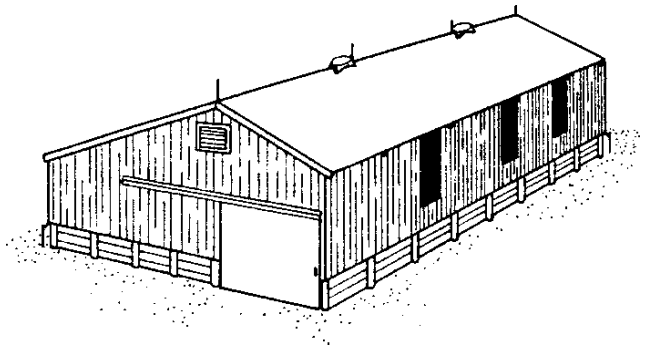
MWPS-72050

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

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

42’ WIDE POLE UTILITY BUILDING

Title Page

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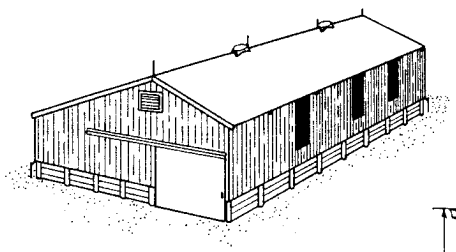
CAUTION!

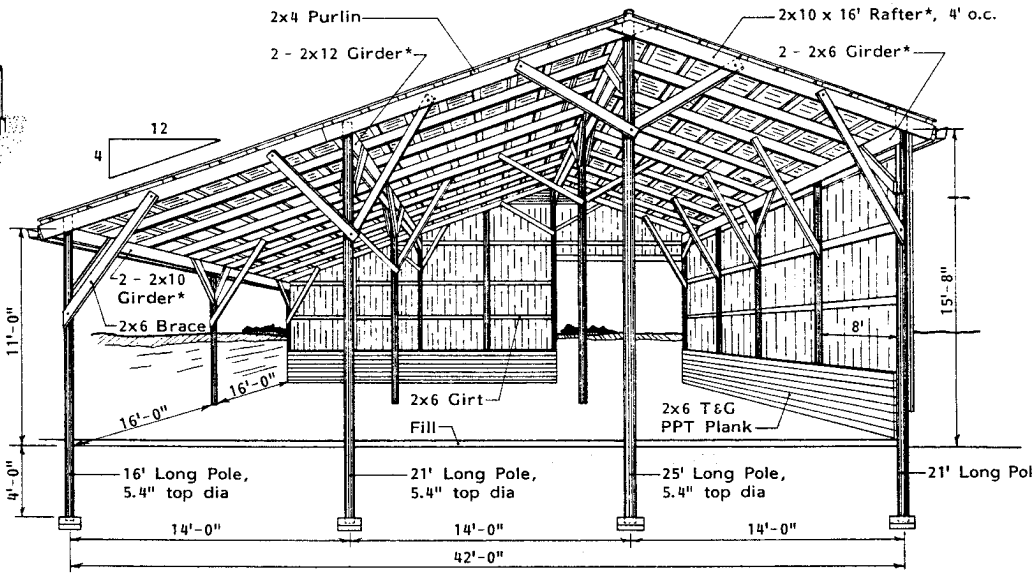
Additional professional services will be required to tailor this plan to your situation, including but not limited to: assurance of compliance with codes and regulations; review of specifications for materials and equipment; supervision of site selection, bid letting and construction; and provision for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

42' Wide Pole-Utility Building

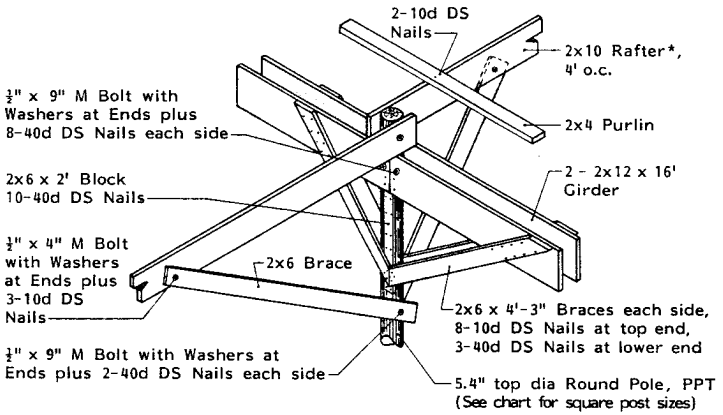
For livestock housing, crop storage, machinery storage, or other not needing insulation. Open wall can be built same as closed wall. Three optional plastic sheets for natural lighting are shown in the closed wall.



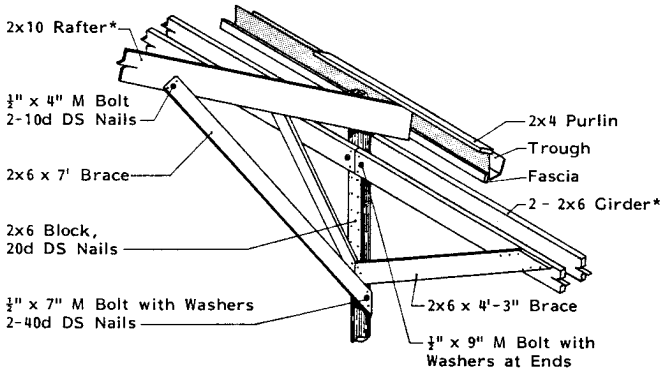
Perspective



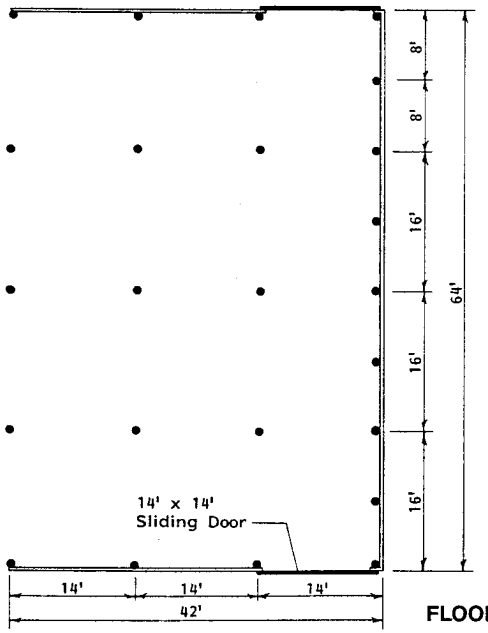
CROSS SECTION PERSPECTIVE - 3/1
Interior Poles; No Clear Span



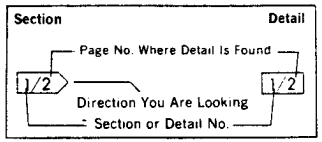
INTERIOR POLE TOP BRACING - 1/1
16' o.c.



BACK WALL BRACING - 2/1
16' o.c.



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

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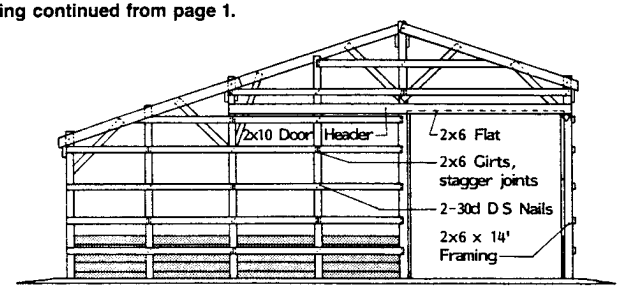
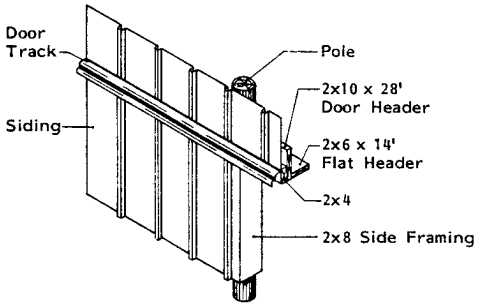
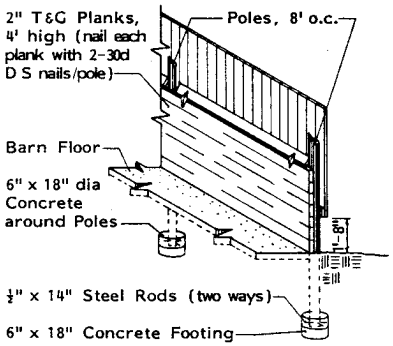
Framing continued from page 1.



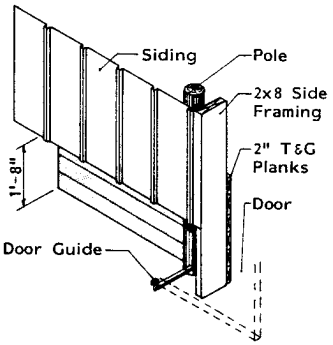
TYPICAL ENDWALL FRAMING - 1/2



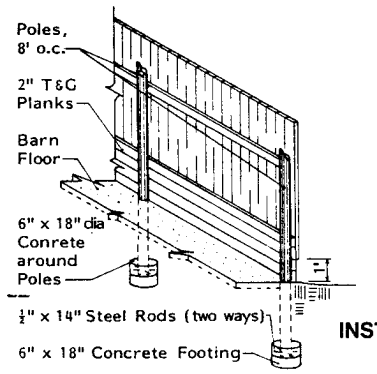


INSTALL INSIDE WALL PLANK FOR LIVESTOCK - 2/2

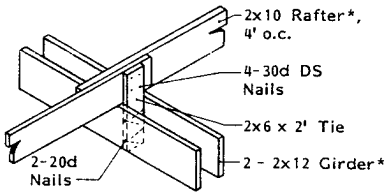
Hinged top plank opens for ventilation.



DOOR FRAMING DETAIL - 4/2



INSTALL OUTSIDE WALL PLANK FOR DRY STORAGE - 3/2



RAFTER TIE BETWEEN POLES - 5/2

Materials List (42' x 64' Barn)

Number	Pressure preservative treated poles:
5	5.4" dia. top x 16' long
2	5.4" dia. top x 18' long
14	5.4" dia. top x 21' long
2	5.4" dia. top x 22' long
5	5.4" dia. top x 25' long

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

	Round poles		Square poles			
			Full size		Dressed	
ASA class	Top dia in.	Length	8' o.c.	16' o.c.	8' o.c.	16' o.c.
6	5.4	16	5x5	6x8	4x6	6x8
		20	6x6	8x8	6x6	6x8
3	7.3	24	6x8	6x10	6x8	8x8

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-fir or better
450 BD Ft	Backwall girts, girders 2x6* #1 SP or #1 D-fir
16	Interior girders 2x12 x 16'* #1 SP or #1 D-fir
8	Front girders 2x10 x16' #1 SP or #1 D-fir
51	Rafters 2x10 x 16'* #1 SP or #1 D-fir
4	Door headers 2x10 x 14' #1 SP or #1 D-fir
1664 Lin Ft	Roof purlins 2x4 x 16' #2 H-fir
3100 Ft²	Roofing (w/fasteners) corr. metal or asph. fiberboard
2000 Ft²	Siding (w/fasteners) corr. metal or ext. plywood
2	Sliding doors w/track, latches and handles, 14' x 14'
22	½"x9" M. Bolts—two washers ea.
16	½"x7" M. bolts—two washers ea.
18	½"x4" M. bolts—two washers ea.
1200	10d D.S. nails
5000	30d D.S. nails
1200	40d D.S. nails
80 Ft	#4 (½") rod (56 pieces of ½" x 14")
2 Yd³	Concrete for footings
Also needed:	Vents, louvers, trim, 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	penny nail size (10d)
dia	diameter (bolts, etc.)
DS	deformed 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)

MWPS MIDWEST PLAN SERVICE

42' WIDE POLE UTILITY BUILDING

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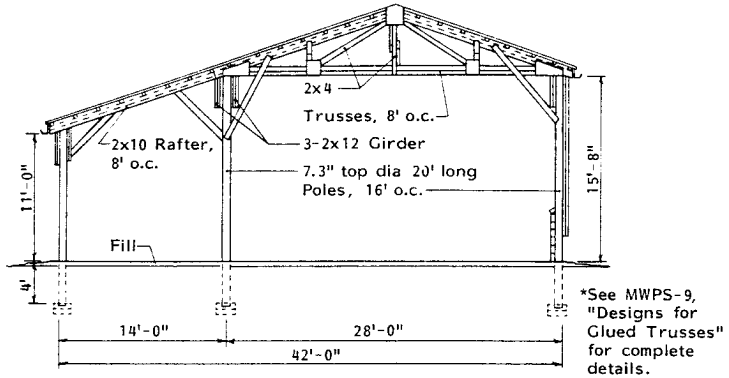
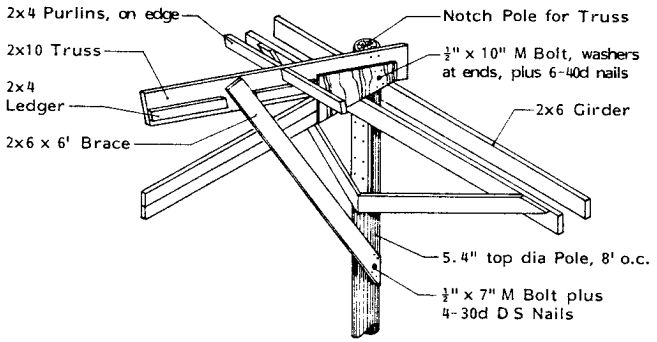
Building Options based on this plan.
Adjust materials list as needed.

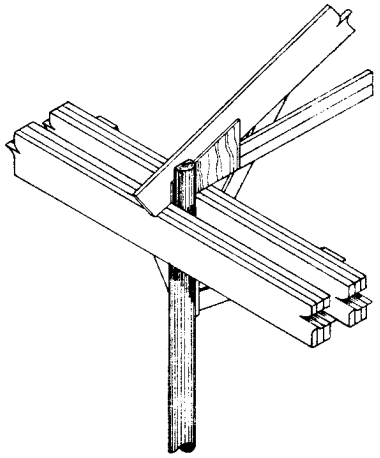


*See MWPS-9, "Designs for Glued Trusses" for complete details.

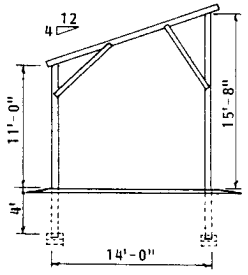
42' WIDE, 28' CLEAR SPAN TRUSS - 1/3



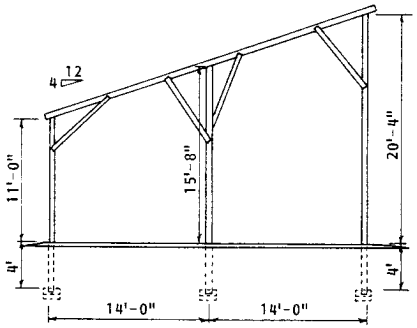
TRUSS ATTACHMENT AT REAR WALL - 2/3



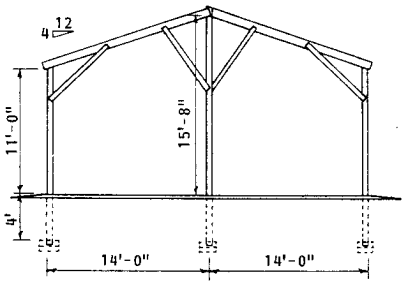
TRUSS ATTACHMENT AT INTERIOR POLE - 3/3



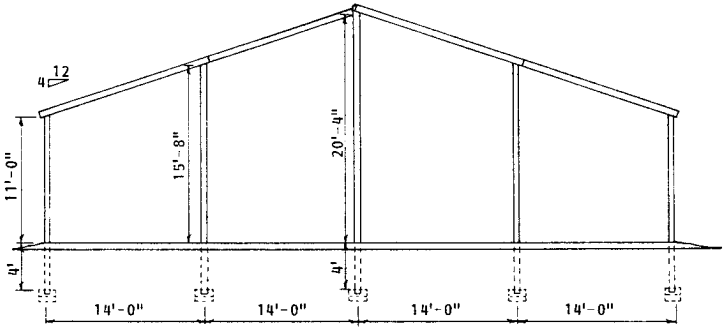
14' WIDE, SHED ROOF



28' WIDE, SHED ROOF



28' WIDE, GABLE ROOF



56' WIDE, GABLE ROOF

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