

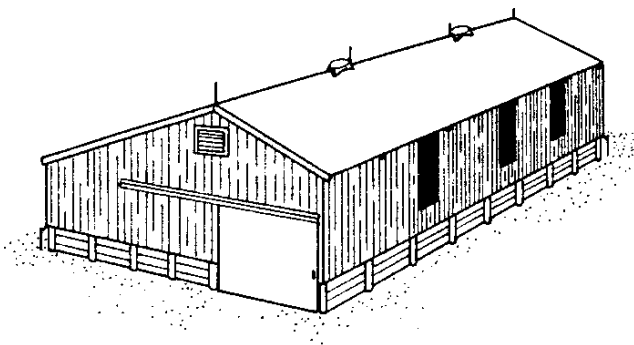
MWPS-72050

42' Wide Pole Utility Building

42' x 64' uninsulated pole utility building that can be used for livestock housing, crop storage, or machinery storage. The plan shows how to build a basic pole building with 14' x 16' bays in a building that can be 14', 28' or 42' wide and any multiple of 16' long.

WARRANTY DISCLAIMER

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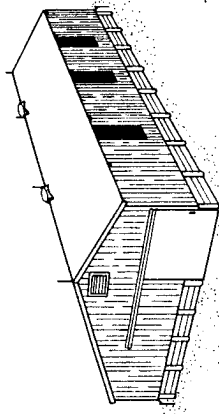
MIDWEST PLAN SERVICE
Cooperative Extension Work in Agriculture and Home Economics and Agricultural Experiment Stations of North Central Region - USDA Cooperating
42' WIDE POLE UTILITY BUILDING
Title Page
MIDWEST PLAN NO. 72050

CAUTION!

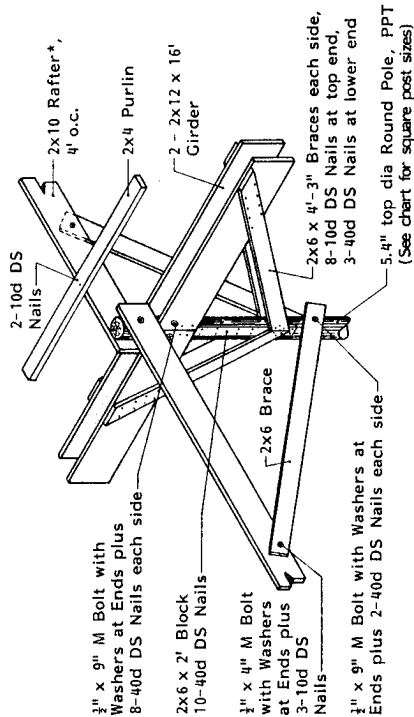
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42' Wide Pole-Utility Building

For livestock housing, crop storage, machinery storage, or other not needing insulation. Open wall can be built same as closed wall. Three optional plastic sheets for natural lighting are shown in the closed wall.

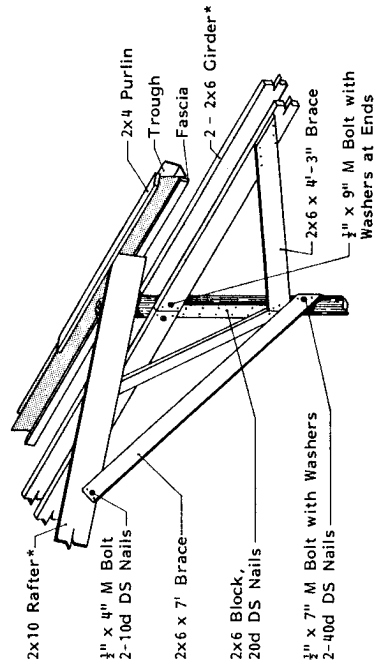


Perspective



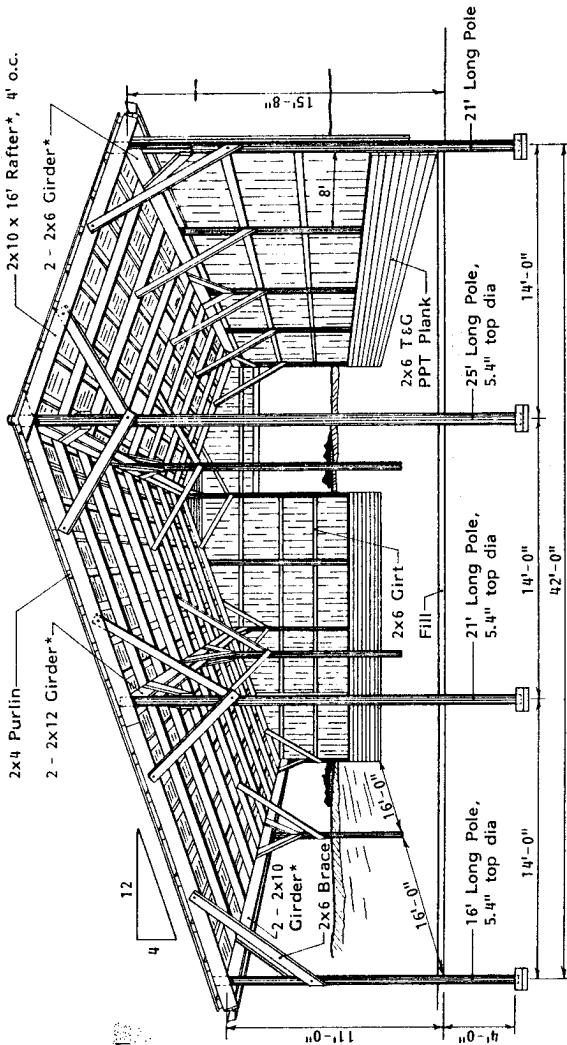
INTERIOR POLE TOP BRACING - 1/1

16' o.c.



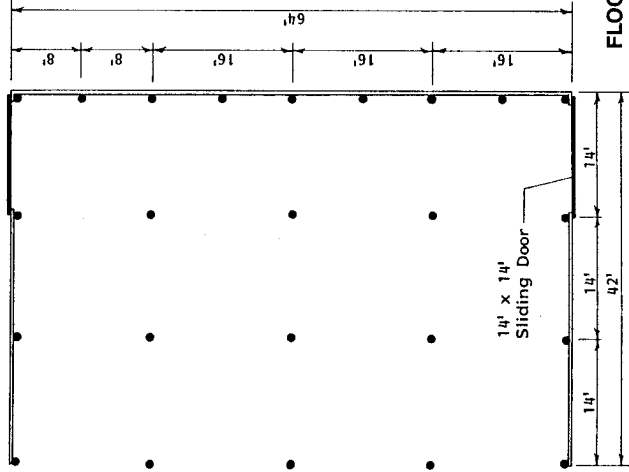
BACK WALL BRACING - 2/1

16' o.c.

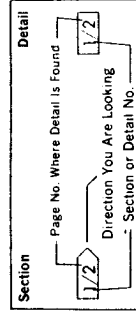


CROSS SECTION PERSPECTIVE - 3/1

Interior Poles; No Clear Span



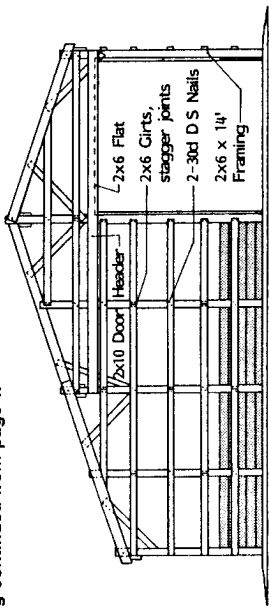
FLOOR PLAN - 4/1



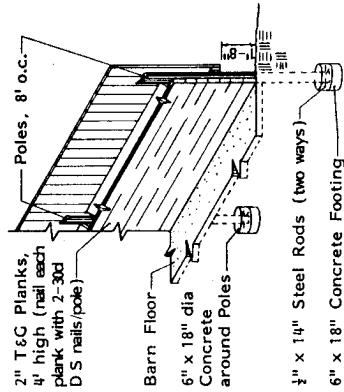
Section & Detail Indicator

MIDWEST PLAN SERVICE Cooperative Extension & Research in Agriculture & Home Economics in the 12 North Central Universities—USDA Cooperating	
42' WIDE POLE UTILITY BUILDING	Plan No. mwps-72050
3 Pages	Page 1 of 3

Framing continued from page 1.

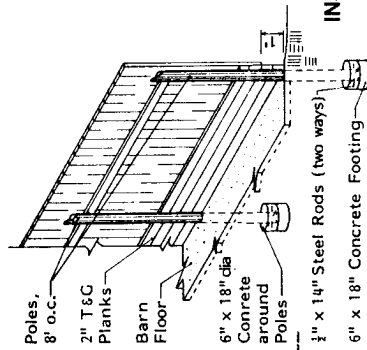


TYPICAL ENDWALL FRAMING - 1/2

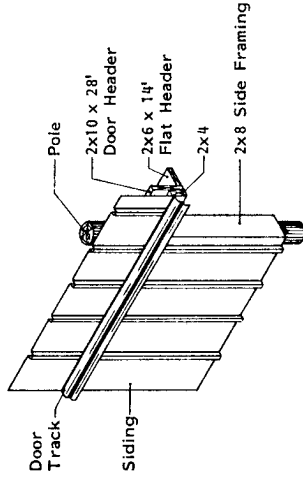


INSTALL INSIDE WALL PLANK FOR LIVESTOCK - 2/2

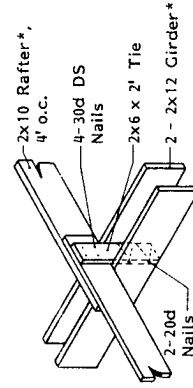
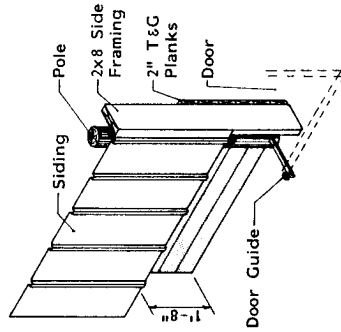
Hinged top plank opens for ventilation.



INSTALL OUTSIDE WALL PLANK FOR DRY STORAGE - 3/2



DOOR FRAMING DETAIL - 4/2



RAFTER TIE BETWEEN POLES - 5/2

Materials List (42' x 64' Barn)

Number	Pressure preservative treated poles:	Round poles			Square poles		
		Top dia in.	Length	8' o.c. 16' o.c.	Full size	Dressed	
5	5.4" dia. top x 16' long	5.4	16	5x5	6x8	4x6	6x8
2	5.4" dia. top x 18' long						6x8
1	5.4" dia. top x 21' long						6x8
2	5.4" dia. top x 22' long						6x8
5	5.4" dia. top x 25' long						6x8

Round pole diameters are the minimum size 3" from the upper end of the pole.

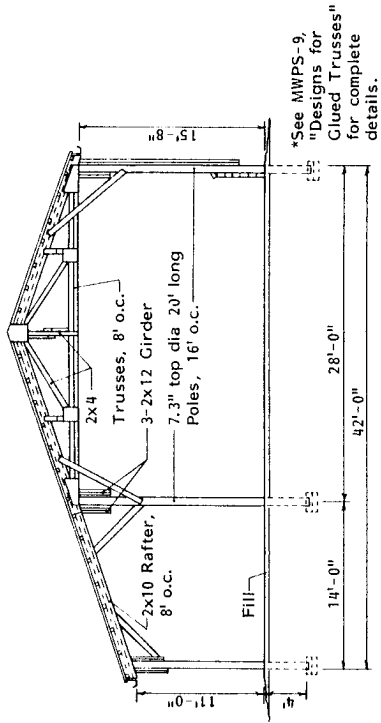
Number	Item
600 BD Ft	Wall plank 2x6 x 14' T&G PPT
1000 BD Ft	End girts, braces & ties 2x6 x 14' #2 H-ir or better
450 BD Ft	Backwall girts, girders 2x6"
16	#1 SP or #1 D-ir Interior girders 2x12 x 16"
8	#1 SP or #1 D-ir Poles 2x12 x 16"
51	Rafters 2x10 x 16"
4	#1 SP or #1 D-ir Door headers 2x10 x 14'
1664 Lin Ft	Roof purlins 2x4 x 16' #2 H-ir
3100 Ft	Roofing (w/ fasteners) corr. metal or asph. fiberboard
2000 Ft	Siding (w/ fasteners) corr. metal or ext. plywood
2	Sliding doors w/ track, latches and handles, 14' x 14'
22	1/2"x6" M. Bolts—two washers ea.
16	1/2"x7" M. bolts—two washers ea.
18	1/2"x4" M. bolts—two washers ea.
1200	10d D.S. nails
5000	30d D.S. nails
1200	40d D.S. nails
80 Ft	#4 (1/2") rod (56 pieces of 1/2" x 14')
2 Yd	Concrete footings
Also needed:	Vents, pipes, pipe, eave trough, downspouts, lightning rods are extra.

*Note: The plan with member sizes and bracing as shown are designed for:
 #1 southern pine or #1 Douglas fir rafters, girders, and doorway headers.
 Maximum allowable roof snow load is 25 psf.
 To increase maximum allowable roof snow load to 38 psf: increase the closed wall girders from 2-2x6 to 2-2x8.
 Increase the interior girders from 2-2x12 to 3-2x12.
 Increase the rafters from 2x10 to 2x12. To determine required snow load in your area, consult an engineer or local building official.

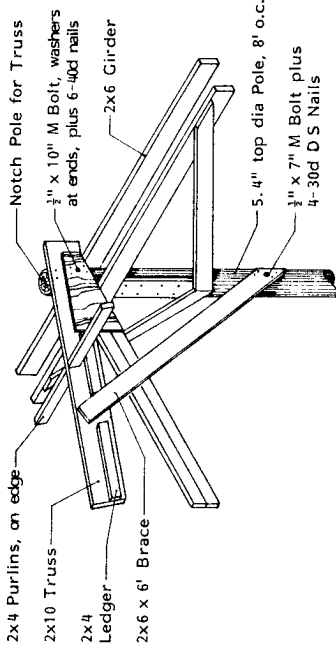
Abbreviations

- d dia
- DS diagonal shank (ring or spiral shank hardened steel nails)
- M machine (bolts)
- o.c. on center (spacing)
- PPT pressure preservative treated (lumber)
- T&G tongue and groove (lumber)

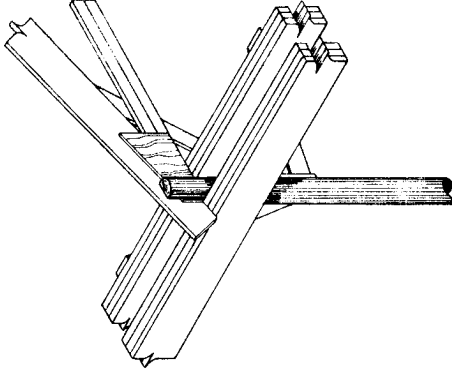
Building Options based on this plan.
Adjust materials list as needed.



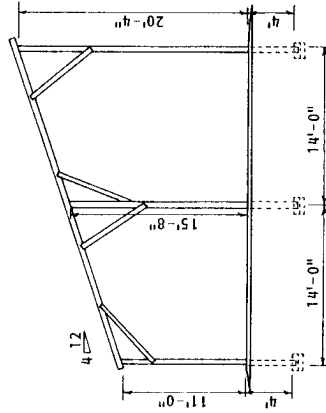
42' WIDE, 28' CLEAR SPAN TRUSS - 1/3



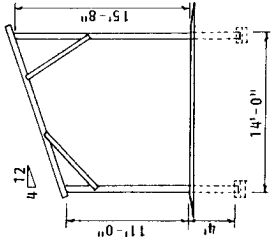
TRUSS ATTACHMENT AT REAR WALL - 2/3



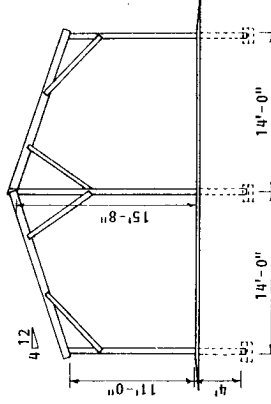
TRUSS ATTACHMENT AT INTERIOR POLE - 3/3



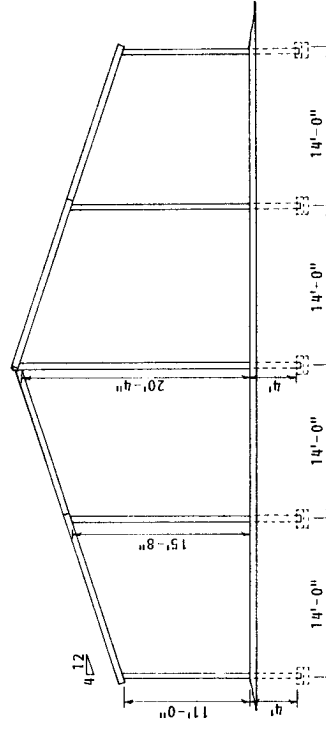
28' WIDE, SHED ROOF



14' WIDE, SHED ROOF



28' WIDE, GABLE ROOF



56' WIDE, GABLE ROOF

MWPS-72058

50' Pole Utility Building

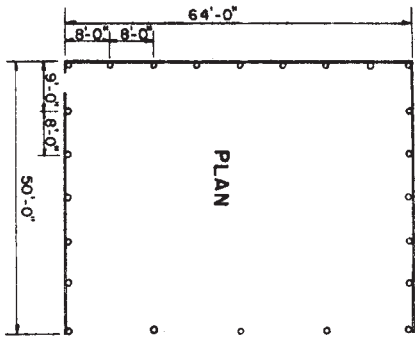
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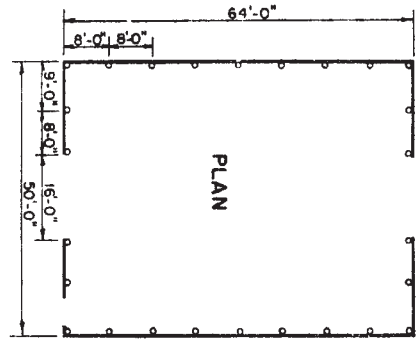
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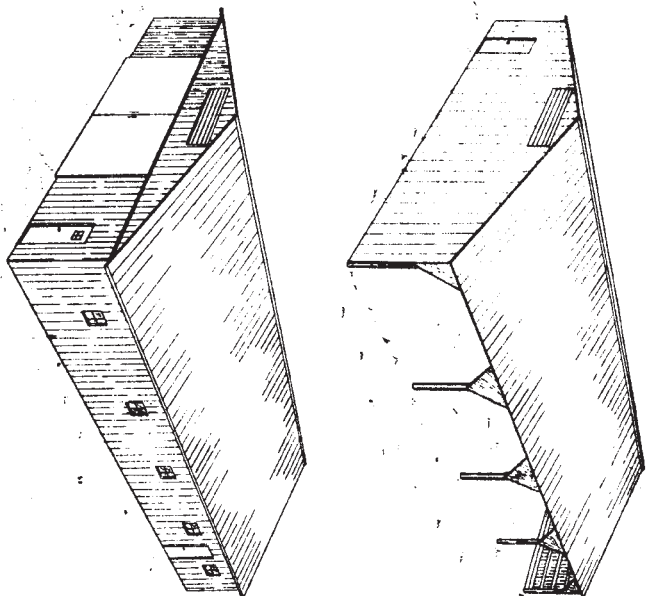
MIDWEST PLAN SERVICE
Cooperative Extension Work in Agriculture and Home Economics and Agricultural Experiment Stations of North Central Region - USDA Cooperating
50' Pole Utility Building
Title Page
MIDWEST PLAN NO. 72058



WITH ONE SIDE OPEN, THE BUILDING CAN BE USED FOR:
 Beef housing and/or feeding.
 Dairy resting barn.
 Machinery housing.

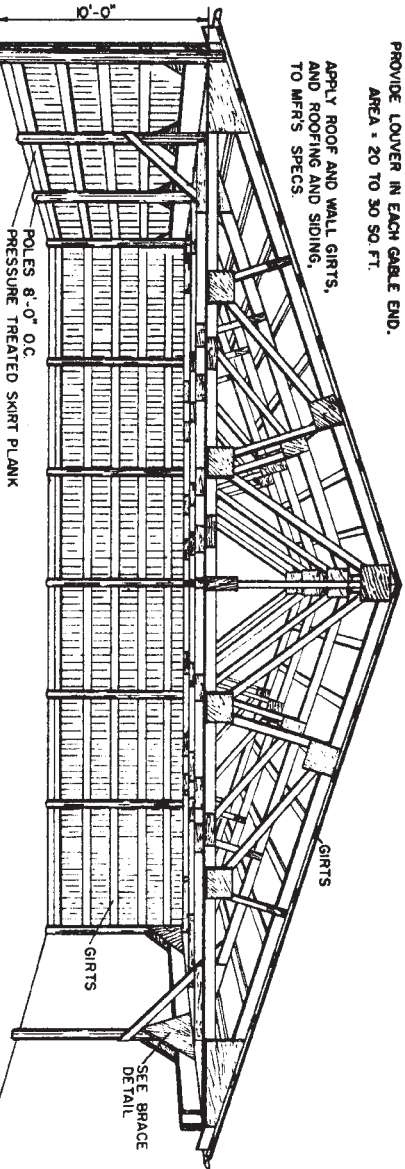


WITH ALL SIDES CLOSED, AND SUITABLE DOORS, THE BUILDING CAN BE USED FOR:
 Drive-through machinery housing.
 Rural warehousing.



PROVIDE LOUVER IN EACH GABLE END.
 AREA = 20 TO 30 SQ. FT.

APPLY ROOF AND WALL GIRTS,
 AND ROOFING AND SIDING,
 TO MFR'S SPECS.

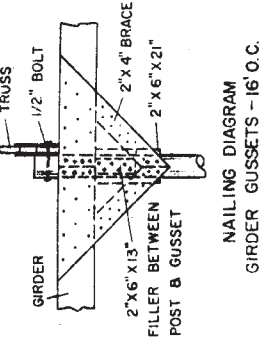


INTERIOR PERSPECTIVE

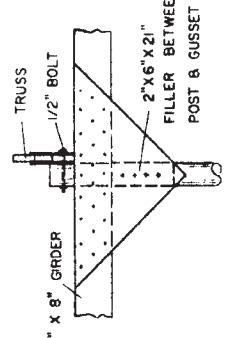
VENTILATION:
 Provide louvers in each end for minimum ventilation. For animal housing in the open shed leave backwall ends open. Drop down doors improve summer ventilation.
 Walls can be 12' high for machine sheds. Provide pressure-treated skirt boards inside poles for cattle housing (usually 3' to 4' high).

SHEET 4: 50' SPAN TRUSSES

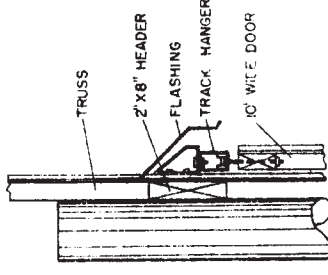
MIDWEST PLAN SERVICE
Cooperative Extension Work in Agriculture and Home Economics and Agricultural Experiment Stations of North Central Region - USDA Cooperating
50' POLE UTILITY BUILDING
Sheet 1 of 4 Sheets
MIDWEST PLAN NO. 72058



NAILING DIAGRAM
GIRDER GUSSETS - 16' O.C.

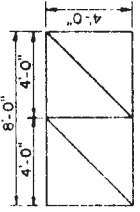


NAILING DIAGRAM
GIRDER GUSSETS - 8' O.C.

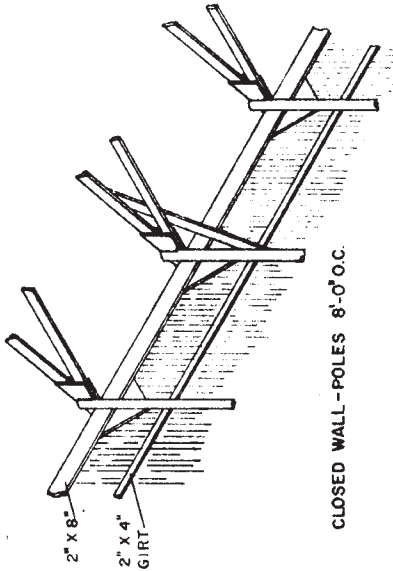


DOOR HANGER DETAIL
(ENDWALL)

- 1/2" BOLTS
- 8d NAILS
- 40d NAILS ARE DEFORMED HARDENED STEEL

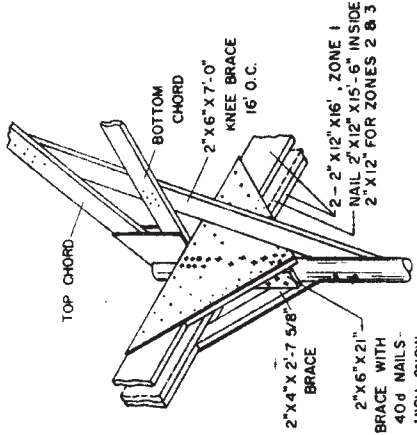


3/8" C-C EXT. PLYWOOD
CUTTING DIAGRAM



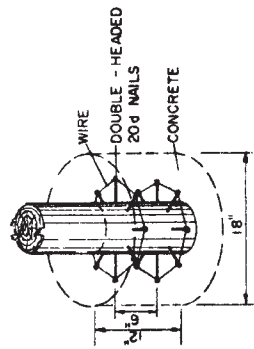
CLOSED WALL - POLES 8'-0" O.C.

PRESSURE TREATED POLES AND POSTS
 Squared Posts, 16' O.C. 6" x 6"
 8' O.C. 4" x 6"
 *Note: Wider dimension is parallel to trusses.
 Class 5
 (5 1/2" Min. Top) (6" Min. Top)
 Douglas Fir, western hemlock,
 southern pine, or equivalent.

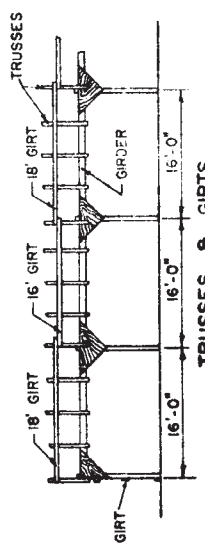


OPEN WALL
GIRDER-POLE CONNECTION

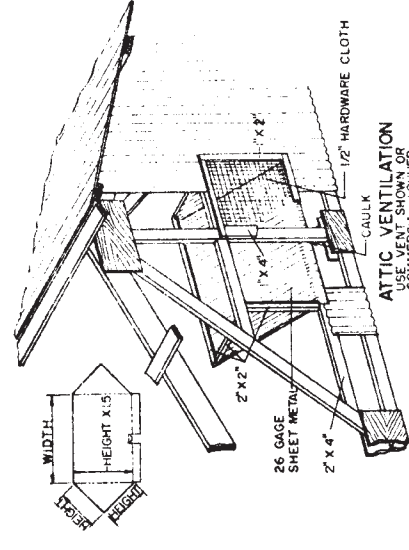
NOTE: DO NOT SUBSTITUTE OTHER
FRAMING METHODS FOR THE
PLYWOOD GUSSETS SHOWN



CONCRETE COLLAR DETAIL



TRUSSES & GIRTS



ATTIC VENTILATION
SHOWS
CONCRETE COLLAR

Gussets may be omitted on one side of endwall truss
if building will never be lengthened.

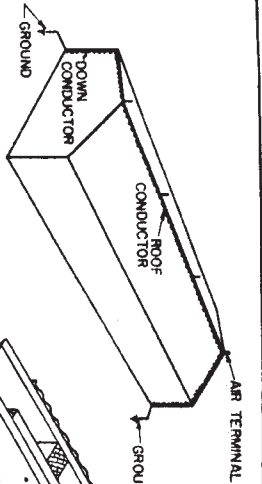
ITEM	DESCRIPTION	BUILDING SECTION	
		BEGINNING (48") 11' 3" Cu. Yds.	ADDITIONAL (16") 10' 4" Cu. Yds.
Concrete - under poles		3	2
Poles	6" top x 16"	18	2
	5" top x 16"	3	2
Girders	2" x 12" x 16'-0"	9	3
	Zones 2 & 3		
Bracing	2" x 8" x 16'-0"	3	1
	2" x 4" x 8' c-c, Ext. Plywood	4	21.4
	2" x 4" x 12'-0"	3	8
	2" x 6" x 12'-0"	3	12
	2" x 6" x 14'-0"	2	14
	2" x 6" x 14'-0"	2	14
Trusses - 8'	2" x 4" x 16'-0"	54	117.4
Girts	2" x 4" x 18'-0"	30	144
Skirt	2" x 6" x 16'-0"	8	128
	2" x 6" x 18'-0"	8	144
Roofing Squares		29	29
Sliding		20	20
Eaves Trough, Ln. Ft.		96	96

SHEET 4: 50' SPAN TRUSSES

MIDWEST PLAN SERVICE
 Cooperative Extension Work in
 Agriculture and Home Economics
 and Agricultural Experiment Stations
 of North Central Region, USDA, Cooperating

50' POLE
UTILITY BUILDING

Sheet 2 of 4 Sheets
 MIDWEST PLAN NO. 72058



LIGHTNING PROTECTION FOR GABLE ROOFS

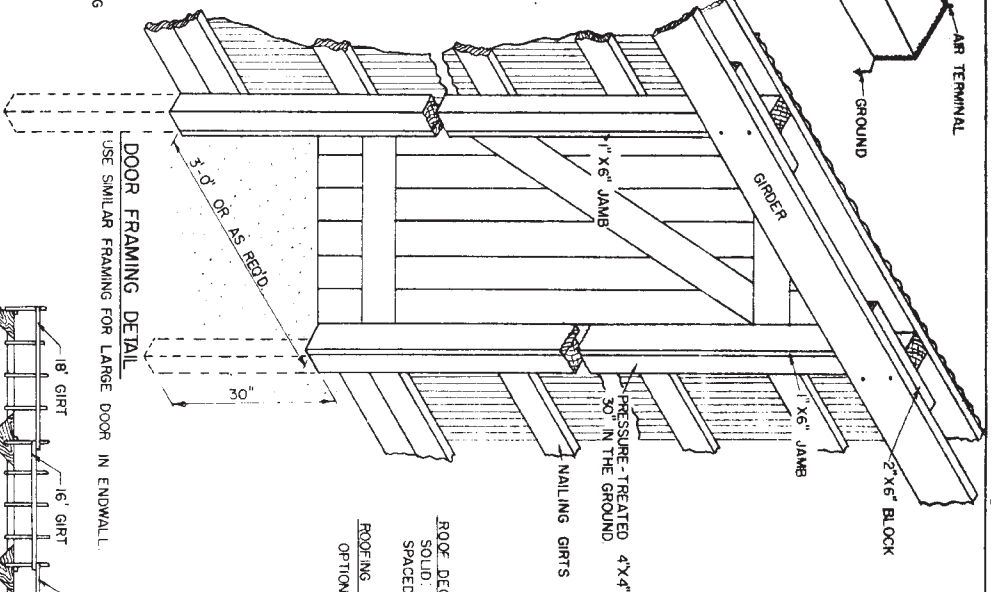
Air Terminal:
At least 24" long.
Up to 35' span: 1/2" aluminum.
3/8" copper tubing, wall thickness over 0.032"

Conductors:
17 AWG wires, 187M/1000'.
Aluminum: 1/4 AWG wires, 95M/1000'.
Two down conductors, minimum, on opposite corners.
For bldgs. over 110' long, use one down conductor per 50' add 1' length.

Grounds:
One ground per down conductor.
Rods buried at least 10'.
If water pipe enters bldg, bond at least one down conductor to it.

Metal Roofs:
Ground metal roofs without air terminals by steeling with 2-3/8" J or U bolts. Ground down conductors as with air terminals.

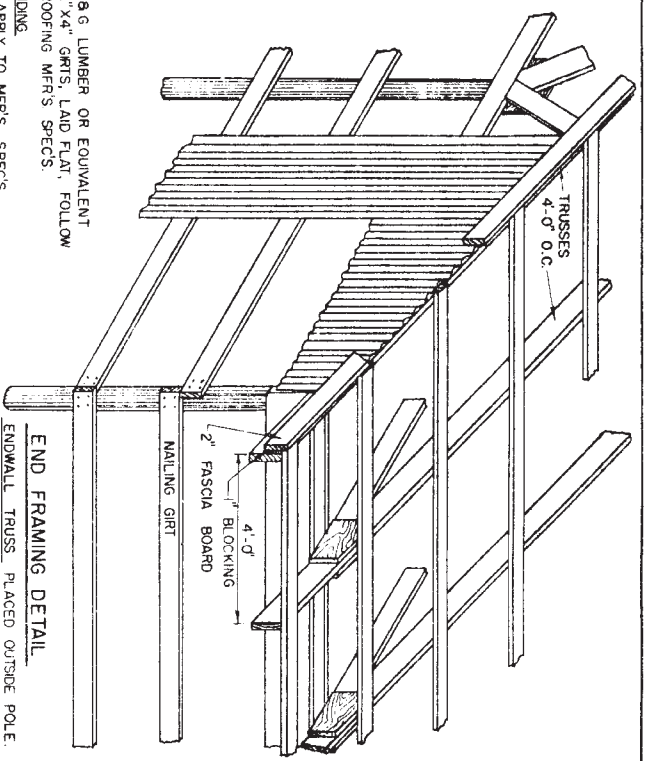
Master Label:
For maximum lightning protection obtain a Master Label System as approved by the Underwriters Laboratories, Inc.



DOOR FRAMING DETAIL

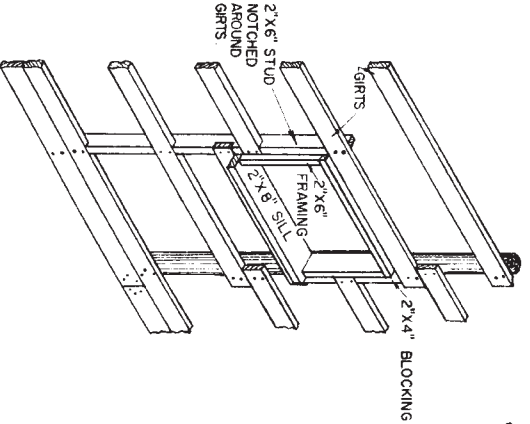
USE SIMILAR FRAMING FOR LARGE DOOR IN ENDWALL

ROOF DECK:
SOLID T & G LUMBER OR EQUIVALENT
SPACED: 2" X 4" GRTS, LAID FLAT, FOLLOW ROOFING MFR'S SPECS.
ROOFING & SIDING:
OPTIONAL APPLY TO MFR'S SPECS.



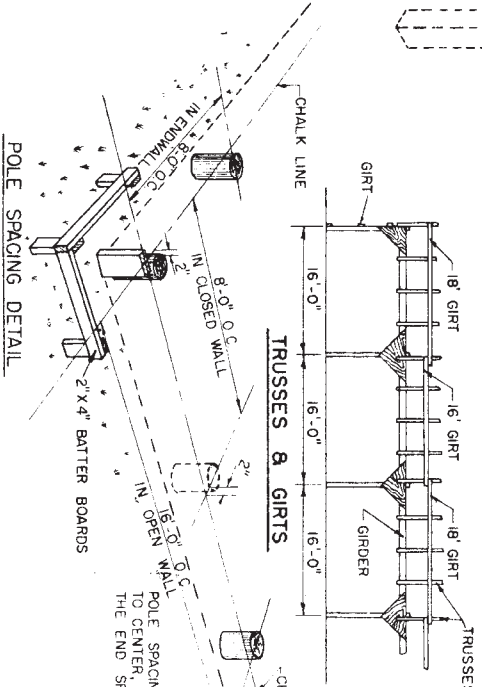
END FRAMING DETAIL

ENDWALL TRUSS PLACED OUTSIDE POLE
NAIL SIDING TO TRUSS MEMBERS

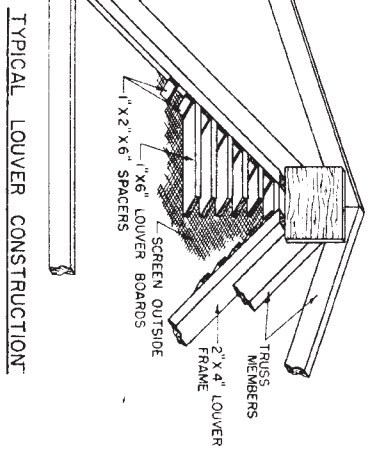


TYPICAL WINDOW FRAMING

SELECT STOPS & HARDWARE TO
SUIT TYPE OF SASH USED



TRUSSES & GIRTS



TYPICAL LOUVER CONSTRUCTION

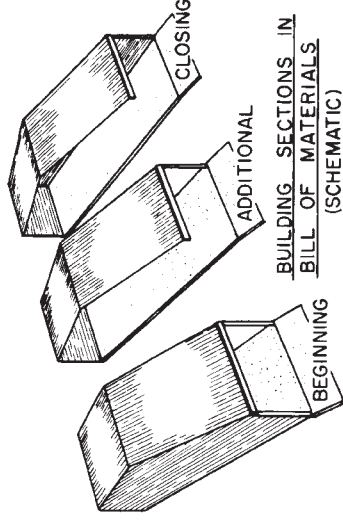
POLE SPACING DETAIL

POLE SPACING IS CENTER TO CENTER EXCEPT FOR THE END SPACES

SHEET 3, 24' SPAN TRUSSES	
MIDWEST PLAN SERVICE	
COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS AND AGRICULTURAL EXPERIMENT STATIONS OF NORTH CENTRAL REGION, USDA COOPERATING	
24' POLE	
UTILITY BUILDING	
6011	SHEET 2 OF 3 SHEETS
MIDWEST PLAN NO. 72054	

BUILDING SECTION (16' LONG)

ITEM	DESCRIPTION	BEGINNING NO. FBM	ADDITIONAL NO. FBM	CLOSING NO. FBM
Concrete	Cu. feet			
Poles	5" Top x 16'	4	2	2
	4" Top x 16'	4	2	2
Girders	2"x8"x16'0"	3	1	3
Bracing-	3/4"x4"x8' c-c, Ext. Plywood	4	85 1/3	4
	2"x4"x14'0"	1 1/2	1	1 1/2
	2"x6"x6'0"	3	2	1
	2"x6"x7'0"	2	12	1
	2"x6"x7'0"	2	14	1
Trusses	See Page 3	5	3	4
Girts	2"x4"x16'0"	7	74 2/3	7
	2"x4"x18'0"	7	84	7
Skirt	2"x6"x16'0"	10	160	10
Siding	2"x6"x16'0" Pressure-treated	5	80	5
Roofing	Sq. feet	445	160	445
	Ln. feet Eaves trough	448	448	448
Louwer	2"x4"x6'0"	32	32	32
	1"x6"x10'0"	2	2	2
	1"x2"x12'0"	5	25	5
	Sq. ft. screen	1	1	1
Man door	4"x4"x12'6"	15	34	15
	2"x6"x2'0"	1	2	1
	1"x6"x10'0"	11	55	11



MWPS-72044

24' Frame Utility Building

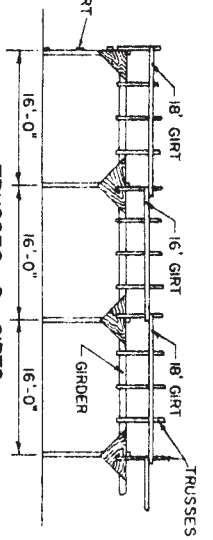
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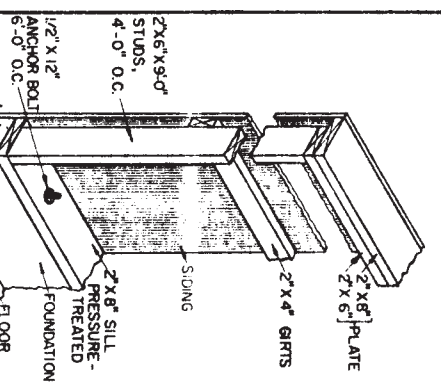
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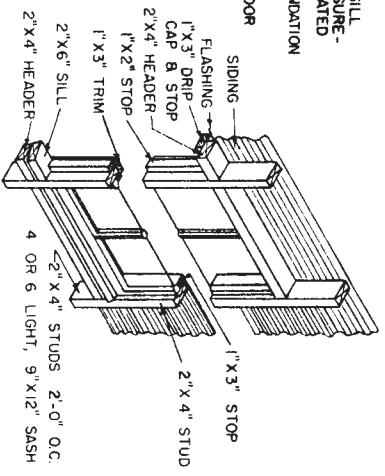
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24' Frame Utility Building
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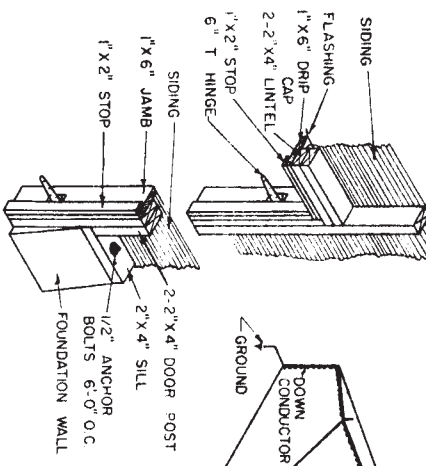
TRUSSES & GIRTS



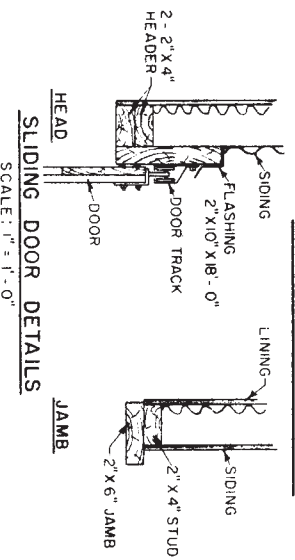
ALTERNATE WALL FRAMING



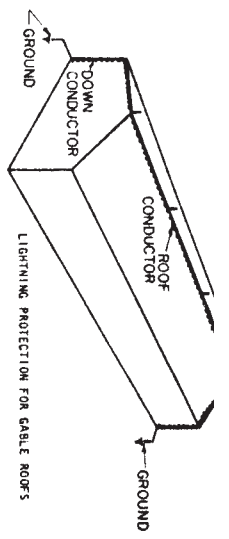
WINDOW FRAMING DETAIL



DOOR FRAMING DETAIL



SLIDING DOOR DETAILS



LIGHTNING PROTECTION FOR GABLE ROOFS

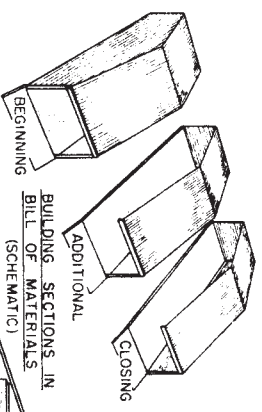
Air Terminals
 At least 24\"/>

Grounds
 One ground per down conductor.
 Rods buried at least 10'.
 If water pipe enters bldg., bond at least one down conductor to it.

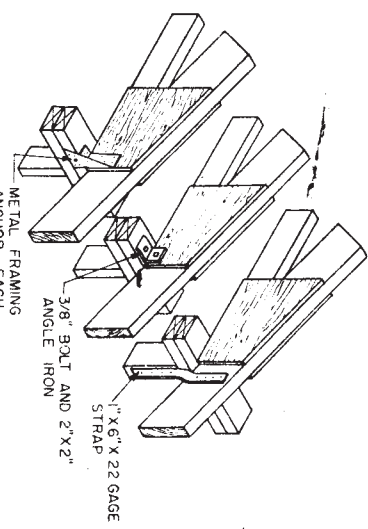
Metal Roofs
 Ground metal roofs without air terminals by attaching 18\"/>

Conductors
 Copper: 17 AWG wires, 183#M/1000'.
 Aluminum: 14 AWG wires, 95#M/1000'.
 Two down conductors, minimum, on opposite corners.
 For bldgs. over 110' long, use one down conductor per 50' add'l length.

Master Label
 For maximum lightning protection obtain a Master Label System as approved by the Underwriters' Laboratories, Inc.

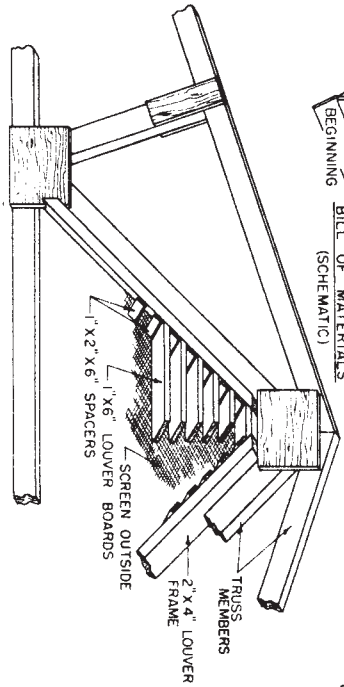


BUILDING SECTIONS IN BILL OF MATERIALS (SCHEMATIC)



TRUSS ATTACHMENT

CONCRETE	Cu. Yards	NO.	BEGINNING FBM	ADDITIONAL FBM	CLOSING FBM
Foundation	4	2	4	3/4	2
Floor	1	1	1	1	1
Apron	1	1	1	1	1
Mastic	40	1	16	16	40
Posts	61/8\"/>				
Girders	21/8\"/>				
Bracing	21/8\"/>				
Trusses	See Page 3	45	7 1/2	2/3	7 1/2
Sill	21/8\"/>				
Studs	21/8\"/>				
Plate	21/8\"/>				
Siding	54 sq. feet	445	8	2	445
Roofing	Ln. feet Eaves trough	448	32	2	448
Louver	21/8\"/>				
Man door	11/8\"/>				



TYPICAL LOUVER CONSTRUCTION

SHEET 3: 24' SPAN TRUSSES

MIDWEST PLAN SERVICE

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS AND AGRICULTURAL EXPERIMENT STATIONS OF NORTH CENTRAL REGION USDA COOPERATING

24' FRAME

UTILITY BUILDING

MIDWEST PLAN NO. 72044

6011 SHEET 2 OF 3 SHEETS

MWPS-72044

24' Frame Utility Building

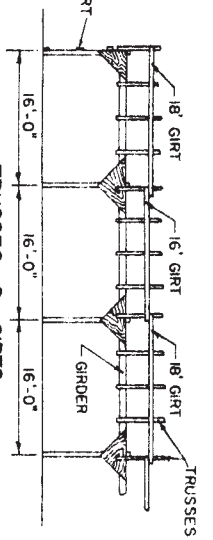
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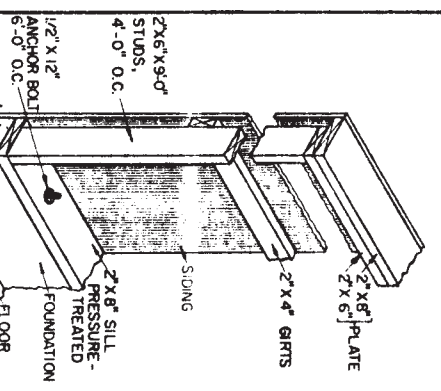
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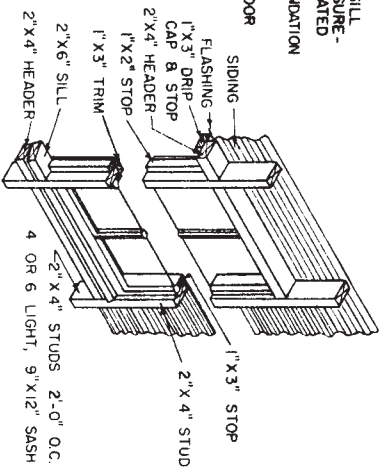
MIDWEST PLAN SERVICE
Cooperative Extension Work in Agriculture and Home Economics and Agricultural Experiment Stations of North Central Region - USDA Cooperating
24' Frame Utility Building
Title Page
MIDWEST PLAN NO. 72044



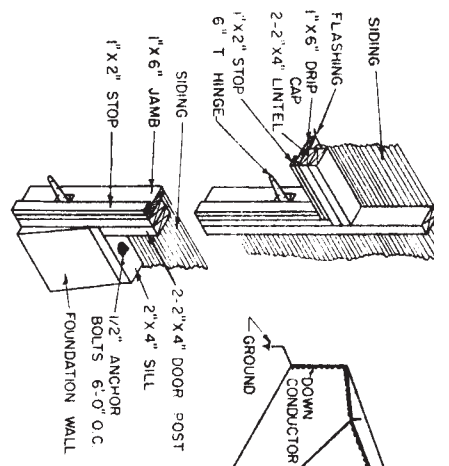
TRUSSES & GIRTS



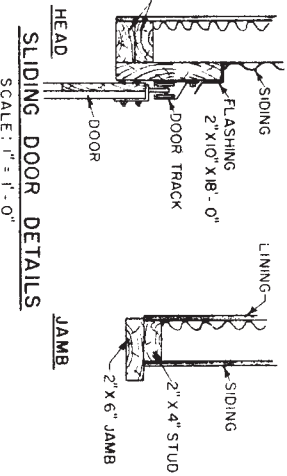
WALL FRAMING



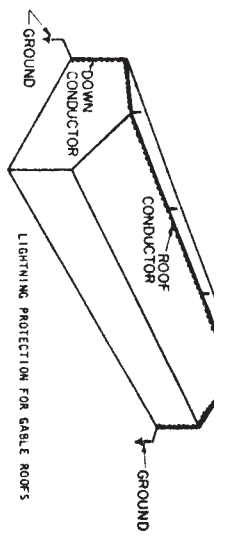
WINDOW FRAMING DETAIL



DOOR FRAMING DETAIL



SLIDING DOOR DETAILS



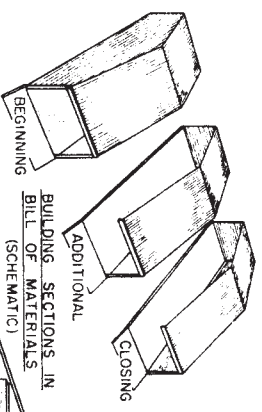
LIGHTNING PROTECTION FOR GABLE ROOFS

Air Terminals
At least 24\"/>

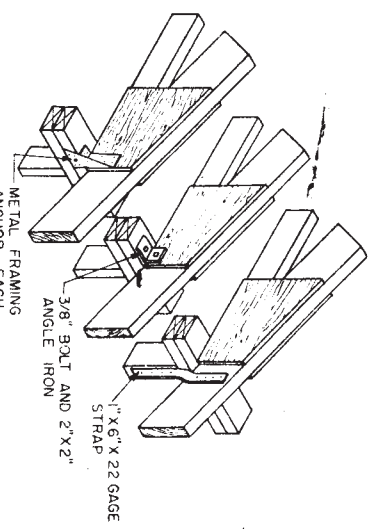
Grounds
One ground per down conductor.
Rods buried at least 10'.
If water pipe enters bldg., bond at least one down conductor to it.

Metal Roofs
Ground metal roofs without air terminals by attaching 18\"/>

Master Label
For maximum lightning protection obtain a Master Label System as approved by the Underwriters' Laboratories, Inc.

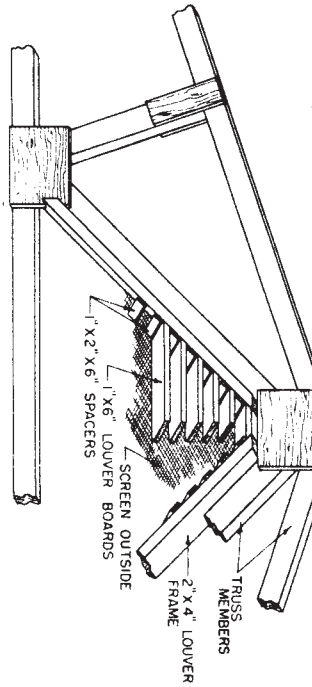


BUILDING SECTIONS IN BILL OF MATERIALS (SCHEMATIC)



TRUSS ATTACHMENT

NO.	BEGINNING FPM	ADDITIONAL FPM	CLOSING FPM
Concrete			
Foundation	2	1	2
Floor	4 3/4	4 3/4	4 3/4
Apron	1	1	1
Mastic	1	1	1
Posts	30	30	42 2/3
Girders	2 3/4	2 1/2	2 1/4
Bracing	3	14	1
	2	6	3
	1	1	1
	2	7	45
Trusses	See Page 3	4	74 2/3
	2	7	7
	7	84	16
	2	10 2/3	2
Sills	1	1	10 2/3
Studs	24	48	23
Plate	2	32	32
	2	21 1/3	21 1/3
Siding	445	2	445
Roofing	448	160	448
Louver	32	32	32
	8	8	8
	5	25	2
	15	2	15
	28	28	28
	1 1/2	3 1/2	1 1/2
Man door	1	1	1



TYPICAL LOUVER CONSTRUCTION

SHEET 3: 24' SPAN TRUSSES

MIDWEST PLAN SERVICE

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS AND AGRICULTURAL EXPERIMENT STATIONS OF NORTH CENTRAL REGION USDA COOPERATING

24' FRAME

UTILITY BUILDING

MIDWEST PLAN NO. 72044

6011 SHEET 2 OF 3 SHEETS

MWPS-72054

24' Pole Utility Building

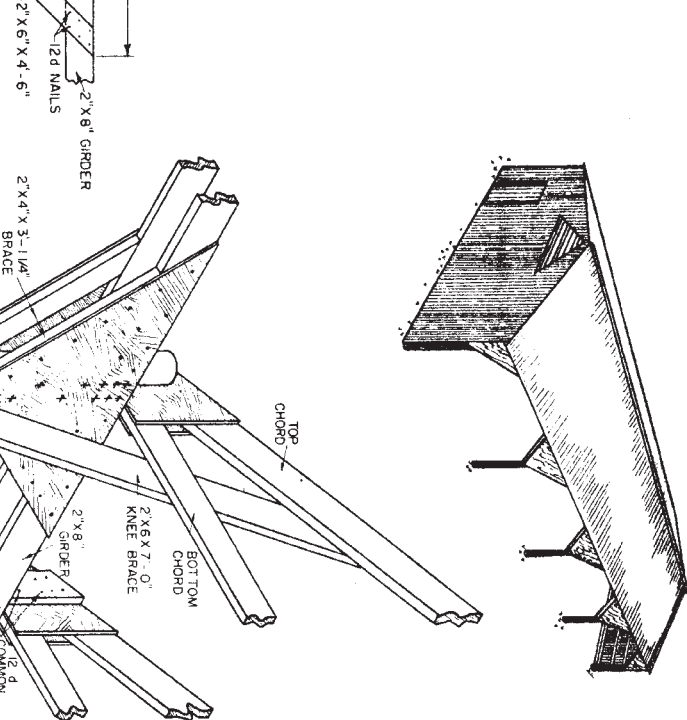
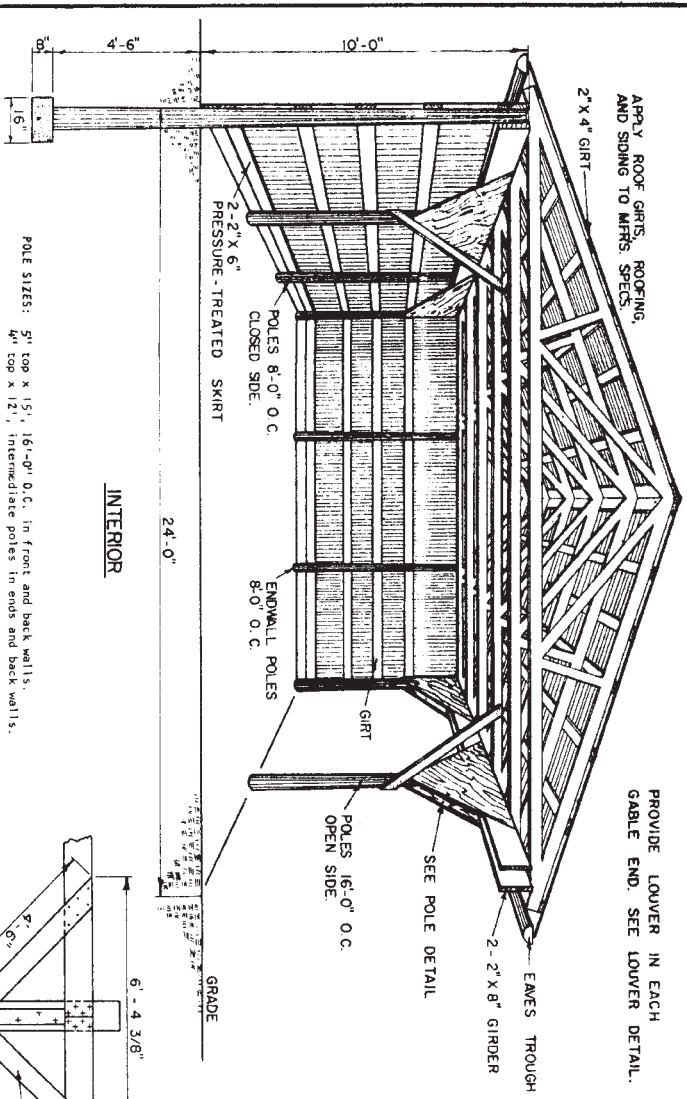
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MIDWEST PLAN SERVICE
Cooperative Extension Work in Agriculture and Home Economics and Agricultural Experiment Stations of North Central Region - USDA Cooperating
24' Pole Utility Building
Title Page
MIDWEST PLAN NO. 72054

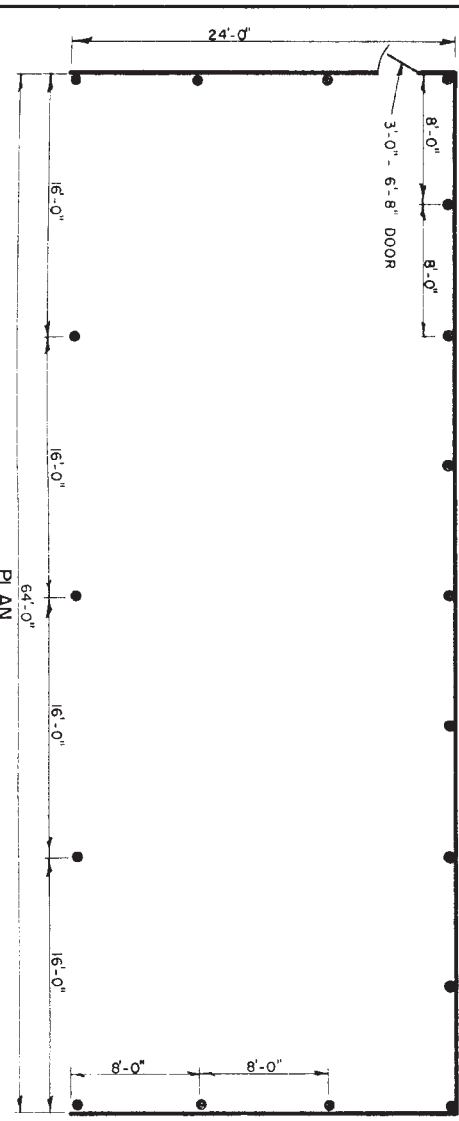
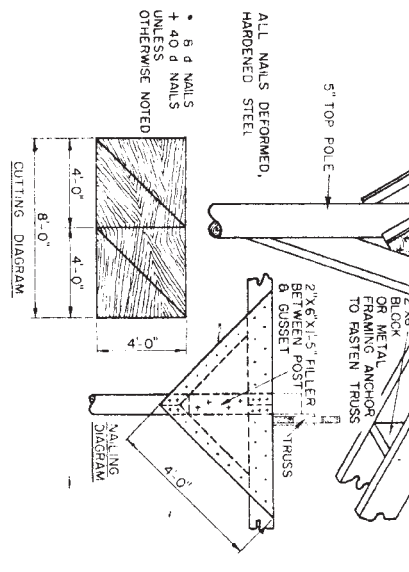


POLE SIZES: 5" top x 15", 16'-0" O.C. in front and back walls;
4" top x 12", intermediate poles in ends and back walls.

All lumber in contact with manure or the soil should be pressure-treated with an oil-base preservative.

REAR WALL CONSTRUCTION - Intermediate 4" top poles in rear wall are non-loadbearing. This construction permits removal of a 4" top pole to make a 16' doorway.
WALL GIRTS - 2" x 4" wall girts may be spaced up to 2'-0" O.C. Use 2" x 6" girts for greater spacings.

ALTERNATE CONNECTION
THIS JOINT IS MORE CONVENTIONAL, BUT LESS EFFECTIVE THAN THE PLYWOOD DETAIL SHOWN.



POLE DETAIL

ALL NAILS DEFORMED, HARDENED STEEL.

* 5 d NAILS
+ 40 d NAILS
UNLESS OTHERWISE NOTED

5" TOP POLE

2' x 6" x 1.5" FILTER BLOCK POST BE DISSET

TRUSS

4'-0"

4'-0"

8'-0"

CUTTING DIAGRAM

4'-0"

4'-0"

8'-0"

NAILING DIAGRAM

SHEET 3: 24' SPAN TRUSSES

MIDWEST PLAN SERVICE

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS
NORTH CENTRAL REGION - USDA COOPERATING

24' POLE

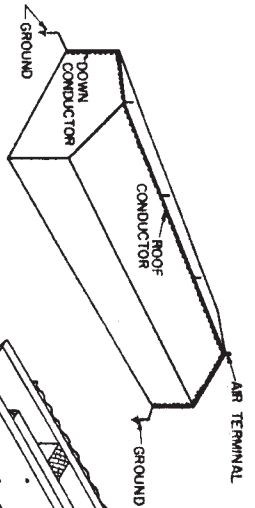
UTILITY BUILDING

6011 SHEET 1 OF 3 SHEETS

MIDWEST PLAN NO. 72054

SCALE 1/8" = 1'-0"

PLAN



LIGHTNING PROTECTION FOR CABLE ROOFS

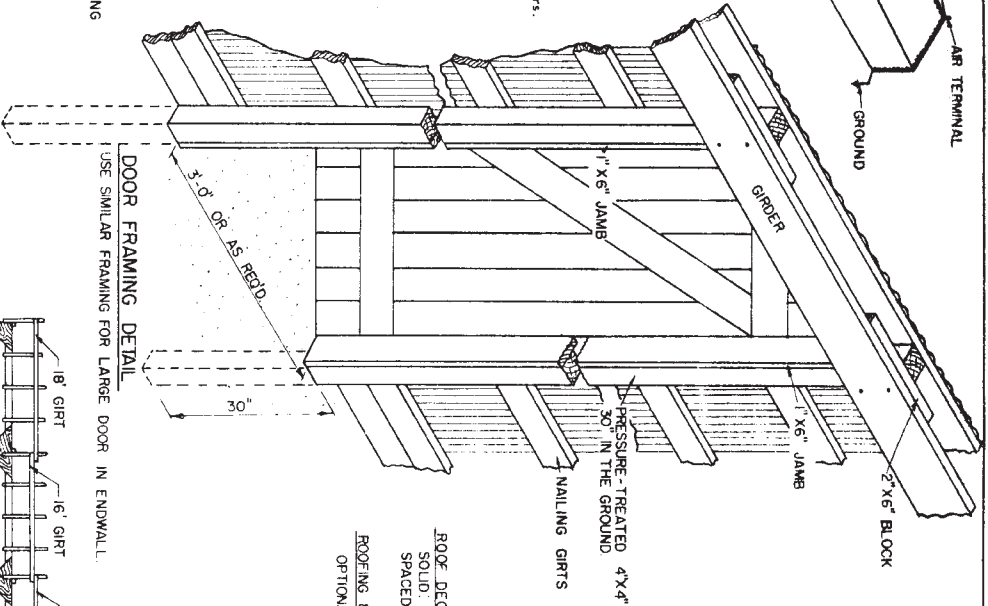
Air Terminals
 At least 24" long.
 Up to 25" apart.
 3/8" copper or 5/8" aluminum.
 5/8" copper tubing, wall thickness over 0.032"

Conductors
 Copper: 17 AWG wires, 187#/1000'.
 Aluminum: 15 AWG wires, 95#/1000'.
 Two down conductors, minimum, on opposite corners.
 For bldgs. over 110' long, use one down conductor per 50' add'l length.

Grounds
 One ground per down conductor.
 Grounds should be made of galvanized pipe.
 If water pipe enters bldg, bond at least one down conductor to it.

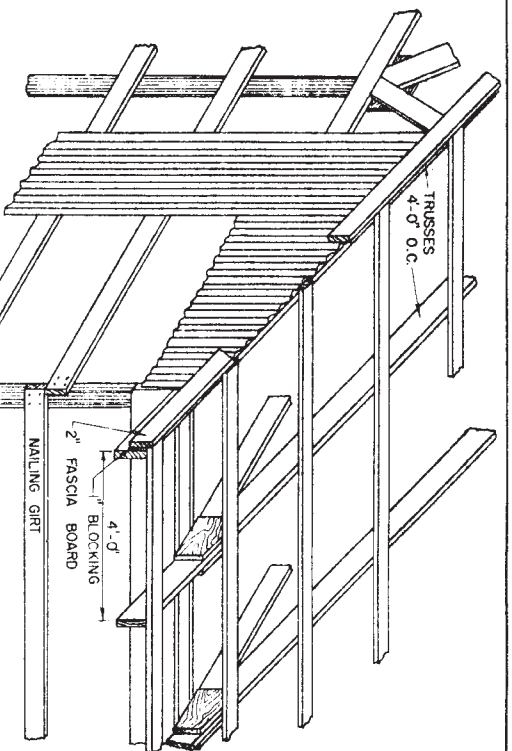
Metal Roofs
 Ground metal roofs without air terminals by attaching 18" of conductors to roofing with 2-3/8" J or U bolts. Ground down conductors as with air terminals.

Master Label
 For maximum lightning protection obtain a Master Label System as approved by the Underwriters' Laboratories, Inc.



DOOR FRAMING DETAIL

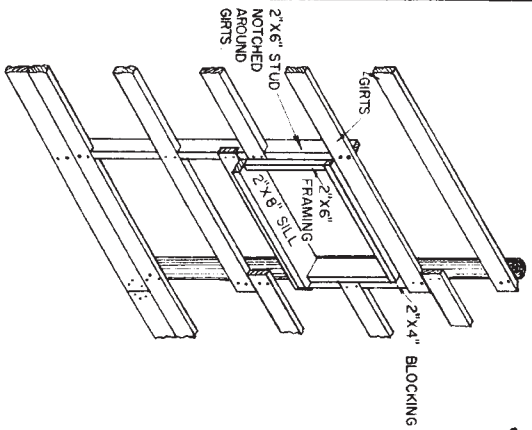
USE SIMILAR FRAMING FOR LARGE DOOR IN ENDWALL.



END FRAMING DETAIL

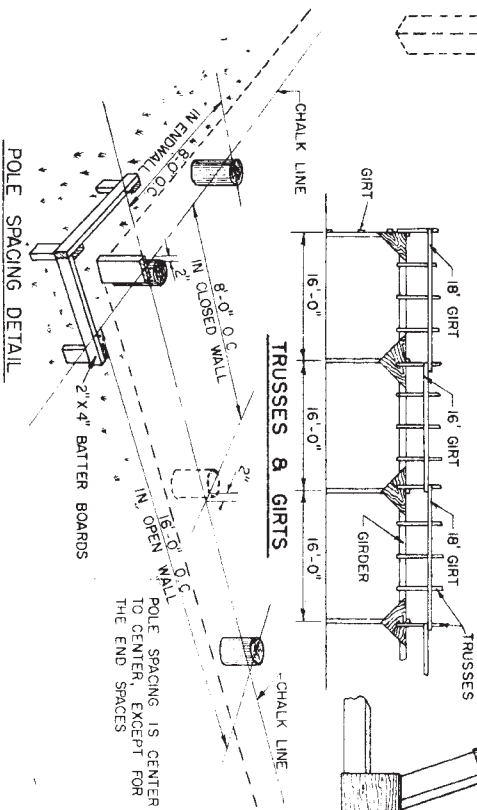
ENDWALL TRUSS PLACED OUTSIDE POLE.
 NAIL SIDING TO TRUSS MEMBERS

ROOF DECK
 SOLID: 1" T & G LUMBER OR EQUIVALENT
 SPACED: 2" X 4" GIRTS, LAID FLAT, FOLLOW ROOFING MFR'S SPECS.
ROOFING & SIDING
 OPTIONAL. APPLY TO MFR'S SPECS.

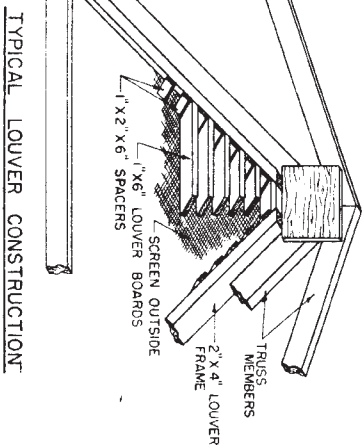


TYPICAL WINDOW FRAMING

SELECT STOPS & HARDWARE TO SUIT TYPE OF SASH USED



TRUSSES & GIRTS



TYPICAL LOUVER CONSTRUCTION

SHEET 3. 24' SPAN TRUSSES

MIDWEST PLAN SERVICE

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND MECHANICAL ENGINEERING AND AGRICULTURAL EXPERIMENT STATIONS OF NORTH CENTRAL REGION, USDA COOPERATING

24' POLE

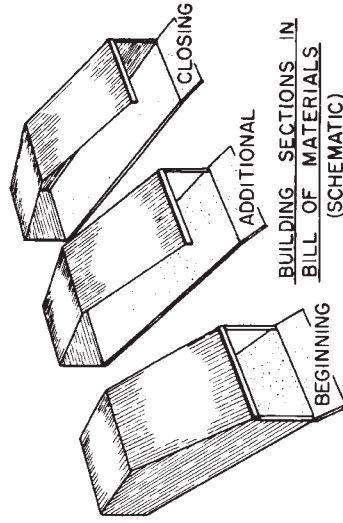
UTILITY BUILDING

6011 SHEET 2 OF 3 SHEETS

MIDWEST PLAN NO. 72054

BUILDING SECTION (16' LONG)

ITEM	DESCRIPTION	BEGINNING NO. FBM	ADDITIONAL NO. FBM	CLOSING NO. FBM
Concrete Poles	Cu. feet 5' Top x 16' 4' Top x 16'	4 4	2 2	2 2
Girders	2"x8"x16'0"	3	1	3
Bracing -	1/2"x4"x8' c-c, Ext. Plywood	4	4	4
	2"x4"x14'0"	1 1/2	1	1/2
	2"x6"x6'0"	3	2	1
	2"x6"x7'0"	2	14	1
Trusses	See Page 3	5	3	4
Girts	2"x4"x16'0"	7	7	7
	2"x4"x18'0"	7	7	7
	2"x6"x16'0"	10	3	10
Skirt Siding	2"x6"x16'0" Pressure-treated	5	2	5
Roofing	Sq. feet	445	160	445
	Sq. feet *	448	448	448
Louwer	Ln. feet Eaves trough	32	32	32
	2"x6"x6'0"	2		2
	1"x6"x10'0"	5		5
	1"x2"x12'0"	1		1
Man door	Sq. ft. screen	15		15
	4"x4"x12'6"	2		2
	2"x6"x 2'0"	1		1
	1"x6"x10'0"	11		55



MWPS-72045

30' Frame Utility Building

CAUTION!

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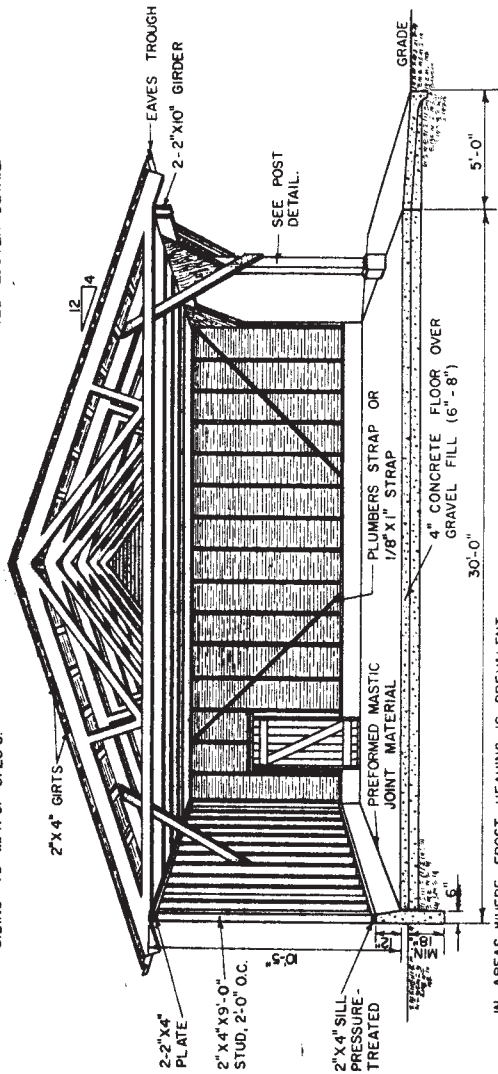
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MIDWEST PLAN SERVICE
Cooperative Extension Work in Agriculture and Home Economics and Agricultural Experiment Stations of North Central Region - USDA Cooperating
30' Frame Utility Building
Title Page
MIDWEST PLAN NO. 72045

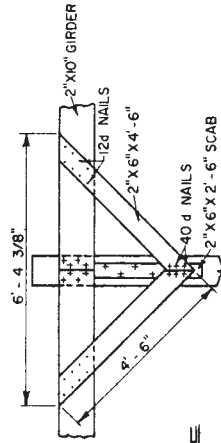
APPLY ROOF GIRTS, ROOFING AND SIDING TO MFR'S. SPEC'S.

PROVIDE LOUVER IN EACH GABLE END. SEE LOUVER DETAIL

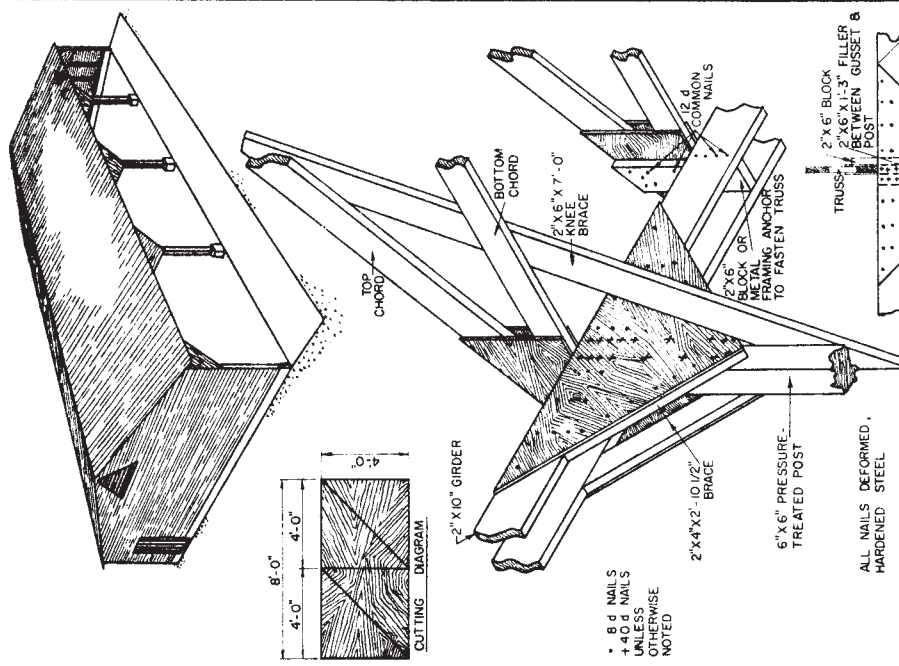
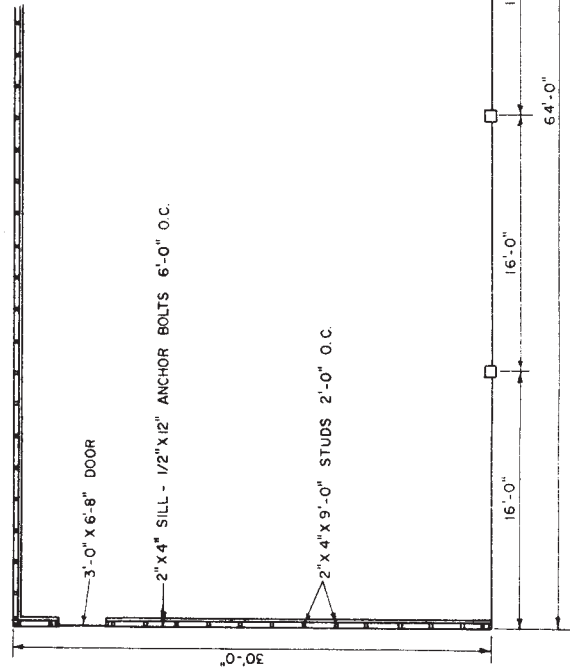


IN AREAS WHERE FROST HEAVING IS PREVALENT EXTEND FOUNDATION TO BELOW FROST.

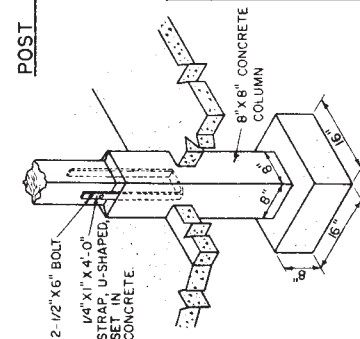
INTERIOR



ALTERNATE CONNECTION
THIS JOINT IS MORE CONVENTIONAL BUT LESS EFFECTIVE THAN THE PLYWOOD DETAIL SHOWN.

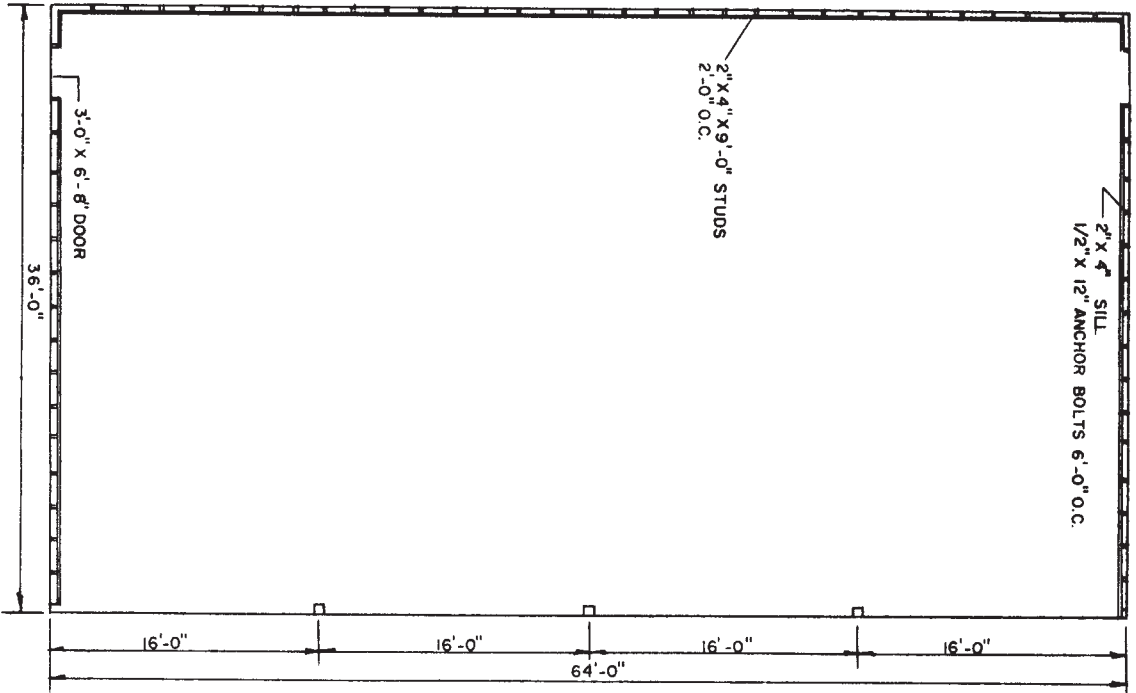


POST DETAIL

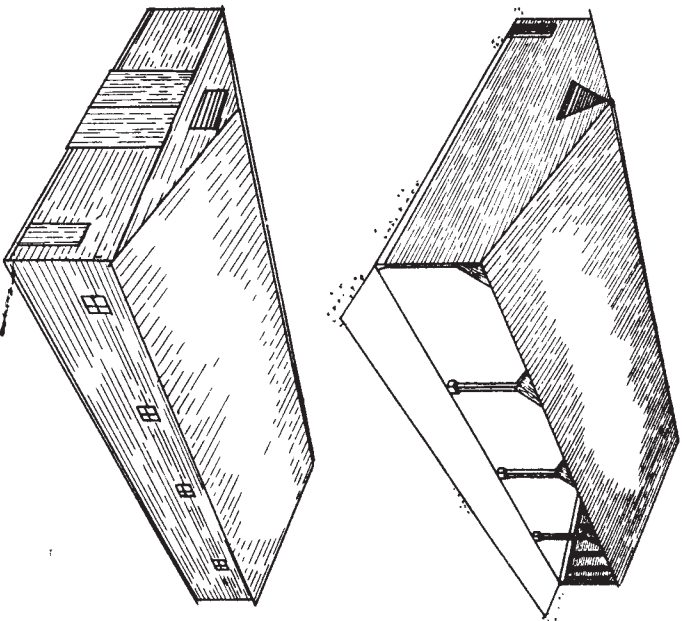


SHEET 3: 30' SPAN TRUSSES

MIDWEST PLAN SERVICE	
COOPERATIVE EXTENSION WORK IN RURAL HOME ECONOMY AND AGRICULTURAL EXPERIMENT STATIONS OF NORTH CENTRAL REGION - USDA COOPERATING	
30' FRAME UTILITY BUILDING	
6011	SHEET 1 OF 3 SHEETS
MIDWEST PLAN NO. 72045	



PLAN



WITH ONE SIDE OPEN, THE BUILDING CAN BE USED FOR:
 Beef housing and/or feeding.
 Dairy resting barn.
 Machinery housing.

WITH ALL SIDES CLOSED, THE BUILDING CAN BE USED FOR:
 Insulated:
 Livestock housing.
 Poultry housing.
 Uninsulated:
 Rural warehousing.
 Machinery housing.

MIDWEST PLAN SERVICE
Cooperative Extension Work in Agriculture, Home Economics and Agricultural Experiment Stations of North Central Region - USDA, Cooperating
36' FRAME UTILITY BUILDING
Sheet 1 of 4 Sheets
MIDWEST PLAN NO. 72046

MWPS-72055

30' Pole Utility Building

CAUTION!

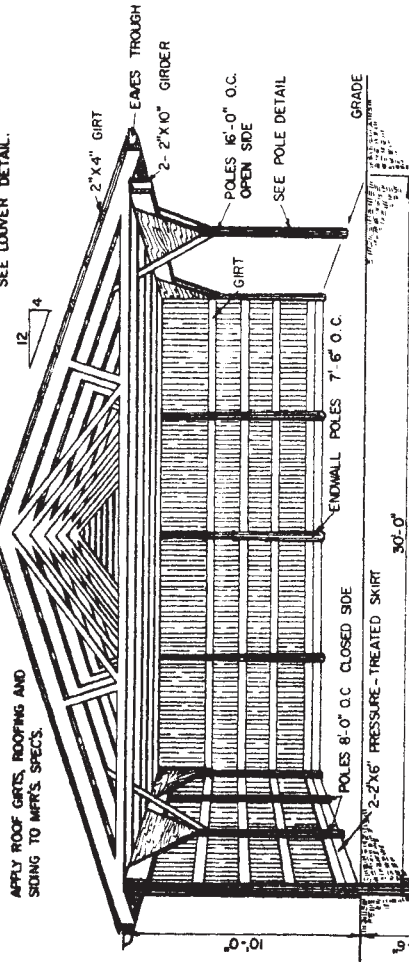
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MIDWEST PLAN SERVICE
Cooperative Extension Work in Agriculture and Home Economics and Agricultural Experiment Stations of North Central Region - USDA Cooperating
30' Pole Utility Building
Title Page
MIDWEST PLAN NO. 72055

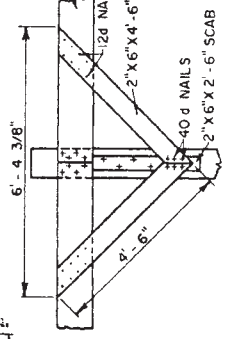
APPLY ROOF GIRTS, ROOFING AND SIDING TO MFR'S SPECS.



INTERIOR

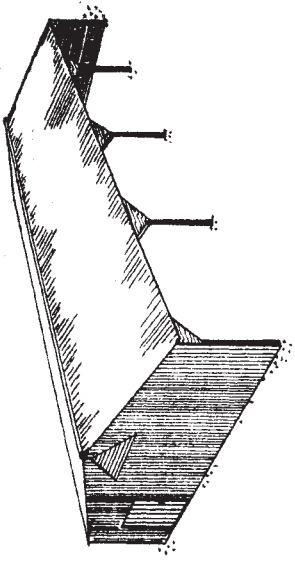
POLE SIZES: 5" top x 15", 16'-0" O.C. in front and back walls.
 4" top x 12", intermediate poles in ends and back walls.
 All lumber in contact with mure or the soil should be pressure-treated with an oil-base preservative.

REAR WALL CONSTRUCTION - Intermediate 4" top poles in rear wall are non-loadbearing. This construction permits removal of a 4" top pole to make a 16" doorway.
 WALL GIRTS - 2" x 4" wall girts may be spaced up to 2'-0" O.C. Use 2" x 6" girts for greater spacings.

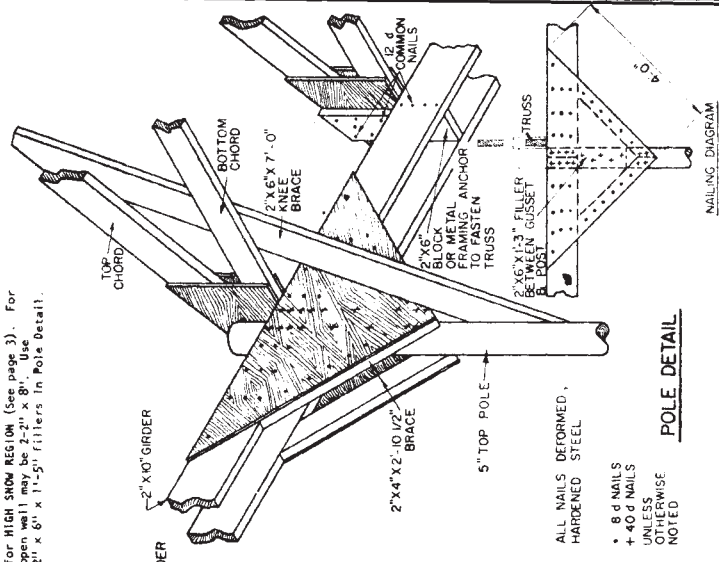


ALTERNATE CONNECTION

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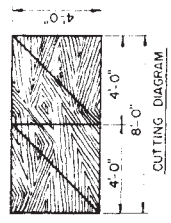


NOTE: Member sizes shown are for HIGH SNOW REGION (See page 3). For Low Snow Region, girder and pole sizes may be reduced to 2" x 4" x 3" - 1 1/2" braces and 2" x 6" x 1" - 5" fillers in Pole Detail.

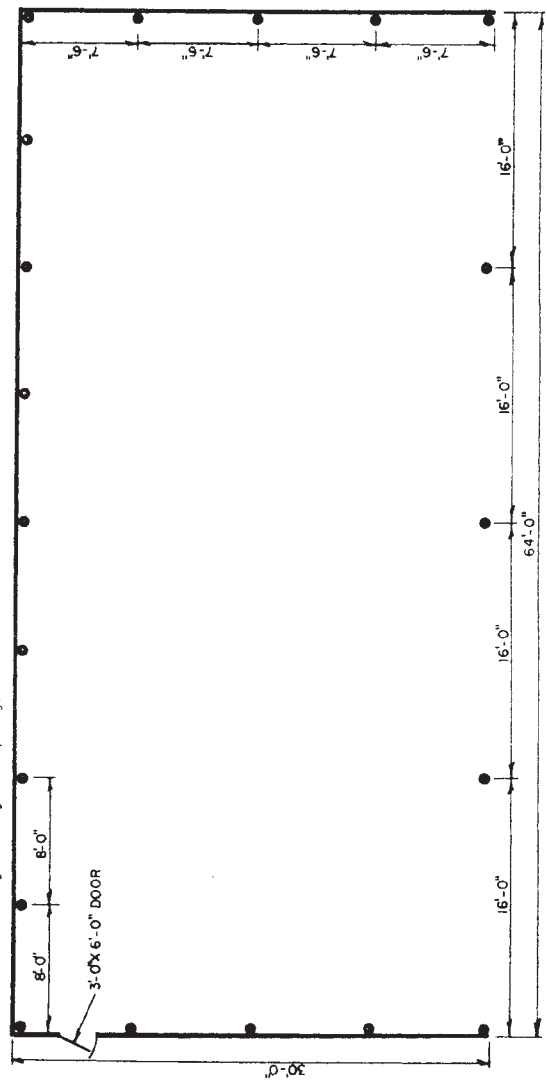


POLE DETAIL

ALL NAILS DEFORMED, HARDENED STEEL
 • 8 d NAILS
 + 40 d NAILS
 UNLESS OTHERWISE NOTED



CUTTING DIAGRAM



PLAN

SHEET 3: 30' SPAN TRUSSES

MIDWEST PLAN SERVICE

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS AND AGRICULTURAL EXPERIMENT STATIONS OF NORTH CENTRAL REGION USDA COOPERATING

30' POLE UTILITY BUILDING

8011 SHEET 1 OF 3 SHEETS

MIDWEST PLAN NO. 72055

MWPS-72046

36' Frame Utility Building

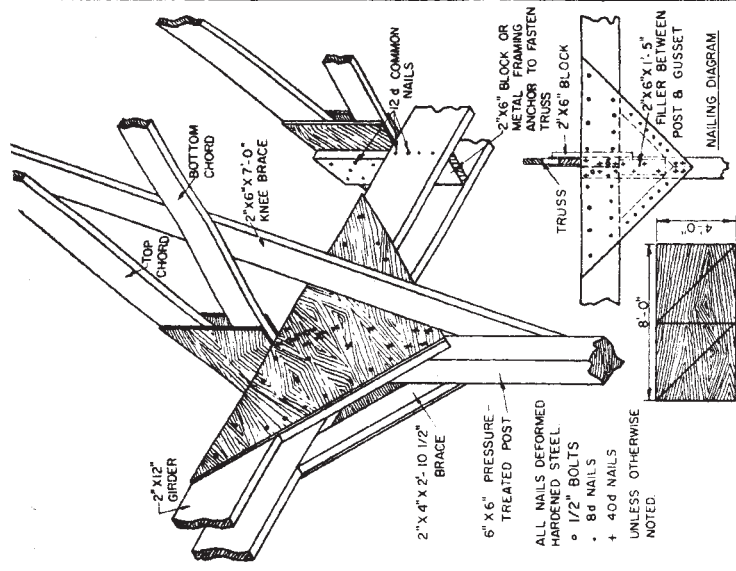
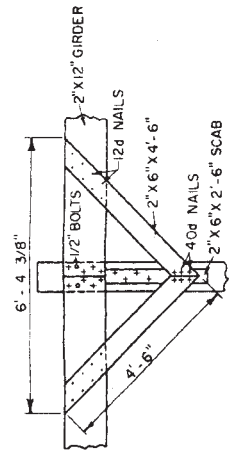
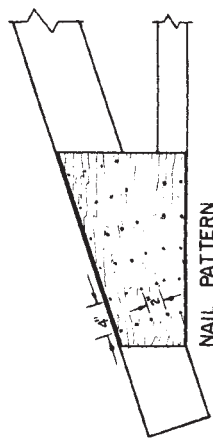
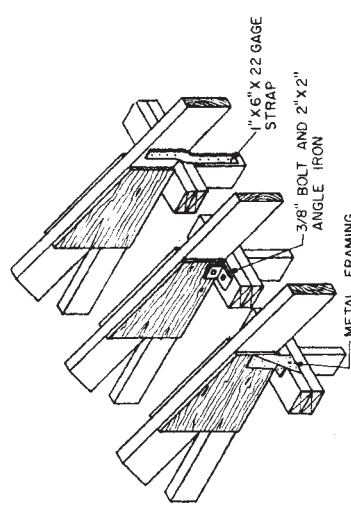
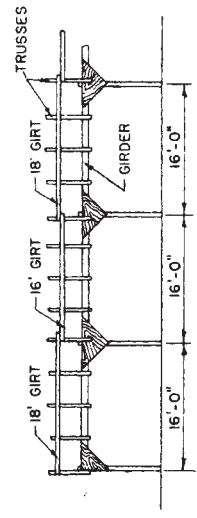
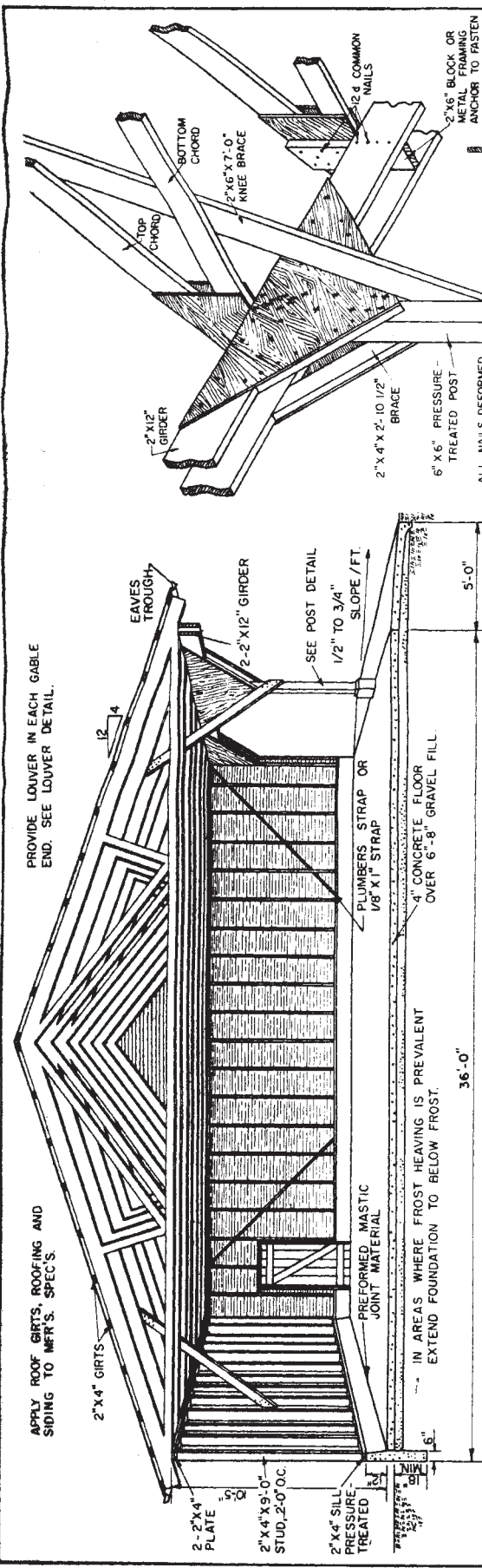
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MIDWEST PLAN SERVICE
Cooperative Extension Work in Agriculture and Home Economics and Agricultural Experiment Stations of North Central Region - USDA Cooperating
36' Frame Utility Building
Title Page
MIDWEST PLAN NO. 72046



MIDWEST PLAN SERVICE
 Cooperative Extension Work in
 Agriculture and Home Economics
 at the Agricultural Experiment Stations
 of the North Central Region - USDA Cooperating

**36' FRAME
 UTILITY BUILDING**

MIDWEST PLAN NO. 72046
 Sheet 2 of 4 Sheets

MWPS-72056

36' Pole Utility Building

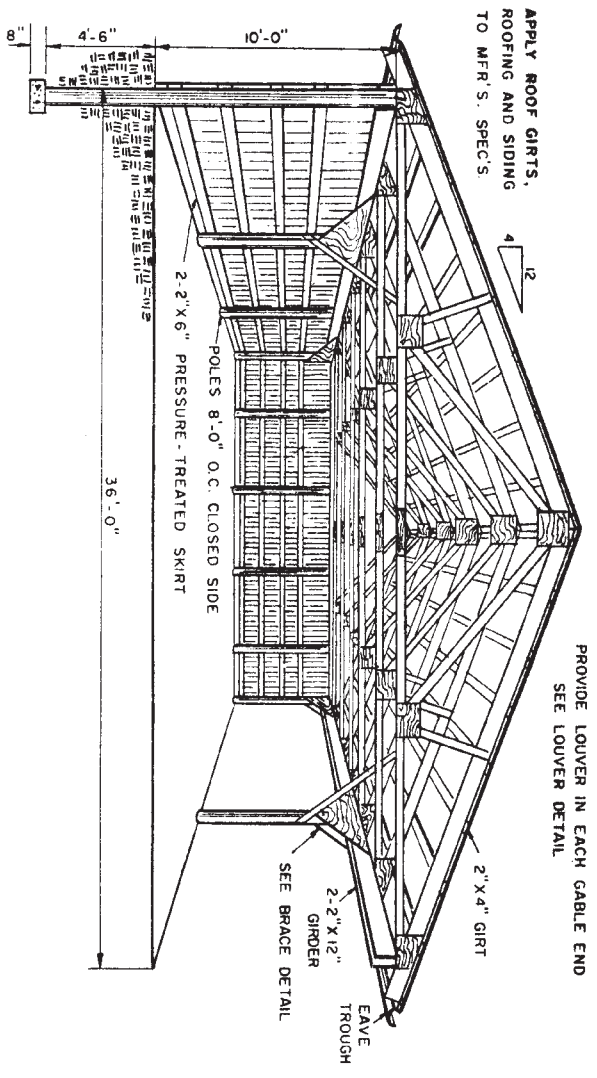
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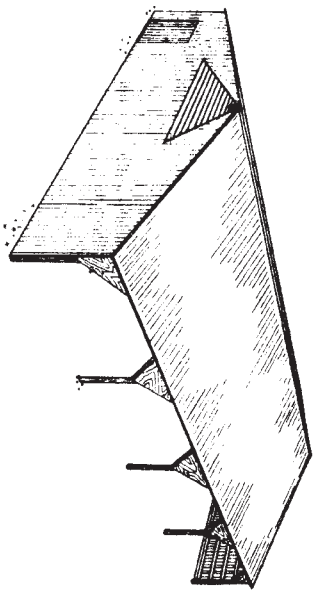
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Cooperative Extension Work in Agriculture and Home Economics and Agricultural Experiment Stations of North Central Region - USDA Cooperating
36' Pole Utility Building
Title Page
MIDWEST PLAN NO. 72056



PROVIDE LOUVER IN EACH GABLE END
SEE LOUVER DETAIL

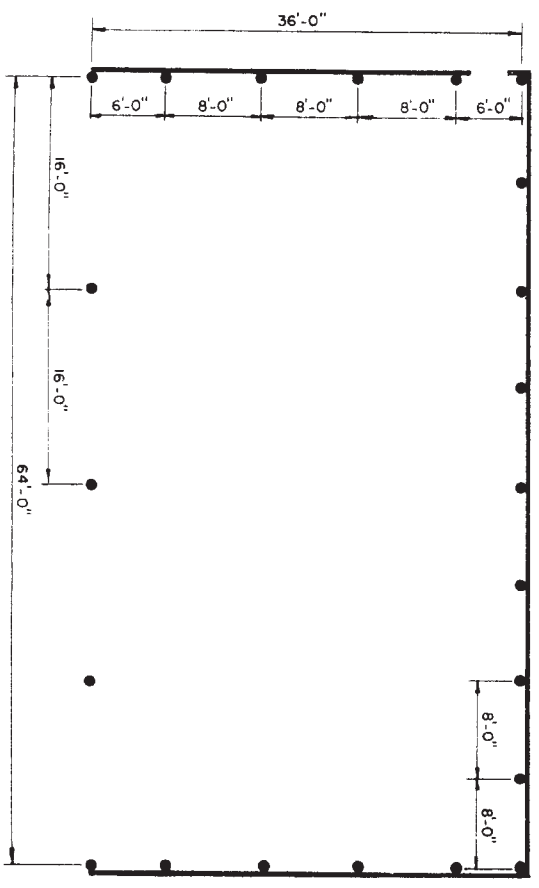


WITH ONE SIDE OPEN, THE BUILDING CAN BE USED FOR:
Beef housing and/or feeding.
Dairy resting barn.
Machinery housing.

WITH ALL SIDES CLOSED, THE BUILDING CAN BE USED FOR:
Insulated:
Livestock housing.
Poultry housing.
Uninsulated:
Rural warehousing.
Machinery housing.

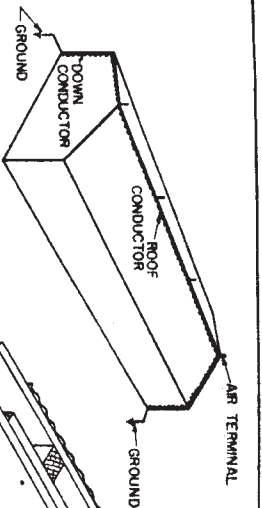
All lumber in contact with manure or the soil should be pressure-treated with an oil-base preservative.

POLE SIZES: 5" top x 16', 16'-0" O.C.
In front and back walls,
4" top x 12', intermediate
poles in ends and back wall



Sheet 4: 36' Span Trusses

MIDWEST PLAN SERVICE
Cooperative Extension Work in Agriculture, Home Economics, and Agricultural Experiment Stations of North Central Region - USDA Cooperating
36' POLE UTILITY BUILDING
Sheet 1 of 4 Sheets
MIDWEST PLAN NO. 72056



LIGHTNING PROTECTION FOR CABLE ROOFS

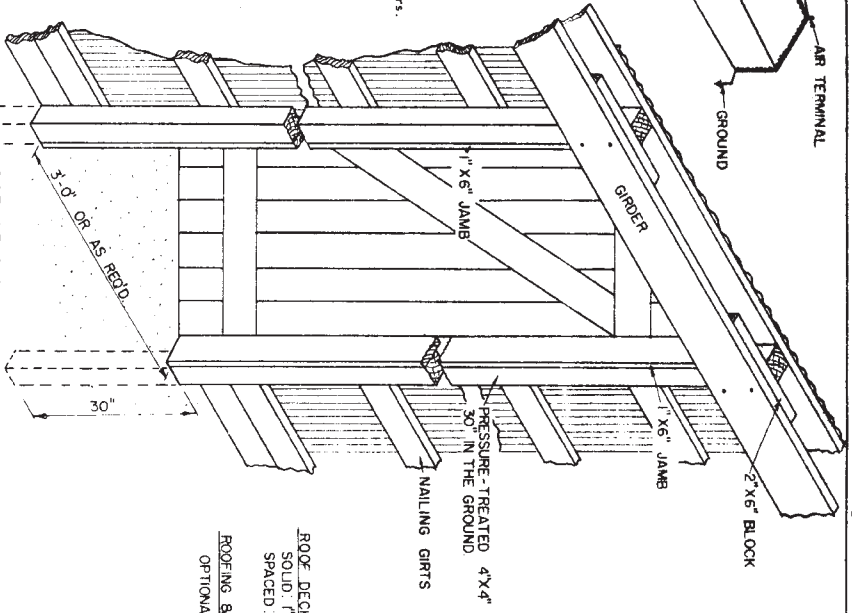
Air Terminals
 At least 24" long.
 Up to 25' apart.
 3/4" copper or 5/8" aluminum.
 5/8" copper tubing, wall thickness over 0.032"

Conductors
 Copper: 1/2" AWG wire, 1814M/1000'.
 Aluminum: 1/2" AWG wire, 954M/1000'.
 Two down conductors, minimum, on opposite corners.
 For bldgs. over 110' long, use one down conductor per 50' add'l length.

Grounds
 One ground per down conductor.
 Rods buried at least 10'.
 If water pipe enters bldg. bond at least one down conductor to it.

Metal Roofs
 Ground metal roofs without air terminals by attaching 18" of conductors to roofing with 2-3/8" J or U bolts. Ground down conductors as with air terminals.

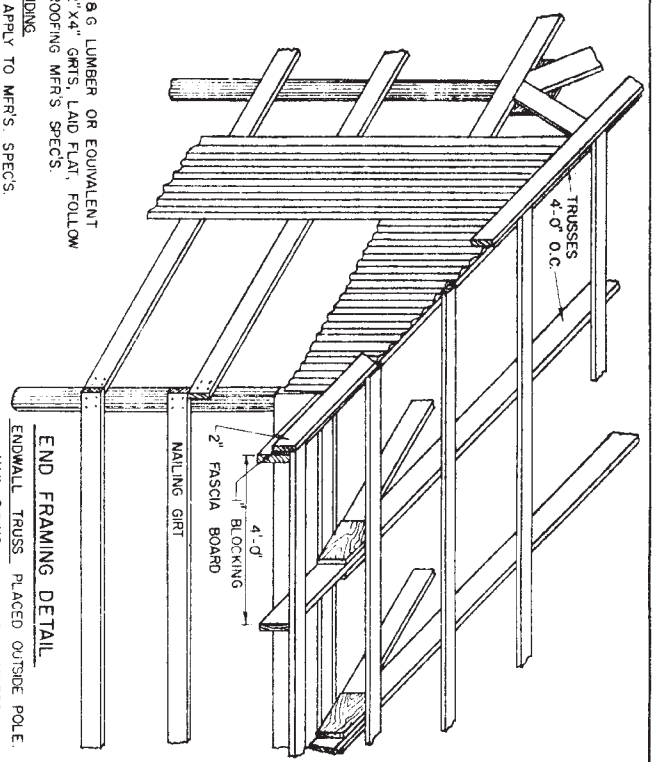
Master Label
 For maximum lightning protection obtain a Master Label System as approved by the Underwriters' Laboratories, Inc.



ROOF DECK
 SOLID 1" T & G LUMBER OR EQUIVALENT
 SPACED: 2" X 4" GIRTS, LAD FLAT, FOLLOW ROOFING MFR'S SPECS.
 OPTIONAL: APPLY TO MFR'S SPECS.

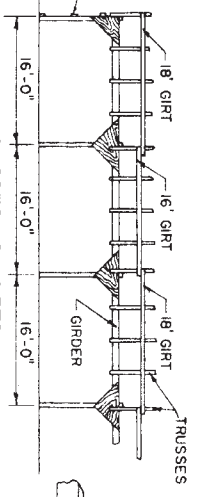
END FRAMING DETAIL

ENDWALL TRUSS PLACED OUTSIDE POLE.
 NAIL SIDING TO TRUSS MEMBERS

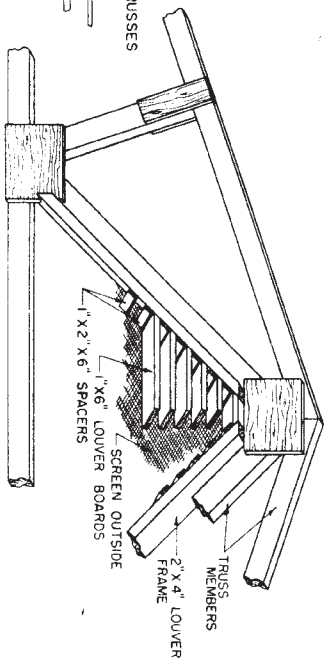


DOOR FRAMING DETAIL

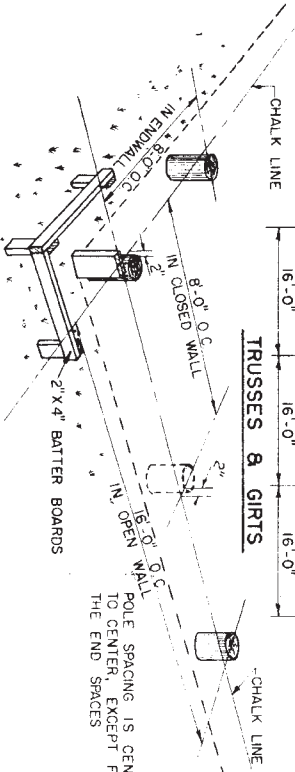
USE SIMILAR FRAMING FOR LARGE DOOR IN ENDWALL



TYPICAL LOUVER CONSTRUCTION

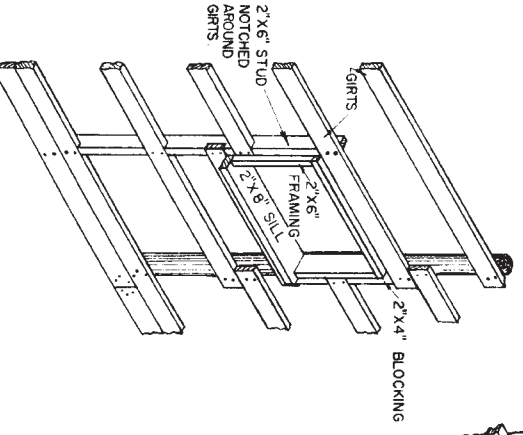


TRUSSES & GIRTS



TYPICAL WINDOW FRAMING

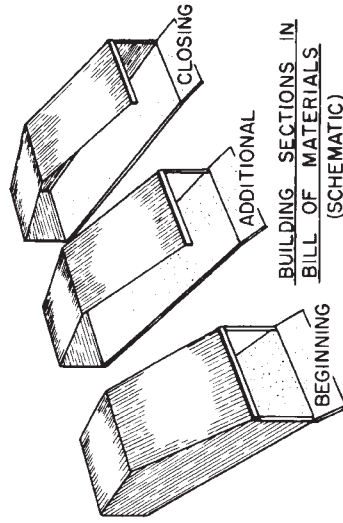
SELECT STOPS & HARDWARE TO SUIT TYPE OF SASH USED



SHEET 3 - 24' SPAN TRUSSES	
MIDWEST PLAN SERVICE	
COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS OF NORTH CENTRAL REGION, USDA COOPERATING	
24' POLE	
UTILITY BUILDING	
6011	SHEET 2 OF 3 SHEETS
MIDWEST PLAN NO. 72054	

BUILDING SECTION (16' LONG)

ITEM	DESCRIPTION	BEGINNING NO. FBM	ADDITIONAL NO. FBM	CLOSING NO. FBM
Concrete Poles	Cu. feet	4	2	2
	5' Top x 16'	4	2	2
	4' Top x 16'	3	1	3
Girders	2"x8"x16'0"	4	85 1/3	4
Bracing-	2"x4"x8' c-c, Ext. Plywood	1 1/2	1	85 1/3
	2"x4"x14'0"	3	28	1
	2"x6"x6'0"	2	12	1
	2"x6"x7'0"	2	14	6
Trusses	See Page 3	5	3	4
Girts	2"x4"x16'0"	7	74 2/3	7
	2"x4"x18'0"	7	84	7
	2"x6"x16'0"	10	160	10
Skirt	2"x6"x16'0" Pressure-treated	5	80	5
Siding	Sq. feet	445	160	445
Roofing	Sq. feet *	448	448	448
Louwer	Ln. feet Eaves trough	32	32	32
	2"x4"x6'0"	2	2	8
	1"x6"x10'0"	5	25	5
	1"x2"x12'0"	1	2	1
Man door	Sq. ft. screen	15	2	15
	4"x4"x12'6"	2	34	2
	2"x6"x 2'0"	1	2	1
	1"x6"x10'0"	11	55	15



MWPS-72047

40' Frame Utility Building

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40' Frame Utility Building
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