

Architensions
BLA
LAMAS

A Tax Credit for Green Projects
A Grand Rapids Hub by UrbanWorks
Crowding, Density, and COVID-19
Flipping Agency in Architecture

architectmagazine.com
The Journal of The American
Institute of Architects

Community Builders

Gathering has taken on a whole new meaning, but the winners of the AIA Awards for Architecture show that thoughtful design will always foster connection.



KALWALL®

high performance translucent building systems

treat your building
like a work of art

photo by Javier Callejas

Today's LEDs may last up to 50,000 hours, but then again, Kalwall will be harvesting sunlight into museum-quality daylighting™ without using any energy for a lot longer than that. The fact that it also filters out most UV and IR wavelengths, while insulating more like a roof than a skylight, is just a nice bonus.

FACADES | SKYROOFS® | SKYLIGHTS | CANOPIES

schedule a technical consultation at KALWALL.COM



**#1 FIRE RATED GLASS
MADE IN THE USA
USA-MADE IS BEST**



PROJECT: ORLANDO VA MEDICAL CENTER IN ORLANDO, FL
ARCHITECT: RLF ARCHITECTS
PRODUCTS: FIRE RESISTIVE & HURRICANE RATED
SUPERLITE II-XL 60 & 120 IN GPX HURRICANE WALL SYSTEM

SAFTI *FIRST* is the **first and only vertically integrated** USA-manufacturer of fire rated glass and framing today, offering **competitive pricing and fast lead times**. UL and Intertek listed. All proudly **USA-made**. Visit us today at safti.com to view our complete line of fire rated glass, doors, framing and floors.



To learn why **SAFTI *FIRST*** is the **#1 USA-manufacturer of fire rated glass**, watch our new video at safti.com/usa-made.



888.653.3333



Presented by:



THE BUILDING SCIENCE OF FLOOR SYSTEMS

A continuing education preview sponsored by AdvanTech™ Subfloor Assembly.



When the outdoor environment is radically different from the indoors, such as air-conditioned homes in high-humidity, high-heat climates, it creates a constant assault on the building envelope as nature attempts to balance the pressure, moisture and temperature. For flooring systems built over unconditioned crawl spaces, the warm, moist air drives through toward the conditioned interior of the home in a phenomenon called

vapor drive, creating the potential for moisture damage along the way.

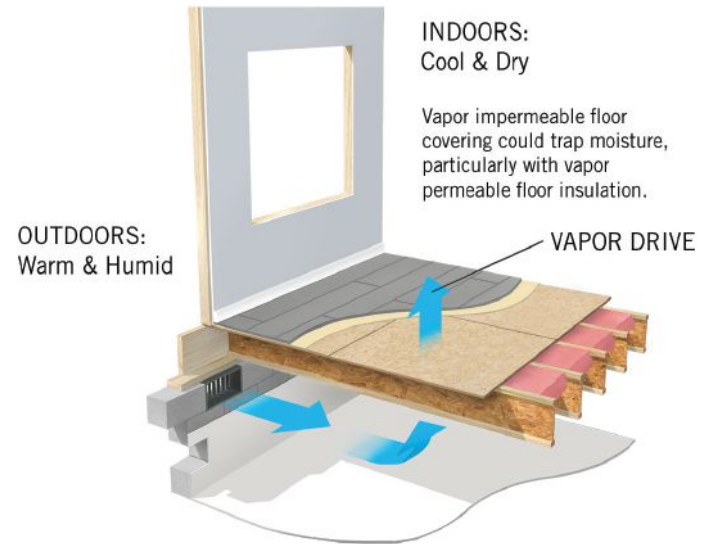
Excess moisture in a crawl space or basement is never ideal, but it becomes a problem when the moisture isn't controlled. At Huber Engineered Woods, the technical hotline support team is seeing an increased number of questions from customers inquiring about best building practices for subfloors with luxury vinyl flooring

finishes. Luxury vinyl flooring (LVF) has many positive attributes: It's affordable, durable and an impressive alternative to more expensive finishing options.

While there are many desirable qualities of LVF, there are also some challenges. Installing LVF over an unconditioned crawl space, especially in warmer, more humid climates, can significantly slow down vapor under the



Trapped moisture due to vapor drive could damage both finish floor coverings and the subfloor below.



Vapor impermeable floor coverings could trap moisture, particularly with vapor permeable floor insulation.

floor and increase the risk of condensation. The result can be bubbling, warping or cupping of the finished flooring and even cause damage to the subfloor. This can happen because of the low vapor permeability of the LVF material combined with the building methods that allow for the presence of condensation buildup due to the transfer of humid air from warm to much cooler surfaces such as LVF. As LVF rises in popularity, the education surrounding proper installation methods for builders will need a boost, too. Without better building techniques, we'll almost certainly see an increase in damaged flooring.

If you're building over an unconditioned crawl space and laying LVF, here are a few considerations to promote evaporation on the underside of the flooring system to avoid condensation collection that can lead to rot.

Follow recommended installation practices.

Naturally, this will vary from company to company, but some manufacturers recommend installers avoid using commodity subflooring with their luxury vinyl finished flooring. They recommend a "better" or "best" option. One reason is that the premium options, such as AdvanTech® subflooring, tend to be more moisture resistant,

which can help prevent moisture from reaching and being trapped under the LVF layer.

Inspect your vapor barrier for gaps.

Vapor barriers should fully cover any ground and overlap at least 6 inches.

**“MAKE SURE YOUR
SUBFLOORING ASSEMBLY
IS DESIGNED TO PROMOTE
MOISTURE RESISTANCE
DURING AND AFTER
CONSTRUCTION.”**

Create a conditioned crawl space.

Conditioned crawl spaces can prevent vapor drive and moisture buildup and provide the added benefit of increased energy efficiency while still capturing the cost savings of building over a crawl space. Air sealing the space is critical to control the movement of the air in a conditioned crawl space. By regulating temperature, this design takes the strain off the HVAC system, which can contribute to

the home's energy efficiency. Ultimately, a conditioned space helps avoid mold growth through more consistent climate control and can help preserve healthy indoor air quality.

Ensure proper drying with permeability.

If the assembly gets wet or exposed to moisture, the assembly has to have a way to dry out or a way to mitigate moisture from the onset. The building assembly is constantly adjusting under the pressure of nature seeking balance, so sequencing products with awareness of each material's permeability will manage the vapor drive and ease this ongoing moisture movement into balance.

Because of the low permeability of LVF, it's important to make sure your subflooring assembly is designed and installed to promote moisture resistance during and after construction.

The full CEU course will take an in-depth look at assembling a subfloor that is durable and squeak-free. Learn more about the benefits of an AdvanTech Subflooring Assembly by visiting [AdvanTechQuiet.com](https://www.AdvanTechQuiet.com).

A Contents

Volume 109, number 09, September 2020.

On the cover: *The Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship at the Illinois Institute of Technology, by John Ronan Architects; photo by Steve Hall/Hall + Merrick. Below: Tivoli Hjørnet, by Pei Cobb Freed & Partners; photo by Hufton+Crow*

Tech + Practice

- 19 The Rules: Green Tax Break for AEC Professionals
- 20 Opinion: Change Agency, Value Change
- 24 CarbonPositive: Density, COVID, and the Future of Cities
- 28 Architectural Lighting: The Winners of the 2020 AL Light & Architecture Design Awards
- 37 Next Progressives: Archintensions
- 42 Residential: Home Street Residences, by Body Lawson Associates
- 47 Typology: Avling Kitchen & Brewery, by LAMAS
- 50 On the Boards: Boston Square, by UrbanWorks

AIA Architect

- 63 Translating Design
- 64 A Legacy No Longer in “the Shadows”
- 66 Education for Real-World Experience
- 71 A More Inclusive Architectural Education
- 72 A Different Kind of Fall

Editorial

- 88 California is on Fire. Again.

AIA 2020 AWARDS



74 2020 AIA Awards for Architecture

- | | |
|---|---|
| Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship Chicago | Jishou Art Museum Jishou, China |
| John Ronan Architects | Atelier FCJZ |
| Floral Court London | Glenstone Potomac, Md. |
| Kohn Pedersen Fox Associates | Thomas Phifer and Partners |
| Chhatrapati Shivaji International Airport, Terminal 2 Mumbai | Calgary Central Library Calgary, Alberta |
| Skidmore, Owings & Merrill | Snøhetta and Dialog |
| Tivoli Hjørnet Copenhagen | Minnesota State Capitol Restoration St. Paul, Minn. |
| Pei Cobb Freed & Partners | HGA |



LOBBY?

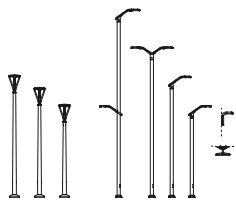
**NO, IT'S YOUR
WASHROOM.**

Whoever said the washroom (the most frequented room in any building) shouldn't be as nice as the lobby? ASI just gave the washroom a makeover—you can too. Visit americanspecialties.com/thebod to explore the new standard for basis of design in washrooms. **Featured in this ad are our exclusive Velare™ and Piatto™ collections of washroom accessories, ASI Alpaco™ partitions, and ASI lockers.**

ASI[®] Group
Integrated Building Products



landscapeforms®



**Beautifully & Thoughtfully
Lighting the Landscape**

Our outdoor lighting is installed in high profile landscape environments. From streetscapes and sports venues to university campuses and public parks, we look at every aspect of outdoor lighting with fresh eyes.

Project & Location:

Howard Park | South Bend, IN

Design Partners:

Alliance Architects, The Lakota Group

FGP Lighting, Torres Lighting

Find us at landscapeforms.com or contact us toll free at 800.430.6205.

DESIGN. CULTURE. CRAFT.

UNIQUE DESIGN STREAMLINED

ProjectWorks™ design and pre-construction service streamlines the entire process – starting with faster, more efficient collaborative design through visualization and takeoffs for DesignFlex® and MetalWorks™ Torsion Spring Shapes. You can bring your unique ceiling vision to life in one convenient work package. See how to streamline your design at armstrongceilings.com/projectworks

EXPLORE DOZENS OF
PRE-DESIGNED LAYOUTS AT
ARMSTRONGCEILINGS.COM/PATTERNALLERY

ULTIMA® & METALWORKS™ SHAPES FOR DESIGNFLEX™ CEILING SYSTEMS WITH
AXIS SCULPT RECESSED MOUNT GEOMETRIC LIGHTS / INSURANCE COMPANY
TRAINING FACILITY, CHICAGO, IL / THE INTERIOR DESIGN GROUP LTD., LISLE, IL

Inspiring Great Spaces®

Armstrong®
CEILING SOLUTIONS

Architect: Morphosis Architects
Curtain Wall Consultant: Arup, New York, NY
Photograph: Matthew Carbone

ARCHITECT

The Journal of The American
Institute of Architects

Editor-in-Chief

Katie Gerfen
kgerfen@hanleywood.com

Managing Editor

Laurie Elden
lelden@hanleywood.com

Art Director

Robb Ogle
rogle@hanleywood.com

Technology and Practice

Editor
Wanda Lau
wlau@hanleywood.com
@wandawlau

Contributing Editors

Aaron Betsky
Blaine Brownell, FAIA
Daniel Davis
Thomas de Monchaux
Elizabeth Evitts Dickinson
John Morris Dixon, FAIA
Eva Hagberg
Thomas Fisher, ASSOC. AIA
Cathy Lang Ho
Karrie Jacobs
Edward Keegan, AIA
Ian Volner
Mimi Zeiger

Features

Senior Editor
Eric Wills
ewills@hanleywood.com

Intern

Madeleine D'Angelo
mdangelo@hanleywood.com

Design Group

Executive Vice President,
Chief Content Officer
Jennifer Pearce
jpearce@hanleywood.com
703-407-6029

Executive Vice President
Paul Tourbaf
ptourbaf@hanleywood.com
847-778-9863

Senior Vice President,
General Manager Digital
Christie Bardo
cbardo@hanleywood.com
703-307-3014

Vice President of Account
Development & Sales
Administration
Philip Hernandez
phernandez@hanleywood.com
703-599-3076

Advertising

Account Coordinator
Katina Billado
kbillado@hanleywood.com
802.233.1976

Marketing

Executive Director of
Marketing
Lauren Fitzgerald

Group Director, Audience
Marketing & Circulation
Chris Lustan

Canada

D. John Magner
jmagner@yorkmedia.net
416.598.0101, ext. 220

Production

Senior Director,
Print Production
Cathy Underwood

China, Hong Kong, Taiwan

Judy Wang
judywang2000@vip.126.com
86.13810325171

Senior Director,
Print Production
Margaret Coulter

Production Manager,
Stephanie Fischer

Hanley Wood University/ Education

Jim Bagan
jbagan@hanleywood.com
773.824.2428

List Rentals

The Information Refinery
Brian Clotworthy
brian@info refinery.com
800.529.9020

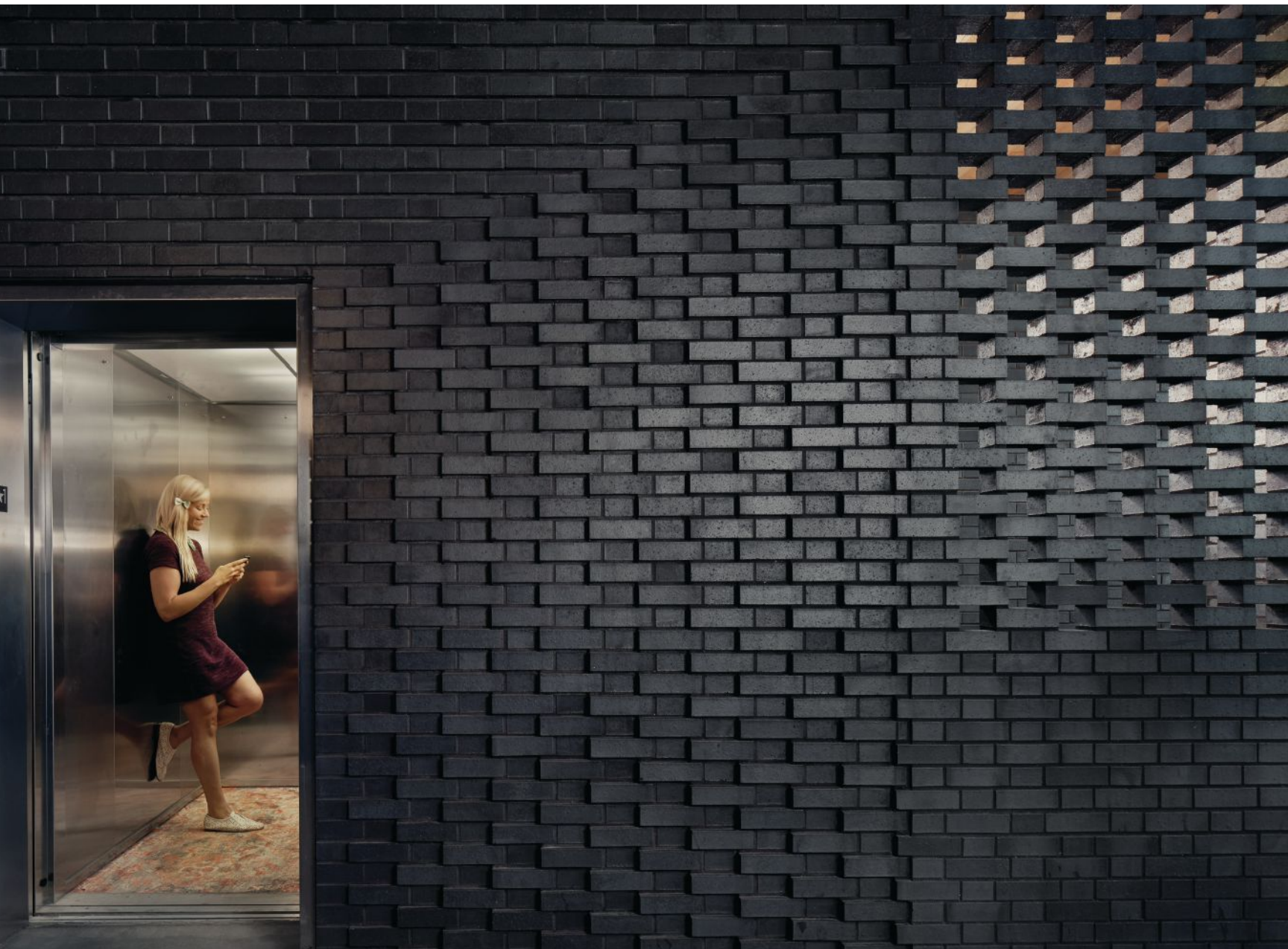
Picture Perforated

The first academic building to open on Cornell Tech's Roosevelt Island campus, the **Emma and Georgina Bloomberg Center** aims for net-zero energy performance, a mission that drives its advanced aesthetics. Designed by **Morphosis**, its facade of pixelated perforated aluminum and curved glass provides both thermal protection and inspiration for a new generation of research. Read more about it in **Metals in Construction** online.

 **Ornamental Metal Institute of New York**

WWW.OMINY.ORG

Copyright 2020 by Hanley Wood, 1152 15th Street NW, Suite 750, Washington, DC 20005.
202.452.0800. Reproduction in whole or in part prohibited without written authorization.
All rights reserved. Printed in the USA.



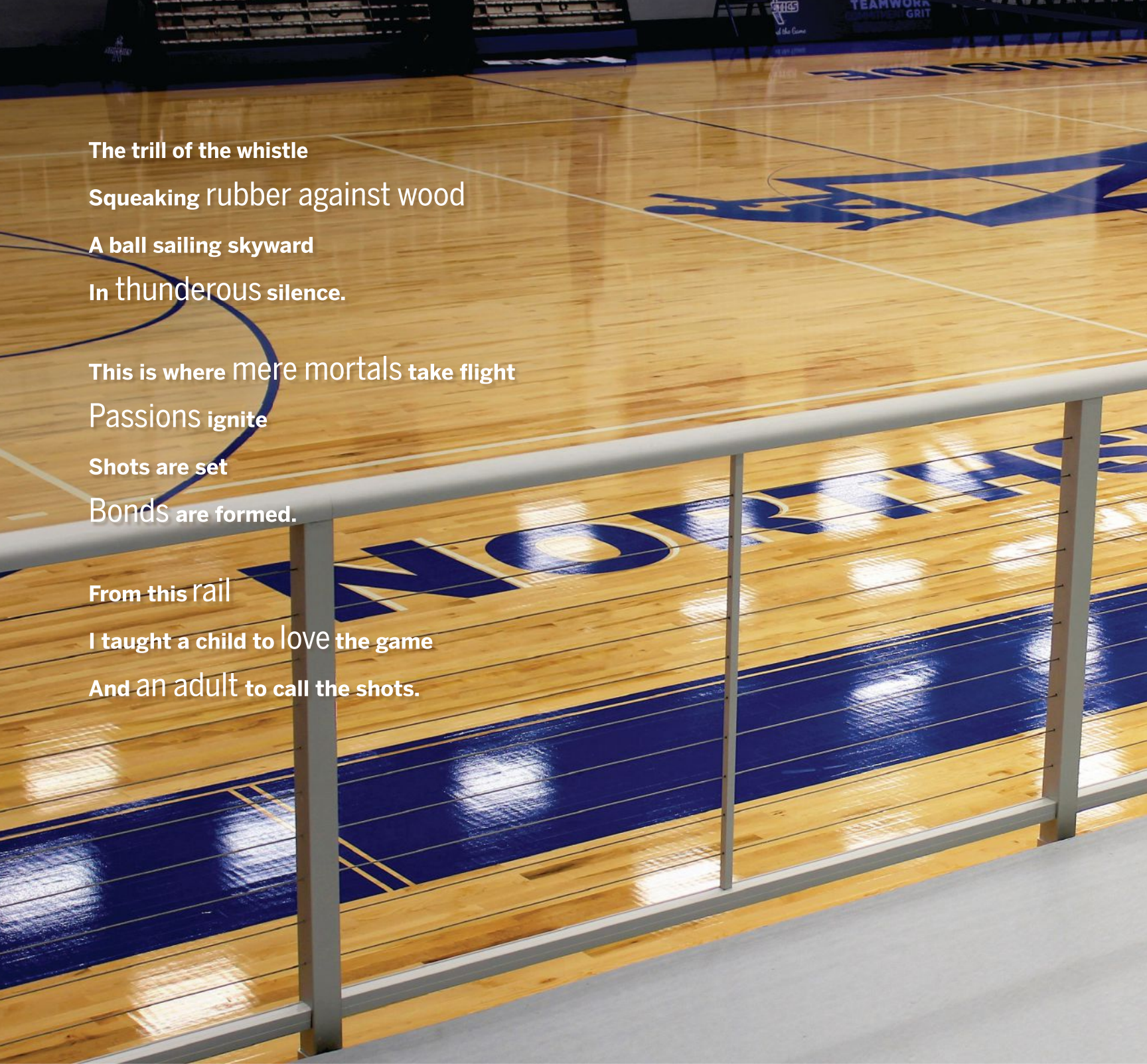
A DIFFERENT WAY TO LOOK AT BRICK

Endicott has been opening doors to next-level design for 100 years. The many unique colors, shapes, textures and sheen of our beautiful, architecturally inspired brick will infuse your design palette and raise your expectations.

 **ENDICOTT**

endicott.com





The trill of the whistle
Squeaking rubber against wood
A ball sailing skyward
In thunderous silence.

This is where mere mortals take flight
Passions ignite
Shots are set
Bonds are formed.

From this rail
I taught a child to love the game
And an adult to call the shots.

You're not designing an arena. You're creating a dream.

A well-designed space has the power to inspire and transform. Ultra-Tec® is here to help your ideas take flight with innovative cable railing solutions that are simple, clean and aesthetically pleasing. Count on us for the support you need to bring your vision to life.

To learn more, visit ultra-tec.com

**ULTRA-TEC**
CABLE RAILING
AMERICAN MADE SINCE 1998



LP FlameBlock®
FIRE-RATED SHEATHING

DEFEND AGAINST FIRE WITH A SPARK OF GENIUS

Defend against flame spread and burn through, so you can meet code, exceed expectations, and give homeowners peace of mind for years to come.

Defend your build™ at
LPCorp.com/FlameBlock



LP FlameBlock®
FIRE-RATED SHEATHING

Architect and Engineer: Tappan Zee Constructors, LLC
Lead Designer: HDR
Photograph: New York State Thruway Authority



Super Mario

The Tappan Zee Bridge, revolutionary in its day, was well past the end of its operational life. Replacing it with the new **Governor Mario M. Cuomo Bridge**, a span of more than three miles across the Hudson River, required erecting a structurally complex cable-stayed design with careful attention to the river ecosystem. The resulting “smart bridge” takes an active role in monitoring its own performance while carrying traffic—a triumph that will benefit the Hudson Valley for generations to come. Read more about it in **Metals in Construction** online.

 **Steel Institute of New York**

WWW.SINY.ORG

ARCHITECT

The Journal of The American Institute of Architects

Hanley Wood Media

Chief Operating Officer
Andrew Reid

Senior Vice President,
General Manager Digital
Christie Bardo

Senior Director, SEO
and Analytics
Jennifer Malkasian

Executive Vice President,
Chief Content Officer
Jennifer Pearce

Vice President,
Digital Strategy and
Operations
Bridget Forbes

Executive Vice President
Paul Tourbaf

Vice President,
Audience Operations
Mari Skelnik

Design Director
Tina Tabibi

Hanley Wood

Chief Executive Officer
Jeff Meyers

Group Vice President,
Talent Strategy
Kurt Nelson

Vice President of Account
Development & Sales
Administration
Philip Hernandez

Chief Financial Officer
Melissa Billiter

Senior Managing Principal,
Advisory Group
Tim Sullivan

Chief Operating Officer
Andrew Reid

Executive Vice President,
National Sales
Amy Dudley



The American
Institute
of Architects

2020 Board of Directors

L. Jane Frederick, FAIA, President
Peter J. Exley, FAIA, First Vice President
Jason C. Winters, AIA, Secretary
Evelyn M. Lee, AIA, Treasurer
Emily A. Grandstaff-Rice, FAIA, At-Large Director
Daniel S. Hart, FAIA, PE, At-Large Director
Timothy C. Hawk, FAIA, At-Large Director
Mark L. Levine, FAIA, At-Large Director
Britt Lindberg, AIA, LEED AP, At-Large Director
Jessica A. Sheridan, AIA, At-Large Director
Becky Magdaleno, 2020 CACE Director
Yiselle M. Santos Rivera, ASSOC. AIA, Associate Director
Sarah M. Curry, ASSOC. AIA, AIAS, Student Director
George B. Forsythe, PH.D., BG, US ARMY (RETIRED), Director
Vivian E. Loftness, FAIA, Director
Robert A. Ivy, FAIA, EVP/Chief Executive Officer

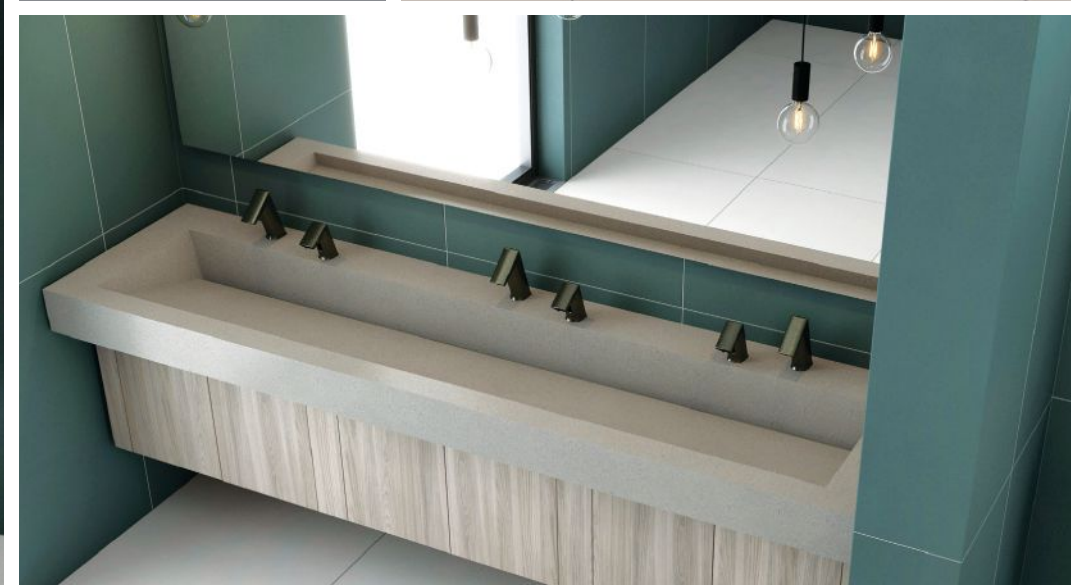
The AIA Architect section of this magazine is produced by the Institute as a benefit to its members in partnership with ARCHITECT's editorial and production teams. Please direct any questions or comments to Frank Scanlan, MD, Strategic Communications & Content for AIA.

hanleywood





**SENSING
THE FUTURE
OF THE
RESTROOM.
TODAY.**



Sloan's sensor-operated products are leading the way toward the future of the integrated commercial restroom. With touch-free solutions for greater hand hygiene and cohesive design, that future is now. Learn more at sloan.com/touch-free

Shown above: ST-2469 Water Closet with CX-8158 Flushometer in Graphite, Sloan® XLERATOR® EHD-501 Hand Dryer in Graphite, Designer Series™ DSG-83000 Gradient Sink with laminated cabinet-style vertical enclosure, BASYS® EFX-250 Faucet and ESD-500 Soap Dispenser in Graphite, SU-7419 Designer Urinal with CX-8198 Flushometer in Graphite

SLOAN
Water Connects Us®

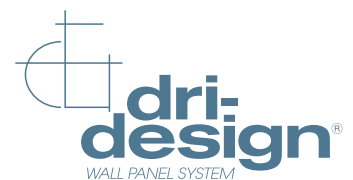
UNIQUE. DISTINCT. FACADES.



Health Partners Neuroscience Center – St. Paul, MN
Architect: BWBR Architects

Dri-Design Metal Wall Panels are available in a nearly unlimited palette of colors, materials, finishes and textures, making them a unique offering among other facades. However, what makes Dri-Design distinct, is that it provides this unique range of design options, in a system that installs and performs even better than it looks. A combination of form and function that is truly distinct.

- No sealants, gaskets or butyl tape means no streaking and no maintenance for owners.
- Not laminated or a composite material, so panels will never delaminate.
- At Dri-Design, we have a strict policy of recycling and creating products that the world can live with.
- Fully tested to exceed ASTM standards and the latest AAMA 508-07.
- Available in a variety of materials and colors.
- Non-combustible and NFPA-285 compliant.



616.355.2970 // DRI-DESIGN.COM



TOTALLY **ONTREND**



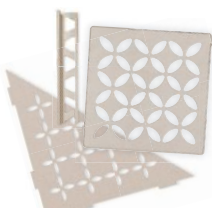
TRENDLINE Grates and Shelves

The latest trends in tile have met their match! The array of textured, color-coated TRENDLINE finishes for Schluter®-KERDI-DRAIN and Schluter®-SHELF allows you to craft cohesive designs with your tile and shower fixtures, and available matching profiles give any bathroom décor that perfect finish.

Go ahead: be bold or blend in. Either way, you're Totally on TREND.



Matte white



Cream



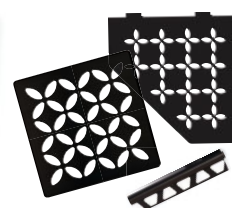
Greige



Stone grey



Bronze



Matte black





Planter-Anchored Glass Screen Wall
 created with our marine anodized aluminum
 frame system, with no paint or powder coating to fail.

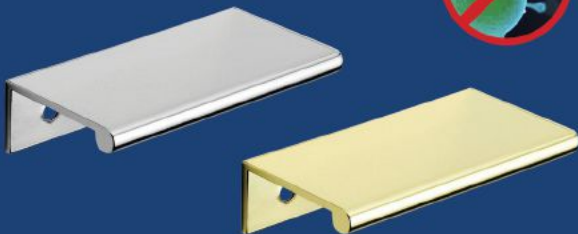
Lifetime Structural Warranty. Glass, Lexan, 3form, Wood, Aluminum,
 almost any panel material option, even gates. What can we build for you?

DeepStreamDesign.com (305) 857-0466



KILLS 99.9% OF GERMS ANTIMICROBIAL FINISHES

DP3 Tab Drawer Pull



Clear protective coating available on Drawer Pulls,
 Door Handles, and more. A new hygienic approach
 to hardware solutions.

MOCKETT
 DOUG MOCKETT & COMPANY, INC.

www.mockett.com
 800-523-1269

Fine Architectural Hardware for Your *fine* Furniture®

Share Your Work



Project Gallery

*Submit your work
 to our project gallery
 and get it seen by
 millions of viewers.*

architectmagazine.com/project-gallery

Architect: LEVER Architecture
General Contractor: P&C Construction
Photo: Jeremy Bittermann, Joel B Sanders Agency

HOW DO YOU DRAW EVEN MORE ATTENTION TO YOUR DESIGN IDEAS?





LET YOUR IMAGINATION
GO OUTSIDE AND PLAY.

Thinking outside the box is easier when you have extraordinary elements to work with. Our Architectural Wall Systems are a good example. These grand expanses of glass become an additional structural building material that can change the way you look at design, and change the way your clients respond to your plans.



SIERRA
PACIFIC
WINDOWS

SierraPacificWindows.com | 800-824-7744

A Division of



SIERRA
PACIFIC
INDUSTRIES

Architect: LEVER Architecture
Builder: Schommer & Sons
Photo: Jeremy Bittermann, Joel B Sanders Agency

Architect: 4240 Architecture, Inc.
Builder: Estes and Gallup
Photo: Rob Karosis



We spend our days working on new ideas, new technologies and new ways for you to add a signature element to your vision. Once the last line is drawn and the last specifications are checked, we want any project you complete with Sierra Pacific windows and doors to be an attention-getter you'll be proud of for years.



Architect: LEVER Architecture
Builder: Reworks
Photo: Jeremy Bittermann, Joel B Sanders Agency



**SIERRA
PACIFIC**
WINDOWS THAT
NEVER COMPROMISE

IS YOUR STUDIO FIRST CLASS?

The Studio Prize is an annual design awards program that recognizes innovative, thoughtful, and ethical studio courses at accredited architecture schools. The prize is designed to celebrate the creativity of studio course curricula and projects—and, this year, the resilience of faculty and students during the COVID-19 pandemic. The exclusive sponsor, Sloan, has generously made \$20,000 available for student prizes. The jury will also confer the \$5,000 Sloan Award to students in a winning studio or studios that address sustainability, specifically water conservation.

5th ANNUAL



Call for entries **Deadline extended**

ELIGIBILITY

All full-time, part-time, and visiting faculty and administrators may submit studio course curricula, and the resulting student work, for consideration. All studio courses must have occurred in the context of an accredited Bachelor of Architecture or Master of Architecture program, or their equivalents, and all must have been concluded within the 2019–2020 academic year. Summer 2019 studios are also eligible. For full eligibility requirements, visit studioprize.com.

RECOGNITION

Winners will be featured in the November issue of *ARCHITECT* with expanded coverage online at architectmagazine.com.

HOW TO ENTER

SUBMIT YOUR WORK AT
> studioprize.com

DEADLINES

REGULAR September 18, 2020
LATE September 23, 2020

FEES

ADMINISTRATIVE FEE \$45
LATE FEE \$25 (for entries submitted after September 18)

**Health, safety, and welfare
are the bedrock of architectural
practice.**

Hanley Wood congratulates and thanks SAFTI *FIRST* for supporting enlightened standards in building regulation, design, and construction.

The Rules: Green Tax Break for AEC Professionals

TEXT BY TERRI PETERS

Introduced as part of the Energy Policy Act of 2005, *Internal Revenue Code Section 179D: Energy Efficient Commercial Buildings Deduction* was recently extended to the end of 2020. Often dubbed the “Green Tax Break for Architects, Engineers, and Contractors,” 179D offers financial incentives to building owners and AEC firms for decreasing a building’s energy usage through the installation and use of high-performance systems.

Because the owner of public projects—namely the government—is a non-taxable entity and thus would not benefit from a deduction, AEC professionals themselves can claim the credit as the “designers” of a project’s energy-efficient measures.

The program applies to newly constructed or renovated commercial or multifamily buildings four stories or taller that perform 50% better than a baseline building that complies with *ASHRAE Standard 90.1-2007*. Many LEED-certified projects as well as recently constructed buildings prioritizing energy efficiency would likely qualify. The deduction, which is taken the year that a project is completed and occupied, requires the use of specific energy analysis software programs and the verification of energy savings by a third-party engineer.

A maximum tax deduction of \$1.80 per square foot can be claimed for projects that meet the energy savings threshold in three building systems: interior lighting, envelope, and HVAC or hot water.

Partial credit may also be earned. For example, “a building need only achieve a 25% reduction in lighting power density to qualify for a \$0.30 per square foot deduction,” says Kathleen King, managing director and national research and development practice leader of Washington, D.C.–based management consultancy Alvarez & Marsal Taxand.

Some AEC firms have leveraged the anticipated deduction to win public construction contracts. Stuart Kaplow, a

179D allows tax deductions of up to \$1.80 per square foot on qualifying new or renovated commercial and multifamily projects for energy savings in:

- . Interior lighting
- . Building envelope
- . HVAC or hot water

Cockeysville, Md.–based environmental attorney, says his firm has helped clients make their bids “more competitive by factoring in the allocation for a designer, which may include ‘an architect, engineer, contractor, environmental consultant, or energy services provider who creates the technical specifications.’ There are potentially many who are eligible to share in this incentive.”

A&M Taxand has also worked with architecture firms to claim this benefit. “A number of nuanced documentation

requirements must be verified in order to sustain the credit,” King says. “That said, the initial estimate of a project’s potential applicability can be as simple as having a qualified 179D deduction consultant review the MEP drawings.”

Global firm HOK has benefited from 179D. “Having this sort of ‘rebate’ or tax deduction can restore a project with a so-so multiplier to one with good financial performance and renew and reinvigorate the overall firm investment capacity in high-performance design skills and tools for all our clients,” says director of sustainable design Anica Landreneau, ASSOC. AIA, who is also based in Washington.

However, because the credit is continually at risk of expiring, HOK could never confidently offer a discount on design services to its clients. “It’s historically been tricky because the credit would expire and then need to be renewed by Congress in two-year cycles, which is generally longer than a design and construction cycle—particularly at the scale of projects on which we work,” Landreneau says.

Though renewal of the legislation is never certain, AIA senior vice president of advocacy and relationships Sarah Dodge says the Institute is working to make the deduction permanent. “We are focused on protecting it—and enhancing it if the opportunity presents itself,” she says. “However, the bigger risk is the deduction being struck down altogether as a cost-savings mechanism for Congress during the pandemic.”

Opinion: Change Agency, Value Change

TEXT BY RENÉE CHENG, FAIA



Collisions are violent. The greater the mass or velocity of objects, the greater the energy released. The crises of the pandemic, economic crash, and social justice outcries are massive and still accelerating. In the wake of their collision, they will reveal new questions for our profession—and newfound energy to address them.

Previously, architects pondering whether a new building was worthy of adding to our canon would ask “What does it look like?” and maybe “How well does it function?”

Now we need to know more: What’s its embodied carbon? Is it resilient to natural disasters? Did innovation help eliminate waste or increase value? Furthermore, are its supply streams fair trade? Does its construction or operation depend on the economics of indentured or slave labor? Can its airflow help stop the spread of disease? Whom does the building benefit?

In architecture education, a space with pinup walls and north-facing windows was once the main ingredient to a successful design studio. Instructors asked students about their design processes and outcomes and—cognizant of studio culture’s perpetuation of the 24/7 cycle—worried about those pulling all-nighters.

Now we must also wonder how often students wash their hands and whether they attended a party last night. We worry why students on remote learning are whispering or silent: Are they bored, in a different time zone, packed together in a household, caring for a sick family member, or simply maxed out on screen time?

Pursuing these deeper questions might feel intimidating or intrusive, particularly when the tools to answer them can be unfamiliar or unknown. But there is freedom in interrogating, rethinking, and finding new stories in histories we thought we knew.

Through this process, we may affirm truths that many of us had suspected: Buildings are not objects; architects may be complicit in the structural inequities of the built world; the studio format is not sacred; students’ personal lives are relevant; the invisible forces of culture have visible consequences; and cultural drivers of inequality should be disrupted and reformed.

In order to answer these difficult but essential questions, architectural practitioners and educators need to make two fundamental shifts.

First, we change the agency of who has a voice and give power and responsibility to those who are most impacted by and most often left out of decision-making processes. In studios, ask students to break—and then rebuild—the model of teaching. In firms, flip the role of the emerging designer from the trainee to the pilot who tests new practice

models. In communities, acknowledge the authority of the lived experience of residents and use their definition of justice to define project needs. We must accept that a building is not always the only answer and that design is not always the most important expertise.

Second, we change the way architecture is valued. We link design intent with social, health, and economic impacts through research—and base architectural fees on those outcomes. This opens paths to alternatives to the competitive bid process, in which firms fight to provide services for diminishing fees. We partner with students and faculty who are advancing research agendas on embodied carbon, equity, social justice, and health so we can apply and test research in our projects. And we stop assuming that our firm is alone in this pursuit or that proprietary work limits what can be shared. There is plenty to do and plenty of credit to go around when progress is made.

As the crises near their collision, let’s channel the imminent release of energy toward substantial and creative changes that will expedite our search for new ways of thinking, educating, building, and designing. These changes will become a starting point for work that is long overdue.

Renée Cheng, FAIA, is dean of the College of Built Environments at the University of Washington, in Seattle. She is leading the research team developing the AIA Guides for Equitable Practice.



THE ULTIMATE IN SPACE FLEXIBILITY

The ability to transform space to your ever-changing needs is essential, now more than ever. Modernfold's movable wall systems provide the ultimate in space flexibility during these challenging times.

Modernfold designs custom movable wall solutions that:

- Easily adjust to evolving space requirements
- Help maintain social distancing guidelines
- Allow for a variety of room configurations
- Provide industry-leading acoustical control

Learn more about our new Online and Lunch & Learn AIA Continuing Education Courses and the various Modernfold space division products by calling **800-869-9685** or visiting **www.modernfold.com**

HANOVER[®] PORCELAIN PAVERS



**HANOVER[®] EXCLUSIVE!
NEW PA BLUESTONE FULL COLOR MODULAR**

HANOVER[®]
Architectural Products
www.hanoverpavers.com • 800.426.4242

ARCHITECT

The Journal of The American
Institute of Architects

Your Voice Matters

ARCHITECT is about you, the people who enrich the design community with your perspectives, ideas, and talents. We are seeking contributors to write thoughtful, timely, and provocative opinion articles. What does the industry need to hear? And how can it make a better, greener, and more equitable built environment?

> *Submit your one-paragraph pitch for a 600-word essay to stories@architectmagazine.com.*



5101 Empira Black - NEW

Beautifully superior.

Designed by nature.
Perfected through innovation.
Quartz like no other.

Learn more at caesarstoneus.com

 caesarstone®

CarbonPositive: Density, COVID, and the Future of Cities

TEXT BY EDWARD MAZRIA, FAIA

Architects and planners have long advocated for increased density and walkable, transit-oriented development to improve city residents' quality of life, combat sprawl, and mitigate climate change. But since March, urban density has been implicated in the rapid spread of COVID-19, based largely on anecdotal evidence gleaned from reported cases and deaths in highly populous cities like New York and Chicago.

Yet a new study by the Johns Hopkins University School of Public Health analyzing data from 913 metropolitan counties in the U.S. shows that there is no causal correlation between density and rates of infection and mortality. In an interview with *Common Edge*, the study's lead author, Shima Hamidi, concludes that "density or sprawl is not a risk factor in terms of the infection rate. ... The disease might start at the urban core, then spread to suburban, exurban, and rural areas, places that are not as well equipped with healthcare infrastructure

as the core. This results in higher death rates in these sprawling areas."

A look at urban density—defined as number of residents per square mile—and global data is similarly revealing. For example, Seoul, South Korea, which has a greater population and urban density than New York, has exponentially fewer cases and deaths.

Even within NYC and its suburbs, a recent study by the Citizens Housing Planning Council illustrates, density is not a factor in COVID-19 rates. For example, Manhattan—the densest borough—has the lowest case rate in the city. And Brooklyn may have 20 times the population density of suburban Rockland County, N.Y., but it also has a lower per-capita infection rate.

Density is often confused with overcrowding, where large numbers of people cluster together, whether in bars or at parties, concerts, or sporting events. Overcrowding, not density, can be a source of virus transmission.

In Chicago, low-density Black and Latino neighborhoods with household overcrowding have been hardest hit by COVID-19.

As our understanding of the pandemic's spread continues to evolve—including its disparate impact on Black, Latino, and Native American communities—we must remember that urban density has been shown to be critical to ecological health and the protection of our natural environment. Seventy-five percent of new and emerging diseases, such as COVID-19, are zoonotic in nature; they spill over from the animal to the human population. As we encroach further into the natural environment and destroy biodiversity, ecosystems, and forest habitats—while fueling climate change at a scale never before experienced in human history—we can expect to see more of these diseases in the years ahead. That's the conclusion of a new U.N. Environment Programme report called "Preventing the Next Pandemic: Zoonotic Diseases and How to Break the Chain of Transmission." For these reasons, we must continue to encourage responsible urbanization.

As we move forward, we must not let ourselves be misled by this confusion between density and overcrowding to the detriment of the momentous push for compact, zero-carbon, and sustainable urbanism as a viable solution to the climate and environmental crises. To that end, our role as architects, planners, and designers is more important than ever.

COVID-19 and Density (Figures as of Aug. 11–13, 2020)

CITY	POPULATION (MILLION)	DENSITY (POP./SQ. MI.)	CASES	DEATHS	DEATHS (MILLION/POP.)
Hong Kong	7.451	18,492	4,313	66	8.8
Singapore	5.639	21,628	55,497	27	4.7
New York City	8.323	27,016	234,000	23,610	2,836.7
Seoul	9.776	42,000	1,675	13	1.3
San Francisco	3.314	18,562	7,947	67	20.2
Berlin	3.769	10,352	9,543	224	59.4
Chicago Area (COOK COUNTY)	5.223	5,526	114,000	4,943	946.4



> For more information from *Architecture 2030*, visit carbon-positive.org.

B-635 Klutch
Mobile Device Holder

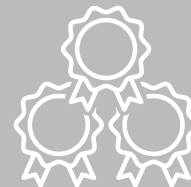
SAFE DISTANCING FOR DEVICES

Patented cradle
"Klutches" devices,
far away from wet or
unsanitary surfaces

Versatile hook holds
up to 300 lbs



Up to 75 percent of Americans use smart devices in the restroom. That's why Bobrick developed the new, patented **B-635 Klutch Mobile Device Holder**. Winner of multiple innovation awards, the versatile Klutch offers a smart, snug resting place for personal items throughout the commercial restroom, from cubicles to common areas.



Product Innovation Grand Prize
BUILDINGS

Product Innovation Award
Architectural Products

Top 101 Products
Building Design + Construction

Trust Klutch for a smarter spec.

Find videos and a case study at bobrick.com/klutch

Specify Smarter



A \$1.8 Billion Vegas Showcase Like No Other

No detail is overlooked in the NFL's new architectural marvel, Allegiant Stadium.

You can't blame long-time NFL football fans of the Raiders for feeling waves of wonder, awe, and delight when they enter the team's new 65,000-seat Las Vegas stadium.

The one reaction Keith Robinson, the project's design team lead, probably didn't expect are tears.

Robinson is a director for Kansas City, Kan.-based Manica Architecture. The firm worked in partnership with the architect of record, HNTB Corporation, on the just-completed \$1.8 billion Allegiant Stadium. "When Las Vegas Raiders fans experience the passion that went into designing and building this stadium, it's bound to stir very powerful emotions," Robinson says. "It's a tribute to the owner's vision. There are many legacy moments. It also connects the team's future. It's well-rounded and thoughtful."

The Manica team is ideally suited for this project. Their credits include an elite global roster of sport and entertainment venues, including Wembley Stadium and the O2 Arena in London; the Chase Center in San Francisco; the Mercedes-Benz Arena in Shanghai; Stadio Cagliari Calcio in Sardinia; and Nuovo Stadio Milano in Milan. The work of the firm demonstrates how form and function connect to deliver unforgettable experiences.

Reimagined Fan Experience

And what a vision. The sleek, futuristic black-and-silver clad stadium represents a new chapter in the fan experience. Take loge seating. "We imagined these seats like international business class plane seat," says Robinson. "What amenities would a ticket-holder expect? Bigger lounge seats with padded armrests and phone charger, of course. We also added a refrigerated compartment stocked with pre-ordered drinks along with a personal monitor in front of each seat with integrated television."

The word connections comes up a lot in discussing the stadium: Connections between fans and action on the field; with the team's storied history; with the allure of the Vegas Strip, visible to fans through an immense, retractable window.



Courtesy Las Vegas Raiders. Photo: Matt Aguirre

Enhanced Aesthetic

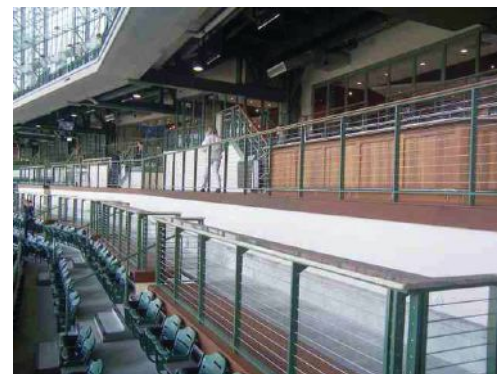
That spirit of connection pervades every detail of the project. Take railing infill, for example: While glass infill for railings isn't an unusual sight, "... you don't use them everywhere. There are certain areas where you need them, other areas where you don't. Glass can create distracting reflections," Robinson says.

One way to minimize distractions and maintain maximum connection is with cable rail infill. "It blends right in," Robinson says. "We lean on cable rail in many contemporary settings because detailing is so important in modern design. Cable rail enhances the aesthetic."

Architectural Cable Rail

Allegiant Stadium incorporates tens of thousands of feet of 1/4-inch-thick cable rail. The project's cable rail subcontractor, Raydeo, turned to a supplier with its own portfolio of stadium work, G&F Southeast Distributors of Peachtree City, Ga.

"We've supplied cable rail for arenas and stadiums in St. Louis, Jacksonville, New Orleans, and elsewhere—including the new Mercedes-Benz Stadium in Atlanta," says G&F co-founder



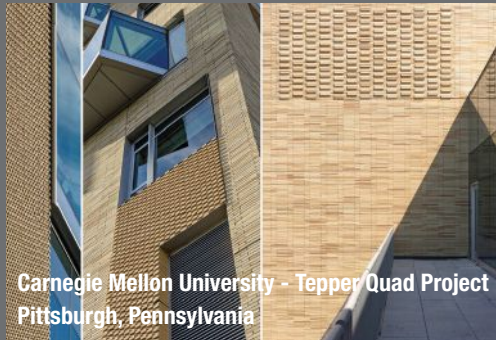
Courtesy Ultra-Tec

Don Goddard. The company supplies cable rail from Ultra-tec, a leading U.S. manufacturer that specializes in architectural-grade cable rail, free of sharp edges, uneven hand-crimped shanks, exposed nuts, and other coarse effects.

Meanwhile, Robinson looks forward to one day experiencing a packed Allegiant Stadium rocking with 65,000 screaming Raiders fans, though it's not likely going to happen this season. "The seating bowl is very tight to the field. It's going to be a tremendous atmosphere. It's going to be very loud," he smiles.

To learn more about stainless-steel cable rail infill and fittings, visit Ultra-tec.com.

Brick is Better.



beldenbrick.com

The Standard of Comparison Since 1885

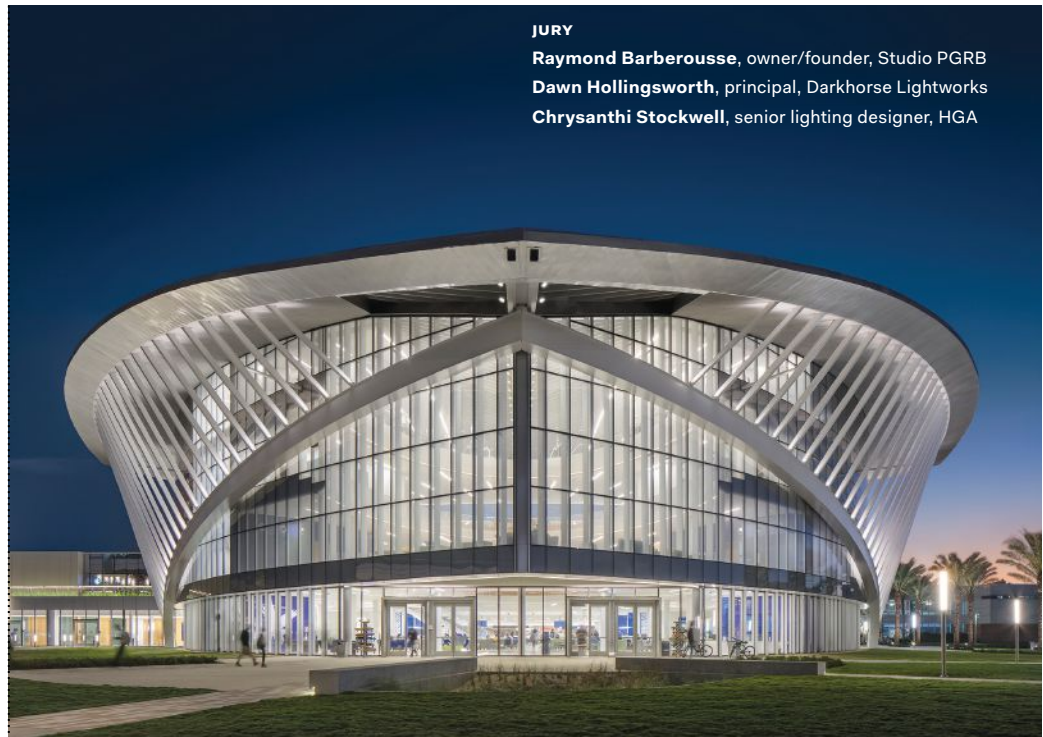
OUR AWARD WINNING PROJECTS...

What a Way to Celebrate
135 Years!

Architectural Lighting: 2020 Light & Architecture Design Awards

TEXT BY WANDA LAU

A beautifully lit project was but the prerequisite for the jurors of the 17th annual ARCHITECTURAL LIGHTING Light & Architecture Design Awards. The winning entries also had to demonstrate a “great backstory, strong lighting concept” and “creative use of light,” said jurors Chrysanthi Stockwell and Raymond Barberousse, respectively. Of the 111 submissions from around the world, the jury recognized 10 projects in four lighting categories: whole building, exterior, interior, and exhibition and installations. “In these projects, the lighting goes beyond just being applied,” said juror Dawn Hollingsworth. “Rather, it gives expression to the space.”



JURY

Raymond Barberousse, owner/founder, Studio PGRB
Dawn Hollingsworth, principal, Darkhorse Lightworks
Chrysanthi Stockwell, senior lighting designer, HGA



Outstanding Achievement

WHOLE BUILDING

Mori Hosseini Student Union, Embry-Riddle Aeronautical University, Daytona Beach, Fla.
 Fisher Marantz Stone, Ikon.5 Architects

The lighting strategy accentuates the steel-and-glass exterior of the avian-inspired student union to reinforce the concept of flight. Uplighting the winglike roof forms and struts creates the illusion that the building is hovering above the ground. Inside, the lighting design enhances the curvilinear spaces and the cosmological references to aviation and aerospace with abstract orbital and meteorlike arrangements of linear LED downlights and pendants. It also creates a series of identifiable program zones and activity areas within a flexible plan without the need for walls.

“The lighting is almost Space Age and portrays the school’s mission.” —Raymond Barberousse

BRAD FEINKNOFF/OTTO

> To learn more about the winning projects, see additional images, and find full project credits, visit bit.ly/ARALDA20.

A·L



Better for your brain

Makes waking hours more **productive**
and resting hours more **relaxing**.

Coming soon from TCP...the newest
innovation in LED lighting.

2020 AL Light & Architecture Design Awards
Outstanding Achievements

INTERIOR LIGHTING

Co-Op Ramen, Bentonville, Ark.

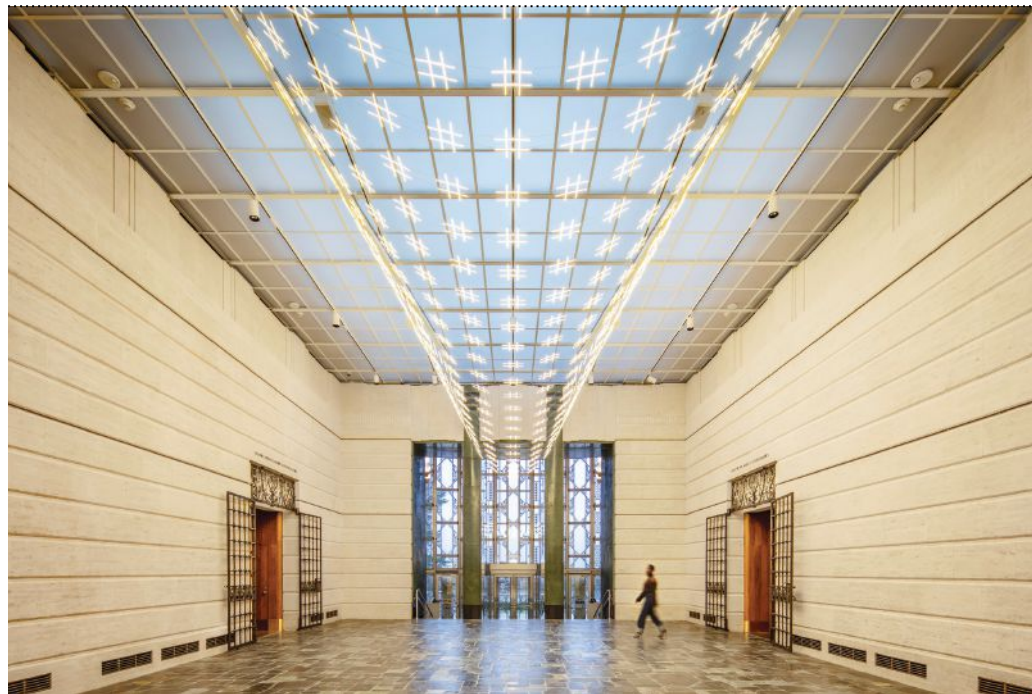
TM Light

Marlon Blackwell Architects

“Creating lighting that brings value to the owner doesn’t have to be extremely expensive. The results are striking, and the designers really hit the mark on this.”

—Dawn Hollingsworth

A ramen restaurant centers on one humble ingredient—the ramen noodle—which can be combined with a series of elements to make many special dishes. The strategic design of this eatery works similarly: An exposed A lamp with a screw-in base is integrated into a series of details in conjunction with varied plywood configurations to create a diverse and dynamic texture of lighting.



EXHIBITION LIGHTING AND INSTALLATIONS

“Gather,” Seattle Asian Art Museum

Studio 1Thousand

Suspended from the Fuller Garden Court’s skylit ceiling, this 26-by-48-by-10-foot artwork serves as a canopy for events while conceptually connecting the space to the museum’s Asian art collection. It turns 390 chip-on-board, mass-produced LED elements into a bespoke fabric, whose form is guided by catenary curves. The concept emerged from the lighting designer’s long-term study of Japanese textiles. The hash pattern, a nod to ikat weaving and sashiko sewing techniques, stands out against both light and dark backgrounds.

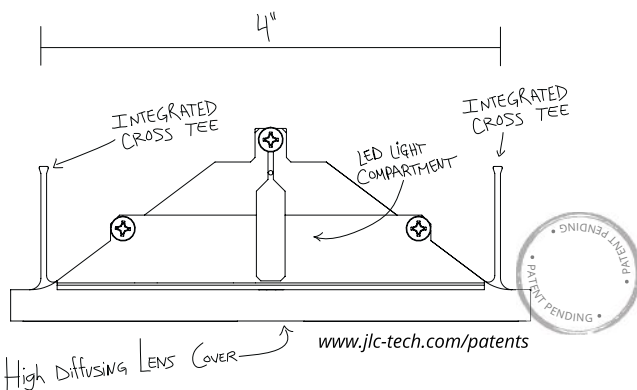
“Achieving the sense that these elements are floating is technically difficult.”

—Chrysanthi Stockwell

Where no light has gone before.

GEMINI™

by JLC • tech



GEMINI™, the first and only low-glare 4" linear downlight to install just like a cross tee in a suspended ceiling. JLC-Tech creates the only lighting products that are designed, approved and patented to replace the cross members in a suspended grid ceiling system.

To learn more about JLC-Tech's products visit JLC-Tech.com.

JLC • tech

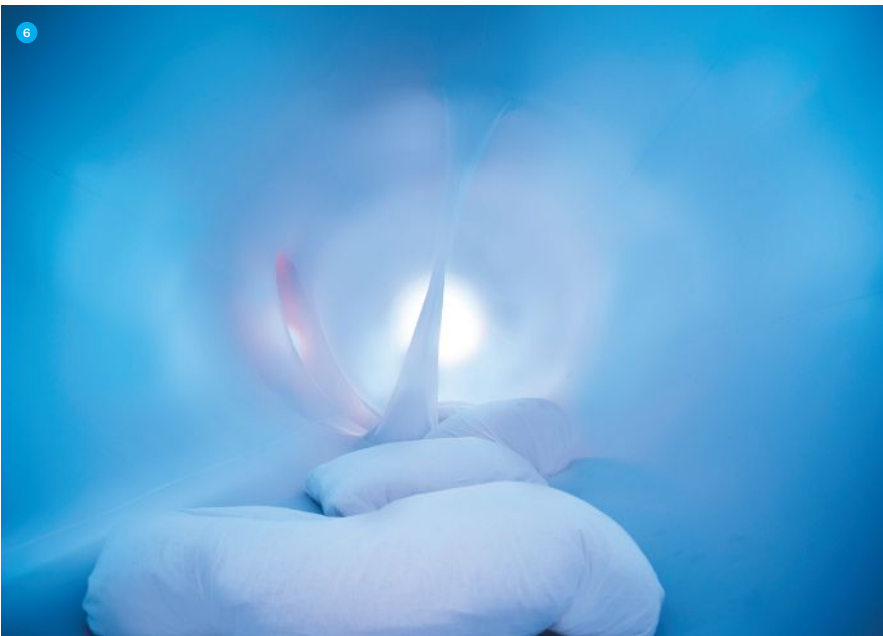
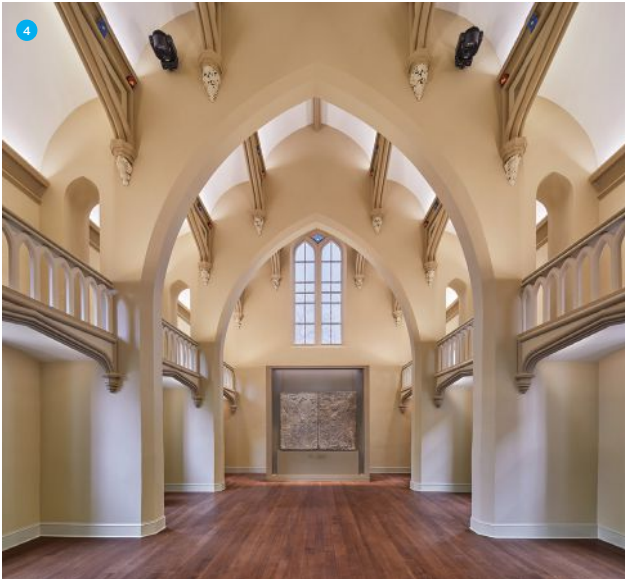
Pembroke, MA 02359 - USA | 1-781-826-8162 | info@jlc-tech.com

©2020 JLC-Tech LLC, All Rights Reserved

2020 AL Light & Architecture Design Awards
Commendable Achievements



1: FERNANDO GUERRA/FG+SG; 2: TIMOTHY HURSLEY; 3: JAMES EWING



4: ANICE HOACHLANDER/HOACHLANDER DAVIS; 5: JAMES NEWTON; 6: ADAM POLHODZIK; 7: JASON ROBINSON

WHOLE BUILDING 1. Residence, Pacific Palisades, Calif. HLB Lighting Design; ShubinDonaldson; Magni Kalman Design; AHBE | MIG. *"There's this beautiful consistency in the way the ceilings and vertical surfaces are treated."* —Hollingsworth. **2. Thaden School, Bentonville, Ark.** TM Light; Marlon Blackwell Architects. *"The exterior composition is well done, and each space has a unique solution."* —Stockwell. **EXTERIOR LIGHTING 3. Allianz Field, St. Paul, Minn.** Illume; Populous. *"Because people inside the stadium can also see the changing light on the exterior, they can enjoy the experience in a different way."* —Barberousse. **INTERIOR LIGHTING 4. Bicentennial Hall, Alexandria, Va.** Stroik Lighting Design; Bowie Gridley Architects; RAM Design Studio. *"To come in and relight something that's from 1855 and not intended to be internally illuminated this way is a difficult challenge."* —Hollingsworth. **5. Relighting Norwich Cathedral, Norwich, U.K.** Speirs + Major. *"The bespoke candle detail, which has a 'flame' on top and a reading light on the bottom, is beautiful."* —Barberousse. **EXHIBITION LIGHTING AND INSTALLATIONS 6. Zohar Concept, Budapest** Zohar Concept. *"I want to experience it, take my shoes and socks off, walk through, touch the screen, and lay down."* —Barberousse. **7. "Brainbow," Michigan State University Interdisciplinary Science and Technology Building** SmithGroup. *"They took this really strong concept to another level."* —Stockwell.

REIMAGINING K-12 CONSTRUCTION AT \$217 PER SQUARE FOOT

Design West is not slowing down. ICF proves they're just getting started.



Western Colorado University Student Housing. Photo by Western Colorado University.

Maintaining your competitive edge year to year is imperative for any architectural firm. Imagine maintaining it not just for a decade or two but for more than a *dozen* (128 years to be exact).

Welcome to the 29 women and men of Design West, a Logan, Utah-based architecture firm that has been operating since 1892. There are many ways to explain the firm's long-running success, but one that stands out is its eagerness to think critically and creatively on the client's behalf.

Take its flourishing K-12 education business: The firm now has four major school construction projects in mid- or late-stage development. Each project shares an unexpected feature: insulated concrete forms. ICFs are a cast-in-place concrete wall system formed by lightweight insulating foam blocks. It's not a common construction method for Utah schools, but the idea is rapidly gaining traction with value-minded school boards.

THERMAL ADVANTAGE

"I use a visual metaphor to describe ICFs," says Design West principal Stephen Williams, AIA. "I say, 'Your Styrofoam coffee cup is an ICF—it's an insulating thermal mass. Pour a cup in the morning, cover it, and at four o'clock that afternoon it will still be piping hot.' The cup is a thermal reservoir."

The firm's first foray with ICFs was seven years ago with a student housing complex in Gunnison, Colo.—one of the coldest winter locations in the continental U.S. Extreme temperatures suit ICFs perfectly.

\$217/SQUARE FOOT

Interestingly, it's often other qualities that prove decisive at bid time.

Williams names a few:

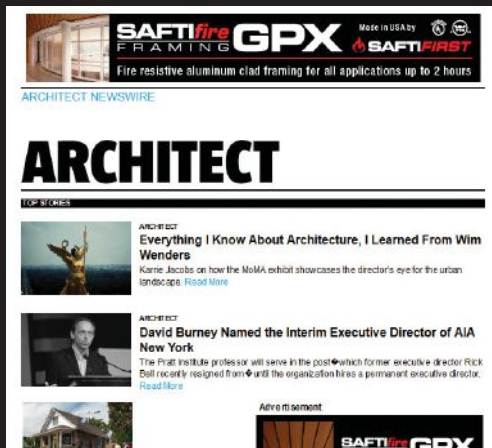
- **Affordability.** At a time when the cost of many new buildings is topping \$300, \$350, even \$400 plus per square foot, ICFs are a school board's dream. "Some schools in our state are going for more than \$300 a square foot. That's outrageous. Our project for Roy Junior High School [in Roy, Utah] had a \$39.5 million budget for 182,316 square feet. That works out to about \$217 per square foot with ICFs," Williams says.
- **One and Done.** The unique sandwiched form with rebar provides a multitude of pluses in one fell swoop: weather barrier; vapor barrier; plastic studs eight inches on center; and, importantly, insulation. Plus, neither furring on the inside or outside walls nor expansion joints are required.
- **Creative Freedom.** "Any structure that's built from the ground up is a candidate for ICFs. In situations that call for grand architectural features, we go with hybrid solutions, using ICFs for classroom wings and steel framing and glass for central hubs," Williams says.
- **Delivery Speed.** "The general contractor on the Roy Junior High project boldly said they could deliver the project a year early," Williams says. "We had some hiccups, like bad weather last fall. But it will be delivered this fall—a year ahead of schedule."

Maybe the great lesson of 128 years is never to look back, and to continuously differentiate with design advancements like using ICFs.

To learn more about using concrete in your next project, visit BuildWithStrength.com.

What's Next?

Subscribe to the ARCHITECT newsletters, and find out.



ARCHITECT Newswire

- > Monday through Friday at lunchtime
- > The latest news from ARCHITECT and around the web



ARCHITECT Weekly

- > Tuesday afternoons
- > A round up of ARCHITECT's own top stories



ARCHITECT Project Gallery

- > Friday mornings
- > Hot projects of the week

**Emerging professionals
are fueling today's design
conversation with high-energy
ideation that challenges
stated norms.**

Hanley Wood congratulates and thanks ASI Group for its ongoing commitment to design innovation driven by architecture's next generation.

Next Progressives: Architensions

Location:

Brooklyn, N.Y., and Rome, Italy

Year founded:

2009, then relaunched in 2013 when Roseboro joined the firm

Firm size:

Four

Education:

Orsini received a B. Arch. and M. Arch. from Roma Tre University and was a visiting scholar at Columbia University Graduate School of Architecture, Planning and Preservation; Roseboro received a B.F.A. from The New School.

Experience:

Orsini worked at Steven Holl Architects; Roseboro was a freelance graphic designer and a musician.

How founders met:

Working on an architecture editorial project.

Firm's mission:

Connecting architecture to people and their experience of the city.

Architects who have influenced you and how:

We have many influences, not necessarily from architecture. A lot of them are from the past. Alberti is someone we bring to our conversations. Sottsass has been an inspiration during the development of our Coachella

project. Then there is art, music, literature.

Most important project and why:

Always the last one. We just finished a proposal for a social housing project, which we embraced as a form of research, learning from it and building new skills and expertise.

Another important project and why:

Our almost completed House on House on Long Island. We spent a lot of time with material experimentation, drawing details that generated great synergy between us and the client.

One thing everyone should know about your studio:

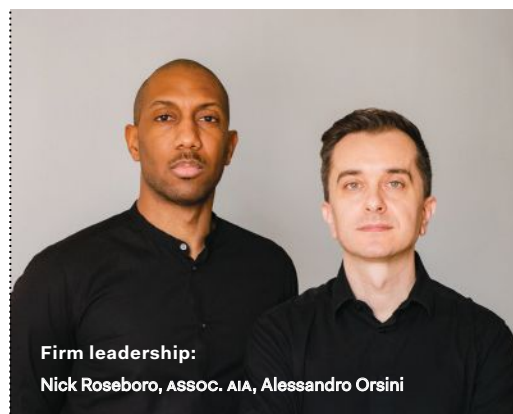
We are truly committed to what we do: namely, bringing back design as the central aspect in a discipline that is today only considered part of a service industry.

Ambitions for the coming five years:

We hope to engage projects in the public realm as a way to crystallize our research of the past five years. We also hope to work on social housing as a way to rethink the typology in light of current events, especially as they relate to social justice.

Design trend that should be left behind:

The diagram as a way to motivate formal decisions, with the hope that your client will understand better and avoid



Firm leadership:

Nick Roseboro, ASSOC. AIA, Alessandro Orsini

slashing your ideas. I think we need other vehicles to drive the conversation between client and designer.

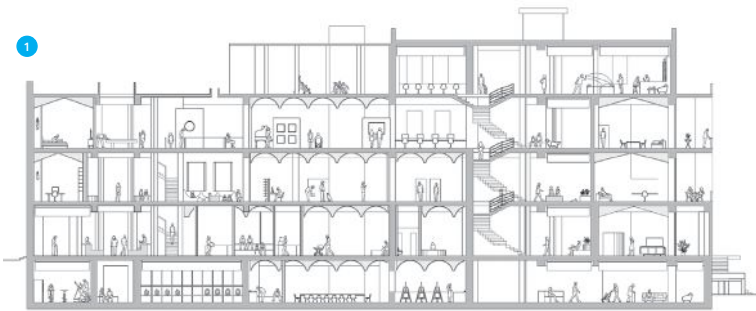
Biggest challenge facing architects today:

Environmental issues are deeply connected to architecture. We need to embrace them if we want to survive.

Most urgent question of policy or politics facing architects today:

Architects and designers are accountable for the different issues around the development of contemporary cities. A change in the approach to urbanism is necessary to address equality, race, and social justice around public space. Architecture must benefit society at large. There is still a lot to discuss around the housing crisis and action to take against the gentrification phenomena that are erasing the culture of our neighborhoods.

**Next Progressives:
Architensions**



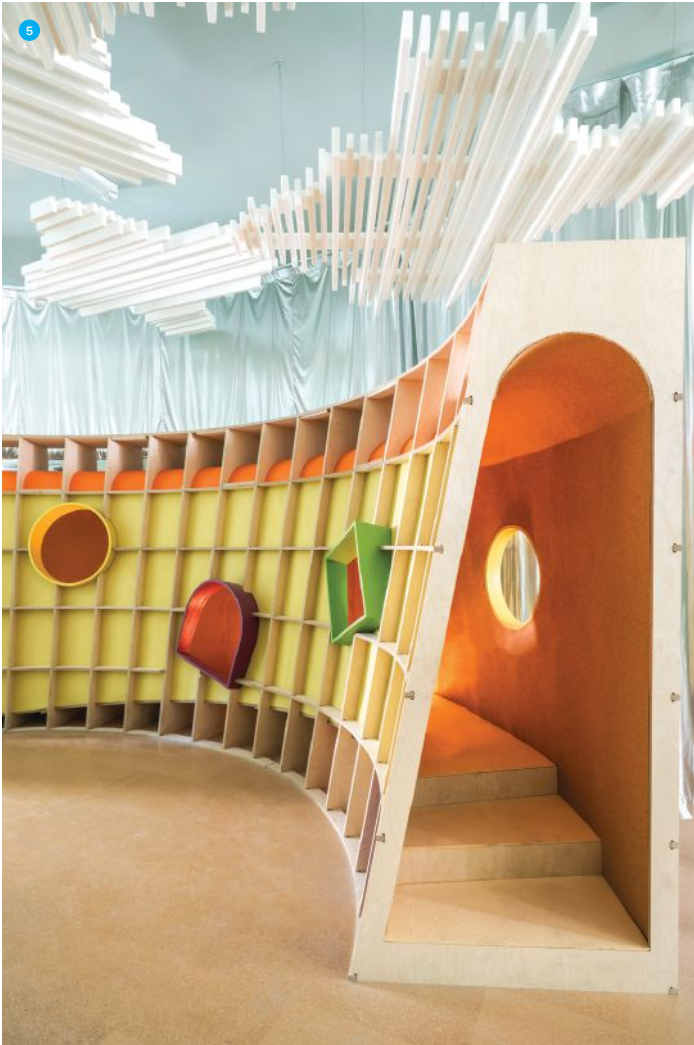
Basic Module:
Information point and single sales booth

Two Module Aggregation:
Small teaching area and crafting activities

Three Module Cluster Aggregation:
Exhibition and presentation

Four Module In-line Aggregation:
Selling booths and market layout





1. The Ex-Galateo Social Housing project, designed for a multi-generational group of occupants, aims to generate a sense of community among them. 2. Dikhroos, a tent study sited in the courtyard of Java Studios in Brooklyn, N.Y., attracts and engages users with the changing nature of light filtered through dichroic film. 3. A proposal for the Ryde Civic Center in Sydney, Australia, merges vertical gardens and public space into an environmentally sensitive mini-city. 4. The Aesop World Trade Center store in New York, located in the Oculus of the Santiago Calatrava, HON. FAIA-designed transportation hub, references the nearby train tracks with its sinuous design of burlap and Cor-Ten steel. 5. The Children's Playspace in Brooklyn relies on Euclidian shapes and other design elements to help facilitate creative play for children. 6. The Writing Pavilion, also in Brooklyn, is built on a concrete plinth out of black-stained cedar and was designed as a light-filled backyard retreat for a couple in the arts. 7. The House on House on Long Island, N.Y., started with an investigation into Sears houses and other American dwellings of the past and ended with this interpretation of the single-family house of today.

High Quality Vents for your "Special Project"

DRYER VENTS

NEW  With Backdraft Flapper Damper
Model: CFXF-P
 4" & 6" Aluminum

 **Model: SFB-P**
 4" & 6" Aluminum

 **Model: SB-P**
 4" & 6" Aluminum

NEW  **Model CFXC** 4" & 6" Aluminum

 **Model SFZC** 4" & 6" Aluminum

 **Model RCC-S** 4" & 6" Stainless Steel

VENT CAPS

NEW  **Model KXU**
 4" & 6" Aluminum

NEW  **Model CFX-P**
 4" & 6" Aluminum

 **Model KX**
 3"-6" Aluminum

 **Model SXL**
 10"-16" Aluminum

NEW  **Model CFX**
 3"-12" Aluminum

 **Model SX**
 3"-8" Aluminum

 **Model SFX-S**
 4" & 6" Stainless Steel

 **Model SX-S**
 4" & 6" Stainless Steel

 **Model RCA-S**
 4" & 6" Stainless Steel

FRESH AIR GRILLES

 **Model JRC**
 4" & 6" Aluminum

 **Model JRA**
 4" & 6" ABS Resin

 **Model DK-M8**
 3", 4", 6" ABS Resin

 **Model JSP**
 4" & 6" ABS Resin

► If you are interested in becoming an authorized international distributor, please contact us. (Except the United States/Canada/Mexico/Japan)



seiho.com



Two-Way Design Edge for Less Washroom Risk

The pandemic teaches many things, especially the value of choice and experience



On the morning of April 7, work began on a 207,000-square-foot, 1,024-bed emergency field hospital on the State University of New York Old Westbury campus, just outside New York City. Twelve days later, the \$116.5 million medical facility was declared finished.

This construction triumph is tempered by the fact that it's an emergency response to the global pandemic. Still, it's good to know what can be achieved through resourcefulness when every second counts.

Now as offices, stores, and schools nationwide take steps to cautiously reopen, architects, designers, and product specifiers are facing new questions of resourcefulness: How should they address washroom health and safety concerns? Who can they turn to for expert advice when official guidelines and scientific understanding are changing so quickly?

Few appreciate that challenge better than Mark Schiller and Cyrus Boatwalla, senior executives at ASI Group. ASI was part of the team behind the Old Westbury hospital. The company's manufacturing

facility in Georgia dropped everything to produce dozens of custom-designed washroom partitions for the new emergency hospital complex.

Today the washroom plays a central role in winning the trust and confidence of wary employees, students, customers, or staff. If the washroom environment feels unsafe, so does everything else.

Much of that safety margin comes down to choice and experience. For example, specifying a soap or sanitizer dispenser that locks a client into a proprietary solution is a disaster if the product supply runs out because of unexpected demand or supply chain issues.

The great lesson from dozens of washroom updates? Think choice and experience when selecting a washroom accessory supplier, Schiller and Boatwalla say.

- **Availability of Choice.** "Don't lock yourself in with a proprietary washroom accessory," Schiller says. Boatwalla agrees: "If a client is locked into a single-product supplier, it's a problem. You

want to minimize supply chain issues. Work with suppliers that represent a variety of choices."

- **Trusted Advisor.** Impartial problem solving can be difficult during a rapidly evolving pandemic. A few companies, like ASI, offer architects and designers the kind of balanced, independent counsel that's required because of a product line built on diversity. If one product doesn't fit the requirement, another one can be offered. The solution is never forced.

"If there was ever a time to lean on a smart, experienced representative, it's now. You want proven practical solutions. You want to know what works in New York, Houston, London, Tokyo, or Paris," Boatwalla says. Local ASI representatives can share the best washroom practice from here and abroad.

The washroom represents less than 1% of the building cost. But it puts 100% of the building owner's investment at risk if the washroom is a turn-off. Play it smart. Work with suppliers that offer choice and experience as ways to minimize risk for everyone.

Learn more about successful washroom design at <https://americanspecialties.com/>.

Residential:

Home Street Residences Bronx, N.Y.

Body Lawson Associates Architects & Planners

TEXT BY KATIE GERFEN

For a decade, the polygonal lot at 1017 Home Street in the Bronx, N.Y., was bounded by a chain-link fence and barely checked overgrowth; at its center, a deteriorating church had been left fallow after burst pipes damaged the interior. New York-based architect Victor Body-Lawson, AIA, and development equity partner Ralph Mckoy saw not decay, but opportunity in the site—specifically to bring new housing options to the neighborhood. They bought it and partnered with local affordable housing developer Bronx Pro Group.

The resulting project, Home Street Residences, was designed by Body Lawson Associates Architects & Planners and offers 62 affordable senior apartments—19 of which are reserved for seniors who had been experiencing homelessness. The 22 studio and 40 one-bedroom units are housed in a 75,000-square-foot, eight-story building; two units were designed for residents with hearing and/or vision impairments, four for those with mobility impairments. A two-bedroom unit is reserved for the building superintendent.

The team wanted Home Street to inspire a connection to the community, and Body-Lawson and Mckoy sought out Bronx Pro because “we like their approach to affordable housing,” Body-Lawson says. “They treat their tenants very well, include art in their buildings, and ensure their buildings are environmentally friendly.”

The design team chose brick for the exterior to nod to the surrounding



Home Street Residences has 62 affordable senior apartments.

Project Credits

Project: Home Street Residences, Bronx, N.Y.

Client: Home Street Partners

Design Architect: Body Lawson Associates, New York · Victor Body-Lawson, AIA (design principal); Ralph Mckoy (design partner); Antonia Walker (project manager); Eni Kodhima, Luis Chacha, Gloria Bautista, Melissa Hernandez (project team)

Structural Engineer: Christie Engineering

Mechanical/Electrical Engineer: Rodkin Cardinale Consulting Engineers

Civil Engineer: Sullivan Group Design

Energy/Environmental Consultants: Steven Winter Associates

General Contractor: Home Builders 1

Construction Manager: C & S Construction and Consulting Group

Landscape Design: AtomsECO

Expediter: RPO Inc.

Size: 75,000 square feet

Cost: \$24 million

White
Bronze
High
Polished



ROCKY MOUNTAIN
H A R D W A R E

HANDCAST BRONZE HARDWARE | 12 FINISHES | rockymountainhardware.com

**Residential:
Body Lawson Associates
Architects & Planners**

building and developed the subtle patterning to reflect the cobbling of brick in the surrounding buildings. “There’s a lot of pride in the way the masons in the 1900s put these buildings together,” Body-Lawson says. “We wanted to use that in our own contemporary way.” Prefabricated panels allowed for speed in construction and flexibility of window placement, and constituted part of a highly insulated envelope that contributed to a LEED-Gold rating.

A ground-floor commercial space was initially going to serve as a church facility but instead became a community arts center programmed by local nonprofit DreamYard, which, according to its mission statement, builds

“pathways to equity and opportunity through the arts.”

BLA prioritizes materials selection and visual transparency in its projects, especially affordable housing, where those details are often overlooked. In the residential public spaces, daylight and views facilitate connections between a community room, rear courtyard, and terrace. A bespoke painting by Body-Lawson on each residential floor serves as wayfinding and creates a visual identity. And in each unit, stone countertops, stainless-steel appliances, and luxury vinyl tile floors that mimic wood rival the finishes in market-rate units. Individual HVAC units give residents autonomy over thermal control. “If you give residents the best, they will identify with the space and not want to abuse it,” Body-Lawson says. “Cost is an issue, but the longevity of [the materials] makes more sense.”

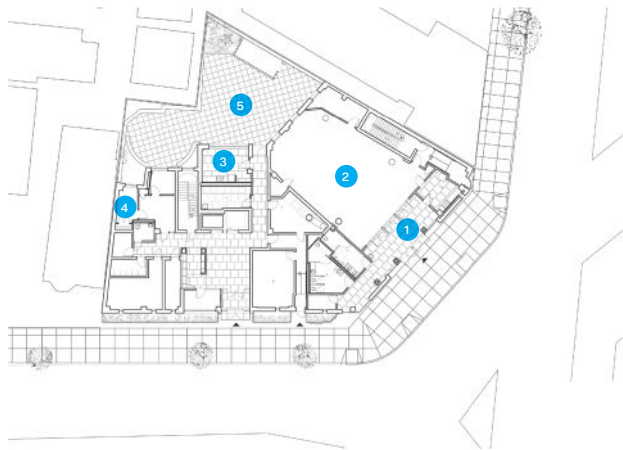
The affordable housing crisis in the United States has seen demand far outstrip supply—especially for seniors. According to Body-Lawson, the lottery for units in the Home Street Residences topped 50,000 applications for the 62 available units. “That blew me away,” Body-Lawson says. “There is just a huge need, and a growing one.”



Top: In-unit kitchens have stone countertops and stainless-steel appliances.

Above: A courtyard provides a gathering place for residents and lets light into even the first-floor spaces.

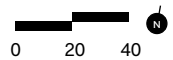
Ground-Floor Plan



Third-Floor Plan



- 1. Lobby
- 2. Community tenant space
- 3. Resident community room
- 4. Administration
- 5. Courtyard
- 6. Studio unit
- 7. One-bedroom unit



Construction and design practices that protect the environment are more than a good idea, they're becoming an essential part of doing business. But when it comes to building in a way that truly respects and preserves our limited resources, it's only part of the story.

BUILDING VALUES THAT GO BEYOND SUSTAINABILITY



SierraPacificWindows.com

800-824-7744

A Division of



Sustainable vertical integration, our

unique seed-to-window manufacturing approach. Owning every step of the manufacturing process gives us something no other window company has – complete control of everything from product quality to how we practice environmental stewardship. We're the only window and door company that builds this way, and it affects everything about us as a company, starting with where we get our wood.

The benefits of being your own supplier. We buy wood from ourselves. Our parent company owns over two million acres of prime forestland, maintained with strict adherence to the environmental protection standards of the Sustainable Forestry Initiative® (SFI). As a result, we'll plant 7 million new trees this year, and schedule frequent visits from our professional foresters and wildlife biologists to help protect wildlife habitat. For generations, we've been growing more than we harvest, to make us more than sustainable. Much more.



Every step of the process helps us do more. The vertical integration manufacturing cycle that produces our world-class windows and doors gives us more ways to protect resources too. We process the wood, convert the lumber, assemble the components, and ship the products. The bark and sawdust left over? It fuels seven cogeneration energy plants that produce energy for our local communities. This approach makes us different. It makes us better at protecting quality, our people, our communities and our environment.

Windows and doors greater than the sum of their parts. Building products this way is an expression of what we value as a company, one that will have lasting effects for generations to come. Increased forest growth reduces greenhouse gasses through carbon sequestration. Vertical integration helps us respect our limited resources. Our goal is to work with you to become part of something bigger than ourselves. And on this point, we will never compromise.



Watch our values come to life at sierrapacificwindows.com/videos



Responsibility is the watchword for architecture in the 21st century and beyond.

Hanley Wood congratulates and thanks the National Ready Mixed Concrete Association for its ongoing commitment to sustainable design, material innovation, and social purpose.



A COALITION OF THE NATIONAL READY MIXED CONCRETE ASSOCIATION

Typology:

Avling Kitchen & Brewery Toronto LAMAS

TEXT BY KATIE GERFEN

The single-story brick-and-concrete-masonry-unit building at 1042 Queen St. E in Toronto's Leslieville neighborhood has always been associated with food. Built in 1949 as an A&P grocery store, it has since served as a vegetable wholesaler and even an indoor bean sprout farm. Its newest life, after an extensive renovation designed by local firm LAMAS with executive architect MGBA, is as a trendy farm-to-table restaurant and brewery.

The biggest challenge for the LAMAS team, led by principals Weihan Vivian Lee, AIA, and James Macgillivray, was reconfiguring and expanding the structure—all within the existing footprint. The basement was excavated to accommodate a full lower level, and the floor in the center of the structure was removed to create a double-height brew house. Throughout, the structural steel was doubled to accommodate the modifications.

That steel was necessary to support the added weight of an urban rooftop farm that provides everything from salad greens for the kitchen to pungent herbs for the beer. "To convert it into something that would support a green roof was a lot of gymnastics," Macgillivray says.

Looking beyond just supplying the kitchen, the garden is also a test nursery for different cultivars of ancient grains to determine which would thrive best at local farms. "The larger mission became trying to use the baked-in interest craft-beer fans have in ingredients,



Windows in the restaurant offer views into the skylit fermentation hall and brew house.

Project Credits

Project: Avling Kitchen & Brewery, Toronto
Client: Avling Kitchen & Brewery
Design Architect: LAMAS, Toronto · James Macgillivray, Weihan Vivian Lee, AIA, Ella den Elzen, Kiefer Savage, Ron Noble
Executive Architect: MGBA
Structural Engineer: Blackwell Structural

Engineers
Mechanical Engineer: Spline
Contractor: BLT Construction
Mural Artist: Madison van Rijn
Lighting Consultant: CS Design
Size: 10,500 square feet
Cost: Withheld

Typology:
LAMAS

flavor, and provenance to shine a light on local cuisine and the need to rethink agricultural problems and opportunities in the food system," owner Max Meighen says. During the COVID-19 pandemic, the roof also provided vegetables for CSA boxes, which supplemented the restaurant's income.

The most public-facing part of the building is, of course, the restaurant's dining room, and the team wanted it to be flexible: "It's a large space that we thought could become a hub for the neighborhood. People are in need of spaces to do work in during the day and there are a lot of young families," Lee says. "We wanted to kind of capture the potential of that for this community."

To that end, the space was split into different zones, with low tables, zinc-topped high-top tables, booths, and bar seating. "There's the idea of four different fields of activity—almost like a crop rotation," Macgillivray says. And the focus wasn't just on dining: "We were deliberate about having a

lot of open space to accommodate strollers, wheelchairs, and multiple configurations," Meighen says. Before the pandemic, the space hosted events from wedding receptions to lecture series, so the flexibility is key.

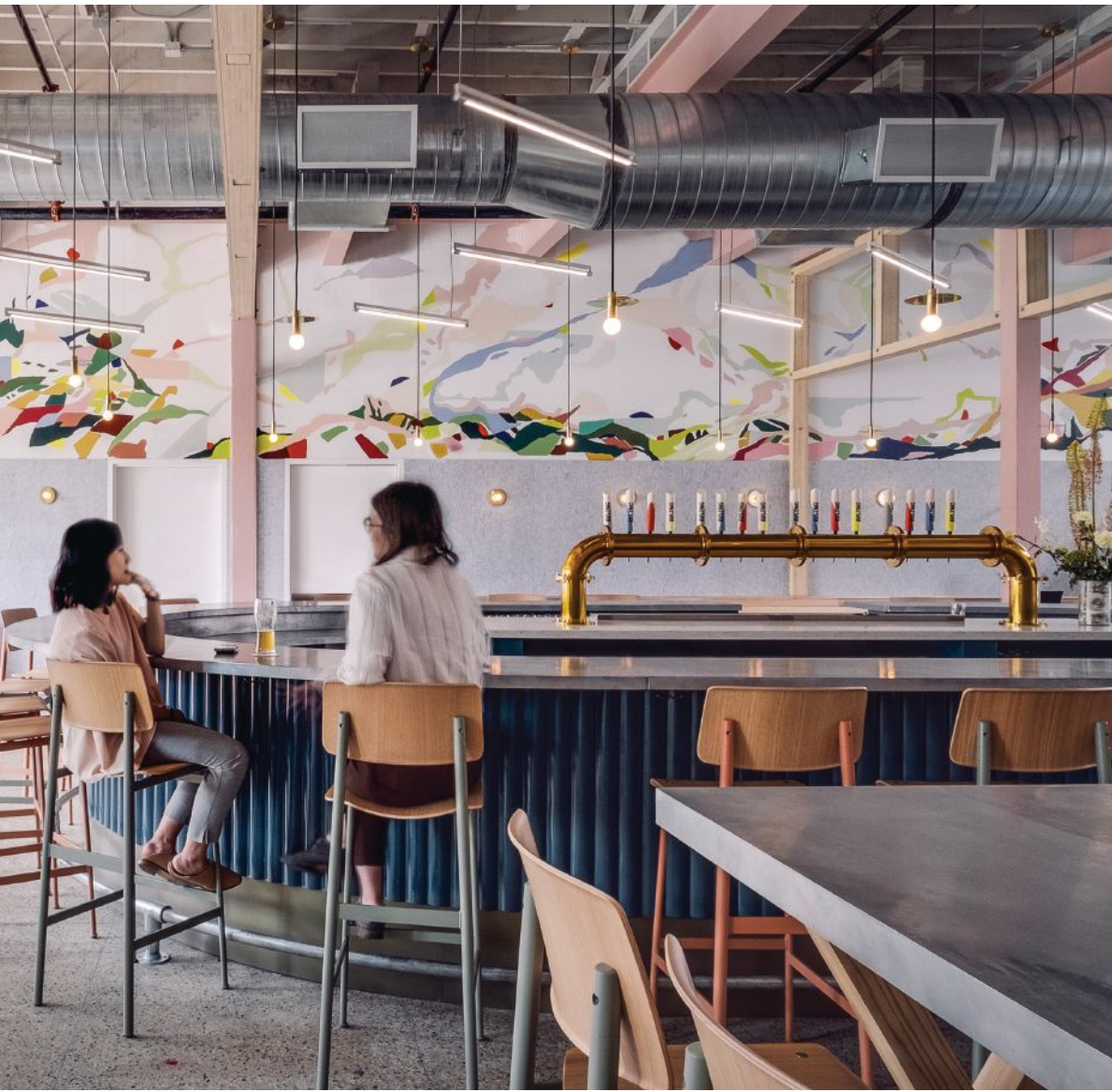
Light fills the space—both from large windows out to the street and into the skylit brew house, as well as from the pendant light fixtures that create a plane below the ceiling. The white concrete block walls are offset by pink-painted exposed structural steel, gray felt runners applied to the walls that serve as acoustical control, and colorful murals by local artist Madison van Rijn. A series of nonstructural wood frames help define seating areas and "play with your sense of scale," Lee says. "When you have repetitive members that keep stretching and reinforcing the receding line, the space looks bigger."

But not everything is new: The original terrazzo floors were patched with concrete and polished, and the existing wood-joist ceiling was left exposed. "You have to make decisions about which things are worth preserving to maintain the character of the original space," Lee says. "It might have been easier to get a new roof, but it makes a huge difference to have that patina."

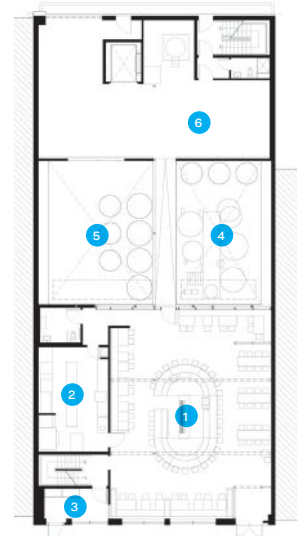
At press time, Avling has reopened for outdoor dining in addition to its grocery business, and Meighen is excited to see what the future will bring: "We didn't design the operation with a pandemic in mind," he says, "but a multifaceted, flexible, and adaptive model was always the plan."



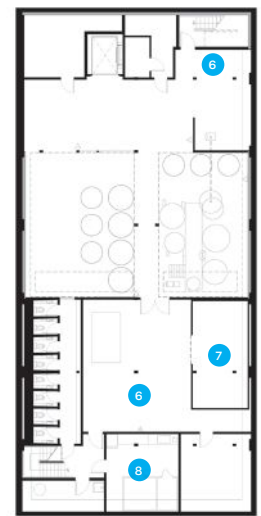
1. The masonry structure was originally built as a grocery store in the 1940s; new windows and a storefront lend transparency to the façade. **2.** The restaurant and bar is split into different zones of seating to accommodate different groups and activities; sound is baffled by felt under the tables and in panels on the walls, which feature murals by local artist Madison van Rijn. Muuto chairs and light fixtures by Lambert & Fils accent the space. **3.** The double-height fermentation hall is lined with concrete floors and the patched original CMU walls, and connected to the dining room via windows. **4.** The rooftop garden, seen here shortly after being planted, provides hyper-local produce.



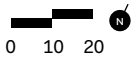
Ground-Floor Plan



Basement-Floor Plan



- 1. Restaurant
- 2. Kitchen
- 3. Bottle shop
- 4. Brew house
- 5. Fermentation hall
- 6. Storage
- 7. Cold room
- 8. Prep kitchen



On the Boards:

Boston Square Grand Rapids, Mich. UrbanWorks

TEXT BY MADELEINE D'ANGELO

With the notable exception of a beloved hardware store, most buildings along a 9-acre wedge of land between the Oakdale and South East End neighborhoods in Grand Rapids, Mich., sat vacant for years before attracting the interest of local organizations Rockford Construction and Amplify GR, and Northbrook, Ill.-based developer Brinshore. Hoping to begin eradicating generational poverty among residents, 35% of whom fall below the poverty line, by providing affordable housing and job growth, the organizations hired Chicago firm UrbanWorks to reimagine Boston Square. Through a collaborative process, the firm solicited ideas from the diverse community, which comprises 60% Black, 20% white, 15% Latino, and

5% Asian residents. "The only way to guard against gentrification is to have a community engagement process—to listen to what the community wants," says UrbanWorks founding partner Patricia Saldaña Natke, FAIA.

The firm organized three open houses for the community, presenting design concepts in English and Spanish and offering listening stations where residents could give feedback about which neighborhood assets to preserve and what facilities could provide new opportunities—suggestions included an early learning center and welcoming outdoor spaces. For those neighbors unable to attend, UrbanWorks launched Boston Square Together, a website summarizing each open house and

the evolution of the design process. The website "became the glue to hold everyone accountable for what was said and what to do," Natke says.

UrbanWorks revealed its plan for the triangular site at the final open house in October; the project is targeting a 2025 completion date. The plan is anchored by a community hub and early learning center at the site's southernmost point. Affordable housing lines the northern border, and on the western edge, retail options—including the relocated hardware store—offer job opportunities and foster local businesses. Expansive green spaces give residents a place to gather, allowing the community's spirit to thrive. "With community engagement, each project is unique," Natke says.





BALLROOM?

**NO, IT'S YOUR
LOCKER ROOM.**

ASI just gave the locker room a makeover—you can too. Visit asi-storage.com/bod to explore the new standard for basis of design in locker rooms. **Featured in this ad are ASI phenolic Z-lockers, ASI Alpaco™ phenolic partitions, Piatto™ completely recessed phenolic accessories, and our exclusive Velare™ concealing mirror cabinet.**

ASI® Group
Integrated Building Products

THE IMPACT OF WOOD USE ON NORTH AMERICAN FORESTS

Presented by:

**THINK
WOOD®**


LEARNING OBJECTIVES

1. Evaluate the use of wood as a construction material in the context of long-term forest sustainability as well as attributes such as low embodied energy and light carbon footprint.
2. Discuss forest sustainability measures such as biodiversity, soil and water quality, and harvest versus net growth.
3. Examine the concept that using wood in buildings provides an incentive to landowners to keep forested lands forested instead of converting them to uses such as urban development.
4. Compare the carbon benefits of an unmanaged forest versus a managed forest where timber is used for wood buildings.

CONTINUING EDUCATION

AIA CREDIT: 1 LU/HSW

AIA COURSE NUMBER: AR012020-3

GBCI CREDIT: 1 CE

GBCI COURSE NUMBER: 0920020675



Use the learning objectives above to focus your study as you read this article. To earn credit and obtain a certificate of completion, visit <http://go.hw.net/AR012020-3> to view the entire CEU and complete the quiz. CEU courses are free of charge once you create a new learner account; returning users log in as usual.

By Roxane Ward and Dave Patterson, RPF

CAN SPECIFYING WOOD FOR BUILDINGS CONTRIBUTE TO FOREST SUSTAINABILITY?

As green building has evolved beyond its initial emphasis on energy efficiency, greater attention has been given to the choice of structural materials and the degree to which they influence a building's environmental footprint. Increasingly, wood from sustainably managed forests is viewed as a responsible choice—for a number of reasons. Wood grows naturally by harnessing energy from the sun, absorbing carbon dioxide and releasing oxygen. It is renewable and a carbon sink, and it outperforms other materials in terms of embodied energy, air and water pollution, and other impact indicators.¹

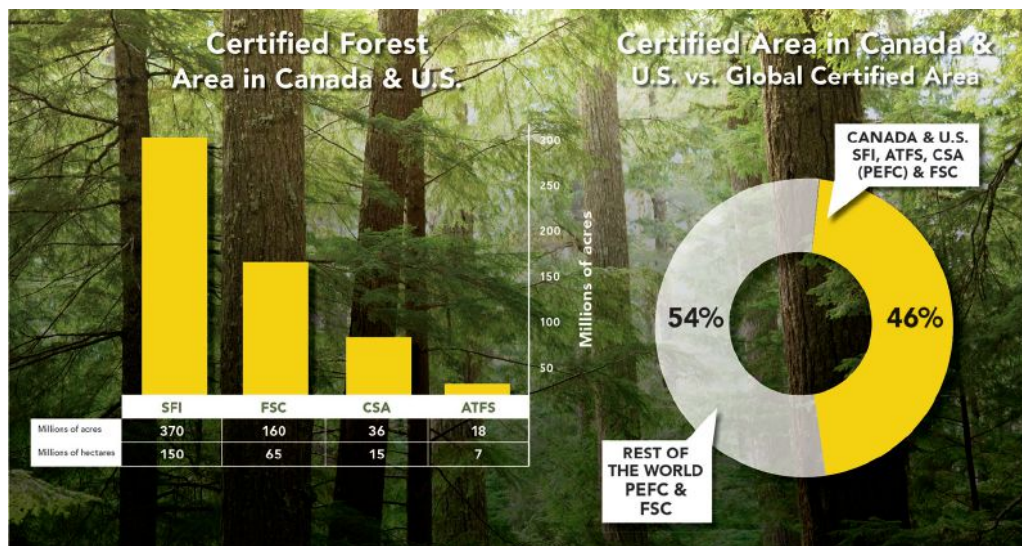
However, what about the forest? The benefits above notwithstanding, how can building

designers be sure that specifying wood does not negatively impact the North American forest resource?

As this course will demonstrate, the answer to that question has several elements. On one hand, North American forest practices are among the world's best, and the amount of forested land, in both the United States and Canada, has been stable for decades. On the other, there are threats—such as climate change, increased wildfire, insect infestation and disease, and deforestation due to urban development—which are broader than the forest industry and must be addressed at a societal level. Drawing from a wide range of research publications, the following pages will examine the current state of North American forests, modern forest practices, and criteria

Deforestation is the permanent conversion of forest land to non-forest land uses. Around the world, it is a major issue and contributor to global warming. In the United States and Canada, the rate of deforestation has been virtually zero for decades; however, the value of forest land in agriculture and real estate maintains pressure to convert.

for sustainability, and consider some of the challenges that could profoundly impact the future of the forest resource. In this context, the course will also discuss why strong markets for wood products provide an incentive for landowners, not only to invest in forest management but also to keep forested land forested even though greater profit can often be made by converting it to other uses.



Shown is a second-growth working forest in Oregon.

Photo courtesy of Plum Creek/© Frank Rosenstein; Source: www.pefc.org and www.fsc.org as of March 2019

IS NORTH AMERICA RUNNING OUT OF FORESTS?

According to the National Report on Sustainable Forests—2010, “On the whole, no evidence suggests that we are using up our forests. In fact, the total area of forests has been stable and the volume of wood on them increasing.”²

Until the early 1900s, settlers coming to North America cleared an average of 2.1 acres of forest per person to survive and grow food.³ Since then, the establishment of industrial agriculture and other changes in land use have mitigated the need for forest clearing, and forest acreage has been stable for close to a century.

The United States reported an annual increase in forest area of 0.12 percent in the 1990s and 0.05 percent from 2000 to 2005, while Canada had no change, and twice as much wood is being grown each year as is harvested.⁴ In both countries, responsible forest management has resulted in more than 50 consecutive years of net forest growth that exceeds annual forest harvests.

United States

The United States has approximately 765 million acres of forest area, which is about one-third of the country’s total land area.⁵ According to the National Report on Sustainable Forests—2010, “This stability is in spite of a nearly three-fold increase in population over the same period and is in marked contrast with many countries where wide-scale deforestation remains a pressing concern.”

Forty-two percent of U.S. forests are owned by entities such as national, state, and local governments; the rest are owned by private landowners, including more than 22 million family forest owners.⁶ The fact that net forest growth has outpaced the amount of wood harvested for decades supports the idea that landowners who depend economically on the resource have a strong incentive for their sustainable management for the long term. This aligns with global forest data, which indicates that forest products and industrial roundwood demands provide the revenue and policy incentives to support sustainable forest management.⁷

However, with urban development and other uses increasingly vying for land, an issue going forward will be making sure that landowners continue to have reasons to keep forested lands forested.

Canada

Canada has 857 million acres of forestland, which is about 90 percent of the forested area it had before European settlement.^{8,9} Ninety-four percent of the forest is publicly owned and managed by provincial, federal, and territorial governments. The remaining 6 percent is on private property belonging to more than 450,000 private landowners.

Wood supply is the term used to describe the estimated volume of timber that can be harvested from an area while meeting environmental, economic, and social objectives.

Governments regulate harvest levels on public lands by specifying an annual allowable cut.

TOOLS FOR ACCOUNTABILITY

Although types of ownership vary, forest management in the United States and Canada operates under layers of federal, state/provincial, and local regulations and guidelines that foresters and harvesting professionals must follow to protect water quality, wildlife habitat, soil, and other resources. Laws addressing safety and workers’ rights also govern forestry activities. Training, continuing education, and certification for loggers and foresters support continuous improvement as well as the use of forestry best management practices (BMPs). Government agencies monitor forest management activities for compliance with regulations.

Forest Certification

While sustainable forest management is defined by the regulations and guidelines that consider environmental, economic, and social values for that particular area and ownership, sustainably managed land does not have to be certified. Forest companies can turn to voluntary forest certification to have their practices independently assessed against sustainability standards to provide additional assurance to customers, backing up their claims that their wood products come from legal, responsible sources.

Wood is the only building material that has third-party certification programs in place to demonstrate that products being sold have come from a responsibly managed resource. As of March 2019, more than 584 million acres of forest in the United States and Canada were certified under one of the four internationally recognized programs used in North America: the Forest Stewardship Council (FSC), Sustainable Forestry Initiative (SFI), Canadian Standards Association’s Sustainable Forest Management Standards (CSA), and American Tree Farm System (ATFS). This represents almost half of the world’s certified forests.¹⁰

According to the National Association of State Foresters, “Credible forest certification programs include the following fundamental elements: independent governance, multi-stakeholder standard, independent certification, complaints/appeals process, open participation, and transparency. While in different manners, the ATFS, FSC, and SFI systems include the fundamental elements of credibility and make positive contributions to forest sustainability.”¹¹ Similarly, the World Business Council on



Certification bodies conduct forest management audits as part of the third-party certification process.
Photo courtesy of www.naturallywood.com

Sustainable Development released a statement supporting an inclusive approach that recognizes these programs as well as CSA (and others).¹²

The FSC, SFI, CSA, and ATFS programs all depend on third-party audits, where independent auditors measure the planning, procedures, systems, and performance of on-the-ground forest operations against the predetermined standard. The audits, performed by experienced, independent foresters, biologists, socio-economists, or other professionals, are conducted by certification bodies accredited to award certificates under each of the programs. A certificate is issued if a forest operation is found to be in conformance with the specified forest certification standard.¹³

EPDs and Forest Certification

The wood industry has been a leader in the development of environmental product declarations (EPDs). An EPD is a standardized, third-party-verified label that communicates the environmental performance of a product, is based on life-cycle assessment (LCA), and applicable worldwide.

An EPD includes information about both product attributes and production impacts. This document provides consistent and comparable information to industrial customers and end-use consumers regarding environmental impacts. The nature of EPDs also allows summation of environmental impacts along a product's supply chain—a powerful feature that greatly enhances the utility of LCA-based information.

GLOSSARY

Biological diversity, or biodiversity—refers to the variety of species and ecosystems on earth and their ecological systems

Clearcutting—used when the young trees of a species need an abundance of sunlight to germinate and to compete successfully with grasses and other plants

Deforestation—the permanent conversion of forest land to non-forest land uses

Environmental Product Declaration (EPDs)—a standardized, third-party-verified label that communicates the environmental performance of a product

Forestry—the art and science of creating, using, and conserving forests

Life-cycle Assessment (LCA)—a tool that can be used to evaluate the potential environmental impacts of a product, material, process, or activity

Silviculture—the art and science of controlling the establishment, growth, composition, health, and quality of forests and woodlands to meet the diverse

needs and values of landowners and society such as wildlife habitat, timber, water resources, restoration, and recreation on a sustainable basis (as defined by the USDA)

Soil—made up of a complex mixture of minerals, organic matter, gases, liquids, and microorganisms; held together by the root structures of trees and plants

Sustainable Forest Management—the stewardship and use of forests and forest lands in a way and at a rate that maintains their biological diversity, productivity, regeneration capacity, vitality, and potential to fulfill, now and in the future, relevant ecological economic and social functions at local, national, and global levels, and that does not cause damage on other ecosystems (as defined by the FAO)

Wood Supply—the term used to describe the estimated volume of timber that can be harvested from an area while meeting environmental, economic, and social objectives

In the case of wood products, sustainable forest management certification complements the information in an EPD, providing a more complete picture by encompassing parameters not covered in an LCA—such as biodiversity conservation, soil and water quality, and the protection of wildlife habitat.

THE ART AND SCIENCE OF FOREST MANAGEMENT

There is a good reason forestry is often described as a blending of art and science. Foresters must follow the laws, regulations, and best practices of forestry and apply forest science and the results of ongoing research. They must also nurture the art of recognizing the unique features of a specific forest and site while developing a management design that will meet diverse environmental, economic, and social interests, including the needs and objectives of the landowner.

The blending of art and science that occurs in forest management is similar to what occurs in a building project. Like the multidisciplinary team that designs and constructs buildings, sustainable forest management involves a team that includes foresters, engineers, biologists, hydrologists, surveyors, and loggers that plan and care for the forest. In both cases, members of the team must address the technical requirements and obligations of their profession while taking into consideration the tastes and desires of the project partners and owners. In

DEFINING FOREST SUSTAINABILITY

Forest sustainability was first described in the book *Sylvicultura oeconomica* by German author Hans Carl von Carlowitz, published in 1713—and, while our understanding of what constitutes sustainability has evolved significantly in 300 years, it has long been a cornerstone of forest management.¹⁴

Von Carlowitz's work planted the seed for what we now know as sustainable development, defined in the landmark 1987 report of the World Commission on Environment and Development (the 'Brundtland Report') as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

The Food and Agriculture Organization of the United Nations (FAO) defines sustainable forest management as, "the stewardship and use of forests and forest lands in a way and at a rate that maintains their biological diversity, productivity, regeneration capacity, vitality, and potential to fulfill, now and in the future, relevant ecological economic and social functions at local, national, and global levels, and that does not cause damage on other ecosystems."

In the United States and Canada, forest sustainability is measured against criteria and indicators that represent the full range of forest values, including biodiversity, ecosystem condition and productivity, soil and water, global ecological cycles, economic and social benefits, and social responsibility. Sustainability criteria and indicators form the basis of individual country regulations as well as third-party sustainable forest certification programs.



Shown is a Douglas fir working forest in Tillamook County, Oregon. Photo courtesy of the Oregon Forest Resources Institute

the case of forestry, this includes caring for the forest while meeting the needs of landowners, the environment, and their community.

PLANNING FORESTS OF THE FUTURE

Although approaches differ, effective multi-decade planning is a fundamental part of forest sustainability.

On national forests in the United States, for example, conformance with the National Forest Management Act (NFMA) requires the development of a comprehensive plan, utilizing substantial public involvement and sound science to guide management decisions.

In Canada, where most forests are publicly owned, integrated land-use planning seeks to balance the economic, social, and cultural opportunities in a forested area while maintaining the well-being of the forest. The public gets a say in decisions about how the land and its resources are managed; forest companies must solicit public input on their forest management plans, which must be approved by government agencies.

SPONSOR INFORMATION



Think Wood represents North America's softwood lumber industry. We share a passion for wood and the forests it comes from. Our goal is to generate awareness and understanding of wood's advantages in the built environment. Join the Think Wood Community to make a difference for the future. Get the latest research, news, and updates on innovative wood use. Visit ThinkWood.com/ceus to learn more and join.

QUIZ

- In the United States and Canada, responsible forest management has resulted in more than ____ years of net forest growth that has exceeded annual forest harvests.
 - 110
 - 95
 - 50
 - 85
- The concept of forest sustainability was first described in:
 - In 1713, in the book *Sylvicultura oeconomica*
 - In the 1800s, when settlers coming to North America cleared an average of 2.1 acres of forest per person
 - In 1987, by the World Commission on Environment and Development
 - In 1992, as part of the United Nations Conference on Environment and Development
- The term used to describe the estimated volume of timber that can be harvested from an area while meeting environmental, economic, and social objectives is:
 - Ecosystem condition
 - Biodiversity
 - Mass timber construction
 - Wood supply
- Clearcutting is considered an appropriate silvicultural tool:
 - When young trees of a species need an abundance of sunlight to germinate and compete successfully with other plants and species
 - On private lands only
 - When woody debris in the forest builds up and increases the risk of wildfire
 - When the forest company is in a hurry to finish harvesting before winter
- In the United States, commercial and government use of herbicides in the forestry sector accounts for what percent versus the percentages used in home and garden and agriculture?
 - 30 percent forest/10 percent home and garden/60 percent agriculture
 - 43 percent forest/12 percent home and garden/45 percent agriculture
 - 4 percent forest/5 percent home and garden/91 percent agriculture
 - 18 percent forest/28 percent home and garden/54 percent agriculture
- All of the following contribute to biodiversity EXCEPT:
 - Planning forest management to maintain habitat patterns
 - Managing forests so they resemble forests established by natural disturbance (such as fire or wind)
 - Creating parks and protected areas
 - Adding diversion ditches and water bars to forest roads
- Deforestation is defined as:
 - Areas impacted by insects or wildfire prior to regeneration
 - Harvested areas prior to regeneration
 - Forested lands that have been permanently converted to other uses
 - Areas that need additional treatments when the regenerating forests are young
- According to the course, ____ is an important indicator of forest sustainability as it enables organisms and ecosystems to respond and adapt to environmental change.
 - Biological diversity (biodiversity)
 - Carbon
 - Biomass energy
 - Biohabitat
- The latest forest inventory systems use light detection and ranging technology to do which of the following?
 - Identify habitat and sensitive areas
 - Build more environmentally sound road systems
 - Identify popular areas for backwoods camping
 - A and B only
- Threats to forest sustainability include:
 - Forest fragmentation
 - Urban development
 - Increased wildfire and insect infestation
 - All of the above



This article continues on <http://go.hw.net/AR012020-3>. Go online to read the rest of the CEU course, complete the corresponding quiz for credit, and receive your certificate of completion.

Breaking In: Designing and Strategizing for Successful Multifamily Housing Projects

Presented By:



35 Dolores Street | San Francisco, California | Levy Design Partners

INTRODUCTION: MAKING THE TRANSITION TO MULTIFAMILY HOUSING PROJECTS'

More than one in six households in the United States live in multifamily housing², whether in an apartment or condominium, and it is estimated that apartment demand will reach 240,000 units in 2020.³ The continued demand for multifamily housing has led many architects to want to transition from designing single-family homes to multifamily housing.

Luck, Word of Mouth, and Aligned Aesthetics

For many architects, the transition from one sector to another is often serendipitous. Boston firm MERGE Architects, founded by Elizabeth Whittaker, for instance, landed its first opportunity to design a new multifamily building after another client introduced

Whittaker to his developer brother-in-law. MERGE went on to win awards, including the Boston Society of Architects Housing Award, for what became Penn Street Lofts.

Other architects, however, view diversifying beyond single-family houses as more intentional than word of mouth and luck. Andrew Kotchen, principal of Workshop/APD in New York, remembers making his first pitch for a multifamily project. Kotchen recalls the screening interview where his firm “put together a presentation based on program and typology—living spaces, baths, and kitchens—rather than individual projects. “We talked [the interviewers] through the sequence of a multifamily project—streetscape, entry, hallway circulation, apartment circulation—showing disparate

LEARNING OBJECTIVES

1. Explore ways to transition from designing single-family homes to landing multifamily housing projects.
2. Assess common challenges and solutions in affordable multifamily housing, including planning, material, and environmental considerations, as well as risk management strategies for condominiums.
3. Analyze community engagement strategies and the ways in which multifamily housing can enhance neighborhoods by connecting people, spaces, and buildings.
4. Discover present and future multifamily trends, including connectivity, individual wellness, and environmental consciousness.

CONTINUING EDUCATION

AIA CREDIT: 1 LU/HSW

AIA COURSE NUMBER: AR092020-1

Use the learning objectives to focus your study as you read this article. To earn credit and obtain a certificate of completion, visit <http://go.hw.net/AR092020-1> to view the entire CEU and complete the quiz. If you are new to Hanley Wood University, CEU courses are free of charge once you create a new learner account; returning users log in as usual.

AIA
Continuing
Education
Provider



Cortona at Forest Park | St. Louis, Missouri | Humphreys & Partners

work that had a unique aesthetic to it, so it wasn't necessarily relevant whether it was single-family or multifamily." In other words, architects can seek to diversify their projects, whether small multifamily, commercial, or institutional, based on having an aesthetic aligned with what potential new clients are trying to achieve.

After landing its first multifamily housing project, which was a renovation of the Printing House condominiums in New York's West Village, Workshop/APD soon landed another. The second project was a ground-up, 13-story apartment building. Kotchen viewed the project "as an opportunity to distribute [his firm's] residential knowledge on an even larger scale: pulling daylight into dark spaces, transitioning through tight hallways, and making spaces look larger than their area by defining ceiling planes."

Necessary Skillsets, Collaborating, and Keeping a Broad Perspective

Minho Kim, Principal at HEDK Architects, maintains architects and designers need to be aware of several factors when considering the leap to multifamily housing. As opposed to single-family homes that create living spaces revolving around the needs of an individual, couple, or family, multifamily housing demands that specifiers "understand how to design an environment for people living together as a community." It is important that specifiers further be "cognizant of the

*"I am thrilled to be able to design multifamily projects, day in and day out, for I realize that good living environments can improve people's lives. Multifamily architecture involves hands-on projects where the end result is a place for people to live in and use, 24 hours a day, 7 days a week, 365 days a year. I believe my designs can contribute to bettering the lives of the people who live in these residences."*⁴

—Minho Kim, Principal HEDK Architects



Prairie Creek Villas | Lenexa, Kansas | HEDK Architects

GLOSSARY

Complete Streets—"Defines streets designed to ensure the safe circulation of all users—pedestrians, cyclists, drivers, and users of public transport. Sidewalks in good condition, infrastructure for bicycles, street furniture, and signage for all users are among the elements that can compose a complete street."

Diversity of Uses—"Blending residential, office and commercial areas, such as bars, restaurants, cafes and local commerce, attracts people and makes the environment safer and friendlier."

Hard Costs—includes construction labor and materials and can be broken down into four subcategories: site prep and substructure, shell and structure, interiors, and services. On average, hard costs account for 50% to 70% of construction costs.

Local Identity—"Public spaces should be planned for the small businesses that characterize the neighborhood. Large enterprises (such as supermarkets or other chain companies) can contribute to the economy in general, but they have little participation in the scale of the neighborhood."

Multifamily Housing—"residential buildings containing units built one on top of another and those built side-by-side which do not have a ground-to-roof wall

and/or have common facilities (i.e., attic, basement, heating plant, plumbing, etc.); structure must contain two or more dwelling units; units can either be leased or sold.

- **Large-Scale Multifamily**—buildings or developments with 50 or more units (commercial)
- **Small Multifamily**—buildings containing between 21 and 49 units (usually residential)
- **Very Small Multifamily**—buildings containing between 5 and 20 units (residential)

Social Dimension and Urban Vitality—"Wide, accessible streets, squares, parks, sidewalks, bike paths and urban furniture stimulate interaction between people and the environment, generate a positive use of space, and increase urban vitality."

Soft Costs—all costs besides land and hard costs; includes design, engineering, financing, permitting, and impact fees. Soft costs average around 20% to 30% of total costs for a relatively straightforward project, though they can be higher in some metro areas and for subsidized affordable housing projects.

location, context, neighbors, and traffic patterns” as well as “understand specific building codes, FHA, ADA, and zoning requirements,” says Kim. Understanding “basic structural systems and product functions” and having “an awareness of the project budget and the relationship between the budget and the design” are also crucial considerations for architects and designers when embarking on a multifamily housing project.⁵

Ed Ault, Director of Design at AvalonBay Communities, states that architects and designers also need to be able “to keep a broad view of the project. Multifamily changes so fast, yet the buildings being designed today often won’t get occupied until four years later. And then you won’t get feedback from the residents until at least one year after that.” For those in multifamily housing, this means, “Any trend we hear about today is already four or five years old.”⁶

Ault emphasizes the importance of understanding that “in order to be fresh, you have to keep your mind open to new ideas and actually be searching for that next trend. It’s hard to find time to do that if you’re embedded in a project that needs your immediate focus. You can’t always address all the trends because sometimes the client isn’t necessarily open-minded, or they have their

own set of requirements or standards that you need to follow. Knowing when to push and when not to push is a hard but necessary skill to learn.”⁷

If some of the factors mentioned by Kim and Ault are initially outwith a specifier’s skill set, firms can hire consultants with niche areas of expertise. Kotchen, for instance, recognized that his firm would benefit from hiring an architect with experience in managing larger projects and teams. Whittaker, too, maintains, ““There are so many resources out there. If there’s something we don’t know, we call a consultant.”” In addition to hiring or bringing in outside help, Whittaker and Kotchen note the necessity of being able to balance the workflow of a busy practice that focuses primarily on single-family homes with the differing pace of multifamily housing projects.

For Ault, Whittaker, Kotchen, and Kim, multifamily operates at a pace different from single family. Collaboration with other professionals is key, as is getting feedback from residents. Having the ability to identify trends is crucial, and an important skill is being able to create solutions that balance and address the needs of clients, future residents, and communities.

Throughout this course, challenges architects may face when breaking into the

THE ARCHITECT-DEVELOPER: SMALL- AND LARGE-SCALE MULTIFAMILY HOUSING

Sometimes, starting “small,” for investors and architects alike, can lead to bigger investments and bigger projects. Small multifamily buildings are those containing between 21 and 49 units; “very small” multifamily buildings have between 5 and 20 units; and large-scale multifamily housing involves buildings or developments with 50 or more units.⁸ Housing with 5 to 49 units accounts for approximately 21% of U.S. housing stock and provides homes for about 22% of the U.S. population.⁹

An emerging trend that allows architects to creatively traverse between small- and large-scale projects is that of the “the architect-developer.” Jonathan Segal, for example, worked for two different architectural firms after he graduated before opening his own in 1988. For his firm’s first project, “he tried shopping a row-house development, which he designed for his thesis, around to different developers, until one of them encouraged him to develop it himself.”¹⁰ Segal eventually found inexpensive land, built the row houses, made more profit than he anticipated, and now specializes in mixed-use residential and commercial infill projects. Currently, he has constructed 245 buildings in San Diego that include micro-unit apartments, luxury lofts, and adaptive reuse projects.

Segal maintains that the architect-developer model works for him in several ways: he is able to foster strong relationships with subcontractors, leading to faster construction and better negotiating leverage for future projects, and the control he has allows him to “save time, money, and creative energy,” resulting in little litigation and “a cohesive, intentional body of work.”¹¹

Adopting Segal’s methods can involve everything from knowledge of real estate development, which some architectural schools offer as part of their graduate degrees, to familiarity with acquiring bank loans and understanding zoning and insurance regulations. A willingness to step outside the bounds of the traditional, however, can allow architects to advocate for their visions of better communities and better cities.



Carillon | Nashville, Tennessee | HEDK Architects

multifamily housing sector, in addition to potential solutions, community engagement, and future multifamily trends will be discussed.

CHALLENGES OF MULTIFAMILY PROJECTS AND SOLUTIONS FOR SUCCESS

Based on design alone, “multifamily housing refers to a building that contains more than one dwelling unit.”¹² While the U.S. Census Bureau defines multifamily housing as “residential buildings containing units built one on top of another and those built side-by-side which do not have a ground-to-roof wall and/or have common facilities (i.e., attic, basement, heating plant, plumbing, etc.),” it also stipulates that the structure must contain two or more dwelling units. Units can either be leased or sold.¹³



Avalon Berkley | Berkely, California | Avalon Communities



This article continues on

<http://go.hw.net/AR092020-1>.

Go online to read the rest of the CEU course, complete the corresponding quiz for credit, and receive your certificate of completion.

SPONSOR INFORMATION



Tamlyn was started in 1971 by Ron Tamlyn Sr and his wife Jean with \$800 in borrowed money, and we continue to this day to be family owned. We strive to bring high quality products to the building industry, which includes our XtremeTrim® line of extruded aluminum for a variety of siding materials and XtremeInterior™ line of extruded aluminum for drywall and interior panels.

QUIZ

- More than one in _____ households in the United States live in multifamily housing.
 - 5
 - 6
 - 7
 - 8
- Which of the following are noted as best practices for designing multifamily homes?
 - Understanding how people live together
 - Understanding basic structural systems and functions
 - Keeping a broad view of the project
 - All of the above
- Housing developments with between 21 and 49 units is usually considered _____.
 - Very small multifamily
 - Commercial construction
 - Small-scale multifamily
 - Large-scale multifamily
- For relatively straightforward projects, which of the following accounts for the majority of construction costs?
 - Land costs
 - Hard costs
 - Soft costs
 - Impact fees
- It is estimated that the shell and structure of a building, which include the façade, windows, and doors, account for 25% to _____ of all hard costs.
 - 30%
 - 35%
 - 40%
 - 50%
- Which strategy outlined by Project for Public Spaces (PPS) can be described as “Blending residential, office and commercial areas, such as bars, restaurants, cafes and local commerce, attracts people and makes the environment safer and friendlier”?
 - Human scale
 - Social dimension and urban vitality
 - Lighting
 - Diversity of uses
- Which strategy outlined by Project for Public Spaces (PPS) can be described as “Public spaces should be planned for the small businesses that characterize the neighborhood”?
 - Stimulating the local economy
 - Complete streets
 - Local identity
 - Human scale
- Which strategy outlined by Project for Public Spaces (PPS) can be described as “Wide, accessible streets, squares, parks, sidewalks, bike paths and urban furniture stimulate interaction between people and the environment, generate a positive use of space, and increase urban vitality”?
 - Social dimension and urban vitality
 - Green areas
 - Social participation
 - Active facades
- Which strategy outlined by Project for Public Spaces (PPS) can be described as “Streets designed to ensure the safe circulation of all users—pedestrians, cyclists, drivers, and users of public transport. Sidewalks in good condition, infrastructure for bicycles, street furniture, and signage for all users”?
 - Green areas
 - Complete streets
 - Local identity
 - Stimulating the local economy
- Which of the following drives current and future multifamily trends?
 - Individual wellness
 - Connectivity
 - Environmental consciousness
 - All of the above



The image features a collection of 3D architectural models of trim profiles. In the upper left, there are several dark grey, extruded profiles with various geometric shapes, including a stepped profile and a profile with a semi-circular cutout. In the lower right, a more complex assembly is shown, featuring a white extruded profile with a red rectangular element integrated into its structure. The background is a dark, gradient grey, and the lighting creates soft shadows, giving the models a three-dimensional appearance.

INTERIOR TRIMS


EXTERIOR TRIMS



Xtreme Trim

ARCHITECTURAL ALUMINUM TRIMS

Tamlyn offers an extensive line of extruded aluminum profiles with thousands of design and color options, allowing architects and designers to dramatically improve their building aesthetics and create modern architectural lines.

CALL US: 800.334.1676  www.tamlyn.com



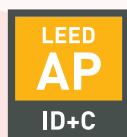
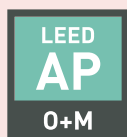
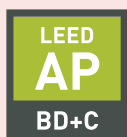


Take your LEED exam online, *from the comfort of home.*



The LEED Green Associate and LEED AP exams are now available online.

Download the credential handbook, review requirements & schedule your exam today.



[usgbc.org/credentials](https://www.usgbc.org/credentials)



AIA Architect

AIA Voices



CREDIT: ELIESA JOHNSON

Translating Design

Inclusion and connection are important in all spaces.

Damaris Hollingsworth, AIA, is an architectural thought leader dedicated to creating inclusive, equitable spaces. Originally from Sao Paulo, Brazil, and now Minneapolis-based, Hollingsworth is a principal architect and owner of Design by Melo, the firm she founded in 2018. She is also the co-founder of DesignSHOP, which connects students of color with mentors in the design field, and the Minnesota chapter of the National Organization of Minority Architects. Hollingsworth won a Young Architect Award from AIA in 2020.

As told to Audrey Taylor Ward

When I was 7 years old, my dad hired an architect to design and handle city approvals for our house. That alone was something out of the ordinary—in the inner cities of Brazil, houses are built without city approvals, and there is no such a thing as the enforcement of master plans, city zoning, or code regulations. When I saw [the architect] meeting with my parents at our dinner table, I thought she looked powerful, intelligent, and beautiful, and decided right there that I wanted to be like her when I grew up—an architect.

I studied architecture and urban design at the Faculdade de Arquitetura e Urbanismo at the Universidade de São Paulo, but it wasn't without its roadblocks. I'd always been told that, to be an architect, I would need to attend college—and colleges were not for people like “us.” Given my inner-city, public-school background and the admission processes that benefitted students from only the best private schools, it ended up taking me three failures before I succeeded in attending university.

These early challenges led to my approach to design and development, which is grounded in

my lived experience. Inclusion and connection are important in all spaces. Public spaces must feel welcoming and safe to everyone and reflect the needs and aspirations of traditionally excluded groups. When public spaces are not welcoming, it results in alienation and a feeling of social fatigue—even despair.

I see myself not just as an architect, but also, by necessity, as a “translator” between design professionals and user groups who often have differing cultural and educational backgrounds.

My experiences also showed that students of color have few role models or introductions to the profession. That is why I co-created DesignSHOP for underserved high school students. This program creates opportunities to introduce students to architecture, but more importantly, to introduce them to architects of color.

While no single profession or sector can solve social problems alone, architects should lead the way to the development of new skills in cross-cultural facilitation. My hope for the profession is that architects embrace its essential purpose of protecting the health, safety, and welfare of the people—all people. **AIA**

AIA Then



CREDIT: PUBLIC DOMAIN

Julian Abele, AIA, was the first African American to earn an architecture degree from the University of Pennsylvania.

A Legacy No Longer in “the Shadows”

Julian Abele, an early 20th century African American architect, is finally getting his due.

By Jocelyn Rogers

Monmouth University’s most prominent building, dating from 1929, was designed by Julian Abele, AIA, the first African American to earn an architecture degree from the University of Pennsylvania. But it was named for Woodrow Wilson, whose legacy includes reinstating racial segregation in the federal workforce.

That disconnect is no more: In June, Monmouth’s Board of Trustees voted unanimously to remove President Wilson’s name, and to honor Abele.

It’s not the first time Abele has received belated recognition from a major university he helped design, and his story serves as a poignant yet inspiring example of the challenges faced by generations of African American architects.

“Willing and Able,” as he was dubbed by classmates, was born in Philadelphia in 1881. Elected president of the student architectural society by his Penn peers, he graduated in 1902. According to the biography *Julian Abele: Architect and the Beaux Arts*, by Dreck Spurlock Wilson (Routledge, 2019), Abele’s additional degrees and certificates in architectural drawing made him “the most formally educated architect in all

of America.” He is believed to have later studied at the École des Beaux-Arts—a style he embraced throughout his career in the nationally known Philadelphia firm, Horace Trumbauer. Abele’s collaboration with Trumbauer was marked by “a great deal of respect,” according to Abele’s son—although, consistent with contemporary practice, the signature of Trumbauer (who was not a formally trained architect) was the only one that appeared on his firm’s designs. “The lines are all Mr. Trumbauer’s,” Abele once said, “but the shadows are all mine.”

That signing practice, plus the collaborative nature of any large firm, makes it difficult to assign sole credit to Abele for many of his most well-known projects. But we do know that he contributed significantly to the Philadelphia Museum of Art—immortalized in the movie “Rocky”—as well as the Free Library of Philadelphia, and the Widener Memorial Library at Harvard University. Abele’s designs in Washington, D.C., include the Argentinian Embassy and what is now the Belgian ambassador’s residence.

“I think we’re really fortunate that Julian Abele’s talent wasn’t squandered due to Jim Crow,” commented Abele’s great-grandnephew Peter Cook, AIA, associate vice president and design principal at Minneapolis-based HGA. “One of the wonderful things about our profession is that the best of our work, for the most part, remains there for future generations to really appreciate. And so his talent is still very much on display, and it graces so many of our cities.”

Abele’s body of work also includes numerous mansions in Newport, R.I., and New York,

including, notably, the Manhattan home of American Tobacco Co. founder James Buchanan Duke (then the “costliest home” on Fifth Avenue, now New York University’s Institute of Fine Arts).

It was this commission that led to an enduring legacy that can be claimed fully and indisputably by Abele: the campus of Duke University. From the university’s iconic Duke Chapel to Cameron Indoor Stadium, home of the Duke Blue Devils basketball team, Abele designed the bulk of Duke’s West Campus between 1924 and 1950. As university president Dick Brodhead put it in 2016, “Abele’s accomplishment was not any single building, but the whole of the campus—30 buildings in all.”

After launching a committee in 2015 to explore ways to honor Abele, Duke’s Board of Trustees elected to engrave the Duke Chapel cornerstone with his name, commission a biography, fund an annual event recognizing African American student achievement, and rename the campus’ central passage Abele Quad. A plaque installed on the quad emphasizes that Abele “designed all the surrounding buildings” and quotes the famous St. Paul’s Cathedral epitaph of Christopher Wren: “If you seek his monument, look around.”

Generations of Duke students have strolled among the university’s Abele-designed buildings—an experience the architect himself may never have enjoyed. During the decades his vision was coming to life in North Carolina, multiple sources suggest the era’s Jim Crow policies prevented Abele from ever visiting the site—although evidence is inconclusive. It is certain, however, that Abele could not have experienced the campus as a student; Duke did not integrate until 1962, 12 years after his death. Even in Philadelphia, Abele could not escape segregation—although he did manage to reject it in his daily commute. According to a *Smithsonian Magazine* profile, Abele reportedly walked more than 10 blocks to work each day rather than sit in the back of the city’s segregated streetcars.

Abele’s legacy also includes a number of descendants who joined the field, including his son Julian F. Abele, Jr., and his nephew, Julian Abele Cook, Sr.—grandfather of Peter Cook. These generations “could never have even dreamed of the potential to be able to work as I work today,” Peter Cook says, whose major projects (while an employee of Davis Brody Bond) include the Smithsonian Institution’s National Museum of African American History and Culture, and the Embassy of South Africa—a project tasked with modernizing the space while preserving the architectural

evidence of an “awful” past the country “couldn’t afford to forget.”

“In some ways that suggests that we’ve made progress in this country,” Cook reflects, “But every time you think about the progress we’ve made, there always seems to be some equal and opposite reaction that attempts to take us back to where we don’t need to go.”

A quiet man, Abele left no personal account of his experiences confronting discrimination as he built a distinguished career. (“My father would be very uneasy with all this attention,” his son commented at the Duke dedication ceremony, “but he was proud of his work at Duke.”) What we do know is that, upon Trumbauer’s death in 1938, Abele began signing drawings with his own name. He became an AIA member in 1942, listing in his application a house he had designed for his sister, and Duke University buildings he worked on after Trumbauer’s death.

If Abele’s achievements were overlooked in his lifetime, the oversight grew after his death in 1950—even as work continued on Duke buildings he had designed. It’s perhaps fitting that his name resurfaced there in 1986, as Duke students protested the school’s investments in apartheid South Africa. As part of the demonstrations, students built shacks in front of the Abele-designed chapel, prompting one student to lament that “our rights as students to a beautiful campus” were being violated.

Another student, Abele’s great-grandniece Susan Cook, spoke out. That very building, Cook wrote, was conceived by “a victim of apartheid in this country,” whose seemingly forgotten achievements testified to “what a black man can create given the opportunity.” Although Duke installed a painting of Abele in 1988, a more adequate tribute to his singular role in creating Duke’s campus would wait another three decades.

Monmouth University’s decision to recognize Abele may likewise be overdue. But there is poetic justice in removing Wilson’s name while honoring the African American architect who persevered over segregation to design the building. As institutions across the nation grapple with how their symbols and building names reflect their values, it’s a welcome opportunity to introduce new generations to stories like Abele’s.

“When you admire Julian Abele’s talent and the work that he was able to do, I’d like to ask people to also think about all the talented people—not just in our profession, but in all walks of life—whose talents remained either untapped or ignored or actively suppressed due to this country’s inability to deal with its original sin,” Peter Cook says. “There are so many other Julian Abeles out there who we don’t know about or who were never able to tap their great potential.” **AIA**

Julian Abele, AIA, designed Duke University Chapel as well as more than 30 additional campus buildings between 1924 and 1950.



AIA Feature

Education for Real-World Experience

Incorporating schools into mixed-use urban developments can benefit the classroom, community, and city.

By Patrick Sisson

Few buildings are as etched into our subconscious and our collective cultural memories as schools. They are a key backdrop in our children's early years and our own adolescent recollections, as well as neighborhood pillars, and they offer designers the chance to both define a community and impact numerous students. A growing number of architects believe that meeting this design challenge by integrating schools more fully into city life can spur a lasting, positive change in how students learn.

"I bet you could tell me exactly what your high school looked and felt like," says AJ Pires, president of Brooklyn, N.Y.-based Alloy Development, which is currently at work designing a multi-block project partially anchored by two schools. "There's a wonderful moment when you realize you're inside a place that's well-designed and required a lot of thought that calls you to be aspirational. That's the perfect message to be sending in the school environment: 'You should be thinking as grandly as you can.'"

For Pires and others, that vision incorporates space for learning within the larger community, whether it's including schools as part of a ground-up high-rise, finding space for a high school in a massive adaptive reuse project, or, like Pires and his firm, designing a new elementary school and new facility for the Khalil Gibran International Academy high school as part of a massive mixed-use development in downtown Brooklyn.

"If you put students in a creative space,

it enhances their capabilities," says Amanda Whitaker, AIA, architect with ANF Architects, a Memphis, Tenn.-based firm that designed a high school within Crosstown Concourse, a sprawling adaptive reuse project that turned an abandoned, 1.5 million-square-foot Sears distribution center into a vertical village. "The fact that it doesn't scream high school is why students love it," she says. "Put them in a box, they'll think inside a box."

Incorporating schools within larger mixed-use projects isn't unheard of, but the practice is becoming increasingly popular—especially for new charter schools—as a way to incorporate real-world learning within the school environment. The XQ Institute, an educational initiative led by Laurene Powell Jobs, has promoted this idea with multimillion-dollar grants for schools across the nation, including the one at Crosstown. What better way to give students access to mentors than to have them learn alongside offices, or provide access to culture and technology than by locating their

classroom within walking distance of museums, theaters, and tech hubs?

While fitting schools in atypical environments means each project is unique, they all share similar design challenges: incorporating natural light into the comparatively sprawling floor plates of mixed-use buildings, as well as including large shared spaces such as gyms and cafeterias; keeping neighboring floors and tenants from getting drowned out by the noise of students; and maintaining separation to keep students and schools safe and secure. But these projects also offer incredible possibilities. Theresa Genovese, AIA, is a principal at New York-based CetraRuddy, which designed Corporate Commons Three, an under-construction mixed-use commercial high-rise in Staten Island, N.Y. The project, which features three schools, is slated to be completed later this year. She says the arrangement allows schools to focus on the business of education, not owning and operating buildings.



Above: ANF Architects designed a high school within Crosstown Concourse, an adaptively reused Sears distribution center in Memphis, Tenn.

“Given current zoning, adding a community facility to a larger project can be beneficial,” Genovese says. “Developers may even get more floors or floor space; there can definitely be a financial incentive.”

These new models have come along just as so many of our preconceived notions of school design and architecture are being destabilized and reconsidered amid the pandemic.

“COVID-19 has exposed the shortcomings of the education system, and how ossified it has become,” says Larry Kearns, FAIA, an architect with Chicago’s Wheeler Kearns Architects who specializes in educational projects. “COVID-19 has made it possible to rethink templates that were hardly ever questioned.”

The Crosstown project in Memphis also reimagines those templates, exemplifying the power of placing a school within a larger

commercial development and making it both an anchor and a satellite for other institutions. When ANF Architects was conceptualizing what would become Crosstown High School, which opened for the 2018–2019 school year and will eventually hold 500 students, the process was ground-up, Whitaker says.

Built around arts, education, and health, the larger Crosstown Concourse, a cavernous former warehouse filled with businesses and nonprofits, offered many synergies to the ANF team. Students share pool and gym facilities with the YMCA, and contemporary arts center Crosstown Arts provides theater space for school performances and clubs, which translate to significant savings in space and construction costs. But the reality of the confined space—the school takes up two-and-a-half floors within a tower on the structure’s east end—meant fitting

traditional classrooms within 20-by-20-foot grids and tight floor plates wasn’t an option.

ANF turned the atypical situation into an advantage. Whitaker and her colleagues used a basecamp model, linking a series of flexible, dynamic, adaptable spaces—including small meeting spaces and home room hubs—across all three floors, including central rooms that could be joined by opening a garage door. The result is a classroom typology mixed with the shared space aesthetics of a tech office. A series of floor-to-ceiling windows that look out over the atrium offer natural light and the ability to “borrow” light for landlocked rooms. The concrete walls and floors of the building made it challenging to integrate modern infrastructure such as HVAC, plumbing, and electrical within the skeleton of a ‘20s-era warehouse, so ANF used lots of acoustic sprays and vibrantly colored acoustic tiles to soak up the noise (“people in other offices say we’re the quietest part of the concourse,” Whitaker jokes).

“Everything was deliberately designed to be flexible and open, so students could see further out into the community itself,” she says. “We nixed ideas like locker-lined corridors.”

Crosstown High was meant to be diverse by design: The larger Crosstown vision includes a commitment to revitalizing the disinvested neighborhood surrounding the complex, and the high school plays a key part. A public charter school that accepts students via a lottery, and aims to “reflect the unique diversity of Memphis as a whole,” according to its mission statement, Crosstown gives students numerous networking and internship opportunities within the larger complex.

Plans for the 330,000-square-foot Corporate Commons Three in Staten Island, an eight-story office complex, suggest the same kinds of neighborhood synergies can be achieved with ground-up designs. According to CetraRuddy’s Genovese, the developer, Nicotra Group, looked for ways to give back, and saw the incorporation of the three schools—John W. Lavelle Preparatory Charter School (grades K–5), Nicotra Early College Charter (grades 8–12), and New Ventures Charter School (grades 10–12)—in the middle of the building’s stacking plan as a unique opportunity.

Students will be able to learn and work on a rooftop farm—which is set to be run by urban agriculture startup Brooklyn Grange—and grow lettuce, tomatoes, eggplant, zucchini, cucumbers, and more. Restaurants and offices will offer additional internship opportunities, adding a suite of vocational learning opportunities to Staten Island students.

Architects faced layout challenges not typically part of a commercial development: Shared social spaces, such as gyms and the

AIA Feature

CONTINUED



Above: Designed by CetraRuddy, Corporate Commons Three on Staten Island, New York, will contain three schools when it is completed in late 2020.

cafeteria, were placed on the middle school floor to avoid annoying neighbors with the sound of active students; a separate entrance and elevator system were installed outside the interior core stairs to keep students and adults moving. Balancing the large floor plates, which are ideal for corporate clients, with the need for daylighting classrooms was tricky.

But perhaps the most challenging aspect was cost: Corporate clients simply have more money. To compensate while still creating a quality learning environment, CetraRuddy focused on long-term savings, including a green roof, passive solar, and fixtures that cut down on water usage, to save the schools from high utility bills.

Schools can be a difficult puzzle piece to place within large-scale projects, but the benefits of having different tenants aren't just for the students. As Alloy's Pires says, schools aren't just part of the blueprint. They're central pillars of what Alloy hopes becomes a true community space: the 80 Flatbush project, which aims to create Brooklyn's most sustainable block, with passive house construction and other sustainable design elements.

The school complex, which is set to open by fall of 2023 with a new K-5 elementary school and new facilities for the Khalil Gibran International Academy, New York's first English-Arabic-language high school, was

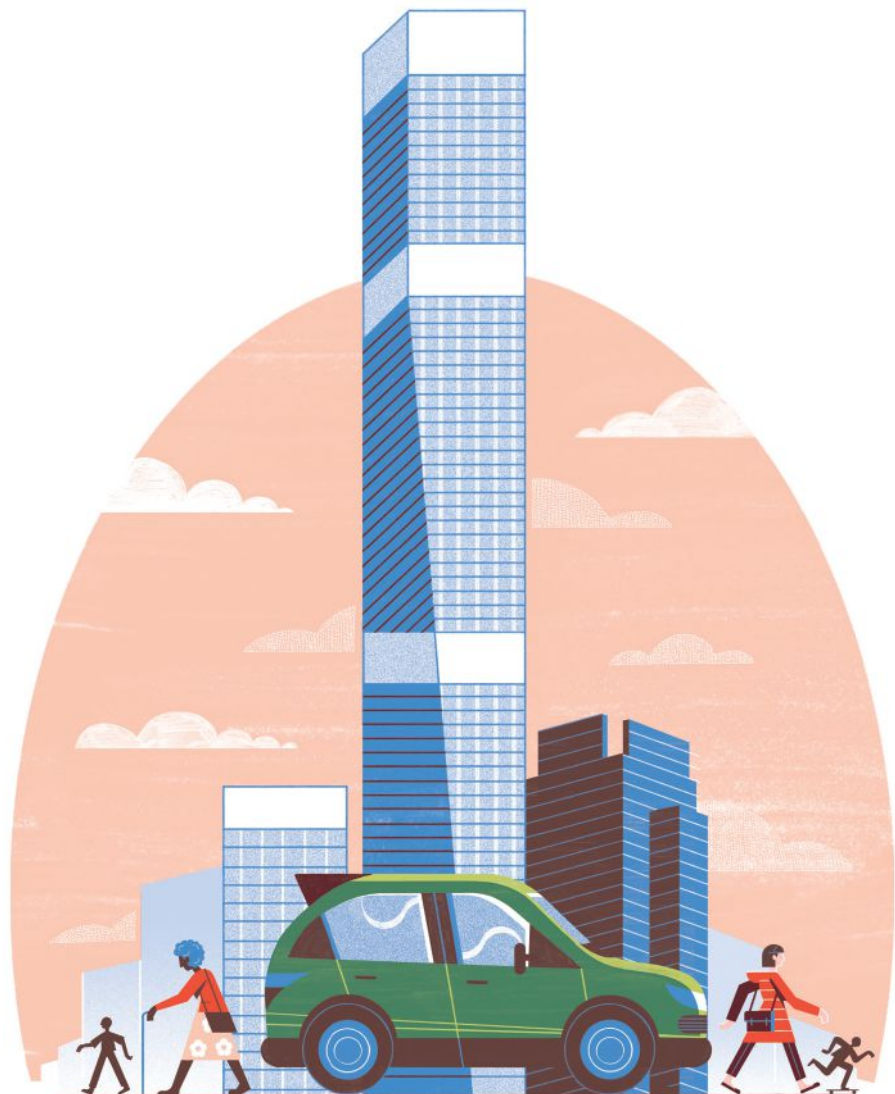
deliberately set in the middle of the block. Instead of placing the school in the podiums of residential or commercial buildings, site planners wanted to set the school apart to give it a true sense of civic importance (New York-based Architecture Research Office will be designing the school separate from Alloy's larger vision of the block, so it's unique).

Pires says these mixed-use educational projects allow for more progressive ideas to filter up into school design. The sustainable focus of 80 Flatbush, for example, will provide the New York City School Construction Authority, one of the city's most prolific builders, with a test case for passive house techniques. The high school's theater has been oriented to be at grade, facing out to the street.

Successfully integrating schools into mixed-use urban developments can open

many additional doors, Kearns says. Zoning changes, creative design, and placemaking could transform darkened store fronts into educational centers, placing schools amid vibrant, more accessible commercial corridors, instead of tucked away into residential neighborhoods. Ideally, that means "we can design school uncoupled from neighborhoods, and the many ways that your ZIP code defines your opportunity," he says.

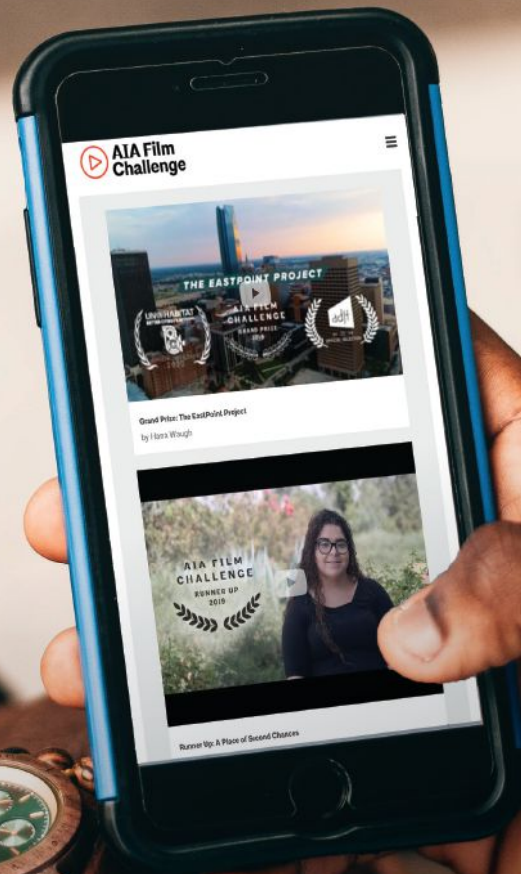
Ultimately, weaving schools more closely into the urban fabric only reinforces the attraction of cities, Whitaker says, and the power of sharing space and institutions. "Design that's more inclusive yields a richer and more plural place," she says. "Schools are part of placemaking, and how people connect with one another. This doesn't happen outside a cellphone store." **AIA**



Above: 80 Flatbush, a mixed-use development in Brooklyn, New York, will contain new facilities for Khalil Gibran International Academy.

Vote for your favorite film!

Architects shared their stories of impact, now it's time for you to vote. The film with the most votes wins the People's Choice Award.



View all the 60- to 90-second films of architects partnering with communities to design a healthy, sustainable, just world that improves lives, then vote for your favorite.

Vote by October 4, 2020. aiafilmchallenge.org

Photo by WoodWatch on Unsplash



Resilient in the face of any disaster

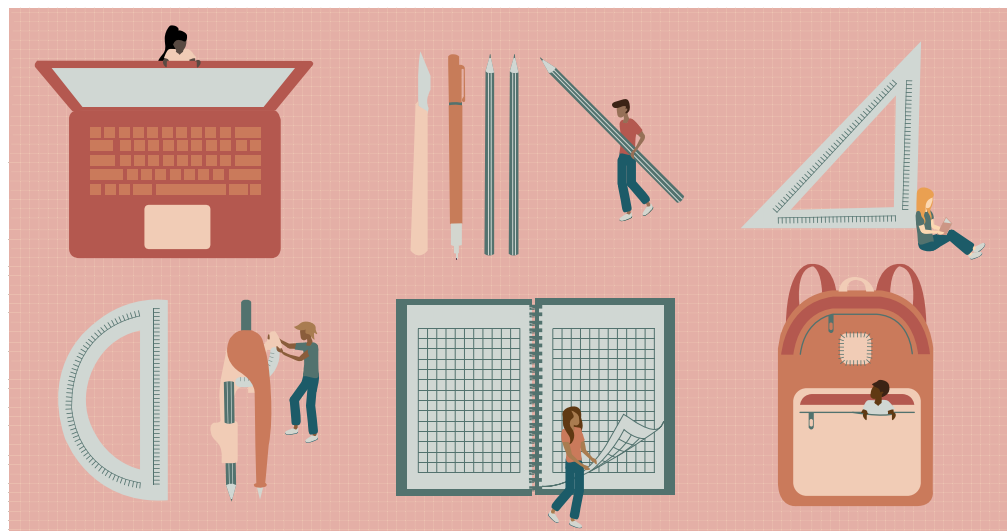
Learn the fundamentals of designing for resilience through AIAU's exclusive Resilience & Adaptation Certificate Program.



Visit our website to start learning.
aiau.aia.org

**Purchase the series
and save 25%.**

AIAFuture



CREDIT: JILLIAN PAUL

A More Inclusive Architectural Education

While some architecture schools are making strides, there are still many barriers for less privileged students.

by Mimi Kirk

As the United States continues to face a reckoning over its historic and current oppression and marginalization of people of color, schools of architecture are no different from other institutions in their need to confront the structures that have privileged whiteness and maleness for centuries.

In fact, schools of architecture may have even more of a need. At a 2019 event, then-AIA President William Bates, FAIA, noted that the percentage of Black students in architecture programs is “not that different from what it was 50 years ago.” The latest demographic findings from the National Council of Architectural Registration Boards support Bates’s statement, demonstrating that recent growth in racial and ethnic diversity in the profession is mainly among Asian and Latinx individuals, with no increase for the Black population. Even with modest growth for certain races and some progress for women, NCARB states that “women and people of color remain underrepresented within the profession.”

Many architecture school administrators are trying to remedy this problem through a variety of strategies, and some have seen significant increases in the enrollment and retention of students of color. But, even those

who have fostered growth acknowledge there is still a long way to go.

Charlton Lewis, assistant dean for student affairs at the University of Texas at Austin School of Architecture, says that though his school has been moving in the right direction—in 2019, at least 36% of its undergraduates were students of color—“I don’t want to paint a rosier picture than what actually exists.”

Director of the School of Architecture and Interior Design at the University of Cincinnati Edward Mitchell notes that though the school’s population is growing more diverse—the percentage of undergraduate students of color more than doubled between 2010 and 2020, from around 6% to at least 14%—“it’s not as diverse as we would like.”

Christian Dagg is the head of the School of Architecture, Planning and Landscape Architecture at Auburn University, whose latest statistics show an undergraduate population in which almost a quarter of students are students of color. He adds that the field itself makes increasing diversity difficult. “There are aspects of architectural education—the length and cost of study, for instance—that actively discourage first generation college students and students of color from selecting architecture as a major,” he says. “We’ve done a good job of making ourselves exclusive.”

Diversity initiatives at architecture schools can only do so much, however, as long as structural inequality remains in society at large. At the same time, university policies can go hand-in-hand with larger societal shifts—or at least provide support while the struggle for fundamental change continues.

What strategies have UT Austin, Cincinnati, and Auburn implemented that have seen results? And what are these schools looking to do more of in the coming years as

they strive to make their student populations not only more diverse, but more inclusive?

Reaching Out to Youth

It’s clear that recruiting young people who may not otherwise consider pursuing an architecture degree due to limited resources or a lack of personal connection to the profession is key to diversifying architecture schools’ student populations. Cincinnati runs summer camps for area middle and high school students and makes a point to recruit kids of color, with the idea that they are then more likely to apply to the program.

Auburn and UT Austin are similarly concerned with recruiting talented students of color: “It’s about making them aware that we’re interested in them and accessible to them,” Lewis says, adding that UT runs summer outreach programs. For almost 10 years, Auburn dedicated a staff member to recruiting such students. While the college has redirected those resources to overall recruitment, it continues with many of the strategies developed during that time, including significant involvement with the National Organization of Minority Architects.

Once students of color enter an architecture program, it’s equally important to support them so that they will stay, succeed, and graduate. If a student doesn’t come from a family that can assist them through the long years of study, which often involve expensive materials and all-nighters, they can easily fail to finish.

The University of Cincinnati has, in part, solved this issue by making its program one in which students work and study at the same time. “We have classes year ‘round,” Mitchell says, “and the students go into the workforce approximately every third semester, allowing them to pay off tuition and earn living expenses.”

“It’s an extraordinarily expensive education,” Lewis says. “The university may pay full tuition for some students in need, but we can’t ignore the fact that they still have financial constraints.” Lewis’s office and the school’s dean have encouraged faculty, for example, to require less expensive or alternative materials for building models and delivering content.

Hiring Faculty of Color

Of course, support is more than monetary assistance; mentorship is also critical. At Cincinnati, Mitchell is working to build a better mentorship program in which older students of color mentor first-year students of color.

AIA Future

CONTINUED

But mentorship also means having full-time faculty of color with whom students can emulate and work with. However, while the number of architecture students of color has generally increased, the dearth of faculty of color has persisted. Students of color may be less likely to seek a program where there are few or no minority professors.

At UT Austin, Lewis and his colleagues have secured two new positions—a tenure-track professorship and an annual fellow—for scholars whose work focuses on diversity, inclusion, gender, and race. One previous fellow's work, for instance, looked at a site in New Orleans where Confederate monuments were being taken down. Students in her studio researched the layers of history of the space and potential ways to transform it.

Diversifying Curricula

Yet it is not only who you find at an architecture school that is important; it's also what is studied. As renowned Black architect Mabel O. Wilson described her own education in a 2017 *Curbed* article, "the content of what I was learning was very Eurocentric—the histories, the methodologies, all of the references. You're in this space of whiteness." Wilson called on the profession to change its body of knowledge.

Lewis notes that discomfort seems to be the main reason professors balk at change, as they don't feel at ease teaching something in which they don't have expertise. "As we push them to embrace vulnerability, we also need to support them," he says. "If they haven't heard of or seen, say, an indigenous approach to landscape architecture in Bolivia, the university needs to be willing to support their research and perhaps even send them there."

A Moral and Practical Imperative

Not only is it ethically vital for schools of architecture to put policies in place that foster more diverse student populations; such efforts also make for better design thinking and a more robust profession.

Dagg notes, for example, that Auburn has had recent success in the development of several affordable housing prototypes through its Rural Studio. "It's clear that this research has benefited from a varied team of students working on this problem with different life experiences and points of view," he says. "We have a much better chance of getting at the underlying issues with diverse voices at the table." **AIA**

AIA Perspective



A Different Kind of Fall

New challenges and renewed commitments mark this school year.

This is the time of year when we usually observe the rituals of going back to school: buying classroom supplies, meeting new teachers, moving into dorms, and settling back into non-summer routines. But "back to school" has a different meaning this year. Whether your school district is opening classrooms with new precautions in place or whether you're in for another round of virtual learning challenges, this school year is fraught with uncertainty and anxiety.

As local officials and school administrators grapple with tough decisions, AIA's Reopening America guidelines can be an important tool to help keep students, teachers, support staff—and their families—healthy. Developed through a series of virtual design charrettes, the design strategies are backed by the latest science on COVID-19, and they draw on the expertise of architects, public health experts, engineers, and facility managers.

With multiple reports tailored for schools, offices, retail spaces, senior living communities, and other high-density buildings, the Reopening America initiative offers tools and strategies that aim to:

- Reduce the spread of pathogens in buildings
- Accommodate physical distancing practices
- Promote mental well-being
- Fulfill alternative operational and functional expectations

The strategies for schools incorporate solutions for every aspect of the school day: arrival, classes, assemblies, meals, and recreation.

The recommendations recognize that schools are the beating heart of our communities, providing so much more than

education. Students, families, and communities depend on schools for creative and physical outlets and human connectivity. In so many cases, schools are a safe haven for students struggling with hunger and domestic violence.

AIA's guidelines consider these factors and many others, providing basic building blocks that can be adjusted on a case-by-case basis to ensure the needs of individual education facilities are met. This kind of public service is the epitome of the architect's mission to protect health, safety, and welfare.

As urgent and complex as these new challenges are, it's vital that we continue to accelerate progress in our ongoing work toward greater equity, diversity, and inclusion in education and licensure.

The latest statistics from the National Council of Architectural Registration Boards (NCARB) show how far we have to go. While racial and ethnic diversity among individuals completing the AXP has improved 16% over the past 10 years, NCARB notes that "growth since 2018 was primarily seen in the proportion of Asian and Hispanic/Latino candidates, which increased by 2 and 1 percentage points, respectively—with no change seen in the proportion of African American individuals in the profession." Overall, NCARB reports that "less than one in five new architects identify as a racial or ethnic minority."

The barriers, of course, don't just start during the licensure process. They don't even start in schools of architecture. They begin in the earliest days of a student's experience—with a child's first dreams of "when I grow up."

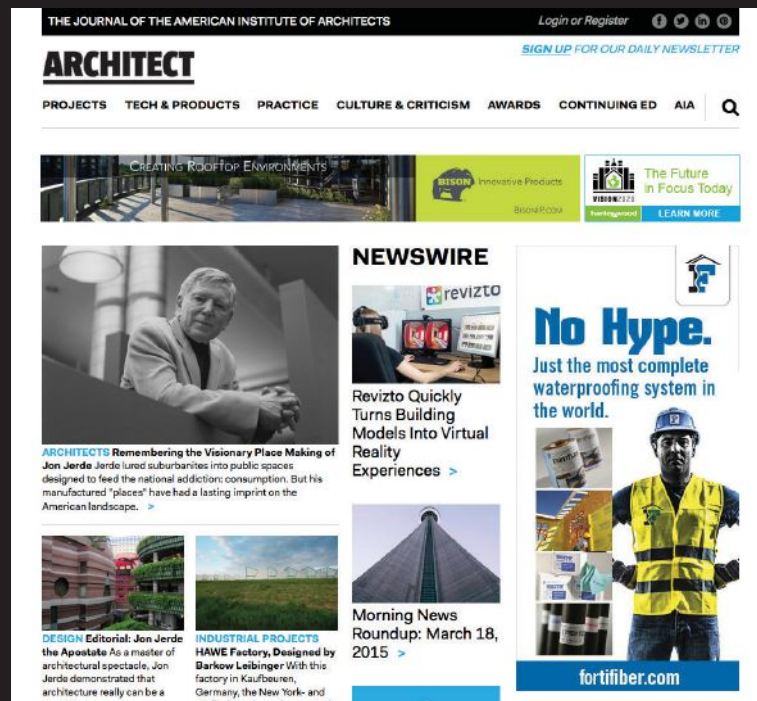
Seeing is believing. For children to see themselves as future architects, they must see themselves in today's architects. Making that connection and letting students of all backgrounds view our profession as a home for their talents and a path for their dreams is our fundamental charge.

But this isn't a time to talk about what we're already doing. It's a time to ask: What more can we do? It's a time to listen and to collaborate in new ways with our colleagues in NOMA and allies in the NAACP, National Urban League, Arquitectos, and others. As we strive to live up to our pledge to advance racial equity, this dialogue is not just a first step; it is an imperative every step of the way.

We've always said that today's challenges are too complex to be solved with a narrow set of perspectives. In a year like 2020, can anyone doubt it? The more diverse and inclusive our profession, the better those solutions will be. **AIA**

Jane Frederick, FAIA, 2020 AIA President

You Deserve More.



The premiere website for practicing architects—featuring news, project galleries, continuing education, blogs, videos and more is architectmagazine.com.

- > More projects
- > More products
- > More critiques
- > More tech
- > More news
- > More business

Get more today at architectmagazine.com

The background of the cover is a photograph of a modern building's interior, seen through large glass windows. The interior is bright and open-plan, with people working at tables. The building has a dark facade and a prominent horizontal band of light-colored panels. The overall aesthetic is clean and architectural.

AIA

2020

The AIA Awards for Architecture aspire to spotlight the best contemporary architecture that improves the lives of the communities, and users, it serves. Among this year's winners you'll find projects that favor restraint over outsize flourishes and public input over top-down directives. Taken together, these buildings welcome the public, and though many have been closed for months as a result of the pandemic, people are slowly, as safety allows, beginning to repopulate the civic, cultural, and community spaces included here. COVID-19 has changed the ways we gather together, but these projects are proof that thoughtful design will endure, and will continue to facilitate connections and community.

TEXT BY IAN VOLNER
EDITED BY KATIE GERFEN AND ERIC WILLS

AWARDS

Miesian simplicity meets high-tech materiality on the Illinois Institute of Technology campus.

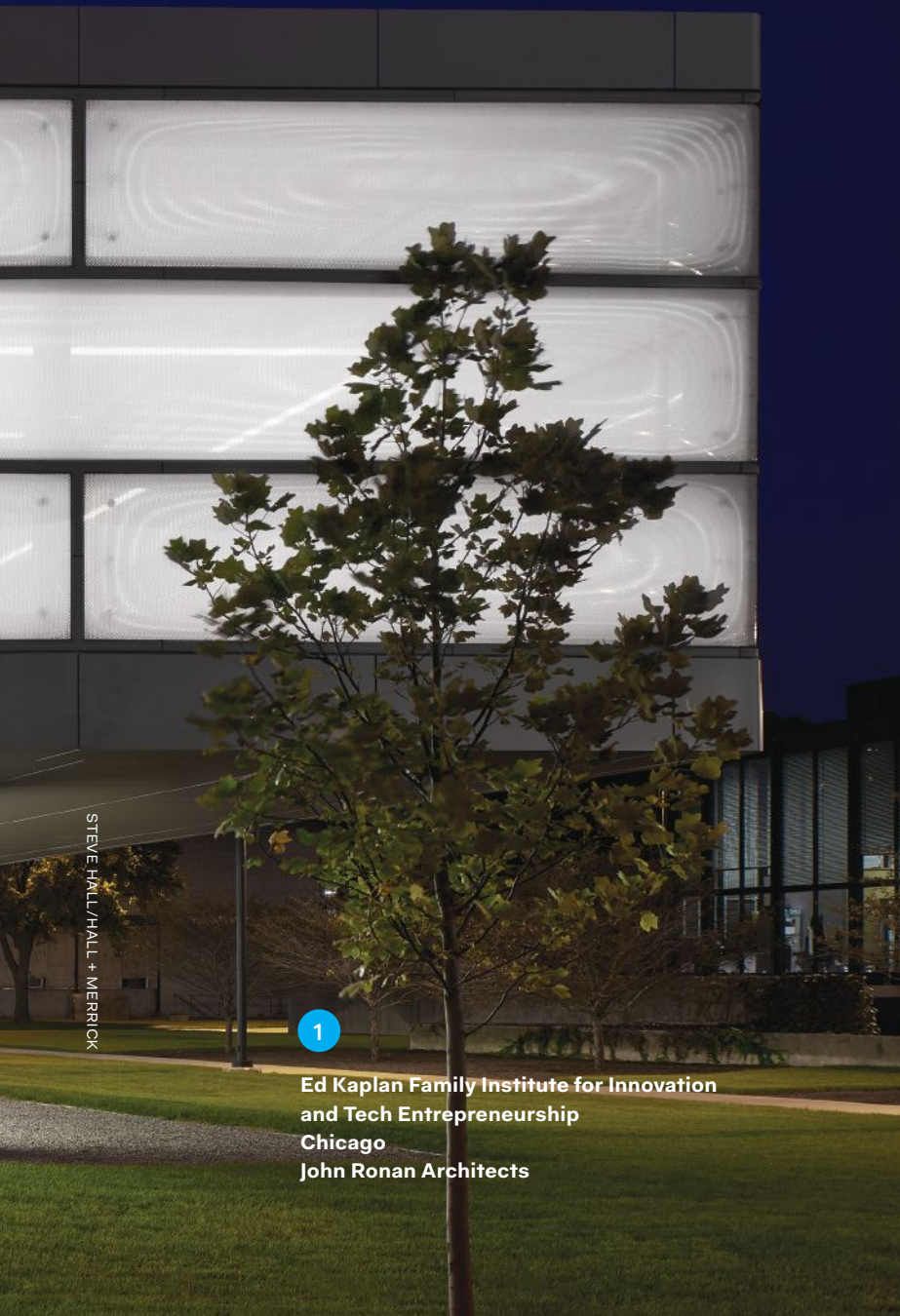
A 1 John Ronan Architects managed to balance invention and reverence in its design for the **Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship**, all while going toe-to-toe with a master of Modernism. Located in the firm's hometown of Chicago, the building is the latest addition to the Illinois Institute of Technology. Designed by Ludwig Mies van der Rohe, the landmark campus includes two of his most celebrated buildings—the Robert Carr Memorial Chapel and S.R. Crown Hall—which sit among a field of similarly austere glass, steel, and brick pavilions set in a rigorous gridiron plan.

The Ronan team responded with a simple rectangular footprint and a crisp industrial materiality that seem to come directly from the Bauhaus playbook—and then called a daring audible. In place of Mies' muscular materiality, the Kaplan Institute's upper story is clouded in a hazy, translucent system—not of glazing, but of inflated pillows of ETFE—that seems to hover in the air. An interlayer moves in response to the sun, changing the density of the system's "frit"—a series of dots on the material's surface that helps to block glare and regulate heat gain.

Inside, students (who, at press time, were slated to have access to the building this fall, when the school resumes a combination of in-person and distance learning) are greeted not with a warehouse-style studio but with an array of discrete spaces and stairs that create a decidedly un-Miesian complexity in section. The staircase on the campus side, a nod to Crown Hall's monumental entryway, leads into a green space, putting the emphasis on tranquility and intimacy. The overall effect is a novel inversion of Mies's Spartan grandeur—sufficiently subdued to blend in with its historic context, with a contemporary sense of functionality and warmth.

ARCHITECTURE AWARDS JURY

Samuel M. Miller, FAIA, LMN, Seattle (Chair)
Merrill Elam, AIA, Mack Scogin Merrill Elam Architects, Atlanta
Rebecca Sharkey, AIA, EHDD, San Francisco
Dale Frens, AIA, Patterhn Ives, West Chester, Pa.
Michael Johns, FAIA, NOMA, Mdesigns + MWJ Consulting, Philadelphia
Michelle Acosta, AIA, SmithGroup, Phoenix
Trinity Simons, Mayor's Institute on City Design, Washington, D.C.
Kevin Alter, ASSOC. AIA, Alterstudio Architecture, Austin, Texas
Caleb Bertels, ASSOC. AIA, University of Arkansas, Fayetteville, Ark.



STEVE HALL/HALL + MERRICK

1

Ed Kaplan Family Institute for Innovation and Tech Entrepreneurship
 Chicago
 John Ronan Architects

2

Floral Court
London
Kohn Pedersen Fox Associates



A residential building in Covent Garden nods to the past while embracing contemporary realities.

A 2 In Central London, Georgian row houses sit side by side with postwar towers in a landscape that is still shaped by the bombing raids of World War II. So it is fitting that the London office of Kohn Pedersen Fox Associates has created a residential building there that attempts to heal an urban fabric that sometimes seems at war with itself. **Floral Court** is a six-story stack of 45 apartments that is artfully slipped into a narrow site in Covent Garden, the commercial and nightlife district famed for its buskers and boutiques. Units range from studios to a penthouse that listed at £20 million.

The structure replaces a bulky, three-decade-old office building that never quite fit in aesthetically. By contrast, Floral Court's buff brick façade blends neatly with its centuries-old neighbors—including, steps away, Inigo Jones' famous St. Paul's Church. The multifamily complex's interior scheme takes existing, decades-old warehouse and office spaces and knits them into public areas for the new building, weaving past and present into a seamless whole.

For residents, vast floor-to-ceiling apartment windows pair elegantly with Spartan finishes and fixtures to make for a modern ambiance in the midst of the landmark district. For passersby, the building's greatest appeal is its signature silhouette, with the glazed apartments shifting slightly from floor to floor, creating a jauntily irregular outline that makes a perfect backdrop to the lively, shingle-filled streetscape. (Though the streets have been quieter during the pandemic, a fresco dining recently returned to a restaurant in Floral Courts' courtyard.) According to the designers, the unusual massing was inspired by fruit and vegetable crates, a detail pulled directly from Covent Gardens' colorful commercial history.

An airport fuses nature and hyperefficiency to improve the travel experience, while also welcoming its local neighbors.

A 3 It's hard enough to design an airport that escapes the pitfall of placelessness—so often the bugbear of the typology—but to do so on the scale required for **Terminal 2** of Mumbai's **Chhatrapati Shivaji International Airport** requires skill and careful planning.

Skidmore, Owings & Merrill were charged with building a 450,000-square-meter (4.8 million-square-foot) facility that could handle a large portion of the hub's estimated 40 million annual passengers. (At press time, pandemic restrictions on air travel in India are starting to ease, and international flight operations are slated to resume in September). The firm also had to account for the requisite modern amenities and support services on a site sandwiched between small private residences and a river.

Such close quarters redoubled the imperative to make the building as sensitive as it would have to be serviceable, and this SOM achieved with a design that combines structural ingenuity and formal daring. The terminal's primary superstructure is composed of coffered white panels that bend, twist, and compress. Taking the form of biomorphic mushroom-like columns, they spread and conjoin to form a gigantic roof canopy that admits daylight to the concourses and reduces the bulk of the building for neighbors.

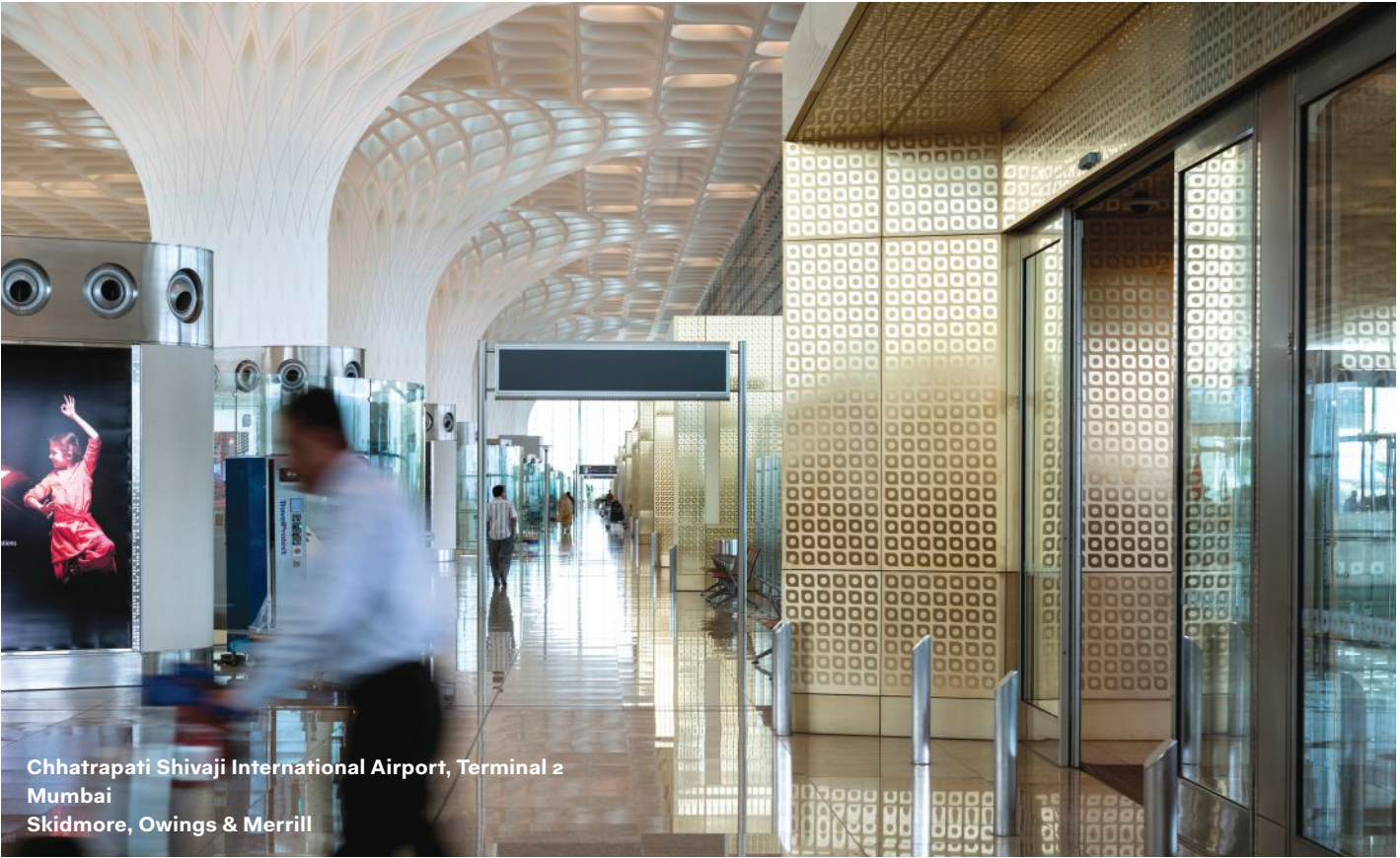
The architects hit on this eye-catching solution (along with decorative motifs in the flooring and fixtures) by observing and consulting with Mumbai-based designers and craftspeople. From a vast wall covered in the work of local artists, to a multi-tier plan for sorting traffic, to exquisitely careful siting that minimizes disruptions to nearby residents, SOM's project brings together technology and ambiance in an original, organic synthesis.

A mixed-use hub in Copenhagen balances the energy of Tivoli Gardens with the restraint of Danish Modernism.

A 4 With the death of Henry N. Cobb this March, the office of Pei Cobb Freed & Partners has now lost all three of its original visionary leaders. Yet the firm carries on the intrepid ethos of its founding trio with projects like **Tivoli Hjørnet**, a mixed-use building in the Danish capital of Copenhagen that simultaneously reflects the city's history, its progressive outlook, and the design team's own architectural sensibility.

Combining hospitality and other commercial tenants inside a nearly 100,000-square-foot space, the building is a multifunctional pendant to Copenhagen's most celebrated recreational attraction: the Tivoli Gardens, the nearly two-century-old fairgrounds. One of the first amusement parks in the world—and an inspiration to Walt Disney, among others—the Gardens create a brief opening in the city's built fabric. (During the pandemic this spring, the lushly landscaped spaces were repurposed as makeshift kindergarten classrooms.)

PCF&P responded to the significance of the site with a design that feels at once energetic and serene. Launching over a setback *rez-de-chaussée*, the building's long, winding façade (a nod to the city wall that once stood on the site) is marked by the vertical strips of an internal brise-soleil, which gives it an orderly rhythm even as it ranges sinuously around its corner site. Roof decks, thickly planted terra cotta terraces facing the park, and an elaborate evening lighting scheme throughout all make the building appear to bristle with activity, but its simple materials palette of glass and steel keeps it well in line with the Danish Modernist spirit—as well as the spirit of PCF&P itself, still innovative after six decades in practice.



Chhatrapati Shivaji International Airport, Terminal 2
Mumbai
Skidmore, Owings & Merrill

3



Tivoli Hjørnet
Copenhagen
Pei Cobb Freed & Partners

4

A museum of local culture in Southeastern China doubles as a pedestrian river crossing.

⑤ Exemplifying the shift away from so-called “weird” buildings that Chinese President Xi Jinping condemned in a pivotal 2014 speech, the **Jishou Art Museum** from Beijing-based Atelier FCJZ is a model of modesty and authenticity—a contemporary building with a vernacular flair.

The city of Jishou, the capital of the Xiangxi Tujia and Miao Autonomous Prefecture, is located in southeast China; even amid the country’s rapid industrialization, the city and surrounding area have maintained a sense of history and a unique cultural identity connected

with its large population of non-Han minorities—in particular, the Tujia and Miao people.

Atelier FCJZ used the regional landscape, full of meandering rivers and rocky valleys, as a starting point for the museum’s parti: Arching over the Wanrong River in the heart of town, the building comprises three levels supported by two structurally distinct stacked bridges. Up top, a shallow-arch supports a gallery for the permanent collection of paintings. The span below supports an open-air pedestrian thoroughway within the depth of its trusses,

with a Kunsthalle-like temporary exhibition hall above. Supporting functions (including staff spaces and a café) are housed in anchoring buildings on either side. Reflecting the museum’s mission, the whole is devoted to the work of local artists and artisans.

As tailored to the city as the work inside, the building does double duty as an actual bridge: Visitors can stroll along the lower level behind the open screen of its steel truss, which is painted gray to match the neighboring buildings and purpose-built to handle the flood-prone Wanrong.

5

Jishou Art Museum
Jishou, China
Atelier FCJZ



Art and nature commingle in a private museum on an exurban Maryland estate.

⑥ Given a nearly blank canvas, enviable resources, and over 100 acres to do with almost as they pleased, the team at Thomas Phifer and Partners made a rare and admirable choice with their design for the **Glenstone Museum**: They opted for restraint. Founded by philanthropists and art lovers Mitchell and Emily Wei Rales, the institution has occupied a small corner of the couple's rolling estate in Potomac, Md., since it opened in 2006; with Phifer's expansion,

the public can finally get a sense of the sheer scale of the couple's collection. (At press time, the museum is operating at limited capacity due to the COVID-19 pandemic. Visitors can schedule a visit on its website; tickets are free.)

To house the 1,000-plus works of postwar painting and sculpture, the architects opted for a sequence of four towers flanked by low-slung, glass-faced pavilions, all built of stacked, blue-gray slabs of precast concrete and arranged

into a courtyard scheme around a snaking, sunken lily pond. The minimal blocks give the structure its moody, somber atmosphere, while the procession down to and then around the water feature gives it a sense of unfolding discovery, of entering a distinct realm of quietude and intimacy that fosters a rare encounter with art.

All of this is contained within a park-like setting, completely devoid of cars and filled instead with thick grasses, native



An urban library, built smartly around a light-rail line, defies convention to create a welcoming space for visitors.

flowers, and thousands of newly transplanted trees, all but hiding it from the suburban estates on either side. Interspersed with the firm's satellite entry and dining pavilions, a preexisting exhibition space by Charles Gwathmey, and outdoor sculptures beside winding paths and inside leafy groves, Glenstone is a landscape for contemplation.



In its design for the **Calgary Central Library**, the Norwegian-American team at Snøhetta, in collaboration with Toronto firm Dialog, seemed determined to upend every expectation. The project is, all at once, a building without a front; a high-tech wonder made out of the simplest of materials; and a civic monument that is also, in effect, a piece of infrastructure.

The architects began with a simple-seeming skin of geometric forms, which vary between opaque white and transparent glass and wrap around both main façades of the crescent-shaped building. The library greets the city from either side as a result, but that double-front approach does not deprive the building of a clear sense of arrival: The lower floor is raised to reveal the primary entry beneath a glowing arch that cuts all the way through the structure—a visual quote that references the region's seasonal arch-shaped clouds. That curvaceous covered entry plaza is clad in a surprising, and sustainable, material: timber harvested in nearby British Columbia.

Visitors (now wearing masks following the library's July reopening) proceed into an 85-foot-tall central atrium—lined in hemlock slats and capped by an elliptical skylight—and ascend via gentle ramps and stairways to peripheral reading rooms and community gathering spaces on the light-filled upper floors.

The grandeur of the building is even more impressive considering that the site overlaps with a light-rail line. The designers lifted the structure at one end to allow for the rail line to pass directly under it—and managed to ensure that the trains don't disrupt the quiet interior.

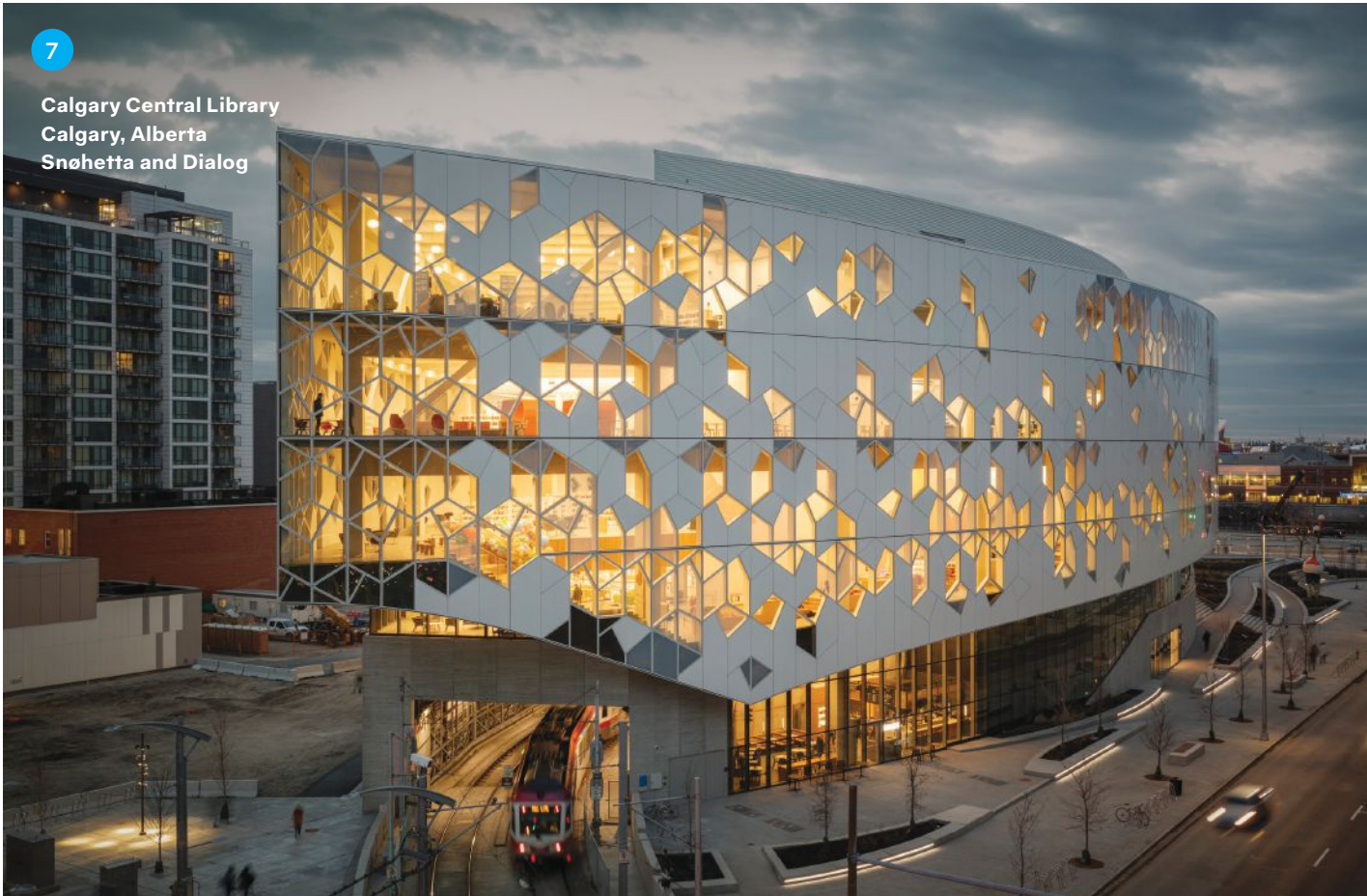


6

Glenstone
Potomac, Md.
Thomas Phifer and Partners

7

Calgary Central Library
Calgary, Alberta
Snøhetta and Dialog



The Cass Gilbert–designed landmark received the first thorough restoration in its 116-year history.

⑧ Louisiana may have the tallest and Texas the biggest, but **Minnesota** boasts one of the most architecturally significant **state capitol** buildings in the United States—not to mention one of the most resilient.

Built 116 years ago, the grand Beaux Arts edifice in St. Paul was designed by Cass Gilbert, architect of New York’s famed Woolworth Building. But having endured a century and more of the Upper Midwest’s rather extreme climate (St. Paul’s snowfall averages about 52 inches per year), the building was more than ready for the

dramatic touch-up directed with sensitive aplomb by local design firm HGA.

Replacing or repairing tens of thousands of pieces of marble; cleaning scores of historic paintings and sculptures; adding safety and accessibility features; relighting the Renaissance-inspired dome and stately classical façade; providing new auxiliary spaces for visitors: The effort to restore the building was nothing if not thorough. But that was a necessity given the fact that the capitol had not been renovated at any point since its original completion.

HGA’s scrupulous attention to detail was complemented by smart logistical management that allowed it to carry out the project in orderly stages over an extended timeline—including four years of construction on top of a prior seven of bureaucratic wrangling.

The architects took special care to consult lawmakers and the public at large in an open process of meetings and dialogue that helped ensure that the final product reflected not just Gilbert’s original vision, but the needs and aspirations of the people it is meant to serve.

8

Minnesota State Capitol Restoration
St. Paul, Minn.
HGA



PAUL CROSBY

> See more images, drawings, and full project credits for each winning project at bit.ly/HonorAwards.




Couverture

Simply the best furniture covers on the market.

877 434 1666
couverturecovers.com

To be a part of the next
ARCHITECT MAGAZINE
special advertising section,
Contact: **Phil Hernandez**
202.736.3381
phernandez@hanleywood.com

NAKAMOTO FORESTRY

Our definition of beauty goes beyond the surface.

nakamotoforestry.com

Panel Brackets



PGRP1A

For Privacy Screens

MOCKETT

DOUG MOCKETT & COMPANY, INC.

www.mockett.com • (800) 523-1269

ALINEA LED LUMINAIRE TIMELESS ELEGANCE



CONTACT US TODAY
800-221-9092
www.aamsco.com



PAC-CLAD
PETERSEN
A CARLISLE COMPANY

CASE STUDY @ PAC-CLAD.COM/DELVALLE



Custom Bins
DeepStreamDesign.com

ARCHITECT

Content Licensing for Every Marketing Strategy



Marketing solutions fit for:
Outdoor | Direct Mail | Print
Advertising | Tradeshow/ POP
Displays | Social Media | Radio & TV

Leverage branded content from Architect to create a more powerful and sophisticated statement about your product, service, or company in your next marketing campaign. Contact Wright's Media to find out more about how we can customize your acknowledgements and recognitions to enhance your marketing strategies.

Call Wright's Media at 877.652.5295, visit our website at wrightsmedia.com/sites/hanleywood or email us at hanleywood@wrightsmedia.com



JLC-Tech creates the only LED lighting products that are designed, approved and patented to replace the cross members in a suspended grid ceiling system. Dramatically cut energy use, reduce installation costs, and minimize construction waste by using JLC-Tech's products.

To learn more about JLC-Tech's lighting products, visit JLC-Tech.com.



landscapeforms®

ARCHITECT

The Journal of the American
Institute of Architects



You Deserve More.



The premiere website for practicing architects—featuring news, project galleries, continuing education, blogs, videos and more is architectmagazine.com.

- > More projects
- > More news
- > More tech
- > More critiques
- > More products
- > More business

Get more today at
architectmagazine.com

Advertiser	Page	Website	Phone
American Institute of Architects	69	aiafilmchallenge.org	
American Institute of Architects	70	aiau.aia.org	
ARCAT, Inc.	C3	arcad.com	
Architect Newsletter	35*	architectmagazine.com	
Architect Online	73*	architectmagazine.com	
Armstrong World Industries - Ceilings	7	armstrongceilings.com/projectworks	
ASI Group	5, 36, 41, 51	asigroup.com	914.476.9000
Belden Brick	27	beldenbrick.com	
Bobrick Washroom	25	bobrick.com/klutch	
Caesarstone	23	caesarstoneus.com	
DeepStream Designs, Inc.	16	deepstreamdesign.com	305.857.0466
Doug Mockett & Co. Inc.	16	mockett.com	800.523.1269
Dri-Design	14	dri-design.com	616.355.2970
Endicott Clay Products	9	endicott.com	
Hanover Architectural Products	22	hanoverpavers.com	800.426.4242
Huber Engineered Woods	2-3	advantechquiet.com	
JLC Tech	31	jlc-tech.com	781.826.8162
Kalwall Corp.	C2	kalwall.com	
Landscape Forms	6	landscapeforms.com	800.430.6205
LP FlameBlock	11	lpcorp.com/flameblock	
LuxeHome	35*	luxehome.com	
Modernfold, Inc.	21	modernfold.com	800.869.9685
National Grid	73*	ngrid.com/biz	
National Ready Mixed Concrete Assn NRMCA	34, 46	buildwithstrength.com	
Ornamental Metal Institute of New York	8	ominy.org	
Residential Architect Design Awards	87	radesignawards.com	
Rocky Mountain Hardware	43	rockymountainhardware.com	
SAFTI FIRST	18	safti.com	
SAFTI FIRST	1	safti.com/usa-made	888.653.3333
Schluter-Systems Inc.	15	schluter.com	
Seiho International	40	seiho.com	626.395.7299
Sierra Pacific Windows	16a-d	sierrapacificwindows.com	800.824.7744
Sierra Pacific Windows	45	sierrapacificwindows.com/videos	800.824.7744
Sloan	13	sloan.com/touch-free	
Steel Institute of New York	12	siny.org	
Sub-Zero Group	Back cover	subzero-wolf.com/connect	
Tamlyn	56-59	go.hw.net/ar092020-1	
Tamlyn	60-61	tamlyn.com	800.334.1676
TCP Lighting	29	tcpi.com	
The Studio Prize	17	studioprize.com	
Think Wood	52-55	go.hw.net/ar012020-3	
Ultra-tec Cable Railing	10, 26	ultra-tec.com	
US Green Building Council	62	usgbc.org/credentials	

ENTER YOUR BEST PROJECTS IN THE 21ST ANNUAL RESIDENTIAL ARCHITECT DESIGN AWARDS
and be recognized for your outstanding work in advancing residential design.

21st ANNUAL

RESIDENTIAL ARCHITECT DESIGN AWARDS



STANDARD ENTRY CATEGORIES (\$150)

1. Custom / Less Than 3,000 Square Feet
2. Custom / More Than 3,000 Square Feet
3. Renovation / Adaptive Reuse (residential remodeling and additions)
4. Restoration / Preservation
5. Multifamily Housing
6. Affordable Housing
7. Architectural Interiors (build-outs, interior renovations)
8. Student Housing
9. Outbuilding
10. On the Boards (any unbuilt residential project not yet completed)

SPECIALTY ENTRY CATEGORIES (\$120)

11. Kitchen
12. Bath
13. Architectural Design Detail

RECOGNITION

Winners will be featured in the December 2020 issue of ARCHITECT with expanded coverage online.

ELIGIBILITY

Entries should be submitted by an architect or designer. Other building industry professionals may submit projects on behalf of an architect or designer. Projects outside the U.S. are welcomed. Any home or project completed after Jan. 1, 2016 is eligible.

HOW TO ENTER

SUBMIT YOUR WORK AT
> radesignawards.com

QUESTIONS?

EMAIL rada@hanleywood.com

DEADLINES

REGULAR October 2, 2020
LATE October 9, 2020 (Will include a late fee of \$50 / entry)

2019 AWARD WINNER BRANCH HOUSE, BY TOLO ARCHITECTURE; PHOTO BY DAVID HARTWELL

Editorial: California is on Fire. Again.

TEXT BY KATIE GERFEN

As I write this, more than a dozen western states are ablaze, with each wildfire ranging from a few hundred to a few hundred thousand acres in size. In northern California, the LNU and SCU Lightning Complex fires (so called because lightning strikes were what instigated the series of small fires that merged to form these massive ones) are already the second and third largest in the state's history; they are barely contained, and more than a dozen additional major fires are active throughout the state.

In fact, more than 1.5 million acres have already burned in the Golden State this year. Nearly 2,000 structures have been destroyed; tens of thousands more are currently threatened. Seven people have died. This is just the latest in a litany of examples that should make it impossible to ignore how climate change is increasing the frequency and scope of natural disasters.

I keep a close eye on wildfires because I grew up in San Francisco, and my family still lives there. My father texted me a photo of the sky, so thick with smoke that the sun glowed an eerie red despite their house being miles from the nearest blaze. Air quality throughout the region is bordering on (or well into) "unhealthy" territory. The threat of respiratory distress for many is real, and more so during the pandemic. Though my family has the resources to evacuate if need be, I worry about those who do not.

The effects of natural disasters like wildfires are insidious and reach beyond the burn zone. In the best of times, air pollution has a disproportionate effect on low-income communities and communities of color. The American Lung Association attributes this disparity to the fact that these communities tend to be closer to sources of pollution and have less access to grocery stores, health care, and job opportunities.

These communities, many of which have been subject to decades of racist housing policies such as redlining, are also disproportionately and devastatingly affected by rising temperatures—some so high that they

dry out hillsides, which then easily ignite. A recent *New York Times* article, citing a 2020 study from *Climate* called "The Effects of Historical Housing Policies on Resident Exposure to Intra-Urban Heat: A Study of 108 U.S. Urban Areas," reports that formerly redlined neighborhoods, many of which have remained communities of color, have minimal green space or tree coverage. This causes them to run an average of 5, but as many as 12 degrees F hotter in the summer months than wealthier, landscaped, predominately white neighborhoods. Every one degree increase in temperature in a heat wave, the article states, can lead to a 2.5% increase in the risk of heat-related deaths.

We know the statistics: Buildings are responsible for nearly 40% of the world's greenhouse gas emissions. Working to design more sustainable structures and cities and to reach carbon neutrality by 2050 at the latest is our best shot at preventing the planet from warming to the point of no return.

Greening our cities isn't just about creating a more sustainable built environment. It is also about creating more just and equitable environments. The air in wealthy California neighborhoods will clear when the fires die out, but in low-income communities and communities of color, poor air quality is an ever-present reality that climate change is only making worse. We must act quickly to stem the tide of climate change and the increasing severity of the disasters it brings. The mounting human toll is too high to bear.



kgerfen@hanleywood.com

Working from home can be a bit of an adjustment.



ARCAT has the tools to help AEC professionals design architecture from anywhere. BIM, CAD, specs, SpecWizard® and so much more!

No dues, no subscriptions,
no registration - just solutions.

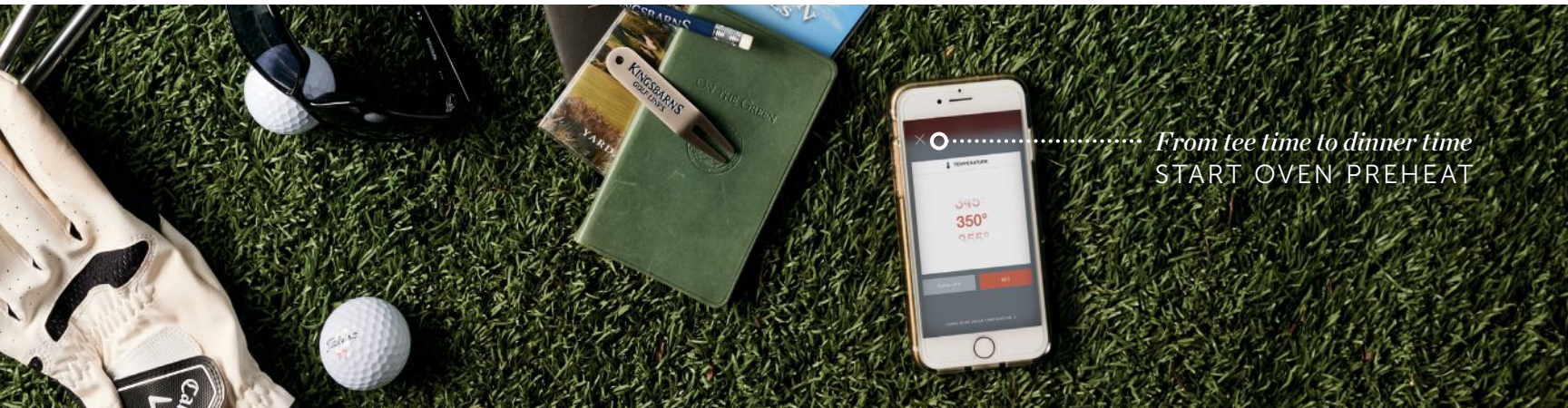
ARCAT[®]
www.arcat.com



The Connected Kitchen



Worry-free travel
ALERT: DOOR AJAR



From tee time to dinner time
START OVEN PREHEAT



Count sheep, not cycles
REMOTE START WASH CYCLE

With Sub-Zero, Wolf, and Cove connected appliances, you have convenience, peace of mind, and knowledge in your palm. This ultimately ensures your appliances always perform at their very best.

 To learn more, visit
SUBZERO-WOLF.COM/CONNECT