

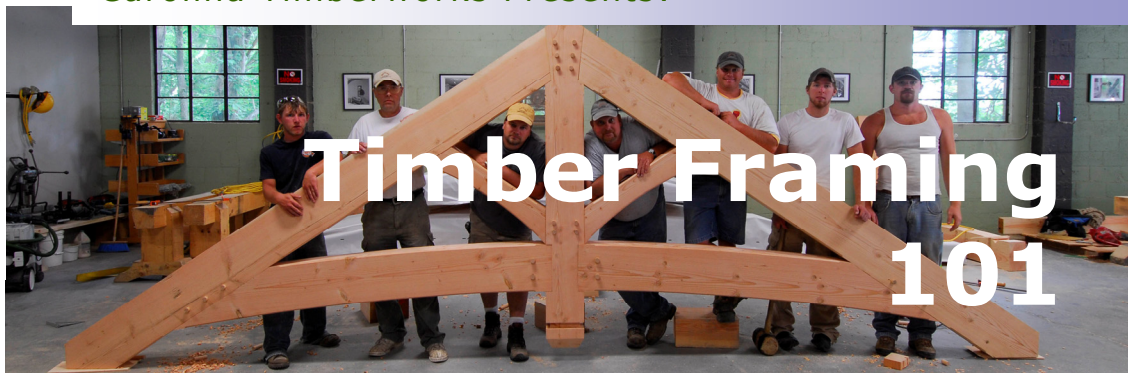
Timber Framing 101





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Timberworks, LLC
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Carolina Timberworks Presents:



A Brief History of Timber Framing

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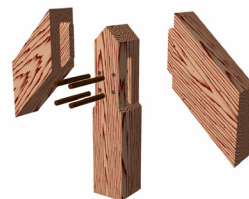
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The old saying that “they don’t build like they used to” isn’t necessarily true. Take timber framing for example. Timber framing is the craft of joining heavy timbers with wooden pegs and intricate joinery. Our ancestors built this way—because nails hadn’t yet been invented. Some of the oldest buildings in the world are timber framed—the great cathedrals in Europe for instance—and have stood for centuries as a

silent tribute to the craftsmanship and durability of this method of building.

Timber framing in the United States almost died out in the late 1800s with the advent of a cheaper way of building—2x4s and nails.

However, the craft is being revived by craftsmen and women who take old timber frames apart—and study the joinery methods of old.



*Using Timber Framing to Affordably Differentiate **Your** Home*

Timber framing is necessarily an expensive way to build—given the skilled craftsmanship and high quality timber that goes into it. In fact, there probably isn’t a more expensive way to build—but that doesn’t mean it can’t be incorporated into your budget.

The ‘secret’ is to only timber frame certain areas of a home—and stick build the rest. This is known as a hybrid timber frame.

For example, a hybrid design might include a timber framed entryway for curb appeal with several timber trusses in the great room 6’ - 8’ on center.

Frankly, this approach makes a lot of sense—you get most of the appeal of a full timber frame at a fraction of the cost.

Finally, incorporate any timber framing early in the design process—doing so is guaranteed to save you money.



A structural Douglas Fir Timber Frame going up. For scale, the posts are 12x12s.

Structural...or Non-Structural?

In your project, one of the first questions that needs to be answered is whether the timber frame will be structural (weight-bearing) or non-structural (decorative). The answer to this question will determine the final cost, lead time, and specie choice.

Traditionally, all timber frames were structural, but that isn't the case in many of today's homes.

If the timber frame is struc-

tural, it will need to be engineered and will need to be constructed from a grade-stamped timber.

Non-structural timber frames can be built from any species of timber—and are often built with Eastern White Pine because it is one of the most affordable choices—yet finishes beautifully.

The structural or non-structural question is important for another reason. A struc-

tural timber frame, by definition, must be installed much earlier in the construction process—because other framing will bear upon it. Therefore, a structural timber frame requires planning early in the process.

A non-structural timber frame, by contrast, is usually installed after the 2x roof is in place—usually before the sheetrock or tongue & groove decking is installed.



Eastern White Pine King Post trusses in a medium stain.

Which Wood is the Best Choice for You?

Your choices are indeed varied—ranging from Eastern White Pine to Antique Recycled Heart Pine. Most timber frames, however, are built with one of the following species:

Eastern White Pine, Douglas Fir, Red or White Oak and Western Red Cedar.

For exterior applications which

will be exposed to the weather, naturally resistant to decay Western Red Cedar is the obvious, but expensive, choice.

For non-structural interior timber frames, Eastern White Pine is a popular choice—economical, and easy to finish.

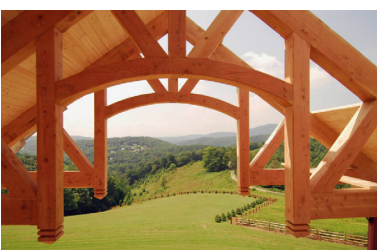
For structural timber framing, Douglas Fir wins our vote. It

is readily available in large sizes, reasonably priced, strong, and grade stamped. Furthermore, it is now available RF Kiln dried—a big advantage over other green (wet) timbers.

Oak is more expensive, and often exhibits substantial shrinkage and checking in drying.

Common Timber Species at a Glance

Species	Indigenous Region:	Characteristics	Cost \$ less expensive \$\$ average \$\$\$ most expensive	Color of dry heartwood	Decay Resistance	Notes specific to timber framing
Cedar—Western Red	Western US	Softwood	\$\$\$	Reddish brown	Resistant or very resistant	
Douglas Fir (Green)	Western US	Softwood; Strong	\$	Orange red to red, sometimes yellow	Moderately resistant	Boxed Heart grade will check more than a FOHC grade.
Douglas Fir (RF Kiln Dry)	Western US	Softwood; Strong	\$\$\$	Orange red to red, sometimes yellow	Moderately resistant	Dry to the core therefore little to no shrinkage or checking. Stable. Straight.
Pine, Eastern White	Northern US	Softwood; Moderately soft and moderately low in strength, low shrinkage and ranks high in stability.	\$	Cream to light reddish brown	Moderately Resistant	More rustic look; Darkens with time to a caramel color.
Oak, Red	Southern, Northern & Appalachia	Hardwood; Open pores, strong, heavy, fairly high shrinkage in drying	\$\$	Light brown, usually with pink or red tinge	Slightly or nonresistant	Heavy & Strong. More rustic look due to
Oak, White	Southern, Northern & Appalachia	Hardwood; Closed pores, strong, even heavier than red oak	\$\$	Light to dark brown, rarely with reddish tinge	Resistant or very resistant	significant checking as timber dries.



Douglas Fir custom trusses—before any finish has been applied.

The Case for Planning Ahead

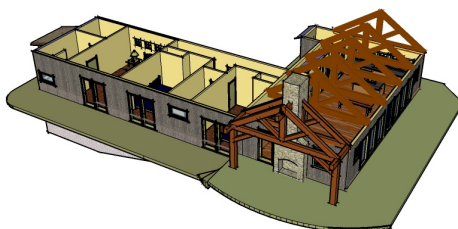
Here's another 'secret'—sometimes you can plan far enough in advance to have your timber framing prebuilt and flown into place with a crane—which can save money.

Take a look at the roof system being flown into place at right. Imagine how much longer it would take to install it 'from below' one piece at a time. Remember that timbers often weigh 500 pounds...each!



Getting Started

Here's how the best timber frames get built: The Architect or Designer works with the Builder and Homeowner(s) and the Timber Frame Company. The design that results from this collaboration is the best of all worlds—it looks gorgeous, it is as affordable as possible, and it can be built on time and within the budget. To make this happen, we need to be involved early in the process—and we look forward to working with you!



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