By Kate Carsella, Associate Editor

DESIGN

The Great Indoors

An emerging architectural movement puts the biophilia hypothesis—that humans seek out and need to feel a connection to nature and other living organisms to mentally and physically prosper—into design practice by bringing outdoor natural elements indoors.

Indoor tree houses, rooftop parks, ponds, and orchards are just some examples of biophilic design's growing prominence in the offices and work spaces of companies such as Google, Facebook, Amazon, and Microsoft, and biophilic design is now finding its way into residential projects as well.



In a report about the relationship between the design of built spaces, nature, and human biology, environmental consulting firm Terrapin Bright Green explains that biophilic design "can reduce stress, improve cognitive function and creativity, improve our well-being, and expedite healing," adding that the forecasted increase of urbanization over time highlights the commensurate growing value of this design method.

But incorporating natural wellness into a home's design isn't restricted to its interior. In October 2014, the International

Well Building Institute (IWBI) launched the Well Building Standard, aimed at turning structures—from the way in which they're built to what they contain—into "health intervention tools" for improving and enhancing residents' comfort, health, and wellness.

Additionally, manufacturers are increasingly inspired by biophilic design and foresee a lasting impact on homeowners and housing professionals. When formulating its 2019 Color of the Year called Night Watch, global paint supplier PPG Industries sought to convey nature's significance, as well as "the overarching [cultural] mood of togetherness, inclusiveness, and community," with a holistic approach.

PPG senior color marketing manager Dee Schlotter says that nature itself is the site of greatest holistic restoration, and that channeling that into the home, where "there is a need for meditation and restoration in a very combative world," can be both a rebellious and necessary act.

REGIONAL

Living With Dignity

In rural Alabama, an effort to create a stock of affordable, resilient homes in underserved communities, called the 20K Initiative, is the result of collaboration between Rural Studio—a student-centered design/build program in Auburn University's College of Architecture, Design and Construction—and government-backed mortgage lender Fannie Mae.

A press release about the program says its hope is to "afford financially vulnerable homeowners the ability to live in dignity, security, and well within their means" in their community.

Research resulting from the initiative is being shared with other industry

groups and educational organizations also working to combat the affordable-housing shortage, with the goal of finding solutions that can be applied nationwide.

Fannie Mae VP Michael Hernandez said in a statement that the 20K Initiative dovetails with the Duty to Serve Underserved Markets rule, which ensures Fannie Mae continues to provide leadership for improving the availability of home financing for very low- to moderate-income families in underserved markets

Along with the support of Fannie Mae, the 20K Initiative was granted funding by Auburn University through its Presidential Awards for Interdisciplinary Research. University president Steven Leath says the initiative symbolizes, "Auburn's best as a land grant institution," adding that by improving lives in Alabama and in the nation, the 20K Initiative "brings quality, sustainable homeownership to citizens and builds stronger communities."

Since 2005, Rural Studio has evaluated various methods for delivering attractive, compact, efficient homes that would appreciate in value for residents who are unable to meet credit requirements in other, more traditional, homebuying processes.

CODES + STANDARDS

Formaldehyde Regulation

As part of the U.S. Environmental Protection Agency's final rule to reduce exposure to formaldehyde emissions, composite wood products, such as hardwood (decorative) plywood, medium-density fiberboard (MDF), and particleboard, must comply with the new regulation as of June 1, 2018. However,

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some structural engineered wood products commonly used in the construction industry, such as structural plywood and oriented strand board, are exempt.

The EPA's regulation is being rolled out in two phases, with the current phase allowing for two certification paths toward compliance: CARB ATCM Phase II or U.S. EPA TSCA Title VI. But as of March 22, 2019, only the latter will be permitted.

APA – The Engineered Wood Association, based in Tacoma, Wash., and representing 172 structural composite lumber mills in North America, says that structural engineered wood products such as I-joists, laminated veneer lumber, and glue-laminated timber (glulam) marked with the APA Mark of Quality are exempt because the mark appears only on structural engineered



wood products. APA says these products are manufactured according to existing product standards and building codes using low-emitting, moisture-resistant adhesives. Product invoices, along with an APA certificate of conformance, may also be used as proof that an unmarked product is exempt.

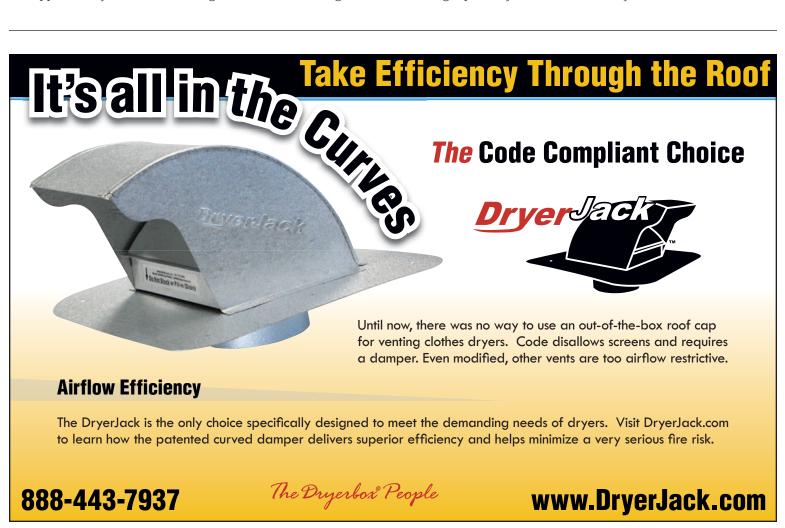
Third-party certifiers are required to verify a manufacturer's ability to comply with the formaldehyde-emission regulation, including quarterly inspections, testing, and reviews of routine quality testing.

During the creation of the final rule, the EPA worked with the California Air Resources Board (CARB) to ensure conformity between CARB's requirements and the final national rule for similar composite-wood products.

AFFORDABILITY

Tiny Home Chicago

Chicago Mayor Rahm Emanuel recently announced an affordable housing initiative for the city's low-income residents.



In June of this year, the city's Department of Planning and Development issued a Request for Information (RFI) to study the viability of tiny homes for seniors and resi-

dents experiencing homelessness. The RFI asks nonprofit housing agencies, housing developers, and other related entities to collaborate with the city on how to best implement such a program throughout the city's neighborhoods and to provide rationale for any proposed changes to Chicago's zoning ordinances.

According to a statement from the mayor's office, the Chicago Tiny House initiative will be funded by the Affordable Housing Opportunity Fund, which receives fees paid by developers, as well as by the City's fee



on home-sharing companies such as Airbnb, and donations and requests to volunteer via its website.

Mayor Emanuel said in a statement, "Every Chicagoan should have a place to call home, period," explaining that tiny

homes offer an innovative solution and the potential "to create affordable and permanent housing options for some of Chicago's most vulnerable residents."

Since 2011, the City of Chicago has increased funding in new programs for sheltering veterans, families, victims of domestic violence, and the city's youth, and has added more than 10 percent to existing funding for homeless initiatives, the mayor's office said.

In June, Emanuel also made a commitment to support 1,600 new housing units for those experiencing homelessness in Chicago, as part of his five-year housing plan, which is forecast to add 21 percent more available housing for vulnerable residents, including those experiencing chronic homelessness. **PB**

