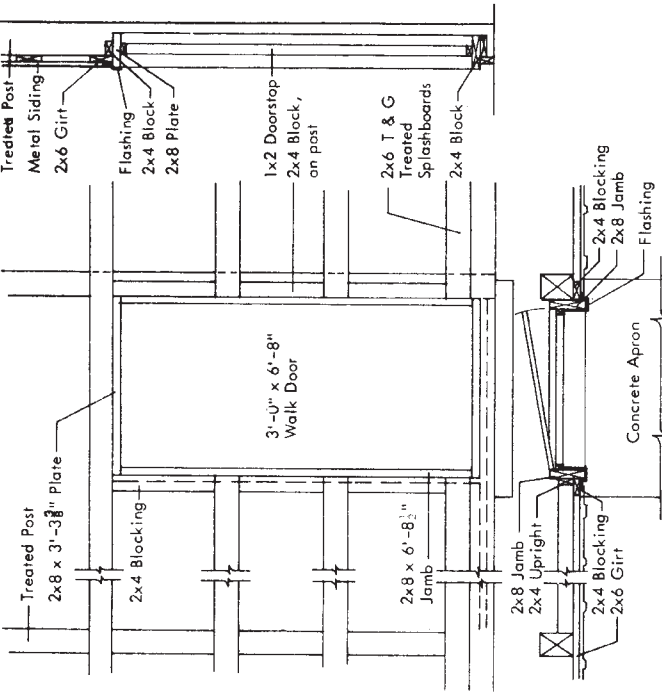
Additional Lighting required over work bench.

LIGHTING PLAN—3/2

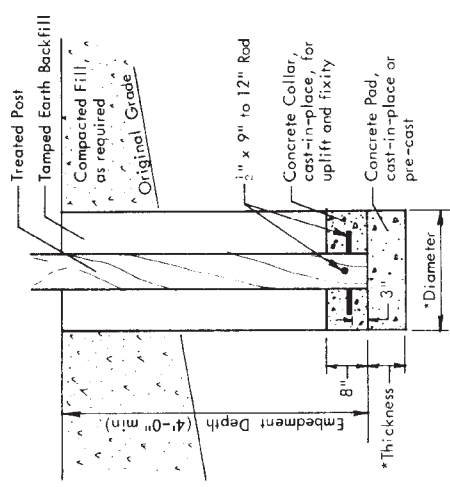
S₃ = 3-way switch



EXTERIOR WALL KNEE BRACE DETAIL—2/2



WALK DOOR FRAMING—4/2
For a building with an interior lining, extend the jambs, plate and sill to be flush with the inside edges of the posts.



POST FOOTING DETAIL—5/2

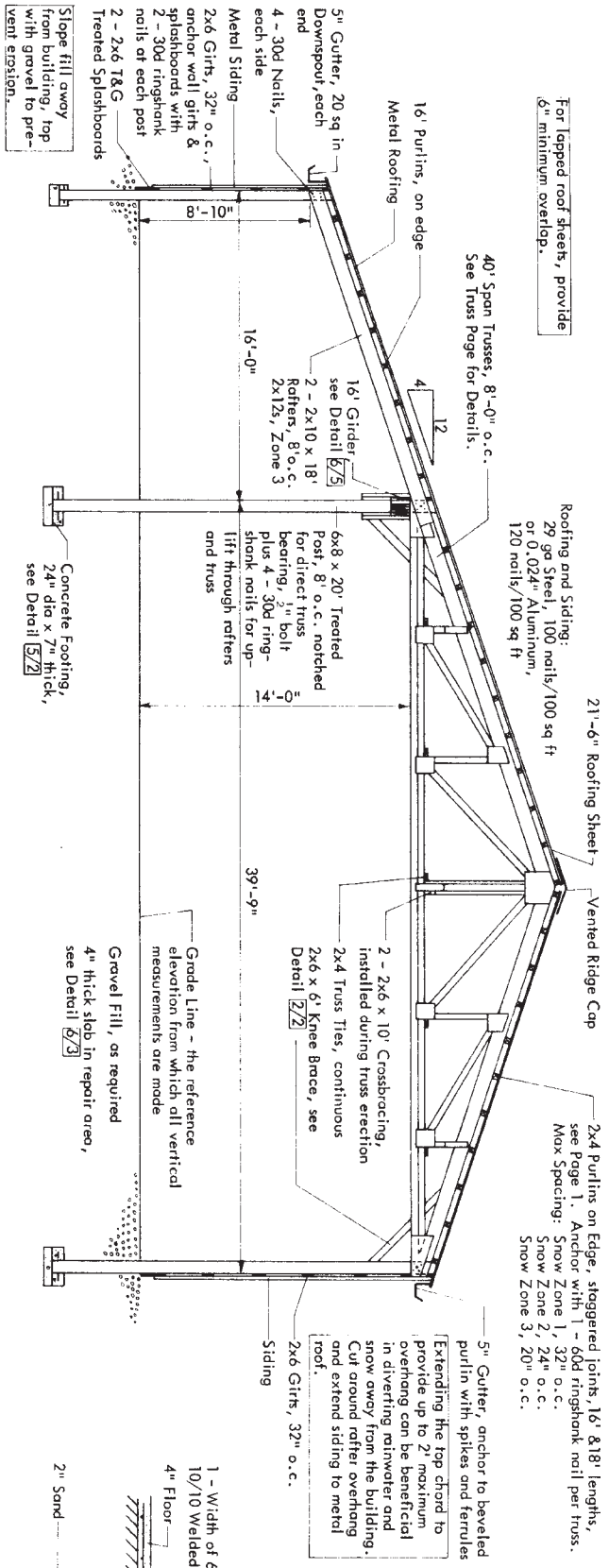
*Footing Size
12" Dia x 6" Thick @ Endwall Posts
16" Dia x 6" Thick @ Sidewall Posts
24" Dia x 7" Thick @ Interior Posts
12" Dia x 6" Thick @ Rafter Posts
24" Dia x 7" Thick @ 24' Spans
Extend embedment depth as required to place footing on undisturbed soil. For large diameter footings, use smaller diameter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

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56' POLE MACHINE SHED

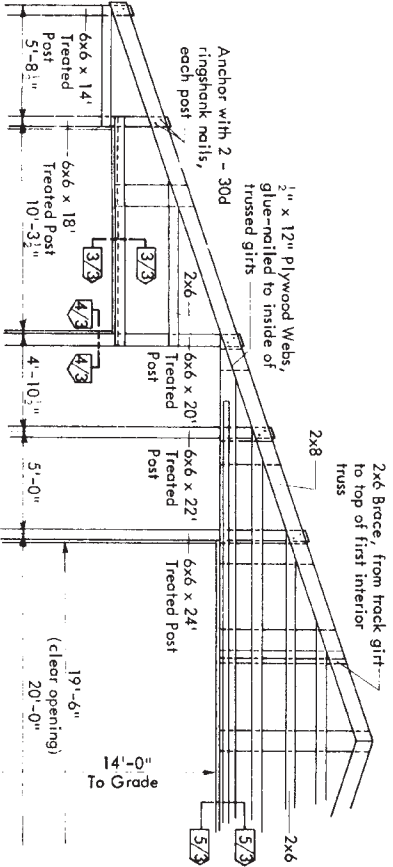
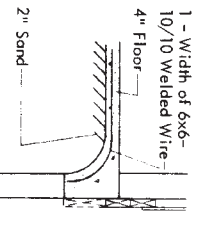
8 Pages plus	Plan No.	Page
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For lapped roof sheets, provide 6" minimum overlap.

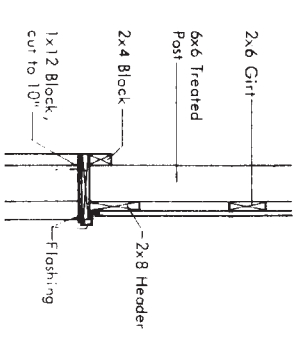


BUILDING CROSS SECTION—1/3

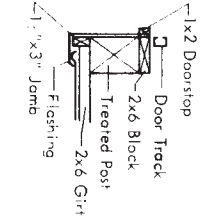
SLAB ON GRADE—6/3



ENDWALL FRAMING—2/3



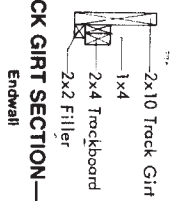
ENDWALL HEADER SECTION—3/3



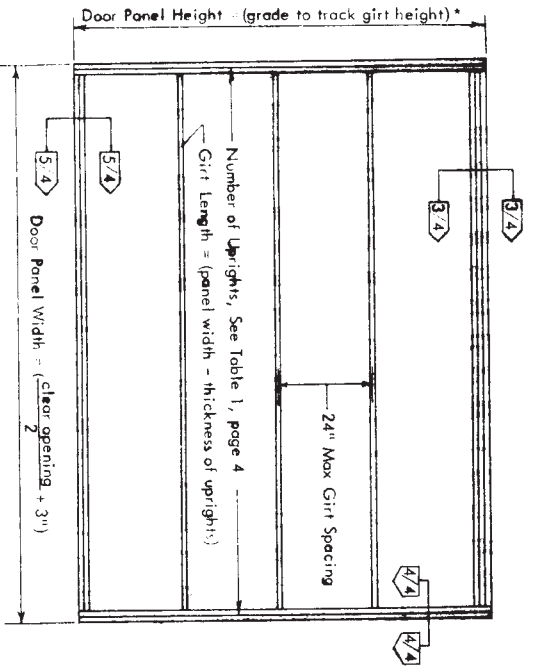
JAMB SECTION—4/3

OVERHEAD DOOR DETAILS

TRACK GIRT SECTION—5/3



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56 POLE MACHINE SHED			



DOUBLE SLIDING DOOR—1/4

*If sliding door apron 2/4 is not installed, reduce door panel height by 2".
Use clear opening dimensions from Detail 1/5 or 2/7.



"U"-Shaped Door Guide

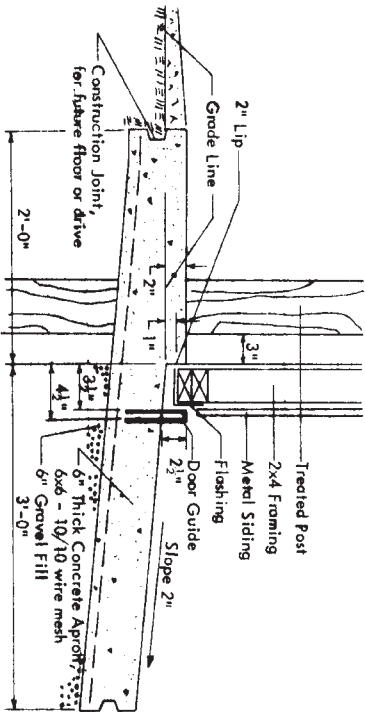
Locate 1/2" dia x 20" "U"-shaped door guide at center of door opening. Break at center to show closing door against apron lip. Taper from 4 1/2" end to 3" center clearance.

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	1	1	1	1	1	1	1	1
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

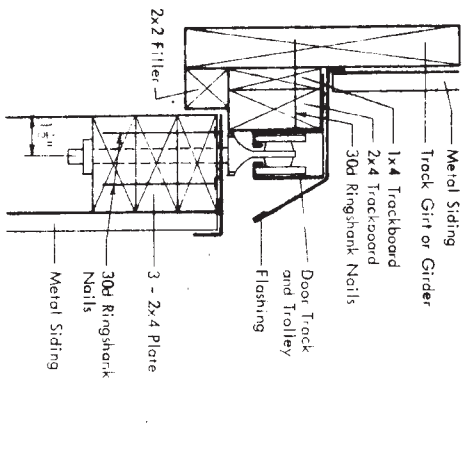
Door Sliding Sheet Length approx. 2" shorter than upright length.

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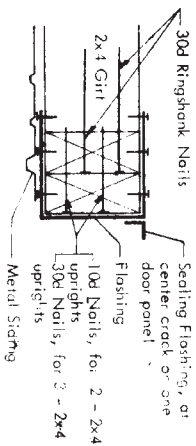


SLIDING DOOR APRON—2/4

See adjustable roller guides in the concrete apron at floor jamb. Use door slope as required.

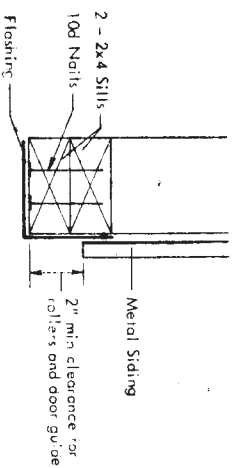


DOOR TRACK ASSEMBLY—3/4

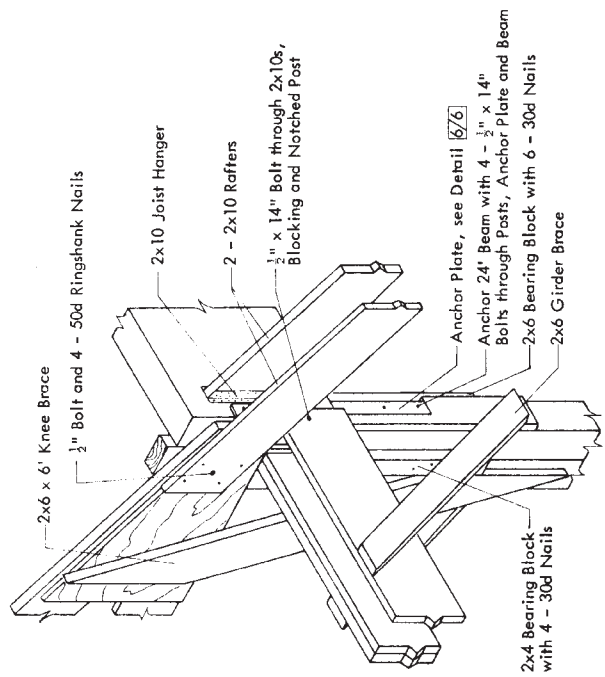


UPRIGHT SECTION—4/4

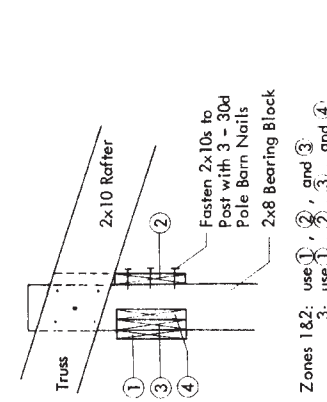
External flashing around uprights and nail to girts and uprights.



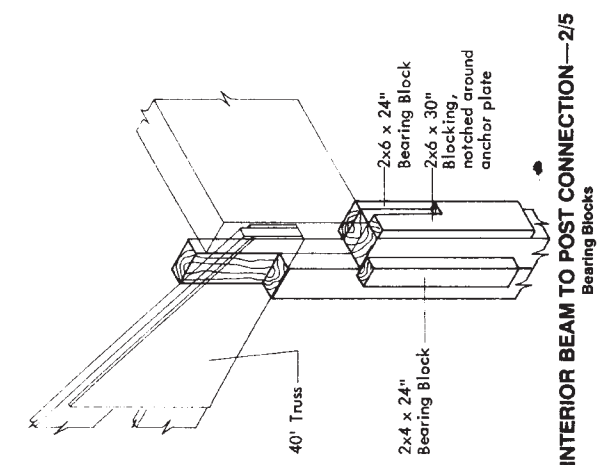
SILL SECTION—5/4



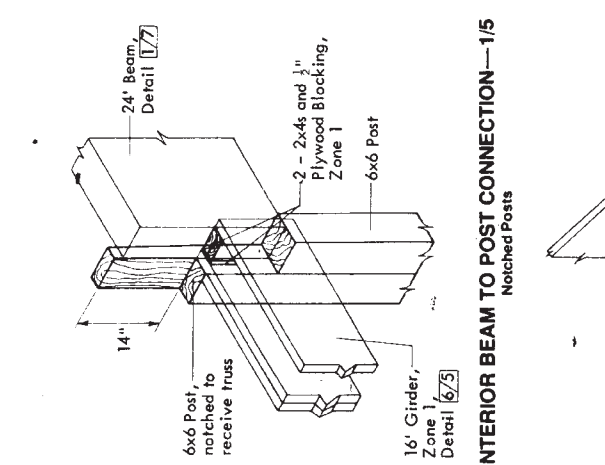
INTERIOR BEAM TO POST CONNECTION—3/5



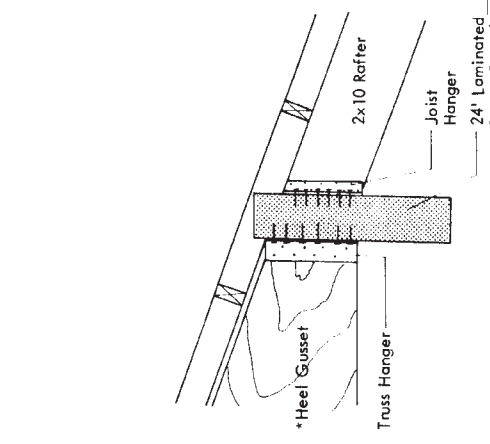
16' INTERIOR GIRDER SECTION—6/5



INTERIOR BEAM TO POST CONNECTION—2/5

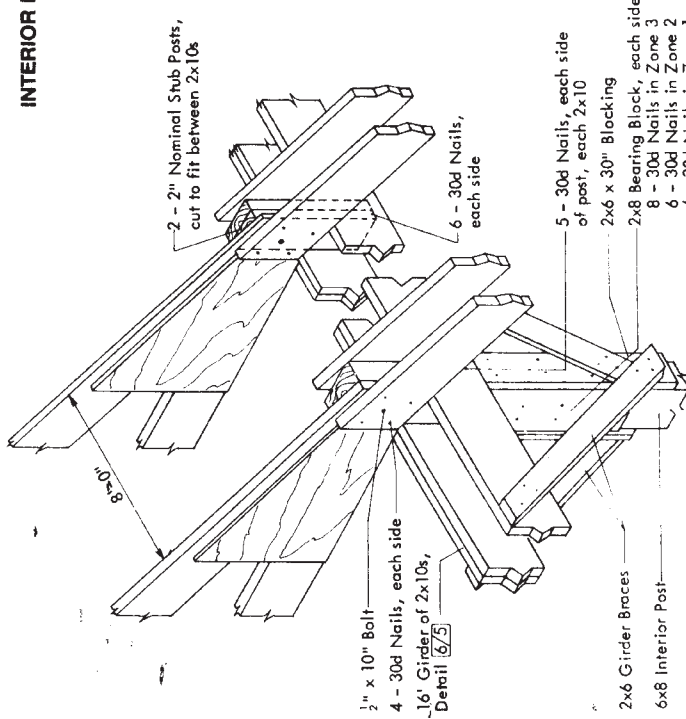


INTERIOR BEAM TO POST CONNECTION—1/5

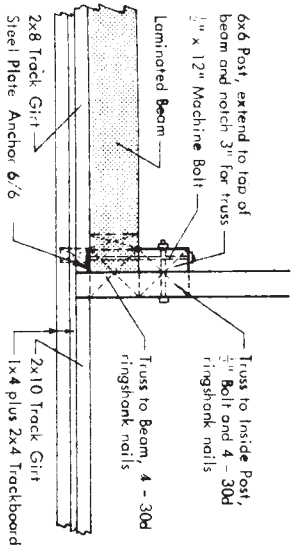


INTERIOR 24' BEAM, RAFTER/TRUSS CONNECTION—5/5

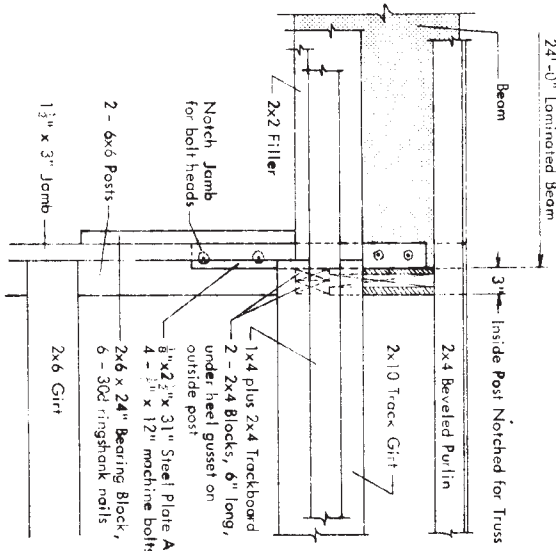
*40' Truss with 7" cut off the heel. Extend gussets 7" to the left so they are not shortened.



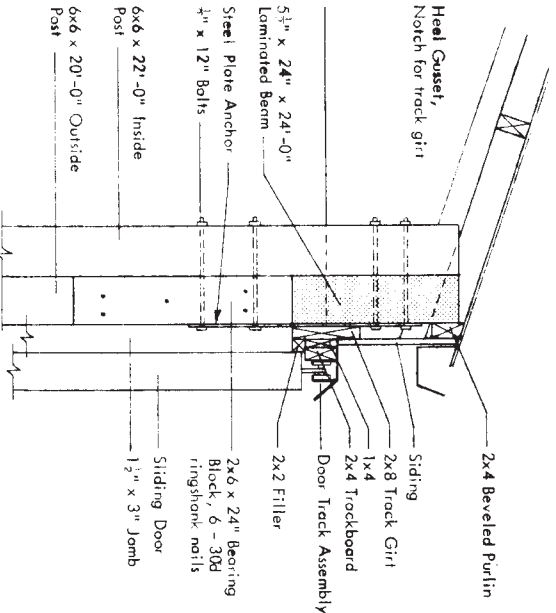
INTERIOR 16' BEAM TO POST CONNECTION—4/5



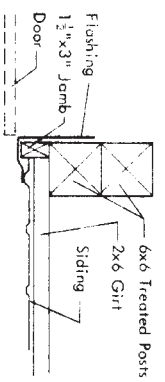
SECTION - 1/6
If metal shear plates are used in the truss, notch the posts 1 1/2" and lengthen the beam to 24'-3".



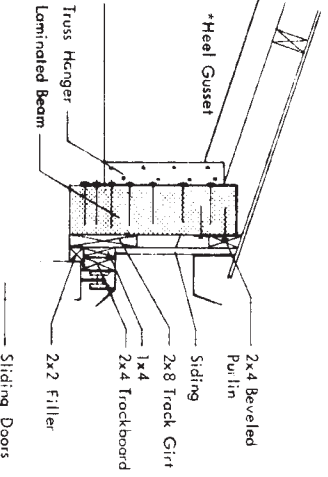
BEAM TO COLUMN CONNECTION - 2/6



SECTION - 3/6

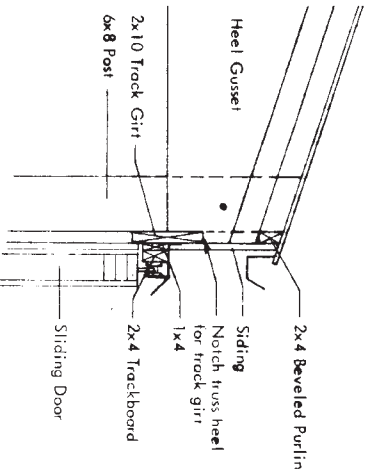


JAMB SECTION - 4/6

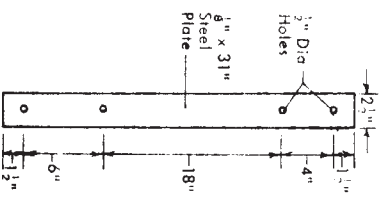


TRUSS TO BEAM - 5/6

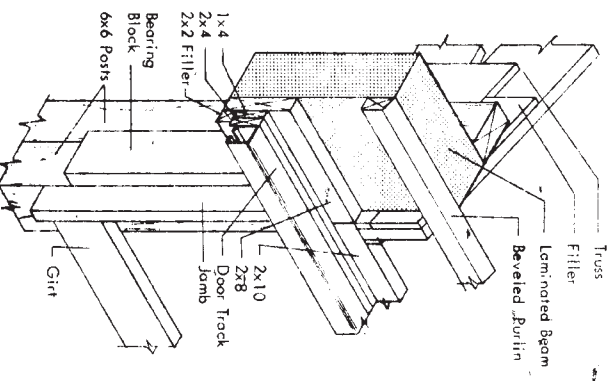
*40' truss with 7" cut off the heel. Extend gussets 7" to the left so they are not shortened.



TRACK GIRT SECTION - 7/6



STEEL PLATE ANCHOR - 6/6



JOINT ASSEMBLY - 8/6

24' BEAM — for 24' wide sidewalk door

MATERIALS

Lumber

This beam is designed for use of Douglas Fir-Larch (No. 1, NC19) or Southern Yellow Pine (No. 1, NC19).

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

Plywood

Use 5/8" C-C Ext. ("Identification Index" = 42/20)

Glue

Casein (MOM-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 + 2x6). Spread glue on the plywood (Layer #1). Nail plywood to layer #2 with 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 dimensional lumber in a similar manner. Then assemble layers #4, #5, and #6.

2. Final Assembly — use method a, or b.

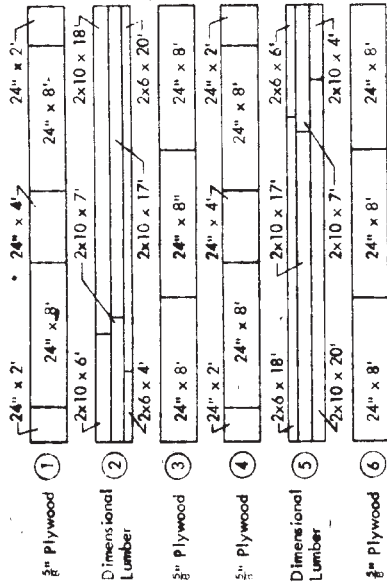
a. Clamping method.

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.

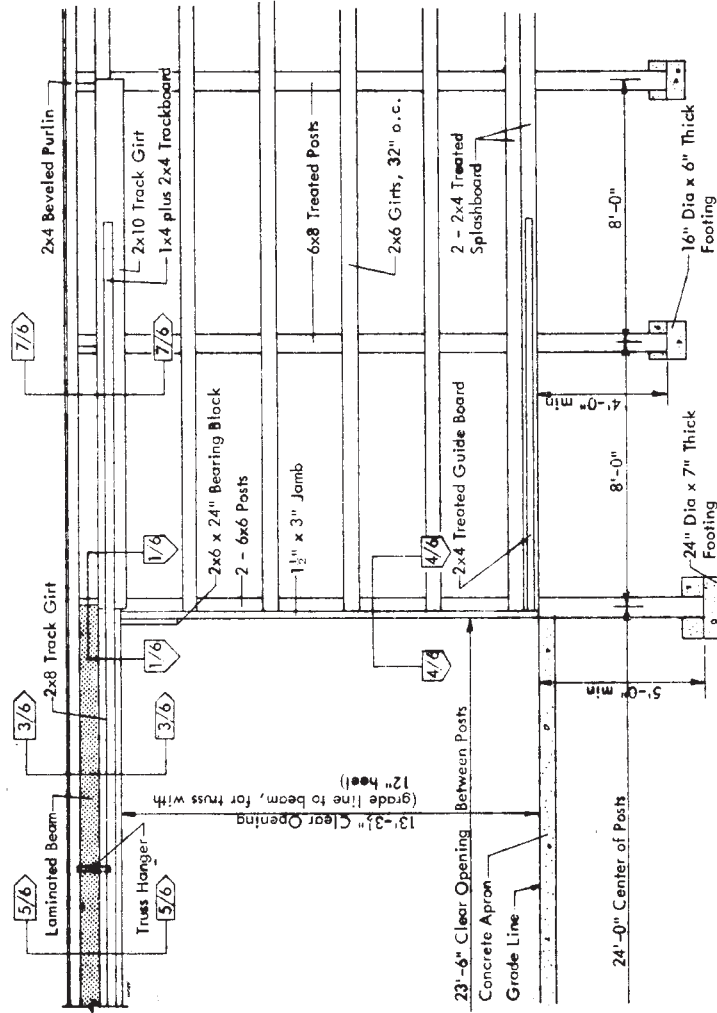
b. Weighting method.

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.

24' Material is preferable, if available.



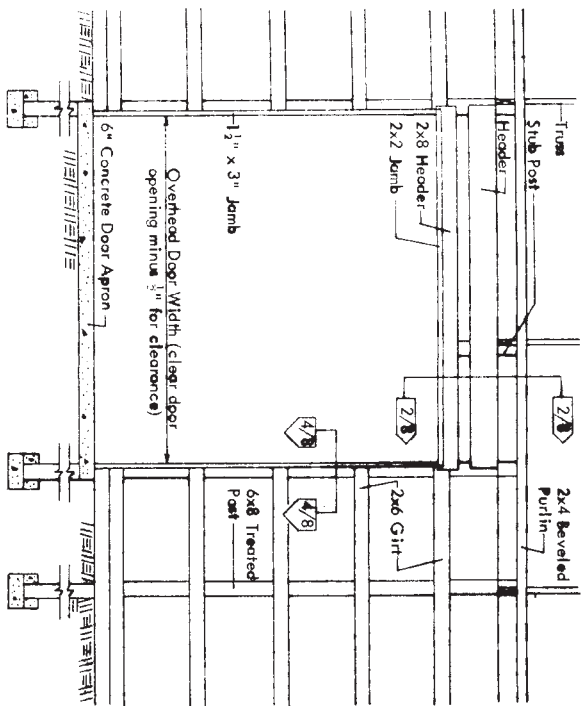
24' LAMINATED BEAM ASSEMBLY — 1/7



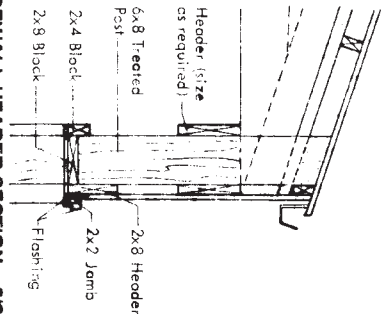
24' DOOR FRAMING — 2/7

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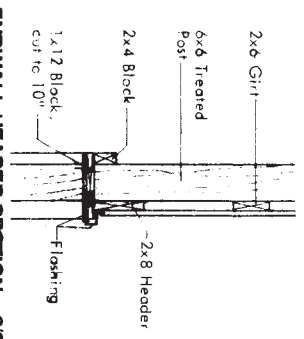
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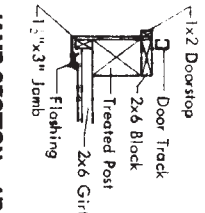
OVERHEAD DOOR FRAMING—1/8



SIDEWALL HEADER SECTION—2/8
For 6x8 Post

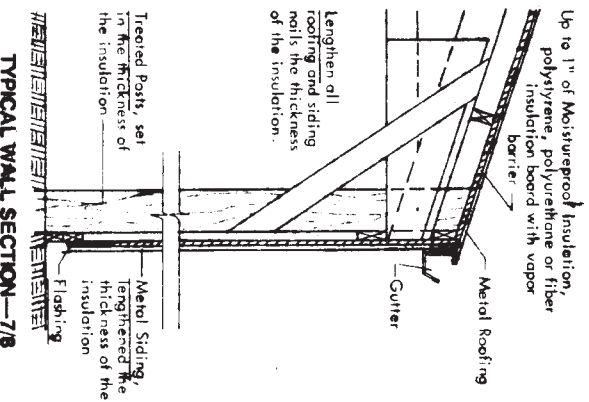
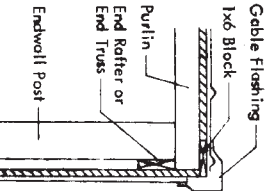


ENDWALL HEADER SECTION—3/8
For 6x6 Post



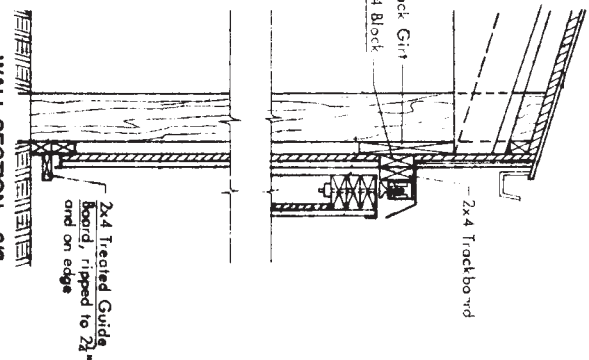
JAMB SECTION—4/8

TYPICAL GABLE END SECTION—5/8

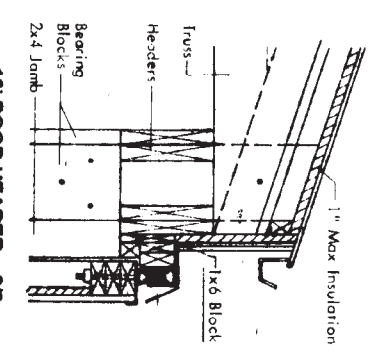


TYPICAL WALL SECTION—7/8

OVERHEAD DOOR DETAILS



WALL SECTION—6/8
With Side Door



16\"/>

INSULATION DETAILS

Underlines show materials that change when insulation is added.

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