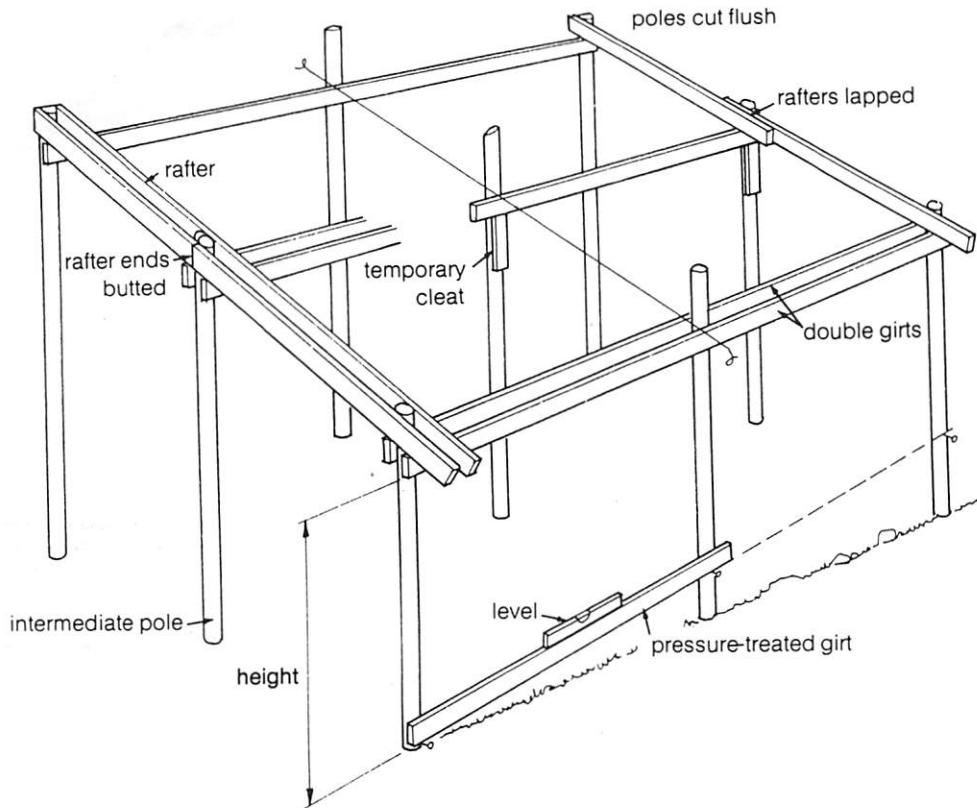


Basic framing pieces of a pole building are shown in this cut-away view. Although this framing method is known as pole building, posts are often substituted for poles.

Pole Framing

Simplicity and economy are the main advantages of pole building. This type of framing is ideally suited for small barns and outbuildings; it enables quick, low-cost construction and requires fewer materials than any other framing method.

Poles are available in many sizes and lengths ranging up to 60 feet or more. Common building poles are under 30 feet in length and range from 4 to 8 inches in diameter. If they are to be set in the ground, they must be pressure treated to last more than a few years. Pressure-treated, southern yellow-pine poles are readily available in all parts of the country. Second-hand poles can also be bought at half price from utility companies and salvage operations. Posts in sizes such as 4 x 6 or 6 x 6, are also suitable.



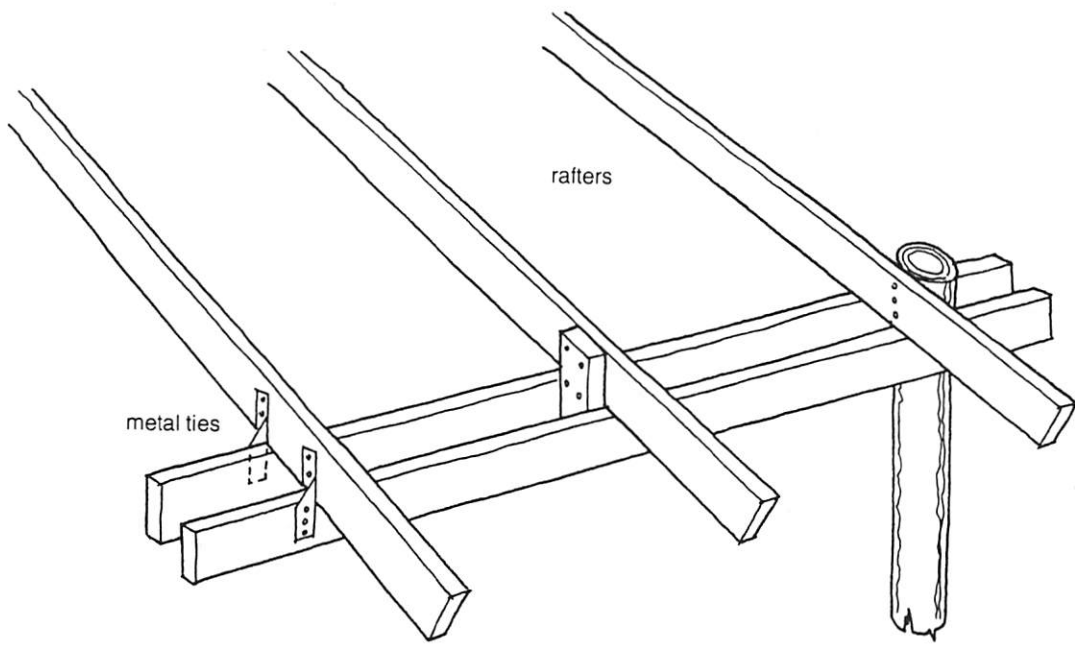
Make sure girts are level. Use the first girt as a guide for measuring the height of the building. Line up girts on intermediate poles with a string. It may prove helpful to rest girts on temporary cleats before securing with nails. Compound rafters may be butted or lapped as shown.

The first step in pole building is to set the poles in the ground in concrete footings or in concrete piers with anchor brackets (see p. 47). Poles can be spaced from 4 to 16 feet apart depending on their size and the load they must carry. Normally, the poles will extend from the foundation right up to the roof line. Large poles can either be raised by hand with several people or raised with a tractor and rope. Once they are up, they must be held plumb while braces are attached to keep them in position.

When all the poles have been raised, girts are nailed onto them horizontally every 2 feet to carry the siding. These are normally 2 x 4s or 2 x 6s depending on the span between poles and the weight of the siding. Bottom girts in contact with the soil should be absolutely level and pressure treated or coated with a preservative.

The top members that carry the rafters are usually double girts made from 2 x 8s or 2 x 10s placed on the inside and outside of the poles. These are bolted together through the poles or nailed in place with 20d spikes. The height of the top members is measured from either the top or bottom of the bottom girt.

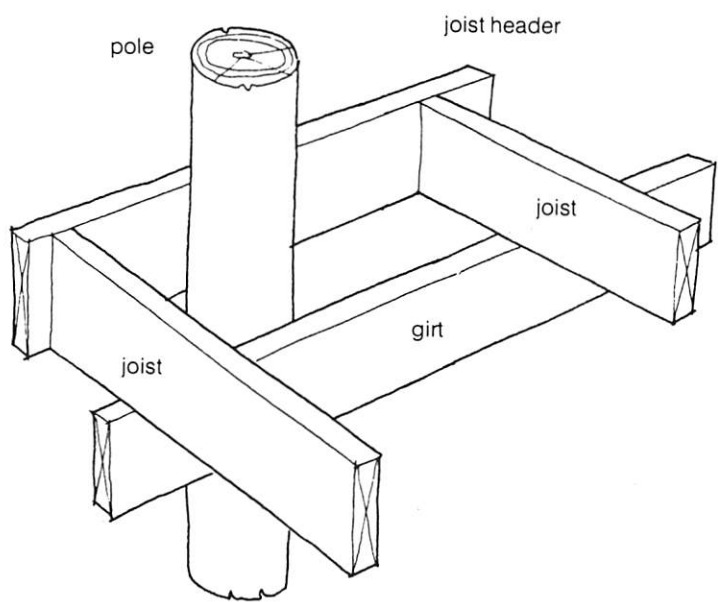
Wall bracing is absolutely necessary in pole buildings. Braces are run from the upper girt to the poles and are often reinforced with plywood gussets. These braces are the only things that give the walls any lateral strength if metal or board siding is used. Plywood siding helps brace the building, but is not a substitute for adequate diagonal bracing.



You can attach rafters to girts with metal ties or wooden blocks. Sometimes, it's convenient to simply attach the rafter to a pole.

With the walls framed and braced, you can assemble roof rafters or trusses on top of the double girts. You can cut and assemble rafters in the same manner as described in the section on platform framing. Or, to simplify things, omit the bird's-mouth cuts, and, after placing the rafters on top of the double girts, secure them with wooden or metal ties. And whenever possible, secure them to adjacent posts. If you use rafters rather than trusses, be sure to attach collar ties so the outside walls will not be pushed out.

In a pole barn, you can build floors at any level by using wall girts to support the joists. Attach joist headers to both the ends of the joists and the poles.



To install a floor at any level of a pole barn, simply support the floor joists on the wall girts.