



# Beautifully precise

## In modern timberframe construction, old world methods meet new technology

It all starts with a tree. And not just any tree. The best trees for building a timberframe home are tall with a tight, dense grain and beautiful natural colour. The best of the best is the Douglas fir, but even within that species some are better than others depending on where it grows.

“We are located specifically

in Golden, B.C. because it’s in the heart of the best stands of interior-grown Douglas fir in North America,” says Jeff Bowes, president and partner at Canadian Timberframes Limited. “Douglas fir grows well in Oregon and Washington state but the Columbia Valley in the B.C. interior is at a higher elevation which causes slower growth and results in a

tighter grain.” A tighter grain means stronger and more stable timbers.

To get those timbers, the trees must first be sustainably harvested and reducing the distance materials have to travel and the energy used to process them is good for both the environment and your wallet. “We start with logs that are

primarily sourced within two hours of our facility,” says Jeff. “Then we deck the logs for a year before they are rough sawn and then we let them dry a second time for a few months. Done properly and at the right time of year, it is often equivalent to kiln drying but is a much more cost- and energy-efficient process. Mother Nature created the tree over 100

years. We let her finish the job naturally.”

Once the rough-sawn logs are dry, they are ready to be used for a new project. But before the first cut is made, the design needs to be finalized. Timberframe homes are unique because the structure is a very visible feature of the architecture. “In conventional construction, it’s rare for the supporting structure of the home to be a finishing element, but that’s the beauty of timberframe,” says Jeff.

To be able to show off that frame, every cut and every joint must be precise. Before technology, the logs for timberframe homes were all hewn, finished and joined by the hands of skilled craftsmen. And while there are still proponents of that method, CNC technology allows for precision milling in a much shorter but still labour-intensive timeframe.

“When the timbers arrive onsite, many people don’t realize the hundreds of hours of labour that have already been expended to prepare them,” explains Jeff. “But even with new technology we haven’t left our roots behind. We still use traditional mortise and tenon joints and authentic joinery which have retained solid engineering capacity for centuries.”

And some of that old-world touch can be incorporated in other ways. “We have skilled carvers who can add unique features and detailing to the timbers for a very personalized look. One of our clients wanted sailboats carved into his roof trusses. We pride ourselves on being able to provide that personal touch despite the technology.”

Once the CNC machines process the timbers to the size and specifications for the project, the finish is applied. A clear coat gives a traditional pale

Douglas fir look, but custom finishes like a circle-sawn antique finish, a distressed look or any tone of stain can be used to complement other design features like hardwood flooring or trim. Only then are the timbers ready to travel to the project site.

“The timbers are at a furniture-quality finish when they leave our facility,” says Jeff. “They are packaged in weather-proofed bundles and are carried by flat-bed truck to the site along with the wall and roof systems that we manufacture.”

Then it’s time for the raising. “We still do raisings all over North America,” says Jeff, “but even if a local builder has been hired to do the installation, we always provide a technician to oversee it onsite to ensure the process goes smoothly.”

It’s similar to an old-fashioned barn raising, but a crane is used to lift the heavy timbers into

place. And it happens incredibly fast. “For a 4000 to 5000 square foot home, the frame will be up within five days,” says Jeff. “With much of the work completed at our facility and the consistent connections enabled by the CNC process, a raising is very efficient. Crane time is a large cost for a project so our goal is to have everything milled so precisely that we get both tight connections and quick construction time.”

The result is a powerful and stunning timber skeleton to which wall and roof systems are attached. “Unlike conventional construction, the walls and roof completely envelope the structure on the outside so

that the frame is visible on the interior.” Once those are in place, the project proceeds more like a conventional home to complete the interior.

While it takes several years for

a mature Douglas fir to become first a timber and then a home, once in place it will stand as strong and proud as it was in the forest for centuries. **DS**

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