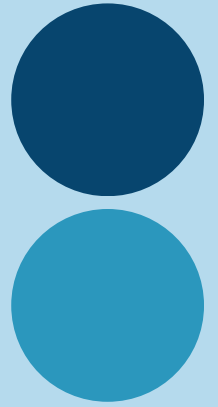


THE CASE FOR STEEL FRAMING

ARTICLE BRIEF

FEBRUARY 14, 2024



Examining the Surge in Mid-Rise Wood Construction Fires

Given that faulty electrical wiring and welding can occur during construction, it's no surprise that wood framing in mid-rise construction projects has led to a rising number of fires across the United States.

'A Campfire Waiting to Happen'

"From a firefighter's point of view," says *Fundamentals of FireFighter Skills*, published by the National Fire Prevention Association, "lightweight wood-frame construction is a campfire waiting to happen. A fire in this type of construction will spread rapidly throughout the building and to adjacent exposures."



[Wood-frame construction fires](#) have been on the rise.

Rise in Fires

Unfortunately, a slate of fires during the construction of mid-rise structures has occurred recently. A few examples include:

Luxury Apartments Engulfed in Flames

A fire in Visalia, California, fire engulfed nearly half of the wood-framed luxury apartments under construction. According to Visalia Times Delta, dozens of firefighters attacked the flames from top to bottom, hitting the peaks of the mostly plywood structures with water from ladder trucks. The cause of the fire remains unknown, though one firefighter said the electrical work could have been the cause.

Fire Damages \$1B Texas Development

A massive fire destroyed a five-story apartment building in Rowlett, Texas. The building is part of the \$1 billion mixed-use Sapphire Bay project under construction, touted for its future mix of residential and commercial spaces. Firefighters from 10 counties battled the fire for 32 hours. Because the apartments were empty, no one was hurt, but it also meant there was no one to contact authorities.

Risks Associated with Wood Fires

Lack of Standard Fire Protection	In the early stages of construction, fire protection measures may not be fully in place, and the use of space heaters, which can cause extra fire risk.
Limited Fire Detection	Incomplete construction may mean that fire detection systems are not fully operational, leading to delays in identifying and responding to a fire.
Loss of Revenue	Fire during the construction of a building can result in a loss of revenue for various stakeholders involved in the project. The impact may include project delays, loss of rental income, reputation damage and more.
Insurance Costs	Insurance premiums may increase following a fire incident. Insurers may perceive the project as higher risk, leading to higher insurance costs for future construction phases.
Flammability	Wood is inherently flammable. And during construction, the exposed wood framing can be susceptible to ignition from various sources such as welding activities, electrical work or other construction processes.

Read the full BuildSteel.org article to see the [complete list of fire risks](#) associated with wood framing.



5 Reasons to Use Steel

1. Steel is Non-combustible	Steel can't burn, because it contains no elements that can serve as fuel. Steel provides no means for a fire to start, does not contribute to fire growth or fire spread and does not contribute to the generation of smoke.
2. Steel Stays Non-combustible	Steel remains noncombustible throughout the entire lifecycle of the building — during building construction, occupation and future renovation.
3. Steel Can Lower the Fire Risk to Workers	Decades of research into the behavior of steel exposed to fire have given designers the confidence to engineer buildings that provide optimum fire safety. Steel can help limit the spread of flames in a building.
4. Steel Lowers the Impact on Fire Services	Fires have prompted several municipalities to implement site-safety regulations that increase construction costs and project timeframes. Some cities want to ban combustible framing above three stories.
4. Steel-Framed Buildings Tend to Cost Less to Insure	Insurers offer lower builders risk and general liability premiums for steel-framed structures compared to wood-framed structures. CFS framing saved \$1.32 million in insurance premiums at a 400-unit hotel project.

Steel framing is noncombustible. It cannot burn because it contains no elements that can serve as fuel. It provides no means for a fire to start, and it does not contribute to fire growth or fire spread. The clear advantage of noncombustible steel framing raises the question of whether more construction projects should specify steel framing for enhanced safety.

Read more about [mid-rise wood construction fires](#).

Learn More About Steel Framing

1. Read the Complete Article on BuildSteel.org

[Examining the Surge in Mid-Rise Wood Construction Fires: The Case for Steel Framing](#)

With the increase of fires in wood-framed mid-rise construction projects, builders are turning to noncombustible steel framing to enhance overall safety. (Search for the title or use the QR code)



2. Take a Free On-Demand, AIA-Approved Course

[SFIA 111: Fire-Rated Cold-Formed Steel Assembly Listings \(On-Demand Course\)](#)

This course delves into the science of fire-resistive testing, describes the testing required by building codes and analyzes how to select a fire-resistive assembly. (pathlms.com/sfia/courses)



3. Ask About Our [Free Project Assistance](#) (800-797-8335)

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