

# Mass Timber

Mass timber construction uses engineered wood products, such as cross-laminated timber (CLT), glulam, and nail-laminated timber (NLT), which are formed by bonding layers of wood with adhesives or fasteners. Panels and beams are manufactured off-site for strength and speed, then assembled on location for tall buildings and other structures. This method offers significant environmental benefits, strong structural performance, and efficient construction. However, like other lumber products, mass timber is vulnerable to moisture damage and pest infestation.

## Hazard Resilience

Wildfire



Fire resistant, as surface char forms a protective layer. Fire rating of 3+ hours.

Rain and Floods



Moisture management is needed. Risk of swelling or decay without protective detailing.

Windy



Strong wind resistance as engineered connections provide stability.

Extreme temperatures



High thermal efficiency and moderate insulation.

Seismic



Flexibility and engineered joints help withstand earthquakes.

Cost estimates for mass timber construction can vary by region, design, and supply factors. In British Columbia, current quoted costs for mass timber systems are in the range of \$400–\$450 per square foot, influenced by demand, manufacturing capacity, and regulatory support. Prefabrication reduces construction time and labor, while local sourcing supports regional economies. Upfront costs can be higher than conventional concrete but may be offset by speed and sustainability incentives. Post-fire repair may also be intensive and expensive, depending on the degree and extent of exposure.