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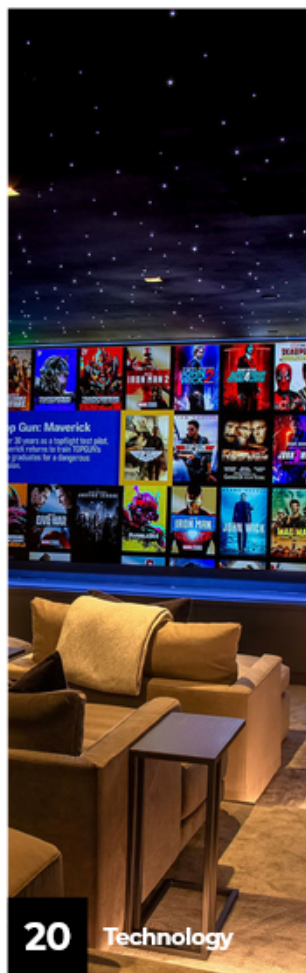
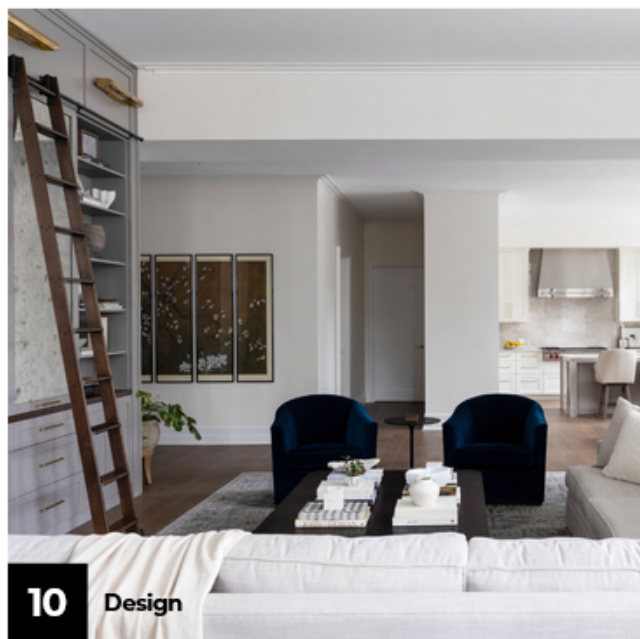
Concrete Homes

Catastrophic wildfires are driving builders towards alternative materials

Technology

Involve integrators earlier in the process to gain maximum value

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CONCRETE EVIDENCE

As the threat of wildfires continues to burn, builders are increasingly turning to residential concrete construction. By Greg Rankin

Residential construction is at a critical inflection point, especially in fire-prone regions across North America. The catastrophic wildfires that swept through Los Angeles in 2025 - and the blazes that continue to devastate parts of Canada - are urgent reminders of the vulnerability of wood-framed homes. As the frequency and intensity of wildfires grow, the case for change is becoming impossible to ignore.

Engineers have long supported the use of fire-resistant materials in home construction. Yet historically, the low cost of

wood has kept it as the default option. Today, however, innovations in concrete construction are rapidly shifting that equation. With advances in prestressed concrete, new design options, and added energy efficiencies, concrete homes are not only becoming more cost-effective, they're becoming essential.

By adding fireproof doors, windows, and metal roofs, concrete homes can be transformed into fireproof structures. However, these improvements go beyond fire resilience. Modern concrete homes also offer superior protection against hurricanes, tornadoes, and seismic activity.



"Concrete is by its nature a very durable and resilient material regardless of the hazard," explains Evan Reis, Executive Director of the U.S. Resiliency Council. "So, from the performance side of things, concrete homes make a ton of sense."

Reis, a structural engineer with more than 30 years of experience, leads the U.S. Resiliency Council, a California-based nonprofit that champions more robust building practices.

"With more people moving to hazard-prone areas and the increase in natural disaster-related losses," says Reis. "Something has got to change."

Insurance in retreat

Further complicating the crisis is the growing difficulty of securing insurance for homes in high-risk areas. According to the First Street Foundation, nearly one-third of homeowners in the continental US already face challenges finding affordable coverage. In California, where insurers began canceling policies ahead of the most recent wildfire season, the situation has become dire.

"Insurance rates are skyrocketing because of the increased risk. At the same time, lenders don't want to be left holding the bag," says Reis. "The good news is that they are both beginning to recognize that they can greatly reduce their risks if homes are built with the right materials."

As the insurance industry pulls back and governments debate long-term solutions, the construction industry is increasingly focused on what comes next. A growing number of builders and developers believe the answer is clear: residential concrete.

New methods, lower barriers

Concrete has long been recognized as a superior material for fire-prone zones, but costs have traditionally slowed its adoption in residential settings. That is now changing. When factoring in long-term savings on maintenance, insurance, and energy, concrete homes are increasingly seen as a smarter financial investment.

Builders are borrowing from commercial construction methods, such as tilt-up techniques and prestressed sandwich panels, and adapting them to the needs of the residential market. The result? Faster builds, lower labor costs, and no need for expensive cranes.

"An entire house can now go up with just three or four people onsite to tilt up the panels and set them in place," says Alonso Forcado, an engineer from Nonquit Homes who helped design and build the first residential home outside of Atlanta using this style of construction.

On-site panel casting eliminates costly transportation logistics, further trimming expenses and timelines. For contractors who embrace the new system, build times can drop from six to 12 months to as little as 120 days.

Training for the future

One of the biggest roadblocks to adoption is contractor knowledge. "Right now, there are simply not enough contractors who know how to efficiently build a home out of concrete," adds Reis.

That's why companies like Texas-based Nonquit Homes are investing in education. Its eight-day hands-on training program equips

contractors and skilled workers with the tools to build energy-efficient, concrete homes using prestressed panels.

"It took us almost two years to perfect the process of building with these prestressed concrete sandwich panels," adds Forcado. "Now we want to pass along what we have learned to builders before it is too late. Right now, it is a race against time."

Solving the old pain points

Historically, concrete homes have faced criticism for limited insulation and restricted design options. Today's innovations are changing that. Nonquit Homes, for instance, embeds thick insulation directly into its wall panels, improving energy performance and eliminating the need for separate insulation or drywall.

Design has also evolved. Builders can now offer concrete finishes in a wide range of patterns, colors, and textures, or apply familiar exterior materials like stucco, brick, or stone for added curb appeal. The result is a residential product that is not only safer, but also greener, more attractive, and built to endure.

"Sustainable design has always been translated into green design, or having a low impact on the environment," concludes Reis. "That is only half of the equation. The other part is the environment having a low impact on us. By combining green design with resilient design, together we can achieve sustainability." ■

Greg Rankin is a Houston-based freelance writer with more than 20 years of experience writing about construction, engineering, and the concrete industry.

The U.S. Resiliency Council (USRC) is a 501(c)(3) non-profit organization for implementing and disseminating rating systems that describe the performance of buildings during earthquakes and other natural hazard events - www.usrc.org

For more information about concrete residential homes visit www.nonquithomes.com