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Full Article Link:

MASS TIMBER

Full Article Link: [5 solutions to acoustic issues in mass timber buildings \(bdcnetwork.com\)](#)

Acoustic experts explain why noise is often a problem for mass timber projects—and how to address it

BY NOVID PARSI, CONTRIBUTING EDITOR | JULY 11, 2023

Tenants gather in the rooftop amenity spaces at 80 M Street SE (80 M), a mass timber addition project in Washington, D.C. The project posed a number of acoustic design challenges for the building team. Photo: Roy Blunt

In the U.S., [mass timber](#) has been quickly gaining popularity as a building material—and for good reason. Mass timber can deliver a slew of benefits, chief among them the environmental impact. A renewable alternative to concrete and steel, mass timber can store vast amounts of carbon.

“Mass timber literally grows on trees. When paired with sustainable forestry practices, mass timber has a strong sustainability story,” says Denis Blount, Associate Principal with Arup.

The potential benefits don’t end there.

With a high strength-to-weight ratio, mass timber’s light weight means lower foundation costs. Prefab mass timber components require fewer onsite workers. The material has the potential to create a competitive edge in the marketplace.

And then there’s the undeniable aesthetic appeal of exposed wood, with studies showing its positive impact on wellbeing. “People like the feel of wood, and its visual, tactile nature can provide benefits to occupants,” Blount says.



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While mass timber has been used in Europe for decades, more U.S. project teams have been embracing the highly durable material, most commonly in the form of cross-laminated timber (CLT). That's been propelled partly by the ICC's inclusion of taller mass timber buildings in the 2021 International Building Code. As of December 2022, almost 1,700 mass timber buildings for multifamily, commercial, and institutional projects had been constructed or were in design throughout the U.S.

Mass timber's Achilles heel: acoustics

But for all its advantages, mass timber also has a less-heralded quality: its acoustic challenges. Exposed wood ceilings and floors have led to issues with excessive noise. "Acoustics are somewhat of an Achilles heel for mass timber systems," says Rose Mary Su, Principal Acoustician at [Acentech](#), an acoustics, technology, and vibration consultant based in Cambridge, Mass. Arup's Blount adds, "I don't think mass timber necessarily leads to poor acoustics, but it is an inherent challenge."

[bdcnetwork.com](https://www.bdcnetwork.com)

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