



BOULDER & BEAM
HANDCRAFTED TIMBER FRAME

The Homeowner's Guide to Timber Frame.

What to know before you frame a porch, pavilion, or feature in solid timber — how the joinery works, what it costs, how it's cared for, and the questions that separate real timber framers from the rest.

Structure built to be seen.

Most framing is built to disappear. Studs, nail plates, and steel hangers vanish behind drywall the day they go up — chosen to be covered, not kept. A timber frame is the opposite: a handful of big, solid timbers joined with wooden joinery and left in full view, carrying the load and the character of the room at the same time.

The joints are the whole idea. Instead of steel connectors, a **tenon** — a tongue cut on the end of one timber — seats into a **mortise**, a pocket cut into another. A hole is bored through both, slightly offset, and a wooden peg is driven in to draw the joint permanently tight. This is a **draw-bored mortise and tenon**, and it's how buildings stood for centuries before steel fasteners existed.

What this means in your home

- The **structure is the finish** — no drywall to hide it, nothing to paint over.
- Wood joinery carries the frame; where the engineering needs steel, it's concealed rather than on show.
- The frame grows more characterful with age, not more tired.

Built from

- **Solid timbers** — Douglas fir, eastern white pine, or a specialty timber species, sized for the span.
- **Wooden pegs** (trunnels) driven through each joint — no through-bolts on show.
- Joinery cut to fit each timber, not off-the-shelf steel brackets.

Traditional frame

Every joint mortise-and-tenon, pegged — the full craft, left exposed inside and out.

Hybrid frame

Timber where it's seen — porches, entries, feature bents — married to conventional framing where it isn't. Most of our work lives here: maximum character, sensible budget.

Every timber has a job.

A timber frame is built from repeating cross-sections called **bents**. A single bent carries the walls, the floors, and the roof above — every timber sized for one clear job, and joined to the next with pegged joinery.



A SINGLE BENT, CUT AND DRY-FIT BEFORE RAISING — EVERY TIMBER SIZED FOR ONE JOB.

PART OF THE FRAME

WHAT IT DOES

Posts & sill

Posts stand on a sill at the base and carry every load down to the foundation — the verticals that hold the frame up.

Girt & floor joists

A girt spans between the posts at floor level; joists sit across it to carry each floor and tie the bent together.

Tie beam & plate

The tie beam spans the post tops and resists the roof's outward thrust; the plate carries the feet of the rafters along the wall.

Rafters, king post & ridge

Principal rafters rise to the ridge, held square by a king post, collar tie, and struts; purlins run between bents to carry the roof.

Braces & joinery

Knee braces and struts keep the frame rigid against wind and racking. Every joint is a pegged mortise and tenon, with concealed steel only where the engineering requires it.

Built once, kept for generations.

Conventional framing is cheaper on the day it's built, and invisible forever after. Timber costs more up front and pays it back in structure you actually live with — and for far longer than the house's first owners.

	CONVENTIONAL FRAMING	TIMBER FRAME
Lifespan	Tied to the building; replaced when the house is. As low as 50-60 years is common.	Centuries — historic frames still stand and get re-clad around them
The structure	Hidden behind drywall, chosen to be covered	Exposed and finished — the frame is the architecture
Connections	Steel nails, plates, and hangers throughout	Wood mortise-and-tenon, pegged; concealed steel only where required
Repairability	Cut out and replace whole members	A single timber can be scarfed and repaired in place
Character	None on show	Grows warmer and more valued with age
Up-front cost	Lowest	Meaningfully higher — a craft, not a commodity

The honest caveat

A timber frame costs more than stick framing — in material, in the hours to cut joinery, and in the crane time to raise it. For walls you'll never see, conventional framing is the rational choice, and we'll tell you that at the assessment.

When it clearly wins

You want structure that's part of the room — a porch, a pavilion, an entry, a great-room bent. You value how it's made and plan to keep the home. That's where a timber frame earns every dollar, and where nothing else feels the same.

What it asks of you

- Keep it dry — and let it dry when it gets wet.
- Refresh exposed exterior timber every few years.
- Expect **checking** — the surface cracks aren't structural.
- Choose the species and surface once — you'll keep it.

Made for Grey-Bruce weather.

Owen Sound swings from lake-effect snow loads to humid summers, and a timber frame lives through all of it. The whole craft of keeping one sound comes down to a single rule: **keep it from getting wet, and let it dry when it does.**

Overhangs & flashing

The first defence is design — deep overhangs, proper flashing, and details that keep water off the end grain. Timber that stays dry lasts indefinitely.

Snow & wind loads

Frames are sized for local snow and wind. Generous timbers and pegged joinery carry Grey-Bruce winters without the fasteners that loosen over time.

Wood movement & checking

Solid timber gives up moisture slowly and checks — surface-cracks along the grain — as it seasons. We orient timbers and detail joints so movement is expected, not a problem.

A warm, tight envelope

For enclosed buildings we wrap the frame in SIP panels or a Larsen-truss wall — a continuous, deeply insulated shell that leaves the timber exposed and comfortable inside.

The one rule, in practice

Every detail we draw — roof overhang, flashing, the way a beam meets a wall, the gap under a post base — is there to keep water moving off the timber and to let any that lands dry out fast. Get that right, and a frame outlives everyone who raised it. Get it wrong, and no species or finish will save it. It's the quiet part of the craft, and it's where we spend the most care.

Choose it once. Live with it for life.

The species, the surface, and the finish are what you'll look at every day — so they're worth understanding beyond the grain.

- **Species sets the character.** Douglas fir is strong, stable, and warm-toned; eastern white pine is lighter, softer, historically local, and easier to produce finer details.
- **Surface sets the mood.** A hand-hewn or rough-sawn face reads old-world; a planed face reads clean and contemporary. Both are fully structural — it's an aesthetic call.
- **Finish protects and tones.** Interior timber can be left raw, oiled, or lightly stained; exposed exterior timber wants an oil or finish refreshed every few years.
- **Joinery is on show.** Pegs, chamfers, and shoulders are details, not afterthoughts — we cut them to be seen.

Beyond the swatch — the timber family

TIMBER

WHERE IT SHINES

Douglas Fir	Strong, dimensionally stable, and warm in tone — the modern timber-frame workhorse.
Eastern White Pine	Light, soft, and easy to work — the traditional eastern species, and kind to the budget.
Hemlock	Economical and stiff — a sound, honest choice for outbuildings and utility frames.

What actually drives the price.

Two frames of the same size can be very different jobs. When quotes differ, this is usually why — and a quote that seems too low usually skipped one of these on purpose.

DRIVER

WHY IT MATTERS

Frame complexity	Every extra bent, hip, and intersecting roof multiplies the joinery. A simple porch is the most efficient frame; a cut-up great room is craftsmanship-hours.
Timber species & size	Bigger sections and denser species cost more in material — and in the labour to handle and raise them.
Joinery count	The number and type of joints — and whether the frame is fully traditional or hybrid — drives the hours at the bench.
Surface & finish	Hand-hewn and planed-and-oiled faces take more time than raw rough-sawn. Finish choice can change the total cost by a substantial amount, but it also makes the frame be what the space demands from it.
Enclosure system	An exposed porch frame is one thing; a fully enclosed SIP or Larsen-truss building is another. Priced to your project, never padded by default.
Access & craneage	Site access and the crane time to raise the frame safely vary by property — and are planned up front, not discovered mid-job.

Can it attach to an existing house?

Often, yes — porches, entries, and feature frames are some of our most common work, tied cleanly into what's already there. We assess the connection honestly before we quote it.

How we quote

A free on-site assessment, real measurements, and a written scope where every driver above is visible — so you can compare our quote against any other on the same terms. No pressure, no call centre.

From drawing to raising day.

Most of the craft happens at the bench, long before the frame goes up. By raising day, every joint already fits.

01

Assessment

We look at your project, your site, and what you want to build. Straight answers, real measurements, and a scope you can read — free, and without a call centre in sight.

02

Design & engineering

We design the frame and work out the joinery and the loads — sized to your local snow and wind, with any concealed steel specified up front where the engineering calls for it.

03

Cut the joinery

In the shop we lay out and cut every mortise, tenon, and peg, then dry-fit the whole frame before a single timber is raised.

04

Raising day

We raise the frame on an organized site, drive the pegs tight, and leave you a structure built to be seen — and a site left clean.

What to expect while we're there

- Clear scheduling and communication — you'll always know what happens next and when.
- A crew that treats the home like their own — reputation is our whole business.
- A final walkthrough together, and a spotless site when we leave.

The questions everyone asks quietly.

Timber framing carries a few old myths. Here are the straight answers — with independent sources you can check yourself.

Will the timber crack?

Yes — it's called checking, and it's normal. As a solid timber gives up moisture it develops surface cracks along the grain. They're cosmetic and expected; the frame's strength lives in the joinery, not the surface.

Is it really more expensive?

Up front, yes — it's a craft with more material and more hours than stick framing. Over the life of the building, exposed structure you keep for generations tells a very different story.

Is it strong enough?

Timber frames are engineered for local snow and wind loads. Big sections and pegged joinery have carried buildings for centuries; yours is sized for the code and the climate.

Doesn't exposed wood rot?

Only wood that stays wet rots. Kept dry by overhangs and flashing — and allowed to dry when wetted — timber lasts indefinitely. It's why frames centuries old are still standing.

Can you insulate a timber frame?

Yes. Enclosed frames are wrapped in SIP panels or a Larsen-truss wall for a tight, warm, continuously insulated envelope — with the timber left exposed inside.

How long does a raising take?

A porch or small bent can go up in a day; larger frames take longer. The bench work — cutting the joinery — is the bigger part of the schedule.

Check for yourself — independent reading

SOURCE

WHAT IT COVERS

tfguild.org

The Timber Framers Guild — the North American craft association. Standards, education, and a directory of framers.

cwc.ca

The Canadian Wood Council — wood design, span, and building-code resources for Canadian construction.

sips.org

The Structural Insulated Panel Association — how a SIP enclosure wraps a frame for a high-performance envelope.

Ten questions to ask any timber framer.

Including us. Good framers enjoy these questions; the other kind change the subject.

1. Is the joinery real mortise-and-tenon?

Good answer: hand-cut mortise-and-tenon, pegged, doing the primary work — with engineered steel concealed where it's needed, not a bolted frame dressed up to look like timber.

2. Traditional or hybrid — and which do I need?

Good answer: an honest read on where exposed timber earns its keep and where conventional framing is the smarter spend.

3. What species, and why?

Good answer: a species matched to the span, the look, and the budget — named, with the trade-offs explained.

4. Who cuts the joinery?

Good answer: their own trained hands, in their own shop — not a joinery package they only assemble.

5. How do you handle movement and checking?

Good answer: it's designed for — timbers oriented and joints detailed so seasoning is expected, not a callback.

6. How is the frame kept dry?

Good answer: overhangs, flashing, and end-grain details planned as part of the design — not left to the finish trades.

7. Is it engineered for our loads?

Good answer: sized to local snow and wind, with drawings you can hand to a building official.

8. How will it be enclosed and insulated?

Good answer: a clear plan — SIPs, Larsen truss, or conventional — that keeps the timber you're paying for on show.

9. Can I see local frames and reviews?

Good answer: nearby work and reviews you can verify yourself.

10. Who do I call in five years?

Good answer: the same person who quoted and cut the frame — and they'll answer.



5.0 ON GOOGLE — EVERY REVIEW, FIVE STARS

“Boulder and Beam have managed two exterior projects for us. I was extremely impressed with their attention to detail and the quality of their work. Done right, on time and on budget!”

— JIM · MEAFORD

“Without hesitation I would recommend Boulder and Beam to anyone for their project. The workmanship is expert and the team is professional.”

— CORRY · OWEN SOUND

Book your free consultation

We'll walk your project and show you honestly what a handcrafted timber frame would look like on it — and what it would take to build.

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