

MWPS-72058

50' Pole Utility Building

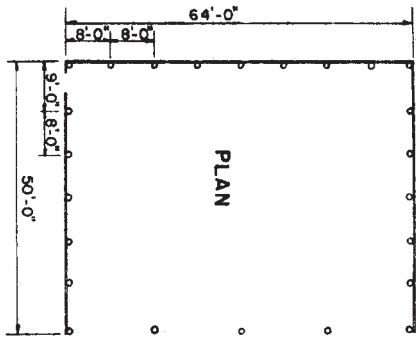
CAUTION!

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.**

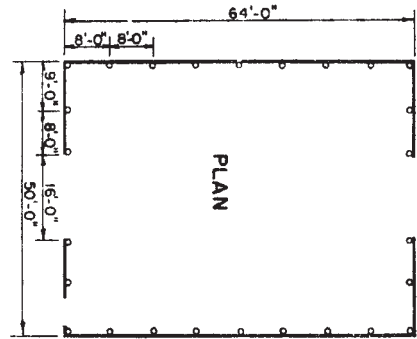
WARRANTY DISCLAIMER

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.

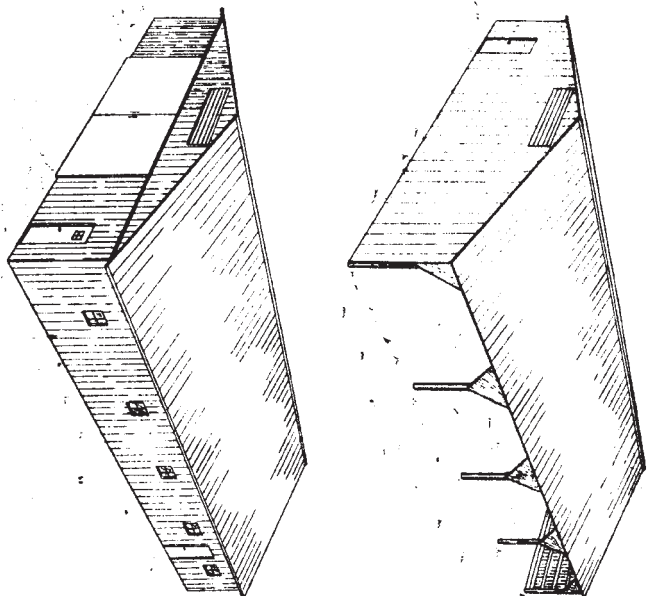
MIDWEST PLAN SERVICE
Cooperative Extension Work in Agriculture and Home Economics and Agricultural Experiment Stations of North Central Region - USDA Cooperating
50' Pole Utility Building
Title Page
MIDWEST PLAN NO. 72058



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.



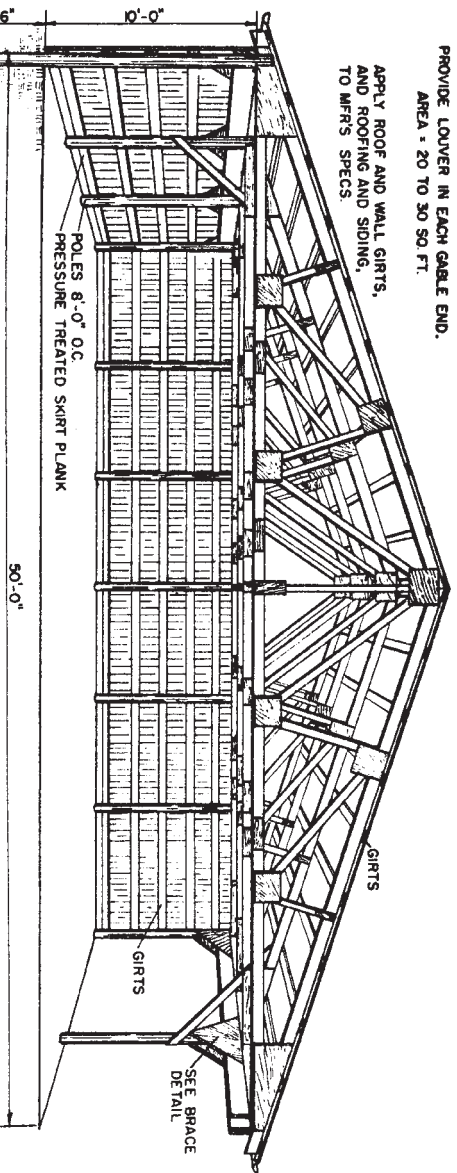
PROVIDE LOUVER IN EACH GABLE END.
 AREA = 20 TO 30 SQ FT.

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

POLES 8'-0" O.C.
 PRESSURE TREATED SKIRT PLANK

INTERIOR PERSPECTIVE

50'-0"



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

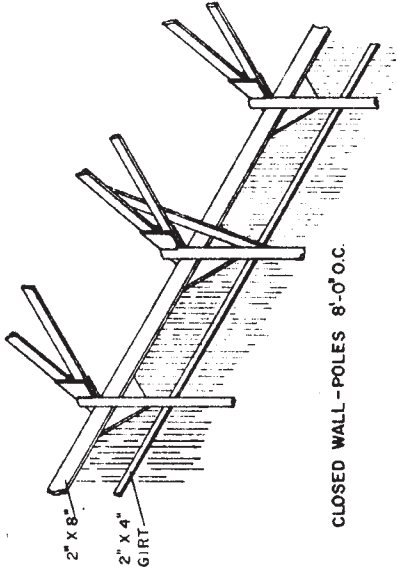
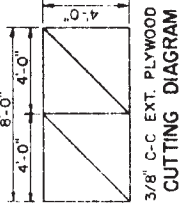
Cooperative Extension Work in
 Agriculture and Home Economics
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50' POLE
 UTILITY BUILDING

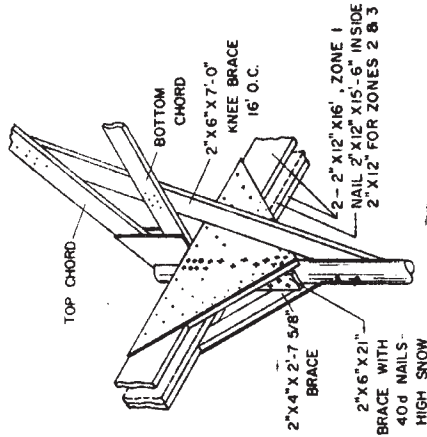
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 Sheet 1 of 4 Sheets

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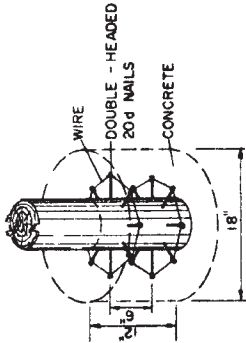
- 1/2" BOLTS
- 8d NAILS
- 40d NAILS ARE DEFORMED HARDENED STEEL



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.



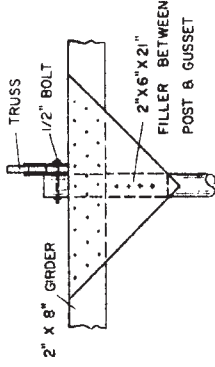
NOTE: DO NOT SUBSTITUTE OTHER FRAMING METHODS FOR THE PLYWOOD GUSSETS SHOWN



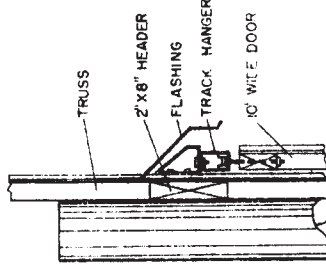
LIST OF MAJOR MATERIALS
(Open Front, Approved)

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	288	96
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
Trusses - 8'	2" x 6" x 14'-0"	4	11
Girts	2" x 4" x 18'-0"	54	117.4
	2" x 4" x 18'-0"	30	144
Skirt	2" x 6" x 18'-0"	8	128
Roofing Squares		29	144
Sliding		29	32
Eaves Trough, Ln. Ft.		96	32

NAILING DIAGRAM
GIRDER GUSSETS - 16' O.C.



NAILING DIAGRAM
GIRDER GUSSETS - 8' O.C.



SHEET 4: 50' SPAN TRUSSES

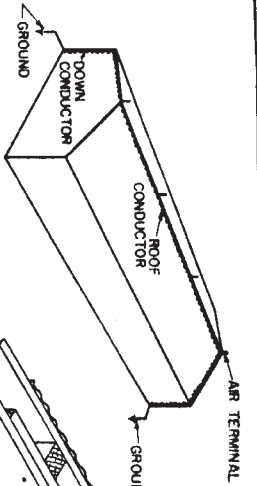
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Cooperative Extension Work in
Agriculture and Home Economics
and Agricultural Experiment Stations
of North Central Region, USDA, Cooperating

50' POLE
UTILITY BUILDING

Sheet 2 of 4 Sheets
MIDWEST PLAN NO. 72058

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Attic Ventilation
Gable, Shed or
Cathedral Louver
Gussets may be omitted on one side of endwall truss
if building will never be lengthened.



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, 1875#/1000'.
Aluminum: 14 AWG wires, 95#/1000'.
Two down conductors, minimum, on opposite corners.
For bldgs. over 110' long, use one down conductor per 50' add 1' length.

Grounds:

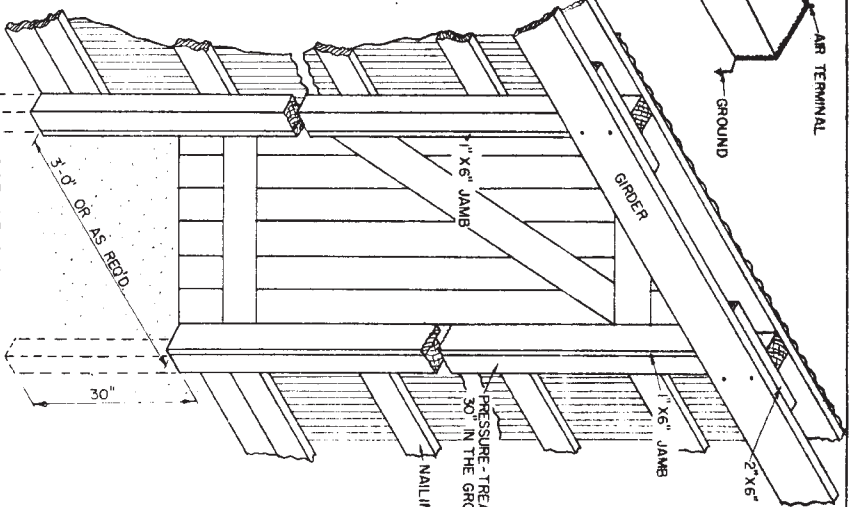
One ground per down conductor.
Rods buried at least 10'.
If water pipe enters bldg, bond at least one down conductor to it.

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:

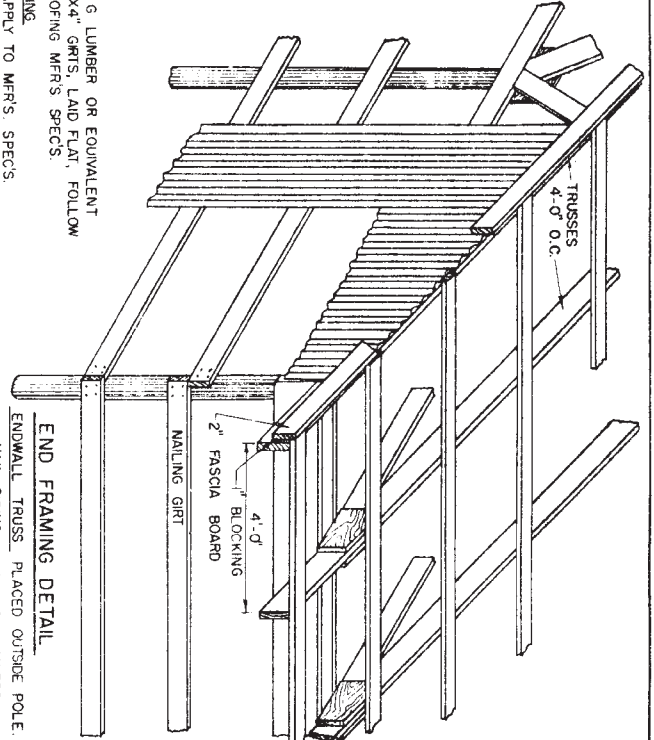
For maximum lightning protection obtain a Master Label System as approved by the Underwriters Laboratories, Inc.



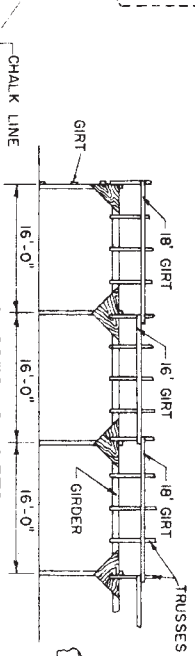
1" x 6" JAMB
PRESSURE-TREATED 4" x 4"
30' IN THE GROUND
NAILING GIRTS

ROOF DECK:
SOLID T & G LUMBER OR EQUIVALENT
SPACED: 2" x 4" GIRTS, LAID FLAT, FOLLOW ROOFING MFRS. SPECS.
ROOFING & SIDING:
OPTIONAL APPLY TO MFRS. SPECS.

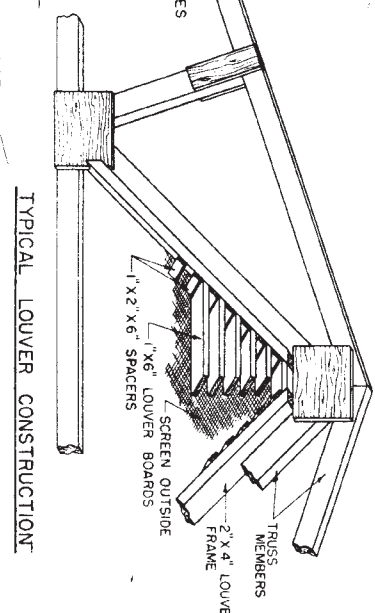
END FRAMING DETAIL
ENDWALL TRUSS PLACED OUTSIDE POLE.
NAIL SIDING TO TRUSS MEMBERS



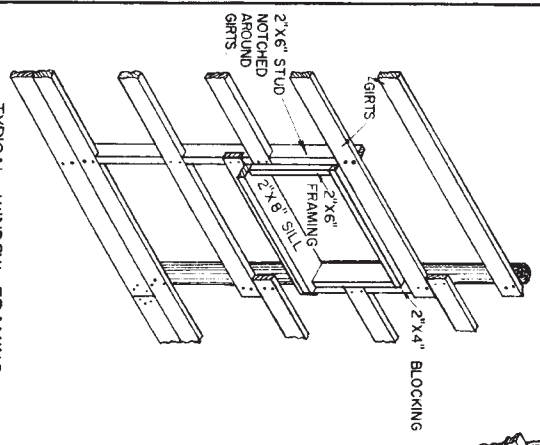
DOOR FRAMING DETAIL
USE SIMILAR FRAMING FOR LARGE DOOR IN ENDWALL



TRUSSES & GIRTS



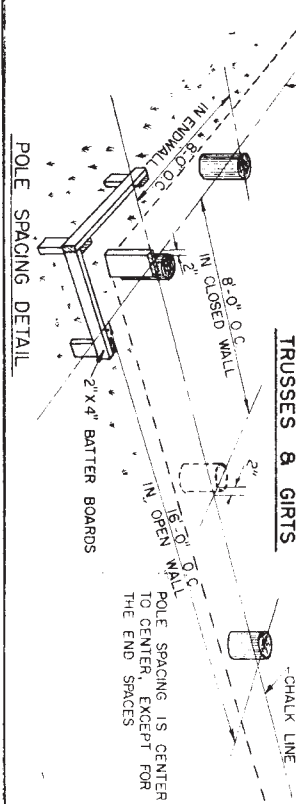
TYPICAL LOUVER CONSTRUCTION



TYPICAL WINDOW FRAMING

SELECT STOPS & HARDWARE TO SUIT TYPE OF SASH USED

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	4	2	2
Poles	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-	3/4"x4"x8' c-c, Ext. Plywood	1 1/2	1	1 1/2
	2"x4"x14'0"	3	28	1
	2"x6"x6'0"	2	12	1
	2"x6"x7'0"	2	14	1
Trusses	2"x6"x7'0"	5	3	4
Girts	See Page 3	7	74 2/3	7
	2"x4"x16'0"	7	84	7
	2"x4"x18'0"	10	160	10
Skirt	2"x6"x16'0"	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	8	2
	1"x6"x10'0"	5	25	5
	1"x2"x12'0"	1	2	1
Man door	Sq. ft. screen	15	34	15
	4"x4"x12'6"	2	2	2
	2"x6"x2'0"	1	2	1
	1"x6"x10'0"	11	55	11

