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Constructing Excellence: Navigating the Choice Between Wood and Non-Wood Frames



Real Estate and Hospitality



In the world of real estate and hospitality, developers are constantly juggling challenges like fluctuating interest rates, rising commodity prices, labor shortages and changing building codes. The big question they face is: how can we build cost-effectively? Whether it's single-family homes, multifamily apartments, or hotels, everyone is trying to figure out how to navigate this unpredictable environment.

Traditionally, outside of high-rise structures seen in large cities, residential low-and mid-rise buildings are primarily wood-frame construction. However, if buildings are taller than six floors, developers need to adhere to local building codes and integrate concrete and steel, which is common with urban infill development. Here, you may see the first one or two levels of concrete (often podium construction), where commercial/retail space is provided for public access, and above, wood-frame multifamily apartments for four or five stories. That said, buildings desiring a specific height exceed the requisites to be wood-frame construction and must be built using a non-combustible/fire-resistive construction method — for example, exclusively with concrete and/or steel.

Wood frames and non-combustible materials (steel and concrete) offer distinct advantages to various stakeholders during construction. While wood is preferred for its affordability and speed of building, concrete and steel structures are more durable and less prone to fire and thus attract lower insurance premiums during the course of construction. Amidst the volatility in the prices of construction materials, the increasing frequency and severity of natural catastrophes, and the rising cost of insurance, developers have started to weigh the costs and benefits of the two construction types.

To tackle these challenges, developers are going back to basics and rethinking the materials they use. This decision, once a straightforward choice based on the type of building, is now a crucial part of the planning process.



Wood Frame Construction: Pros and Cons

Why choose wood?

- » **Affordable:** Wood is typically cheaper than concrete and steel, even with fluctuating lumber prices.
- » **Quick to build:** Wood structures go up fast, saving time and money on things like loan interest and contractor fees.
- » **Lightweight and green:** Wood is lighter, reducing foundation stress, and has a smaller carbon footprint.
- » **Flexible design:** Wood frames offer architects simplicity in designing the structure(s), which often results in fewer load calculations for structural engineers, ultimately increasing the speed at which architects can design the building. There is often flexibility with wood-framed designs, allowing architects and contractors to make pivots during construction ad hoc if needed with less disruption, as openings for windows, mechanical systems, doors, etc. can be done without invasive structural adjustments.

Depending on other factors, there may also be opportunities to arrange for prefabricated components, such as trusses or panels, that are available with wood frame construction, which can further accelerate a project's timeline.

Although still in its early stages of adoption, mass timber, including cross-laminated timber ("CLT"), offers a superior strength-to-weight ratio, enabling the construction of taller buildings that surpass the limitations of traditional wood frame structures. Factory-built modular units, which can be built in a controlled environment away from the project site, are another method developers are exploring, which can provide a means to deliver a project on a fast-tracked timeline.

- » **Regulatory acceptance:** In many states, building codes are already well-established for wood frame structures, enabling faster permit approvals.

What to watch out for:

- » **Fire risk:** Wood frames are more susceptible to fire, particularly during the construction phase. With a large fire during construction, the result is often a total loss, as the main firefighting focus is containing the fire within its site (preventing fatalities and further spread to neighboring buildings and structures) rather than saving the project and preserving the integrity of the structure incurring the fire. The goal is to allow the one fire to burn in an effort to save all the other buildings around it — have one loss, not multiple. While advantageous for saving lives and neighboring structures, that approach presents more risk to a wood frame project, as the threat of a substantial loss is more magnified. Non-combustible construction offers a much higher degree of fire resilience.
- » **Higher insurance costs:** Due to heightened fire risk, insurers charge higher premiums for wood-frame projects, substantially increasing the project costs compared to non-wood-frame buildings.
- » **Extra security needs:** Insurers may require additional security measures to manage fire risks. This may include on-site watchmen and advanced camera systems with thermal imaging to detect smoke and fire outbreaks, which increases the project's overall costs. Insurance premiums alone cannot be evaluated in a silo — depending on the construction type, there may be additional, ancillary requirements imposed by insurers that developers must also be mindful of — all of which are influenced by the construction type being used.
- » **Weather vulnerability:** Wood structures can be more easily damaged by severe weather like hurricanes, heavy winds and snow loads, making them less favorable in certain geographic regions.





Non-Wood Frame Construction Concrete & Steel: Pros and Cons

Why choose concrete & steel?

- » **Durable:** These materials last longer and need less maintenance.
- » **Lower insurance costs:** They're more fire-resistant, which generally means cheaper insurance. Property insurance premiums, in particular, are considerably lower.
- » **Higher structural integrity:** Better suited for extreme conditions like hurricanes and wildfires.

What to watch out for:

- » **Higher initial costs:** Concrete and steel construction typically requires higher cost of materials and more specialized labor, making them less attractive to developers for most multifamily and hospitality structures under six stories. However, this is being challenged by developers in today's environment.
- » **Longer build time:** These projects often take longer, increasing ancillary project costs such as construction loan interest carry and contractor overhead and general conditions, each of which impacts the project's overall viability from a cost perspective.
- » **Environmental impact:** Producing steel and concrete uses a lot of energy and emits more carbon.



As the insurance market continues to evolve and become more complex, demands on developers to explore opportunities for cost savings and premium efficiencies are paramount. Making informed assessments on the value proposition behind the construction type selection for a project is critical; numerous characteristics of the project will influence its total cost of risk — geography and project cost are just the tip of the iceberg — now more than ever, the construction type of the project is having an outsized influence on the total cost of risk and must be evaluated project by project to determine the most viable path forward.”

Justin Dove, Area Executive Vice President — Real Estate, Gallagher

Insurance considerations?

Choosing the right construction method also means picking the right insurance coverage. Wood frame projects often face higher premiums due to increased fire risk, while non-wood structures benefit from lower rates. Gallagher's experts can help you navigate these complexities to find the best insurance solutions for your project.

Insurance Options

- » **Builder's risk insurance:** This property insurance policy covers the project during the course of construction and is intended to respond to claims for direct physical property damage caused by covered perils, including but not limited to: fire, water, wind, hail, theft and vandalism. Additional perils of coverage can be purchased for an additional premium, including occurrences for earthquake, hurricane and acts of terrorism.
- » **General and excess liability insurance:** This is intended to cover claims related to bodily injury, property damage to third parties and legal expenses incurred to defend a claim arising out of the construction work on the project. Excess liability insurance provides limits above the primary policy limits to protect against substantial claims. Construction liability policies can also provide coverage protection beyond the project's completion for claims arising out of construction defects, for the statute of repose (as long as 10 years after the project completion in some states; up to 6 years in others).
- » **Controlled Insurance Program ("CIP"):** A construction liability program secured by either the owner/developer (an Owner Controlled Insurance Program, referred to as an "OCIP") or the general contractor (a Contractor Controlled Insurance Program, referred to as a "CCIP"), which is intended to provide coverage for the owner/developer, the general contractor and most contractors and subcontractors performing on-site work related to the project. Like other construction liability policies, the CIP provides coverage protection beyond the project's completion for claims arising out of construction defects for the statute of repose (as long as 10 years after the project's completion in some states and up to 6 years in others).

Consult Gallagher's trusted and experienced construction insurance advisors to navigate your unique insurance needs.



Insurance rates for wood frame structures have increased substantially over the last decade, as losses magnified and capacity within the market shrunk. Today, it's common for a single insurer to offer no more than five to ten million of capacity (limits), meaning large wood frame projects often require more than a dozen participating insurers. In contrast, a single insurer may be willing to provide two to five hundred million in capacity for a similarly sized non-combustible project, as these structures present a lower risk of total loss."

Chris Schoeneborn, Area Senior Vice President — Real Estate, Gallagher

