



Mass timber buildings are sustainable, safe and healthy

What is mass timber?

Mass timber products are typically formed with lamination, fasteners, or structural adhesives and are engineered for high strength. Mass timber construction is built using engineered wood products made of large, solid wood panels, columns or beams for use as load-bearing wall, floor, and roof assemblies. Several mass timber products, including glue-laminated timber posts and beams and cross-laminated timber floors, are used in this building.

Renewable and sustainable

Mass timber is a natural, renewable, and sustainable building material, with a lighter carbon footprint than other construction materials. Maximizing use of mass timber in construction in Canada could remove an estimated 0.6 million tonnes of CO₂ from the atmosphere annually by 2030 – equal to taking 125,000 cars off the road.

Easy to work with

Mass timber is strong, flexible, easy to process and finish, and easily modified on-site in case of last minute changes in design. It can also be combined with different materials (e.g. steel, concrete) to deliver a wide range of structural solutions.

Creates a healthy environment

Research is showing that incorporating wood and other natural materials into our buildings can reduce stress and contribute to good mental health.

Low-carbon construction

A growing interest in green building materials and taller and larger wood buildings is emerging in Canada and globally. Mass timber buildings are a key part of the low-carbon construction solution because they are built with wood-based products that use little fossil fuel energy during manufacturing.





Building with wood is not new

In the beginning of the 20th century, buildings as high as nine storeys were constructed with traditional solid sawn timbers in Canada. Toward the mid-20th century, concrete and steel systems slowly replaced wood systems. Many of these original wood buildings are still standing, serving their occupants and complying with modern building code requirements.

Proven fire safety

Mass timber has inherent fire resistance. During fires, exposed mass timber chars on the outside, which forms an insulating layer protecting the interior wood from damage. Mass timber construction can meet and even exceed fire safety requirements in the Canadian building codes.

Built to last

When mass timber buildings are designed with local climate impacts in mind, they can last for centuries. Durability can be enhanced through environmentally friendly preservative treatments.

Resilient

Mass timber buildings are designed to resist high winds and earthquakes given their light weight and inherent flexibility in the connections design.

Safe and quick construction

Since mass timber panels are prefabricated off-site and then assembled on-site, buildings made from mass timber have much shorter project timelines, less neighbourhood disturbance and safer construction sites.