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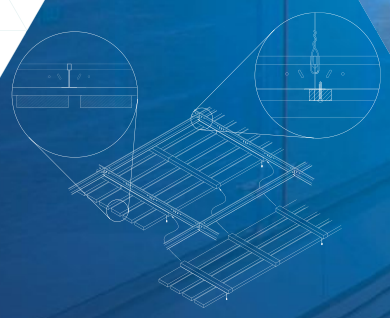
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ASSOCIATE EDITOR	Kara Mavros, *mavrosk@bnpmedia.com*
CONTRIBUTING PRODUCTS EDITOR	Sheila Kim, *sheilakim.nyc@gmail.com*
ASSISTANT EDITOR	Ilana Herzig, *areditor@bnpmedia.com*
COPY EDITOR	Anna Shapiro
ART DIRECTOR	Michael T. Powell, *powellm@bnpmedia.com*
ASSISTANT ART DIRECTOR	Kaylee Webster, *websterk@bnpmedia.com*
CONTRIBUTING ILLUSTRATOR, PRESENTATION DRAWINGS	Peter Coe
CONTRIBUTING EDITORS	Sarah Amelar, Robert Campbell, FAIA, Blair Kamin, Katharine Logan, Jayne Merkel, Clifford A. Pearson, David Sokol, Sarah Williams Goldhagen
SPECIAL INTERNATIONAL CORRESPONDENT	Naomi R. Pollock, FAIA
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CONTRIBUTING PHOTOGRAPHERS	Iwan Baan, Roland Halbe

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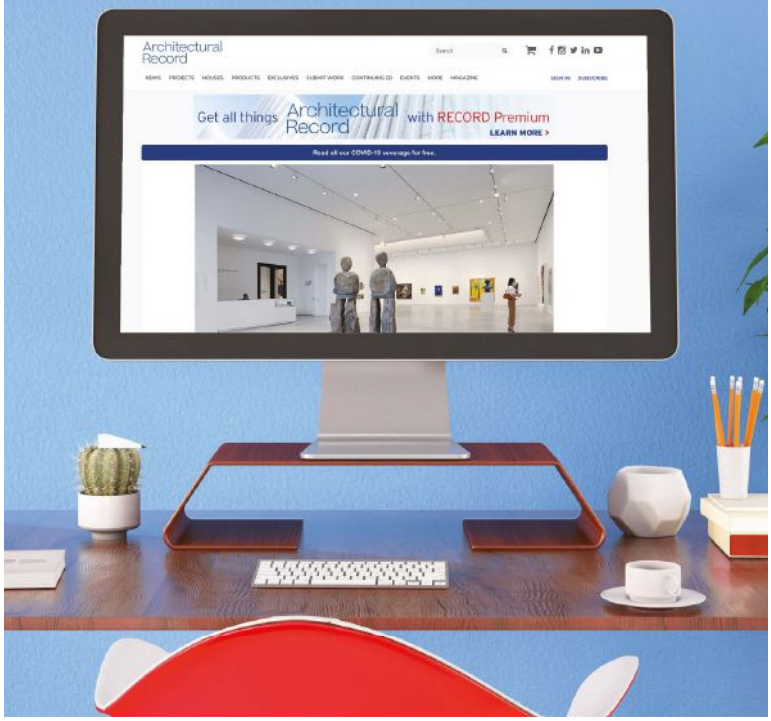
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PUBLISHER

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ADVERTISING SALES

NEW ENGLAND AND PA: Joseph Sosnowski
(610) 278-7829, Fax: (610) 278-0936, *sosnowskij@bnpmedia.com*
SOUTHEAST, MID-ATLANTIC: Wesley Loon
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(224) 216-7836, Fax: (248) 786-1390, *Smithb@bnpmedia.com*
MIDWEST (IN, MI, OH), TX, OK, EASTERN CANADA: Lisa Zurick
(513) 345-8210, Fax: (513) 345-8250, *zurickl@bnpmedia.com*
WEST, WESTERN CANADA: Bill Madden
(503) 260-9679, Fax: (503) 557-9002, *bill@maddenandassociates.net*
FL, KS, NE, ND, NY, SD, INTERNATIONAL: Risa Serin
(646) 849-7130, Fax: (248) 786-1393, *serinr@bnpmedia.com*

WORKFORCE/RECRUITMENT: Diane Soister
(646) 849-7137, Fax: (248) 502-2046, *soisterd@bnpmedia.com*

PRODUCTION MANAGER: Kristen Carpenter
(248) 786-1222, Fax: (248) 502-2051, *carpenterk@bnpmedia.com*

CONTINUING EDUCATION

CONTINUING EDUCATION GROUP MANAGER
Brittnie Wilson
wilsonb@bnpmedia.com
CONTINUING EDUCATION PROJECT COORDINATOR
Lisa Stradinger
stradingerl@bnpmedia.com
CUSTOM CONTENT EDITOR
Samantha Staniszewski
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AUDIENCE MARKETING

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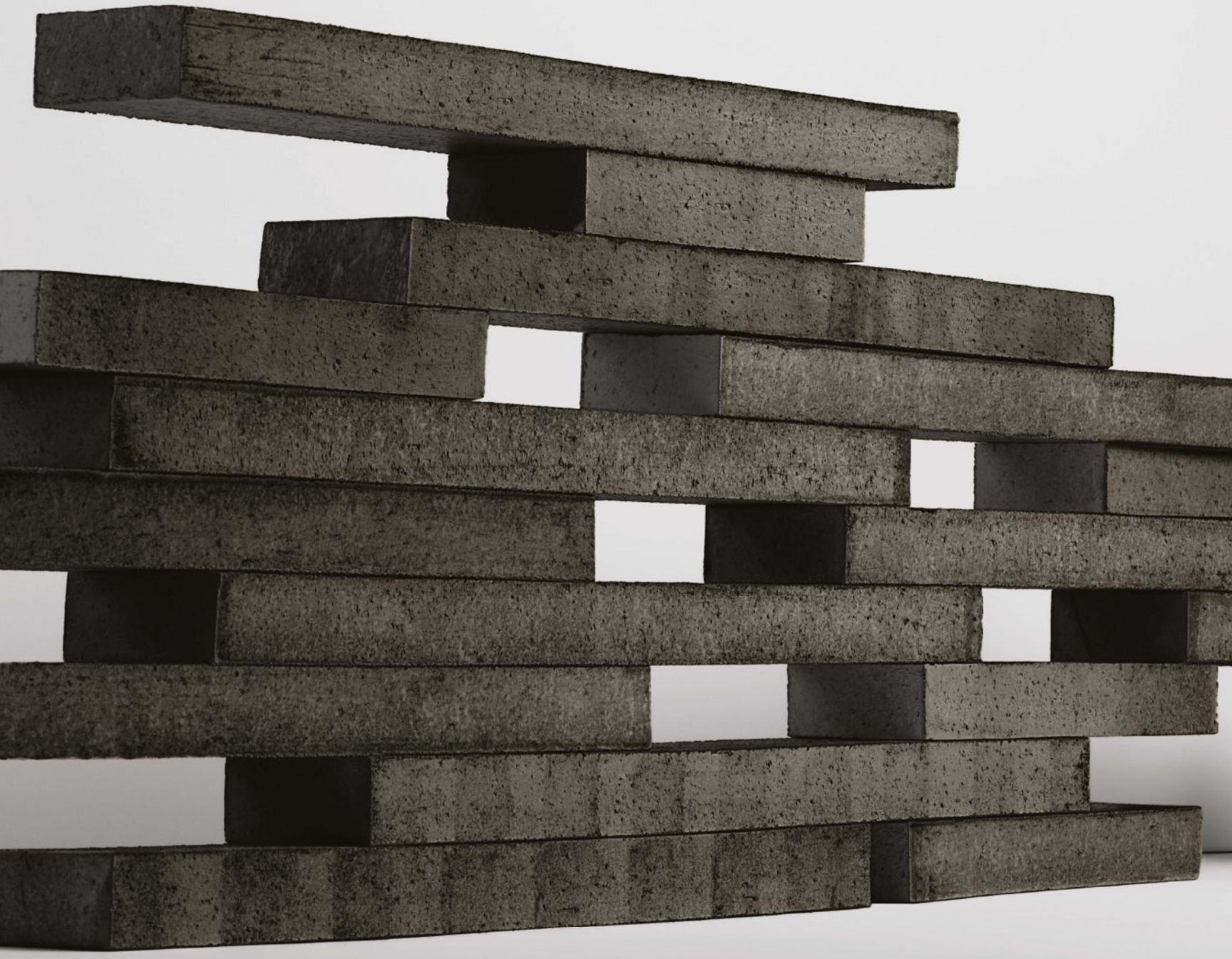
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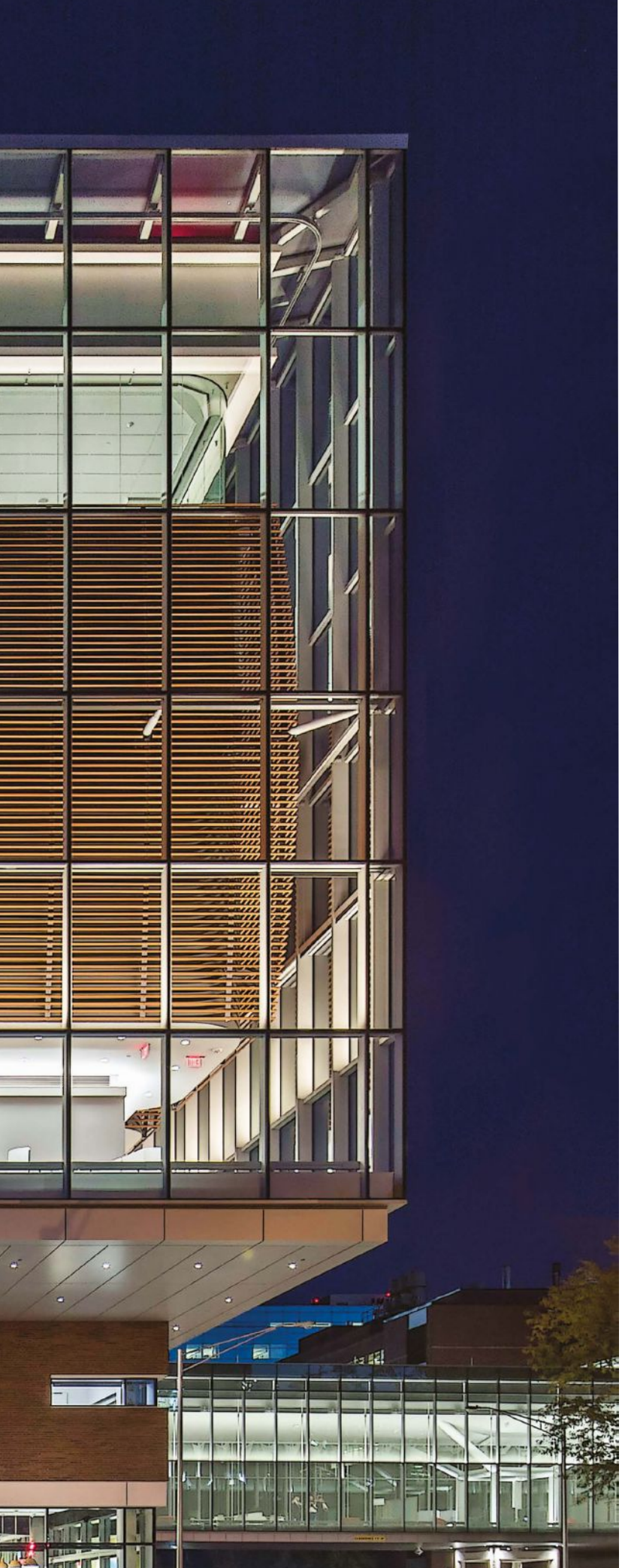
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Civic Lesson

How to rebuild successful, diverse cities. And how not to.

AS RECOVERY from the pandemic looms on the horizon, urbanists are exploring new ways to regenerate cities. Beyond Covid lies the opportunity to rebuild the civic realm in innovative ways around infrastructure, transportation, housing, health care, and public space—and in the process, seriously address equity, access, and sustainability.

Such ambitious undertakings can be costly. But there are lessons about how best to use resources to build thriving, diverse cities. And lessons about how not to.

Exhibit A in un-civic design is the largest private real-estate development in the history of the United States: the 28-acre, $25 billion Hudson Yards project on the far west side of Manhattan. When the first half of the mixed-use complex officially opened in March 2019, with a party debuting its shiny seven-story shopping mall, it was clear that the project was designed to be an exclusive haven, isolated from the rest of the city and a widely diverse public.

Hudson Yards sits on a deck constructed over active railyards near the Hudson River. The Related Companies (in partnership with Oxford Properties) won the right to develop the newly minted area, touting it as the largest public-private partnership in the city since Rockefeller Center. Yet that earlier complex is knit into the urban fabric, while this superblock was planned without extending all the adjacent city streets through it. Its half dozen gleaming towers, for high-end offices and luxury apartments—designed by KPF, SOM, DS+R, and Foster + Partners—could be at home in any global metropolis far from New York (one new resident calls the place "Little Dubai"). Glass-and-steel facades front the main thoroughfare, 10th Avenue; entry to the complex from there is only possible via an office building or the mall. There's not an attempt at even faux urbanity to break that wall with friendly shops at street level.

As part of the agreement with the city, half of the 12 acres in the first phase are designated public space. But much of that is essentially circulation, and all, except for elevated planting beds, is hardscape. There's little seating, mostly along the masonry planters. And the so-called "Public Square" at the center is hardly anyone's idea of an open civic plaza, overwhelmed as it is by the Vessel, the gigantic 150-foot-high tourist attraction, with its 154 zigzagging climbable staircases. Designed by Thomas Heatherwick, the $250 million coppertone folly is a monument to Related's chairman Stephen Ross, who personally oversaw its design and told *The New Yorker* that he wanted something that was really big.

Hudson Yards is privately controlled space (except for the SHED, the nonprofit cultural center that sits on a patch of city-owned land)—with its own rules, security, and little transparency. It was planned, too, with the latest smart technology, which can regulate its many sustainable features and gather all kinds of data, though few details about the data have been divulged.

While proponents of Hudson Yards cite its value to the city in investment, jobs, and future tax revenues (estimated eventually to be $500 million a year, according to Related, though the developers received $6 billion in tax breaks—you do the math), the few amenities of greatest value to ordinary citizens will be far in the future. Early last month, *The New York Times* reported that Hudson Yards has Covid-related economic woes, like many businesses. The anchor retail tenant, Neiman Marcus, went bankrupt and shut (its vacant space will be converted to yet more offices). The glittering mall and other buildings are quiet. And the Vessel closed indefinitely in January, for tragic reasons: the third suicide by jumping.

Now the timetable for the final phase of Hudson Yards, originally meant to finish in 2024, "appears on indefinite hold," according to the *Times*. That plan calls for eight more towers—by Frank Gehry, Santiago Calatrava, and Robert A.M. Stern, among others—with 3,000 residences. Its public givebacks are supposed to include a few hundred affordable apartments; a public elementary school for 750 children; and several acres of green space, open to all, in this park-starved wedge of the city. But who knows when—or if—those benefits will come to fruition?

The luxury customers who form the target market for this elite enclave will surely be back: New York breeds one-percenters like nobody's business. But what will be there for everybody else?

Though Daniel Burnham famously advised "make no little plans," architects can begin to make headway to improve our cities, one project at a time. In the pages ahead we look at a nonprofit's headquarters in Portland, Oregon, that is a catalyst in the rebirth of a historic African-American neighborhood destroyed by urban renewal (page 64); a public library in Brooklyn that has made outdoor public space a priority (page 76); and a Syracuse University center that brings together civilian and veteran students, along with local citizens (page 92). Each is helping to lead the way to more diverse and equitable cities.

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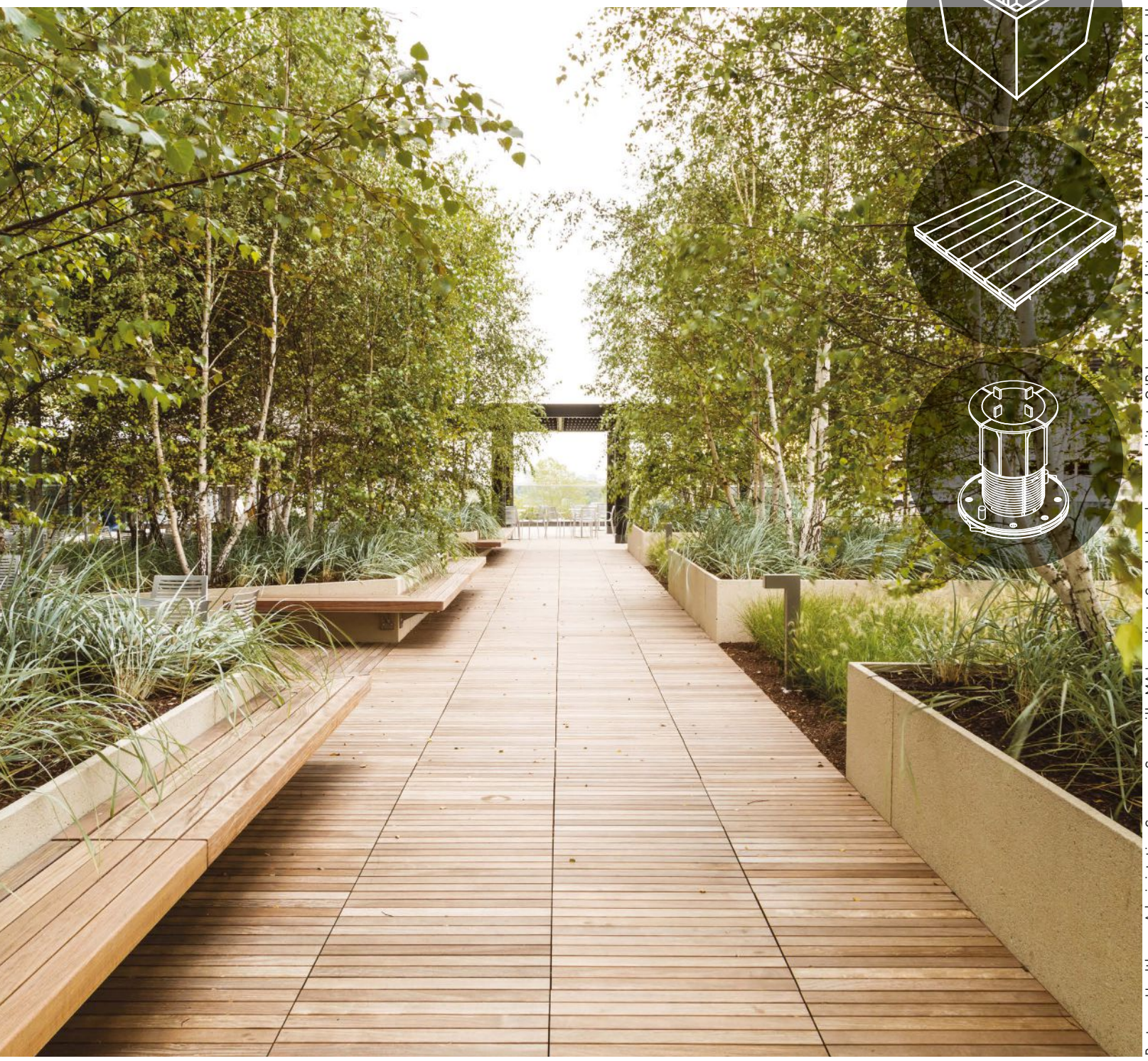
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– *John Seabrook, "Has the Pandemic Transformed the Office Forever?",* The New Yorker, *January 25, 2021*

What Biden's "Building Back Better" Could Mean for Architecture

BY DEANE MADSEN

THE EARS of architects, engineers, landscape architects, and urban planners may have collectively pricked up when Biden and Harris as candidates began touting a campaign slogan last summer of "Building Back Better." So far, the executive orders and proposals in the administration's early days suggest quite a lot of industry mobilization to support new clean-energy plants, new infrastructure, and new housing.

The administration, transitioning during a global pandemic and at a time of domestic unrest, has as its immediate priorities managing the Covid crisis and vaccine distribution, of course, while trying to rebuild democracy within a country that seems anything but united. At the same time, work is beginning immediately on an issue that would be top priority in any year: climate change.

Led by the country's first National Climate Advisor, Gina McCarthy—who served as the Environmental Protection Agency (EPA) administrator from 2013 to 2017—and with the confirmation of Michael Regan as the new leader of the EPA, the Biden-Harris administration is well positioned to carry out its climate proposals, including beginning work on fulfilling a campaign promise to achieve net zero carbon emissions by 2050. Understanding that cutting reliance on fossil fuels can threaten employment, the Biden-Harris administration seeks to create new jobs supporting clean energy. As McCarthy outlined in a recent CNN opinion piece, "Whether it's building and deploying offshore wind turbines in the Northeast, installing solar panels in Nevada, or retrofitting residential and commercial buildings in Ohio, we are making sure the clean-energy revolution is made in America, bought in America, and built by American workers."

Among the most significant hurdles the new administration faces will be untangling and undoing policies put in place over the last four years. Under the Trump administration, the EPA was led first by Scott Pruitt—a fossil-fuel lobbyist who resigned midway through his term due to multiple investigations into ethical breaches and conflicts of interest—and subsequently by his deputy, coal-lobbyist Andrew Wheeler. Pruitt and Wheeler spent their tenures at the EPA erasing the agency's legacy by rolling back more than 100 of its environmental regulations. As the EPA's first administrator, William Ruckelshaus, put it in 2017, "We've spent 40 years putting together an apparatus to protect public health and the environment from a lot of different pollutants. [Pruitt]'s pulling that whole apparatus down."



President Joe Biden at the Moving America Forward Forum hosted by United for Infrastructure at the University of Nevada in February 2020.

When confirmed as the new EPA administrator, Regan pledged to combat environmental inequality while reaffirming an agency belief in science as the primary weapon against climate change: "Our priorities for the environment are clear. We will restore the role of science and transparency at EPA," he said in the opening statement of his Senate confirmation hearing. "We will support the dedicated and talented career officials. We will move with a sense of urgency on climate change, and we will stand up for environmental justice and equity."

The administration's climate goals won't be achieved by simply trading jobs in the auto industry for jobs manufacturing zero-emission vehicles, but that's one place to start; changes to help cities that promote mass transit over single-occupancy-vehicle infrastructure will take longer to unfold. And McCarthy suggested that new industries will arise through the pursuit of clean-energy infrastructure such as wind-power complexes, akin to a contemporary version of the WPA—or a Green New Deal, if you will. While building new industries will be an important part of keeping the country's workforce engaged, proactively *not* building has taken on an equally important role, as in the "30 by 30" plan, which proposes conservation of 30 percent of U.S. land and waters by 2030.

On the transportation front, Pete Buttigieg has a track record, as mayor of South Bend, Indiana, of reorienting urban-planning priori-

PHOTOGRAPHY: COURTESY GAGE SKIDMORE



Children at a march during the Global Climate Strike in 2019.

PHOTOGRAPHY: COURTESY GARRY KNIGHT

ties around pedestrians and cyclists. To carry off a nationwide plan will be a much heavier lift, but Buttigieg, as the newly confirmed transportation secretary, is already talking about building up a network of high-speed trains to rival the best in the world, starting with a $205 billion five-year plan, the American High-Speed Rail Act, introduced by Congressman Seth Moulton (D. Mass.), to modernize railway infrastructure.

It's also encouraging to think what a Housing and Urban Development (HUD) department guided by Rep. Marcia L. Fudge could accomplish, when seemingly all Secretary Ben Carson could do was eliminate the Obama administration's 2015 Affirmatively Furthering Fair Housing (AFFH) regulation. Already, President Biden has signed an executive order prohibiting gender identity and sexual orientation discrimination and has signaled a review of the evisceration of AFFH. In her confirmation hearing, Fudge noted that HUD's responsibilities directly affect the people in this country most in need: "It bears mentioning, particularly in this moment of crisis, that HUD—perhaps more than any other department—exists to serve the most vulnerable people in America. We need to deliver on the administration's commitments on improving the quality, safety, and accessibility of affordable housing and building 1.5 million new affordable homes."

Some may be wondering what has happened to Trump's Executive Order, "Promoting Beautiful Federal Architecture," to mandate classical architecture for federal buildings in Washington, D.C., and one lambasted by many architects, which was signed in December. As RECORD goes to press, the AIA says that it is continuing to work with the Biden administration to reverse the executive order.

Once the pandemic is under control, the country can begin to move full speed ahead on "Building Back Better," in Washington, D.C., and elsewhere, ensuring that we have the infrastructure in place to make the country sustainable well into the future. ■





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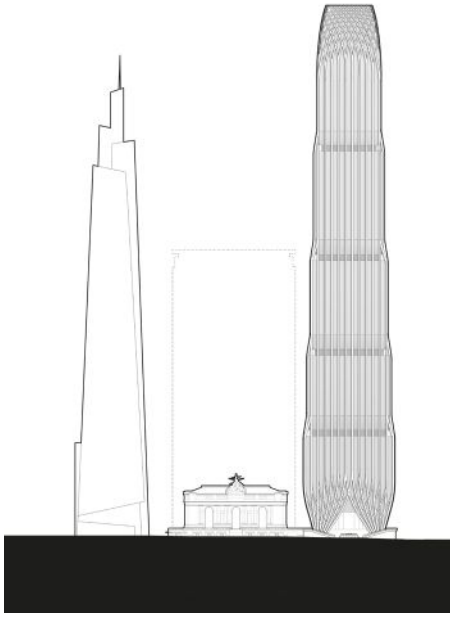
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Controversial Design Unveiled for a New Supertall by SOM in New York

BY FRED A. BERNSTEIN

IN 1980, Donald Trump made his first foray into Manhattan real estate, turning the stolid 26-story Commodore Hotel on Manhattan's East 42nd Street into the ugly, glass-encased Grand Hyatt. That same year, architect T.J. Gottesdiener went to work at Skidmore, Owings & Merrill (SOM).

Forty years later, the hotel has outlived its usefulness, and Gottesdiener, now a consulting partner at SOM, has designed a 2 million-square-foot mixed-use tower to replace it. The 1,653-foot-high building will be half again as tall as the Chrysler Building, immediately across Lexington Avenue, making the Art Deco masterpiece invisible from the west. But Jon McMillan, the director of planning for TF Cornerstone, co-developer of the building, argues that the Chrysler Building is already obscured by One Vanderbilt, the brand-new 1,401-foot-high KPF tower just west of Grand Central Terminal, and that his much taller building, on the east side of the terminal, will at least provide a neutral backdrop for William Van Alen's classic spire. (Renderings showing the relationship of the new building to its 1930 neighbor have not yet been released, though McMillan says "they're coming.") Meanwhile, views of Chrysler from the northeast will be erased by Foster + Partner's new tower at 270 Park Avenue, expected to top out at more than 1,400 feet. McMillan says he believes the three supertalls will have a "lovely" relationship and that "a new Manhattan skyline is emerging."



A new SOM tower (above, on right) adjacent to Grand Central Terminal will, with One Vanderbilt, obscure views of the Chrysler Building from the west. A rendering of the base of the tower on 42nd Street, looking west (below).

Not everyone is happy about that new skyline, the result of Mayor Michael Bloomberg's 2017 upzoning of the east Midtown neighborhood. "New York has two skyscrapers that are indispensable to the character of the city—the Empire State Building and the Chrysler Building—and to overwhelm one of them in this way is a sacrilege," says Samuel White, a founding partner of the firm Platt Byard Dovell White (and a great-grandson of Stanford White). The new SOM building, White later wrote in an e-mail, "replaces bad taste (Trump's mirrored curtain wall) with bad manners."



TF Cornerstone and its development partner RXR have made the announcement at a time when Manhattan office space is going begging. With an expected cost of about $3 billion, the building "is a vote of confidence in New York City's future," McMillan says, though he concedes that construction won't begin until an anchor tenant emerges. "Of course it scares you," he says of the pandemic, "but we think things will get back to normal. There will always be top companies looking for office space and don't want to go all the way down to the World Trade Center." The building, to be known as 175 Park Avenue, hasn't been redesigned in light of the coronavirus, but state-of-the-art air-handling systems and column-free floor plates of varying sizes will give tenants safety and maximum flexibility, he says.

The building, which will take until 2030 to complete, has been in the planning stages for more than three years, according to McMillan. Early steps included negotiating with the Metropolitan Transit Authority about the project's impact on the subway station directly below it. The developers will greatly expand the station and add significant new public spaces, including a plaza, by James Corner Field Operations, that will wrap around the building. But the presence of the station means the new building can touch the ground only at two points on 42nd Street. At each of those points, a bundle of curved columns will emerge from the ground. (The two bundles, one observer noted, will make the building's 42nd Street facade "look like a giant pair of harem pants.") The columns will form a tube-like structural system at the building's perimeter, similar to that of Minoru Yamasaki's World Trade Center towers. The building will house a new Hyatt on its top floors, below what is expected to be the highest roof in the Western Hemisphere. (A few buildings with lower roofs are nominally higher, thanks to spires or antennas.)

Almost half a century ago, the U.S. Supreme Court upheld New York's landmarks-preservation law in a case that barred building directly over Grand Central Terminal. Yet it is only because the developers bought Grand Central's air rights that they now hope to reach almost a third of a mile into the sky. With the SOM building on one side and One Vanderbilt on the other, Grand Central may look as if it's fallen to the bottom of a canyon. ■

IMAGES: COURTESY SOM

Venice Biennale Forges Ahead With In-Person Attendance

BY DAVID SOKOL

AS NEW coronavirus variants emerge and mass-vaccination efforts roll out more slowly than anticipated, the organizers of design and architecture festivals and product trade shows have engaged in a new round of event postponements that feel like 2020 all over again. After canceling the Salone del Mobile last year, Milan's famous furniture fair announced this past November that it would shift its 2021 edition from April to early September. In January, Art Basel pushed back its Swiss flagship event from its traditional June slot to September, citing the "many uncertainties" of planning during the pandemic.

Bucking the trend, the Venice Biennale has confirmed its springtime schedule, with the architecture edition of the international exhibition set to open for in-person attendance on May 22, 2021, after postponing last May and then canceling altogether. "We continue to work with our team at [the University of Illinois at Chicago] and La Biennale di Venezia to ensure that our exhibition for the U.S. Pavilion will be ready to safely open this May," said U.S. Pavilion co-curators Paul Andersen and Paul Preissner.

American Framing, the exhibition overseen by Andersen and Preissner, will incorporate numerous safety precautions. Before visitors even arrive at the Castello Gardens in Venice, they will have purchased show tickets (with tracing access) via an online portal. They will undergo temperature checks at the entrance to the U.S. Pavilion, and follow a one-way path through the Palladian-style building that will also include social-distancing cues and hand-sanitization stations. Mask wearing will be mandatory both indoors and out, but specific limitations for building capacity have not yet been set.

Even without those limitations in place, warm-weather attendance may be sparse. As of mid-February, only 2 percent of Italian citizens were fully vaccinated, and statements from both the U.S. Department of State and the Centers for Disease Control were advising tourists to avoid or defer travel to Italy. Planning of American Framing has taken virtual audiences into consideration. "Documentation of the U.S. Pavilion will be available through its forthcoming catalogue, as well as on its website and Instagram," a spokesperson told RECORD via e-mail. ■



A crowded Biennale press conference in 2013.

PHOTOGRAPHY: © MATTEO DE FINA



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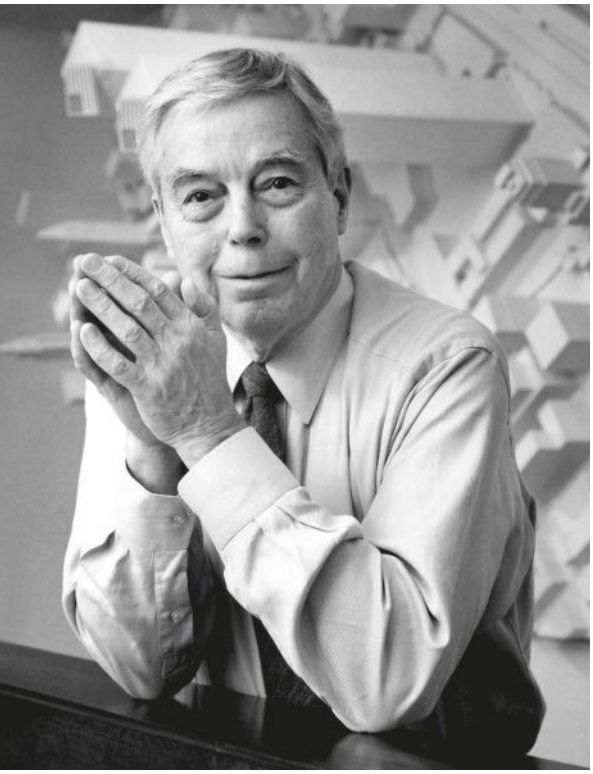
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Leslie Robertson, 1928–2021

BY CATHLEEN MCGUIGAN

LESLIE ROBERTSON, the structural engineer known for his innovative work on skyscrapers around the globe, died on February 11th, a day before his 93rd birthday, of multiple myeloma. Revered and beloved by the architects with whom he collaborated, Robertson may remain best known for engineering the Twin Towers of the World Trade Center (WTC) with architect Minoru Yamasaki. Its unconventional design created wide-open floors for office tenants by bringing densely spaced steel columns to the perimeter as well as by creating a robust steel-framed



core. Other firsts included damping devices incorporated into the structural system and the development of a new partition called a shaft wall that eliminated masonry at the core, according to the Skyscraper Museum. The towers, completed in 1973, were said by Robertson to be able to withstand the impact of a 707—but the horrific attack on 9/11, by two 767s, loaded with thousands of gallons of fuel that fed the conflagrations, was unimaginable. It left Robertson grief-stricken. Many experts noted that because of how long each tower stood before falling, thousands of people were able to escape.

Born in California, Robertson earned a B.S. in engineering at Berkeley in 1952. When Yamasaki won the competition for the WTC 10 years later, Robertson's firm got the engineering contract and his skyscraper career was launched. "I was a kid," he told *The New York Times*. "We had never done a real high-rise before." The Twin Towers gave Robertson the chance to do pioneering research, such as helping develop the first boundary-layer wind tunnel and conducting the first experiments on people's sensitivity to the sway of buildings, *Engineering News Record* reported.

Robertson began collaborating with I.M. Pei in the 1970s, and they worked together on such unconventional structures as the Bank of China Building in Hong Kong (1990), with its distinctive diagonal braces. They became close friends, and Robertson frequently visited Pei in the architect's last years. Other architect partners included William Pedersen of KPF, on the supertall Shanghai World Financial Center, among many of that firm's global projects with Robertson.

He ran his own firm in New York for many years, and then formed See Robertson Engineers with his longtime partner and wife, the structural engineer SawTeen See, who survives him.

Active in Architects/Designers/Planners for Social Responsibility, Robertson was a pacifist, who always wore a peace-sign pin on his lapel, though, if asked, he would take it off and hand it to you, as he had "a bag of them," said his daughter, Karla Robertson. Friends and colleagues found Robertson unfailingly charming, in a self-effacing way.

"Shortly after 9/11, I was asked about Les and described him as the Steve Jobs of structural engineering," recalls Guy Nordenson, the engineer and a friend for 30 years. "He had a painterly feeling for structure, particularly steel. We did a drawing at Princeton University [where Nordenson teaches] that illustrates the varied steels used in the World Trade Center towers and displays the extraordinary and sublimated genius of Les's design of that structure. His solution saved many lives by delaying the inevitable collapse of the towers on that horrible day. Like Jobs, Leslie Robertson was a force field of ingenuity, invention, and inspiration. He was a national treasure." ■

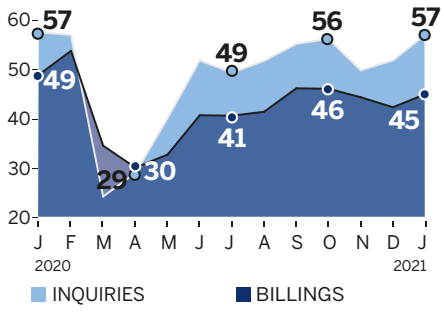
Art Institute Appoints Sunwoo



The Art Institute of Chicago announced last month that the museum had appointed architectural historian and curator Irene Sunwoo to be the John H. Bryan Chair and Curator, Architecture and Design. Previously, Sunwoo was the curator of the Arthur Ross Architecture Gallery at Columbia University's Graduate School of Architecture, Planning and Preservation, where she had been the director of exhibitions since 2016. Sunwoo also served as associate curator of the inaugural Chicago Architecture Biennial titled *The State of the Art of Architecture* (2015) and was a key team member in the Biennial's launch.

Massachusetts Leads in LEED

In February, the U.S. Green Building Council (USGBC) released its annual list of the Top 10 States for LEED Green Building with Massachusetts leading the country for 2020, with the most certified square feet per capita, followed by Washington, Illinois, Colorado, and New York. Across the top states, more than 60 percent of certifications were office, health care, higher education, and K–12 projects. This year, USGBC also released a ranking of states with the most LEED professionals, with California taking the top spot. Collectively, the 2020 rankings represent 1,171 LEED-certified buildings and spaces, and more than 100,000 green-building workers.



ABI Inquires Jump in January

The American Institute of Architects reports that the January Architecture Billings Index (ABI) score was 44.9, up from 42.3 in December. (Any score above 50 indicates an increase in billings.) The Inquiries index made a more noticeable leap in the new year, up 5 points from December at 56.8.

PHOTOGRAPHY: © ALEN MACWEENEY (LEFT); BENJAMIN MISTAK, COURTESY ART INSTITUTE OF CHICAGO (RIGHT)

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HOUSE of the Month

ARCHITECTS SANTIAGO VALDIVIESO AND STEFANO ROLLA WRAP A CHILEAN RETREAT WITH A WOOD SHELL. **BY WENDY MOONAN**





THE CHIC seaside village of Zapallar is known as "the Hamptons of Chile." A 2½-hour drive from the capital city of Santiago, Zapallar has wide, sandy beaches. But, unlike the Long Island enclave of villages about the same distance from New York, it is dry, very windy, and mountainous.

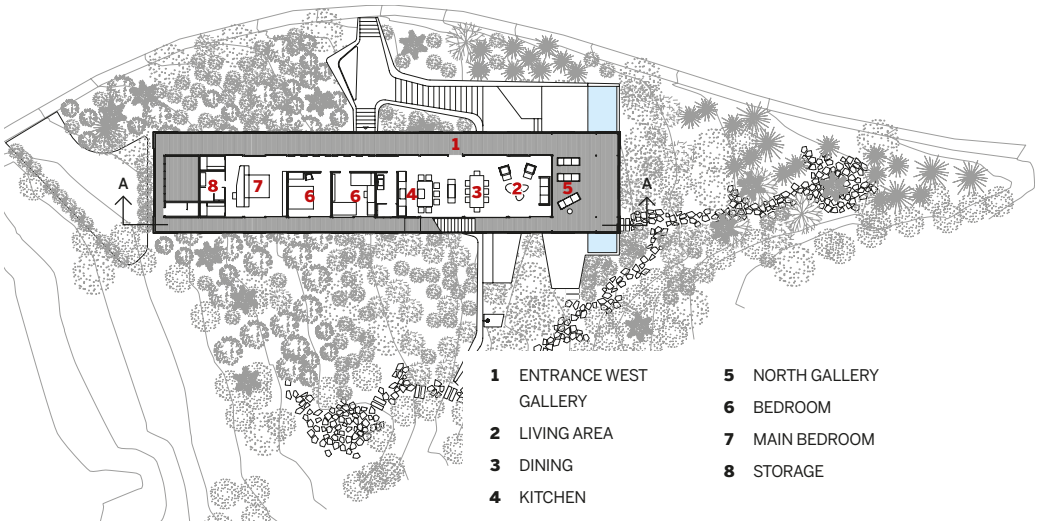
Alejandro Reyes, a lawyer from Santiago, found a half-acre of land overlooking the Pacific on the small, narrow peninsula called Punta Pinte ("tip of the wind") as a site for a family weekend retreat. But he wouldn't buy the property unless the architects Santiago Valdivieso and Stefano Rolla would elevate the house high enough to see the sea to the west, the large bay to the east, and the forest to the south.

"I wanted a minimalist house with very simple, clean, and pure lines, which would provide space for meditation, peace, and tranquility," says Reyes, who has an artist wife and a daughter. "But I also wanted to maintain the privacy of the interior spaces without losing views of the sea, the vegetation, and the treetops."

The architectural solution is ingenious—an elevated rectangular glass house with an outside shell of slatted rauli wood. The 1,700-square-foot steel-framed glass volume rests on steel pilotis, which take the shape of an inverse pyramid, to support the house where it juts above the land to the north. The wood floor, along with shutters and a roof, wraps around the glass volume on three sides, while the walkway continues on the fourth (east) edge; in total, this adds 1,500 square feet of space to the dwelling. "I tried to design an intermediate space that is neither the exterior



Wood sliding screens, roof, and walkway enclose the elongated glazed, rectangular house (above). The north end (above, left) juts out toward the sea. Inside, the living and dining areas (left) have views in several directions.



MAIN-FLOOR PLAN

PHOTOGRAPHY: © CRISTÓBAL PALMA/ESTUDIO PALMA







The bedrooms are arranged enfilade at the southern end of the house (above). The west gallery leads from the south end (right) of the house to the living areas on the north. On the east side, the glass pavilion (above, right) doesn't have sliding shutters, but it has a stair leading to the roof deck.

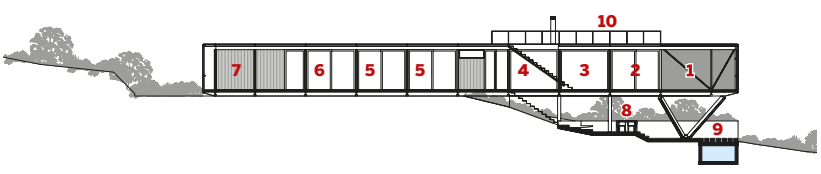
nor the interior," says Valdivieso.

The name, Engawa House, alludes to the porchlike feature found in a traditional Japanese dwelling. The slatted wall shutters can slide open to reveal the view or be closed to allow for privacy. "The lattice was an extraordinary architectural solution," Reyes says. The slats produce dramatic shadows. "When the sun touches the wood, the light inside changes," Valdivieso notes. "It also smells good; rauli is a sustainable Chilean hardwood that works well near the beach."

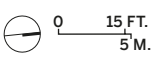
The glass walls also slide open. "This is not a static house," the architect adds. "It's an agent for change, for performance."

The compact three-bedroom house is all on one level. The living room, dining room, and kitchen on the north are open-plan and minimally furnished, with the bedrooms placed at the southern (landlocked) part of the barlike rectangle. Underneath the end that projects to the north are a swimming pool and terrace, framed by the pilotis. And on top is a roof deck with 360-degree views.

Reyes is from a family of architects, including his grandfather, father, and brothers. "It was my desire to be the architect I was not," says the satisfied client. "Valdiviseo and Rossa supported my interventions, opinions, and obsessions." ■



SECTION A - A



1 NORTH GALLERY
2 LIVING AREA
3 DINING
4 KITCHEN
5 BEDROOM
6 MAIN BEDROOM
7 STORAGE
8 TERRACE
9 SWIMMING POOL
10 ROOF DECK

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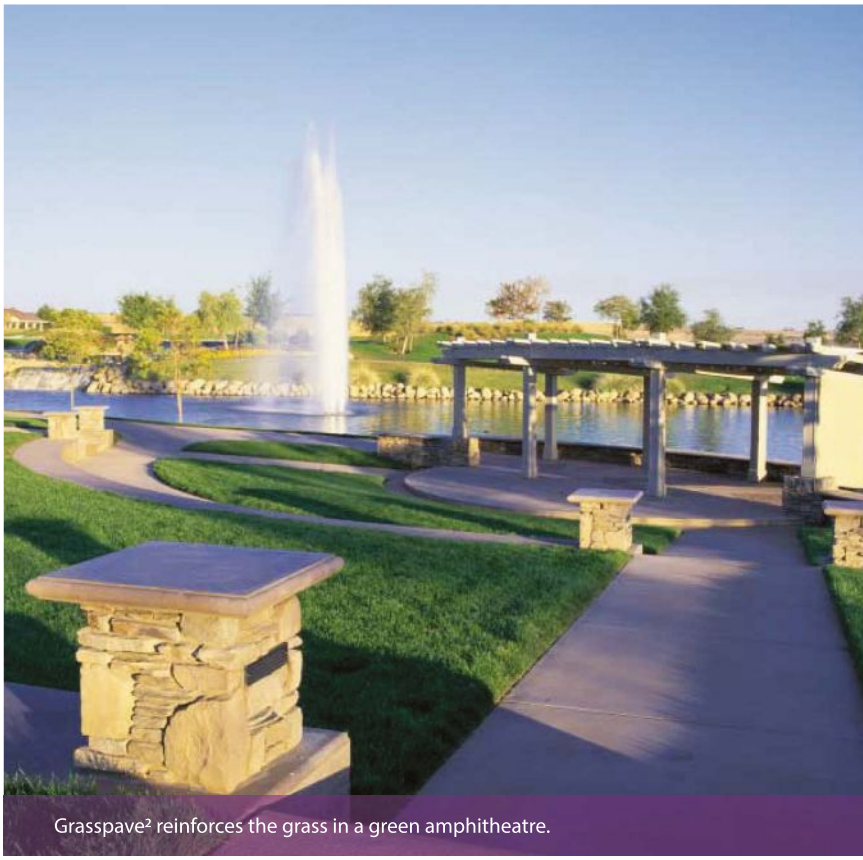
Grasspave² doubles as greenspace and a fire lane.



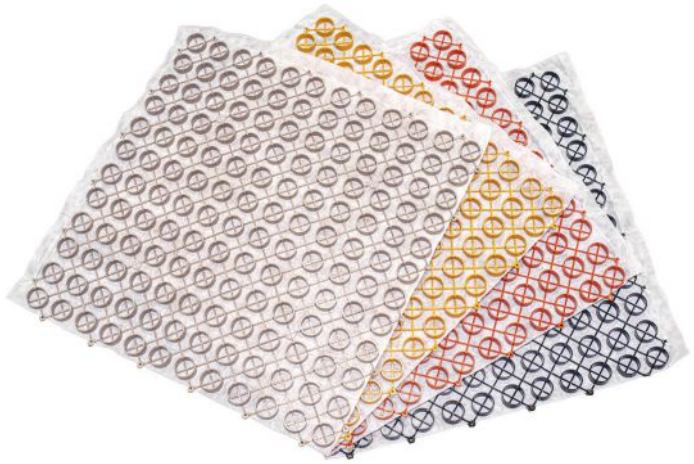
A hotel restaurant used Gravelpave² to increase outdoor seating.



Grasspave² was used as a green alternative for a helicopter landing pad.



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Pump or Plug: Electric Cars and the Future of Gas Stations

Architects look at transforming the ubiquitous roadside facilities, some of which have already been converted to coffee shops, fast-food restaurants, or even hair salons.

BY SARAH AMELAR

CALIFORNIA freeways have long inspired a legendary car culture. But classic fixtures of that lifestyle are primed for change. Last fall, the state's governor, Gavin Newsom, set 2035 as the year by which all new cars and passenger trucks sold in California must be zero-emission, or electric, vehicles (EVs)—a decade and a half ahead of the current federal deadline of 2050. (The UK has since revised its own target dates, which are now similar to California's.) In late January, General Motors upped the ante, announcing that, by 2035, it will sell only EVs worldwide. This profound transformation will have implications well beyond the natural environment. For example, what will happen to gas stations? It may not make sense simply to convert them into charging venues, which, with current technology, demand time and space far exceeding that of traditional fueling. Though innovations with batteries and re-energizing methods continue to emerge, a full recharge still takes anywhere from 40 minutes to, more typically, an entire night. This means the process requires places for cars to sit, making home charging and parking lot plug-ins the most likely alternatives for the immediate future. So, what will become of the ubiquitous gas stations—more than 107,000 across the United States and over 7,000 in California alone—that punctuate neighborhoods and roadways with their logos and sweeping canopies, beckoning like great 3-D billboards?

"I think there's a real commercial opportunity here—and potential to increase community amenities," says architect (and longtime electric-car owner) Craig Hodgetts, of Mithun | Hodgetts + Fung, in Culver City, California. "There's probably a gas station within walking distance of most homes throughout the country, making them a natural fit for another kind of chain, like coworking spaces or small parks or gyms." Though the canopy (and even the entire site footprint) might be too small to harvest sufficient solar energy for daily recharging of one vehicle after another, it could provide enough power for another type of business to operate at net zero. Modifiable elements of branding consistency would already be in place. And, since the original structures tend to be "industrial products with standardized prefab components," Hodgetts adds, "they offer a kit of parts that could be readily (and economically) repurposed."



A new iteration of the classic filling station (2009), in Los Angeles, by Kanner Architect.

The filling station has a long history of adaptive reuse, dating back to the latter half of the 20th century when mom-and-pop operations gave way to multi-pump mega-stations. Over the years, decommissioned fuel stops have become auto body, muffler, or tire shops, as well as everything from one-off hair salons and clothing boutiques to law offices. Many have re-emerged as snack shacks or restaurants—turning pumping areas into outdoor dining patios—including the B Bar & Grill in New York (a Gulf station, converted in 1993), Kellys Pub ABQ in Albuquerque (originally a 1939 Deco-style Ford dealership/Texaco station, rendered in white-stuccoed concrete block), and Afters ice-cream parlor in Pasadena, California (formerly a quaint 1929 gas stop, whose three vintage pumps remain today as props). Starbucks restored a vacant 1935 Streamline Moderne gem in Hollywood, California, six years ago—swapping one kind of refueling for another. (The rare gasoline vendor that has converted entirely to electric charging includes one in Takoma Park, Maryland, which switched over in 2019—but strategically retained its bustling auto-repair business on the same property.) Service stations often occupy corner sites at major intersections, which—coupled with the fact that two-thirds of the profits typically come from their mini-marts (selling snack food, cigarettes, groceries, lottery tickets, beer, and other beverages)—suggests the viability of these locations for non-fueling enterprises.

The Hollywood filling station that's now a Starbucks had already been designated a Los Angeles Historic-Cultural Monument. Such protections are not entirely unusual. Across the country, at least 142 classic stations are on the National Register of Historic Places and/or locally landmarked (including one by Frank Lloyd Wright, from 1958, in Cloquet, Minnesota, and still selling gasoline today). "There's a nostalgia for these vintage structures and the 'glory days' of the great open road," says architect Antoine Predock (a motorcyclist who has switched completely from gasoline- to electric-powered bikes).

PHOTOGRAPHY: © JANNA IRELAND, EXCEPT AS NOTED

"Cool examples—like the one that became a burger stand along Route 66 near Albuquerque—seem to get saved through 'natural selection.' It's been happening for a long time—I don't think we have to worry about losing the most iconic ones."

That said, "it's easiest to make a preservation case for the ones shaped like pagodas or airplanes," says Paul Lusignan, a historian with the National Register of Historic Places. "And Route 66, in particular, has a loyal public following, committed to the preservation of its roadside structures of all kinds." Of course, not all former gas stations are visually or culturally remarkable. And many have languished, deserted for decades, often due to costly toxin-remediation demands for aging underground storage tanks. As far back as 2004, the Environmental Protection Agency (EPA) estimated that, of 200,000 petroleum-contaminated vacant sites in the U.S., most were former gas stations. Some states offer funding for certified cleanup, but often with significant hurdles. Another reuse challenge, especially in dense cities, can be small and awkwardly shaped lots.

Yet architect Jeffrey Inaba of Inaba Williams sees value in keeping old gas stations, particularly in poorer neighborhoods, where they tend to double as ad hoc social hubs. He presented his firm's "Station to Staytion" proposal last December at "Pump to Plug," a virtual symposium at the University of Southern California, hosted by Christopher Hawthorne and focused on designing for the transition to EVs. "Station to Staytion" would further develop filling stations as community gathering spots for underserved areas, with integral retail and connections to municipal bicycling and mass-transit infrastructure. (By not breaking ground, or otherwise disturbing the soil, the architect believes, such a project would legally bypass California's remediation requirements.) These venues could offer healthy resources, such as produce markets, to low-income populations, potentially "turning an environmental threat into a wellness amenity." (In its fitness and well-being focus, the proposal recalls "Getting Pumped," a 2018 scheme by Gensler, with Reebok, for transforming defunct gas stations into workout facilities, with rooftop running tracks, spas, farm-to-table dining, and more—but Inaba's ideas for such sites go further in their social purpose.)





A standard corner gas station in Los Angeles (above) and a 1935 Streamline Moderne station in Hollywood, California (below), now a Starbucks.

In financially struggling neighborhoods, Inaba points out, "most people may need to defer the expense of replacing their gas cars as long as possible. So it will be important to keep the stations operating longer to help sustain those communities" and their mobility. Fuel pumping would remain at these spatially flexible hybrid and reprogrammable sites, gradually getting phased out as the need diminishes.

The complete switchover to EVs—and total obsolescence of fossil-fuel stations—will take years, and drivers of functional combustion-engine cars, from many sorts of backgrounds, will lack the means or desire to upgrade right away. "But, eventually, it will become harder to get gas the way it's now harder to get charging," says Hodgetts. "The tables will turn, increasing the incentive to switch over to electric vehicles."

With rapidly evolving technology, extremely fast charging (XFC)—able to refill a battery within 10 minutes—is on the horizon. For now, powering venues need to remain adaptable. When a full charge becomes as quick as a gasoline fill-up, the conversion of existing stations to electric might actually become a good fit.

"You need to look at all the emerging companion technologies and lifestyle changes—like ride-sharing, declining car ownership, and even automated vehicles—that are developing simultaneously," observes Hodgetts. So much is in flux. Meanwhile, the automotive industry is revving up for a major turn in the road—but America's love affair with the car (and its trappings) may be far from over. ■

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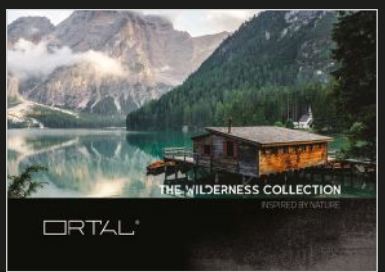






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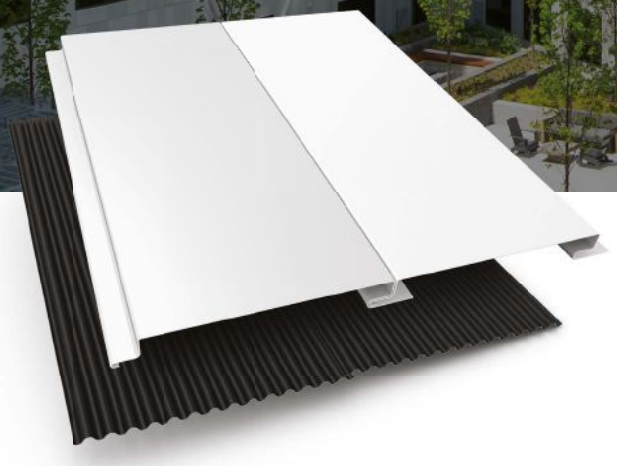
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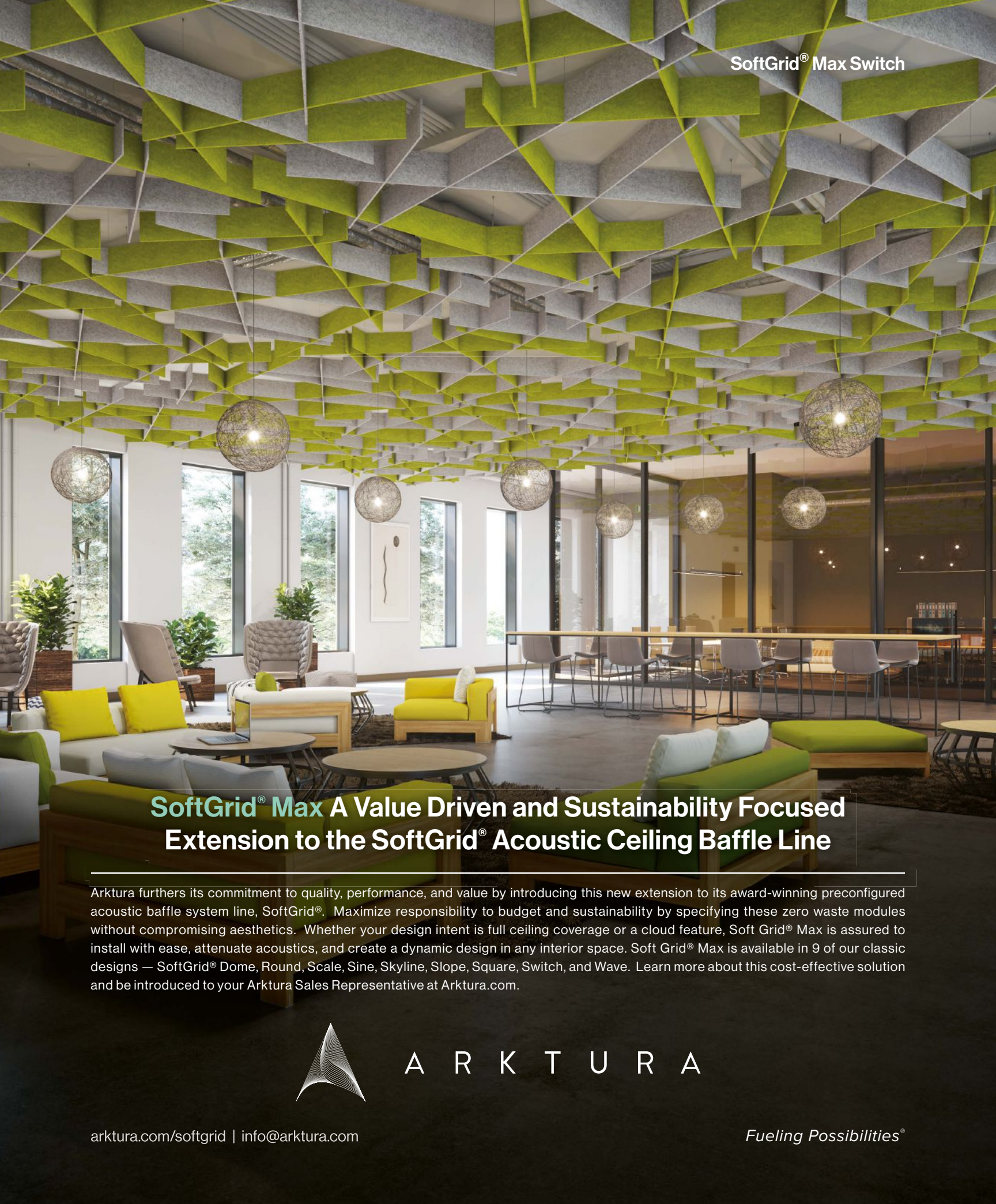


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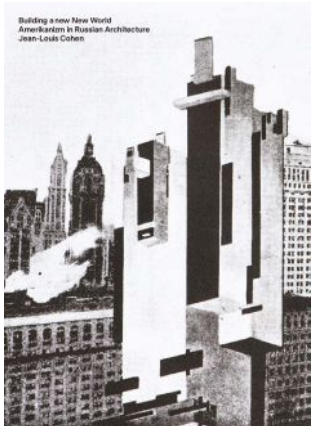
Two Historians Shed Light on Soviet Design and Pedagogy

REVIEWED BY ERIC PAUL MUMFORD

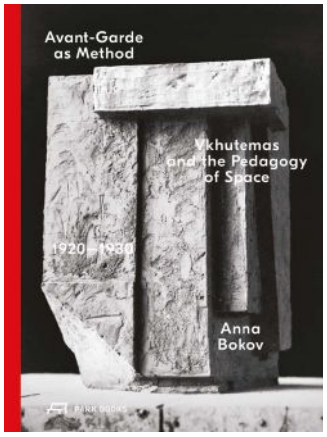
THINKING about the historical architectural and technical exchanges between the United States and Russia might not seem like an important topic at the moment, suggesting as it does espionage, nuclear war, and disinformation campaigns. Yet both of these books offer much about the importance of design in a relationship that was once far from one-sided.

Jean-Louis Cohen's *Building a new New World: Amerikanizm in Russian Architecture* is the latest academic book from the eminent New York– and Paris-based French historian of modern architecture and urbanism. Cohen offers a concise account of how Russian "Amerikanizm," the perception that emerged there in the 19th century that the United States was an industrial civilization from which much could be learned, shaped a variety of Russian architectural and urbanistic efforts down to the 1970s. It is the companion volume to an exhibition that Cohen, who is fluent in Russian, organized at the Canadian Centre for Architecture in Montreal. It is also the third volume of Cohen's rich archival documentation of the development of global modernity in the built environment, which began with his *Scenes of the World to Come: European Architecture and the American Challenge, 1893–1960* (1995) and continued with his probing *Architecture in Uniform: Designing and Building for the Second World War* (2011).

Organized into six sections that cover various periods of modern Russian history, and illustrated with many well-chosen photographs and architectural drawings, occasionally interspersed with advertising and propaganda posters, *Building a new New World* offers an overview of this vast topic in a compact format. Key episodes during the Soviet era, such as Lenin's fascination with American industrial practices, and his genocidal successor Stalin's subsequent commissioning of hundreds of large factories by Albert Kahn Associates of Detroit, are concisely described and amply illustrated here. So too is the Stalin-period effort to rebuild Moscow and other Soviet cities in the image of North American downtowns of the 1920s, which ironically occurred even as the regime extensively promulgated critiques of American racism and inequality. Cohen's book also carries the story into the mid-20th century, after Stalin's death in 1953, focusing on U.S. and Soviet Cold War technological competition, which involved such American design figures as Buckminster Fuller, Victor Gruen, and Charles and Ray Eames.

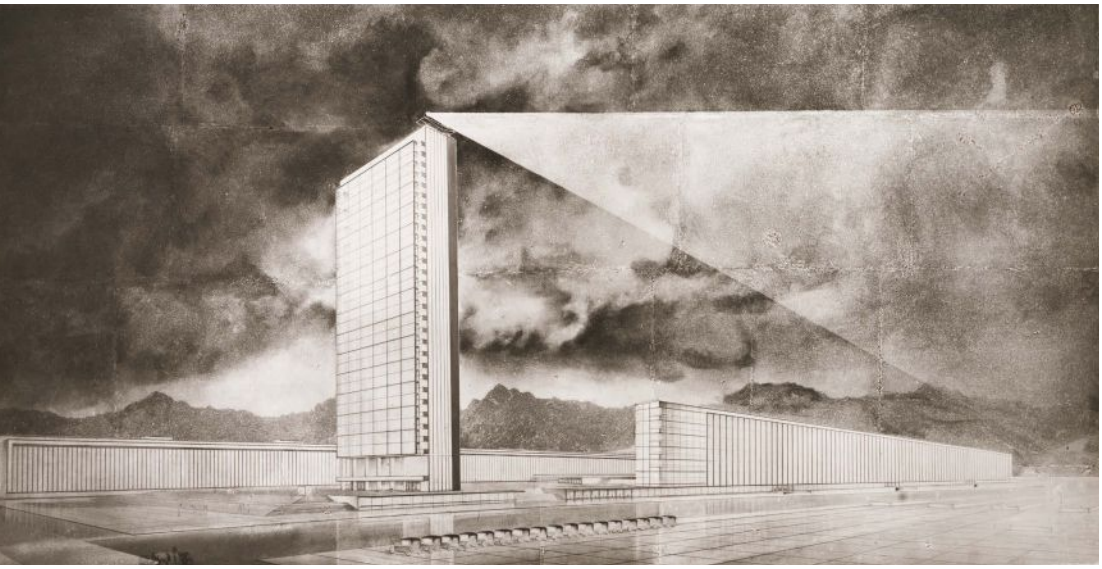


Building a new New World: Amerikanizm in Russian Architecture, *by Jean-Louis Cohen. Canadian Centre for Architecture/Yale University Press, 544 pages, $40.*



Avant-Garde as Method: Vkhutemas and the Pedagogy of Space, 1920–1930, *by Anna Bokov. Park Books/University of Chicago Press, 624 pages, $65.*

Avant-Garde as Method, by Anna Bokov, an emerging architectural historian at Cooper Union in New York, by contrast, explores one key episode in Modernism, the design education at Vkhutemas (an acronym usually translated as "Higher/Advanced Artistic and Technical Workshops"). This was a Soviet government art academy founded in Moscow after the Russian Revolution of 1917. While the Bauhaus, begun by Walter Gropius in 1919 in the liberal and socialist political atmosphere of post–World War I Germany, is generally seen as the school where modern approaches to architecture and design were first institutionalized, its Moscow counterpart is far less well known. Bokov's comprehensive and richly illustrated account of Vkhutemas demonstrates that much of the teaching methodology associated with the Bauhaus was, in fact, first devel-



Building of Industry site in Sverdlovsk, Soviet Union (now Ekaterinburg, Russia), 1931.

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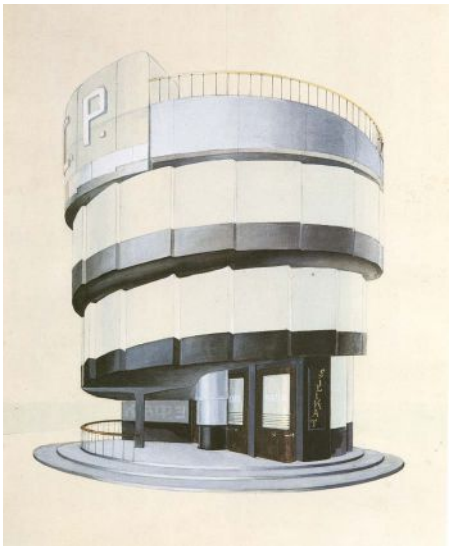
Bokov's comprehensive and richly illustrated account of Vkhutemas demonstrates that much of the teaching methodology associated with the Bauhaus was, in fact, first developed at this Soviet institution.

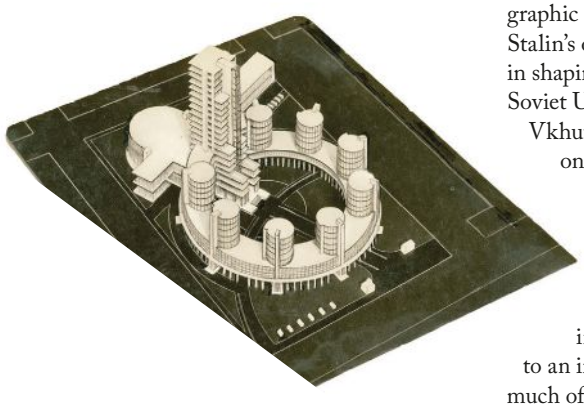


oped at this Soviet institution. With 2,000 students, it was much larger than the Bauhaus, and was directly supported by the central government. The Bauhaus, funded at the state level in Germany, was in its early years a socially inclusive and largely "Expressionist" institution, focused on craft production and individual artistic visions of a hoped-for future socialist German society. In response to the economic collapse of post-Imperial Germany, by 1923 such new Bauhaus faculty members as Laszlo Moholy-Nagy and Wassily Kandinsky, previously at Vkhutemas, introduced teaching methods and pedagogical approaches derived from Soviet avant-garde artistic culture. These were intended to put artists and designers in direct contact with industry, to make designs for the everyday objects and environments required by the new masses of industrial workers in modern industrial cities. Bokov's large, well-illustrated, and painstakingly researched book is a definitive account of how what are now often known as "Bauhaus methods" were in some cases first put forward by Vkhutemas teachers. These included Nicolay Ladovsky, Alexi Gan, Alexander Rodchenko, and others who were, in many cases, inspired by the earlier abstract artworks of Kasimir Malevich. Bokov also documents how the Vkhutemas students, many from impoverished backgrounds and totally dependent on Soviet state support, were used as experimental subjects in various efforts to better understand the psychology of visual perception and the range of human design and spatial abilities.

As a Soviet institution, Vkhutemas was unable to publicize its methods and activities in Western Europe and the U.S. in the 1920s (though Alfred Barr of MoMA visited there and wrote about it in 1928). It also lacked official approval for its avant-garde design approaches: Lenin, after visiting the school, remarked, "Well, I guess tastes differ." Though Vkhutemas, reorganized as Vkhutein (Higher Artistic and Technical Institute), continued until 1930, by 1932, Lenin's successor, Stalin, had made it clear that in his view, which became official Soviet policy until 1954, such avant-gardism was a symptom of Western bourgeois decadence. Instead, Stalin advocated "Socialist Realism," a return to classical forms in art and architecture but with socialist content. The Moscow subway and the many urbanistic and industrial projects documented in Cohen's book were the most immediate outcomes of this new policy. Even the most respected Vkhutemas design teachers were relegated to obscurity and, sometimes—as in the case of the influential graphic artist Gustav Klutsis—executed, on Stalin's orders. Instead of taking a central role in shaping a new Communist society in the Soviet Union, perhaps the main outcome of Vkhutemas's efforts was its strong influence on the Bauhaus and its many successor institutions around the world.

Although neither of these books offers a quick read, and some graphic-design choices in both books undermine aspects of their authors' intentions, both provide direct access to an immense amount of archival material, much of it not previously available in any form. ■





Vkhutemas students with models (top). Exhibition hall organized as a spiral ramp, 1927 (left). House of Industry and Trade, diploma project for Nikolay Ladovsky's studio, 1928 (above).

Eric Paul Mumford, Ph.D., is professor of architecture at the Sam Fox School of Design & Visual Arts at Washington University in St. Louis.

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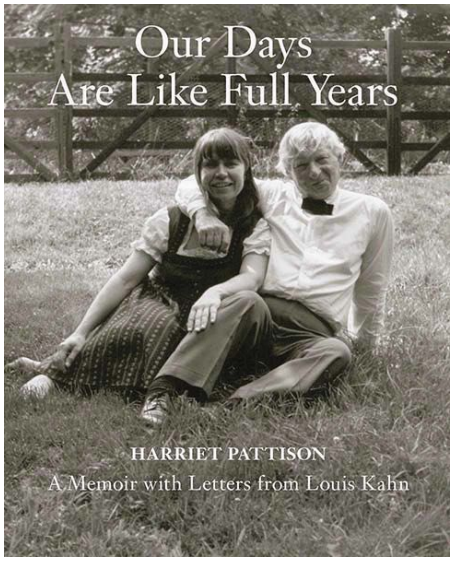
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Kahn's Other Other Woman

BY CATHLEEN MCGUIGAN

Our Days Are Like Full Years: A Memoir with Letters from Louis Kahn, *by Harriet Pattison. Yale University Press, 438 pages, $45.*



IF YOU ASK architects today whose work they most revere, "Louis Kahn" is a constant reply. Nearly half a century after his death, his architecture maintains a powerful hold on the imaginations of younger generations of practitioners. Yet the man who created buildings of timeless monumentality and ethereal light lived much of his life on shaky ground. His firm in Philadelphia teetered financially, his clients were often fickle, his travel schedule was punishing—and, at the height of his career, his family was splintered among three households: one with his wife and daughter Sue Ann, and two others with the women who each had a child with him.

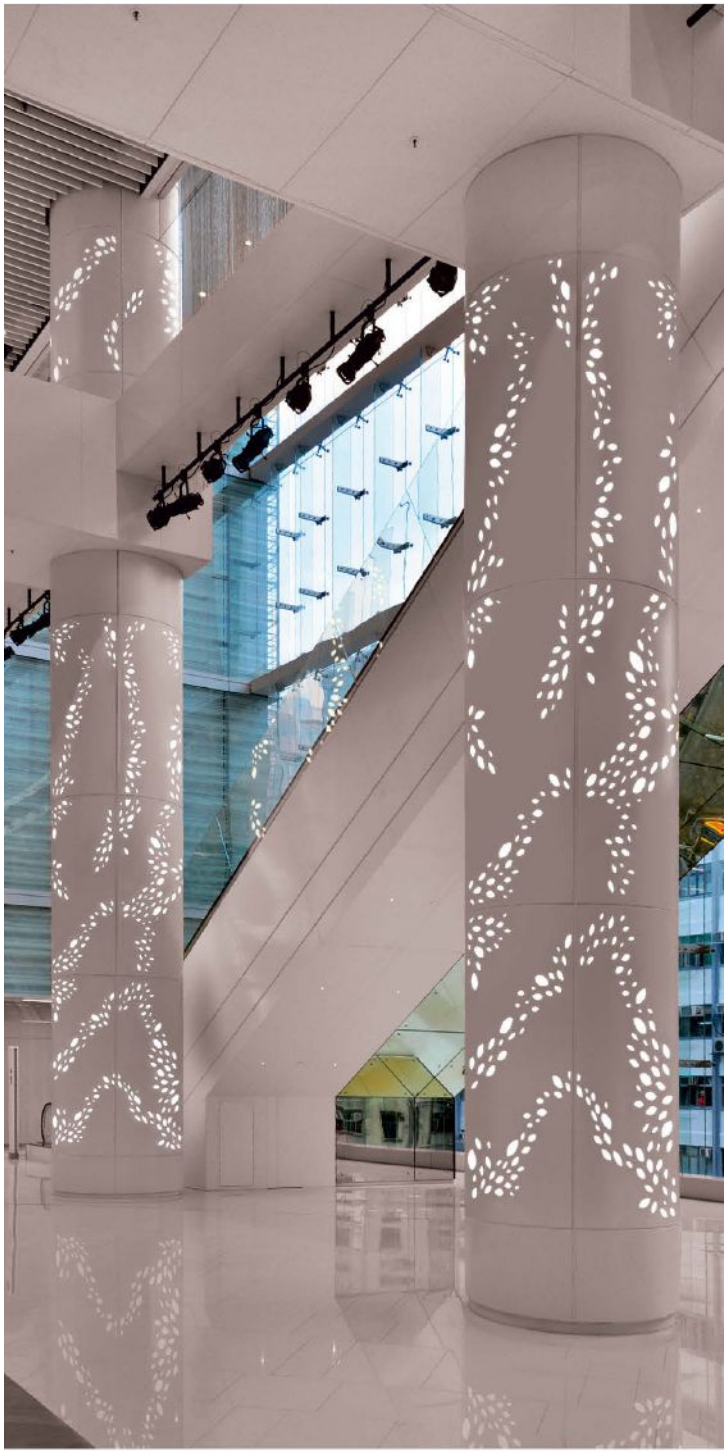
The 2003 Oscar-nominated documentary, *My Architect*, by his son, Nathanial Kahn, blew the lid off this domestic drama, though did so tenderly. Even earlier, in 1997, the architect Anne Tyng had published a collection of Kahn's letters to her, written in 1953–54, when she left his office for Rome, to secretly give birth to their daughter, Alexandra Tyng. There have been a number of books about Kahn since—Wendy Lesser's 2017 biography, *You Say to Brick*, in particular, knit together Kahn's public achievements and private tumult. Now there is one more perspective, from the second woman, Harriet Pattison, the mother of Nathaniel. Titled *Our Days Are Like Full Years*, it is a handsomely illustrated volume of Kahn's love letters to her during the last 15 years of his complicated—and architecturally triumphant—life, salted with photographs, sketches, and her own memories.

Kahn's letters to Tyng in Rome were deeply loving, but also crammed with architectural ideas and details as he kept her apprised of projects, and sometimes sought her sketches and advice. Tyng was in the first class of women admitted to Harvard's GSD and was the only woman licensed as an architect in Pennsylvania in 1949. With her brilliant intellect, particularly for math and geometry, she and Kahn collaborated closely; she was essential, for example, to the design of the innovative ceiling of the Yale Art Gallery (1953), the first building to win him wide acclaim. After the birth of their child, Tyng returned to Kahn's office and their love affair resumed, though the relationship became platonic, she wrote, when she realized Kahn had a new extramarital interest.

That likely was Pattison (according to Lesser, Kahn had at least one other serious affair). Pattison met the architect at a 1958 Christmas party at the Esherick Studio outside Philadelphia (which Kahn had designed with Tyng), brought by her date, Robert Venturi. She was educated at the Yale School of Drama in set design, and eventually moved to Philadelphia to study piano. When they met, she had just turned 30 and Kahn was 58. By late the following year, he declared in a letter, "You are the only one I ever loved," and the year after that: "Someday my darling our love will be in our little ones." But when Pattison told him in the spring of 1962 that she was pregnant, Kahn blurted, "Not again!" and fell silent. He refused to get a divorce.

It's hard not to bring a 2021 viewpoint to the twists in their lives; today an unmarried mother doesn't live in the social shadows as Pattison and Tyng both did, suffering personal and serious professional slights. And we are quick to excoriate the man with the power. Yet, then, both women—as well as Kahn's wife, Esther, who worked to support him financially for decades—believed in his genius as an architect and understood that his work came first: till late at night and on





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weekends and holidays. Pattison loved him profoundly and never stopped wishing and pressing Kahn to leave his marriage; but, as she writes in the book, "he seemed able to put different parts of his life in different places in his mind . . . a kind of living equivalent of the way he sought a strong distinction between spaces in his architecture."

Kahn arranged Pattison's exile to Vermont, with baby Nathaniel, to apprentice for landscape architect Dan Kiley. After a year, she and their son returned to Philadelphia, where she earned a master's degree in landscape architecture at the University of Pennsylvania. She worked for a firm in the same building as Kahn's firm and intermittently for Kahn, too (off in a closetlike space in case of a surprise visit from Esther); key among her projects was the site planning and early landscape design for the Kimbell Art Museum.

Those were the glory years for the architect, with work under way not only on the Kimbell but the Salk Institute, and on the enormous projects on the Asian subcontinent, the National Assembly in Dhaka and the Indian Institute of Management in Ahmedabad. Kahn's letters from his busy travels include charming sketches and site plans for various projects, as well as philosophical musings and expressions of his ardor: "As much as my work is my life, it would be little without your love." Facsimiles of the original handwritten correspondence are included in the book, a collage of picture postcards and yellowed stationery from exotic hotels.

For more than a decade, Kahn journeyed frequently to Pakistan and India, writing Pattison about the banalities of travel, the progress of meetings, and often deep frustrations: insolent officials; fraught negotiations; contracts not signed; constant money worries (and apologies for not sending some cash). He worked and reworked projects that were never built; when he was fired from designing the President's Estate in Islamabad, his confidence was shaken. "Dearest Harriet, I feel that I have lost my mastery and doubt even if I ever had it." He endured dysentery, unbearable heat, and the monsoons that brought snakes and rats out of their holes in the earth. Yet he developed warm friendships with Indian colleagues such as Balkrishna Doshi, and he longed to extend his stays to better oversee the construction of what are his masterpieces in Dhaka and Ahmedabad.

His flight itineraries were crazy (one trip home, he wrote Pattison, was routed from Karachi to Moscow to Warsaw to London), and the missed connections, interminable delays, and sleeplessness are exhausting just to read about, and ultimately the travel killed Kahn, who collapsed on his way home from Dhaka in 1974. He was 73.

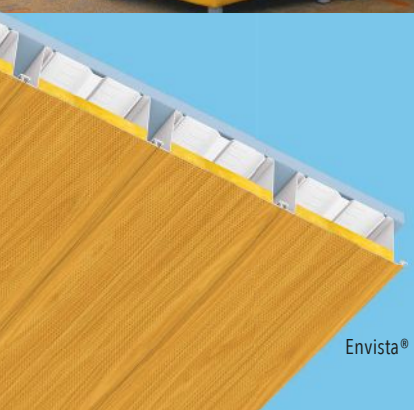
Kahn never tore down the architecture that separated the rooms of his complicated life. But his expressions of love in the letters and his devotion to Nathaniel are extremely poignant. "I am so lonely for the two of you," was a frequent sign-off from a faraway hotel. On his occasional evenings at Pattison's house, she would mix his martini and then fix dinner while Kahn played, with pleasure, on the floor with his son, a momentary replica of normal family life. Then, very late, Pattison would drive him to the corner of the street where he lived with his wife.

Kahn was a loving father to Alexandra Tyng, too, and as a bold teenager, she pulled down the walls, and the three Kahn children got to know each other while their father was still alive. Today, they come together to fight for his legacy, most recently to protest the Indian Institute of Management's plan to raze part of Kahn's extraordinary campus. And now Pattison, 92 (and the only of the three mothers still alive) has provided new pieces of the Kahn puzzle, though the picture of his life will never be completely understood. ■

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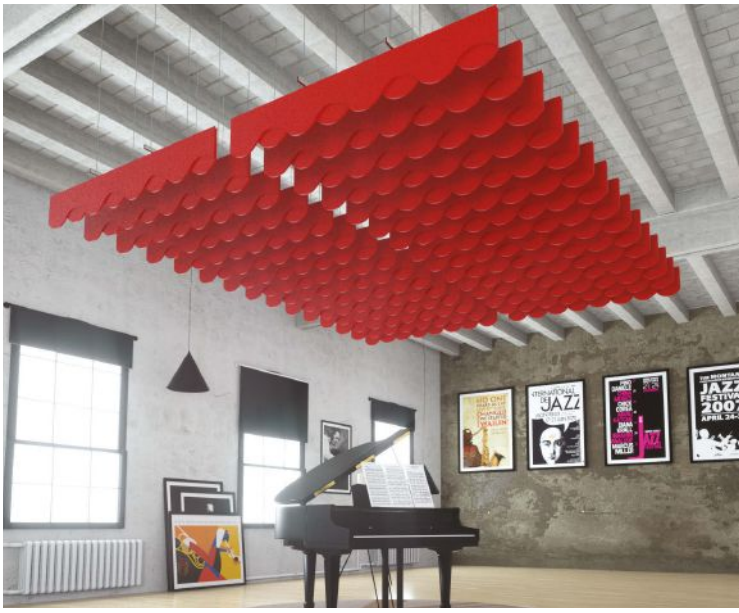
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Designer Jill Malek was inspired by the organic habitats that animals construct—think coral reef or cocoon—when she created this commercial-grade wallcovering collection of four non-repeating textured patterns that evoke such dwellings. All four are customizable in scale, with the option of adding dimensional felt accents, sewn by hand.
jillmalek.com

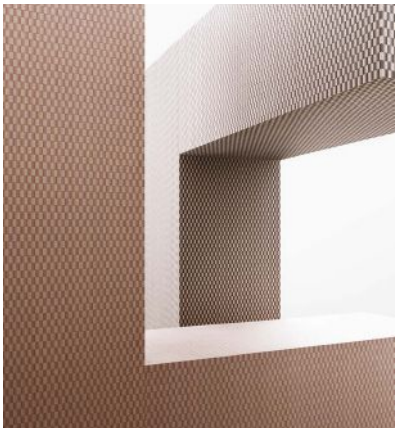


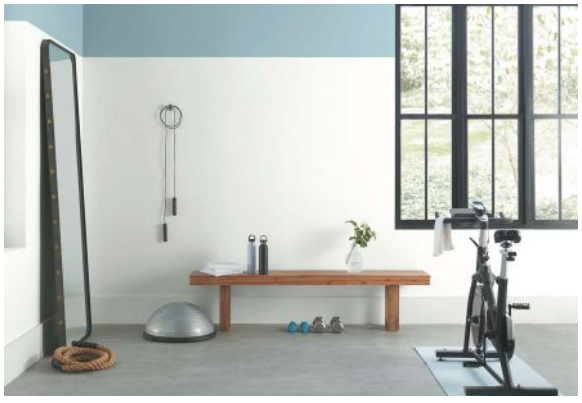
Duo Baffles

Unika Vaev's latest acoustic-baffle system consists of two-layer single-color designs that achieve an NRC rating of approximately 0.75 when spaced 8" apart. Eight patterns, offered in 11 colorways, play with positive and negative space, resulting in a convex and concave pairing of shapes—from undulating waves to repeating octagons.
unikavaev.com

Grada and Quadra

Known for its veneers, made mostly of reconstituted wood, ALPI has added two graphic patterns designed by Patricia Urquiola. Quadra sports traditional gridlines with single-color squares, while Grada has shifting hues that add rhythmic movement. Both are well suited to walls.
alpi.it





Living Well

Sherwin-Williams's Living Well paints comprise two products: SuperPaint with Sanitizing Technology delivers ongoing antibacterial properties, said to kill certain bacteria on the painted surface, while SuperPaint with Air Purifying Technology helps reduce VOCs and breaks down odors for better air quality. A total of 11 color palettes are available.
s-w.com



New Durapalm Panels

Smith & Fong has launched six new exotic carved designs for its Durapalm line of wall and ceiling panels. Like their predecessors, these panels utilize materials sourced from a mix of palm-tree species, the majority being sugar and coconut. The Class C fire-rated panels measure 47¾" wide by 95¾" tall with a thickness of ¾".
durapalm.com



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Tread on Me

Subtle or bold, these new resilient-floor and carpet collections withstand high traffic.

BY SHEILA KIM



Synergy

In collaboration with textile designer Virginia Langley, Durkan has launched this modular carpet collection particularly suited to the hospitality industry. Available in 12" x 36" and 24" x 24" formats and 12 colorways, its nine patterns, inspired by nature, have a rhythmic energy that is also serene.
durkan.com



Korlock Select with InteGrout

Karndean has updated its interlocking floating-floor LVT series Korlock Select with 17 new stone looks and its proprietary InteGrout, integrated faux grout lines that mimic the real thing to speed up installation. The collection is available in 18" x 24" planks or a 6" x 24" herringbone format.
karndean.com



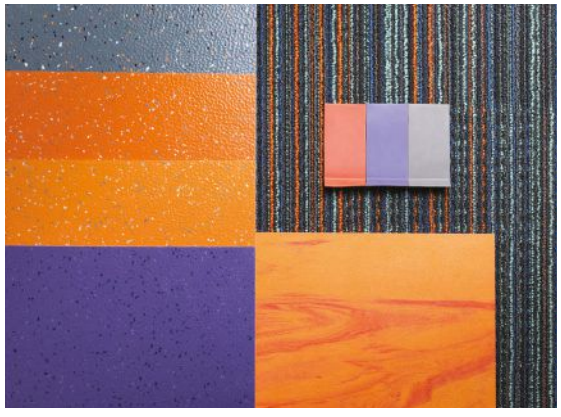
Living Local Terrazzo

Mohawk Group channels classic terrazzo—with a modern twist—in Living Local. This luxury vinyl tile (LVT) collection sports colorful flecks and popular hues against a natural or neutral base for a total of 14 colorways. It is available in 12" x 24" planks, is made of 100% pre-consumer recycled content, and has a 20-mil commercial-grade wear layer.
mohawkgroup.com



Local Reserve

Well suited to high-traffic spaces, this LVT from Patcraft simulates a wide range of wood species from oak to maple, in traditional and modern weathered styles. The resilient flooring product comes in 7" x 48" planks and 18 colorways and features a high-density core and 20-mil wear layer, as well as tongue-and-groove joinery.
patcraft.com



Color Splash

This rubber tile from Tarkett comes in 50 colors inspired by the outdoors—from bluish-gray Adirondack to yellow Canary—offering architects more possibilities when designing with safety and slip-resistance in mind. Color Splash tiles come in a 24"-square format, are phthalate-free, and Cradle to Cradle Bronze certified.
tarkettna.com



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White Plains, NY

DESIGN IQ Landscape Architects.

PRODUCT City Park Paver ™ in Series™ finish

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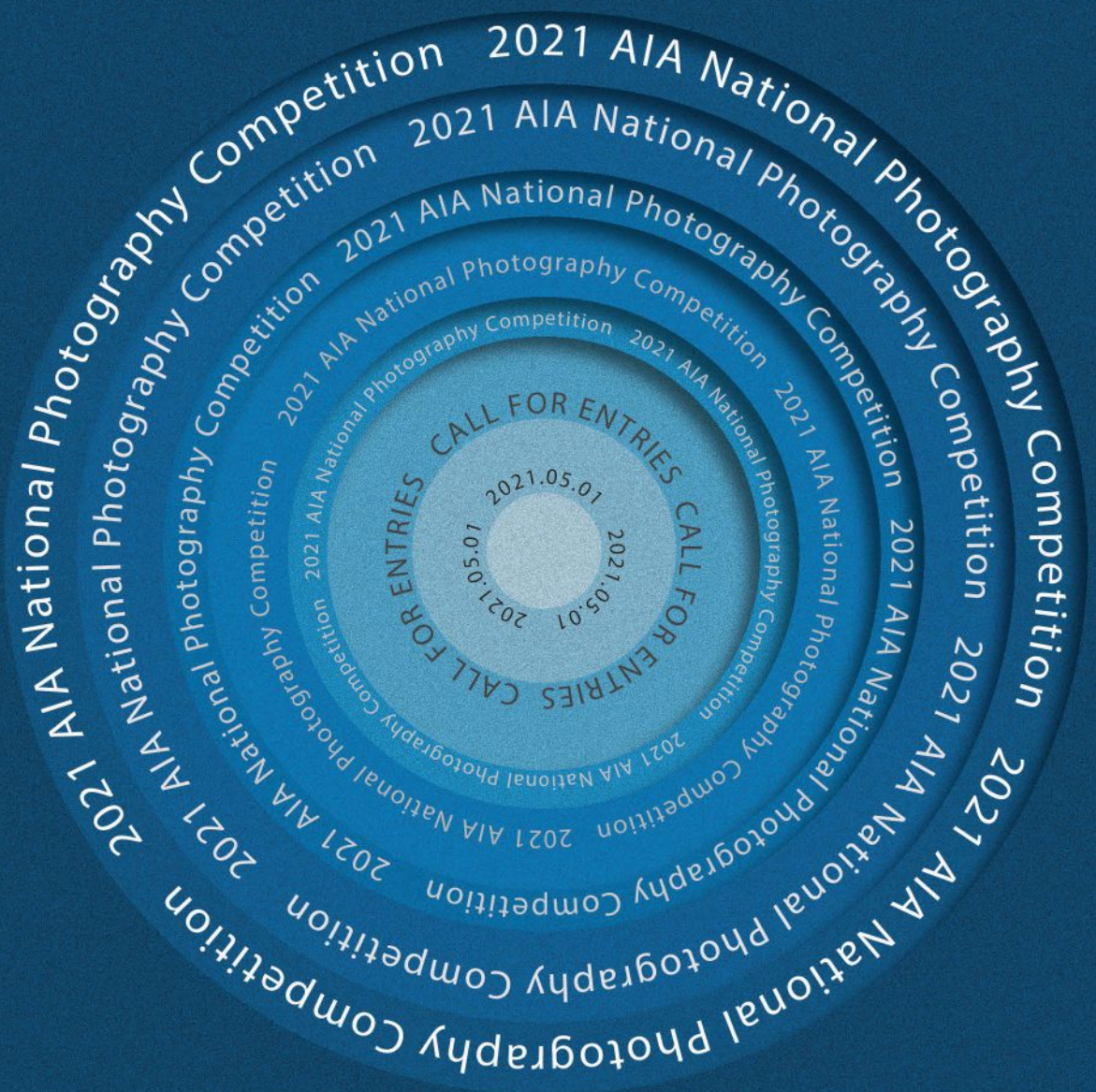
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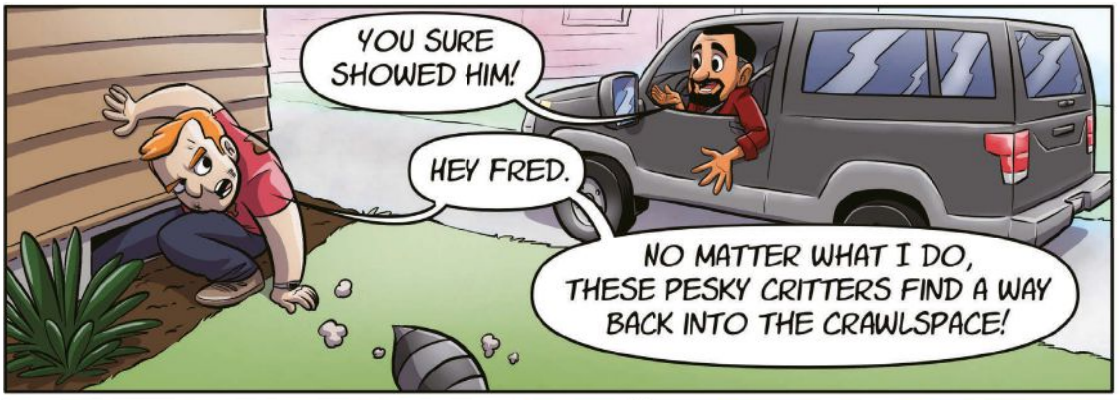




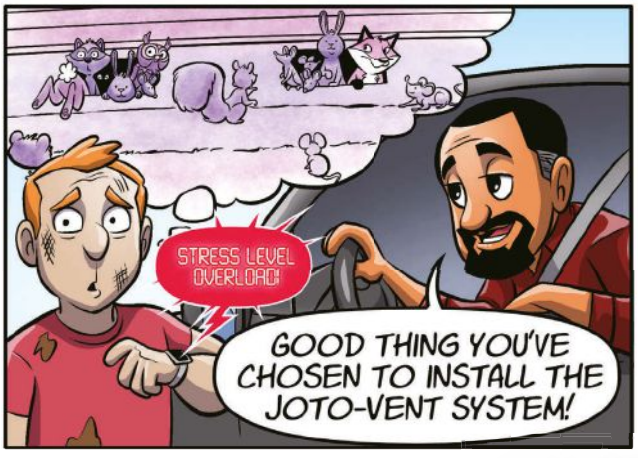
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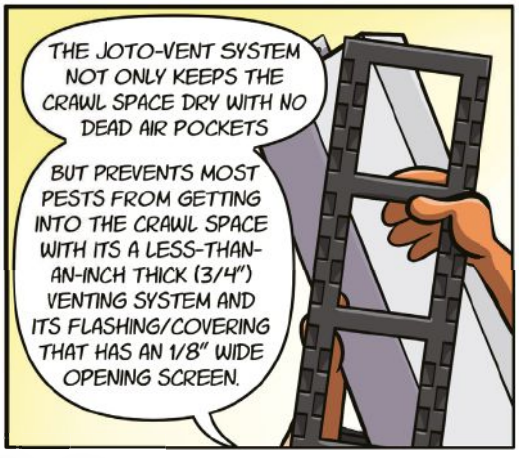
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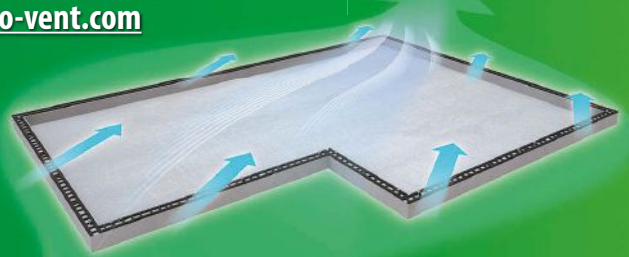








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ARCHITECT: Formline Architecture
GLAZING CONTRACTOR: Lynnmour Glass

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CIVIC DESIGN

With the pandemic and recent political events, our understanding of civic architecture has been upended. In an astonishing episode at the start of this year, the U.S. Capitol, the very symbol of American democracy, came under siege. And, not unlike other historical crises that have created upheaval, the fight against Covid-19 has turned spiritual and sporting structures into palaces of public safety, with icons from Salisbury Cathedral to Yankee Stadium becoming mass-vaccination sites. With this issue, we're looking at civic design beyond government buildings and including places for community services and veterans' resources, venues that provide public access to science, models of transformed urban spaces, and more.



PHOTOGRAPHY: © DUCCIOMALAGAMBA

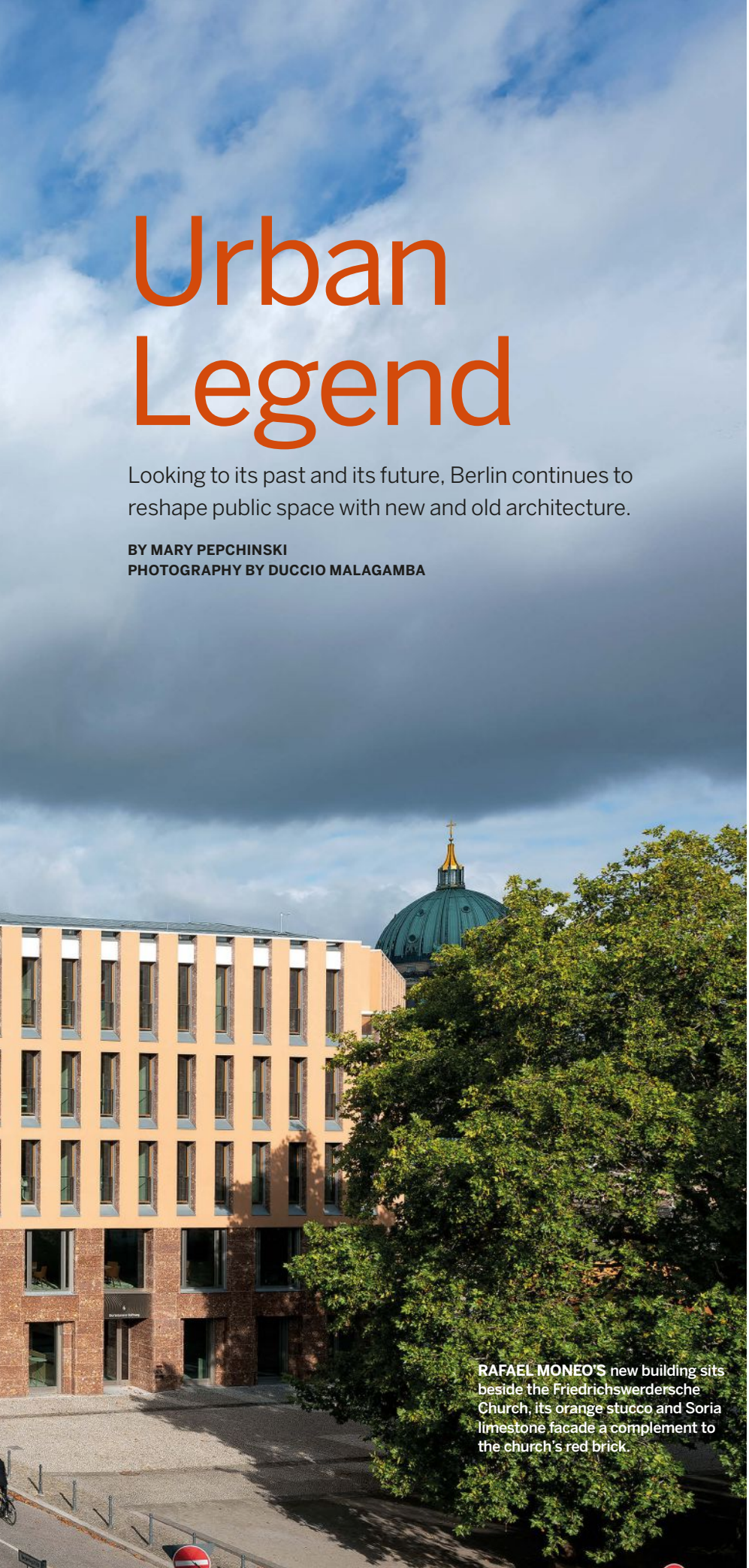
A VIEW OF SCHINKELPLATZ, IN BERLIN, WITH A NEW MIXED-USE BUILDING BY RAFAEL MONEO IN THE FOREGROUND.



Urban Legend

Looking to its past and its future, Berlin continues to reshape public space with new and old architecture.

BY MARY PEPCHINSKI
PHOTOGRAPHY BY DUCCIO MALAGAMBA



RAFAEL MONEO'S new building sits beside the Friedrichswerdersche Church, its orange stucco and Soria limestone facade a complement to the church's red brick.

IN SHAPING a coherent urban center since the fall of the Wall in 1989, the city of Berlin has faced immense challenges: the lingering destruction from the Second World War and the brutal 30-year urban bifurcation, and then the integration of the sprawling federal bureaucracy, once the city became the capital again, of a reunited Germany. The *Planwerk Innenstadt* (City Center Plan Guide), from 1999, called for such strategies as a uniform building height of 72 feet, limited dimensions of window openings, and maintaining the existing pattern of city blocks to create viable urban spaces and a sense of historical continuity. Revisions made in 2010 proposed specific interventions, like the reconstruction of key monuments and public spaces for 11 areas in the former East and West. Although there are some exceptions, such as the high-rises clustered around Potsdamer Platz and the Zoo train station, as well as those planned for the Alexanderplatz, an embrace of historical models, as inspiration for the new and as a basis for direct imitation in rebuilding, is at the heart of these measures.

One of the most highly charged areas in the 2010 revisions relates to the historical center, where this approach has been played out in two ways: with a partial



facsimile of the City Castle, now known as the Humboldt Forum (see sidebar), and the reinstatement of city blocks and squares, using new architecture at the Schinkelplatz site, including a 30,000-square-foot infill building by Madrid-based Pritzker Prize–winning architect Rafael Moneo.

Located at the eastern end of the Unter den Linden boulevard around the rebuilt City Castle, the historical center is a hub for politics, high culture, and tourism. Formerly the nexus of imperial power, the East German government had demolished the war-damaged castle in 1950 and constructed in its place the vast, modern government forum, including the Palace of the Republic and the Foreign Ministry, obliterating the 19th-century urban fabric in the process.

To make way for the reconstructed City Castle and the Schinkelplatz development, the historical center plans required razing the East German Palace of the Republic and the Foreign Ministry (a controversial move among some contemporary historians). While the castle directly references Germany's imperial past, the Schinkelplatz pays homage to Karl Friedrich Schinkel (1781–1841), the great Prussian civil-servant architect, whose restrained Neoclassicism is on display nearby in his Altes Museum, the Neue Wache (New Guard House) on Unter den Linden, and the





MONEO'S building shares a U-shaped courtyard (opposite) with buildings by Hemprich Tophof Architects and Schultes Frank Architects (the balconied facade of one visible above). The site in 2005, before these structures were built, with a facsimile of Schinkel's Bauakademie erected (right).



PHOTOGRAPHY: © DAVID PLOTZKI (BOTTOM); MAP DATA: GOOGLE, GEOBASIS-DE/BKG (OPPOSITE, BOTTOM)

Grosses Schauspielhaus (Grand Playhouse) on the Gendarmenmarkt.

Situated directly across from the City Castle, the narrow Schinkelplatz stretches along a fork in the River Spree. A residential district for much of the 19th century, by 1900, department stores had replaced apartment buildings, which were damaged by Allied bombardment and then finished off by the construction of the East German Foreign Ministry in the 1960s. In the near future the Schinkelplatz site will—once again—feature two distinct redbrick structures designed by Schinkel: the neo-Gothic Friedrichswerdersche Church (from 1831, partially damaged in the war and restored in 1987) and the Bauakademie, or Building Academy, based on English industrial architecture (from 1836, partially damaged in the war and demolished in 1962, with a re-creation planned) will once again stand across from one another on the site's southern border.

Nestling between the two, the infill building by Moneo forms the end of a block of new luxury housing and faces a public space, the Werderscher Markt. For this architect, directives like the Inner City Plan Guide were not impediments but rather inspirations for a cogent design: "Even when everything seems predetermined, there is ample room for an architectural intervention," Moneo says.

At the Werderscher Markt, the challenge was to design a facade that served as an adequate backdrop to the plaza and connected the disparate icons. "How to mediate between two buildings, which, though coming from the same architect, are in fact so unalike?" he asks.

He took cues from Schinkel's sketches for the long-gone surrounding apartment facades, noting their gridded fenestration and the subtle "fragmentation" caused by the off-kilter property lines and slight variations in height. With these domestic models in mind, his pale orange stucco facade is articulated as three planes: one placed parallel to the church, another along the plaza, and the third at a diagonal to the Building Academy, with stepped-down corner joints. An elongated grid of deep-set floor-to-ceiling windows covers these surfaces, while Soria limestone from northern Spain, in varying maroon, cream, and brown hues, wraps the base and lines the window jambs, echoing the palette of the brick church. Originally planned as residential, only one section nearest the Building Academy will contain apartments; the rest is now offices and a media center for the Bertelsmann Foundation, a global think tank.

Today, when walking through the restored inner-city blocks, passing such attractions as the Boulez Saal concert hall by Frank Gehry (RECORD, February 2017) and moving towards the Humboldt Forum or the nearby Museum Island (the site of Schinkel's Altes Museum), pedestrians come upon Werderscher Markt. Here they encounter the warm and inviting ambience created by brick, stone, and stucco, and charming details like the Bears Fountain, depicting a mother and her rollicking cubs, hewn from rose-toned volcanic stone, as well as the shade from two mature plane trees.

Although Rafael Moneo wishes that his building could be "more accessible to the Berliners," the site does offer some public access: the deconsecrated Friedrichswerdersche Church houses an exhibition of 19th-century sculpture, and the Building Academy, when rebuilt, will offer programming for architecture and related industries. Nonetheless, for all the tourists and locals who will stream through here in the near future, it is the Werderscher Markt that is a real amenity—not a fawning remake but rather a meditation on the past that allows for a brief pause in the present. ■

Mary Pepchinski is a writer, curator, and former professor of architectural theory at the Technical University Dresden.









THE PALACE of the Republic, built by the Communist authorities, was razed (right). Next to the domed Berlin Cathedral, the rebuilt City Castle, now the Humboldt Forum, has Baroque facades (above) and a contemporary one facing the river (top). Old and new come together in the interiors also (opposite).

PHOTOGRAPHY: © CHRISTOPH MUSIOL (TOP AND BOTTOM, LEFT); ALEXANDER SCHIPPEL (OPPOSITE, BOTTOM); DIETMAR RABICH (BOTTOM, RIGHT)

The Humboldt Forum

DOMINATING an island in the River Spree, Berlin's Humboldt Forum hosted a virtual opening last December. The behemoth museum-cum-cultural center, costing $825 million, occupies the site of the former Berlin City Castle—built between the 15th and 19th centuries, damaged in World War II, and demolished by Communist East Berlin authorities in 1950, who erected their parliament, the modern Palace of the Republic, clad in a tangerine-toned reflective curtain wall, in its place.

With German reunification, lobbying efforts culminated in the Bundestag's 2002 resolution to reconstruct the razed castle's rectangular volume with its three Baroque facades, details from an 18th-century courtyard, and the 19th-century dome, while completing the rest with contemporary architecture. In 2008, a neo-rationalist scheme by Vicenza-based architect Franco Stella won a competition for the project. A former collaborator of Aldo Rossi, Stella was versed in the Berlin context, having judged a 1994 urban-planning competition for the area, which awarded the first prize to a proposal to reinstate the volume of the former City Castle but articulated using modern design.

Displaying exhibits from Berlin's Humboldt University, City Museum, and Asian and so-called Ethnological collections, the Humboldt Forum intends to address local and global issues, like the linkages between history, cultures, ecology, and colonialism. "Our task is to open up the minds of our visitors," says director Hartmut Dorgerloh.

Whether the Humboldt Forum's hybrid architecture is the right enclosure for its ambitious program is yet to be seen. When its plan was first announced, some architects dismissed the facsimile as the "Disneyfication" of Berlin. Now completed, the Baroque sandstone facades have mostly met with approval, while the "cold functionalism" of Stella's interiors, as the *Frankfurter Allgemeine Zeitung* remarked, have not.

But the bigger concern involves the long-term pitfalls that such spectacular reconstructions can have in perpetuating historical revisionism. Assessing the result remotely, Michael Z. Wise, author of *Capital Dilemma*, about the politics and architecture in post-1989 Berlin, notes that the current iteration "goes some way to restoring spatial coherence to one of the capital's most crucial urbanistic ensembles," although "it was highly questionable for the Federal Republic of Germany to repeat history's erasure by the Communists . . . of the original castle with a subsequent razing of the East German parliament." *MP*







Change Agent

LEVER creates a headquarters for a Portland, Oregon, foundation committed to social equity.

BY RANDY GRAGG
PHOTOGRAPHY BY JEREMY BITTERMANN

MICHELLE DEPASS, the CEO of the Portland, Oregon-based Meyer Memorial Trust, the state's largest private foundation, thinks the label "civic building" is less about the architecture than action. She would argue that the Trust's new headquarters fits the definition: "Building democracy isn't about four walls. It is a participatory practice."

Conceived and built by a local team that included a developer called Project^, LEVER Architecture, and O'Neill/Walsh Community Builders, the Trust's new headquarters, in the Lower Albina neighborhood, is in the historic heart of Portland's Black community, near many of the Black-oriented organizations Meyer is investing in. A trio of peaked roofs, eccentrically angled to accommodate solar panels, recall the gabled houses once plentiful in the area. The wrap of custom-profiled corrugated metal echoes the industrial environs, while the mass-timber construction, exposed in the building's public spaces, imbues it with a civic sturdiness. It's vying for LEED Platinum. "The headquarters," says DePass, "is the embodiment of our goals for sustainability, but also for inclusion and economic development."

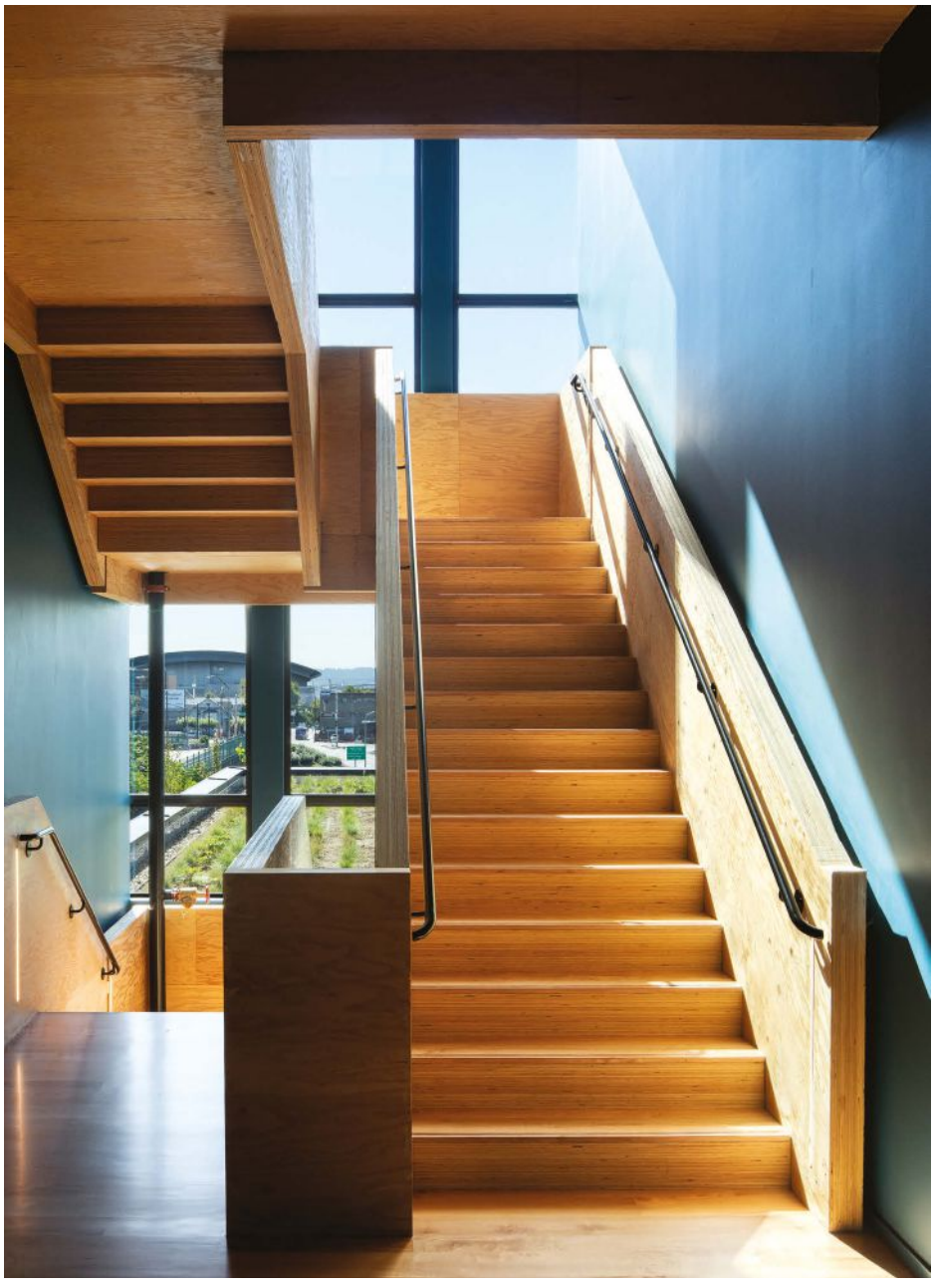


WITH A SERIES of roofs that recall the gabled houses once plentiful in the neighborhood, and metal cladding that echoes its industrial environs (opposite), the new headquarters is pushed to one edge of its site to allow for a garden (above) at the opposite end.



THE STRUCTURE of mass-plywood panels is exposed throughout much of the ground floor, including a convening room known as the Center for Great Purposes (left), its adjacent pre-function area (above), and the main stair (opposite, bottom). Walls painted a deep blue, such as those surrounding the stair and the reception area (opposite, both), denote circulation spaces.



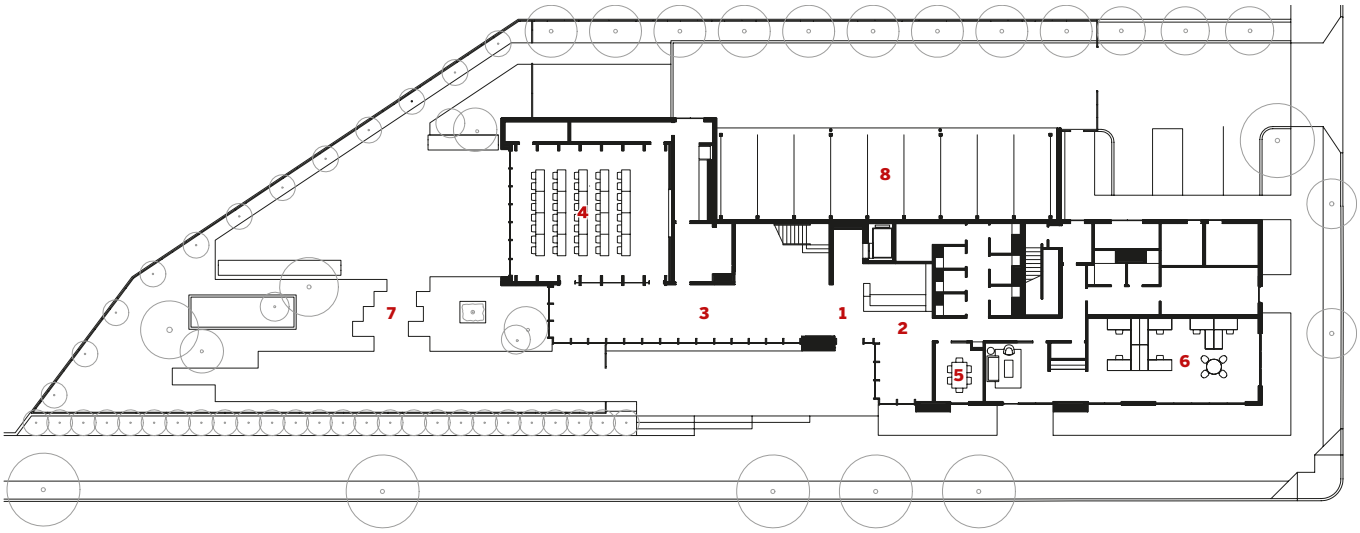


Seeded by the estate of the regional supermarket magnate Fred Meyer, 39 years ago, the $840 million trust has undergone a dramatic transformation in the past decade. From a traditional grant-maker largely steered by white men it has evolved into a dynamic BIPOC-led pioneer in social-impact investing that delivers grants and technical assistance statewide.

Five women led the development, design, and construction team, including Anyeley Hallová, who oversaw the development of the new headquarters while she was partner at Project^, and Chandra Robinson, a LEVER principal. It was a "very robust process," according to Hallová. The trust's 44-member staff weighed in on "every design iteration" of the building, landscape, programming, and interiors, says Robinson. Meyer's goal of being a community anchor drove the selection of the site—a former tow-truck storage lot—to try to reclaim the once-bustling Black neighborhood that was destroyed by urban renewal and the construction of a freeway, as has happened in so many American cities. Among its many initiatives, Meyer and its partners are working to "re-root" those pushed out, anchoring the community that remains while attracting a new generation of African-American residents and businesses.

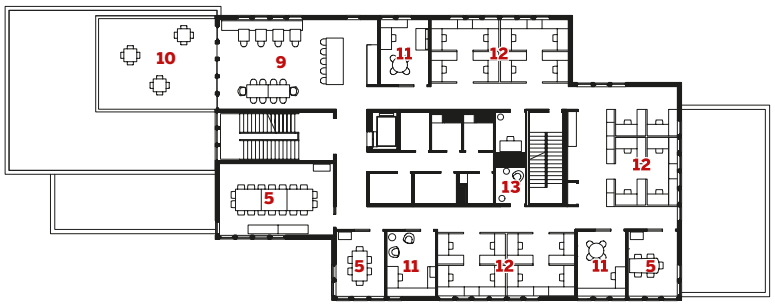
The $10.8 million, 19,800-square-foot three-story building's parti reflects the district's past, present, and hoped-for future. Clad in glass and cedar, the building's ground floor houses the organization's more public interface of lobby, flex space for coworking, and the "Center for Great Purposes" (CGP)—a meeting room with a capacity for 105 seated (162 standing), named after a phrase from Meyer's will. The building is pushed to the site's north edge, offering space at the south end for a garden and preserving sweeping views of the city and the Willamette River from the street—one of the city's major bike/transit thoroughfares. Set back 8½ feet from the property line, the building's base creates a "front porch," with plants and seating that welcome visitors or just someone waiting for the bus. The metal siding catches the changing light with a soft glow, making the structure stand out from a distance.

Inside, details are bold but spare. Muscular mass-timber panels shape the central stairwell and surround the CGP in thickly plied columns, beams, and floor slabs, lightly coated with a whitewash to cool the wood's natural orange. Hemlock slats, coupled with floor-to-ceiling dichroic glass, transform one side of the CGP into a constantly changing light show. Throughout, walls painted in a deep



FIRST-FLOOR PLAN

0 20 FT.
6 M.



SECOND-FLOOR PLAN



THIRD-FLOOR PLAN

1 MAIN ENTRY
2 LOBBY
3 PRE-FUNCTION SPACE
4 CENTER FOR GREAT PURPOSES
5 CONFERENCE ROOM
6 COWORKING SPACE
7 GARDEN
8 PARKING
9 LUNCHROOM
10 TERRACE
11 PRIVATE OFFICE
12 OPEN OFFICE
13 FOCUS ROOM
14 COPY ROOM
15 NURSING ROOM

blue, with works by local artists, denote public and circulation spaces.

The two upper office floors express the Trust's internal equity goals. Whether open or enclosed, all work spaces enjoy the same natural light and views. Corners are reserved for conference rooms, a dining area, and a library. Restrooms are all-gender. A scattering of skylights illuminate the conference areas as well as a nursing room. The staff selected the eclectic array of seating, in a variety of widths, heights, and styles, with an eye to comfort for those of various physical abilities and body sizes.

In particular, Meyer applied its equity lens to material selection and contracting. Working with the nonprofit Sustainable Northwest, the team developed new timber specification guidelines in which the Forest Stewardship Council (FSC) certification was weighed equally with proximity of sourcing, innovation, and minority, female, and indigenous ownership, as well as cost. The project recently won an FSC Leadership Award, with 85 percent of the wood meeting the new criteria. For example, the building's mass-plywood panels are a patented composite lumber product invented and made only in Oregon. Of all the suppliers, 47 percent were minority- and women-owned businesses. Of the contractors, 20 percent were small companies that had never worked on a such large, prominent project. The mandate, Hallová notes with a smile, forced LEVER at times to modify their details. "Rather than design and then let the subcontractors figure out how to build it," Hallová says, "the question for the architects became, how should they design so the subcontractors can more easily build?"

Sustainability benchmarks often come at a cost premium (the custom, certified timber was 3 percent more expensive than anticipated)—and so can design for equity and inclusion. O'Neill/Walsh did charge extra to provide shop drawings for the novice subcontractors, according to Hallová. But, says Robinson, "it was a learning process,

THE WORKSPACES on the upper floors, including the offices (right) and a library (above), have generous windows, providing daylight and views, and a variety of seating types to accommodate staff preferences.

and our passion." She adds that, in her 14 years as an architect, she had never worked with a leadership team that was all female and majority Black. Construction can sometimes be a combative blame game but, on this project, she notes, "We were like, 'Dang, this is cool. We're all women.' It became about supporting one another." ■

Randy Gragg is a Portland, Oregon–based freelance writer focusing on architecture and urban design.



Credits

ARCHITECT: LEVER Architecture — Timothy Cooke, Chandra Robinson, Thomas Robinson, George-Michael Rusch, Cecily Ryan, Doug Sheets, project team

CONSULTANTS: KPFF Consulting Engineers (structural); Glumac (m/e/p, LEED, commissioning, low voltage); Standridge Design (civil); Acoustic Design Studio (acoustical); 2.ink Studio (landscape); O-LLC (lighting)

GENERAL CONTRACTOR: O'Neill/Walsh Community Builders

CLIENT: Meyer Memorial Trust

DEVELOPER: Project^

SIZE: 19,800 square feet

COST: $10.8 million

COMPLETION DATE: September 2020

SOURCES

METAL PANELS: Browns Architectural Sheet Metal

TIMBER COMPONENTS: Freres Lumber, Alpine, RedBuilt, Timberland

WINDOWS: Cascadia

GLASS: Vitro

SKYLIGHTS: Velux

DICHROIC FILM: 3M



Déjà Vu All Over Again

For a library in Provence, Dominique Coulon incorporates the site's extraordinary pre-existing conditions.

BY ANDREW AYERS
PHOTOGRAPHY BY EUGENI PONS

WITH ITS stately plane trees and dense medieval center surrounded by large 18th-century houses, known as bastides, Pélissanne is a picture-postcard Provençal village. When, in 2013, the municipality voted to construct a new library (the old one having become woefully inadequate for a population now numbering 10,000), they decided to locate it in one of these bastides, a handsome three-story edifice sited between the medieval center and the town hall. Built in the local blond stone, *pierre de Rognes*, the house came with a sizable garden that the municipality opened as a park when it first bought the property, in 2001. By far the largest in Pélissanne's historic center, the park has become a much loved public facility, so local apprehension was palpable when it was announced that, in order to create a library of sufficient size, an extension to the bastide would have to be built on part of the garden.

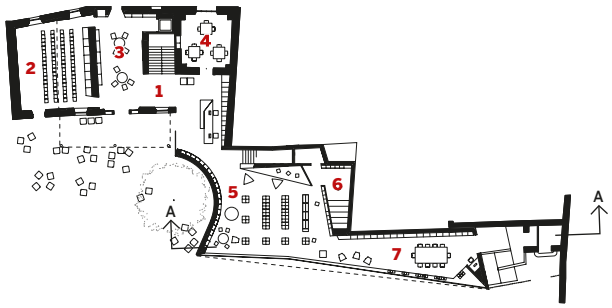
"What interested us in this project was the beautiful site," says

THE NEW EXTENSION celebrates what came before: an elegant 18th-century manse and its plane trees and lush gardens.

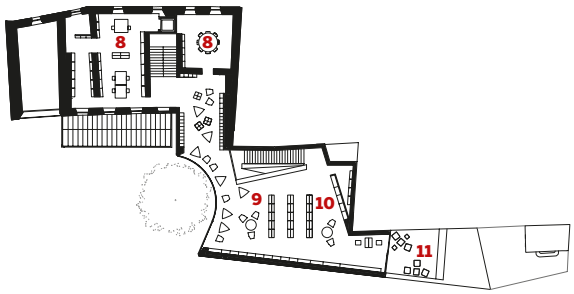




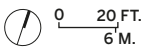


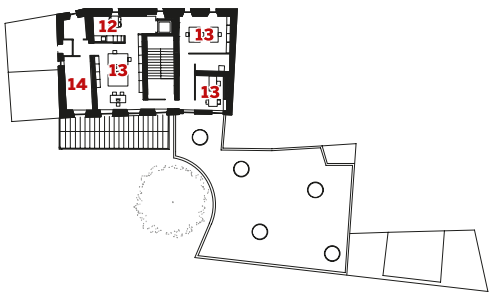


GROUND-FLOOR PLAN



SECOND-FLOOR PLAN





THIRD-FLOOR PLAN



SECTION A - A

1 RECEPTION
2 CULTURAL ACTIVITY AREA
3 NEWS
4 WORKSHOP AREA
5 CHILDREN'S SECTION
6 STORY TIME
7 MULTIMEDIA
8 DOCUMENTARY
9 FICTION
10 IMAGE AND SOUND
11 TERRACE
12 PANTRY
13 OFFICE
14 MECHANICAL
15 PASSAGEWAY



A PASSAGEWAY carved out of an adjacent house connects the library to a pedestrian axis (opposite). South-facing floor-to-ceiling glazing floods the interior with daylight and invites the garden inside (above).

Strasbourg-based architect Dominique Coulon, whose office won the 2014 design competition. "I'm very attached to the relationship between landscape and architecture"—an attachment that won him the job, as his proposal was far more self-effacing than the others. "We wanted the old house to be as visible as possible," he explains, "so we chose to site the extension next to the bastide, in front of the blind rear walls of neighboring houses." Coulon's sensitivity to the genius loci went further than that, however, since the relationship with the site drove the entire logic of his design. "Plane trees are sacred in Provence!" exclaims Nathalie Allemand, the library's director, and it so happens that two magnificent specimens stand right in front of the bastide's garden facade; Coulon's extension scoops around one of them and establishes a direct relationship with it from inside.

Sensitivity to the site also implied treating the bastide with respect, so Coulon insisted that visitors enter via the house's original hallway. From the entry, you may either turn left into a new lecture hall (carved out of the bastide's western extremity), ascend the house's new main staircase diagonally opposite, or turn fully right to enter the extension. Choosing the latter option, you make your way into a long, south-facing space that is flooded with daylight by floor-to-ceiling glazing running down its entire length, thereby bringing the garden right inside. Here, opposite handsome bespoke shelving that curves around the plane-tree scoop, is a debonair single-flight stairway that, Coulon explains, "was not designed as an autonomous object but as an unfurling of space." Climbing it to the extension's second level, you discover the other big surprise (a revelation, even though you'd half clocked it outside): here the western rather than the southern facade is entirely glazed, a bravura realization in 15-foot-high, 2-inch-thick panes of curved glass that affords plunging views into the plane tree's heart. Indeed the entire extension is a technical feat, since no intermediary supports interrupt the run of the downstairs glass wall, thanks to a 100-foot-long beam perched on the cast-concrete lateral walls, whose sand and aggregate were locally sourced in order to achieve a result resembling *pierre de Rognes* (with a naturalistic surface effect obtained using acid-etched polystyrene for the formwork's inner surface). Taking its cues from the context, the extension slopes down toward the east, following the roofline of the neighboring houses, while to the west its structural audacity is highlighted by a knife-edge joint where the ground-floor and second-story glazing meet.

Equally impressive is the way such a rich variety of spaces has been packed into a relatively small building (10,500 square feet). Coulon wanted to touch the bastide as little as possible—a difficult task when its new function required stronger floors, wider staircases, elevators, geothermal heating/cooling, a new basement, etc.—and managed to leave its layout more or less intact. Certain original features, such as exposed beams, were preserved, including a ceiling medallion (which meant not reinforcing the floor above, leading him to suspend the upper story's shelving from the wall). Color and materials contribute to the diversity—the bespoke furnishings by Coulon in shades of gray and green, the new bastide staircase in sheet steel with oak wainscoting, the children's story corner in vivid red—in what is a total environment: Coulon chose all the furniture that he didn't have made (chairs by Mendes da Rocha, Rietveld, and the Bouroullec brothers). The one exception is the standard-issue freestanding shelving, which he tolerated. The single major criticism is that such a high-design approach leaves no opportunity for interventions by the




SHERLOCK
LES MISERABLES

THE BUILDING embraces a plane tree within a glazed scoop (opposite, top). Below, the curve supports bookshelves (right and opposite, bottom). A reading room in the existing structure features the original ceiling beams (bottom).

inhabitants, so when they do it anyway—the splashy Christmas painting and giant Post-it display on the ground-floor glazing the day I visited—the clash is startling, to say the least.

"Since opening, we've doubled our attendance," says Allemand. "People tell us the library is like a beautiful gift to the inhabitants of Pélissanne." She particularly appreciates the southern glazing (situated alongside a pedestrian axis crossing the village, the municipality having asked Coulon to create a passageway out of a nearby house) for the relationship it establishes with the exterior. "Passersby see what's happening inside, which takes away the intimidation they might feel faced with a grand entrance. As a result, they're much more inclined to cross the threshold"—just one example of the benevolent civic-mindedness that permeates the entire project. ■





Credits

ARCHITECT: Dominique Coulon & associés — Dominique Coulon, Jean Scherer, architects; Gautier Duthoit, David Romero-Uzeda, Javier Gigosos, Diego Bastos-Romero, Olivier Poulat, Margot Machin, Thomas Bukenmeyer, Florent Revel, Théo Petit, Yannick Signani, assistant architects

ENGINEERS: Batiserf Ingénierie (structural); BET G. Jost (m/e)

CONSULTANTS: Bruno Kubler (landscape); Euro Sound Project (acoustics)

CLIENT: City of Pélissanne

SIZE: 6,500 square feet (existing); 4,000 square feet (new construction)

COST: $4 million

COMPLETION DATE: February 2020

Sources

CLADDING: Atrium Bâtiment

WINDOWS & DOORS: Vollmer, Schüco, Wicona, Puertas Padillas

HARDWARE: Stremler

ACOUSTICAL CEILINGS: Place, Siniat, Vogl

DEMOUNTABLE PARTITIONS: Placo

FLOOR & WALL TILE: Villeroy & Boch

ACOUSTIC INSULATION WALL: Saint-Gobain Isover

WOOD FLOORING: chêne de l'est

ELEVATOR: Otis

FURNISHINGS: IDM

Turning a Page

Marble Fairbanks' Greenpoint Library and Environmental Education Center in Brooklyn aims to engage a community stung by industrial neglect.

BY LINDA C. LENTZ
PHOTOGRAPHY BY MICHAEL MORAN

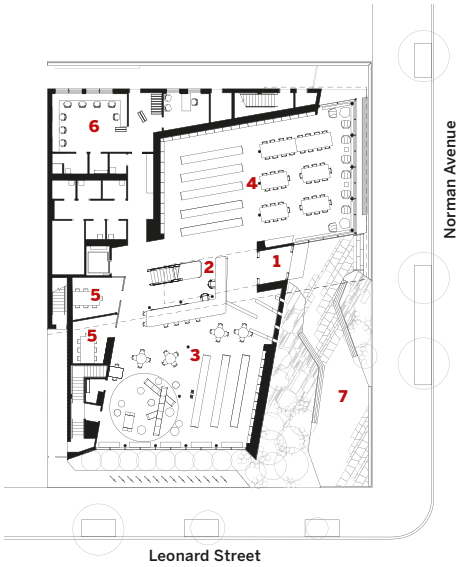
OPEN SINCE OCTOBER, the Greenpoint Library and Environmental Education Center is more than a repository of information. Designed by Marble Fairbanks, it is a symbol of an ecological effort that dates back more than 40 years. In 1978, one of the largest oil spills recorded in the United States (at least 50 percent greater than that of the *Exxon Valdez*) was discovered in a tributary of New York's East River. Between 17 and 30 million gallons of oil and refining products leaked from processing facilities in Greenpoint, Brooklyn, and seeped deep into 55 acres of soil and aquifer in both industrial and residential areas. After years of litigation and slow remediation, this disaster became a



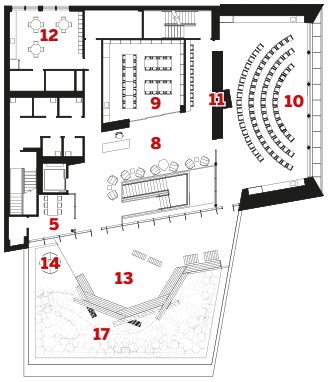
THE BUILDING thrusts forward on the street to offer views into a large community room on the upper level and the adult reading room below. Benches along the glass and around the plaza (above) invite gathering.



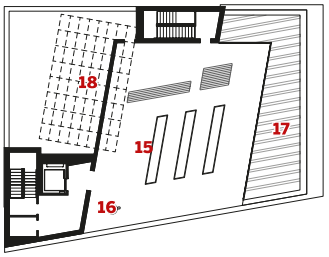




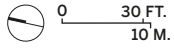
GROUND-FLOOR PLAN



SECOND-FLOOR PLAN



THIRD-FLOOR PLAN



1 ENTRANCE
2 INFORMATION DESK
3 CHILDREN'S AREA
4 ADULT READING ROOM
5 MEETING ROOM
6 STAFF WORKROOM
7 PLAZA
8 ECO LOUNGE
9 TEEN CENTER/LAB
10 COMMUNITY ROOM
11 DISPLAY WALL
12 STAFF LOUNGE
13 READING GARDEN
14 CISTERN
15 DEMONSTRATION GARDEN
16 CISTERN HAND PUMP
17 POLLINATOR HABITAT
18 SOLAR PANELS

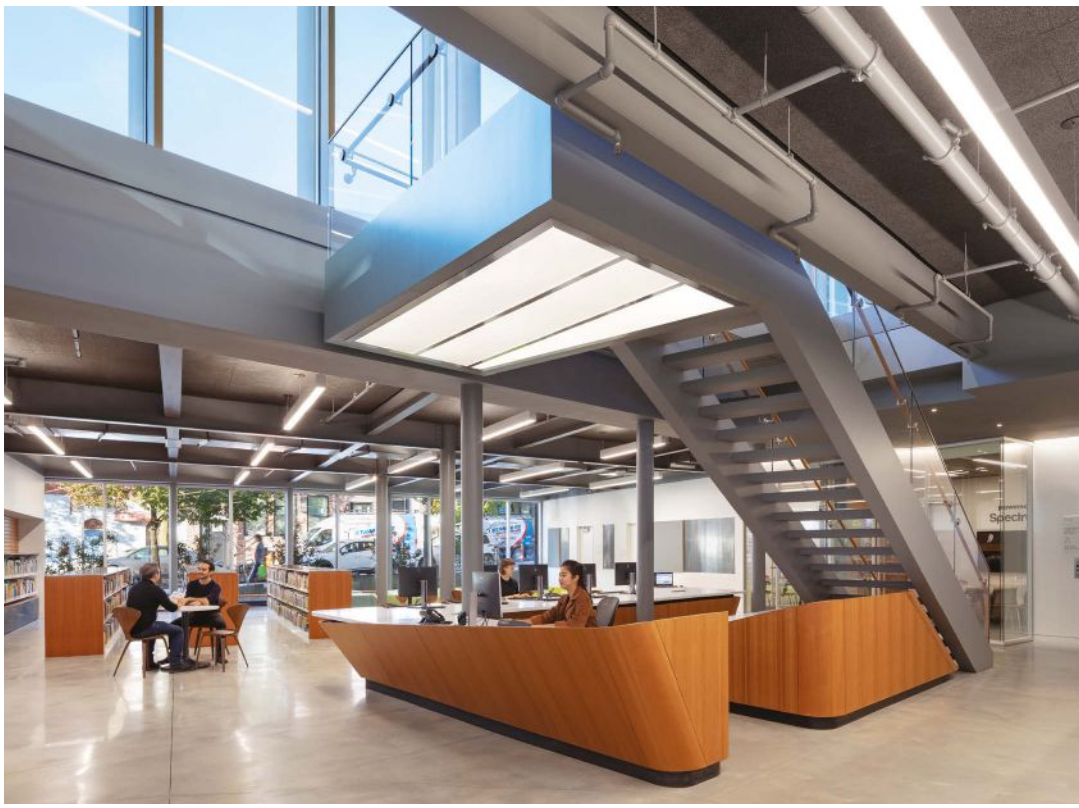
catalyst for the new public library, which offers a unique focus on sustainability and the local ecosystem in a building that exemplifies the principles of good stewardship.

Despite the ongoing cleanup, Greenpoint—with its desirable location on the East River, opposite midtown Manhattan—has been gentrifying with new development. Yet it retains much of the multi-ethnic working-class population spawned by a still-active commercial zone. According to firm principal Karen Fairbanks, neighborhood residents, who were frustrated with the existing outdated small, dark library branch from the 1970s, initiated the $23 million project: it was financed with $5 million from the Greenpoint Community Environmental Fund (instituted with money from ExxonMobil for the spill) and $18 million from additional city and state sources.

Situated on a prominent corner, the 15,000-square-foot steel-and-concrete structure immediately grabs your attention with a gracious plaza. Marble Fairbanks wanted to introduce public green space where there had been none and so massed the building by stacking a pair of orthogonal volumes and rotating them at right angles to establish three tiered outdoor areas: the plaza at grade, a second-level reading garden, and a rooftop horticultural classroom. Broad expanses of deep-set louvered and insulated glass span the southeast and west facades to visually connect passersby with the reading rooms, and to infuse the interior with strategically shaded daylight. The massing also enabled the creation of a welcoming backlit entrance canopy beneath an overhang.

The architects clad the upper volume with sandblasted-cedar panels made in the nearby Brooklyn Navy Yard, then used the same wood as formwork for glass-fiber-reinforced concrete panels on the lower volume. This move, says project architect Jason Roberts, places the more durable material at the street level and contrasts it with the wood, which will age, above. The split levels and bold materiality also minimize the bulk of the structure so that it fits within Greenpoint's patchwork of old and new buildings faced in wood, brick, and vinyl siding.

Besides collaborating with the client (the Brooklyn Public Library), Fairbanks and her team worked with the community and local environmental groups, as well as landscape architect SCAPE and ads Engineers, to develop the programmatic, material, and sustainability strategies, ultimately targeting LEED-Platinum certification. Products, sourced within 500 miles when possible, include the





THE FACADE'S contrasting cedar and concrete planks present a lesson in materiality, while the plaza nods to the local ecology with native plantings and granite boulders (opposite). The main desk curves into a public computer station (top), flanked by adult and children's reading rooms (above).





A LOUNGE on the second floor (top) opens to the reading garden (above), where a cistern collects water to be retrieved by a hand pump in the demonstration garden above it (opposite).

work of local artisans and fabricators; 87 percent of the wood comes from sustainable forests; and low-VOC adhesives, coatings, and flooring were used throughout. Efficient systems include low-velocity-displacement ventilation; controlled LED lighting; and bidirectional solar panels on the roof, estimated to offset more than 10 percent of the building's annual energy consumption. These components (and more) are identified and explained on wall plaques.

SCAPE introduced immersive landscapes that connect to the urban and ecological context. In homage to the region's geological history, bands and outcroppings of granite on the plaza trace the movement of the Laurentide Ice Sheet across Brooklyn 18,000 years ago. Native plantings, bioswale, and permeable pavers manage runoff, with excess rainwater directed into a retention tank below ground. More native plants and fruit-bearing shrubs in the reading garden on the second floor provide food and habitat for birds and insects, and water from a 1,500-gallon cistern is used by student and community groups who pump it by hand to tend raised beds and a green roof on the upper level.

Walking in from the street, you'll find adult and children's reading rooms on either side of a



cherry-clad main desk. Such local wood figures prominently throughout the interior, as do select shades of green. Marble Fairbanks seized every opportunity to insert details that reinforce the program: four narrow south-facing windows near the entrance each align to highlight the path of the sun on the concrete floor during an equinox or solstice.

The actual environmental center is one flight up, where a lounge opens to the reading garden. This central space, or "eco lounge," is bordered by a glazed "teen lab" and 1,400-square-foot community room that can be divided in two for simultaneous educational and social activities. The lounge also features a display wall to showcase projects, art, and other materials that will increase awareness about sustainability. A digital monitor explains the building and presents data such as its energy use and how much the solar panels generate.

A first of its kind in its dual identity, the Greenpoint Library and Environmental Education Center is poised to be a popular neighborhood—and city—resource. This was apparent on a recent winter afternoon when, even during the limited access due to Covid, parents with kids were lining up to retrieve books at the door. "It's going to be exciting to see these spaces filled with people, doing all those things you didn't realize they were going to do," says Fairbanks. ■

Credits

ARCHITECT: Marble Fairbanks — Karen Fairbanks, Scott Marble, Jason Roberts, Nicholas Desbiens, Peter Adams, Benjamin Hait, Keenan Korth, Lauren Espeseth, Spenser Krut, Tanya Gershon, Ravipa Ramyarupa

ENGINEERS: Silman (structural); ads Engineers (m/e/p/fp); Yu & Associates (civil/geotechnical)

GENERAL CONTRACTOR: Westerman Construction

CONSULTANTS: SCAPE (landscape architect); Tillotson Design Associates (lighting); Jam Consultants (code expeditor); Cosentini Associates (IT/Security); MTWTF (wayfinding)

CLIENT: Brooklyn Public Library

SIZE: 15,000 square feet

COST: $23 million

COMPLETION DATE: October 2020

Sources

CLADDING: Morin; Pac-Clad; 3M; Evan Eisman (cedar panels); Concreteworks East (GFRC panels)

CURTAIN WALL: Kawneer

GLAZING: Oldcastle BuildingEnvelope

DOORS: Solar Innovations; Assa Abloy

PAVERS: Champlain Stone; Tectura

STAIR: Jaroff Design

INTERIOR SURFACES: Armstrong; Benjamin Moore; Decoustics; Kydex; Formica; Corian; Avonite; 3Form

FURNITURE: Vitra; Cherner; Artifort; Herman Miller; Knoll; Keilhauer; ERG; Hightower; Blondie's Treehouse

RUG: Mary Mattingly (design); Classic Rug Collection (realization)

LIGHTING: USAI; Acuity; Lucifer; Backlight; Zaneen; Hevi Lite: Acclaim

PV SYSTEM: Brooklyn SolarWorks

ENERGY MANAGEMENT: Distech

Sky's the Limit

Patano Studio Architecture reimagines a run-down observatory in Washington to reflect its celestial purpose.

BY JOSEPHINE MINUTILLO
PHOTOGRAPHY BY ED SOZINHO

THE FOUNDING of the Goldendale Observatory is the stuff of folklore. A half century ago, four amateur astronomers from Vancouver, Washington, built a telescope, then canvased the Cascade Mountains for a place to put it. Goldendale, a small town 100 miles northeast of Portland, Oregon, just inside the Washington State border, proved to be the perfect spot. Famous for its dark skies, the immediate area was inside a narrow geographical path that would experience three total eclipses within a century, a rarity. The idea of building an observatory —first encountered by locals overhearing a conversation among the astronomers at a diner—appealed to the town as a way to attract tourists. But the boxy, brick-clad structure Goldendale erected in 1973 looked more like rest-stop architecture familiar to drivers pulling off the road than what stargazers should see before staring up at the skies.

"I was intrigued by the typology," says Christopher Patano of the Seattle-based Patano Studio Architecture. "It's not often one gets to design an observatory." Patano, who had done previous work for Washington State Parks, which had taken over management of the building and site in 1980, transformed the two existing square rooms—



one to house the telescope, the other a small classroom—into a pair of rounded bodies seemingly in orbit, with a glazed lobby between as the embodiment of gravity pulling at them. As the architect points out, "There are no right angles in space."

Patano clad the small circle and larger ellipse in wood, punctuated every 5 feet or so by vertical aluminum fins that offer a sense of direction and scale, and act as expansion joints over the rainscreen assembly, though the siding's charred *shou sugi ban* finish repels water and reduces movement in the wood.

Movement was definitely something to avoid, given the sensitive nature of the telescope. There is no mechanical equipment in or on the structure; all heating and cooling lines are buried underground. And the all-electric building—perched atop the highest hill in the area with views of the Cascade Range's famous volcanic peaks, Mount Hood, Mount Adams, Mount Rainier, and Mount St. Helens—takes advantage of the substantial wind and hydropower harnessed in the Pacific Northwest.

The dome-topped circular portion of the building actually encases the original brick box around the telescope, with ample capacity for substantial cellulose batt insulation and air space to prevent heat gain, since the telescope has to be the same temperature as the outside air. (The new roof aids in that effort as well.) The diamond-shaped room housing the telescope, deemed historically significant, was untouched in the renovation, aside from cleaning the brick and installing new lighting and didactic panels. "It's like a time capsule," remarks Christopher Carlson, construction project coordinator for Washington State Parks. Likewise, the almost 50-year-old aluminum dome, a catalogue item, was retained after some cleaning and sandblasting, with the pneumatic pistons that slide its aperture open still functioning.

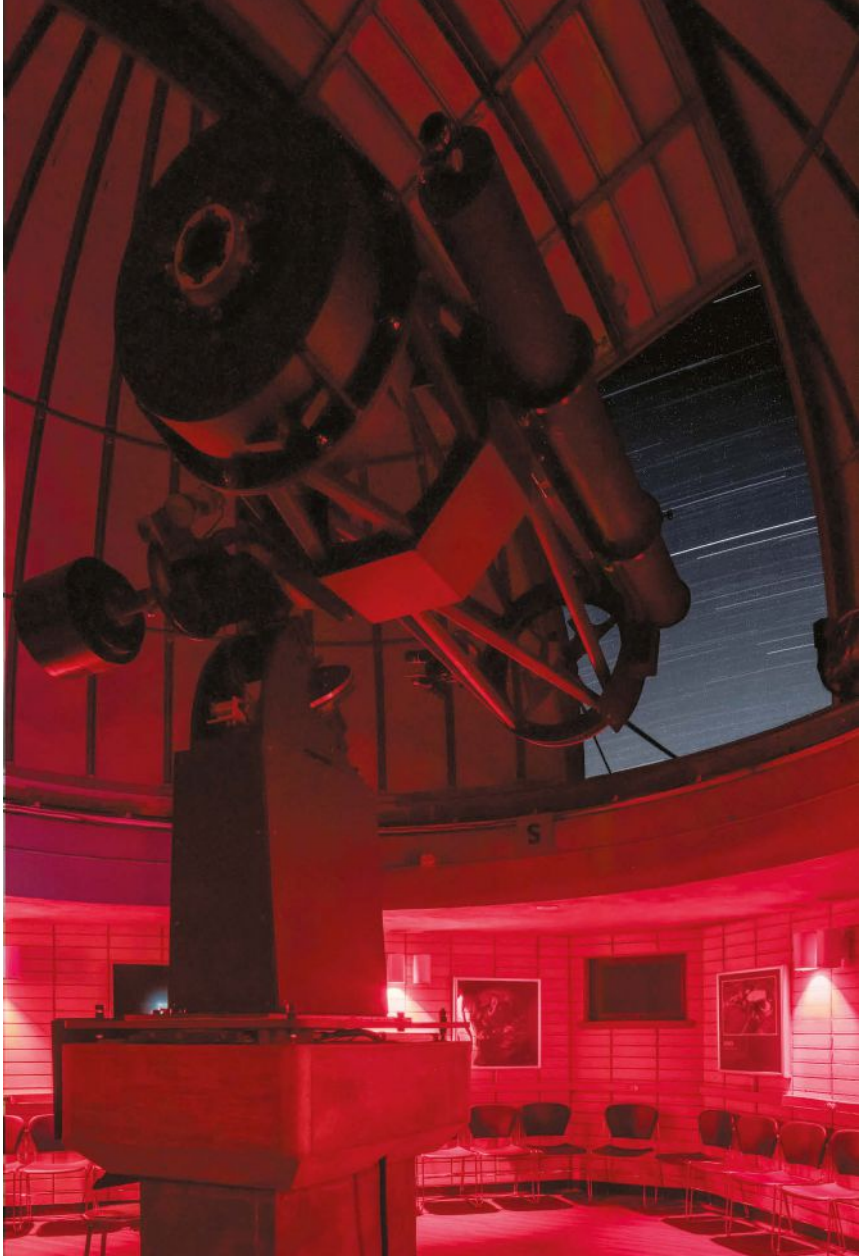
The ellipse, on the other hand, has been constructed from the ground up, and replaces a "dump of a room," as Patano called it. "We could barely accommodate 40 people, and now we have room for over a hundred," says observatory administrator Troy Carpenter, who applauds the openness of the now 4,000-square-foot facility. "The previous hallway was a choke point." The 118 seats in the new ramped auditorium—in which three 100-foot screens display live telescope views and celestial-themed shows—correspond to each of the elements of the periodic table. The curving walls around them feature an interpretive exhibition design. Above the auditorium and its adjacent restrooms, office, and retail space, the architect designed extra-deep parapets for a future rooftop viewing platform.

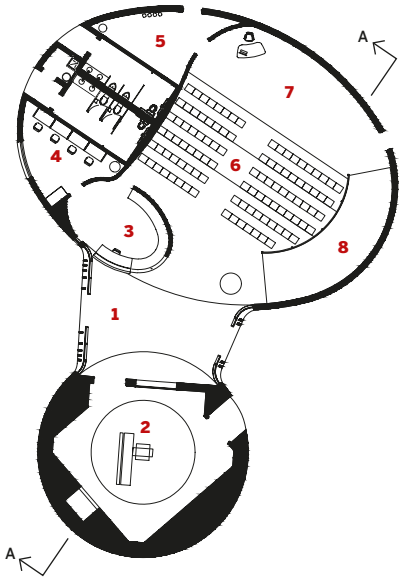
The $2.4 million renovation included a redesign of the grounds, whose xeriscaping requires minimal maintenance, benefiting the light-





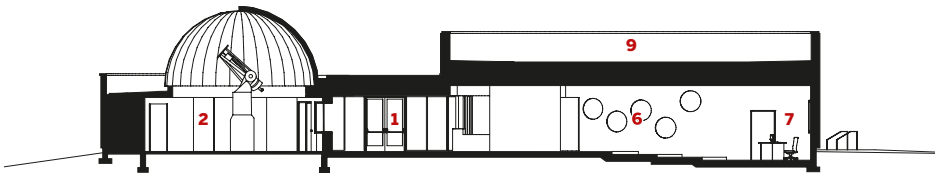






FLOOR PLAN

0 15 FT. 5 M.



SECTION A - A

0 15 FT. 5 M.

1 LOBBY
2 TELESCOPE ROOM
3 RETAIL SPACE
4 OFFICE
5 UTILITY CLOSET
6 AUDITORIUM
7 STAGE
8 RAMP
9 FUTURE ROOFTOP VIEWING

THE DOMED room housing the telescope was preserved (opposite, right). Behind a small retail space (opposite, bottom left), seating in the auditorium aligns with the 118 elements of the periodic table (opposite, top left). Red lights allow eyes to adjust better to the dark (right).

ly staffed organization. (Many visits are self-guided.) Significantly, the road and parking lot were moved to avoid car headlights' disrupting nighttime stargazing outside. Newly installed red-hued lighting on and around the building is compatible with viewing the sky in the otherwise complete dark. Interpretive design elements are sprinkled around the building; there is a human-scaled sundial, for instance, in which a person acts as the gnomon casting a shadow.

The building and landscape were not the only elements to see changes. Though not used for research but for school groups and afficionados, the original telescope itself—one of only a few in the country that allows visitors to climb a stairway and look through its eyepiece—received some serious upgrades, including a new 24½-inch-diameter mirror. Converted from a Cassegrain to a Newtonian telescope, it is now more versatile, operating at high and low magnification. The improved instrument, along with the expanded interior and all it has to offer, makes science accessible to the public in ways both practical and exciting, bringing the stars down to earth. ■



Credits

ARCHITECT: Patano Studio Architecture — Christopher Patano, director; Michael Eliason, project manager; Grace Moreyra, Kelly Liu, Alberto Saez, project architects

ENGINEERS: Quantum Consulting Engineers (structural); Coffman Engineers (civil and electrical); Rainbow Consulting (mechanical)

CONSULTANTS: Walker|Macy (landscape); JUB Engineers (surveyor); C&G Partners and Formations (interpretive exhibition design)

GENERAL CONTRACTOR: Tapani

CLIENT: Washington State Parks and Recreation Commission

SIZE: 4,000 square feet

COST: $5.9 million (total); $2.4 million (construction)

COMPLETION DATE: July 2020

Sources

WOOD CLADDING: Montana Timber Products

CURTAIN WALL: Kawneer

FLOOR AND WALL TILE: Daltile

GLASS: Guardian Glass

PAINT: Sherwin-Williams

Design for Density

In Helsinki's former docklands, Lahdelma & Mahlamäki builds loftlike government offices.

BY TIM ABRAHAMS
PHOTOGRAPHY BY KUVATOIMISTO KUVIO

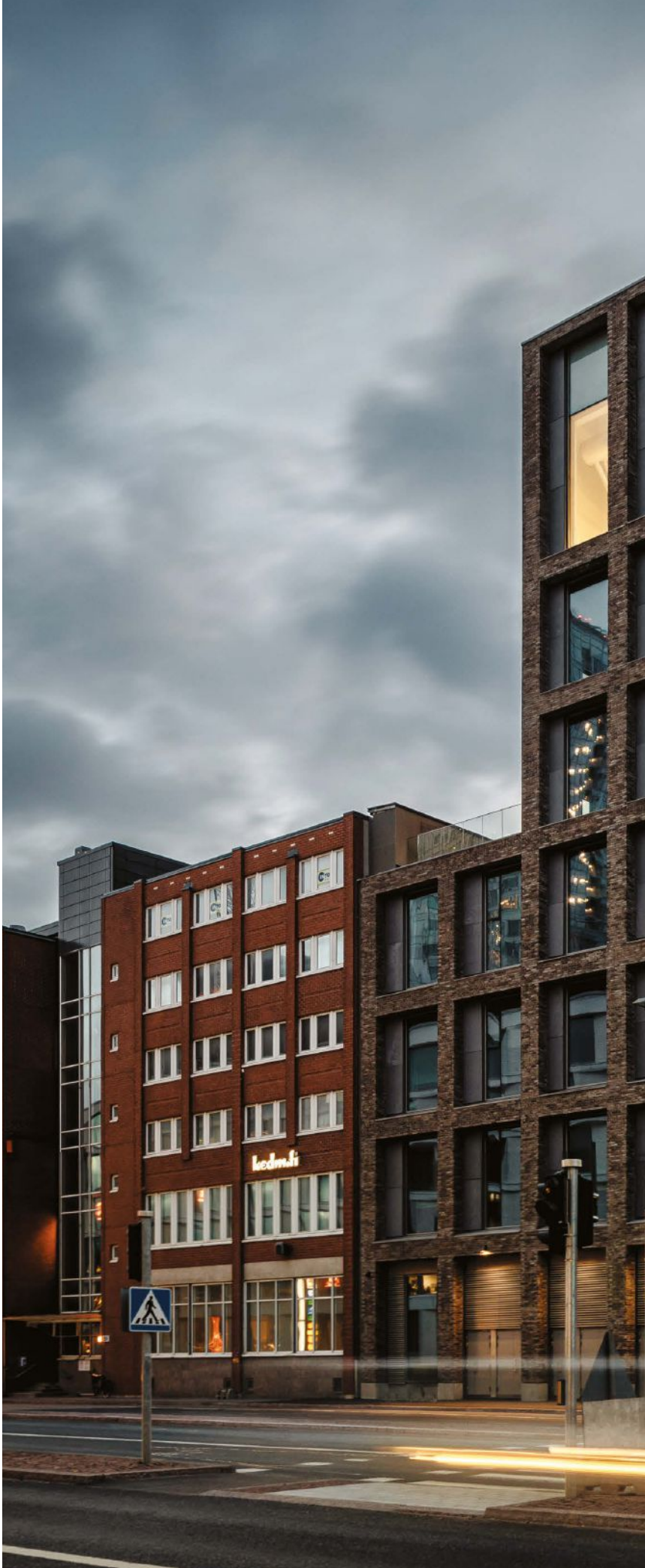
IN 2016, Helsinki produced a city plan designed to prevent urban sprawl. It designated Verkkosaari, the former docklands to the northeast of the city center, as a new area for development. A subsequent document defined a site at its heart for the Urban Environment House: an integrated home for the planning, housing, and environmental departments, previously spread out across Helsinki. That detailed document specified a skewed L-shaped building that would enclose two sides of a city block to form an internal courtyard with a neighboring structure. It required the building be set back from the street on one side, to create a public space along one route in the neighborhood, and set a height of eight stories, to mediate the scale between tall residential towers on one side and a lower district of converted slaughterhouses on the other.

Designed by Finland's preeminent architectural practice, Lahdelma & Mahlamäki (LMA), designers of the Museum of the History of Polish Jews in Warsaw (RECORD, December 2013), the Urban Environment House achieves its pragmatic goal of creating enough office space for 1,500 local government employees, in a modestly scaled urban core. It also accomplishes more ambitious aims, living up to its name as a model for well-designed urban redensification, while serving as an exemplar of sustainability, as a near–net zero building.

Despite the many restrictions that could have confounded lesser architects, here LMA managed to create a surprisingly artful civic edifice. Because of the L shape and certain design strategies, the 440,000-square-foot, primarily brick building appears less massive than its actual size. The colonnade running along much of the base satisfies the requirement for a street setback while creating an urbane public amenity. The graceful low brick arch dominating the northwest corner, which leads to the main entrance, makes a simple civic gesture to a new urban square, albeit in the idiom of 19th-century industrial architecture that typifies the area.

The building within is welcoming, but with a quiet grandeur. The first two floors of the concrete-framed structure are largely given over to public functions: exhibition space, a one-stop shop for various permits, an auditorium for planning meetings, a restaurant, and a cafeteria.

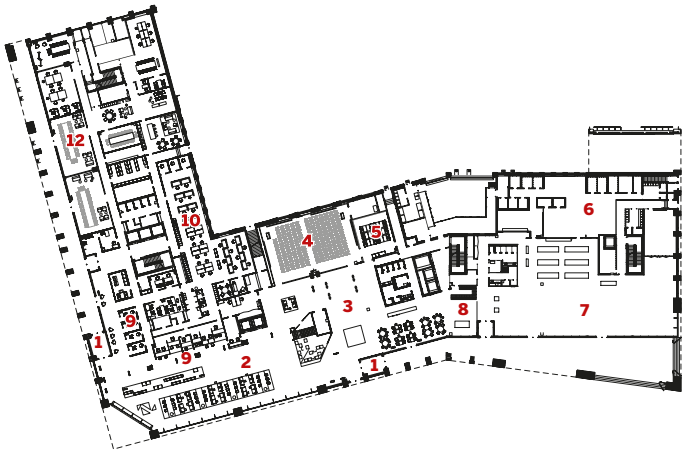
Although it is new construction, the Urban Environment House evokes a converted warehouse. To accommodate the complex program, LMA increased the depth of the floor plates from a local average of around 40 feet to nearly 100 feet. To help overcome reduced daylight penetration, the ceiling heights were increased from the usual



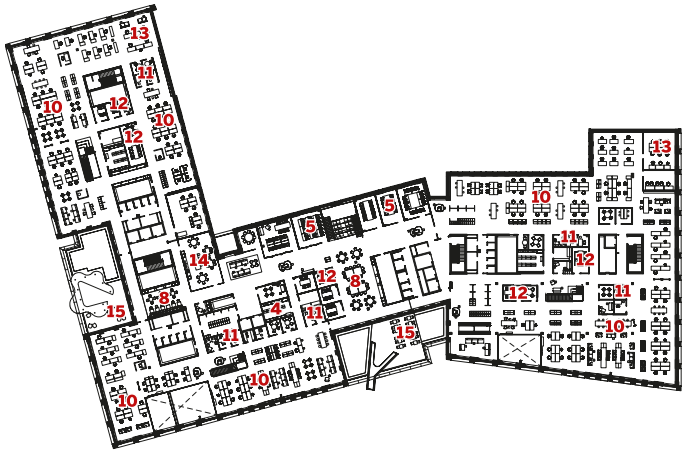


THE URBAN ENVIRONMENT HOUSE's ground-level colonnade defines a route through the neighborhood while helping communicate the building's civic program.





GROUND-FLOOR PLAN



FOURTH-FLOOR PLAN

0 50 FT.
15 M.

Credits

ARCHITECT: Lahdelma & Mahlamäki Architects — Ilmari Lahdelma, principal designer; Teemu Seppälä, project manager; Minja Hildén, interior architect

CONSULTANTS: Ramboll Finland (structural, HVAC, civil, fire safety); Rejlers Finland (electrical); Loci Maisema-arkkitehdit (landscape); Akukon (acoustics); KVA-Arkkitehdit (work-space planning)

GENERAL CONTRACTOR: Skanska Finland

CLIENT: City of Helsinki

SIZE: 440,000 square feet

COST: $200 million

COMPLETION DATE: June 2020

Sources

MASONRY: Tiileri

GLAZING: Metus Finland

INTERIOR WOOD ELEMENTS: Inlook

LIGHTING: Fagerhult

1 ENTRANCE
2 LOBBY
3 EXHIBITION
4 AUDITORIUM
5 MULTIFUNCTION SPACE
6 KITCHEN
7 RESTAURANT
8 CAFÉ
9 CUSTOMER SERVICE
10 OPEN OFFICE
11 ENCLOSED OFFICE
12 CONFERENCE ROOM
13 QUIET AREA
14 LUNCHROOM
15 TERRACE

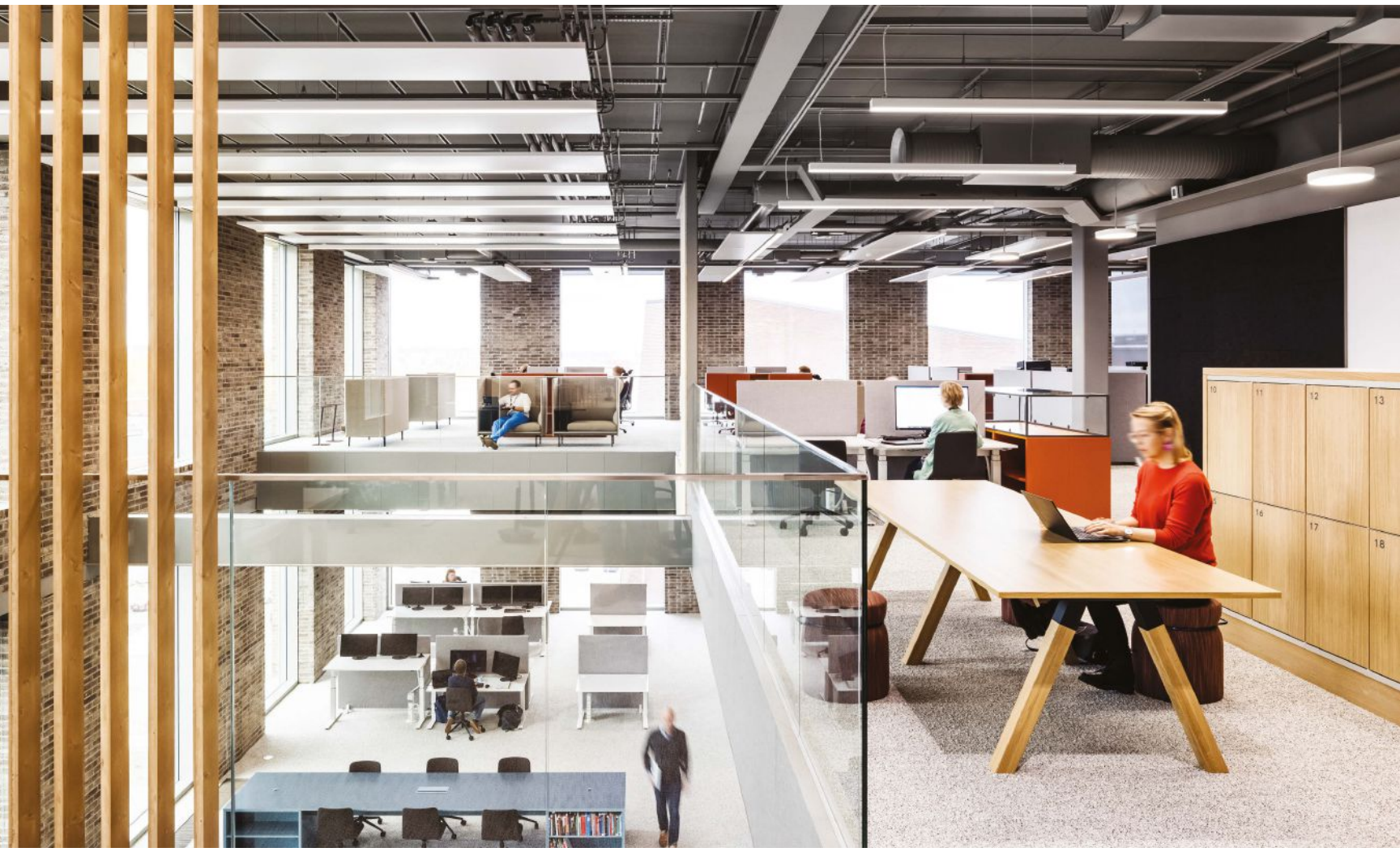
BROAD ARCHED windows at the base connect the interior with the city (above and opposite). The building contains varied environments for impromptu gathering and collaborative work, including stadium-like steps (above), meeting rooms, and informal seating areas (right).



12 feet to 15 feet, giving the interiors a loft-like feel. Terraces, facing the street, have been carved from the volume of the building, two at the third level and two at the fourth, effectively creating voids that cut through the floors above.

Not only do the terraces provide outdoor space for occupants and introduce daylight, the voids further help break up the building's mass. This strategy is enhanced by the architects' handling of the materials prescribed in the planning document: brick as the facade's primary material, along with copper and wood. Using the secondary materials, LMA has skillfully detailed the windows and subtly differentiated sections of the building.

The terraces, though, are the key to the Urban Environment House. On the north facade, for example, the terrace is the starting point for an internal street that runs south



VOIDS PIERCE through multiple levels (above), while terraces (opposite) slice into the building's volume. These features create visual links, help occupants with orientation, and bring daylight into the deep floor plates.

through the building on each floor. Around this spine are placed meeting spaces and shared facilities like cafeterias and kitchens.

By slicing vertically through the building's bulk, those on the interior who are near the terraces can see the floors above or below. In addition to these external incisions into the volume, LMA has cut through the deep floor plates elsewhere, forming double-height interior spaces and creating a sense of openness and visual links between floors.

These visual connections would be meaningless, though, if the architects had not created a separate identity for each floor, preventing the anonymity and bureaucratic sameness that often pervade government office buildings. A themed color scheme differentiates each floor, in a nuanced way. The theme for the fourth floor, for instance, is "field and meadows," with plenty of wood furniture and beiges, burnished reds, and browns for the carpet and upholstery. About 60 percent of the desks in the building are reused from previous offices—reconditioned where needed—and around 20 percent of the meeting room furniture, including some designed by Alvar Aalto. Each space in the building looks and feels different.

The furniture reuse is just the kind of high-impact, low-cost strategy that a planning department should be promoting—and, as the Urban Environment Division of the City of Helsinki, it had to meet performance standards for public buildings in place since 2019. Among its features are a highly insulated envelope and heat recovery, with energy demands satisfied by on-site solar panels, nearby renewable sources, and the district heating and cooling system. In addition, the building's 55,000-square-foot roof, a green space featuring more than 22,000 plants, is designed as both a pleasant outdoor area and a laboratory where the experimental growing will be closely monitored and will inform planning advice going forward.

With the Urban Environment House, LMA has created an impressive piece of bureaucratic infrastructure, and done so within an incredibly tight urban site; they've designed a spacious and daylight-filled working environment, with a core of generous shared facilities that is also welcoming to the public. If we are determined to redensify our cities, the Urban Environment House is the kind of building we will need to create. ■

Tim Abrahams, a former editor at the Canadian Centre for Architecture, is a critic based in the UK.



Active Duty

SHoP designs a veterans center at Syracuse University, connecting town and gown.

BY CLIFFORD A. PEARSON
PHOTOGRAPHY BY JAMES EWING/JBSA

SYRACUSE UNIVERSITY has unusually strong ties to the U.S. military, going back to World War I when it established a Student Army Training Corps and then expanding significantly after World War II, when it waived admission requirements for returning servicemen. By 1947, a rush of 9,000 veterans tripled the size of the student body, shaping a campus culture that welcomed their involvement rather than marginalizing it. The new National Veterans Resource Center (NVRC), designed by SHoP Architects, builds on that legacy by bringing together military and civilian students, as well as the public and the university.

The center serves as a home for a broad range of veteran services—including counseling, which requires privacy—while drawing in civilian students and the public to attend events in its 750-seat auditorium or enjoy meals in its banquet space. The architects needed to create a large building that would occupy the width of a full city block and work on the urban scale while at the same time crafting a place that would engage people who wanted to grab a snack at a canteen or view art in a modestly sized gallery.

Set at a pivotal location between the school's historic campus to the south and the city to the north, the 126,000-square-foot building—owned and operated by the university—is a new gateway between town and gown. To break down the bulk of the four-story box, SHoP split it in two: the firm wrapped the lower floors in clear glass to invite the public inside, and on the upper floors installed reflective glass studded with projecting aluminum fins to ensure privacy for the offices, conference rooms, and teaching spaces used by veterans and their families. By pushing the upper floors out past the lower ones, the architects could fashion colonnaded porticoes on three sides of the building's base. "We wanted the upper portion to float like a cloud and reflect the sky," says Christopher Sharples, a founding partner of SHoP. The vertical fins extend beyond the glass by 10, 12, 14, or 16 inches and bend at different angles—a strategy inspired in part by Isamu Noguchi's Wind Catcher galvanized-steel sculptures from the 1980s—to animate the upper facade.



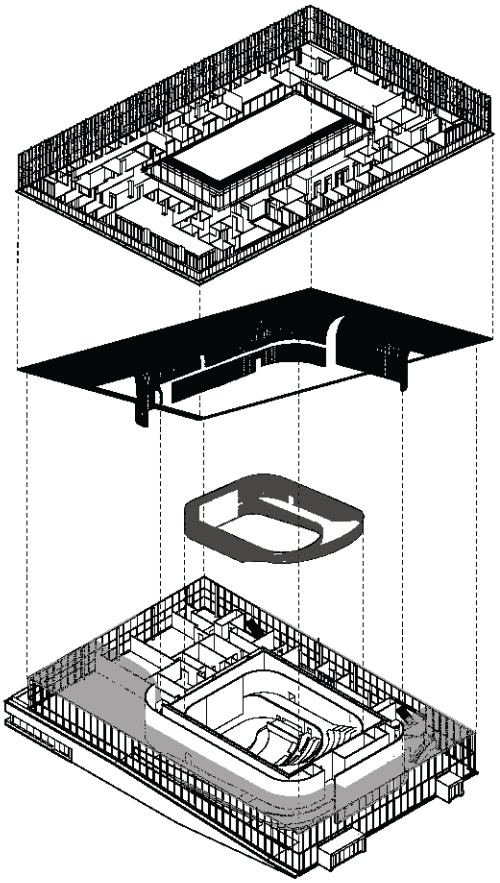
VISIBLE from the street, a digitally fabricated wood "wave" serves as a civic gesture (above), inviting people inside where Douglas fir curls over a ramp (opposite, bottom) leading to an auditorium.

To lure people inside, SHoP designed a curving wood element that snakes from the entrance on the south through the building, guiding visitors up a gentle ramp to the balcony level of the auditorium or down to a lower floor with a small canteen, art gallery, and classrooms. SHoP has long employed digitally controlled fabrication of simple materials, such as engineered-wood products, to make organic forms that crest like waves or spread out like tree branches. In Syracuse, the firm set the latest iteration of this signature approach behind the building's clear-glass base, giving it visibility from the street. "It's a civic gesture," says Christopher Sharples. Speaking of its branching, carefully crafted form, his twin brother and fellow SHoP principal William Sharples says it has "a certain Gothic quality."

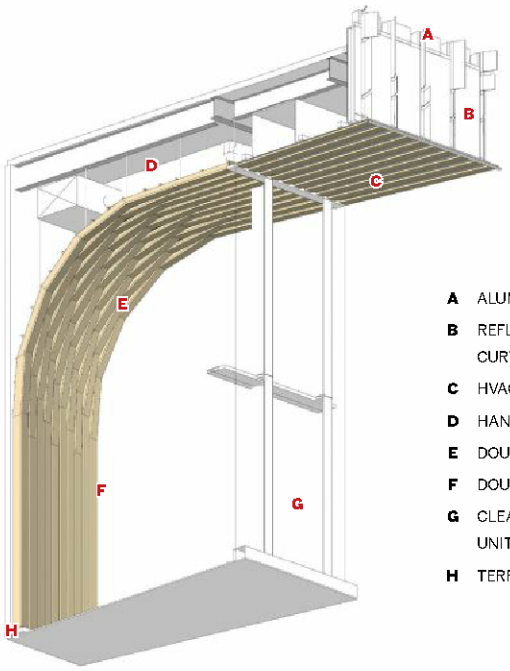
The building is meant to raise the profile of veterans on campus among all students, so the ramp down to the lower level was designed





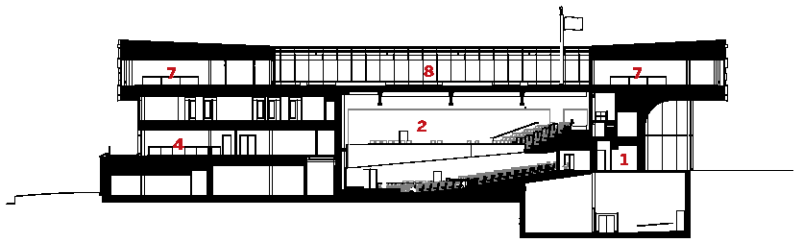


EXPLODED AXONOMETRIC



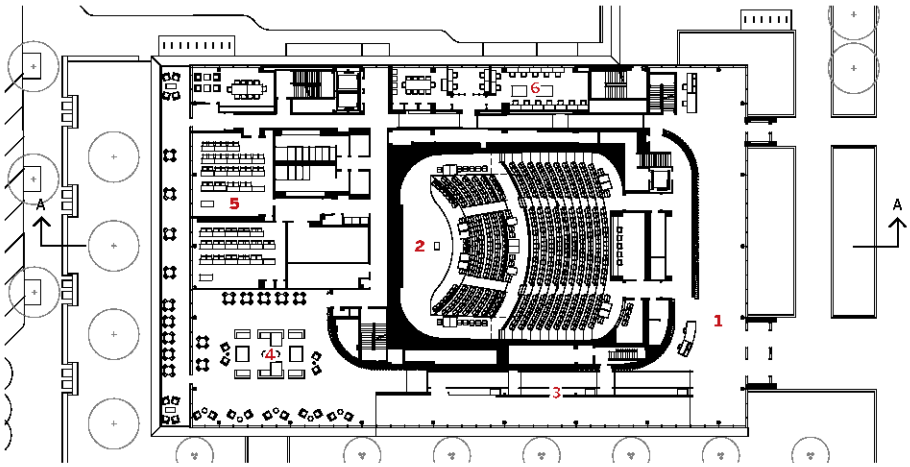
A ALUMINUM FIN
B REFLECTIVE-GLASS UNITIZED CURTAIN WALL
C HVAC AIR INTAKE
D HANGER
E DOUGLAS FIR CLT WEB PIECE
F DOUGLAS FIR CLT FACE PLANK
G CLEAR LOW-IRON GLASS UNITIZED CURTAIN WALL
H TERRAZZO BASE

WOOD WAVE DETAIL

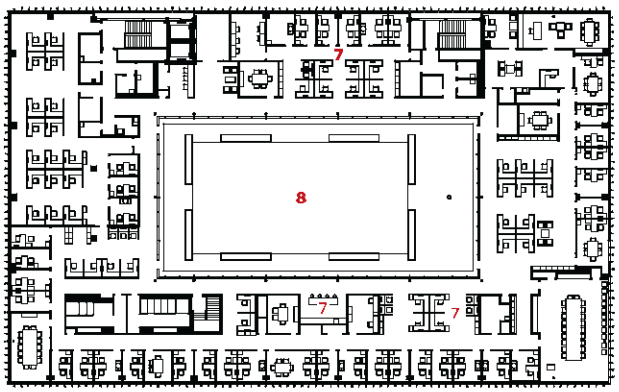


SECTION A - A

0 30 FT.
10 M.



GROUND-FLOOR PLAN



THIRD-FLOOR PLAN

0 30 FT.
10 M.

1 LOBBY
2 AUDITORIUM
3 HALL OF HONOR
4 BANQUET HALL
5 ROTC CLASSROOMS
6 RESEARCH CENTER
7 OFFICES
8 PARADE GROUND



MADE FROM cross-laminated timber, the wave is both suspended from above and attached to walls on the side (right). Acoustic panels of ash wood wrap around the balcony in the 750-seat auditorium (bottom).

as a Hall of Honor, with displays of important military figures and events at the university. The center also serves as a dedicated hub for students in Reserve Officer Training programs and those who are veterans, as well as their families. SHoP balanced the needs of these main constituencies, creating two entries on the south side of the building—a large one for everyone attending events in the auditorium or banquet space, and a smaller one for those using the veterans' facilities. The upper two floors are reserved for military and veterans organizations, with the top one featuring the Parade Ground, a central courtyard for outdoor exercises and gatherings. "We thought of the Parade Ground as a cloister, a controlled landscape out of view from the public," says John Barrett, a SHoP project director.

Because many veterans using the building have been injured during their service, accessibility was a critical concern. The gently sloping ramps to the lower level and the auditorium balcony are treated as featured elements in the overall design—not code requirements that must be met—and are 10 feet wide, so two wheelchairs can move comfortably side by side. The auditorium itself has about eight times the usual number of spaces for wheelchairs. SHoP wrapped its interior with undulating ash-wood panels that give the





ALUMINUM fins bent at different angles give the upper portion of the building a cloudlike character that contrasts with the more public and transparent lower floors (above).

impression of a basket weave and embrace the audience. Designed to accommodate a variety of functions—from talks to performances—the auditorium is meant to be a flexible space; Dana Getman, a SHoP principal, likens its adjustability to that of "a Swiss Army knife."

Opened during the Covid pandemic, the center has functioned at limited capacity. But its auditorium has helped the university adapt to hybrid learning, acting as a spacious classroom even though it was not intended for that use. The multipurpose project, serving disparate communities, is an architectural hybrid that knits together the distinct identities of public, academic, and military. ■

Credits

ARCHITECT: SHoP Architects — Christopher Sharples, William Sharples, Coren Sharples, Dana Getman, principals; John Barrett, project director; Mengyi Fan, director of visualization; Dana Wu, Gawon Shin, Adamo Garritano, Adam Letcher, Michelle Fowler, Scott Overall, Jason Brook, Kendra Ho, Felicia Chan, senior associates; Andrew Broddle, Seanna Drew, Paul Chan, Diego Gonzalez, Sameer Kumar, Joseph Hand, Marie-Alice Paul, Carter Read, project team

ENGINEERS: Thornton Tomasetti (structural); GHD Group (civil); ME Engineering (mechanical/plumbing and LEED); LSTN Consultants (acoustical); John P. Stopen Engineering (geotechnical)

GENERAL CONTRACTOR: LeChase Construction Services

CONSULTANTS: Structure Fusion, Smith Construction (wood wall); Knippers Helbig (facade); Theater Projects (theater); Tillotson (lighting); United Spinal Association (accessibility)

CLIENT: Syracuse University

SIZE: 126,000 square feet

COST: withheld

COMPLETION DATE: September 2020

Sources

MASONRY: Belden Brick

CURTAIN WALL: Antamex Industries

CLT WOOD: TILLY Holzindustrie

BUILT-UP ROOFING: American Hydrotech

GLASS: AGC Interpane

ENTRANCES: CRL

EXIT DEVICES: Von Duprin

PULLS: Von Duprin, DIRTT

PAINTS: Benjamin Moore, Sansin

ACOUSTICAL CEILINGS: Armstrong, Pyrok Starsilent

SOLID SURFACING: Caesarstone, Corian

LIGHTING CONTROLS: Lutron, ETC

ELEVATORS: Otis, Gen2



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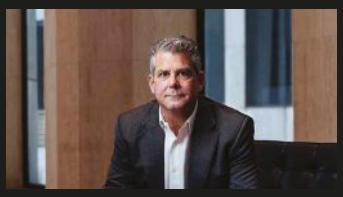
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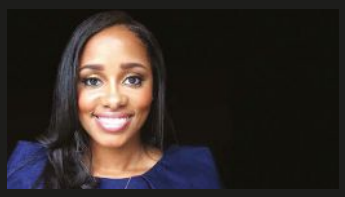
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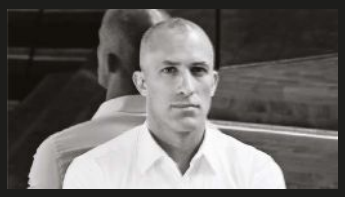
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Street Smarts

Designers restrict cars to make space on city roads for pedestrians, cyclists, and varied uses in post-pandemic life.

BY KATHARINE LOGAN

DO YOU THINK you have the answer to why the chicken crossed the road? As city dwellers worldwide will now tell you, it wasn't simply to get to the other side. No—that chicken crossed the road because the sidewalk wasn't wide enough for social distancing in a pandemic. Geographer Daniel Rotsztain demonstrated that last spring in his viral video of collaborator Bobby Gadda trying to navigate in their home city with a 6-foot-radius hoop slung over his shoulders.

The current crisis has highlighted long-standing issues around the livability, safety, equity, and sustainability of streets, while placing new demands on residents, workers, and businesses as they tried to adapt to the spatial implications of the contagion. Cities around the globe responded with a speed unprecedented in peacetime, rolling out a range of adaptive measures. These include reallocating road lanes to extend the width of sidewalks and to provide bike and public-transit routes; improving the safety of crossings by using vertical elements and surface markings (as emptier streets have led to higher speeds, driving up pedestrian fatality rates); and increasing connectivity and mobility options with slow or shared street programs (where vehicle access is limited to local traffic at reduced speeds, and priority given to pedestrians and cyclists). Streets have been opened as space for physical activity, play, and distanced socializing; as outdoor classrooms, health-check zones, and drop-off areas for schools; and as expanded gathering space for cultural, religious, and civic institutions. Businesses have been permitted to use street space for outdoor dining, pickup and delivery, and markets. And special-event provisions have supported the exercise of fundamental civil rights, such as voting and protest.

Underlying these changes is a growing recognition that the street is not just a way of moving traffic around: it is the most significant publicly owned land asset that municipalities have for achieving civic goals. "We need to rethink for what and for whom our streets are put in service," says Gia Biagi, transportation commissioner for the City of Chicago. "This pandemic has made it possible for Chicagoans to see that more clearly."

Based on public outreach to better understand neighborhood needs, Chicago has implemented 125 blocks of shared streets and an outdoor dining program in which about 500 establishments are participating at 250 locations across the city. A focus on mobility justice has resulted in pop-up bus-only lanes, which have doubled transit service for some 20,000 essential workers, while also reducing fares. It has brought wider service on what is now the most geographically expansive bike-share program in the country, with the addition of e-bikes for longer distances, and an e-scooter pilot program in priority areas,



based on equity, where high numbers of essential workers have faced mobility and connectivity challenges. "It's a practice-oriented way of working that Covid has enabled, an open-mindedness to testing things," says Biagi. "It's local knowledge and local know-how that makes projects work and makes them stick."

Urbanists see the coronavirus emergency as an extraordinary opportunity for the long-term transformation of streets in cities around the world. Examples from Toronto, New York, and Chicago address key themes that the pandemic has highlighted—including quality of life, mobility justice, and equity of access to public space. They demonstrate solutions that respond to local specifics, and illustrate changes that many city dwellers hope will be made permanent.

In Toronto's core, one of the biggest issues is the lack of public open space. By the measure of the World Health Organization, green space per person falls far short of the minimum recommended 9 square meters—never mind the ideal of 50. During the short summer, thousands of Torontonians who wanted to be outside gathered unsafely in the downtown's few small parks. With land for new ones scarce, "if city living is going to be relevant, competitive, and attractive post-Covid," says Adam Nicklin, a principal at the local urban-design and landscape-architecture firm PUBLIC WORK, "you have to rethink the role of streets."

ISOLATED green spaces in Toronto, such as the one in front of the law courts (opposite), would be reimagined (above) under a plan by PUBLIC WORK for University Avenue.

PUBLIC WORK has made a bold proposal, with sponsorship from the Michael Young Family Foundation and the urban-sustainability nonprofit Evergreen, to re-envision University Avenue, one of Toronto's major north–south thoroughfares, as a civic promenade. The plan would consolidate six to eight lanes of vehicular traffic into four lanes on the western side, convert the eastern lanes to bike and pedestrian paths, and use ecological landscaping to link isolated patches of public green space along the route. The con-

IMAGES: © PUBLIC WORK









THE SCHEME for Toronto's University Avenue would create a 90-acre linear park with Queen's Park (existing, bottom right; proposed, bottom left) at one end and Lake Ontario at the other. It would connect civic and cultural institutions and pass through the hospital district (existing, below; proposed, left).

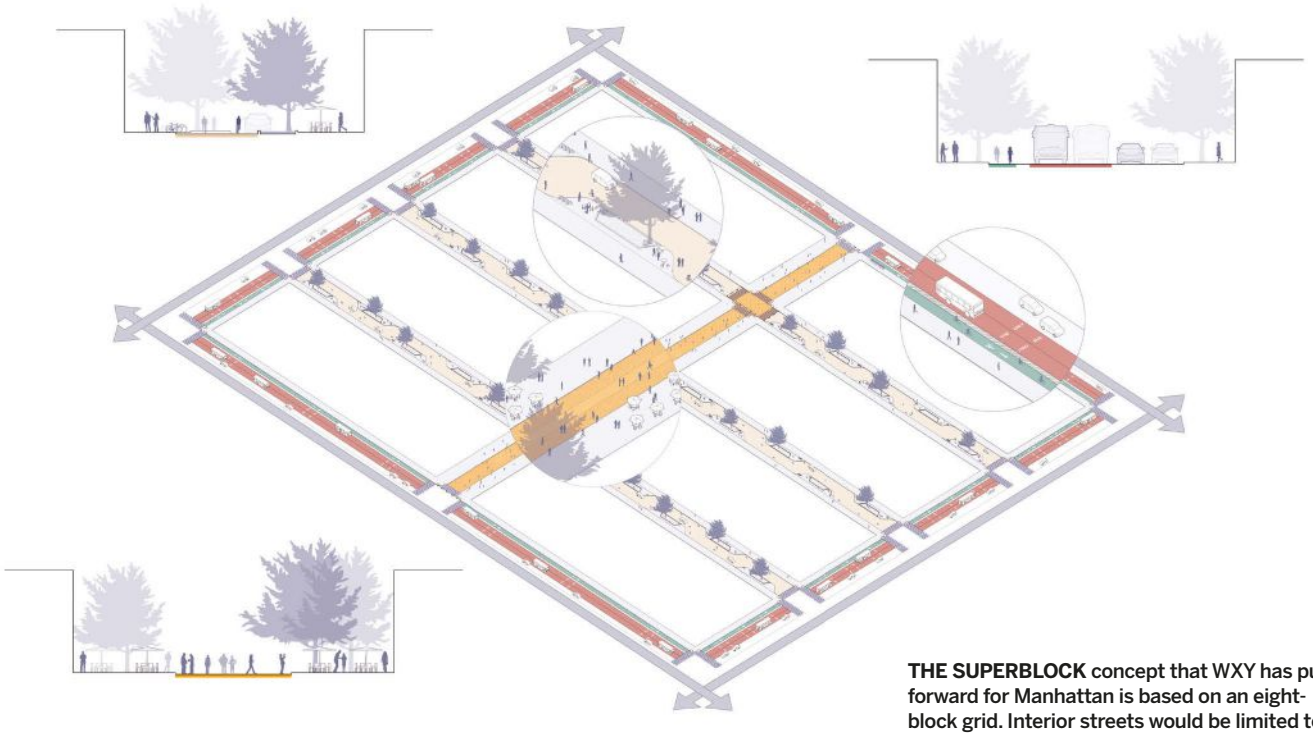
cept means taking just 9.5 acres of city-owned asphalt to create a 90-acre linear park. At its north end, the new University Park would connect the provincial parliament, the University of Toronto, and significant cultural institutions. Continuing south through the city's hospital district, with much-needed places of green respite, it would pass the law courts and adjacent city hall, and finish at the shore of Lake Ontario.

The proposal also calls for the installation of green infrastructure to help mitigate the city's increasingly severe flooding, and for the acknowledgement of indigenous landscape elements, such as a buried creek, in counterpoint to the colonial memorials that now dot the boulevard.

In addition to improving the quality of life in Toronto's vertical neighborhoods, the project acknowledges the significance of University Avenue as the site for public protest and demonstration. "In this past year, more than ever before, we have realized the need for gathering places where people can raise their voice," says Nina Pesavento, project lead for the Young foundation. With the provincial parliament and city hall, University Avenue is the street most symbolic of democracy in Toronto, Nicklin notes. Transforming it into a welcoming public space at the heart of the city, open to all, acknowledges the importance of street space in an equitable society.

The proposal has attracted significant public and planning interest, and the mayor has recently convened a panel to study its feasibility. At a projected cost of just $215 million, and buildable in an estimated five years, in coordination with infrastructure upgrades scheduled to tear up the pavement in 2024 anyway, the project goes after low-hanging fruit, says Nicklin. "Instead of fragmented and disparate little pockets of unrelated land, you have—yes, a street—but also a massive civic park, a ceremonial space, a gathering place, a health district," he says. "And it doesn't have any magic tricks up its sleeve, other than just taking what you have and changing the way it works."

A similar approach underlies a grand vision for Manhattan based on the superblock concept that Barcelona has been pioneering to wide acclaim (ARCHITECTURAL RECORD, June 2019). Not to be confused with the disconnected and monolithic superblocks of the mid-20th century that Jane Jacobs decried in *The Death and Life of Great American Cities*, the Barcelona model creates nine-block squares of traffic-calmed and shared streets, with transit connections and through-traffic at the perimeters. In 2016,



THE SUPERBLOCK concept that WXY has put forward for Manhattan is based on an eight-block grid. Interior streets would be limited to local traffic, with a central spine for pedestrians.

WXY Architecture + Urban Design floated an idea for how the concept might be adapted for 30 or so blocks in New York's financial district; in 2018, designers at Perkins Eastman made a case for applying the idea to the Manhattan grid more broadly. Most recently, WXY's extrapolations from the city's swiftly implemented pandemic programs, such as Open Streets and Open Restaurants, have led them to consider longer-term objectives—including climate response, equity, and traffic safety, as well as public health—and reintroduce the superblock concept.

Taking the Manhattan core as a starting point, and referencing planning initiatives such as New York's 2019 *Streets Master Plan* legislation, as well as analyzing existing and planned pedestrian, cycling, and transit networks, the proposal envisions a network of superblock modules, each consisting of eight Manhattan blocks. As in Barcelona, through-traffic is held to the perimeter, where dedicated bus- and bikeways enhance connectivity. Interior streets are designed as slow streets where vehicle access is limited to local traffic, with the central interior roadway becoming a pedestrian zone that serves as more of a front yard, similar to the Dutch *woonerf*, or living street. "The superblock model is attractive both for transportation and for creating a community within the grid," says David Vega-Barachowitz, director of urban design at WXY. He sees the proposal as setting the table for the city administration to think big over the next decade about reallocating street space for more diverse uses, and turning the piecemeal, bottom-up initiatives of the summer of 2020 into a coherent transformation that advances the city's long-standing goals.

Experience with unrelated temporary street modifications during the pandemic can help inform the phased rollout of a more comprehensive plan. One of the most significant insights to emerge from a WXY initiative—to create a series of parklets, curbside activations, and covered structures along the sidewalk of Strivers Row in Harlem—pertains to the process of designing, constructing, and operating a project that's relevant and meaningful to the community, says Vega-Barachowitz. "Neighborhood partners play a critical role, not just in creating a design vision and an ideal spatial hierarchy, but in creating the place," he says. While that experience shows that success depends on strong local organizations to helm the process and follow through, it raises the need to ensure that a lack of such organizational capacity to maintain public space does not become a barrier to equitable distribution of such desirable new spaces throughout the city.

WXY is continuing to develop the superblock proposal in collaboration with Sam Schwartz Engineering, and is working with advocacy partners to disseminate the vision to stakeholders across the city. With a new Department of Transportation (DOT) commissioner for the municipality and strong New York representation at the federal DOT, Vega-Barachowitz says the group sees a strategic opportunity to accelerate this kind of vision and to realize pilots and capital projects that will further its goals.

One of the central challenges of transforming a streetscape entails balancing the needs of multiple users and functions in a limited road-width. Designing for the ability to serve different uses at different times can help optimize streets and enhance their value to the community. For example, a curbside lane might serve as a dedicated busway during morning rush hours, become a midday greenway (with adjacent rain or community gardens) to facilitate neighborhood connections to parks or waterfronts via bike and other micro-mobility modes, and combine with adjacent lanes in the evenings or on weekends to allow for outdoor eating, recreation, or festivals.

An emerging concept supporting this type of flexibility is the modular lane, says Francesco Cerroni, mobility leader at Buro Happold, where the idea is being developed. Modular lanes use low-tech solutions like pavement markings and colored paint, along with medium-tech tactics including pave-

IMAGES: © WXY; PUBLIC WORK (OPPOSITE)





FOR CHICAGO, SOM and City Tech Collaborative propose transforming Chicago's roadways, including Madison Street, on the West Side, from multi-lane arteries for cars (left) into space that could better accommodate cyclists, pedestrians, and public transit (above).

ment-embedded lighting and hydraulic bollards. Innovations such as internet-connected sensors and smart curbs (where technology can enhance the varied and efficient use of in-demand zones) can also contribute. Such designation and information strategies, all of which now exist in various stages of use, allow modular lanes to be activated on demand, and modified with the season, day, or hour. "With good management of these elements," says Cerroni, "we can create a successful story for redistributing and reusing the street space."

As the technology of transportation advances, experts widely agree that it should be employed to facilitate good design rather than vice versa. SOM and the technology-based innovation nonprofit City Tech Collaborative recently teamed up to develop a set of ideas, with input from multiple stakeholders, on how streets in Chicago could evolve over the next 10 to 30 years. Design concepts, modeled on that city's typical street types, take account of new technologies such as access to real-time information on personal devices about transit service and on-demand cars; innovations in equipment, like autonomous vehicles and faster telecommunications; mobility trends, including electrification and the rise of micro-transit; and functional priorities: freight and logistics, public transit, personal vehicles, cycling, and walking. Arising from these considerations come a set of predictions, strategies, components, and case studies for tailoring solutions to neighborhood conditions. While the study doesn't take Covid into account explicitly, "resilience depends on flexibility and adaptability, which are relevant to a pandemic as well as other stressors," says Christopher Hall, urban-strategy leader in SOM's City Design Practice.

Besides the future function of Chicago's streets, SOM is also considering the city as a whole. Looking at mapping and overlays of the greenways and boulevards that were part of Daniel Burnham's influential 1909 Plan of Chicago (which was only partially implemented), "you start to see a green weave emerge that could put everyone in Chicago within a five- to ten-minute bike ride of a park," says Doug Voigt, head of SOM's City Design Practice. Using the city's boulevards and abandoned rail lines this way could quickly mitigate Chicago's inequities around access to green space and build on the city's pandemic responses by adding connections to its centralized, radial mobility network. The "green weave" would also incorporate storm-water management and improved habitat, adding further value to the public realm.

These ideas are influencing government decisions regarding ongoing city-led rail and trail initiatives, as well as the use and quality of streets as public spaces in response to the pandemic, Hall and Voigt say. The research is also expected to inform discussions about how anticipated federal infrastructure funding could be used to develop Chicago's streets.

During Covid-19, street changes have happened fast, and they've provided momentum for long-term change. Significant proposals like the ones from Toronto, New York, and Chicago are raising awareness of fresh possibilities and priorities for underserved neighborhoods. "The pandemic has brought to the fore the appreciation and understanding of how important our streets are to the livability of our communities," says Hall. All of which makes this an exciting time in the history of streets—and for anyone with a reason for crossing them. ■

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Learning Objectives

1. Explain how Covid-19 is prompting cities to consider the reconfiguration of street space as a means to accomplish civic goals.
2. Describe how urban streets can be revamped to advance goals for equity, mobility, and climate.
3. Discuss street adaptations that could help cities improve green-space access.
4. Describe emerging digital technologies that could help cities better manage their streets and promote a diversity of uses.

AIA/CES Course #K2103A

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The Future of Wood Design Innovation in the US

CREDITS: 1 AIA LU/HSW; 1 AIBD P-CE; 0.1 IACET CEU

Cross-Laminated Timber (CLT) buildings captured imaginations and launched a sustainable construction revolution in North America. What is on the horizon for mass timber construction? This presentation focuses on the issues and innovations that will shape the next decade of mass timber design in the US. Specific topics to be addressed include hybrid timber structures, sustainable sourcing and forest management practices, integrated approaches to design and fabrication, next generation materials, and research and development of resilient wood systems.

Learning Objectives:

- Describe multiple approaches to designing hybrid timber structures.
- Identify methods for sustainable sourcing of wood products.
- Recognize innovative new wood products coming to market.
- Explain challenges and opportunities relative to the acceptance of mass timber in the building code.



Thomas Robinson
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Designing Beneficial Spaces for Living, Working, and Well-Being

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Whole Building Approach to Interior Roller Shade Fabric Selections

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Image courtesy of Bobrick Washroom Equipment, Inc.



Reimagining Restrooms for Human Health & Wellness

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UniverCity Childcare Centre, Simon Fraser University, Burnaby, British Columbia,Canada

Photo: Martin Tessler

Designing Beneficial Spaces for Living, Working, and Well-Being

Sponsored by Think Wood

It is a common human reaction: We turn to nature in uncertain times. Nature nurtures, as they say. With the 2020 global pandemic and limited access to the outdoors it has meant for many, people are looking at their surroundings with new appreciation—and an increased desire for buildings that help them feel good as they spend more time indoors.

While we know that good architecture does not guarantee good health, evidence is growing that a well-designed building can lead to an improved overall sense of well-being for occupants. And, since wood has a natural connection with nature, there is increasing evidence that wood can contribute to the well-being of building occupants when it is left where it can be seen and even smelled.

This course explores the trend toward architecture that is designed to improve the well-being of building occupants.

BUILDING DESIGNS MUST ADAPT TO CHANGING MARKET NEEDS

Occupant health and well-being is more important than ever, especially given the fact that Americans, on average, are currently spending approximately 90 percent of their time indoors.[1] As a result, building professionals are seeing the need to rethink how we design, use, and occupy buildings.

COVID-19 is also changing the ways in which buildings are designed. For example, building teams are considering touchless entries, improved ventilation systems, and design features that allow people to spread out with renewed interest. But the increased focus on

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Learning Objectives

After reading this article, you should be able to:

1. Appreciate the role of architecture and material choice in designing buildings that promote occupant well-being.
2. Identify four of the most common design approaches that recognize the positive connection between humans and nature.
3. Explain the role of wellness-focused building standards, and recognize the overlap between occupant wellness considerations and existing green building standards.
4. Discuss the ways in which buildings can be designed to help reduce stress, promote healing, support learning, improve employee productivity and satisfaction, and enhance retail customer experience.

To receive AIA credit, you are required to read the entire article and pass the quiz. Visit **ce.architecturalrecord.com** for the complete text and to take the quiz for free. This course may also qualify for one Professional Development Hour (PDH). Most states now accept AIA credits for engineers' requirements. Check your state licensing board for all laws, rules, and regulations to confirm.

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beneficial spaces is not only on occupant safety; designers are looking for ways to simply improve the way that people feel inside of buildings, even as they need to spend more time inside.

"The spaces where we live and work can have a significant effect on our physical and emotional well-being," says Ricardo Álvarez-Díaz, founder and principal of Álvarez-Díaz & Villalón, a design firm based in San Juan, Puerto Rico, and Miami. "Thoughtful, innovative design can shape how we feel and what we experience within a physical space."[2]

Designing for Wellness: The Power of Nature

Emerging research shows that communities are more apt to thrive when the buildings people occupy are intentionally designed with community wellness in mind. The built environment can have a big influence on the self-perceived well-being of occupants; visual warmth and comfort of an office building tells employees that they are valued, for example, and a warm and friendly entrance tells those who live in a multifamily building that they are welcomed home.

On its website, global design and engineering firm Atkins says, "More and more evidence and guidance is making its way from the medical and research world into the construction industry, highlighting the impact the built environment has on both our physical and mental well-being… Understanding the complexities and interconnected nature of [these] well-being parameters at the very beginning of a building project is the only way to deliver environments that maintain, at their heart, the well-being of those who inhabit them."[3]

Certainly, impacts of factors like poor indoor air quality have been well-documented, proven by the increasing recognition of the importance of low-VOC surface treatments and other elements dictated by sustainable design initiatives like LEED. But architects are also recognizing the increasing importance of the overall design that supports human well-being.

This is particularly true for urban populations. The "Green Cities: Good Health" report from the University of Washington's Urban Forestry Department presents the results of extensive research on the topic of stress, wellness, and physiology.[4]

Continues at ce.architecturalrecord.com

CASE STUDY: SIDEYARD

This unique project was built in an oddly shaped remnant property that may otherwise have been overlooked in Portland, Oregon. Design for the 9,000-square-foot working-class building was aimed at connecting occupants of the mixed-use property with public transportation via pedestrian and bicycle options. The five-story structure features a cross-laminated timber (CLT) structural system with exposed wood for the ground-level retail area and office space on the floors above. The development also includes an adjacent area for food carts, engaging the community from the sidewalk.

People who gather nearby can easily see into the interior of Sideyard, with its exposed wood surfaces. "We considered 'colder materials' like concrete and steel, but the point of a mixed-use building like this is to create a warmer environment," says Claudia Munk-von Flotow, COO of Oregon-based Key Development. "We wanted to build practically and in a way that benefits our proforma, but at the same time, it should feel good."

Wood's timeless versatility became even more relevant as the contractor completed construction in early summer 2020, amid the COVID-19 pandemic. When tenants began to terminate leases and change office space requirements, the team found value in their ability to reconfigure Sideyard's internal design while still leaving the beautiful wood structure exposed. The resulting project met Key Development's goals, which were to provide a way to connect neighborhoods and transform a forgotten urban space into a valued property.

"Architecture transcends pandemics and social changes," says Brent Grubb, project manager at Portland-based architectural firm Skylab. "Over time, the building can transform and support different users. Sideyard has become the quiet anchor to the Burnside Bridge area, and we achieved our goal of developing something amazing where nobody thought something could be built."

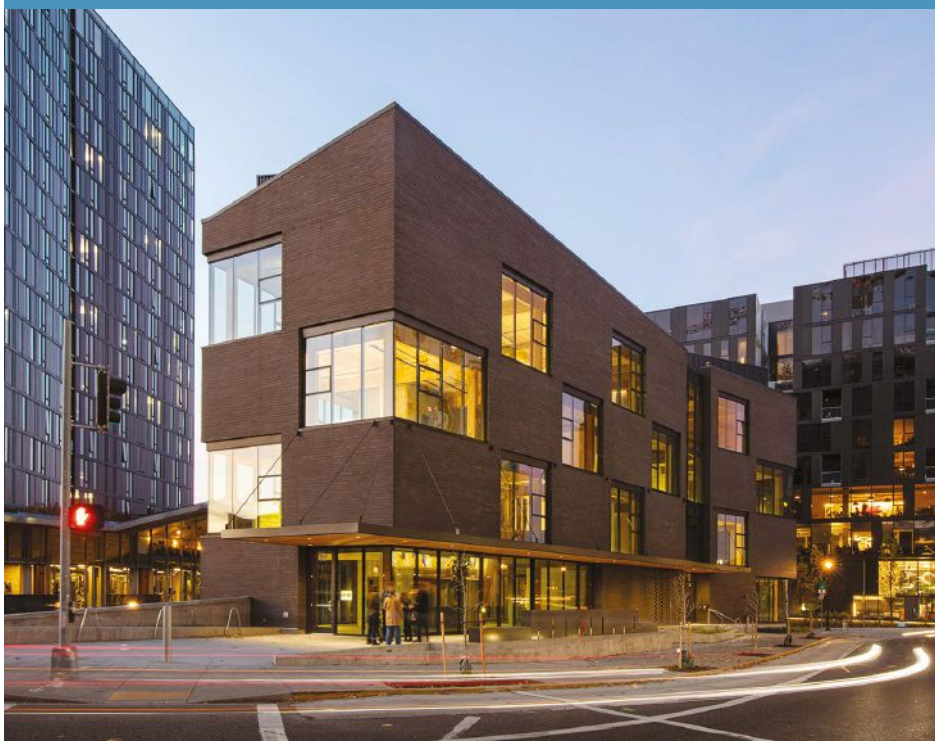


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Specifying interior roller shade fabrics is not simply an interior design decision.

Whole Building Approach to Interior Roller Shade Fabric Selections

Many factors impact building performance, energy efficiency, and aesthetics

Sponsored by Draper Inc. | *By Barbara Horwitz-Bennett*

When glancing up at the facade of a high-rise, office/medical building, or educational facility, do the interior roller shades blend in seamlessly with the enclosure and surrounding environment, or are they a mishmash of colors and styles, haphazardly raised and lowered?

Beyond aesthetics, fabric shades can make a significant contribution toward whole building performance, health, and wellness.

"It is critical to select the right shade properties to ensure glare protection, reduce energy use, and enhance occupant comfort and well-being," explains Thanos Tzempelikos, Ph.D., professor of civil engineering, Center for High-Performance Buildings, Purdue University.

As architects evaluate fabric shade options, including weave pattern, openness factor, color, and material composition, Brandon Andow, Ph.D., NCARB, senior building performance analyst and senior associate at EYP Architecture & Engineering in Denver, explains that the shades' properties of visible light transmission (VLT), absorption, reflection, scattering, and emissivity will not only affect views and daylighting but also significantly impact HVAC loads from heat and radiation transfer through the fenestration, aesthetics, thermal comfort and circadian health of occupants, productivity, and surface condensation.

In optimally choosing shade fabrics to best compliment whole building

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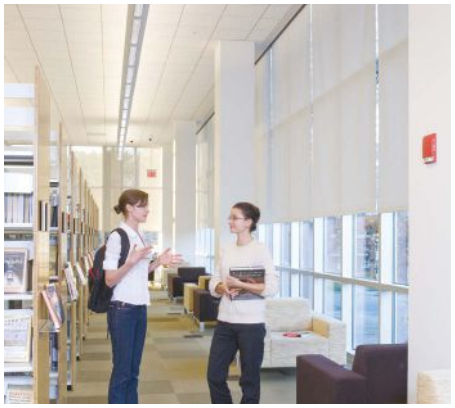
After reading this article, you should be able to:

1. Evaluate the whole building impact of roller shade fabrics on thermal comfort, energy efficiency, productivity, aesthetics, and views.
2. Identify the characteristics of fiberglass and polyester shades, including the different fabric weave patterns and view-through options.
3. Adjust colors, openness factors, and weaves to optimize comfort, performance, and aesthetics for the customized needs of each project application.
4. Discuss the benefits of a complex glazing, whole building approach that considers how a fabric performs with the glass as a total system and integrates with the building's facade, surroundings, geographical location, and orientation.
5. Review modeling tools and mock up best practices to optimize shade fabric designs.

To receive AIA credit, you are required to read the entire article and pass the quiz. Visit **ce.architecturalrecord.com** for the complete text and to take the quiz for free.

AIA COURSE K2103E

Photo: Barry Rustin



The main considerations in selecting a shade fabric should be related to performance factors, such as glare reduction, thermal comfort, and occupant comfort, as shown here at the Champaign Public Library in Champaign, Illinois.

performance and aesthetics, architects must be knowledgeable about the different materials, weaves, openness factors, and performance standards.

FIBERGLASS VERSUS POLYESTER

Starting with the material selection, the composition of the yarn core forming the fabric roller shades is typically fiberglass or polyester. To select the best material for the application, a review of each selection's characteristics is helpful.

Fiberglass is a fiber produced mainly from sand, and polyester is a synthetic fiber derived from coal, air, water, and petroleum. A typical fiberglass core yarn holds 200–400 filaments, and a polyester core yarn contains 50–100 filaments. Most of the world's fiberglass shade fabrics are woven in the United States and Europe.

Technically speaking, polyester core yarns have a higher strength rating than fiberglass. However, pound for pound, fiberglass is actually stronger than steel. So practically speaking, strength values are negligible as both materials are more than strong enough for roller shade applications.

Because fiberglass is not affected by heat, it has greater dimensional stability. This means that shades have less fullness and limits on motorized units will rarely have to be reset. Generally speaking, fiberglass yarn is thinner and therefore offers somewhat better glare control and improved view-through characteristics. Its high dimensional stability makes it more suitable for tensioned shades. Its thinness and light weight also mean an overall smaller profile, which means smaller rollers, clutches, motors, bracketry, and other hardware, as well as lower cost. At the same time, recent developments in polyester yarns have made them more competitive in the realm of thinness and weight. That said, heavier and thicker fabrics require bigger head boxes that use more raw materials, increasing cost, and can be more visible.

Another characteristic of both materials is the fact that they can be coated by PVC vinyl. This coating provides color, durability, UV resistance, and other properties, including antimicrobial effectiveness, fungal resistance, colorfastness, lightfastness, and washability.

Where coatings for fiberglass and polyester shade fabrics vary is in their proprietary blends of UV stabilizers, pigments, plasticizers, and fire retardants. Some polyester fabrics on the market are made with non-PVC coatings, which is an eco-friendly option. There is also a polyester product that is Cradle-to-Cradle Certified Bronze and therefore meets rigorous criteria in the realm of material health, material reutilization, energy, water, and social responsibility.

Photo courtesy of Phifer Inc.



The type of weave can impact view-through characteristics of the shade fabric, as well as the look and feel of the material.

There are also several fiberglass and polyester fabrics that are GREENGUARD Gold certified for low chemical emissions.

Specifiers will also want to consider the extent to which products are prone to frayed edges. Some manufacturers utilize ultrasonic technology to create a clean, non-frayed edge when cutting the shade fabrics. However, this only works with polyester since the material is sensitive to heat. There is a small possibility that the polyester fabric will fray after some time in the field, but this can be remedied with the careful application of heat/flame to melt the frayed pieces away.

With fiberglass, advanced cutting methods help to reduce the likelihood of fraying. If it does become an issue, scissors can be used to trim down stray yarns.

WEAVE TYPES

With both fiberglass and polyester, designers can choose between different types of fabric weaves.

As the simplest weave pattern, the **plain weave** is created by passing each weft yarn over and under an alternating warp. This produces the same look on the front and back. Fashioned with a larger yarn, the **rib weave** creates a ribbed line effect in both the warp and weft directions.

With a **basket weave**, even numbers of the weft yarns cross over and under alternating yarns of the warp in a 1-to-1 ratio. This produces equally sized square openings and therefore offers the best view-through of any weave pattern, consequently making it the most popular pattern.

A **twill weave** is formed when weft yarns are threaded over one or more warp yarns and then passed under another two or more warp yarns. As each yarn row is offset from the previous, this produces a diagonal rib pattern. Also called a duplex fabric, the fabric is unique in that it offers identifiabley different colors and tones on each side.

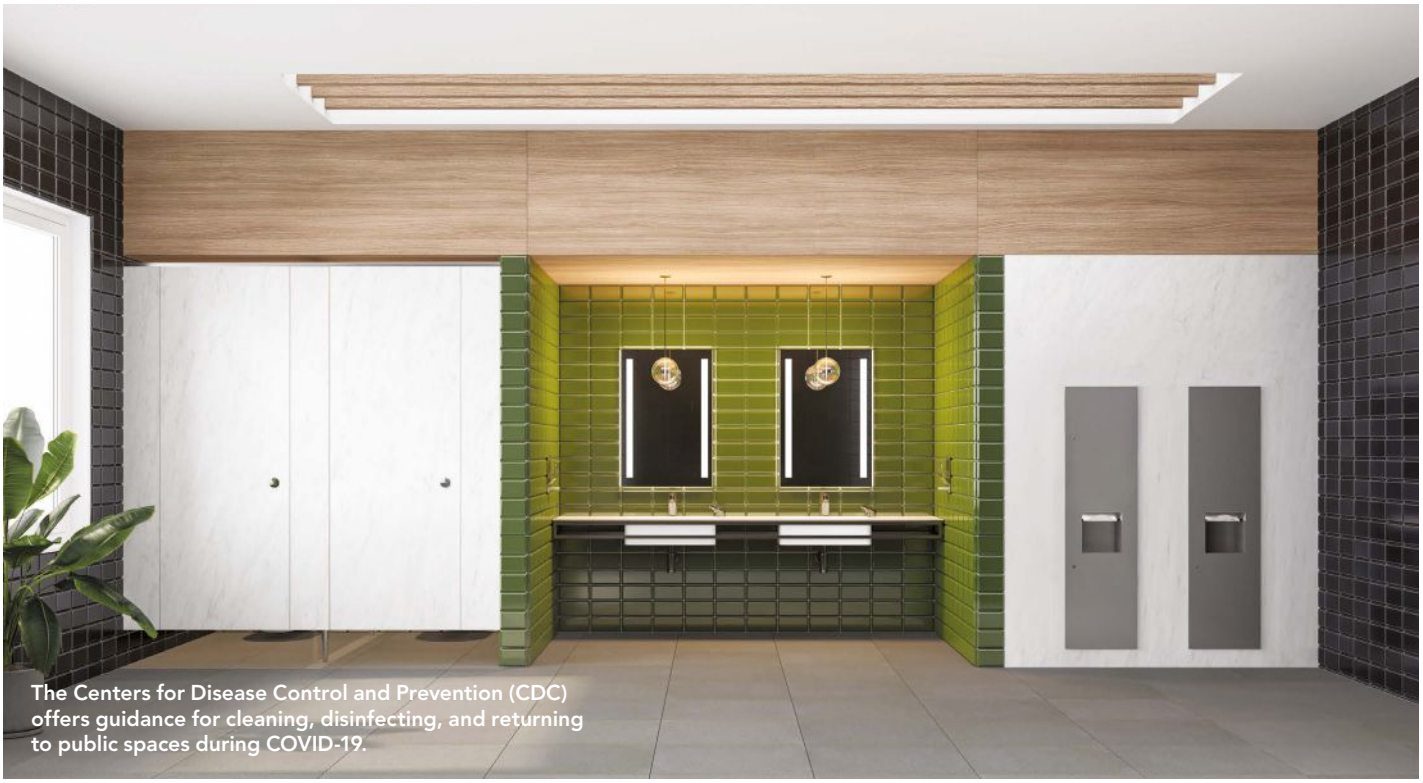
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Barbara Horwitz-Bennett *is a veteran architectural journalist who has written hundreds of CEUs and articles for various AEC publications.* ***www.bhbennett.com***

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Image courtesy of Bobrick Washroom Equipment, Inc.



The Centers for Disease Control and Prevention (CDC) offers guidance for cleaning, disinfecting, and returning to public spaces during COVID-19.

Reimagining Restrooms for Human Health & Wellness

Evolving design expectations in the COVID-19 era

Sponsored by Bobrick Washroom Equipment, Inc. | *By Alan Gettelman, Vice President of External Affairs, Bobrick Washroom Equipment, Inc.*

This course provides architects and design professionals who must now contend with evolving design expectations due to the COVID-19 pandemic with restroom design strategies that minimize disease transmission by maximizing hygiene, optimizing space and traffic flow, and selecting products that enable proactive sanitation and maintenance. All recommendations are rooted in official Centers for Disease Control and Prevention (CDC) guidelines.

CHALLENGES OF DESIGNING PUBLIC RESTROOMS IN THE COVID-19 ERA

First, we will explore and evaluate the hygiene challenges for public restrooms in the face of the COVID-19 pandemic, including the science of virus and bacteria transmission, and CDC guidance for cleaning, disinfecting, and using public spaces.

Disease Transmission

Before evaluating the potential risk to human health in commercial restrooms and solutions to current hygiene challenges, it is important to first understand how diseases, such as COVID-19, can be transmitted from person to person.

According to the World Health Organization (WHO), the COVID-19 virus can spread from an infected person's mouth or nose, in small liquid particles known as droplets, when the person coughs, sneezes, speaks, sings, or breathes heavily.

These liquid particles are different sizes, ranging from larger respiratory droplets to smaller aerosols. Diseases like COVID-19 can

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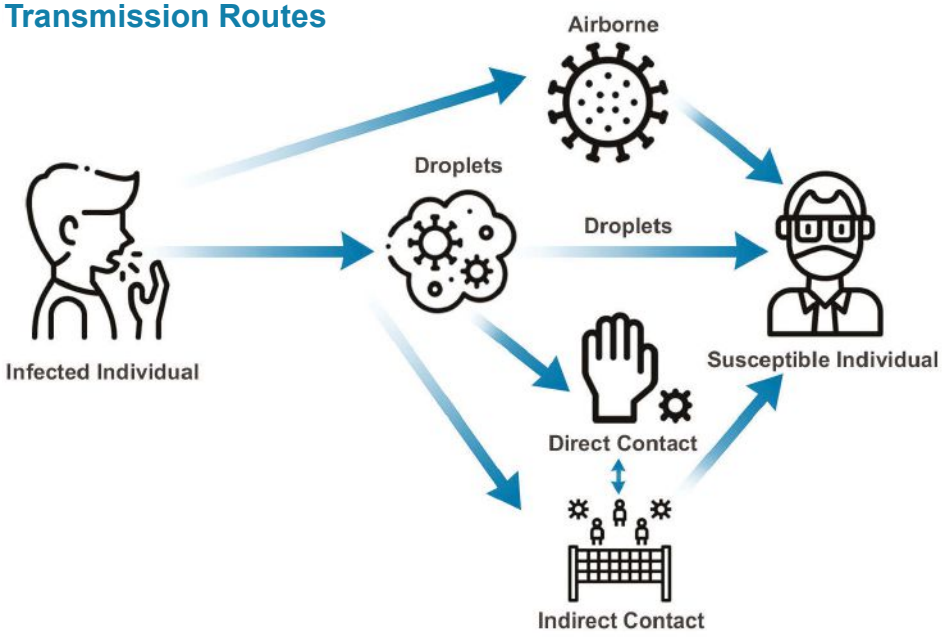
After reading this article, you should be able to:

1. Review the hygiene challenges for public restrooms in the face of the COVID-19 pandemic, including the science of virus and bacteria transmission, and CDC guidance for cleaning, disinfecting, and using public spaces.
2. Evaluate product strategies that minimize touchpoints and promote effective handwashing and drying to maximize hygiene in commercial and public restrooms.
3. Examine space-planning strategies to optimize traffic flow and promote physical distancing between patrons while maintaining accessibility.
4. Assess design strategies to enable proactive sanitation, cleaning, and maintenance for reliable operation and optimal hygiene.

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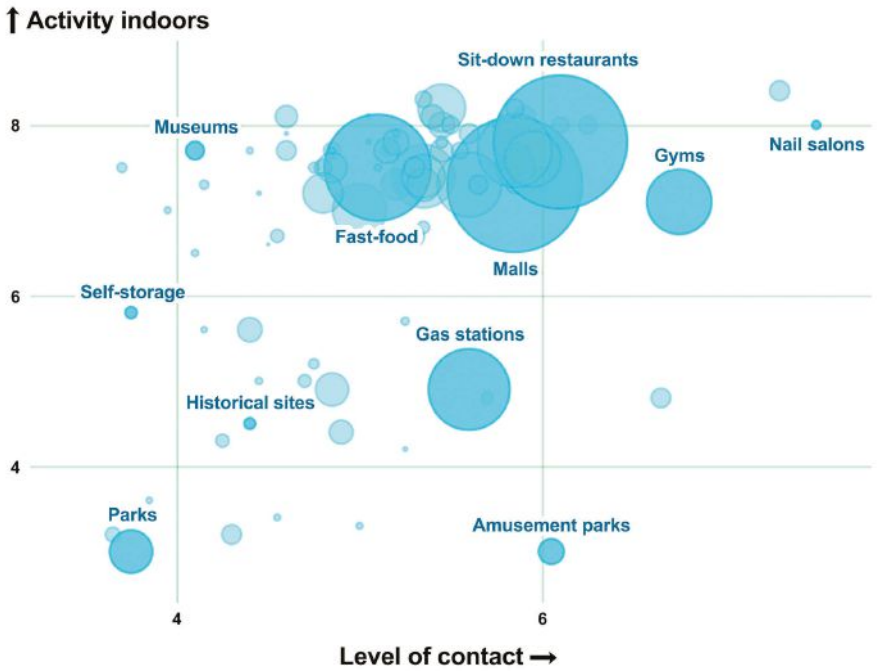
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Transmission Routes



Source: Journal of Hospital Infection 92 (2016) 235–250

Places Most at Risk



Source: "Is It Safer to Visit a Coffee Shop or a Gym?" *New York Times*, May 6, 2020

also be transmitted when the virus comes into contact with a person's mouth, nose, or eyes. This is more likely to occur when people are in direct or close contact—less than 3 feet away from an infected person.

These different methods of transmission are important to understand as we design spaces that minimize both direct and indirect contact while still maintaining efficient traffic flow in shared spaces.

From the research that has been done on the transmission of the COVID-19 virus, we know that restaurants, malls, and gyms have been identified as places with the greatest risk of transmission. Where individuals gather (both indoors or outdoors), the overall crowd density, and patrons' ability to keep their masks on throughout their visits are all significant factors in whether a building carries a high or low risk of transmission.

While all restrooms moving forward will require modified design approaches, knowing which building types are at highest risk can help prioritize solutions.

Top Challenges for Public Restrooms

Possibly the biggest challenge facing public restrooms from an infection-prevention standpoint is how crowded and enclosed they tend to be. The reason we hear so much about maintaining a 6-foot distance between patrons is that respiratory viruses such as COVID-19 can be spread easily by respiratory droplets that transmit from 3 to 5 feet. Transmission can occur either from person to person or via the contamination of surfaces within a space.

Other factors that encourage the spread of viruses in this setting include poor air circulation as well as moisture. Viruses live longer on smooth, moist surfaces.

Restrooms also have numerous touchpoints, which promote the spread of disease and pose design challenges. In fact, some restrooms can have up to nine or 10 total physical touchpoints. A single user can touch an entry door handle, a toilet-compartment door pull, a toilet-compartment door latch, a toilet-tissue dispenser, a toilet flush lever, a manual soap dispenser, a manual faucet, a paper-towel dispenser, and an exit door handle all in one trip to the restroom.

Continues at ce.architecturalrecord.com

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Upcoming Exhibitions

Sigurd Lewerentz: Architect of Death and Life
Stockholm
From April 2021
Sigurd Lewerentz, the 20th-century Swedish architect, is the subject of a new exhibition at ArkDes, the Swedish national center for architecture and design. It will show a range of Lewerentz's works, including the Woodland Cemetery, St. Mark's Church, and St. Peter's Church, in Scandinavia. The opening will coincide with the publishing of a monograph about the architect, due out during the course of the show. More at arkdes.se/en/.

Ongoing Exhibitions

Marking Time: Art in the Age of Mass Incarceration
New York
Through April 4, 2021
As its first exhibition upon reopening to the public since the Covid lockdown, MoMA PS1 highlights the centrality of incarceration to contemporary art and culture. Featuring art made by people in prisons and work by non-incarcerated artists concerned with state repression, erasure, and imprisonment, this exhibition includes more than 35 artists, including Tameca Cole, Russell Craig, James "Yaya" Hough, Jesse Krimes, Mark Loughney, Gilberto Rivera, and Sable Elyse Smith. The exhibition has been updated to reflect the growing Covid-19 crisis in U.S. prisons, featuring new works by artists made in response to this ongoing emergency. More information at moma.org.

Engineer, Agitator, Constructor: The Artist Reinvented
New York
Through April 10, 2021
This exhibition at MoMA looks at the reinvention of the role of the artist and the functions of art that took place in tandem with historical shifts in industry, technology, and labor amid the impact of World War I, the Russian Revolution, the collapse of the Austro-Hungarian Empire, and the rise of fascism. Highlighting figures such as Aleksandr Rodchenko, Lyubov Popova, John Heartfield, and Fré Cohen, this exhibition demonstrates the ways in which artists reimagined their roles to create a dynamic art for a new world. More at moma.org.

Howardena Pindell: Rope/Fire/Water
New York
Through April 11, 2021
For her solo exhibition at the Shed, Howardena Pindell will present her first video in 25 years—a project unrealized for more than four decades, which the Shed commissioned her to complete. In *Rope/Fire/Water*, Pindell recounts personal anecdotes and anthropological and historical data related to lynchings and racist attacks in the United States, using voiceover with archival photos of lynchings and the May 1963 Birmingham, Alabama, Children's Crusade, a series of

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nonviolent protests carried out by young people. Learn more at theshed.org.

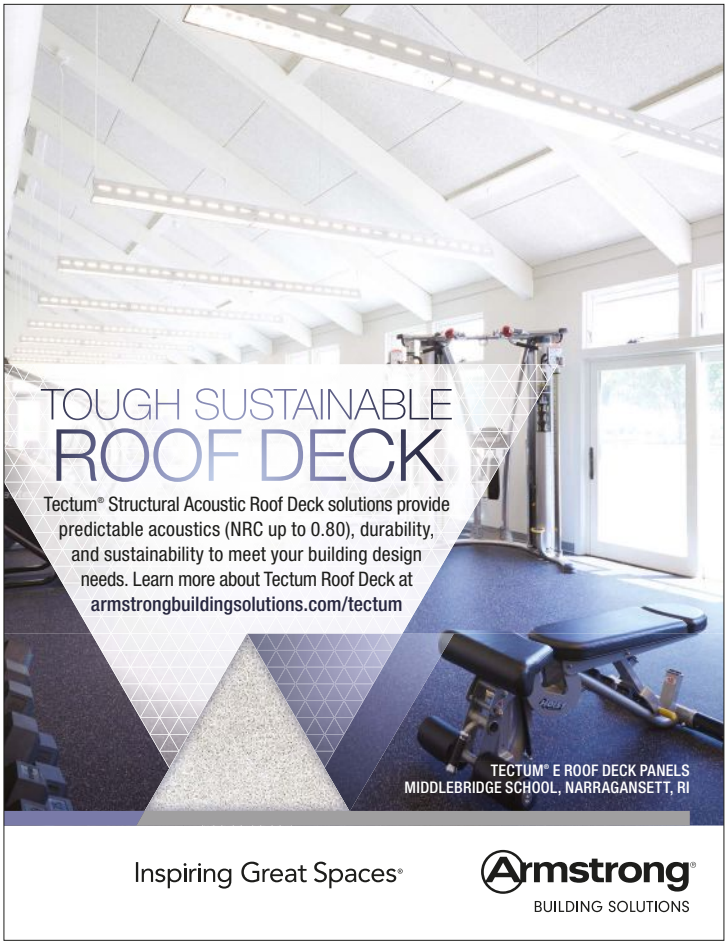
Goodnight House
New York
Through April 29, 2021
This exhibition at Fort Makers gallery on the Lower East Side features new artwork and objects inspired by the children's classic *Goodnight Moon*. The works featured include an upholstered bed and handwoven textiles, ceramic table lamps, a rocking chair, stools, and a cloud-shaped bedside table and storage unit, among other gallery-commissioned objects. See more at fortmakers.com.

The Long Dream
Chicago
Through May 2, 2021
This new exhibition at the Museum of Contemporary Art is inspired by the current moment, giving shape to issues heightened by the pandemic and social unrest. It features over 70 Chicago artists, with work ranging from the visual arts to performance and public practice, selected by museum curators and programmers with different backgrounds and specialties. Named after a novel by author Richard Wright, *The Long Dream* is part reflection on the state of the world after the arrival of Covid-19 and part celebration of Chicago artists and creative denizens. The goal of the exhibition is to amplify artists' voices and show artwork of a city grappling with anxiety and social unrest, letting artists have an impact during a time of social change. See more at mcachicago.org.

When Practice Becomes Form: Carpentry Tools from Japan
New York
June 13, 2021
The exhibition at the Japan Society celebrates architecture and craftsmanship through Japanese woodworking tools, as well as architectural patterns and models. It features a site-specific installation, conceived by architect Sou Fujimoto in collaboration with Brooklyn-based Popular Architecture, that interprets themes of the exhibition, highlighting the connection between traditional Japanese wooden construction and modern architecture. More at japansociety.org.

Competitions

Design Impact Grant Program
Deadline: March 12, 2021
Designing a Better Chicago, a collaborative organized by NeoCon and theMART, the Chicago Department of Cultural Affairs and Special Events, and the Design Museum of Chicago, is now accepting nominations for its second annual program. This year, the organization will provide $25,000 in project-specific grants to those using design to directly address pressing issues in Chicago communities. Winners will be selected by an advisory committee in summer 2021. Learn more at designingabetterchicago.org.





Re-Use Italy
Deadline: March 12, 2021
The third edition of this international architecture competition promotes the reuse of a church's shell in southern Italy while considering the abandonment of small towns occurring in the nation. The competition, open to architects, engineers, and students, asks the participants to transform the ruin into a concert hall. Submissions will be displayed in April 2021 in Grottole, Italy, and the winners will receive a cash prize of €4,000 and be invited to explain their project to the townspeople. More at reuseitaly.com.

Better Bus Stops
Deadline: March 23, 2021
The challenge is to design a modular bus-shelter system that can change from locality to locality, solving for any neighborhood in the world that you choose as a pilot for the program. The deliverable for this competition demands a single bus stand only, recommended via three presentation images. See more at uni.xyz/competitions/better-bus-stop.

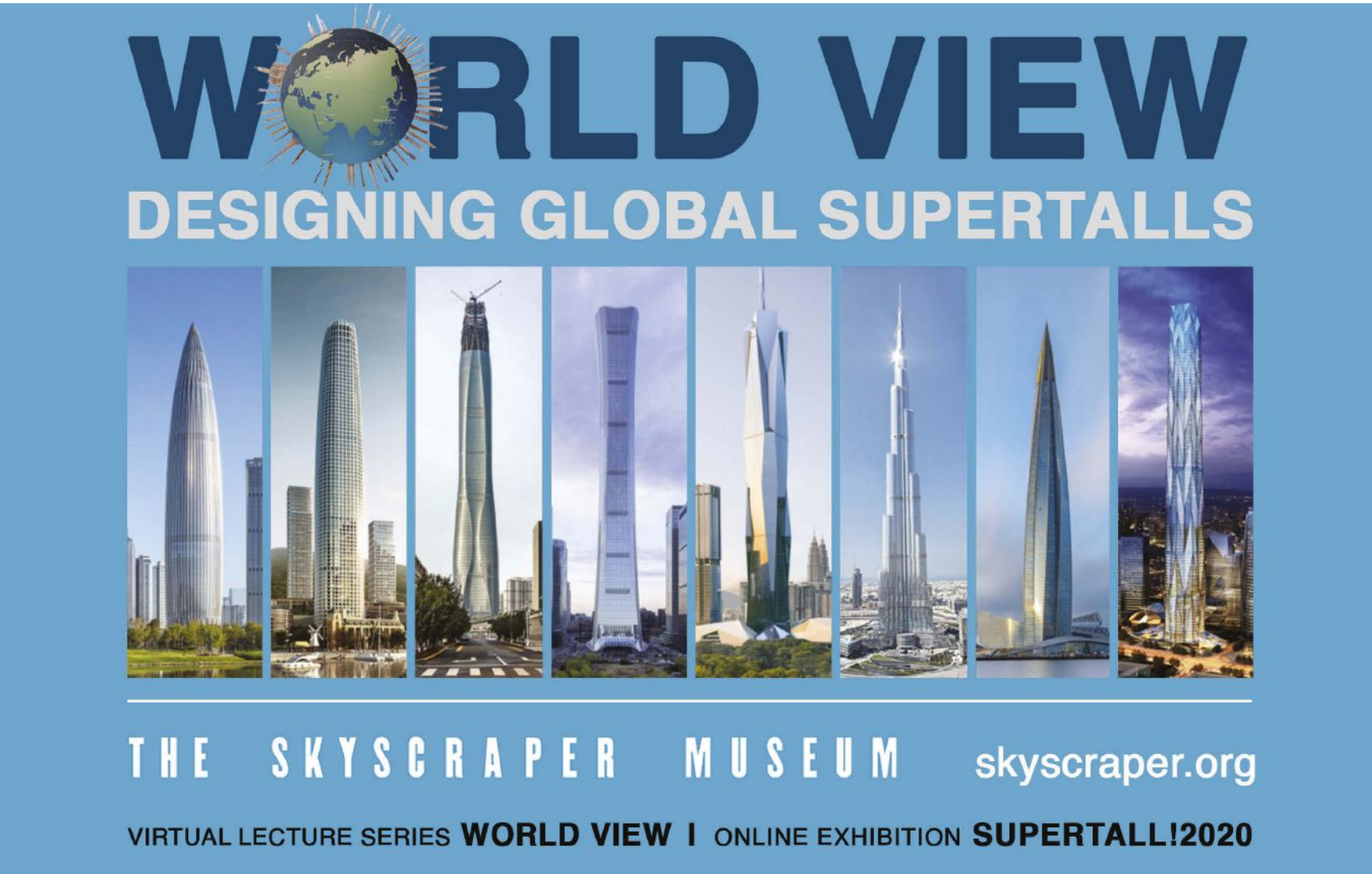
Newhouse Architecture + Design Competition
Deadline: April 9, 2021
The 39th annual competition, sponsored through the Chicago Architecture Center, is an opportunity to showcase design talents of Chicago-area students who create projects that solve real-world problems. This year's competition highlights the city's INVEST South/West initiative by concentrating students' efforts on proposals to improve the quality of life in the Auburn Gresham, Austin, and Englewood neighborhoods. More at architecture.org/newhouse.

Events

Mabel O. Wilson: Studio&: A Black Study
Online
March 3, 2021
As part of Sci-Arc's spring 2021 lecture series, architect and professor in African American and African Diasporic Studies at Columbia University Mabel O. Wilson will give an online talk about her transdisciplinary practice at 7 p.m. PST. See more at sciarc.edu.

Design Dialogues: Healthy Buildings and the Workplace
Online
March 16, 2021
As part of its spring 2021 programming, the Chicago Architecture Center is hosting this virtual event at 8:30 a.m. CT. The discussion will delve into how Covid-19 affects today's workplaces through ventilation, sanitation, and overall building design. More information at architecture.org.

E-mail information two months in advance to areditor@bnpmedia.com



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Ⓡ Regional AD

SNAPSHOT

More than a dozen bottle-shaped structures form the Kaleidoscope art museum in southeastern China's new Dongfengyun Town. So far, the town (which will span over two square miles when fully realized) also includes a multipurpose hall, a restaurant, and hotel, all of which are composed entirely of local red brick and soil and are creations of Luo Xu, an artist also from the region. The bulbous, soaring forms represent bottles from the nearby Yunnan wine region, says Xu, but can also be interpreted as an abstraction of the fires around which locals dance in an annual festival. Joe Cheng, founder of Hong Kong–based Cheng Chung Design (CCD), who designed the interiors throughout Xu's complex, describes being surprised and moved by the forms at first sight. "The curves and contours of the building seem to be casual yet full of tension," he says. Narrow skylights are the structures' only source of daylight; the layout and flow of the interiors were all about seizing the limited illumination and letting the raw architecture shine, says Cheng. See more photos online. *Kara Mavros*



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