

Light and Circadian Rhythm
Karrie Jacobs on the TWA Terminal
Better Community Engagement
An Acoustical Ceiling by LMN
New Contract Furniture
The Open Workshop: A Portfolio

architectmagazine.com
The Journal of The American
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Inside? Outside?

**Challenging conventions of
enclosure and containment**
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Jennifer Bonner / MALL
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BUILDING LEGACIES.



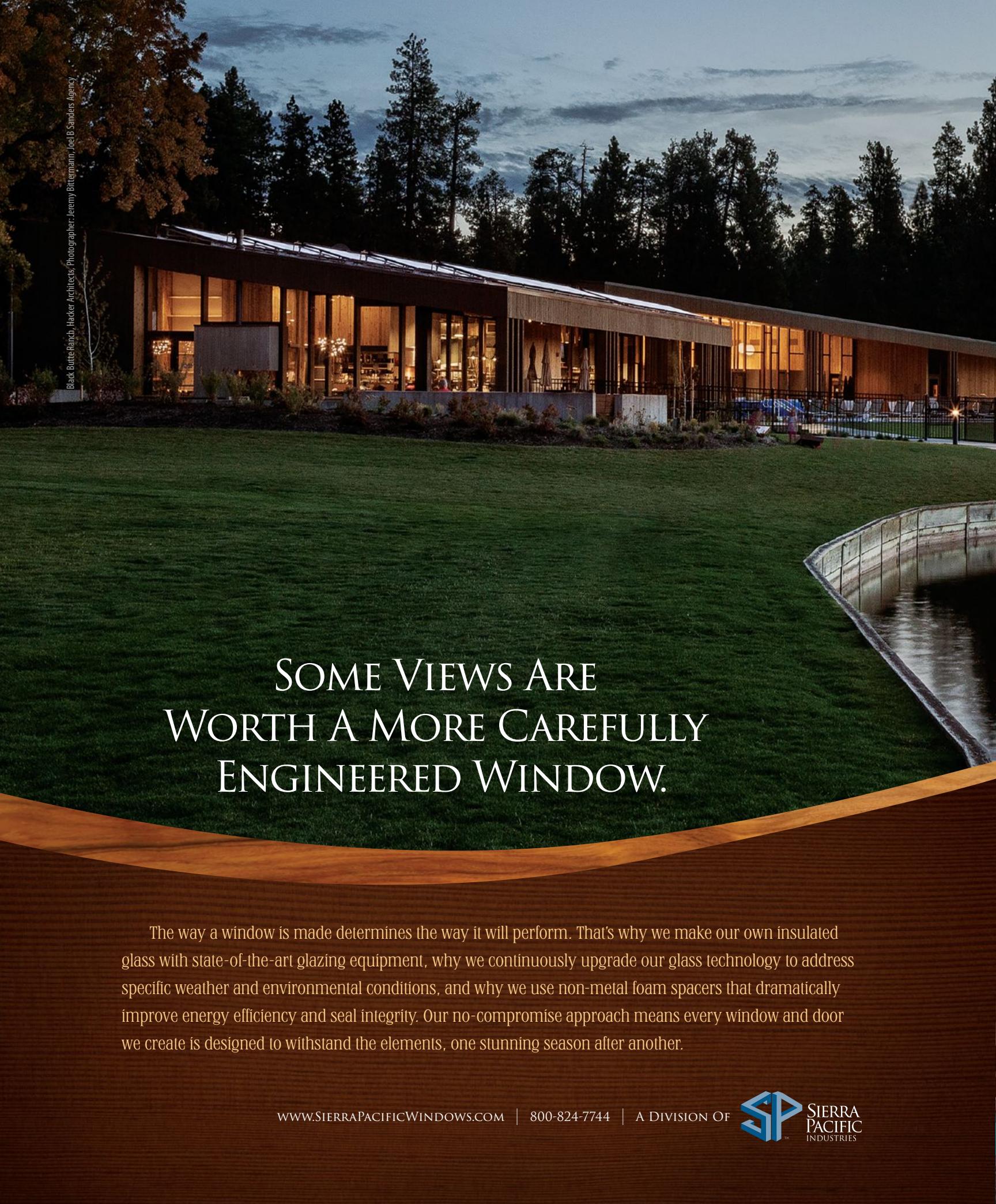
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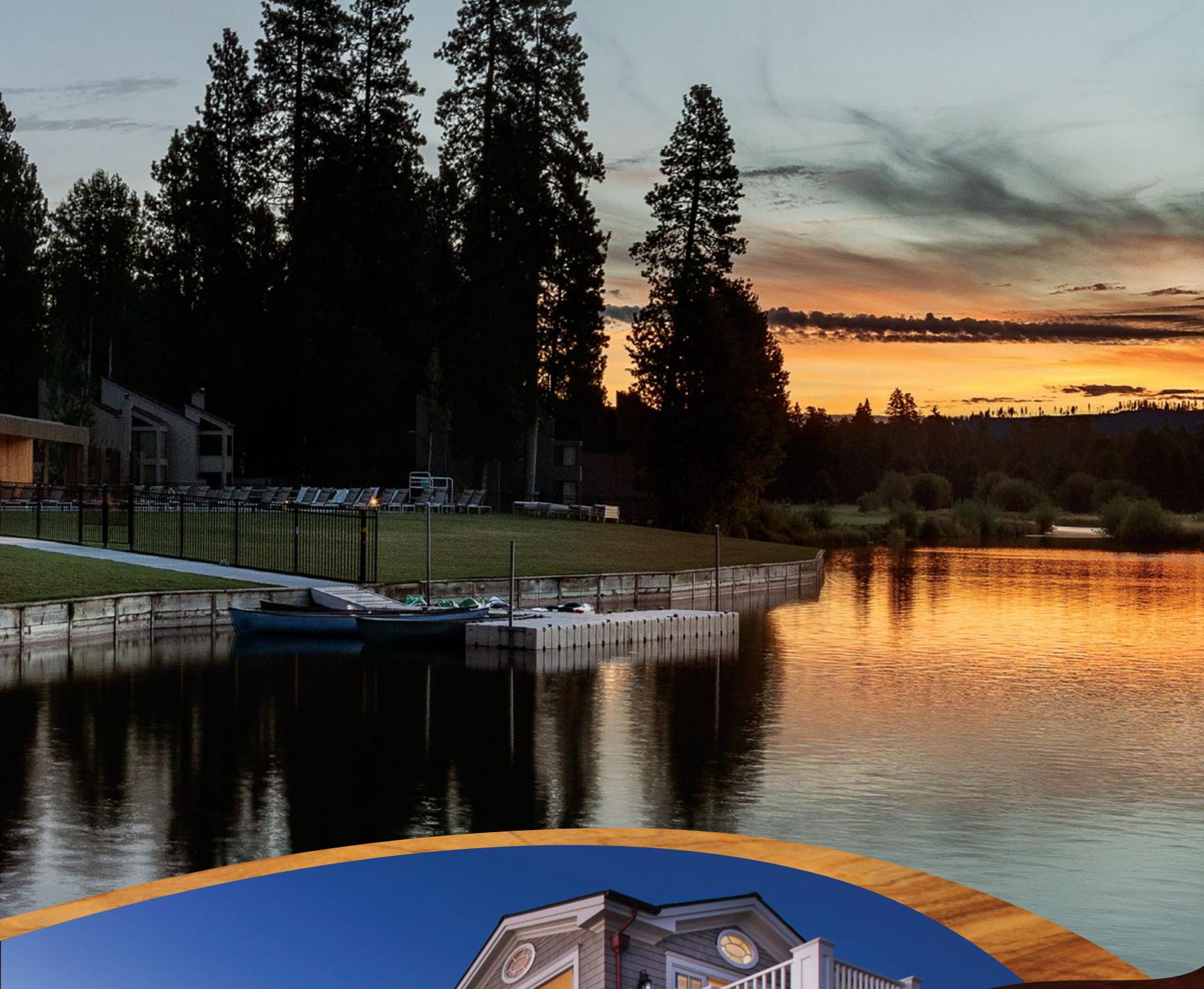
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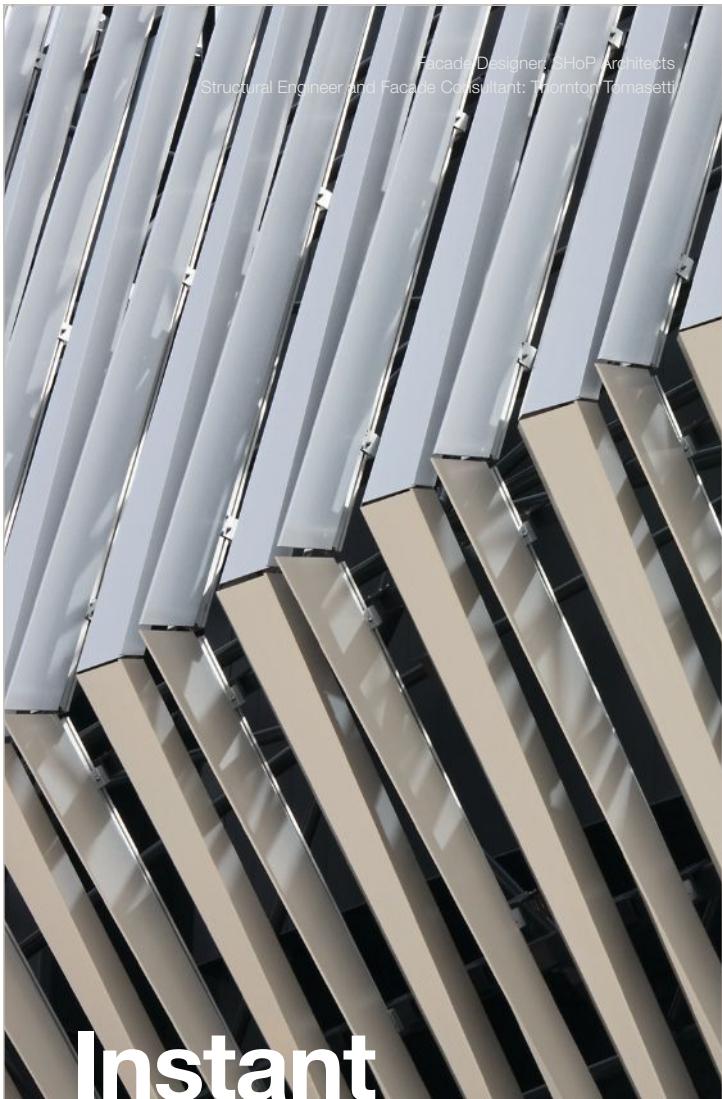


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Read more about it in **Metals in Construction** online.

Façade Designer: SHoP Architects
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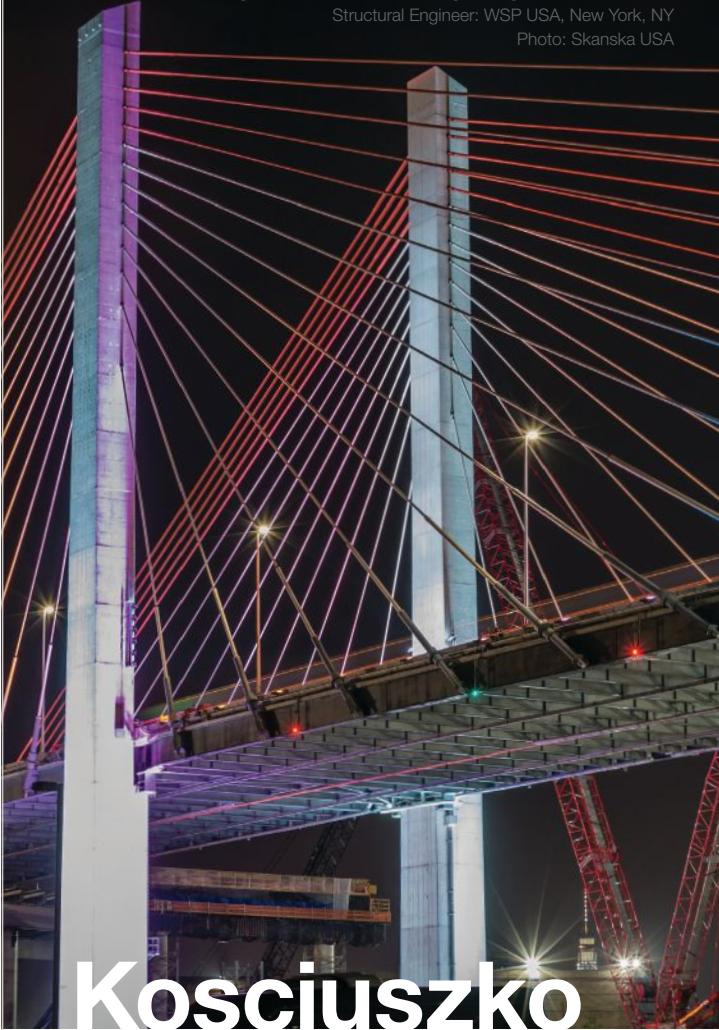
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Nine more to go.

One in ten new apartments in the U.S. are
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Lead Design Firm: HNTB New York Engineering and Architecture PC
Structural Engineer: WSP USA, New York, NY
Photo: Skanska USA



Kosciuszko à Gogo

The design of urban infrastructure affects city life as much as the design of its buildings. That's why replacing the **Kosciuszko Bridge**—a notorious pinch point in traffic between Brooklyn and Queens—was a high priority for Governor Cuomo. With heavy lifting from **HNTB**, **WSP USA**, and **Skanska**, a striking cable-stayed span has risen where the outdated bridge once stood, ensuring New Yorkers may still have trouble saying its name, but they never have trouble getting home.

Read more about it in **Metals in Construction** online.

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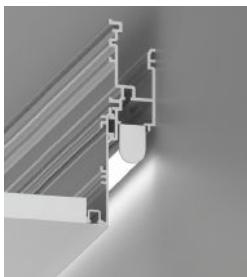
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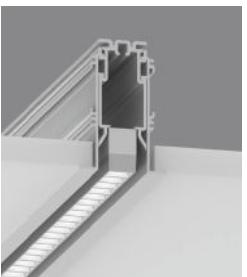
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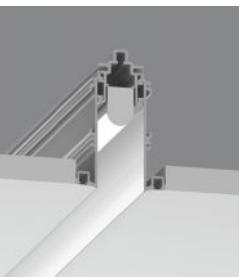
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Modernism in America

Docomomo U.S. has announced the winners of its 2019 Modernism in America Awards: restorations of Mies' Des Moines, Iowa, Catholic Pastoral Center, Saarinen's Gateway Arch Museum in St. Louis, Lautner's Silverado house in Los Angeles; Johnson and Knoll's Schlumberger Research Center Administration Building (above) in Ridgefield, Conn., and Olav Hammarstrom's Pond House in Wellfleet, Mass.; surveys of two Eichler neighborhoods in California and 400 midcentury buildings in Michigan; and advocacy for Isami Enomoto murals in Hawaii, the Portland Building, and SOM's Terrace Plaza Hotel in Cincinnati. —MIABELLE SALZANO

> To learn more about the 2019 Modernism in America Award winners, visit bit.ly/DocomomoUS2019Awards.



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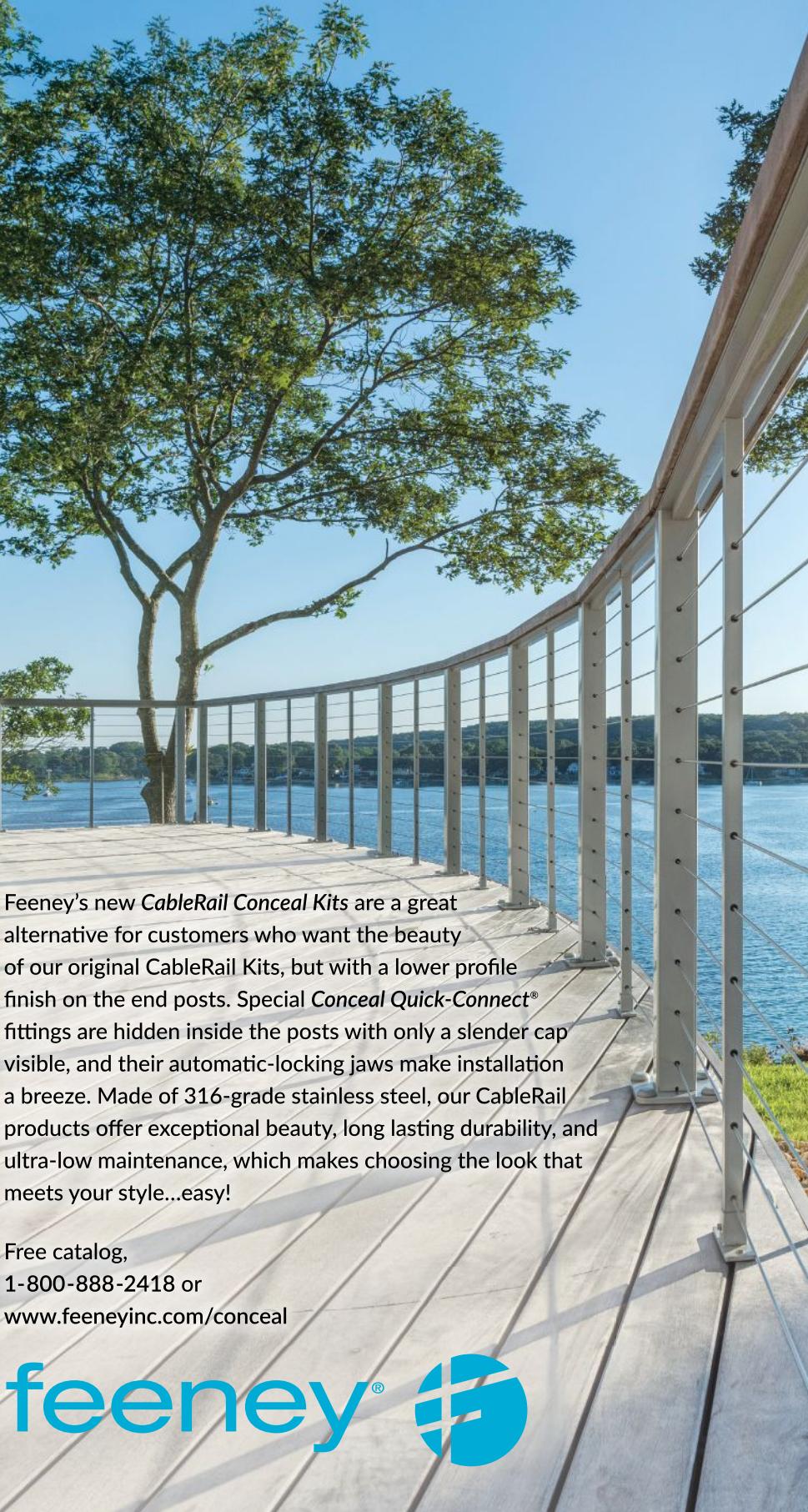


Just Desserts

Every year, the Architectural League Prize recognizes talented young practitioners who submit based on a theme. The 2019 theme was "just," and the winners are Cyrus Peñarroyo of Extents, Ann Arbor, Mich.; Virginia Black, Gabrielle Printz, and Rosana Elkhatib of Feminist Architecture Collaborative (F-Architecture), New York; Gregory Meltonov of Taller Ken, New York, Guatemala City, and San José, Costa Rica; Jennifer Bonner of MALL, Boston; Mira Hasson Henry of Henry Architecture (HA), Los Angeles; and Rachel Barnard of Young New Yorkers, which is a New York-based arts program for youths (shown) in the criminal justice system.

> For more information about this year's winners, visit bit.ly/LeaguePrize2019.

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The Pragmatic Outlaw

The architect Craig Hodgetts, FAIA—writing way back in 1970—pretty accurately predicted the reality we inhabit today. He might not have foreseen the messiness and ephemerality that the digital turn and emergence of a hyper-object world has created, but he did understand that we would indeed, as the title of one of his essays of the period indicates, live in a “Synthetic Landscape.” The prescient text appears in an anthology of Hodgetts’ work (including a polemical comic, above) entitled *Swimming to Suburbia and Other Essays* (Oro Editions, 2018), edited by Todd Gannon, AIA, of Ohio State University’s Knowlton School. —AARON BETSKY



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Best Practices: Making a Name for Yourself

TEXT BY AILEEN KWUN

It's no secret that working at a large firm can be a demanding experience. Here, three emerging professionals share how they've also managed to prioritize self-initiated projects and strike out on their own beyond conventional design.

Define and Promote Your Passion

For Pascale Sablan, AIA, her push to develop a personal brand separate from her work as a senior associate at Sg Architecture, in New York, coincided with a burgeoning passion for diversity and inclusion in architecture. The realization that she "was the 315th African American woman in the United States of all time, ever, to become licensed," led Sablan to establish Beyond the Built Environment (BBE), a platform for championing and amplifying the contributions of architects of color with public programs and exhibitions.

To amplify her message, Sablan depends on a range of digital tools, including Google Drive and the website platform Wix, for self-marketing. Her "Excited to Share" email blast, first started six years ago to keep her family and relatives apprised of her work, now goes out to well over 1,000 recipients. As she traveled to conferences, speaking engagements, and other networking events, amassing contacts, she began to extend her newsletter to professional acquaintances as an easy way to keep her contacts organized and informed with her latest calls to action, news developments, and projects that link back to her website.

Dare to Provoke

In designer Dong-Ping Wong's case, the first step to establishing his personal brand came when he went outside the conventions of architecture. In 2011, Wong and fellow designers Archie Coates and Jeff Franklin captivated the industry with +POOL, an unsolicited proposal for a floating, self-filtering swimming pool in New York City's East River. Introduced purely as a visual concept and provocation—and rebellion against architecture's stringent culture centered on briefs and competitions—the project has become a calling card for Wong's fresh ideas and a refreshingly pop-driven approach to architecture.

"In the beginning, the intention wasn't even to try and build it," says

"I've always just been interested in different ways to initiate projects."

—Dong-Ping Wong, founder,
Food New York

Wong, who dreamt up the idea while freelancing. "Nobody approached us to design a pool. I've always just been interested in different ways to initiate projects and ask, 'Are there different ways that architects can communicate? Are there different ways architects can have more agency?'"

Wong has since parlayed his reputation as an innovator who

embraces the alternative into working on commercial and community engagement projects with the likes of Kanye West and Virgil Abloh. Now with his firm, Food New York, Wong aims to self-start one out of every five projects, with an ongoing emphasis on thinking outside the box of conventional architecture. Recently, he started a radio station, run out of a local Chinatown storefront, that features workshops and a podcast for local entrepreneurs to connect with the community.

Bring the Benefits Back to Your Firm

With her workload, Sablan will often sleep just three to four hours a night and regularly dedicate her evenings, weekends, and paid time off to running BBE. But she's convinced that her advocacy has tangibly brought value back to her employer. One client even hired Sg for a job expressly because of Sablan's work. "They were a mission-based organization, and they said it was important that their architect also be a mission-based professional," Sablan says.

She foresees a future in which an in-house director of advocacy will become commonplace at architecture firms, similar to the rise of directors of sustainability and of diversity and inclusion. "There's a real financial benefit to this kind of work," Sablan attests, who sees all of her work as part of the same spectrum of inclusion. "The visibility of what we do is very important, because representation matters."



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RECOGNITION

Winners will be featured in the December 2019 issue of ARCHITECT with expanded coverage online.

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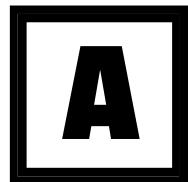
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Detail: Octave 9 Handcrafted Acoustical Ceiling

TEXT BY TIMOTHY A. SCHULER



Instead of having “all the guts hanging out on the ceiling” as is common in black box theaters, Octave 9 in Seattle features a sculptural ceiling composed of hundreds of irregularly shaped “cells” that absorb sound while concealing the audiovisual system, says Scott Crawford, ASSOC. AIA, a principal at LMN Architects. Felt-like in appearance and touch, the cells—PET plastic sourced from local company Snap-Tex—join together like puzzle pieces, forming approximately 6-foot-square modules that hang from a Unistrut system.

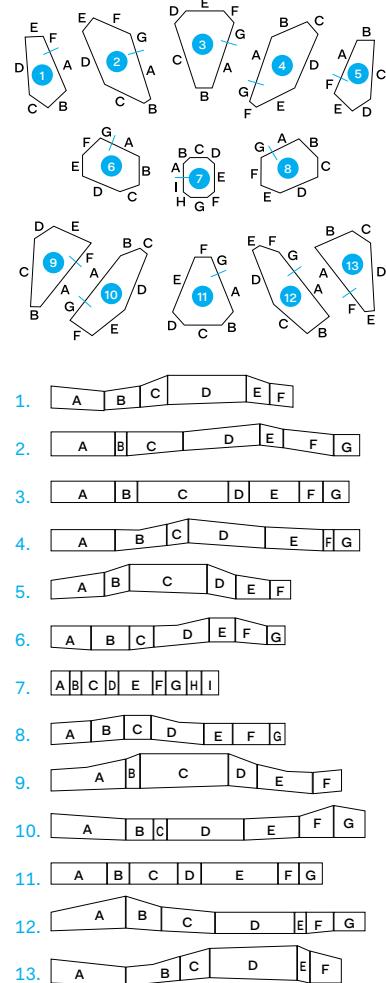
The ceiling’s biomorphic form derived from the underlying grid of audiovisual equipment, such as lights and microphones, combined with the radial configuration of special projectors and a few designer tweaks. The final form “emerged out of the simulations that we were running,” Crawford says.

LMN, which fabricated the final acoustical product, created drawings of each individual cell in its “unfolded”

state, creating long geometric panels that could be CNC-milled from Snap-Tex’s 4-foot-by-8-foot, 0.5-inch-thick sheets. The shortest panel was just 3.25 feet, while the longest, which ganged two sections, was 10.5 feet. The team could fit up to seven panels per sheet. Overall, fabricating the ceiling took about six weeks.

Local general contractor JTM Construction installed the ceiling system, in part for insurance reasons. Because some acoustical cells only attach to neighboring cells and not the Unistrut system, the architects created a color-coded sequencing diagram to guide the installation process. Adjacent cells were pinned together with clear plastic binding posts and hung using an aluminum angle that slips between the “walls” of the cell. Each module weighs at most 30 pounds, Crawford says.

Altogether, the ceiling uses 4,000 square feet of acoustical panel and weighs less than 2,000 pounds.



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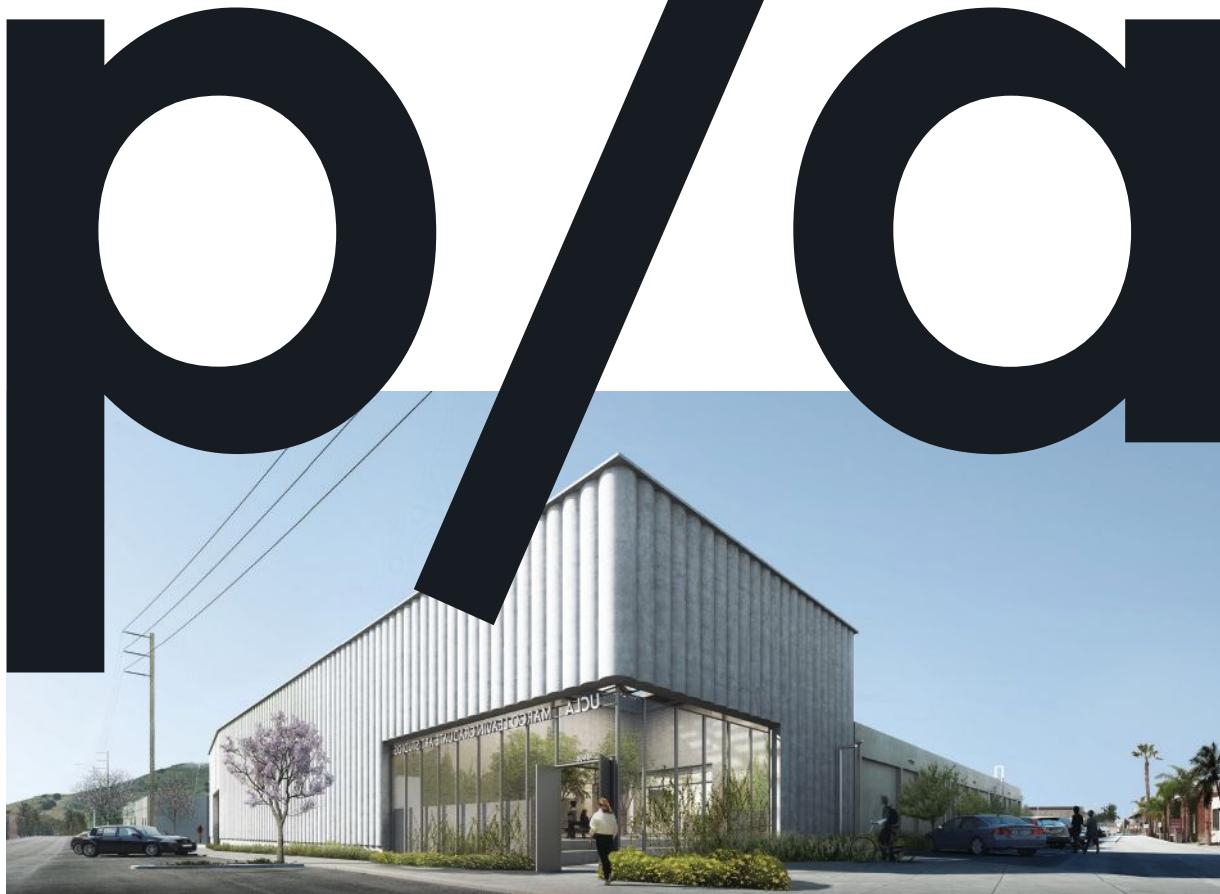
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Next Progressives: The Open Workshop

EDITED BY KATHARINE KEANE

Location:

San Francisco

Year founded:

2013

Firm leadership:

Neeraj Bhatia

Education:

B.Arch., University of Waterloo in Waterloo, Ontario; M.Arch., MIT

Firm size:

Four to six

Mission:

We aim to use architecture to address social, ecological, and economic issues that often sit outside a building's footprint. In essence, we engage architectural form in territorial issues.

Origin of firm name:

The name of the office emerged from late Italian novelist Umberto Eco's treatise *The Open Work* (Bompiani, 1962). For Eco, an "open work" is strategically designed to be incomplete, allowing an individual to incorporate some final missing piece. Although Eco's treatise did not address architectural practice, it offers a promising way to address political and environmental indeterminacy and instability in our field. Our studio uses the template of Eco's treatise to understand the subject as both the collection of distinct humans and the dynamic environment that they

inhabit. For us, "open work" suggests that designers maintain control and precision through the structuring of permanent frames that require individual meanings, interpretations, and/or transformative environmental qualities to complete the project.

Favorite project:

The "New Investigations in Collective Form" exhibition hosted at the Yerba Buena Center for the Arts, in San Francisco, allowed us to reflect on our practice and see patterns emerging across a variety of projects.

Second favorite project:

The Garden of Framed Scenes pavilion in Viseu, Portugal, was a smaller project, but it reminded us how collectivity can be formed and framed within a larger environment.

Memorable learning experience:

The start of my post-professional degree at MIT coincided with Hurricane Katrina. MIT responded with several classes devoted to efforts of rebuilding, examining water-based urbanism and highlighting the problematized relationship between architecture, infrastructure, and the natural environment. Embedded in that negotiation are deeper questions of class and race divides that architecture often attempts to normalize or control. These issues became the core of the Open Workshop's work. In particular, we ask how this negotiation might unfold

Neeraj Bhatia



to empower local people as well as the environments they live in.

Architecture hero:

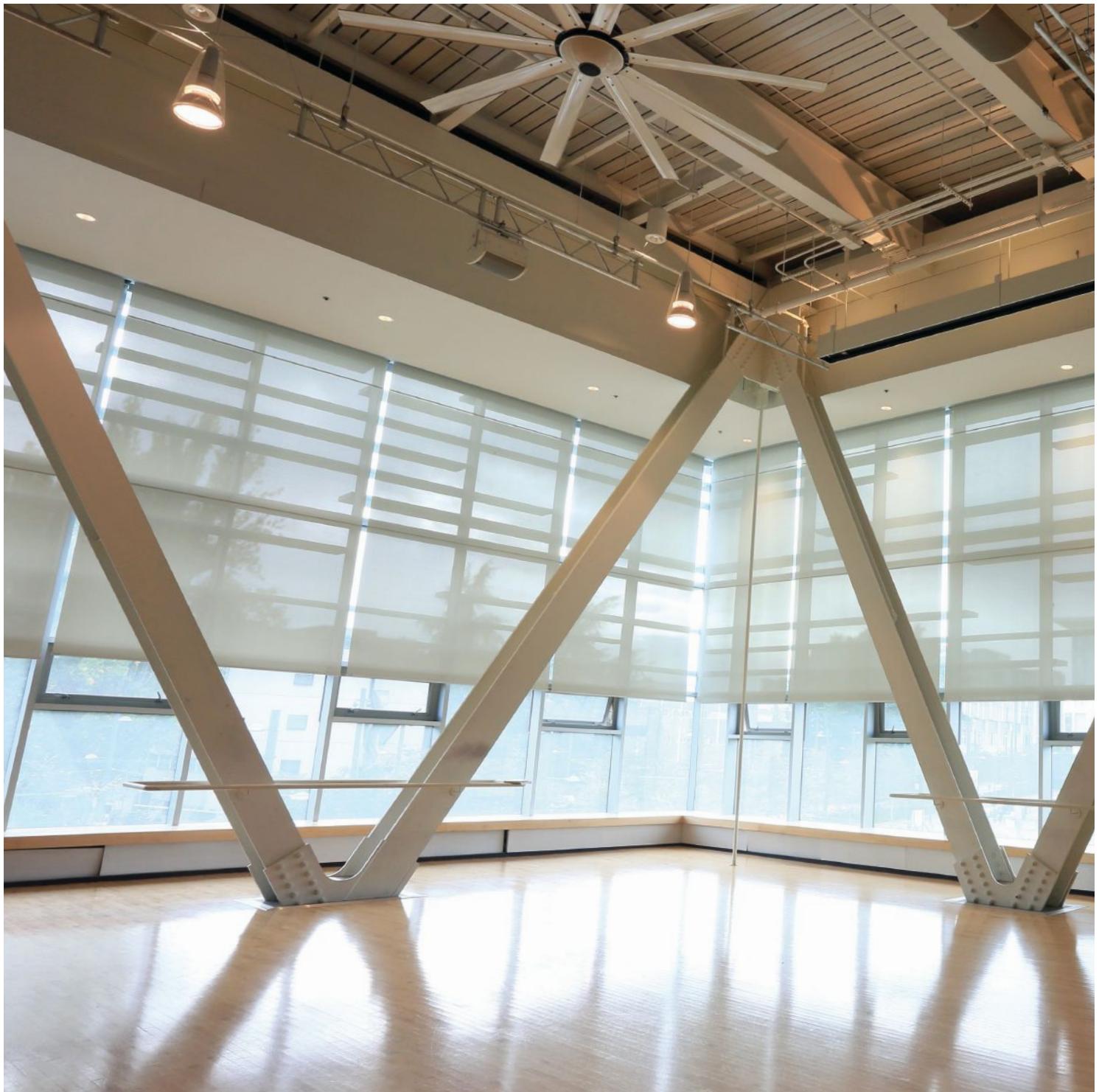
I am inspired by British architect Cedric Price's work—for its range, transcalar nature, and interest in questions of indeterminacy and adaptation. His time-based approach that spanned from systems to objects is highly relevant for our contemporary challenges.

Greatest challenge to running a successful practice:

Aligning the type of work tied to our deeper interests and research—on urbanism and the public realm—with the reality of opportunities for young offices.

Design tool of choice:

Foam wire cutter—its speed allows for a highly iterative process that can also be precise.



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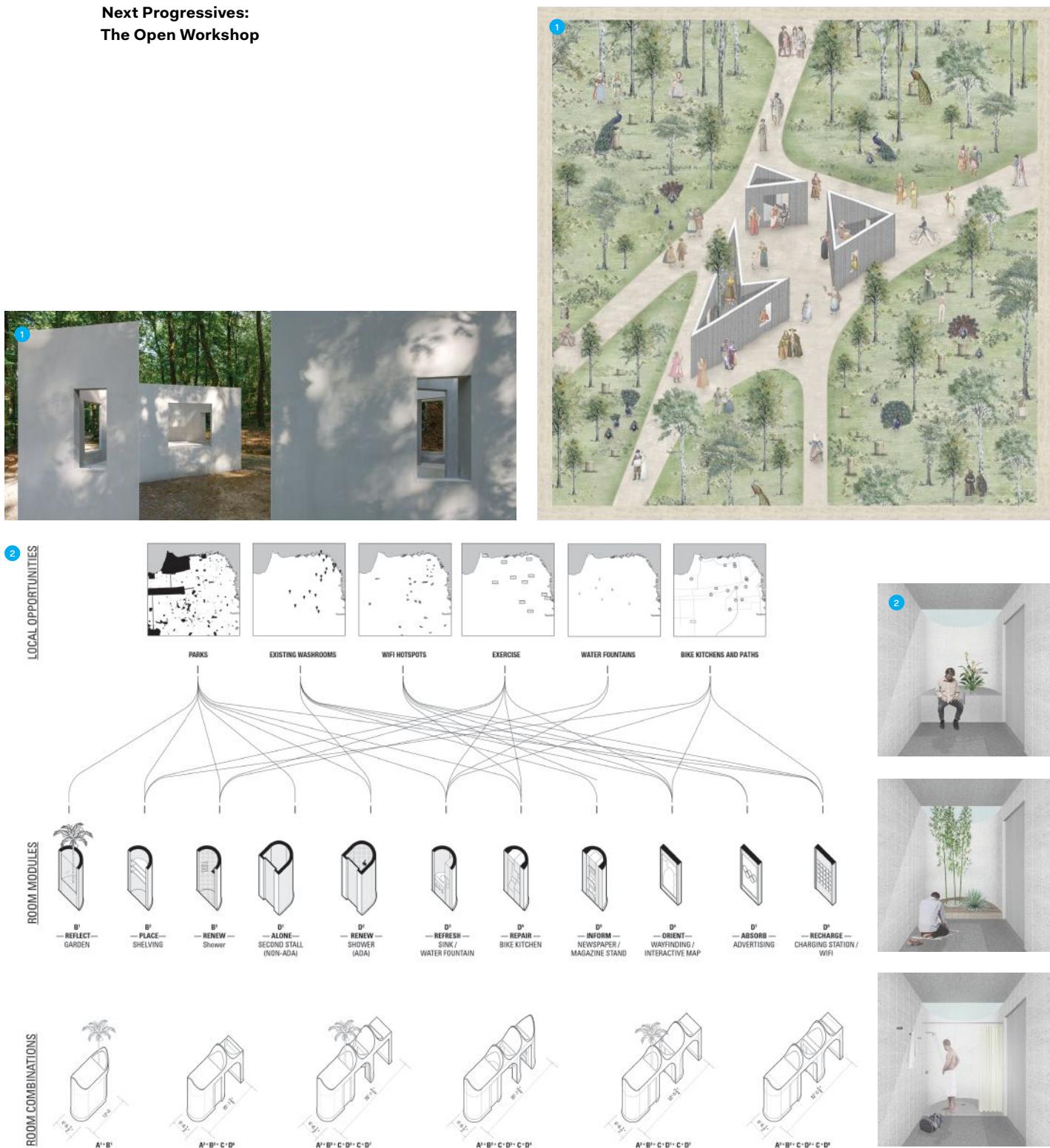
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The Open Workshop**

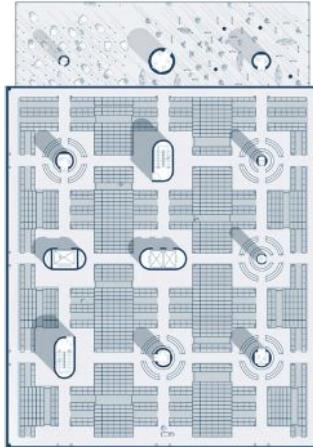


1: LUIS BELO; 2: COURTESY THE OPEN WORKSHOP & STUDIO VARA

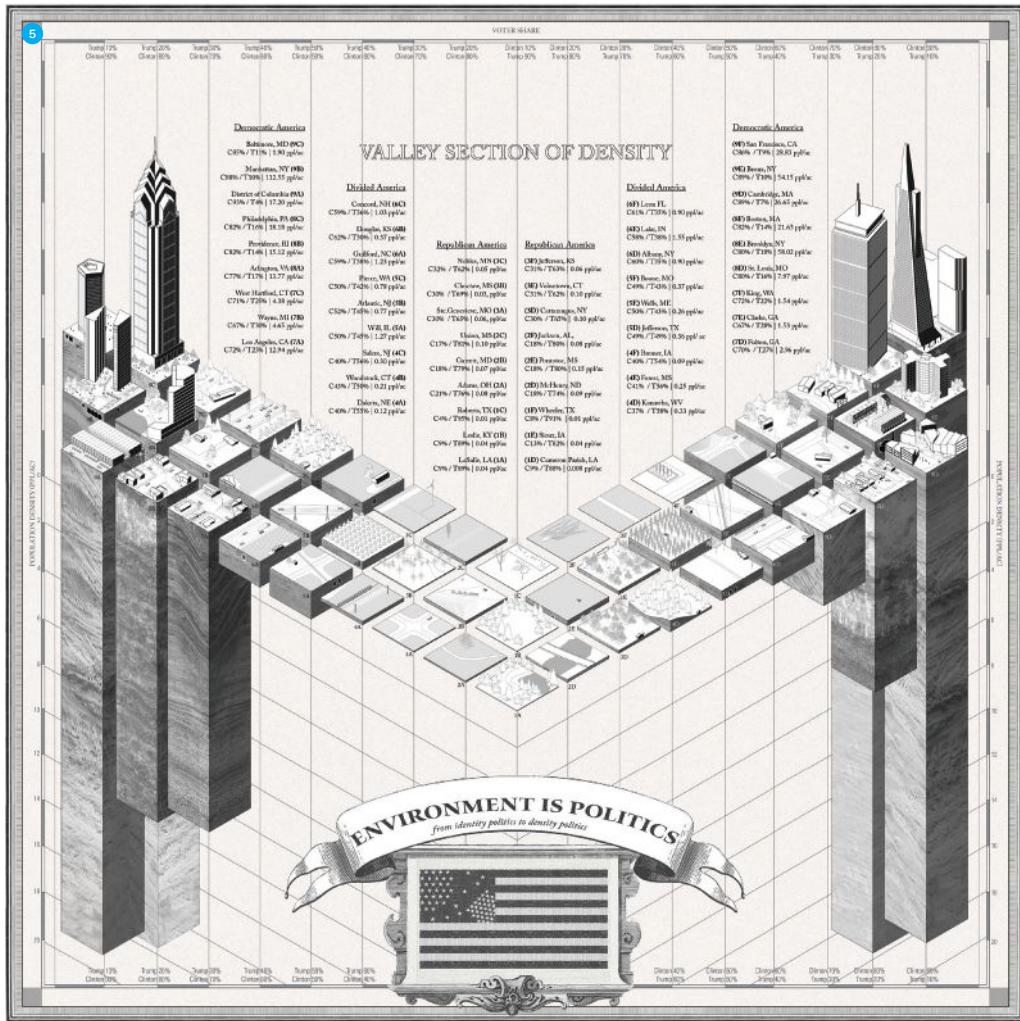
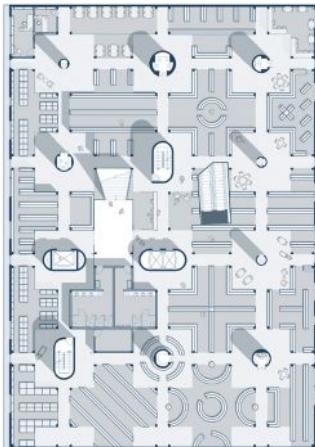
Reading Forest



Closed Archive



Open Archive



1. Inspired by the techniques of Renaissance painter Grão Vasco, the three volumes of the Garden of Framed Scenes pavilion located in Viseu, Portugal, create “a theater for collective performance,” according to Bhatia. **2.** In this proposal, Bhatia reconceptualizes San Francisco public restrooms as modular amenities that offer a private space for a variety of ephemeral uses, such as changing, praying, and breastfeeding, with features such as a small garden and skylight. **3.** For the Varna Public Library and Archive in Bulgaria, the Open Workshop proposed a “forest” structure with “groves and clearings” for individual work and study. **4.** Currently under construction in Germany, the Depth of Fields house uses three superimposed geometric forms—a circle, cruciform, and triangle—to create voids for circulation, interior gardens, and inhabitable space.

5. In his April 2017 “Environment as Politics” article in *Places Journal*, Bhatia offered drawings exploring the relationship between residential density and voting behavior. This image shows the breakdown of 51 counties in America based on voter activity from the 2016 presidential election.

Products:

Contract Furniture

TEXT BY KATHARINE KEANE



Alto, Humanscale

Designed by Don Chadwick, Alto features a contoured flexible shell seat. Available in bar and counter heights, Alto can be specified with maple, walnut, or ebony legs. humanscale.com



Alya, Andreu World

This line of upholstered plywood and flexible foam lounge chairs is available with a low or high backrest. It offers various base configurations in multiple finishes. andreuworld.com



Navy Wood Chair, Emeco

Emeco is celebrating the 75th anniversary of its iconic aluminum 1006 Navy Chair with the launch of a wood version. Available in walnut, white oak, and black-stained oak. emeco.net



Soft Work, Vitra

Designers Edward Barber and Jay Osgerby predict a future where individual workstations are no longer the standard. In their stead, the duo propose this modular couch system that aims to provide the comfort of residential furniture in office and open environments. Movable swivel table inserts, partition screens, outlets, and charging stations are optional. Available in 138 colorways. vitra.com



Exchange 3, Allseating

Exchange 3 comprises seven recycled, injection-molded plastic components that can be configured more than 180,000 ways, for private (shown) or collaborative work. allseating.com



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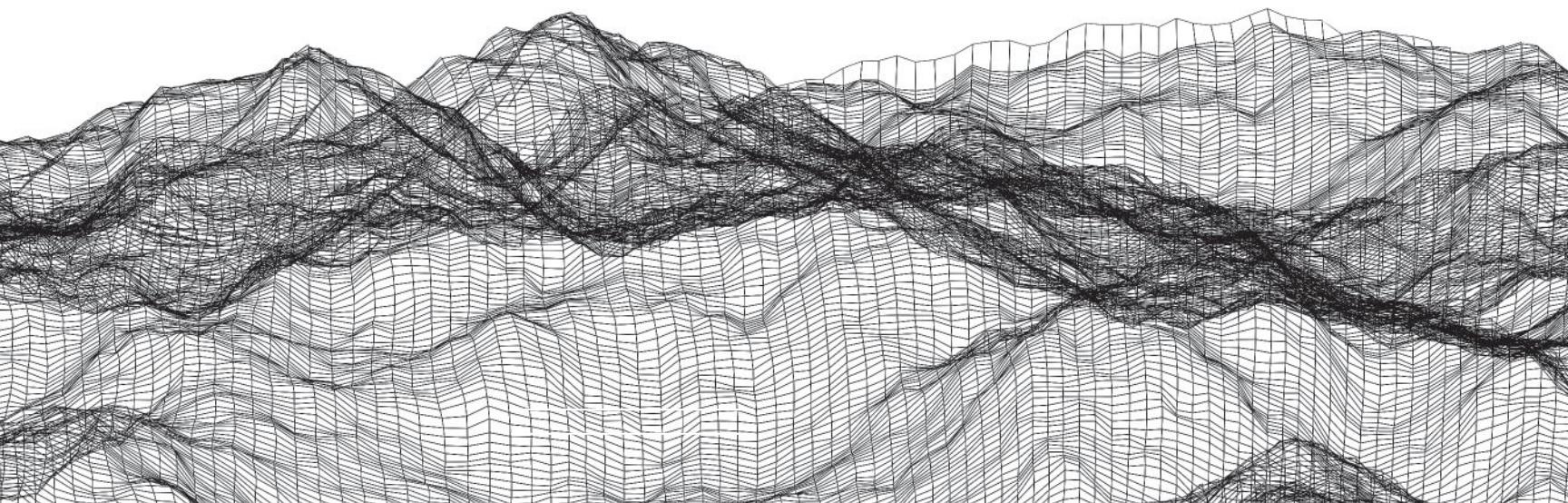
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Opinion: Every Community Is Our Client

TEXT BY SIBONEY DÍAZ-SÁNCHEZ, AIA



My mother, Beva Sánchez-Padilla, taught me a modified version of musical chairs: When the music stops, everyone works to create a space for the individual left standing. Someone not having a seat is a call to action for the collective.

My colleagues often tell me that I am “political.” Besides the fact that the buildings, land, and infrastructure I use and design are regulated by policy, being an apolitical architect is a luxury I cannot afford. My profession is less than 5 percent Latina. My being is politicized.

As a founding member and co-chair of AIA San Antonio’s Latinos in Architecture Committee (LiA), I work to make the design profession an accessible option for Latinx. Having a space—a community—in which you feel welcomed is powerful. It is important to take up space in a world that historically hasn’t considered the perspectives of people like you.

Though my formal education did not teach me about engaging with users, my upbringing did. Carving out a place and time for communities and earning their trust are simultaneously delicate and heavy skills necessary to cultural preservation and the design profession.

In City Council District 5 within San Antonio’s Westside, 94 percent of the population identifies as Hispanic or

Latino/a/x. Though their culture helps power the city’s tourism industry, Westside and similar communities struggle with generations of disinvestment. Creeks, railroad tracks, industrial lots, a freeway, and a jail separate Westside from downtown San Antonio. In 2016, the average per capita income was \$13,596, and one in three residents lived in poverty.

Last fall, the City of San Antonio asked LiA to help lead community meetings focused on reimagining capital improvements for Plaza Guadalupe, a public space in District 5. Alleging that the plaza had become a destination for drug activity and violent crime, the plaza’s managing organization had commissioned the design of a permanent fence that would limit access to users. Residents and local organizations saw the project as an attempt to privatize public space.

LiA’s efforts to engage the community came with a humbling learning curve—and we are better for it. When LiA co-hosted a free public event with the city’s Office of Innovation and DreamWeek San Antonio to understand how to better listen and implement feedback, attendees expressed frustration with the accountability, accessibility, and transparency of established engagement processes. When the feedback we received lacked generational diversity, we headed to the nearest middle school to talk to students about their plaza. We had to make the design process and architectural

terminology accessible. Understanding how and where residents want to be heard was, and remains, paramount.

Communities expressed concerns that a fence would do nothing to address the systemic and societal issues that some associate with the plaza due to generations of disinvestment: homelessness, drugs, poverty, and racism. They wanted to see investment in health and human services, affordable housing, public education, public transit, and public spaces.

In response, we created two conceptual plans for public voting, both including programmatic, physical, and operational improvements. A version of the more popular plan—a compromise between the plaza management and community groups—was approved by the city’s Historic and Design Review Commission in April. The plaza’s main entrances will remain open, but fencing will be installed around select locations, such as the playground. The city has designated programming funds to activate the space; LiA will hold a youth design justice event there this fall.

Success in community engagement comes in many forms. Because architects are ultimately accountable to communities, we must integrate formal community outreach strategies into our practices. We must also be ready for outcomes tempered by realities.

Architecture is always political.

Siboney Díaz-Sánchez, AIA, is an architect based in San Antonio, Texas.



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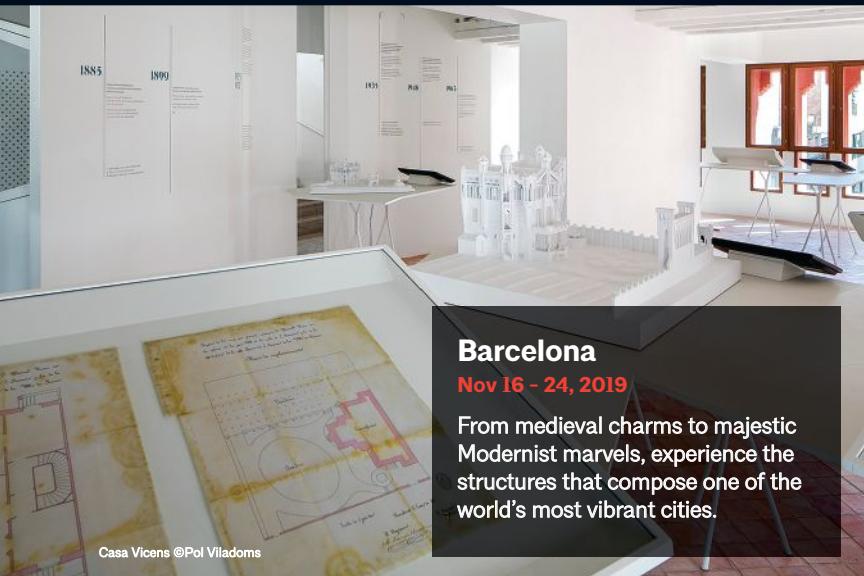
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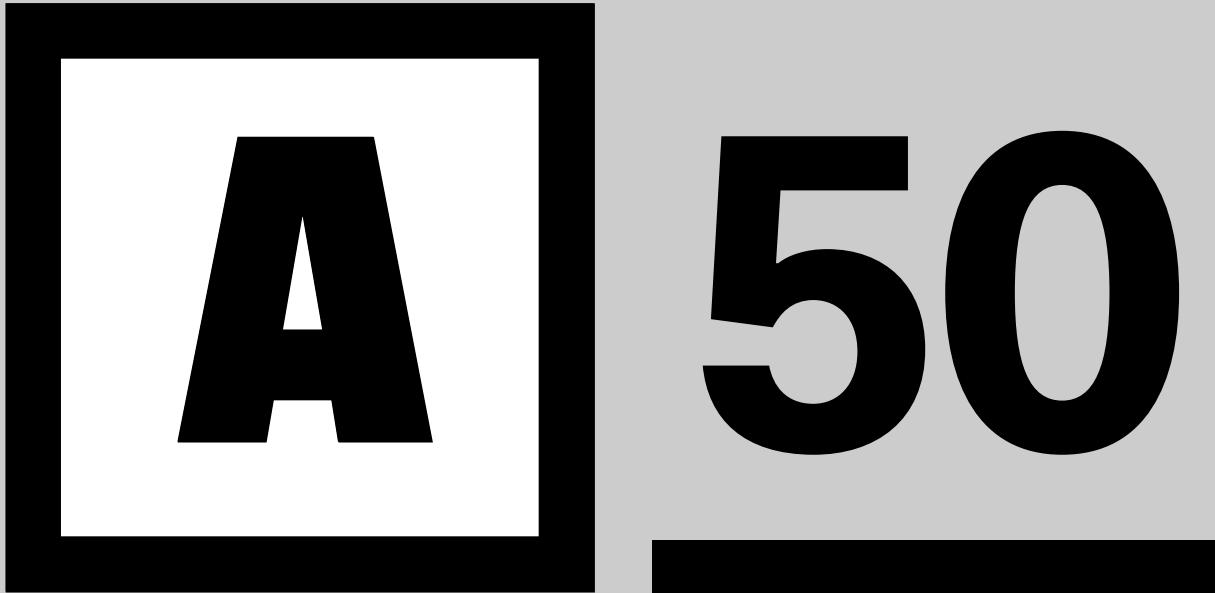
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DEADLINES

Check the website for an updated schedule. Surveys are expected to be released in early June and will be due at the end of July.

Architectural Lighting: The Merit or Myth of Circadian Lighting

TEXT BY MURRYE BERNARD, AIA

The potential of lighting to improve occupant health and well-being is increasingly attracting the attention of project owners and end users. In commercial environments, good design has become synonymous with talent hiring and retention. The benefits of well-lit spaces map across other regularly occupied building typologies, such as residences and schools, as well as patient rooms in healthcare and assisted-living facilities.

"If you don't get the lighting right, it's not going to be an environment anyone wants to spend time in," says Elizabeth O. Lowrey, principal and director of interior architecture at Elkus Manfredi Architects, in Boston. "It all goes back to making people feel good and look good."

"Clients are increasingly requesting and expecting lighting systems and applications that can support human health and well-being and make an impact on the circadian system," concurs Mariana Figueiro, director of the Lighting Research Center (LRC) at Rensselaer Polytechnic Institute, in Troy, N.Y., where she is also a professor at its School of Architecture.

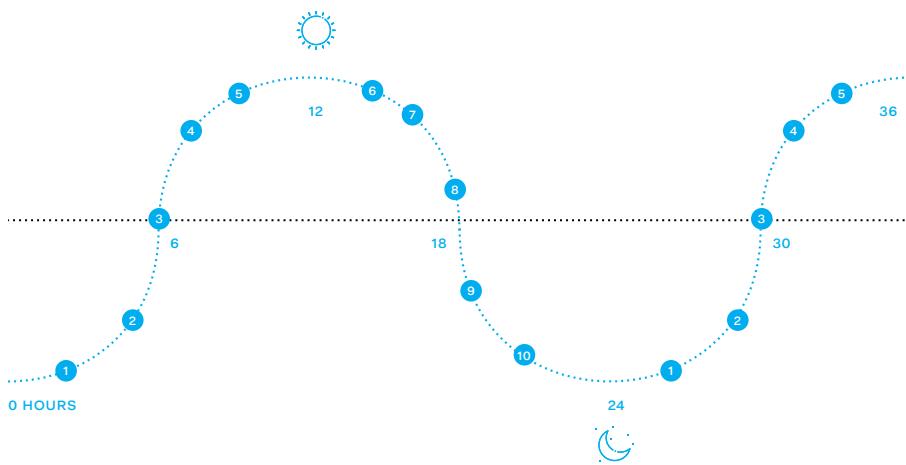
In response to demand, lighting manufacturers are launching new products that they allege to be attuned to our circadian rhythms. Yet the skeptical architect and end user have to wonder: How much of this is marketing versus actual science? Is circadian-attuned lighting any better than conventional products?

What You Can't See

Both daylight, courtesy of Earth's 24-hour light-dark cycle, and electric light can drive our circadian system, our internal clocks that regulate daily behaviors and the timing of biological processes, such as the release of the hormones melatonin and cortisol, which help control our blood sugar and affect our energy levels.

Several characteristics of lighting, including quantity, spectrum, timing, duration, and distribution, determine its nonvisual effects on our bodies and minds. The influence can be positive, but also negative if, for example, light is delivered at the wrong time. Think screen time on electronic devices before bed or in the middle of the night. The

Circadian rhythm repeats approximately every 24 hours



- 1. Deep sleep
- 2. Lowest body temperature
- 3. Cortisol release
- 4. Fastest increase in blood pressure
- 5. High alertness
- 6. Best coordination
- 7. Fastest reaction time
- 8. Highest body temperature
- 9. Highest blood pressure
- 10. Melatonin secretion

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Architectural Lighting: The Merit or Myth of Circadian Lighting

disruption of circadian rhythms has been associated with health problems such as metabolic diseases, depression, and some types of cancer.

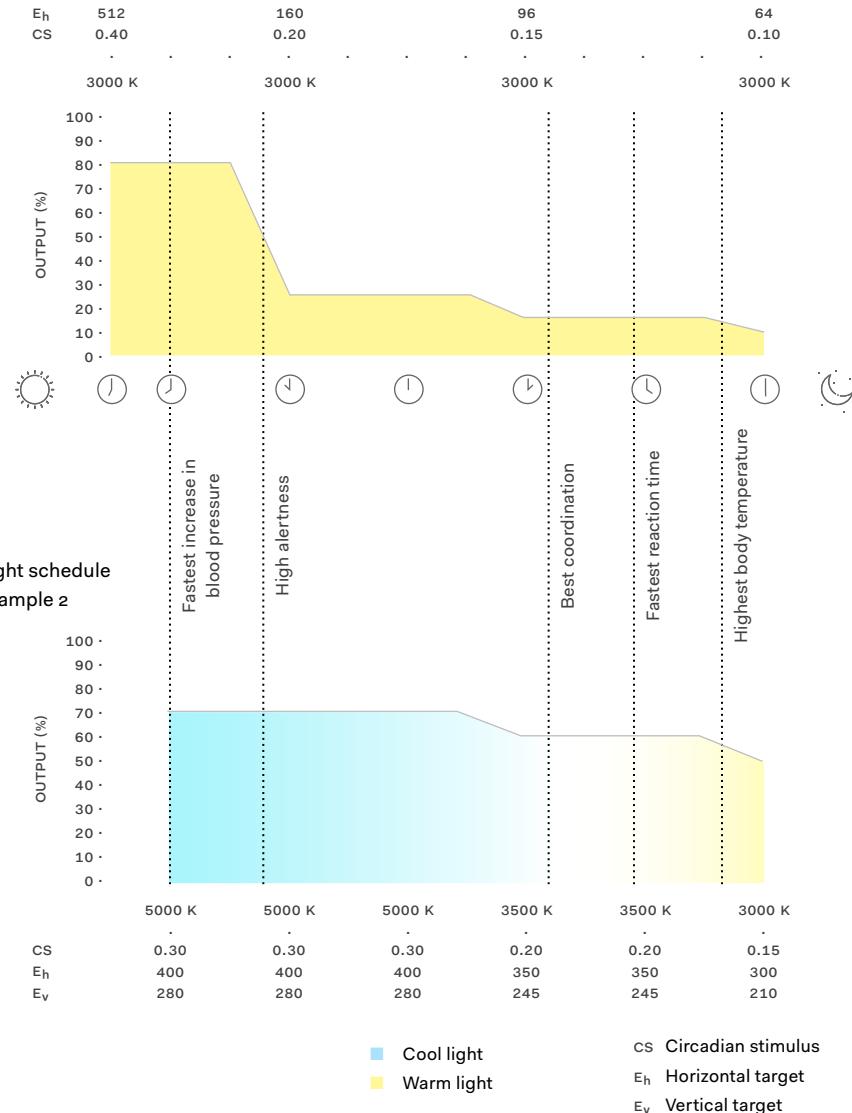
"We don't fully understand everything there is to know about light's nonvisual effects, but we know enough from the research over the past 30 years to be able to apply light to improve sleep, mood, and well-being in a variety of environments," Figueiro says.

The LRC, for one, develops metrics and tools to help lighting designers understand and apply circadian light in the built environment. Circadian stimulus (CS) measures the effectiveness of the retinal light stimulus for the human circadian system from threshold to saturation; in other words, this metric allows designers to compare the ability of different light sources to stimulate the circadian system. With funding from the U.S. General Services Administration, the LRC has conducted several studies that found office workers receiving high CS throughout the workday felt more energetic and alert than workers receiving low CS. The former group also experienced better sleep and felt less depressed.

Daylight, Mimicked

Generally speaking, natural is best and lighting is no exception: Daylight is the ideal source for regulating the circadian system. However, people tend to spend most of their day in interior environments, the majority of which Figueiro believes are under-lit: "Due to

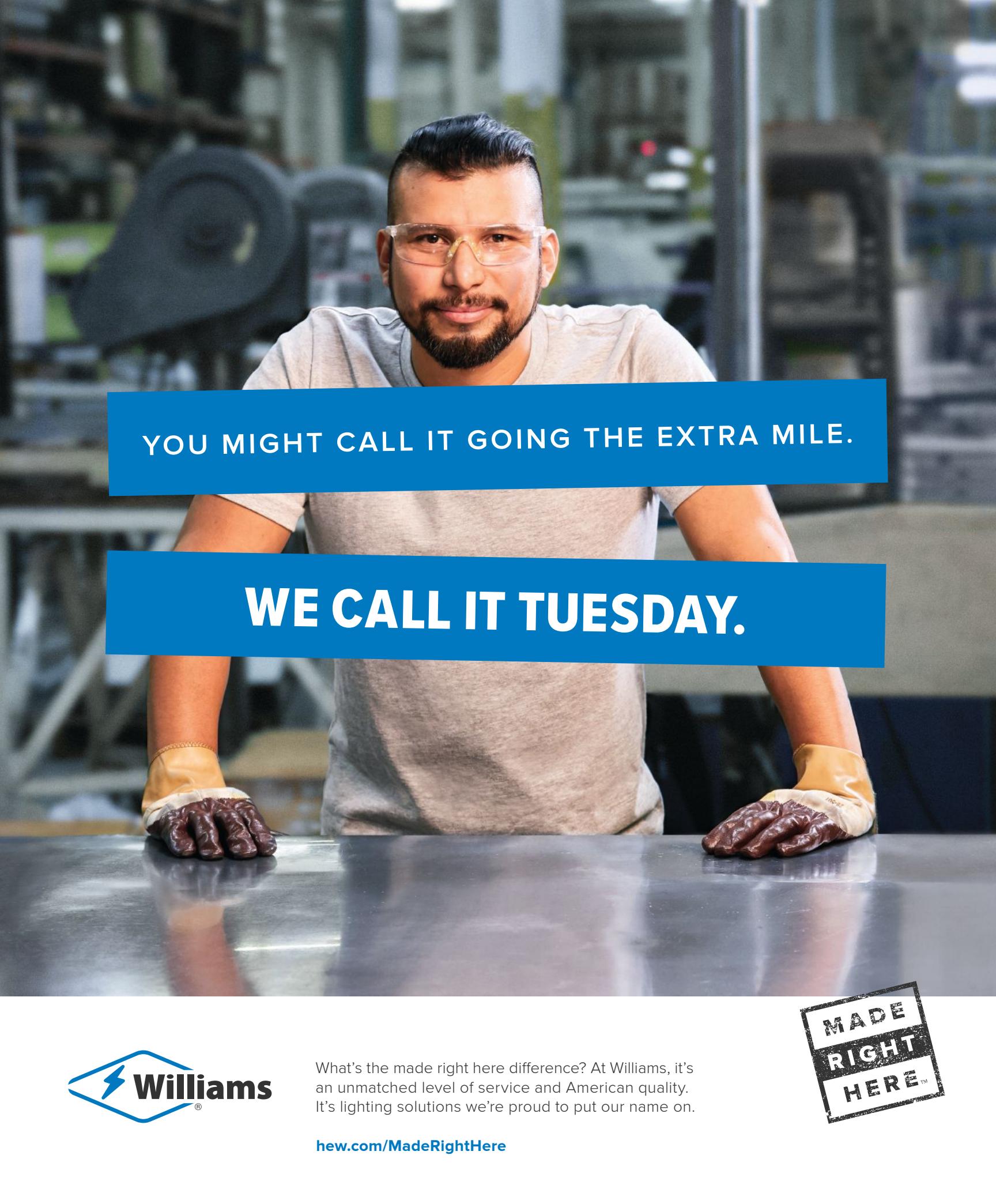
Light schedule
example 1



Tunable luminaries can be programmed to change circadian stimulus. In these two hypothetical examples, the top schedule increases and decreases light output while fixing color temperature, while the bottom schedule alters both light levels and color temperature.

restrictive energy codes, daytime light levels in buildings are often too low or at threshold for activating the circadian system," she says. "Even in open offices with many, large windows, workers do not receive enough daylight to stimulate their circadian system, due to factors such as season, cloud cover, desk orientation, and window shade position."

Supplemental electric lighting is thus a necessity, and recent technologies



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Architectural Lighting: The Merit or Myth of Circadian Lighting

says Keith Yancey, AIA, principal at architectural lighting consultancy Lam Partners, in Cambridge, Mass. "While there is clearly a perceptive difference in CCT, which can make spaces feel warmer or cooler, actually stimulating the nonvisual cortex requires increased light levels in order to be effective."

Though tunable fixtures may be worthwhile, Yancey cautions that increased lighting levels and sources rich in the blue spectrum (CCT exceeding 5000K) can create eye fatigue and glare if not properly implemented.



For Potamus Trading's headquarters in Boston, Elkus Manfredi Architects indirectly illuminated surfaces with concealed fixtures, blurring the lines between daylit and electrically lighted spaces. Pendants in the breakout spaces "add focus and sparkle."

have enabled and improved the ability of fixtures to work in tandem with daylight. For example, luminaires with integrated photosensors and automatic dimming can maintain consistent light levels regardless of fluctuations in available daylight. Advancements in LED technology have also fostered the creation of tunable white light systems, which mimic daylight patterns by adjusting correlated color temperature (CCT) and brightness levels throughout the day.

"Many manufacturers have made claims of tunable white light fixtures [that can change in CCT] as 'circadian,'"

For lighting to achieve CS and still feel normal and comfortable to our eyes, he recommends providing high light levels at cooler color temperatures.

To change CS values, Figueiro advises, simply increase or decrease light output while fixing CCT. If energy codes are restrictive, she suggests choosing a source that emits more short-wavelength light and picking a luminaire distribution that provides a higher horizontal-to-vertical ratio for visual tasks, such as surgery or reading paper documents. But that doesn't mean designers can neglect vertical illuminance, which is what stimulates the

brain. "Designers need to think about lighting beyond the ceiling and bring the source close to the eyes," she says. She advises that designers aim for a distribution of light with a horizontal to vertical illuminance ratio of at least 7:10.

Utilizing LED lighting panels as luminous vertical partitions is another economic way to change occupant energy levels. Saturated blue light can promote alertness in morning, and then transition after lunch to saturated red light, which still stimulates energy levels without raising CS to levels that may affect sleep later.

Painting with Light

More recent design approaches favor using layers of light from a variety of sources to mimic the effects of natural light, rather than simply delivering white light to surfaces via ceiling-mounted fixtures. Natural light is uneven—brighter areas are offset by shadows—and this contrast creates visual interest.

"We are thinking a lot about the changeability and diversity of light, particularly in open plan environments," Lowrey says. "Consistent lighting can be rigorous and creates fatigue." She advocates for "painting" surfaces with layers of light, such as task lighting for work surfaces, focused light to highlight artwork or significant architectural features, and a mixture of up- and downlighting throughout.

Currently, Lowrey is exploring the movement of light and shadows in common spaces to match the morning light outside. The lighting patterns will subtly evolve throughout the day, resulting in a dynamic space.

Though fixtures designed to influence the circadian system are more expensive than standard white lights, implementing circadian lighting strategies doesn't have to be expensive. One economical approach Figueiro suggests is designating a space as a "light oasis," a room within a commercial space that is bathed in color-tuned light and where occupants can visit in the morning for their daily circadian dose.



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Residential: MALL

TEXT BY EDWARD KEEGAN, AIA

Haus Gables began life as a conceptual design and research project called "Domestic Hats," which Boston-based designer and MALL director Jennifer Bonner displayed at an Atlanta gallery in 2014. "I had a hunch that starting an architectural project from the roof—not the plan, elevation, or section—might be an interesting way to think about space and the domestic interior," Bonner says. Five years later, the whimsy embodied in those initial explorations has been realized in built form with Haus Gables, a 2,200-square-foot residence for her family in Atlanta's historic Old Fourth Ward neighborhood.

Hanif Kara, the London-based director of structural engineering firm AKT II and a mentor to Bonner, helped her realize Haus Gables. Bonner dismissed Kara's initial suggestion to construct the forms with steel since "we don't build houses in America out of steel," she says. As an alternative, Kara proposed cross-laminated timber (CLT), which is still relatively new for residential construction in this country, but can be seen as a 21st-century variation on traditional wood-frame construction.

A CLT structural system allows the realization of what Peter Eisenman, FAIA, famously termed "cardboard architecture"—a piece of chipboard or cardboard in a model can be realized as a full-scale wall of durable construction. "If it can be made on the desk, it can be made real with the same technique," Bonner says. "But instead of a strip of glue, it's 14 10-inch screws; it slots



View from northwest, showing cementitious stucco finish with embedded glass beads.

Project Credits

Project: Haus Gables, Atlanta
Client: Jennifer Bonner and Volkan Alkanoglu
Developer: Jennifer Bonner/MALL
Architecture/Interior Design: MALL, Boston · Jennifer Bonner (director); Ben Halpern, Benzi Rodman, Justin Jiang, Dohyun Lee, Daniela Leon (project team)
Associate Architect: Olinger Architects
General Contractor: Principle Builders Group

Structural Engineers: AKT II; Bensonwood; PEC Structural Engineering; Fire Tower
CLT Manufacturer: KLH Massivholz
CLT Installation Specialist: Terry Ducatt
Wood Products Specialist: 7 Seas Group USA
Civil Engineer: Crescent View Engineering
Mechanical Systems: Emily McGlohn, AIA
Facade Research: Alex Timmer
Landscape Design: Carley Rickles
Size: 2,200 square feet
Cost: Withheld

> For more materials and sources information, visit bit.ly/HausGables.

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FEELUX

Residential: MALL

together that easily." At times daunting, the process included the coordination of 87 different large-scale CLT panels from the manufacturer in Austria as they were shipped to Savannah, Ga., trucked to Atlanta, and eventually erected—over just days—on site. But the system allowed the many-peaked roof to be realized without the need for additional structural supports that would obscure the topography from inside.

At 18 feet wide, Haus Gables maximizes the available zoning envelope: The lower-level garage is accessed via a ramped drive; the main floor has a kitchen, a double-height dining room at the center, and a master bedroom at the front; and on the second floor, a second bedroom sits at the back, with a patio at the center and a living room at the front.

One problem with using the roof plan as the generator of form in a two-story

house is that it's the second-floor that enjoys the drama implied by the exterior, which explains why the living room is on the upper level where one might expect the master bedroom. On the main level, only the centrally located dining room is open to the acrobatic roof.

Befitting a multigabled house whose roofs will seem kerflooey to most, the interior projects a fun house vibe with bold applications of faux finishes and color combinations. "They're amazing materials that are humorous and funny," Bonner says. Most of the wallcoverings are low on the walls, like traditional wainscoting but in nontraditional materials, and they camouflage electrical runs routed into the otherwise exposed surfaces of the CLT panels.

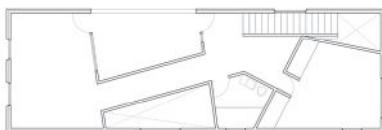
The exterior is surfaced with a cementitious white stucco finish, in two patterns. The north and west façades display faux brick while the south and east elevations have just a few joints in the monolithic surface. Bonner added glass beads, typically used in road markings, to the stucco's finish coat to provide a subtle reflectivity.

Haus Gables is the perfect architect's house, in that Bonner explored formal interests outside the constraints of market forces. While CLT has a firm place in next-generation construction, it remains to be seen if the system's formal flexibility, as evident in Haus Gables, will take off in commercial applications.

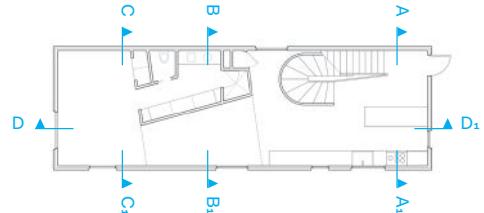
Roof Plan



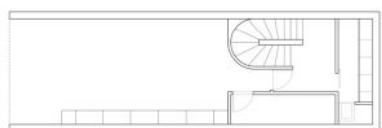
Second-Floor Plan



Ground-Floor Plan

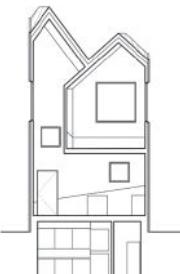


Basement Plan

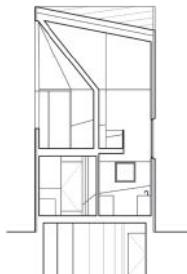


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Section A-A₁



Section B-B₁



Section C-C₁



Section D-D₁

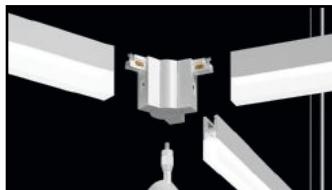


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**Residential:
MALL**



1. A ramp on the west side of the structure leads to parking on the lower level. **2.** The double-height dining area on the first floor features a bright yellow floor and walls that stand out from the exposed CLT-panel surface of the upper walls and ceilings above. The threshold of the master bedroom beyond is marked by a shift to gray accents.



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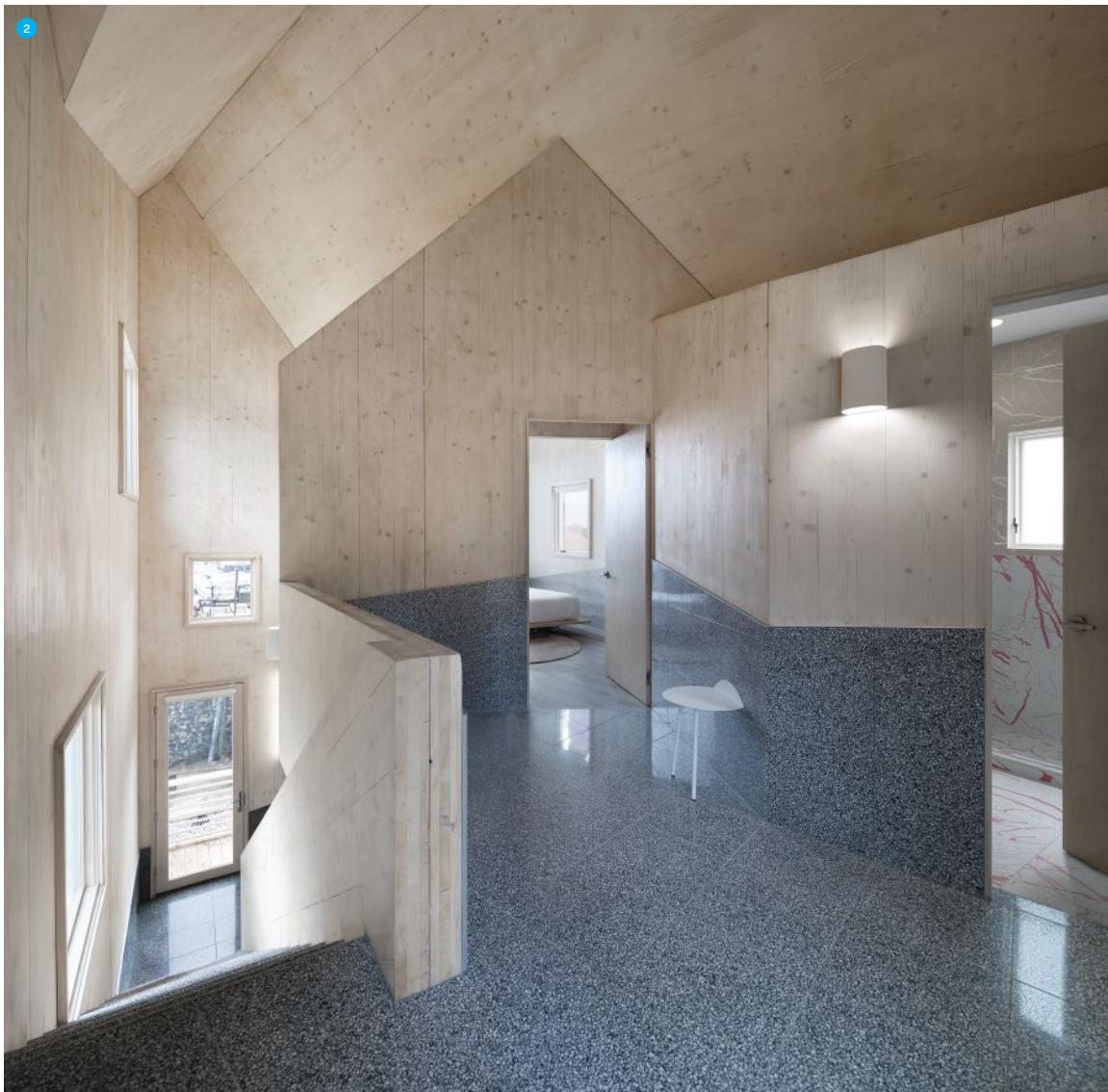


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1. The ground-floor kitchen features EcoTerr tile floors.
2. Looking southeast from the second-floor landing, one can see into the second bedroom at left, and the bathroom at right, which is lined with Ornamenta Artwork tile on the floor and walls.



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DESIGNING RESTROOMS FOR SUSTAINABLE OPERATION

Presented by:



SUSTAINABILITY: THINKING BEYOND LEED

In modern commercial architecture, LEED and green design are increasingly important and often expected by building owners. When striving for green design, using environmentally responsible materials on the building envelope or leveraging the Regional Materials credit by utilizing materials that require minimal transportation resources are usually top of mind for architects and designers.

Although strategies like these may include the richest sources of LEED credits and associated documentation, a greater focus on operational design strategies for the interior of the building can contribute toward overall sustainable intent. In fact, when striving for green design, being "authentically sustainable" will require a long-term approach to reducing impact on the environment and minimizing operational costs for the building owner.

Benefits for Facilities

By designing restrooms to be authentically sustainable, facilities can make the most of their upfront investments in building products and reduce long-term operational costs, such as the following:

- Usage of consumables, like soap and paper towels
- Energy costs
- Water costs
- Waste and waste management costs
- Maintenance costs, as many sustainable products generally require less labor hours to maintain and improve worker productivity
- Potential tax incentives

A sustainable approach to restroom operation can optimize the life cycle of the building, thereby increasing the property value associated with the property. In addition to the many financial benefits, this approach can result in positive public relations, improved morale for employees or tenants in the building, and LEED certification for the building or other green building accolades or certifications.

LEARNING OBJECTIVES

1. Explore the benefits and incentives applicable to building owners and occupants when specifying restroom projects that use sustainable design practices.
2. Explore common sources of costly, non-sustainable restroom operation and green building solutions that improve the financial impact, as well as the occupancy experience.
3. Analyze the relationship between sustainable operation and the preservation of the designer's aesthetic vision.
4. Identify opportunities to educate clients on the benefits of sustainable restroom design options.

CONTINUING EDUCATION

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Tenant and Employee Satisfaction

For architects and designers, an “authentically green” approach can deliver a range of benefits beyond LEED certification including improved client relationships and a positive reputation in the market; endurance of the original design vision, as sustainable products are less likely to be replaced with less aesthetic products by the building owner; and satisfied tenants, leading to satisfied building owners.

Efficient restrooms make an environment more pleasant to work in thus contributing to increased satisfaction from tenants. For the building owner, this increased satisfaction translates to lower tenant turnover.

According to a 2015 study, there is a statistical link between tenant satisfaction and sustainability efforts involving cost savings from energy, water, and other forms of conservation. The study showed tenant satisfaction scores to be 7 points higher in buildings with at least one sustainability certification. Buildings that achieve LEED's Existing Buildings (EB) certification for Operations and Maintenance scored 10 points higher than buildings that did not. ENERGY STAR buildings also scored 30 points higher in satisfaction compared to those without that certification.

Another study, conducted by the research firm Lightspeed in 2017, revealed that nearly one in 10 Millennials would quit their jobs if they found out their current employer was

not sustainable. Nine in 10 Millennials say it is important they work for a sustainable company, compared to 84 percent of Gen Xers and 77 percent of Baby Boomers. More than 80 percent of Millennials whose employer does not have a recycling system in place believe employers have a responsibility to encourage recycling in the workplace.

Similarly, the 2016 Deloitte Millennial Survey concluded that millennials actively seek employers whose environmental values align with theirs. These findings underscore the role that sustainable operation can play in helping buildings satisfy their tenants, improve retention, and support their overall business goals.

COMMON SOURCES AND SOLUTIONS FOR COSTLY, NON-SUSTAINABLE RESTROOM OPERATION

When designing a green building, it is important to give thoughtful consideration to how the building will operate once it is occupied. When designing a prestige, Class A and/or LEED certified building in particular, being authentically sustainable requires a holistic approach to reducing waste throughout the entire lifecycle of the building.

To enable sustainable operation, it is critical to give thoughtful consideration to the products that are being specified. Products that should be considered are those that save money and resources, including products that reduce

waste, energy consumption, and usage of consumables and water, as well as products that do not use batteries. Products that are timesaving and easy to refill and maintain should be considered.

Excess Waste

Specifying inappropriate solutions can result in excess waste, which can be a primary contributor to non-sustainable operation of restrooms. For example, specifying an inappropriate towel system is one cause of excess waste, as some paper towel systems can be more inefficient than others. Many roll paper towel systems leave what is known as a “stub roll” at the end of each roll. This is comprised of a portion of unused paper towels that must be discarded, resulting in excess waste.

As no-touch accessories gain in popularity, battery usage becomes an important

GLOSSARY

Authentically Green—Deliver a range of benefits beyond LEED certification that includes improved client relationships and a positive reputation in the market; endurance of the original design vision, as sustainable products are less likely to be replaced with less aesthetic products by the building owner; and satisfied tenants, leading to satisfied building owners

Authentically Sustainable—Long-term approach to reducing impact on the environment and minimizing operational costs for the building owner

Bottom Fill Soap Dispensers—Cause additional labor, time, and strain to maintain

Bulk Soap System—Utilize foam soap, which is highly sustainable; patrons tend to use less soap than liquid soap

Cartridge Soap Dispensing System—Lead to excess plastic waste; cartridges are often proprietary, limiting owner's purchasing options; requires extra labor from janitorial staff when refilling; generally empties faster than bulk systems

Fiber Optic Sensors—Generally more reliable than infrared sensors, leading to less waste

Infrared Sensors—Popular touch-free option in restrooms; however, can result in wasted water or consumables; beam does not always deactivate properly

Regional Priority Credit—Introduced in the LEED 2009 rating system; different regions designate existing LEED credits as important for their area

Stub Roll—Comprised of a portion of unused paper towels that must be discarded, resulting in excess waste

Top-fill Soap Dispensers—Staff only need to remove a cap or top to refill the soap; less time and labor intensive than bottom fill dispensers



consideration. Used batteries are waste that must be disposed of and/or recycled; however, alternative power sources are available.

Specifying an inappropriate soap dispensing system can lead to excess plastic waste. In particular, cartridge soap dispensing systems require the facility to use smaller, individual plastic soap cartridges that often are proprietary; restricting the owner's purchasing freedom. With each refill, janitorial staff must replace the previous plastic cartridge with a new one. Furthermore, cartridge soap generally empties faster than bulk systems. Over time, this excess packaging can lead to more waste, in addition to the costs and hours of labor associated with replacing the cartridges.

Reducing Soap Usage

To address the excess plastic waste associated with proprietary soap dispensing systems, non-proprietary, bulk soap systems are available. These systems deliver a range of benefits, including enabling the usage of universal soap, which can be purchased on the open market, thereby reducing costs and offering greater choice.

These systems also eliminate the labor-intensive replacement and disposal of partially filled cartridges. Many bulk soap-dispensing systems utilize foam soap, which is a highly sustainable choice, as patrons will tend to use less foam than liquid to achieve an effective hand-wash. Foam soap dispensers diffuse air into a liquid foaming soap solution to create a lathering foam that today's patrons often prefer over liquid or lotion soap.

Foam soap offers numerous cost and sustainability benefits over liquid soap, including reduced number of hand washes for a given volume of soap and increased soap volume compared to liquid soap. The air in the foam bulks up the soap to ten times its original volume, providing greater hand coverage. This results in decreased soap and water usage by patrons. Finally, a rich lather promotes a complete, luxurious, and effective hand-wash, enhancing the patron experience.

Reducing Maintenance

The filling mechanism of the soap dispenser can have a significant impact on maintenance costs of the restroom. Bottom-fill dispensers are a primary culprit of janitorial strain and labor hours, as they require staff to bend under the lavatory counter to replace a proprietary soap cartridge. This process often requires



At the Long Beach Convention and Entertainment Center in California, maintenance staff was having difficulty refilling the soap dispensers. Soap ran out frequently due to busy trade shows and conferences. Since the system was a proprietary, cartridge-based system, it was necessary for maintenance personnel to crawl underneath the sinks to refill the cartridges.

Often, while replacing the cartridges, paneling under the sink would become dislodged and fall on workers. In addition, due to the sheer number of dispensers and the size of the convention center, maintenance staff regularly would dispose of cartridges containing small amounts of soap to avoid making additional trips to and from the restrooms.

However, by switching to a manual bulk foam dispenser throughout the facility, staff was able to replace previous soap cartridges with jug foam soap. The dispenser's top-fill design also significantly reduced the strain on maintenance staff. Plus, the dispenser's 34-ounce bottle capacity meant that maintenance staff would be returning for refills less often.

Ultimately, more than 300 units were installed throughout the entire convention center. After installing the dispensers, the convention center reported they were spending 80 percent less on soap compared to their previous system.

maintenance staff to temporarily remove the ADA panel below the lavatory, which equates to additional time and strain.

Due to the cost of maintenance, it is common for bottom-fill dispensers to be replaced with owner-provided dispensers early in the restroom's lifecycle. Plastic, mirror-mounted dispensers typically are chosen to replace the specified, bottom-fill product.

Top-fill dispensers, on the other hand, save time and effort by eliminating this process. Janitorial staff simply need to remove or slide a cap off the top of the dispenser to refill it with bulk jug soap. Over the course of a restroom's lifetime, these labor savings can make a significant impact on operating costs.



Optimizing Paper Towel Consumption

To promote sustainable, economical operation while meeting the needs of users, hand-drying solutions should be appropriate for the building type and occupancy of the given project. While roll paper towel systems generally are considered more sustainable than folded paper towel systems, employing a few strategies can help further ensure sustainable operation.

Many units feature adjustable towel pull lengths and portion control features to limit the amount of towel dispensed per use, which reduces waste. Some units also feature shorter second pull lengths and delayed second activation to further discourage wasteful dispensing. However, in high-traffic environments, portion control features may have a diminished effect.

Some units are equipped with stub roll utilization functionality, ensuring that every roll goes furthest and providing complete consumable usage and less replacement time. In addition, many roll towel systems permit open market purchasing freedom and cost savings by allowing facilities to utilize non-proprietary paper towels at a lower cost than proprietary paper towels.

While roll towels are generally more sustainable, many facilities prefer folded paper towels for their versatility and to eliminate stub roll waste. For example, employees often use folded towels at their workstations, to remove makeup, grab restroom door handles and clean up minor spills. Folded towels are more absorbent than roll towels, and since all towels are the same size, portion control is built-in. However, it should be noted that patrons often are responsible for "handful" dispensing when using folded paper towel systems.

Fortunately, solutions are available to mitigate the impact on paper towel usage, as folded paper towel dispensers can be equipped with

accessories that enable portion control. Such accessories eliminate handful dispensing by separating individual C- or multifold towels as they are pulled to ensure that only one towel is dispensed at a time. These units have been shown to be as economical as roll towel systems, reducing paper towel usage by up to 20 percent.



This photo shows a restroom of a high-end hotel lobby. Direct your attention to the counter, where you can see stacks of loose paper towels and a non-commercial soap dispenser. Both of those solutions are highly unsustainable.

The soap dispenser is low capacity, which means the operator will have to refill it more often. The dispenser also does not match the overall aesthetic of the restroom. Instead of a paper towel dispenser or hand dryer, loose stacks of paper towels are employed, which leads to waste. Patrons may grab a handful of towels, whereas an appropriate dispenser could limit dispensing lengths (in the case of roll towels) or ensure that only one towel is dispensed at a time (in the case of folded).

For this project, either the architect failed to specify a soap or paper towel dispenser, or she or he specified a non-sustainable solution, that was later replaced by the owner with solutions that are simultaneously less sustainable and compromise the aesthetic of the restroom.

Finally, note that the lighting in this restroom is antiquated, utilizing incandescent light bulbs and no automatic sensors.



This article continues on <http://go.hw.net/AR062019-1>. Go online to read the rest of the CEU course, complete the corresponding quiz for credit, and receive your certificate of completion.

QUIZ

1. Which of the following should be taken into consideration when designing for authentic sustainability?
 - a. Energy and Water Costs
 - b. Use of Consumables
 - c. Maintenance Costs and Potential Tax Incentives
 - d. All of the Above

2. What percentage of Millennials believe their employer has the responsibility to encourage recycling in the workplace?
 - a. 50%
 - b. 60%
 - c. 80%
 - d. 90%

3. Which of the following is generally the most sustainable soap option for commercial use?
 - a. Cartridge Soap Dispenser
 - b. Bulk Soap System
 - c. Bar Soap
 - d. All of the Above

4. Switching to a non-proprietary, top-fill soap dispenser allowed the Long Beach Convention Center to spend _____ less on soap in comparison to their previous cartridge-based system.
 - a. 80%
 - b. 55%
 - c. 40%
 - d. 10%

5. Folded paper towel dispensers with accessories that enable portion control have been shown to be as economical as roll towel systems and can reduce paper towel usage by up to _____.
 - a. 10%
 - b. 20%
 - c. 30%
 - d. 40%

6. Before specifying a hand dryer, which of the following should be considered?
 - a. Energy Impact
 - b. Institutional Aesthetic
 - c. Noise Levels
 - d. All of the Above

7. With incandescent bulbs, ____ percent of the energy used goes toward heat, while only ____ percent is used to produce actual light.
 - a. 90; 10
 - b. 10; 90
 - c. 80; 30
 - d. 30; 80

8. LEDs can have up to _____ maintenance-free hours of useful life.
 - a. 500
 - b. 5,000
 - c. 50,000
 - d. 500,000

9. Key stakeholders in restroom design might include which of the following?
 - a. Property Management Company
 - b. Building Service Contractors
 - c. Facility Managers and Operators
 - d. All of the Above

10. Which materials for toilet partitions score exceptionally high for graffiti, impact, and scratch-resistance?
 - a. SCRC, CL, and HPL
 - b. CL only
 - c. HPL only
 - d. None of the Above

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PHOTOGRAPHY: JESSICA MILLETTE

Design for Communities, by Communities

Architects need to advocate for a different approach to affordable housing.

Omar Hakeem, AIA, was in college at SUNY Buffalo when Hurricane Katrina hit. Months later, he traveled south to assist in disaster recovery efforts and was stunned by the horrific living conditions he encountered. From that point on, he committed to using his design skills to support others. He now does so as design director at buildingcommunityWORKSHOP, a nonprofit community design center that focuses on the endemic challenges many resource-strapped communities face.

As told to Steve Cimino

As architects, we need to be engaged in social issues. Whitney Young said it in 1968: “You are not a profession that has distinguished itself by your social and civic contributions to the cause of civil rights.” That’s still true to a certain extent. We’re not accessing a holistic cross-section of the United States, from a racial standpoint and from an economic one. As creative problem-solvers, we need to be seeking out challenges, and we need to do so within the framework of creating spaces and places that support our natural environments and ecosystems.

Integrating public interest design into one’s practice or career is challenging, and many designers don’t know where to start. The work John Peterson and Public Architecture have done with their 1+ program is phenomenal; it’s helped establish a national pro bono model. On the other hand, working solely in a pro bono format assumes that addressing difficult challenges must be done for free, or at night and on weekends. At buildingcommunityWORKSHOP, our operational model is roughly 50 percent fee-

for-service and 50 percent contributions. This may not be feasible for some firms, but it can be done.

The system needs changing from the top-down. We do many projects through the low-income housing tax credit (LIHTC) program, which is how most affordable housing gets funded these days. The process is not conducive whatsoever to design. The period when designers can work is very short and there’s no money to work ahead of the funding award; there is no guarantee that the project will even happen. We are trying to design multifamily projects—ideally where communities will thrive—on such a short timeline and with limited financial resources. It’s very difficult to produce quality work.

Working this way results in a lot of shovel-ready projects, built for communities that had no voice in the design. When you drive down the street, you can pick them out: “That’s affordable housing.” We need to change how the LIHTC process is laid out; we need more architects to advocate for a different way of working. **AIA**

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ILLUSTRATION: JULIAN PAUL

Thirty-Eight Percent of Architecture Firm Billings Are Billed Using a Fixed Fee

By Michele Russo

At larger firms with 100 or more employees, nearly half the billings in 2018 were from projects billed with a stipulated sum (fixed fee). The second largest share of firm billings (28 percent) were billed using a professional fee plus reimbursables. For smaller firms, the largest share of billings were from projects billed using an hourly rate. However, use of hourly billing has trended down over the last few years. Billing projects based on percentage of construction costs has trended upward during the same time period.

Source: AIA's 2019 Business of Architecture Report

AIAFeature

Finding a Way Home

America's housing crisis is intensifying. A community-based approach may hold the solution.

By Katherine Flynn



PHOTOGRAPH: BRIAN TOMAINO/TORTI GALLAS + PARTNERS

Housing types at Milwaukee's Westlawn Gardens were conceptualized to meet the needs of a variety of individuals and families: seniors, disabled individuals, families with young children, and bigger families with children of different ages.

Two affordable housing projects in Wisconsin—and their architects—are part of a new, community-based approach to public housing, one that aims to change the way most people view this type of development.

In 1923, Milwaukee became home to the country's first public housing project. Garden Homes, on the city's north side, was an unprecedented experiment: a fan-shaped subdivision featuring streets lined with two-story Colonial Revival houses, organized around a central green park. While the neighborhood's history is marred by the legacy of segregation—at the time, Garden Homes was designated as whites-only—the design is still lauded by architects and planners as forward-thinking. Beyond its basic intention of providing housing for low-income and working-class families, Garden Homes was meant to be something more: a community.

Milwaukee's Westlawn, the state's largest public housing development, followed in 1952. Spanning a sizable 75 acres, it housed 1,800 low-income residents in 726 barracks-style housing units. As the decades wore on, it became clear that the boxy brick structures weren't accommodating their residents' needs; they weren't large enough to comfortably house families, and the large blocks where the buildings sat isolated their residents, physically and socially, from their surroundings. By the mid-2000s, the neighborhood's stormwater drains and energy systems had become severely outdated, and Milwaukee's housing authority began eyeing the site for redevelopment.

Murphy Antoine, AIA, principal at Torti Gallas + Partners, was the project lead on the ground-up redesign of Westlawn, rechristened Westlawn Gardens. The project's \$82 million Phase 1 was completed in 2012, funded by the largest low-income housing tax credit award in the state's history.

"We were really trying to make a place that was going to—and is going to—serve the Housing Authority and the city of Milwaukee's residents, and make a more mixed-income community," Antoine says.

Inclusive and collaborative design was a theme that carried through to Tree Lane Family Apartments in nearby Madison, Wis., a project of the Chicago-based nonprofit Heartland Housing. While Tree Lane, in contrast to the sprawling neighborhood of Westlawn Gardens, is only one building on a much smaller plot of land, its goal is also to provide a high standard of living through a community-based approach. The four-story, 45-unit building opened in June 2018, with an emphasis on in-house social services.

Active Listening

Throughout the design processes, Torti Gallas + Partners, Kindness Architecture + Planning, and Entelechy for Westlawn Gardens, and Valerio Dewalt Train Associates for Tree Lane prioritized the voices of the communities that the developments would be serving.

One of the biggest challenges facing Antoine's team during the Westlawn Gardens redesign involved conceptualizing housing types that would meet the needs of a variety of individuals and families: seniors, disabled individuals, families with young children, and bigger families with children of different ages. Between 2008 and 2010, Torti Gallas + Partners held regular public meetings, workshops and charrettes in Westlawn Gardens' Silver Spring Community Center.

"We were able to draw during the conversations and then meet a couple of days later, instead of weeks or months later, to say, 'Is this what you had in mind?' to get reaction and real-time feedback. The process itself, being there and having really quick feedback loops, was a big part of it," Torti Gallas' Antoine says.

In the case of Tree Lane, which was being built for brand-new residents, Heartland Housing partnered with Madison's YWCA to set up focus groups. Aside from on-site counseling and support services, communal gathering spaces and play areas for children were high priorities.

"In terms of those early meetings with [potential] residents, there was a social aspect with those folks that wanted places where they could meet as families and have a birthday party or potluck," says David Jennerjahn, AIA, principal at Valerio Dewalt Train Associates in Chicago, the project architects for 7933 Tree Lane. He explains that many of the families in the building have multiple children, and one of their biggest concerns was where they could go when they weren't in school. Jennerjahn and his team addressed this by including a multipurpose room, a computer room, and outdoor play spaces for younger children who needed supervision.

"The times that I've been to the building post-occupancy, I've observed a number of residents who interact with each other—they help each other, they know each other, they kind of look out for each other and each other's kids," Jennerjahn says. "It's clear that everyone tends to know everyone. ... I like to

AIA Feature

CONTINUED

think the architecture is helping."

Tree Lane is part of a larger Housing First initiative by the city of Madison, which prioritizes putting people who have experienced homelessness for a prolonged period of time into housing with few or no conditions. Voluntary support services are available to residents on-site. There's mounting evidence that the Housing First model lowers overall costs for police, healthcare, and other support services. While Jennerjahn's firm had worked on market-rate multifamily housing before, this was the first affordable housing project they had ever designed from scratch.

"You still pick high-quality materials, because you need them to be durable," he says. "You don't want to be replacing them in three years because you went with a low-quality or lesser-cost item. Where you're trying to be efficient and where you're trying to be smart about where you spend the money; that's the difference."

Following the Money

Obtaining funding is a perennial problem for public housing projects throughout the United States. The awards and grants that are available, through the U.S. Department of Housing and Urban Development as well as state agencies, are highly competitive. Antoine says that Milwaukee's Housing Authority has been particularly successful in securing grants from HUD, but in the case of Westlawn Gardens, the first phase of the project was facilitated almost entirely through state tax credits purchased through syndication by private equity. Tree Lane was financed through low-income housing tax credits, and subsidized rent from the city and county helps fund management and upkeep of the building.

"Sixty to 80 percent of your development costs are typically accounted for from the equity you raise from low-income housing tax credits," says Michael Goldberg, executive director of Heartland Housing. "So, it's a critical piece. Without it, this development wouldn't have been built."

In affordable housing, tenants typically pay 30 percent of their income. "You're dealing with a very vulnerable population, that have experienced traumas, that may not have great work histories, that may not have strong educations, that may be dealing with mental illness," Goldberg says. "The idea is, you're never going to pay more than 30 percent of your income toward housing, and that amount will move as your income moves."

In the case of Westlawn Gardens and Tree Lane, financial decisions also played a prominent role in the way sustainability and health elements were factored into each development. Jennerjahn and his team originally began designing Tree Lane to the WELL Building Standard, which, he says, focuses more on the health and wellness of the occupants than the building's energy performance.

"We created a large feature stair that faces the outside and has light coming in," Jennerjahn says. "[We] were trying to encourage residents to use that stair for circulating among the floors, rather than taking the elevator." Although Tree Lane ultimately didn't complete WELL certification due to operational requirements and the additional cost of receiving that accreditation, Jennerjahn says that what they did incorporate wasn't for nothing. He and his team placed an emphasis on optimizing natural light and air quality, as well as keeping energy costs down by making sure the building envelope was up to the highest standards.

Westlawn Gardens' Phase 1 achieved Silver status through the LEED for Neighborhood Development (LEED ND) criteria, which, Antoine says, was the highest at the time under those standards. "The bar was set pretty high, but all of those considerations are rolling into Phase 2," he says. Phase 1 included updating the stormwater drains and the neighborhood's energy grid. On an individual building level, Torti Gallas was able to build one of the homes to a LEED for Homes Platinum standard and get it accredited, subsequently building the rest of the housing to that same high standard.

"You could basically buy another house for what you were paying for the certification," Antoine says. "It [was] the same project manual, the same specifications, the same standard for all the homes."

Westlawn Gardens' Phase 1 achieved Silver status in LEED for Neighborhood Development.



Westlawn Gardens residents enjoy the complex's outdoor spaces.

PHOTOGRAPH: BRIAN TOMAINO/TORTI GALLAS + PARTNERS

Phase 2 will have what Antoine calls a "higher standard for mixed-use," with retail space and some market-rate housing. "Those aspects of a highly functioning and sustainable neighborhood come into play as well," he says.

Transitions

For the residents of Tree Lane, the transition out of homelessness has posed challenges. Since the building opened last summer, Madison police have responded to calls related to weapons possession, drug-related activity, domestic disputes, and overdoses. In February, the Madison Common Council approved \$275,250 for extra support programming throughout the rest of 2019 and will be seeking proposals from organizations offering support services beyond this year.

"Our role here in serving families is to try to be as holistic with case management as possible, with the underlying goal of supporting families to keep their housing as long as that is their own goal," says Georgie Nazos, a housing specialist with the Road Home Dane County, which will be providing interim support services at Tree Lane until a longer-term provider is secured. She identifies racism, a lack of affordable housing in the community overall, and barriers to transportation as just a few of the challenges that the residents are facing. Homelessness continues to be one of Madison's most pressing issues, with over 3500 people experiencing homelessness annually.

Goldberg sees these issues as an inevitable part of the path to providing this vulnerable population with long-term stable housing.

"We're looking to create a home," Goldberg says. "This isn't transitional housing; it isn't a shelter; it isn't a program the way you sometimes think of group homes. This is an apartment building. It is their home." **AIA**

AIA Contracts

Interiors Projects are Contractually Different. Here's Why.

By Mike Koger

The seemingly minor details of furniture, furnishings, and equipment in an interiors project can have a big impact. In 2019, AIA updated its Interiors Family of contract documents, which account for the potentially complex legal issues inherent in interiors projects—be it a centuries-old renovation or a new shell building, devoid of interior walls and finishes.

Interiors projects are more likely to require predesign services, such as programming or test-fit analysis, as a necessary piece of the architect's scope. But from a legal perspective, furniture, furnishings, and equipment (or FF&E for brevity) make interiors projects unique.

The FF&E provider is another important part of the equation. Owners typically buy FF&E directly from vendors or manufacturers, bypassing the general contractor. This leaves an architect drafting two sets of drawings and specifications—one to form the basis of the construction contract, the other to form the basis of the FF&E contract. And with separate entities performing work under separate contracts comes the complexity of multiple bids, budgets, and schedules. There's also no industry standard for how an architect interacts with FF&E vendors. Some owners want to hire and manage vendors themselves, while others want to delegate this responsibility to the architect.

FF&E contracts are also governed by a different set of rules than construction contracts: those found in Article 2 of the Uniform Commercial Code (UCC). Article 2 governs the sale of movable goods such as furniture, and addresses irregularities that often occur in sales contracts. Unlike other contracts, the sale of goods are often not fully negotiated or committed to one writing. Often, buyers and sellers exchange their own proposed contracts and never formally agree to one set of terms. In other instances, they may agree on some terms while neglecting to address others. When disputes arise, the parties are left struggling to make sense of a muddy contracting scenario. The UCC addresses these contractual shortcomings and



The lobby of the Guest House at Graceland Resort in Memphis, Tenn., by HBG Design.

provides a set of rules that attempt to honor the parties' original intentions. If a term is missing, the UCC provides a default. If there are two proposed contracts with different terms, the UCC provides a method for reconciling the differences.

In essence, the architect's task on an interiors project is to finish the design of an existing building while dealing with both contractors and vendors and their various budgets, schedules, and contract documents, all while recognizing that these contracts will be managed, interpreted, and affected by two distinct sets of law.

It's a Daunting Task, but Using the Right Contracts Can Help

AIA's 2019 update to the Interiors Family of documents includes the impact of the UCC on FF&E. The lead owner/architect agreement in this family, B152-2019, was reworked to draw clearer distinctions between interior architectural design and FF&E design. If an architect is only performing one set of services, the other can be easily redacted. This separation also allows architectural interior design and FF&E design to progress on their

own independent schedules with separate budgets and estimates. B152 also establishes a baseline for interactions between the architect and vendors. For example, while the architect is expected to inspect FF&E upon delivery and when installation is complete, the architect is not required to purchase FF&E on the owner's behalf. But should that need arise, AIA has created a new scope of services document, B254-2019, that allows the architect to get paid extra for acting as the owner's purchasing agent.

AIA also modernized its vendor agreements to make them easier to use. The 2007 owner/vendor agreement was comprised of two parts: A151 and A251. Those documents have now been merged into one, A151-2019, which is intended for situations where the vendor will provide a large amount, or perhaps even all, of the FF&E for a project. In A151, the vendor not only sells and delivers FF&E, it performs on-site work such as placement, assembly, and installation. In 2019, AIA also added a second option for hiring vendors: the A152-2019, Purchase Order. A152 is a short document that was designed to allow sales contracts to be negotiated quickly. It is suitable for engagements that are limited to the sale and delivery of goods not requiring on-site work.

Interiors projects come with complex contracting issues. But recognizing these issues and using the right contracts for your situation is the right place to start addressing them. Visit aiacontracts.org to learn more about the AIA's Interiors Family of documents. **AIA**

Clearer distinctions now exist between interior architectural design and furniture, furnishings, and equipment design.

This article is not meant in any way to provide legal advice. If professional advice or other expert assistance is required, the services of a licensed professional should be sought.

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AIA Collaboration



PHOTOGRAPH: MATT KLEINMANN

Rachel Jefferson, executive director of the Historic Northeast Midtown Association, stands outside the future Northeast Grocer Co-Op.

In Kansas, Healthy Food for Healthier Communities

By Kathleen M. O'Donnell

In 2012, Wyandotte County was ranked the unhealthiest in the state of Kansas. A lack of fresh, healthy food had contributed to a public health crisis, and as of today, one census tract in the area has the highest estimated rate of Type 2 diabetes in all of the state. Instead of waiting for a corporate grocery store to take notice of food insecurity here, local organizations—with help from designers—have put matters into the community's hands by developing a plan for the Northeast Grocer Co-Op.

Matt Kleinmann, a University of Kansas doctoral student who has dedicated his academic and professional life to activism around health and the built environment, says that health disparities in a corner of Wyandotte County—northeast Kansas City, Kan. (KCK)—are exacerbated by systemic inequities. Today, there isn't a single full-service grocery store for the entire community of 20,000 residents. "This lack of investment puts all of our residents at a public health disadvantage, especially seniors and those that live below the poverty line, where

finding the nearest grocery store represents a major inconvenience," Kleinmann says.

Spearheaded by the Historic Northeast Midtown Association (HNMA), the Northeast Grocer Co-Op is set to be housed along a historic corridor in a vacant storefront, which has already been cleaned out by community volunteers and prepped for upgrades. A series of engagement events and participatory design exercises are taking place throughout 2019, allowing community members to plan the co-op's future together.

Kleinmann's long-term involvement with the Northeast Grocer Co-Op includes coordinating design services. He is also developing "Holding Space," an interactive exhibit that invites residents to take part in the design process and documents the co-op project as it progresses. A participant in last fall's AIA Design Justice Summit, Kleinmann believes that giving community members decision-making power is imperative for infusing social justice into design.

"With 'Holding Space,' we're inviting the community to participate in developing their own visual narrative, which will be an interim installation on display as we seek to return a grocery store to the space. This gives our community the tools and capacity needed to hold space for reflection on where we've been and where we're going," he says.

KU School of Architecture's Dotte Agency, the design collaborative Kleinmann co-founded with professors Shannon Criss, AIA, and Nils Gore, AIA, will partner with YouthBuild KCK, an AmeriCorps Vista/United Way program that supports construction training for young people pursuing GEDs, to design and build the exhibit. "Holding Space," like many other initiatives spearheaded by Design Justice Summit participants across the country, will receive grant funding from AIA.

But the installation is just one important piece of the bigger project. The Northeast Grocer Co-Op is a massive undertaking with high hopes of transforming the social and physical health of northeast KCK.

Below, we asked Rachel Jefferson, executive director of the Historic Northeast Midtown Association, about the collaborative nature of the project and the promise it holds:

Why is collaboration among community members, organizations, and designers critical to the success of the project?

The Northeast Grocer Co-op is about a lot more than providing safe and affordable food in a food desert. Although that is an outcome of the project, the principles that guide the project are rooted in community self-direction and co-creation. Under-resourced

AIA Perspective



Jefferson says that the grocer co-op will improve the economic and physical conditions of Northeast KCK.

communities like Northeast KCK are successful in furthering those principles when they have equitable access to cross-sectoral collaborations among community members, community organizations, institutions, designers that provide technical expertise, in-kind donations, and material resources to support the community's vision of itself.

How does Holding Space factor in to the overall mission of the co-op project?

Holding Space will capture the rich history of Northeast KCK by highlighting the area's previous economic and social vibrancy, with the intended outcome of garnering community support for future economic revitalization activities in the area. It provides an avenue for sharing the rich history of the community and the evolution of the Northeast Grocer project, while also functionally providing seating and storage space for the co-op.

What is one hope you have for the future of your community? How does the co-op fit into that vision?

HNMA's goal is to improve the quality of life for Northeast KCK residents while creating a more desirable, healthy, safe, and economically vibrant community. This project is providing Northeast KCK with an invaluable jump-start in managing their own food supply and improving the economic and physical conditions of a key part of Quindaro Boulevard, a major artery in Northeast KCK. In the long-term, this project will catalyze redevelopment along Quindaro and the Northeast by creating opportunities for ownership, economic self-direction, and cultural healing within the community. **AIA**



PHOTOGRAPH: GREG POWERS

Social Justice by Design

Our legacy depends on our ability to help close divides through the power of design.

Architecture is more than the product of the technological tools we use or the sum of our imagination and expertise. At its best, architecture is a lasting physical manifestation of our highest ideals and most cherished values.

While the world we live in today is the most socially aware and connected in human history, too many people still experience the daily indignities created by social injustice in all its variations. Our legacy and long-term relevance depend on our ability to help close the divides of class, gender, and race through the power of design. To that end, I believe that architecture and architects have an essential role in advancing social justice by focusing on design justice.

It is my opinion that the only way we will achieve those ends is by including the voices, experiences, and cultural perspectives of a diverse cross section of people.

As Henry David Thoreau observed, "It's not what you look at that matters, it's what you see." What we "see," to a considerable degree, is shaped by our experiences and how society sees us and relates to us throughout our lives. Therefore, in my view, advancing social justice through design justice and increasing the diversity and inclusion of the profession are inextricably linked. Diversity helps a team, a community, and even a nation "see" problems more holistically and find lasting solutions that satisfy the needs and encourage the achievements of everyone.

For architecture and architects to thrive in an ever-more-complex and diverse world, the creativity, contribution, and leadership of

everyone will be essential, without regard to gender, race, or socioeconomic background.

Why? As the trend toward greater urbanization continues, the expertise of architects could and should be central to finding equitable and just solutions. Today, more than 50 percent of people worldwide live in cities. By the end of the century, some estimates put that number at close to 90 percent.

As the urbanization trend continues, humanity will be even more dependent on the built environment. That could fundamentally change the role of the architect in society.

Architects could be at the forefront of creating a more equitable and more just built world—and by extension society—no matter the nation, but only if we have the innovation, ingenuity, and leadership of everyone who shares our vision.

The choices we make today will determine if architects can be trusted partners who will deliver solutions that help solve society's most urgent challenges and promote social justice, or if the profession is an artifact of a bygone era, relegated to the sidelines of social advancement and achievement.

Ultimately, we are more than designers and builders—we are facilitators. We are at our most effective when we remember that everyone deserves to be heard. As we are called on to lead efforts to meet the challenges of fighting climate change and increasing sustainability, economic equity, and opportunity for all, the profession of architecture must reflect the demographic diversity of society.

To achieve our fundamental goal of driving positive change through the power of design, we have to empower those who have been too long ignored. We have to create spaces that allow everyone to become their best selves through the power of design. **AIA**

William Bates, FAIA, 2019 AIA President

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“The rebirth of Saarinen’s landmark can be seen an exercise in mid-20th-century nostalgia informed by 21st-century Instagram-driven placemaking.”

The TWA Terminal’s Bittersweet Revival by Karrie Jacobs

In a light-filled, one-room architecture studio in Brooklyn's **DUMBO** neighborhood, Anne Marie Lubrano, AIA, is talking Camelot. When the small firm she founded with Lea Ciavarra, AIA, began working on the project that would transform Eero Saarinen's beloved but long-vacant 1962 TWA Flight Center into a hotel and conference center, it was 2014. The Obama family was in the White House and there was a sense of optimism that Lubrano thought must have been akin to the way the country felt when the Kennedys were in residence.

The revival of the TWA terminal, constructed at Idlewild (now John F. Kennedy) Airport in Queens when air travel was still stylish and commercial jets were much smaller—a hundred passengers on average—is clearly an attempt to monetize the *joie de vivre* of the early jet age. As hotelier Tyler Morse, the CEO and managing partner of MCR Development, the company behind the project, told *The New York Times*: "Sixty-two was a special year: John Kennedy was president, John Glenn circled the Earth, the space race was on." To Lubrano, born when Nixon was president, 2014 felt just as special. "I can remember meeting Tyler and just feeling like the city was still booming and there was this hope and aspiration."



The terminal's sunken lounge circa 1962

All that hope and aspiration culminated in mid-May with the reopening of the Flight Center, which had been mothballed after TWA went bankrupt for the final time in 2001. The historic terminal, restored by Beyer Blinder Belle (BBB), now serves as the entryway and lounge for a 512-room hotel designed by Lubrano Ciavarra Architects; a newly dug basement includes an additional 50,000-square-feet of event space.

The rebirth of Saarinen's landmark, with its restored sunken lounge smothered in TWA red, its walls lined with vintage travel posters designed for the airline by artist David Klein, and its pay phones preserved and conspicuously positioned, can be seen as an exercise in mid-20th-century nostalgia informed by 21st-century Instagram-driven placemaking. The opening day festivities featured a performance by a less-than-convincing group of Beatles impersonators singing on the mezzanine-level footbridge as young performers dressed as pilots and flight attendants shimmied. Meanwhile, dozens of actual TWA veterans once again circled the terminal, many wearing their old uniforms.

I spoke with two sisters, Marcia Bytnar-Rouse and Karen Bytnar, who had both worked as flight attendants in the 1960s and '70s. They talked about how miraculous it seemed to come to work every day in this building (and then fly off to Paris or Rome). "It felt like we were in the future," says Bytnar-Rouse. "Honestly, it still looks futuristic to me."

A Starchitecture Trial Run

Except that future has moved on and gone places that neither Saarinen nor TWA anticipated. The Flight Center's architecture is less visionary than quaint. It doesn't speak of technological advancement but of craft; every oddly shaped opening and soft curve was handmade by contractors who were maestros of poured concrete. At night, when the whole curvaceous volume turns into a giant cocktail lounge, the shadows cast by all the convexities and concavities make it look like the set of a German expressionist film circa 1920.

The building represents an appealingly exotic vision of the past, one in which Idlewild decided that each major airline should have a symbolic stand-alone building, essentially giving the concept of starchitecture a trial run. Eero Saarinen, who escaped from the architectural shadow of his father, Eliel, when he won the 1948 competition for the St. Louis Gateway Arch, a great stainless steel wishbone that still looks structurally implausible, emerged in the 1950s as a progenitor of an unusually expressive architectural language. While some of his buildings were rectilinear to a fault—Bell Labs in Holmdel, N.J., comes to mind—many of them, like the Ingalls Rink at Yale University, with its curving concrete spine or Dulles International Airport outside Washington, D.C., with its ski jump roof, appeared to be equal parts liquid and solid.

Every fluid new Saarinen design was an invention, untested and full of engineering and aesthetic challenges. None more so than TWA, which was completed a year after Saarinen died of a brain tumor. The building's

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Saarinen's historic terminal, now flanked by two new hotel wings

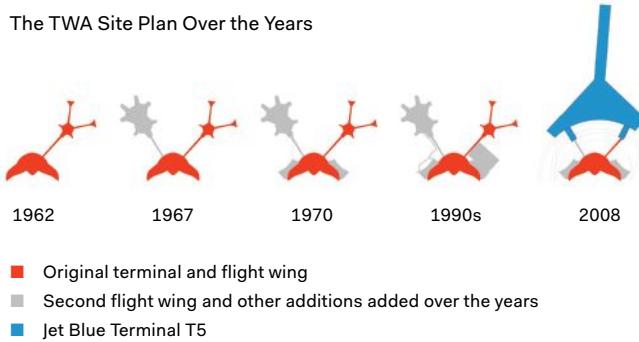


avian form, unlike, say Santiago Calatrava, FAIA's bird-inspired World Trade Center Oculus in Manhattan, didn't benefit from computer software that could calculate stresses or guide fabrication of components. The process of building the swooping concrete structure had to be improvised, Saarinen working in close collaboration with engineer Abba Tor of the firm Ammann & Whitney, and Grave Shepherd Wilson & Kruse, the contractor. To develop his unconventional concepts, Saarinen tried them on, fashioning huge models that he endlessly manipulated. A photo on the wall in one of the TWA Hotel's exhibition areas shows Saarinen face-down inside a Flight Center model, only his legs sticking out the back.

Most astonishing was the terminal's construction method. The August 1960 issue of *Architectural Forum* detailed how Saarinen's firm went from its "rough working models" to something like construction documents. What the architects gave to the contractors were, in essence, topographic maps. "From these 'contour maps' the contractor had to develop still more elaborate drawings to show every rib and connection for the actual form work needed to hold up the concrete on the site," the magazine reported.

Photos that ran with the story captured the intricacy and the improvised nature of the formwork—an impossibly dense construct of plywood and scaffolding that resembled those early Zaha Hadid paintings, in which unlikely architectural objects are alluded to by blizzards of polygons flying in all directions. When the last of the formwork was stripped away in late 1960, the fact that the 5,500-ton structure remained standing, balanced atop four concrete buttresses, was a near miracle. And the fact that it still stands, balanced like a bird on "spindly little legs," as Richard Southwick, FAIA, BBB's director of historic preservation, puts it, is no less remarkable.

The TWA Site Plan Over the Years



A Monument to Blissful Ignorance

You can view the Flight Center as a symbol of a time when air travel was exhilarating and stylish. Or a harbinger of the sort of architectural gymnastics we now take for granted. But you can also look at it as a symbol of confidence, a monument to the idea that we could will the world to behave in unprecedented new ways by relying on skilled know-how and audacious improvisation.

Yet the building can also be read as a monument to blissful ignorance or, perhaps, denial. One thing that Saarinen didn't know was that airplanes were about to get much bigger. The Boeing 747, which could be configured to carry as many as 480 passengers, was under development in the 1960s and began commercial service in 1970. As the airplanes grew, Saarinen's terminal began to feel smaller. According to Lubrano, it was designed for a capacity of just 600; later, "bat wings" were added on to the original bird to increase baggage storage capacity. Saarinen's other 1960s airport, Dulles, was enlarged in 1996 by extruding his great swoop of a terminal to double its original size. But that solution wasn't possible at TWA, a work of sculpture that simply couldn't accommodate the rising



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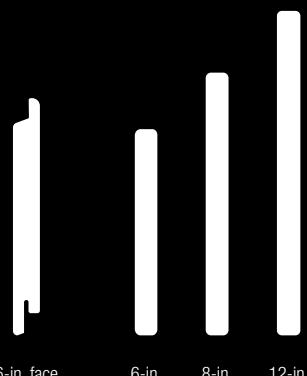
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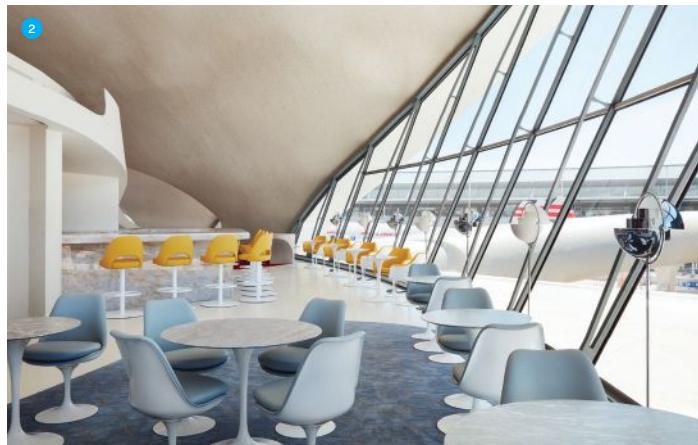
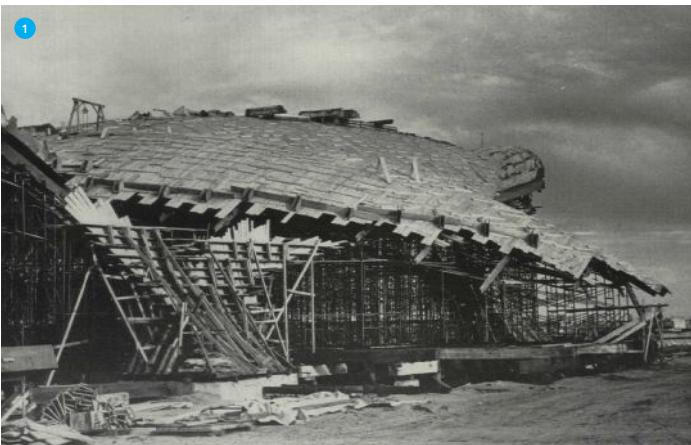
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1. A photo in *Architectural Forum* showing the pouring of the terminal's roof. 2. The renovated Paris Cafe. 3. Guests check in at the rebuilt terminal counters (left) and then take a procession of steps up to the main level. 4. The 1962 Room, an events space that was previously a baggage claim area. 5. The restored Pope's Room in the Ambassador Lounge

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Southwick of BBB, a New York firm renowned for its restoration work on landmarks such as Grand Central Terminal and the Empire State Building, began his long engagement with the Flight Center in 1994, just after the building was designated a landmark by New York City. The Port Authority of New York and New Jersey, which owns and operates the metropolitan area's airports, including JFK, has what's called "superior jurisdiction," meaning it could have ignored the landmark designation. "They wanted to know if they could tear it down," Southwick recalls. "I said yes, but I wouldn't want to be in your shoes."

According to Southwick, there were a variety of plans for the site in the 1990s and 2000s, including a combined United Airlines/JetBlue terminal that could



A restored flight tube, which connects to one of the hotel wings

have incorporated Saarinen's TWA. "Actually, a few days before September 11, there was a tour with Neil Levin," Southwick told me. "There was going to be a big article the Sunday after, stating that the TWA terminal was being saved, and this would be the keystone of all the new structures around it." Levin, the executive director of the Port Authority, was killed in the World Trade Center attack, and those plans never materialized.

In 2008, when I last saw Saarinen's TWA, JetBlue was putting the finishing touches on a terminal that it was constructing directly behind the historic building. At some point I heard that the Flight Center might serve as a dedicated gateway to JetBlue: Cabs would drop passengers at TWA, they'd walk through an architectural wonderland, and then into JetBlue's highly optimized environment. Southwick called it "a very romantic notion," one that "made no sense at all."

All along, the Port Authority had been searching for a development partner that could transform the

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A hotel room, complete with martini bar and Womb Chair

Flight Center into a hotel. André Balazs, known for the Standard Hotels and Chateau Marmont, originally won the bid, but his business plan turned out to be impractically modest, and he pulled out. In 2014, Morse and MCR made their successful pitch, which hinged on having enough hotel rooms to make the project financially viable.

Lubrano's design team was able to make space for the two new hotel wings by demolishing the various additions that had been made to the Flight Center over the years. The new wings curve subtly and act as a backdrop for the historic building, concealing what couldn't be removed, including the JetBlue terminal. Inside the Flight Center, BBB attempted to re-create the experience of TWA circa 1962. "So we ended up doing all the glass. We did that sunken lounge. That was all plywood-ed over at one point," Southwick told me. As for the passenger check-in area (now the hotel check-in), "we ended up reconstructing it entirely using old shop drawings." A Queens-based upholsterer re-created the banquette seating, and a factory in China replaced millions of aspirin-sized Italian tiles. The Ambassador Lounge, the one dining area that was seamlessly designed by Saarinen (the other restaurants were farmed out to Raymond Loewy's firm), with seating by Eames and a Noguchi fountain, was meticulously restored. The old terminal now looks conspicuously new.

Some things are different, of course. An old baggage carousel space is now a ballroom. There's a simulated tarmac outside the sunken lounge with a 1959 Lockheed Constellation airplane that's been converted into a cocktail lounge. The famous tube-shaped passageways that used to lead from the central



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part of the terminal to the gates now take guests to the hotel wings. And there's a heated pool and cocktail lounge on one hotel rooftop, overlooking a very busy runway and a natural gas-fueled power plant atop the other wing.

The rooms themselves are 1960s-inspired and feature Saarinen-designed Tulip Tables and TWA-red Womb Chairs, and the kind of pole lamp that was so ubiquitous in the mid-20th century that even my unstylish parents owned one. Mike Suomi, ASSOC. AIA, a principal and vice president of interior design at Stonehill Taylor in New York, the firm behind the design, said that the rooms are mostly intended for short-term guests who might be incapacitated by jet lag. "We wanted to create an oasis so that it took the traveler away from the hectic nature of air travel today, gave them a place to relax and unwind."

A Bittersweet Fantasy

I'm thrilled the Flight Center was preserved and restored, and is once again full of life. I especially loved the view of Saarinen's building that I got from my hotel room during my stay on opening night. My bed faced the window, which is 5 inches thick and blocks the airport noise. I peered out into the former Ambassador's Club; the Noguchi fountain was about even with the foot of my bed. I saw the swoop of the great roof and everything around it. An elevated AirTrain track, a parking garage, and an awkwardly asymmetrical control tower—all were visible in the near distance, but the contrast of their dull brownish concrete helped make Saarinen's freshly painted white terminal appear to gleam.

Yet I remain wary of the nostalgia the project conjures; I'm not entirely comfortable with our bottomless fascination with midcentury Modernism. And I find it disconcerting that Morse has transformed the logo and trade dress of a dead airline into a 21st-century style brand, applying it to everything, including the employees, who are costumed in updated flight uniforms.

The flight center connects directly to Terminal 5, via an elevator (the buttons are labeled "1960s TWA HOTEL" and "PRESENT DAY JETBLUE"). When you step into the present day, the effect is jarring. Saarinen's TWA has long been a totemic object for the design crowd, but part of its appeal might be that the vision it embodied was devastatingly wrong. It was built for a past that only barely existed and for a future that didn't want it. Lubrano had it exactly right. The flight-center-turned-hotel is a bittersweet fantasy, a congenial spot for happily ever after: Saarinen's very own Camelot.



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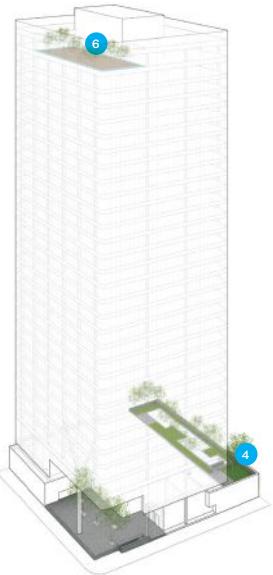
A new high-rise office tower joins its public spaces to the city around it.

TEXT BY KATIE GERFEN
PHOTOS BY STEVE HALL/HALL + MERRICK PHOTOGRAPHERS

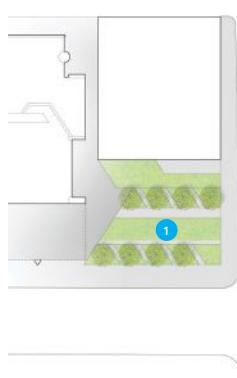




Green Space Diagram



Ground-Floor Plan



- 1. Existing pocket park
- 2. Plaza
- 3. Lobby
- 4. Terrace
- 5. Stair to street
- 6. Roof terrace

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"Most architects who get a high-rise building immediately think about shape," says architect John Ronan, FAIA. But that results in "a city full of self-referential object buildings with no dialogue." For the design of 151 North Franklin, a spec office tower in his home base of Chicago, Ronan took the opposite approach: Instead of focusing on the building's form, he asked, "How do you pull the city into the building? And conversely, how does the building make the city better?"

Ronan and the project team from his eponymous firm, John Ronan Architects, approached the commission with urban design in mind: Building upon an existing pocket park across the street, they extended the green space—or at least the idea of it—right through the structure, with a plaza and visually open lobby at the base, a terrace on the second level, and a glassed-in deck on the top floor. Ronan conceived of the exterior spaces as distinct environments—each suited to different activities, from lunch meetings, to quiet work, to unwinding at the end of the day—but also very much as a part of the whole. "I think of them as outdoor rooms," he says. "What if we rethink public space in terms of collaboration lounges, so that people can leave the office without leaving the building?"

The plaza is carved out of the base of the tower, behind a colonnade, and features a scattering of birch trees and seating for a ground-floor café. The branches and leaves are hazily reflected in the linen-finished stainless steel ceiling panels two stories above, so that "the effect of the trees is amplified," Ronan says.

The second-floor terrace feels more private, though it is open to the public via an exterior stair leading

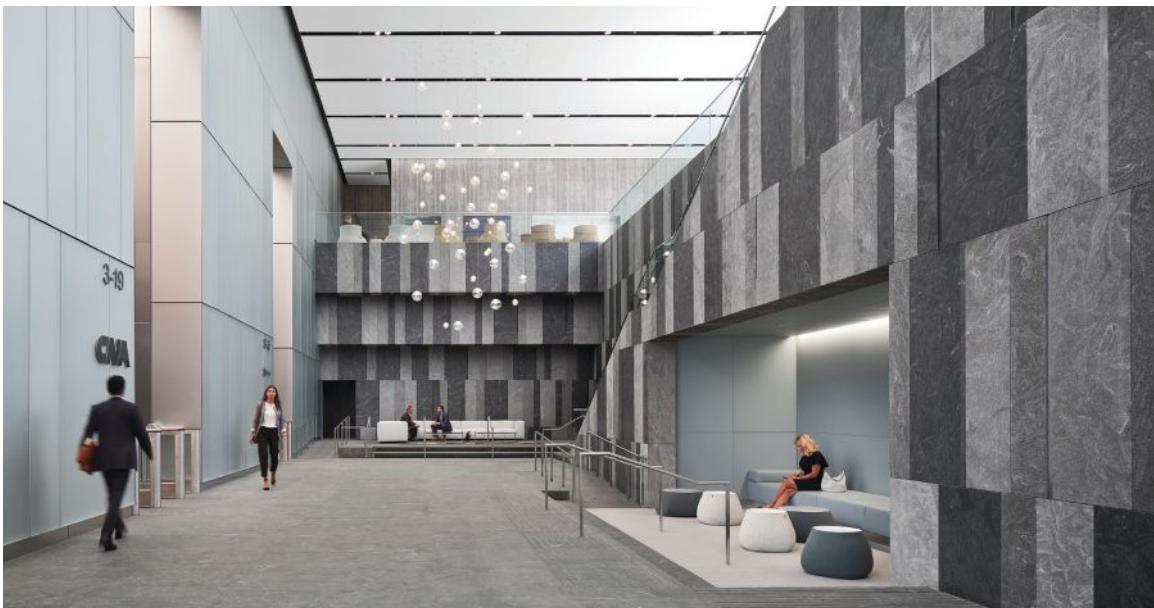
directly to the street. "It gets direct sunlight from 11:00 to 1:00," Ronan says, "and at other times it's shady and contemplative."

The tenants-only roof terrace is lined with glass walls that serve as a windbreak. It can accommodate large gatherings, but hawthorn trees in gabion planters define smaller seating areas. Placing a deck at the top of the tower was a pointed choice: At 36 stories, the tower is shorter than the buildings around it, so, Ronan says, "How much sense does it make to spend the money on a form at the top of the tower?" Instead, the terrace draws the street plaza into the skyline.

Ronan's approach to creating flexible urban space isn't limited to the outdoors, it extends to the lobby as well. Security at the elevator cores limits upper-floor access to tenants, but the majority of the space remains publicly accessible. "It feels like a grand lobby," Ronan says, "but at the same time there are spaces within the lobby that feel smaller and more intimate—like a sunken lounge."

Ronan specified Jet Mist granite as a nod to the conventional trappings of Class A lobby space, but eschewing what he calls the "mausoleum-like" feel of many tower lobbies, he chose three finishes—sandblasted, flamed, and honed—to make it less formal. The core is clad in sandblasted mirror-finish glass to reflect the birch trees and the daylight from full-height windows at the end of each elevator bank.

"Object buildings exclude you because you have to be outside of them to appreciate them," Ronan says. "I wanted people to feel welcome, and to have it be a real place in the city."

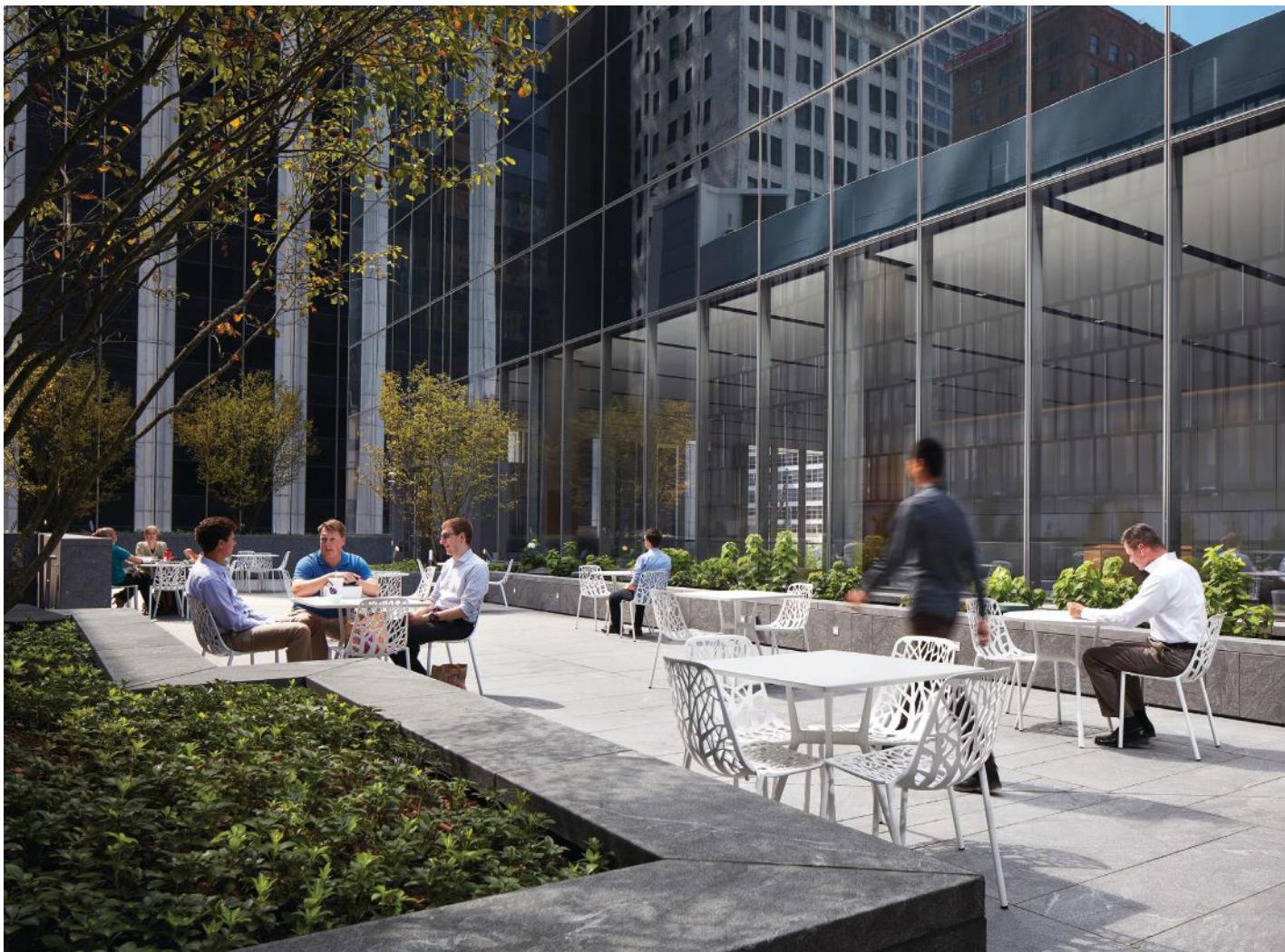


Previous Spread: Elevator core with view out to birch trees in ground-floor plaza

Opposite: Dusk view of tower from northwest, showing plaza at base

Top: Lobby, with elevator core at left and sunken conversation area at right

Above: Plaza with building entrance at right



Above: Second-floor terrace

Opposite: Roof terrace, showing gabion tree planters

Project Credits

Project: 151 North Franklin, Chicago
Client/Owner: The John Buck Co.

Design Architect/Interior Designer: John Ronan Architects, Chicago · John Ronan, FAIA (principal and lead designer); Marcin Szef, Assoc. AIA, Sam Park, Eric Cheng, Laura Gomez Hernandez (project team)

Architect of Record: AAI Associates

M/E/P Engineer: Environmental Systems Design

Structural Engineer: Magnusson Klemencic Associates

Civil Engineer: Mackie Consultants

Geotechnical Engineer: GEI Consultants
Construction Manager/General Contractor:

Lendlease

Landscape Architect: Wolff Landscape Architecture

Lighting Designer: Aurora Lighting Design
Vertical Transportation: Jenkins & Huntington

Code/ADA Consultant: Jensen Hughes

Acoustic Engineering: Shiner+Associates

Size: 880,000 square feet

Cost: \$184 million (core and shell)



**The Children's Library at Concourse House
Bronx, N.Y.
Michael K Chen Architecture**

A choir loft turned library gives children creative space in a larger transitional housing environment.

TEXT BY EDWARD KEEGAN, AIA
PHOTOS BY ALAN TANSEY



Concourse House has provided transitional housing and services for women and their children from a stout four-story masonry structure on Grand Concourse in the Bronx, N.Y., since 1991. The facility includes a barrel-vaulted, double-height former chapel, with a choir loft above, that dates to the building's construction in the 1930s. Recently, New York-based Michael K Chen Architecture (MKCA) transformed the 250-square-foot loft into a library for Concourse House's young residents.

Principal Michael K. Chen, AIA, was introduced to the nonprofit by donors Kate and Julie Yamin. He explains that a lifelong love of reading— influenced by his librarian-trained mother—determined the design approach: “All of my greatest escapes were in books,” he says. The children who live at Concourse House are transitioning out of homelessness and “don’t have their own books,” he says. “A library is a special part of childhood—to have access to the exploration and learning and imagination that books afford.”

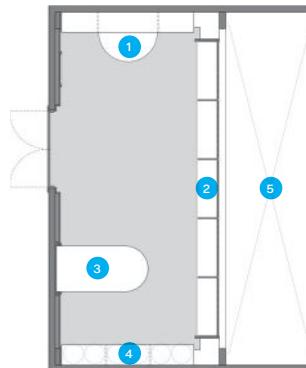
MKCA placed a capsule-shaped shelving unit—a form also delightfully known as a discorrectangle—in front of the choir’s existing railing to provide a more substantial safeguard against the drop-off. The rift-sawn white oak shelving is about 5 feet tall, and is designed to maximize book storage while ensuring the space isn’t intimidating for the children. A series of spaced wood dowels form the back of the unit and allow both light and air to circulate into the library. “We calibrated the scale so the elements are big, but kind of cuddly,” Chen says. “Even though it’s a single space, we were trying to create little pockets of intimacy.” For example, a small table acts as the librarian’s “office” for meetings, counseling, and poetry writing workshops.

The design provides a number of different settings for reading—a solid-surfaced reading table, playfully upholstered poufs stored in low shelving, and a comfortable, colorful carpet which provides unlimited seating options. Designed by MKCA, the custom carpet features bold abstract forms that “map” how the space can be used. “It signals that you could sit in a circle around a person who’s telling a story,” Chen says. The height of pile varies, and it’s more plush in the center where children are more likely to sit. For illumination, Chen suspended four globe-shaped pendant fixtures from the vaulted ceiling, supplementing them with a pair of sconces on the wall.

When the library opened, “we cut the ribbon, and the children ran in and grabbed books,” Chen says. “They used it exactly the way it was meant to be used; they didn’t need to be prompted.” Which seems like an object lesson in good design.



Floor Plan



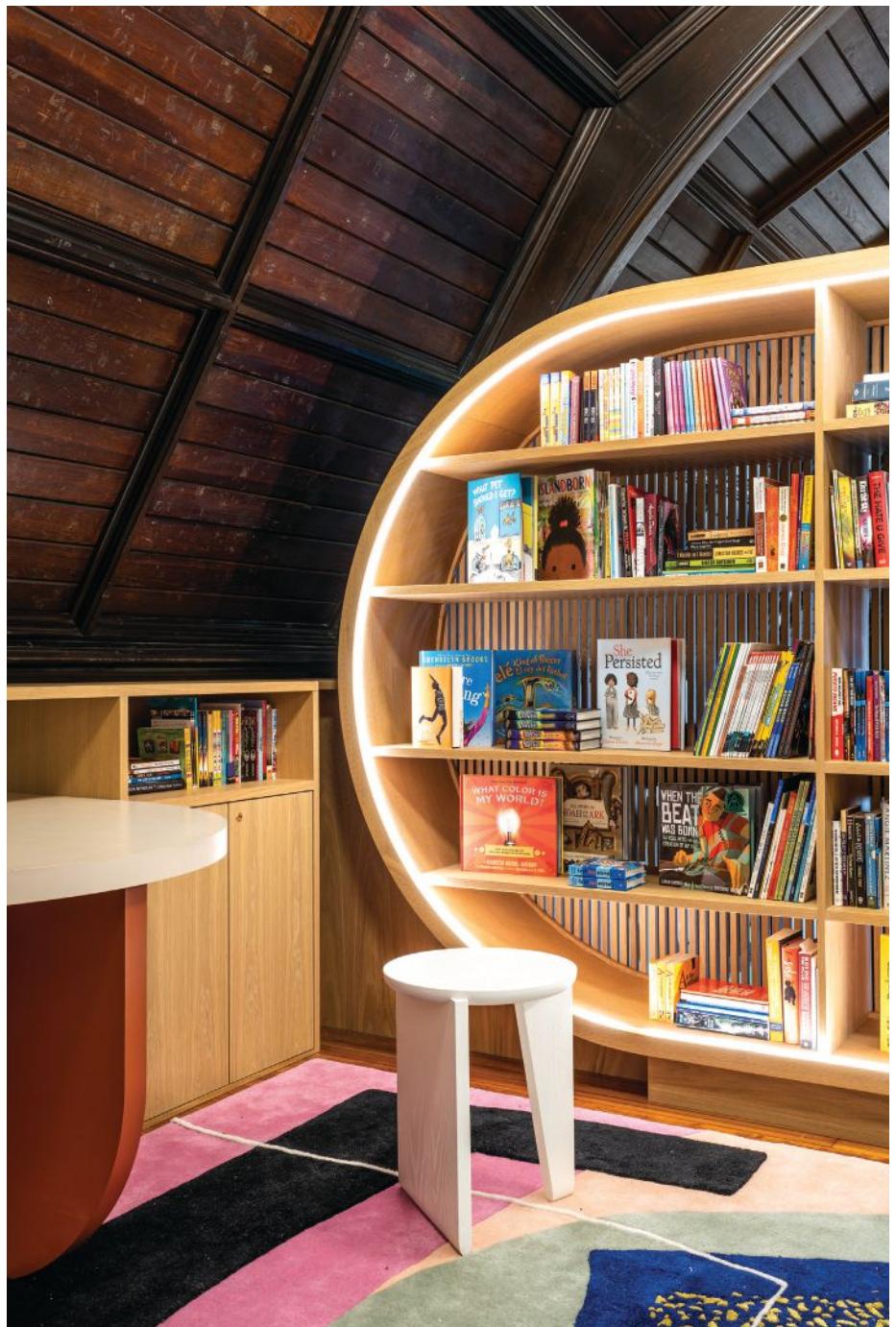
1. Librarian's table
2. Shelving
3. Reading table
4. Pouf seating storage
5. Open to below



Previous Spread: Library looking south to pouf seating storage and reading table

Opposite: Double-height space with library visible in former choir loft above

Right: Librarian's table next to main shelving unit with embedded LED lighting



Project Credits

Project: The Children's Library at Concourse House, Bronx, N.Y.

Client: Concourse House

Architect: Michael K Chen Architecture, New York - Braden Caldwell, Michael K. Chen, AIA (project team)

General Contractor/Millwork: Structure NYC

Major Donors: Julie Yamin and Kate Yamin

Donations: Studio Proba; Asher Israelow; Bec

Brittain; Birnam Wood Studio; Christopher

Kurtz; Chronicle Books; David Weeks Studio;

Egg Collective; Ezra Tessler, Courtesy of

315 Gallery; Fernando Mastrangelo Studio;

Haley Josephs, Courtesy of 315 Gallery; Kin &

Co.; Kinder Modern; Ladies and Gentlemen

Studio; Maharam; Manzanares Furniture;

Mary Wallis for Lindsey Adelman Studio;

Pelle; Phaedo, Courtesy of Colony; Ramos

Trucking; Schoolhouse; Structure NYC;

Visibility; Vonnegut/Kraft and Mary Ping

Size: 250 square feet

Cost: Withheld

Boxen
Swedish Centre for
Architecture and Design
Stockholm
Dehlin Brattgård Arkitekter

A steel-and-wood pavilion forms an intimate gallery space within a larger exhibition hall.

TEXT BY CLAY RISEN
PHOTOS BY JOHAN DELIN





The Swedish Centre for Architecture and Design, commonly known as ArkDes, is located in a 19th century structure built for the Swedish military on an island in the center of Stockholm. Its two cavernous halls offer a wondrous space for large-scale architecture and design installations, but they are less than ideal for smaller exhibits showcasing emerging designers. So in the fall of 2017, the center launched a competition in search of a solution.

Local firm Dehlin Brattgård Arkitekter's winning design is called Boxen, and, as its name implies, it is a cuboid structure set inside one of the main galleries, within which ArkDes can mount more-intimate exhibits. Built with a tight schedule and budget, Boxen is made of steel, painted birch plywood, and wire mesh, with a gently sloping ramp that rises around the outside. A circular window allows views into the space from the larger exhibition hall around it.

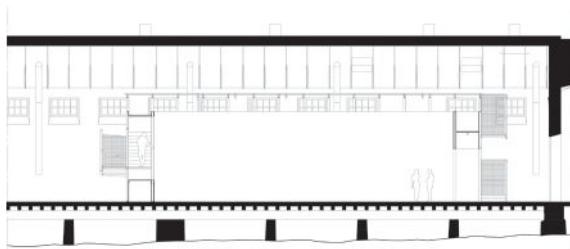
Central to the design is a desire to build connections between Boxen, its contents, and the rest of the gallery, says principal Johan Dehlin. As visitors ascend the ramp, they get a different perspective on the exhibits in the larger hall; the ramp and windows also put them on display. "We thought it would be interesting if the visitors themselves could become part of the exhibition space somehow," says Johannes Brattgård, the firm's other principal.

Boxen only looks simple: In fact, Dehlin and Brattgård say that the design and construction process was constrained by a long list of regulations and surprises. For starters, the main ArkDes halls are protected historic structures, and so whatever was built had to be minimally invasive and leave no permanent mark. This pushed them toward using lightweight materials to build an unassuming structure—aside from a few lights, there are no mechanical or electrical elements. "It became an opportunity to make a building without all the complexities of the utilities," Dehlin says. "It's just the structure and the function."

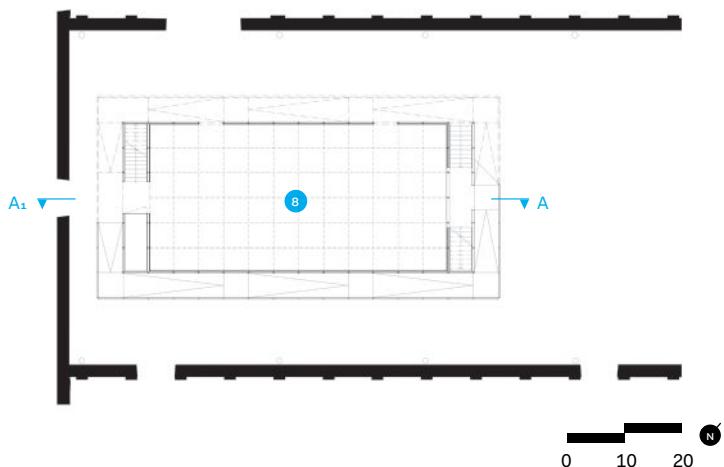
From the start, the architects knew they wanted to include an elevated viewing area, but accessibility requirements prevented them from relying solely on a staircase—hence the ramp (a pair of staircases, required by fire code, offer an alternative route). But as Boxen took shape within the hall, they found yet another challenge: The floors could not support the structure's point loads. Dehlin and Brattgård worked closely with a steel fabricator to build what amounts to a bridgelike structure that focuses the loads atop concrete foundations under the existing floor.

"It was technically quite challenging, but for that reason it was quite fun for us," Dehlin says. "And it got much better as we worked through those challenges."

Section A-A₁



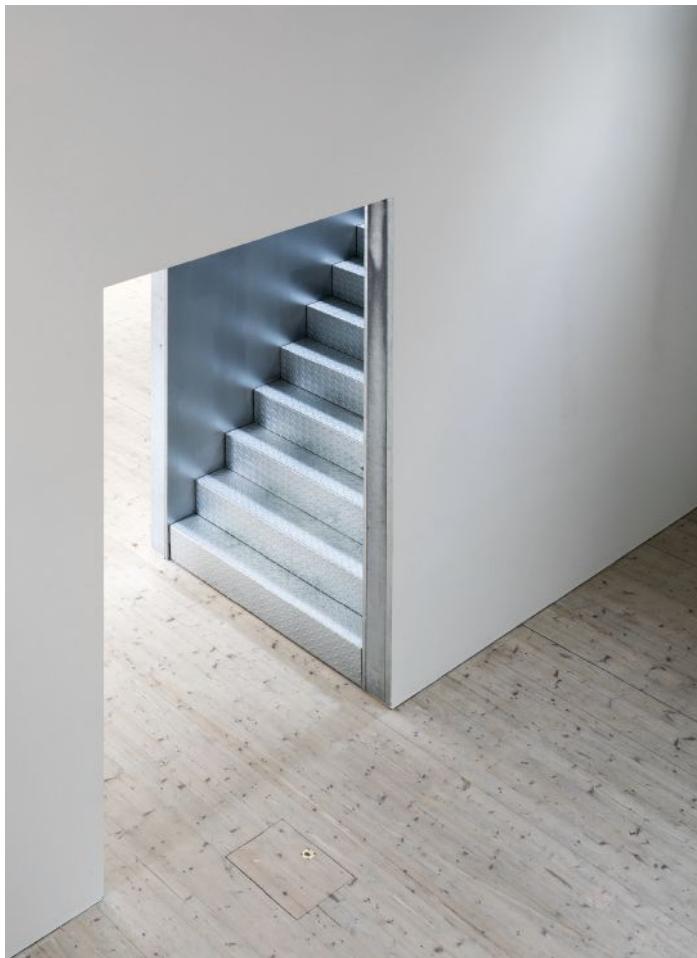
Detail Floor Plan



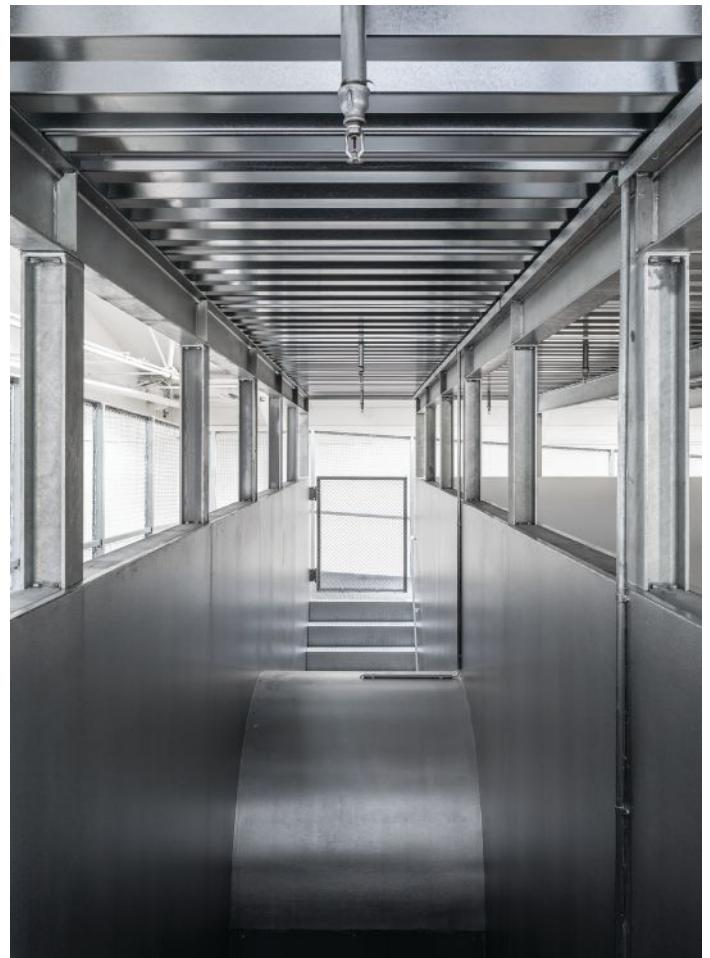
Ground-Floor Plan



- | | |
|--------------------|--------------|
| 1. Entrance | 5. Classroom |
| 2. Boxen | 6. Café |
| 3. Exhibition hall | 7. Library |
| 4. Gift shop | 8. Gallery |



Previous Spread: Boxen in the larger exhibition hall, with other exhibits in foreground



Above, Left: Entrance to northernmost fire stair leading to Boxen's upper viewing platform

Above, Right: Top of stair, with circular window surround in foreground



Above: Ramp, showing wire mesh
guardrail, with view into gallery interior
at right

Right: Gallery interior





Project Credits

Project: Boxen, Stockholm
Client: ArkDes (Swedish Centre for Architecture and Design)
Architect: Dehlin Brattgård Arkitekter, Stockholm · Johan Dehlin, Johannes Brattgård (lead architects)
Structural Engineer: DIFK
Project Manager: Erik Törnqvist
Steel Construction: Promostal
Contractor: Eckerud EQT
Size: 156 square meters (1,679 square feet)
Cost: 2.1 million Swedish Krona (\$217,906)

**Geffen Academy at UCLA
Los Angeles
Koning Eizenberg Architecture**



A secondary school on a college campus uses indoor and outdoor space to form a smart, informal learning environment.

TEXT BY KATIE GERFEN
PHOTOS BY ERIC STAUDENMAIER



Second-Floor Plan



Third-Floor Plan



Ground-Floor Plan



Some of the newest students at the University of California, Los Angeles (UCLA) campus haven't taken their SATs—they are the middle and high schoolers at the new Geffen Academy at UCLA. The university decided to start a secondary school for students from the greater Los Angeles area—including those of UCLA faculty—back in 2015. It selected a campus building designed by Culver City, Calif.–based Ehrlich Architects (now Ehrlich Yanai Rhee Chaney Architects) as a facility to temporarily house various departments during renovations, and hired Santa Monica, Calif.–based Koning Eizenberg Architecture (KEA) to transform it into Geffen Academy. The school opened in 2017, and moved into its new facility last fall.

KEA principal Julie Eizenberg, FAIA, says that the client was not interested in a traditional school: "They told us that they expected a third of their students to not be in class at any given time, that they wanted to begin to break down the barrier between faculty and students, and that they believed in wellness programs," especially the importance of daylight.

To address this brief, KEA reoriented the entry from one of the short sides of the building to the long side to create a better area for drop-off, and to reclaim some of the parking lot surrounding the building to create an outdoor patio for students. Existing roll-up

- 1. Main entrance
- 2. Living room
- 3. Faculty
- 4. Athletics
- 5. Classroom
- 6. Maker studio, with yard
- 7. Dance studio, with yard
- 8. Art studio, with yard
- 9. Food service
- 10. Multipurpose/dining
- 11. Patio
- 12. Open library
- 13. Media lab
- 14. Science lab



garage doors now open ground-floor studios for dance, art, and maker space to light and air, and connect the patio to a cafeteria. Inside, KEA cut a stair into the floor plates to connect the three levels and admit daylight via a skylight above. Glass interior partitions allow light to penetrate deep into the floor plates.

An important design concept was "the idea of empowerment," Eizenberg says. "To make the students feel empowered, you need to give them choice." A central, open library offers a variety of study and collaborative environments for students and teachers alike to choose how and where they want to work. The library starts on the ground floor with a space known as the living room, and occupies the center of floors two and three, where it is surrounded by classrooms. While the sequence of spaces is called a library—and does indeed hold books—the school has taken to it just as the architects intended. "We used indirect lighting on Unistrut that the students can also use for display," says project manager Mandi Roberts, ASSOC. AIA. The last time she visited, "the living room was a theater."

"To make teachers and students comfortable, you need a fairly sophisticated environment," Eizenberg says—high-tech offices were a source of inspiration. But the school was "keen that the kids create the narrative. It's got to be a place where you can make a mess."



Previous Spread: Ground-floor maker studio, with access to courtyard via roll-up door

Top, Left: Main entrance

Top, Right: Food service area, with reclaimed light fixtures from renovated space

Above: Outdoor seating on patio, with indoor multipurpose and dining area at right, beyond open roll-up door



Above: Second-floor faculty office, with visual connections to main stair and open library through glass wall

Opposite: Main stair at third floor, showing topographic map wall graphics by KEA

Project Credits

Project: Geffen Academy at UCLA, Los Angeles
Client: UCLA Capital Programs
Architect/Interior Designer: Koning Eizenberg Architecture, Santa Monica, Calif. · Julie Eizenberg, FAIA (principal-in-charge); Mandi Roberts, ASSOC. AIA (project manager/designer); Greg Cheng, AIA (project architect); Sam Ludwig, Nathan Bishop, Troy Fosler, AIA, Julian Menne (project team)
General Contractor: BNBuilders
Civil Engineer: KPFF Consulting Engineers
Landscape Architect: Pamela Burton & Co.
Structural Engineer: John Labib + Associates
Mechanical/Plumbing Engineer: Southland Industries

Electrical Engineer: Helix Electric
Lighting Designer/Sustainability: BuroHappold Engineering
Signage: Newsom Gonzalez
Audio/Video: Vantage Technology Consulting Group
Code Consultant: TK1SC
Acoustics: Veneklaesen Associates
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Laboratory Planner: Strategic Facilities Planning
Specifications: AWC
Fee Specifications: Dotrio
Hardware: Finish Hardware Technology
Food Service: Laschober + Sovich
Size: 75,000 square feet
Cost: Withheld



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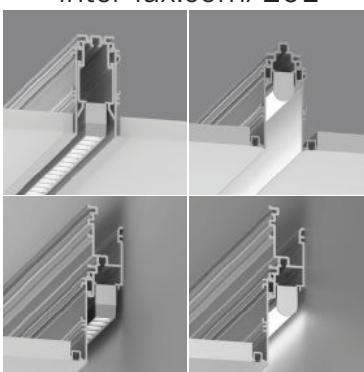
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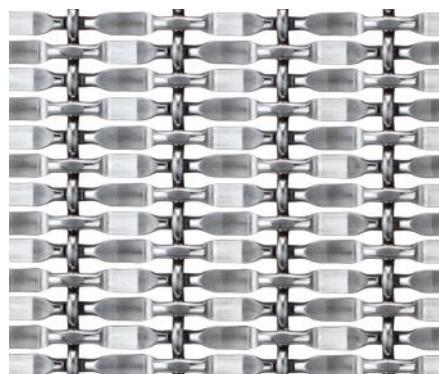
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Editorial: Don't Ban Glass, Cap Emissions

Wait a minute. Did the mayor of New York threaten to ban glass skyscrapers? Bill de Blasio certainly gave that impression during a press conference on Earth Day: “We are going to introduce legislation to ban the glass and steel skyscrapers that have contributed so much to global warming,” he proclaimed. “They have no place in our city or on our Earth anymore.”

De Blasio’s stated motivation is certainly correct: The planet faces an environmental disaster due to excess greenhouse gas emissions, and buildings are major producers. An inventory of 2015 emissions in New York found that buildings accounted for 67 percent of the year’s total. But many building technologies contribute to the problem, not just one envelope type. A ban on the glass curtainwall seems like an ill-advised solution that could, among other things, actually limit the development of sustainable design techniques.

As it turns out, de Blasio was trolling—sort of. After dropping the ban bomb, he offered a clarification: “If a company wants to build a big skyscraper, they can use all the glass [they want], if they do all the things needed to reduce the emissions. But putting up monuments to themselves that harm our Earth and threaten our future—that will no longer be allowed in New York City.” Fair enough.

At the press conference, the director of the Mayor’s Office of Sustainability, Mark Chambers, reiterated that there would be, in fact, no ban on glass. Instead, the goal is to increase large and tall buildings’ energy efficiency and reduce their carbon footprints.

Curiously, just a few days before, the City Council had passed legislation to reduce greenhouse gas emissions from large buildings by 40 percent by 2030, as part of a larger Climate Mobilization Act.

So why did de Blasio bother? I suspect he was performing a bit of political theater, wrapping a rational regulatory goal to reduce emissions in extreme rhetoric, and piggybacking on the notoriety of the

proposed Green New Deal in Congress. By that standard, the ploy worked: Here I am, writing about it.

Unfortunately, de Blasio pushed questionable policy, and that calls for a response. Outright bans of specific materials or technologies often make clumsy, counterproductive tools. Where climate is concerned, government should establish where we need to go, but shouldn’t dictate how to get there. Hopefully New York—and any other entity pursuing reductions in emissions and embodied carbon—will instead pursue goals-based strategies that set targets and promote best practices. I say this not because of some ideological opposition to government intervention, but because we need all the good ideas we can get.

Over the past decade or so, the sustainability movement has helped kindle an amazing resurgence of technology in architectural practice and education, and it would be criminal to limit the possibilities. After decades of spectacular form-making, the pendulum is swinging in the opposite direction. Passion for modeling complex curves is giving way to the necessity of modeling building performance. While both can be profoundly creative acts, at this fragile moment in ecological history, we should encourage the latter, pragmatic sort of innovation—and vehemently oppose obstacles to it.



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