

ARCHITECTURAL RECORD

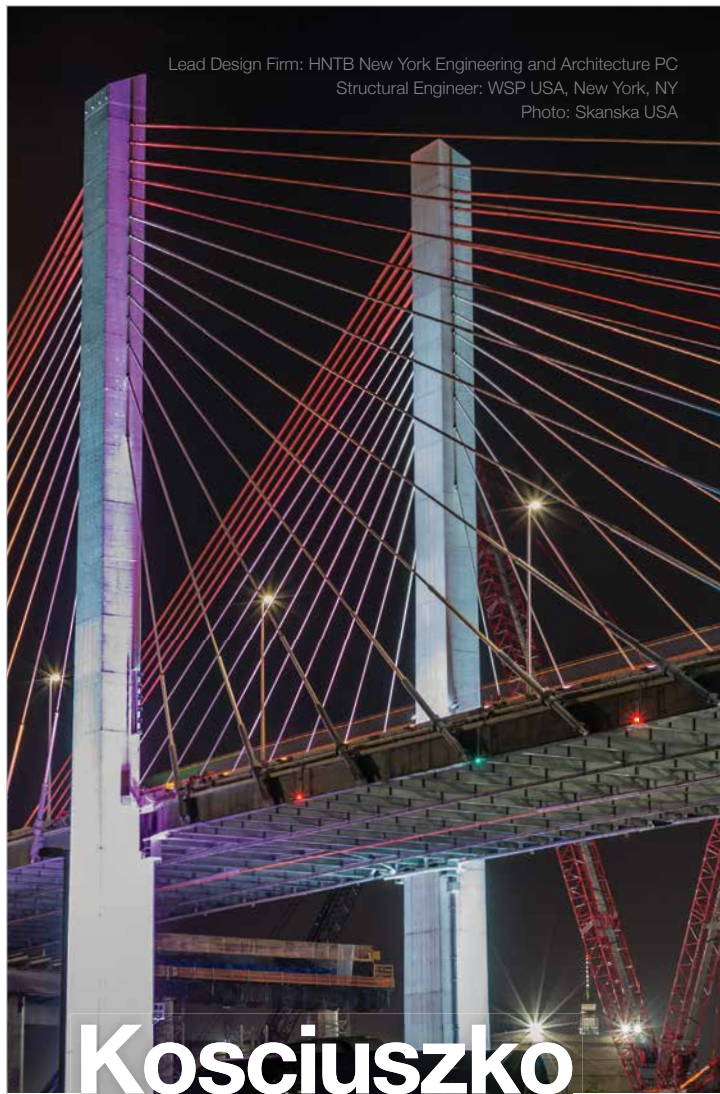
100 Years Later: Does the Bauhaus Still Matter?

DESIGN
VANGUARD
2019

SPIRITUAL PLACES

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Kosciuszko à Gogo

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 With heavy lifting from **HNTB**, **WSP USA**, and **Skanska**, a striking cable-stayed span has risen where the outdated bridge once stood, ensuring New Yorkers may still have trouble saying its name, but they never have trouble getting home.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

 **Steel Institute of New York**

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Instant Replay

With four consecutive Stanley Cup victories in its history, the **Nassau Veterans Memorial Coliseum** is a beloved fixture of Long Island life. When the owner of the 1972 arena decided to reward fans with a renovation worthy of its storied past, it reimagined the venue with an overcladding that would bring new life to the facility. With a design by **SHoP Architects** and **Thornton Tomasetti**, the new folded-ribbon façade of composite aluminum fins connects to the original structure with a minimum of intervention, ensuring thoughtful reuse of a venue that still has a lot of wins in its future. Read more about it in **Metals in Construction** online.

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BY HEIKE HANADA. PHOTO BY ANDREW ALBERTS.

for the RECORD

Beyond the printed page: highlights from our website, live events, and other happenings.



ESPIONAGE UNVEILED

The International Spy Museum by Rogers, Stirk, Harbour + Partners opened May 12 in Washington, D.C. Read our story online about the 140,000-square-foot building.



RECORD ON THE ROAD

Last month in Washington, D.C. (above), editor-in-chief Cathleen McGuigan talked about office design with REX founder Joshua Ramus (pictured) and others. In Boston (right) in late April, features editor Josephine Minutillo (far left in photo) moderated a panel on resilience with Ellen Watts, Chris Reed, and Nick Iselin (left to right).



LAND OF LIBERTY

Senior news and web editor Miriam Sitz toured the new Statue of Liberty Museum (page 31) in New York with FXCollaborative partner and project designer Nicolas Garrison.



VANGUARD REVISITED

Managing editor Beth Broome met with Abraham Cherem (at left, above) and José Antonio Aguilar (at right) of 2018 Design Vanguard firm Cherem Arquitectos in their Mexico City office, which overlooks Chapultepec Park. The practice designed the Birkat Itzjak Synagogue (page 190), also in the capital.

Happy Birthday, Dear Bauhaus

The world's most famous design school had a short life but long legacy.

HERE AT RECORD, we wondered how we should celebrate the 100th birthday of something that actually died at the tender age of 14. That would be the Bauhaus, of course—a misunderstood institution, born in 1919, that shifted its focus over the course of its short life each time the leadership changed, from Walter Gropius to Hannes Meyer to Mies van der Rohe, who was in charge when the Nazis shut it down for good in 1933.

The major misperception about the Bauhaus is that it is a style. You may love the look (more than the comfort) of the Wassily chair, named by Marcel Breuer for his Bauhaus colleague Wassily Kandinsky, but the Bauhaus was a school, and it varied more than is recognized from one particular expression.

Which is not to say that it was not stylish. Just look at the graphics that came out of the Bauhaus—the posters and books designed by László Moholy-Nagy and others; the work of Herbert Bayer, who created the Bauhaus's sans serif universal font—it all still looks so modern and has had a lasting impact on advertising and graphic design.

Another misperception: that the Bauhaus started with a full-fledged architecture program. In fact, it began as an arts-and-crafts school. Its founder, Gropius, though an architect, wanted to shatter the hierarchy of the arts and bring everything together under one umbrella—there were workshops in cabinetmaking, textiles, metalwork—all dedicated to a utopian future with the motto Art into Industry. Only in 1928, after Gropius left and the school had moved from Weimar to Dessau, was architecture emphasized, under Meyer, and even more so in Mies's era. Mies himself was far less interested in other disciplines.

In every way, the Bauhaus was a progressive institution. For one thing, it was open to women as well as men—its first class had 84 females to 79 males, though Gropius tended to steer women to the more domestic weaving class. Yet some of them broke the mold—Marianne Brandt was an artist and industrial designer who studied at the Bauhaus in Weimar, and then ran the metal workshop in Dessau. The school opened up opportunities for women in design that had barely existed before.

Yet the question remains: why does the Bauhaus still exert such a hold on our collective imagination? In this issue, we explore some of the reasons, and examine the power of the Bauhaus diaspora, particularly the faculty who tried to transport the school's principles to America as they fled prewar Germany. Mies, who arrived here in 1938, was the most influential architecturally—he created the contemporary campus he led at the Illinois Institute of Technology and designed his greatest buildings in Chicago and in New York.

Gropius had come to Harvard the year before Mies. While his attempts to create a Bauhaus-like environment at the Graduate School of Design did not take hold, his overall Modernist agenda prevailed. Josef



Albers, who emigrated with his wife Anni (she had been a student, then a teacher at the Bauhaus), and brought his theories about visual perception and color first to Black Mountain College and then to Yale, had more success translating his ideas to this side of the Atlantic.

In the pages ahead, a trio of experts—professors Barry Bergdoll, Rosemarie Haag Bletter, and Mary McLeod—debate the impact of the Bauhaus on architecture and design education. And we asked architects to weigh in on what the Bauhaus has meant to them. John Ronan has written a thoughtful essay about the elusiveness of recreating the Bauhaus mission, while others offer shorter takes. For almost all the architects we spoke with, the Bauhaus has had some deep meaning—only Robert A.M. Stern proclaims he's spent his career fighting its influence.

We'll leave it to a Bauhaus master to have the last word. Asked in 1953 why the school had had an enduring impact, Mies replied: "That the Bauhaus was an idea is the cause of the enormous influence it had . . . around the world. You cannot do that with organization, you cannot do that with propaganda. Only an idea spreads so far."

Cathleen McGuigan

Cathleen McGuigan, Editor in Chief

DAILY UPDATES

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perspective

A ship may be baptized with a bottle of Champagne, but this was baptism by fashion.

—New York Times fashion director *Vanessa Friedman*, on the May 8 Louis Vuitton fashion show at Eero Saarinen's renovated TWA Flight Center in New York.

Los Angeles LGBT Center Opens New Campus

BY MIRIAM SITZ



EVERY YEAR, June is Pride month, a festive time for the LGBTQ community and allies. But this year, June is especially notable: it marks the 50th anniversary of the Stonewall Uprising in New York—a landmark event in the history of LGBTQ rights. There's even further cause for celebration at the Los Angeles LGBT Center, which is also turning 50 this year. Located in the heart of Hollywood, the Center's \$141 million new Anita May Rosenstein Campus has just opened, presenting a striking, dignified face to the neighborhood.

Designed by New York-based Leong Leong, a 2011 RECORD Design Vanguard winner, and Killefer Flammang Architects (KFA) in Los Angeles, the 70,000-square-foot building dramatically expands the Center's capacity to serve the LGBTQ community. Rendered in white stucco and located across the street from an existing Center facility, the new building includes activity centers for youth and seniors, an educational and work-training academy for young people, event space, offices, and 100 beds for temporarily housing homeless youth. The firms also developed the master plan for the campus; Phase II, currently under construction and slated for completion in 2020,

From certain angles, cutouts in the frit align to form circles on the glazing (above). Pride Hall opens to the main plaza (right).

includes 98 units of affordable senior housing and 25 supportive apartments for young people.

Both the intergenerational nature of the Center's clientele and the diversity of programs offered to them informed the design, says Dominic Leong, principal of the firm he founded with his brother Chris Leong in 2009. "We had to create a campus that negotiates this idea of cohesion and unity, but also holds space for differences and multiplicity." A series of internal courtyards brings daylight to areas deep within the plan while buffering different program spaces from each other, yet also creating connections between them.

The main entrance and a flexible event space called Pride Hall are located just off a large plaza, which fronts the sidewalk and connects by elevator to underground parking. Five other entrances to the facility allow staff and visitors to enter through a door that gives



them access to the program area—and level of privacy—they may desire. "It fits the Center's mission to have multiple points of entry, so you feel welcome however you approach," says KFA partner Barbara Flammang.

The massing and materials of the steel-frame building work to engage the project's urban context. The building comprises volumes of two to four stories, keeping the senior and youth centers at a more intimate scale, while allowing staff offices and the temporary



Courtyards break up the building's mass and infuse interiors with daylight (left). The campus presents a distinct face to each side of its corner site (above).

youth housing to become taller. Because function generated form, the building has a unique profile from each side: "There isn't one singular, iconic point of view," says Dominic. "We thought that was important, because the Center isn't about the singular; it's about multiplicity." A frit pattern on the glazed

upper stories adds to the lively street presence (while also reducing solar gain); from certain perspectives, oblong cutouts in the frit align to form circles, echoing the Center's logo.

Creating a space for clients to feel safe, both physically and emotionally, was paramount to the Center and the designers, so security comes primarily in the form of on-site personnel, rather than an abundance of cameras or tightly controlled entrances and exits. "As an

organization, the Center is very open, and they wanted that to be maintained in our design," says Jesse Ottinger, the lead designer and project manager of KFA. "They're very sensitive to the youth population and don't want them to feel as if they were under surveillance, because many people come to the center after having traumatic experiences."

The project is Leong Leong's largest building to date. "It affirmed our belief that

architecture is fundamentally about self-actualization," says Dominic. "It's about how we relate to ourselves and others, and how we create spaces that meet our needs as we evolve as individuals and as a society. Architecture can nudge us along that path, and this project was validation of that."

KFA has operated in Los Angeles for some 40 years and, for their part, says Flammang, "If we can look back and say we've helped make the people who live here more comfortable, with access to the things that they need to live a good life, then we've done a good job." ■

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New Museum Offers Up-Close Look at Lady Liberty

BY MIRIAM SITZ



AS OF MAY 16, the masses of tourists huddled on the decks of Statue Cruise boats, yearning to take photos of New York landmarks, have another reason to visit Liberty Island—and a new vantage point for their Lower Manhattan-skyline selfies.

Two and a half years after breaking ground, the new Statue of Liberty Museum is now complete. Conceived by FXCollaborative, with exhibition design by ESI Design, the 26,000-square-foot building—which contains permanent and rotating displays of Statue-related artifacts, a three-room immersive theater, and Lady Liberty’s original 1886 torch—blends into the natural landscape of the island while complementing the formal mall setting of the park that surrounds the neoclassical sculpture.

The new facility enriches the Liberty Island visitor’s experience, which has been a frustrating one for many: with the most popular (and easiest to obtain) ticket, sightseers are only able to walk the grounds, not ascend to the crown nor enter the old museum (which will be converted into offices for the National Park Service) in the podium of the statue—activities for which tickets are limited. Now anyone with a ferry ticket to the island can take in the exhibitions and view the original torch, even if they can’t climb to the top of the statue.

The project’s origins go back to 2012, when FXCollaborative interviewed with the Statue of Liberty-Ellis Island Foundation and presented the initial concept design. The scheme evolved as new factors came into play over time. For example, after Hurricane Sandy hit New York, the architects raised the museum to 19 feet



The museum is situated behind the Statue, on Liberty Island (top). Ramps to the building’s main entrance (above), as well as to the elevator that opens on the roof terrace, make the museum fully accessible.

above sea level, allowing for 500-year-flood water levels. And building on an island always comes with its challenges; shipping materials meant that “a \$1 million dock showed up on our budget sheet,” FXCollaborative partner and project designer Nicholas Garrison told *RECORD*. (He added that the temporary structure has remained in place longer than expected, as fish have made it their spawning grounds.)

The New York-based firm also navigated a lengthy approvals and design process. Though the site is under federal jurisdiction, the team conferred with historic-preservation organizations in New York and New Jersey, as well as with the Stockbridge-Munsee Band of Mohican Indians and the Delaware Tribe of Indians, which have heritage sites on the land.

Embedded in a waterfront-facing berm, the

glass and concrete building looks out at the back of the Statue and the New York skyline beyond. The museum’s prismatic form is bisected by a wide stone stair, leading to a prowlike viewing platform that sits adjacent to a green roof of native grasses. (Both the stair and plaza are made of Stony Creek granite, also used in the Richard Morris Hunt–designed statue pedestal.) Unifying the meadow above and landscape below, a triangular section of the green roof folds down toward the ground. Between the berm and the sharply angled forms, the structure gives the appearance of pushing up from the earth. “It’s as if a tectonic shift created the museum,” says Garrison.

Subtle material choices allow the building’s context and content to shine. Glazing covers much of the exterior and, given that the site is



Digital kiosks allow visitors to add their photos and reflections about liberty to a collage wall (far left). The original torch is installed in the "Inspiration Gallery" (left).

located on a migratory-bird route, the architects added a subtle dot frit. Precast panels of dark concrete frame the sides of the edifice, and a heavy-gauge copper fascia edges the roof. Garrison hopes the material is slow to acquire a green patina: "We don't actually want to compete with her," he says, nodding to Lady Liberty.

Upon entering the building, visitors first encounter the standing-room theater, where a 10-minute film about the Statue's history is projected on oversize curved screens. The

rounded insertion is loosely enclosed by undulating walls of cherry slats, meant to improve acoustics in the museum's 15,500-square-foot interior. In the main exhibition space, artifacts—including a full-scale copper model of the statue's foot—and interactive media stations illustrate French sculptor Frédéric-Auguste Bartholdi's design and fabrication process, and explore the larger meaning of "liberty." With this experience, ESI president and principal designer Edwin Schlossberg

explains, his firm aimed to make visitors realize their individual responsibility for defining and protecting liberty. "There should be as many definitions of what liberty is as there are people," he says.

The museum visit culminates in a bright, spare gallery with expansive floor-to-ceiling windows, where Lady Liberty's original torch—removed in 1984 due to water damage and replaced with an exact replica two years later—stands against a backdrop of the Statue, the water, and the Lower Manhattan skyline. "We really fought for this," says Garrison, explaining that moving the 3,600-pound torch from its location inside the statue's pedestal was a significant feat of engineering. To him, the effort was worth it. "She's in daylight for the first time in more than 30 years."

Beyond showcasing tangible objects from the Statue of Liberty's history, the \$100 million project offers visitors the opportunity to consider on a new level the meaning of this iconic symbol, and to engage deeply with their understanding of one of this country's founding concepts. ■

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Films Bring a “Blueprint for Better” to AIA Conference

BY DANTE A. CIAMPAGLIA

THIS MONTH, AIA Conference on Architecture 2019 attendees shuffling between keynotes and workshops would be wise to budget a few extra minutes between sessions—to catch a movie.

The Westgate Resort & Casino’s Pavilion Four will host a 32-film program, organized by the AIA and the Architecture & Design Film Festival (ADFF), called the Blueprint for Better Film Series, highlighting architects’ roles in improving the places where people live. More than 20 of the films are no longer than five minutes, with some starting as early as 8 a.m., to “accommodate more of that conference schedule,” says ADFF founder and festival director Kyle Bergman.

There are four short-film programs—Equity, Diversity, & Inclusion; Design & Culture; Urbanism & Housing; and Resilient & Healthy Communities—and a few features. The series is organized around the AIA’s year-long Blueprint for Better campaign, which encourages architects to collaborate with civic and elected leaders and, through initiatives like the film series, aims to promote the perception of design professionals as thought leaders.

That mission is certainly reflected in the films. Premiering at the conference, *Designed to Last: Blueprint for a Better Home* focuses on how architect Illya Azaroff is addressing climate change by designing a resilient, sustainable home in Queens, New York, for a resident whose home was destroyed by Hurricane Sandy.

Also screening is *Past/Presence: Saving the Spring Garden School*, which details the adaptive reuse of Philadelphia’s Spring Garden School as affordable housing for veterans and seniors—after it stood abandoned for nearly 40 years. The documentary won the 2018 AIA Film Challenge, an annual program that invites architects and filmmakers to submit short videos about design professionals making a positive impact on their cities.

Another film, *Caño Martín Peña: A Blueprint for Better*, presents a powerful record of the work done by architects, including Jonathan Marvel (RECORD, September 2018), to help a devastated Puerto Rico community recover from Hurricane Maria. The film, which premiered last year, doubles as a kind of ad for the AIA’s Blueprint initiative.

And playing at Eclipse Theaters—a few miles away from the main conference sites, in an attempt to engage the broader Las Vegas community—a feature-length documentary called *The Experimental City* will dive into a never-built utopian project planned for the woods of northern Minneapolis in the 1960s.

The Blueprint for Better series chronicles how architects and designers have confronted a host of civic and environmental challenges, while giving the professionals descending on Las Vegas a taste of the ADFF they might not get otherwise. “The goal of the AIA Film Challenge is the same as the goal of the ADFF: to use film to broaden the conversation about architecture and design,” Bergman tells RECORD. “We align really well in that respect.” ■



Designed to Last: Blueprint for a Better Home (top) will premier at AIA '19. Also screening is 2018 AIA Film Challenge winner *Past/Presence: Saving the Spring Garden School* (above).

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OMA-Designed Sotheby's Opens

BY JOSEPHINE MINUTILLO

WHEN **SOTHEBY'S UNVEILED** its revamped New York headquarters last month, the art installations within the new galleries rivaled any in the venerated museums—the Met, Met Breuer, Frick, Guggenheim—within walking distance of it on Manhattan's Upper East Side. But the 275-year-old auction house isn't competing with those neighboring institutions. “The art market is changing so rapidly and substantially,” says Allan Schwartzman, Sotheby's executive vice president and chairman of the fine-art division. “We envision programming well beyond the historical core of our business.”

Sotheby's had been considering leaving its home of nearly 20 years, a 10-story building that covers an entire city block, for a move to Midtown. Says Schwartzman, “There were fundamental limitations to displaying art in, and moving through, our building”—a four-story former factory onto which six stories were added in a 2001 project by KPF. Sotheby's engaged several architects to develop designs for a new space it had selected, but also to reimagine its existing building—in order to convince the board that a move was necessary.

Ironically, the scheme by OMA NY partner Shohei Shigematsu convinced them otherwise. “There are columns every 20 feet on the lower levels,” Schwartzman explains. “But Shohei

found a way to embed columns in walls, or, when visible, to become a prominent feature of the architecture.”

“Brands reach out to architects when they are rethinking their brand,” says Shigematsu. “So it's about much more than the architecture.” Here, though, in OMA's first major gallery space in the U.S., the architectural moves—in some cases drastic, like slicing through floor slabs to create double-height galleries, in others subtle, such as lining the thresholds into gallery clusters with custom-stained walnut panels in a nod to Sotheby's London—offer the auction house ideal ways to show art and luxury goods in isolation and in broader combination. All galleries were moved to the lower four levels, increasing exhibition space from 67,000 to over 90,000 square feet. The new configuration is more welcoming to the public and eliminates the bottleneck of traffic to what had been its premiere exhibition space on the 10th floor, which will be converted to offices. “There's no hierarchy now,” notes Schwartzman. The \$55



In the double-height gallery on the ground floor, original concrete columns are exposed (top). Elsewhere, columns are enclosed within 4½-foot-thick walls (above).

million project includes 40 new galleries of 20 distinct types—from white cube to enfilade, octagonal, and L-shaped—that range in size and materials to respond to different sales, exhibitions, and events, and allow the auction house to easily and frequently change out shows without disrupting other galleries or building temporary walls. “Flexibility is provided through diversity,” says Shigematsu.

Adds Schwartzman, “Having these redesigned galleries positions us to be able to grow the business in ways that we don't even know about, but that will be needs of the near and further future.” ■

New York's Big Buildings May Soon Curb Carbon Emissions

BY RONDA KAYSEN

ON APRIL 18, the New York City Council passed an ambitious package of climate-change bills—legislation that imposes strict rules on the city's larger buildings, requiring them to drastically curb carbon emissions.

The centerpiece of the eight-bill Climate Mobilization Act is aimed at new and existing buildings larger than 25,000 square feet; it requires owners to cut emissions by 40 percent by 2030, and 80 percent by 2050. Failure to comply will mean owners face steep fines—\$1 million a year for the largest properties.

Mayor Bill de Blasio, who may run for president in 2020, is expected to sign the legislation in the coming weeks and has touted it as a Green New Deal for New York, one that could forge a path for other cities to follow.

"This is the first city in the world, that I know of, that has placed significant carbon emission caps on this many buildings," said John M. Mandyck, chief executive officer of the Urban Green Council (UGC), a New York City advocacy group for sustainable buildings. His comments echo those of Mayor de Blasio, who,

in a late-April interview on MSNBC's *Morning Joe*, called the new rules "the first of any major city on the Earth to say to building owners, 'You've got to clean up your act, you've got to retrofit, you've got to save energy.'"

However, other cities have also singled out building emissions in their climate policies, to varying degrees. In 2010, Tokyo enacted a cap-and-trade program for its 1,400 largest buildings. In a Washington, D.C., climate law passed in January, the city set energy benchmarks for its largest buildings, although specific targets have not been set. And, last year, California passed a law requiring buildings to reduce emissions by 40 percent below 1990 levels by 2030.

New York City pledged in its 2016 "Roadmap to 80x50" report to meet the Paris Climate Agreement targets to reduce emissions by 80 percent by 2050. The Climate Mobilization Act builds on this and other existing rules, like the city benchmarking law, which requires large buildings to measure and report energy and water consumption.

Some 67 percent of carbon emissions in the city come from the built environment, and the Urban Green Council estimates that about 60 percent of New York's 1 million buildings are 25,000 square feet or larger. The new legislation makes specific, and expensive, demands on these larger buildings. Mark Chambers, the director of the mayor's Office of Sustainability, estimates the work could cost property owners a total of \$4 billion as buildings replace or retrofit windows, roofs, and heating and cooling systems.

But the bill does make some exceptions. Public housing, houses of worship, and apartment buildings with rent-regulated units would be exempt from the emissions caps, and instead have to meet softer targets and implement prescriptive fixes like insulating pipes. The Real Estate Board of New York (REBNY) opposes the legislation for excluding so many buildings from the requirements and setting emission standards that it says could inhibit business growth.

The legislation "does not take a comprehensive, city-wide approach needed to solve this



PHOTOGRAPHY: © MICHAEL APPLETON/MAYORAL PHOTOGRAPHY

Mayor Bill de Blasio announced New York's Green New Deal at Hunter's Point South Park in Queens on Earth Day 2019.

an effort to shift the city away from fossil fuels. Other new rules would require green roofs or solar panels on new construction and major retrofits.

In a speech on Earth Day, Mayor de Blasio singled out glass skyscrapers as a major source of pollution. "We are going to introduce legislation to ban the glass-and-steel skyscrapers that have contributed so much to global warming," he said, standing on the Queens shoreline.

"They have no place in our complex issue," REBNY president John H. Banks said in a statement.

The Climate Mobilization Act includes an advisory board to recommend policy changes as the law rolls out. It also allows buildings to trade carbon credits and encourages building owners to buy renewable sources of energy, in

city or on our Earth anymore."

Chambers from the mayor's office backpedaled de Blasio's comments, however, telling RECORD, "No one is saying that no one is going to use glass material anymore. What we're saying is we have to be as thoughtful as possible about our mass and glass ratios."

REBNY's Banks pushed back against criticism of glass towers in a May 1 op-ed in *Real Estate Weekly*, writing, "We must not forget that a building's rate of energy use and efficiency is not dictated by the material found in its facade—far from it."

The mayor may be able to implement design changes through the city's revised energy code for new construction, expected by the end of the year, according to UGC's Mandyck. "We're waiting to see any proposals," he said in an e-mail. "So we simply don't know if it will be part of the code—and, if so, how—or separate legislation."

Chambers also pointed to the energy code as a way to implement such changes, saying that the mayor "wants our energy code to be even stronger." He added that he would like to see more buildings employ better glazing technology to improve envelope efficiency; use more photovoltaic glass; and consider alternate materials.

"There is one single archetype that has dominated, and that is solely floor-to-ceiling curtain wall," Chambers said. "If we're going to see glass, we're going to see the highest performing glass, ushering in a new phase where we're not designing buildings from the inside out." ■

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[NEWSMAKER]

Sarah Whiting

BY HEATHER CORCORAN

IN APRIL, the Harvard Graduate School of Design (GSD) named Sarah Whiting its incoming dean, making her the first woman to lead the GSD since its founding in 1936. The post marks a return to Harvard for Whiting, who taught at the GSD early in her career, prior to joining the faculty at Princeton University School of Architecture and becoming dean of the Rice School of Architecture in 2010.

Whiting replaces Mohsen Mostafavi, who stepped down after 11 years (RECORD, December 2018), during which he expanded the GSD's programming and student body. Whiting—a 2011 Women in Architecture award-winner—brings a perspective rooted in her own interdisciplinary journey as an academic, author, and practicing professional at the helm of WW Architecture, the firm she founded with her husband, Ron Witte, in 1999.

Ahead of her arrival at the GSD on July 1, RECORD spoke with Whiting about her plans for the school and the future of architecture education.

After almost a decade at Rice, you take the reins at the GSD next month. What's on your mind?

It's bittersweet to leave Rice, because it's a very busy moment. We've just announced a new building annex and almost reached our fundraising goal. But I'm super excited. The congratulations that have poured in are both overwhelming and humbling.

You've highlighted Rice's small size as one of its strengths. How are you approaching the much larger GSD, with some 900 students?

Scaling up is exciting. The GSD is a collection of programs [architecture, landscape architecture, urban planning and design, etc.] as opposed to a single school. The key is understanding how to leverage the size and optimize those programs. But my goals and plans are still developing. I was at the school 15 years ago, so I wouldn't want to assume I know it well enough now to be able to say, 'These are the things the school needs.' I'm looking forward to figuring out what those things are.

What issues should the GSD be discussing, both at Harvard and beyond?

The beautiful thing about architecture is that it touches so many issues. One of the things Mohsen did very well was to bring the

GSD into Harvard's larger orbit. Design is affected by and affects climate change, so from that scale to specific issues like micro-housing and the sharing economy, which both have their pluses and minuses—those are the problems that engage the rest of the university in terms of politics, technology, and that engage different parts of the world.

The U.S. doesn't value design in the same way some other cultures do, but the GSD can help influence that. I think there's a certain responsibility to help advance the world that comes with such a platform.

Representation is a pressing topic within the field—in academia and in practice—and, recently, a wave of women has stepped into leadership at architecture schools. How do you see your role as a member of this group?

When you mention representation, I confess, my first thought was tools of representing—drawing, models—which is an interesting topic. I don't automatically think of my gender. I have a very interdisciplinary background that includes urbanism, history, and theory. I think I represent diversity, but maybe intellectual diversity more than anything else.

Traditionally, architecture deans are chosen for either important books they have

written or important buildings they've completed. How do you see your experience fitting into this tradition?

You mean, what's my book or what's my building? Or what I have in lieu of that. I'm one of many people in this field who approach the world through writing and design, through different scales of architecture and urbanism, through history and theory, which I think are two different things, and criticism, which is yet another.

My firm has designed a table, we've designed houses, but we've also worked on urban plans. The same is true in academia—I've taught history, theory focused on a specific writer, studio. So I've benefited from a fluidity that is actually still hard to get away with.

Decades from now, what do you hope your legacy at the GSD will be?

I hope it's a combination of focus—deep projects—and breadth. It goes back to my own profile as someone who does a bit of everything—long-term projects and broader, faster, cross-disciplined projects. If the school can recognize those two tempos, and the value of both tempos, that can generate a lot of important work. ■

**Docomomo US Honors Gateway Arch Museum in St. Louis**

On June 19, the preservation-focused nonprofit will confer the Civic Design Award of Excellence on the restored museum and grounds (RECORD, July 2018) at the base of Eero Saarinen's 1967 landmark. The design team included Cooper Robertson, James Carpenter Design Associates, Trivers, and Michael Van Valkenburgh Associates.

Harvard Announces 2019 Wheelwright Prize Winner

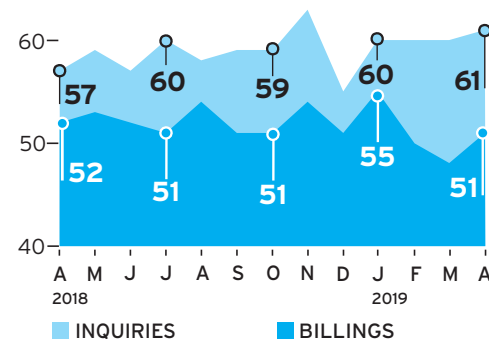
On May 10, the Graduate School of Design named Polish-born U.S.-based architect Aleksandra Jaeschke the winner of its seventh annual award to early-career architects for travel-based research. The prize comes with a \$100,000 grant. Jaeschke codirected the firm AION in Italy from 2008–13.

Adjaye Associates Wins Art and Cultural Center Commission in India

David Adjaye's firm was selected in early May to design the Kiran Nadar Museum of Art & Cultural Center in New Delhi. The privately funded institution will exhibit modern and contemporary work from India and provide a venue for dance, music, and educational events.

Brazilian Project Achieves First LEED Zero Certification

In late April, the 4,700-square-foot headquarters of Petinelli, an engineering and green-construction consulting firm in the Brazilian city of Curitiba, became the first building to certify with LEED Zero. The standard, unveiled in 2018 as a complement to LEED, recognizes projects that achieve net zero carbon, energy, water, and waste.

**Billings Rebound After March Dip**

The Architectural Billings Index showed modest growth in April, according to the AIA's latest data, rising to 50.5 from 47.8 in March. (Scores over 50 indicate an increase in firm billings.) Inquiries into new work and the value of new design contracts also rose, to 60.9 and 52.1, respectively.



How to Fix a Fragile Planet

The Cooper Hewitt Triennial showcases the transformative potential of multidisciplinary design.

BY PILAR VILADAS

CAN DESIGN save the planet? Judging by the more than 60 projects that are shown in *Nature*—Cooper Hewitt Design Triennial, which is on view at the Cooper Hewitt, National Design Museum through January 20, 2020, there is definite cause for optimism. The exhibition, which was jointly organized by the Cooper Hewitt and the Cube design museum in Kerkade, the Netherlands—and which will be presented simultaneously at both museums—illustrates the ways in which designers are working with scientists, engineers, and environmentalists to solve the crises stemming from climate change, environmental pollution, and other man-made problems.

The Triennial, developed by a team that includes Caitlin Condell, Andrea Lipps, and Matilda McQuaid from the Cooper Hewitt, and Gene Bertrand and Hans Gubbels of Cube, is organized into seven sections: Understand, Simulate, Salvage, Facilitate, Augment, Remediate, and Nurture, each of

which describes specific strategies for working with nature.

A number of projects propose architectural solutions. In the Rwanda Institute for Conservation Agriculture, by MASS Design Group (winners of a 2017 National Design Award), landscape and architecture help train young people to be leaders of conservation agriculture, employing the One Health concept, which links human, animal, and environmental health. The Monarch Sanctuary, a project by Mitchell Joachim and Vivian Kuan of the nonprofit research group Terreform ONE, proposes a New York building with a double-glass facade. Inside the cavity between its two skins is a 30,000-square-foot sanctuary—in the form of a vertical meadow with regulated temperature and humidity—where threatened butterflies can breed during their annual migration.

The exhibition includes numerous examples of materials research. The Bio-receptive Concrete Panels by London-based



Among the architectural solutions in the exhibition is a campus by Mass Design Group for a Rwandan institute that aims to train agricultural entrepreneurs (top) and a Monarch Sanctuary by Terreform ONE housed within a double-skin facade (above).

industrial evolution



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perspective **exhibition**



Curiosity Cloud, by mischer

Marcos Cruz, Richard Beckett, and Javier Ruiz are made of concrete with a low pH that supports the growth of small plants like moss, without requiring expensive irrigation. Fantasma, a long garment made of glowing transgenic silk, demonstrates how nature, craft, and engineering can amplify each other. The piece, a product of Japanese art and science, was created by the Tokyo design studio AnotherFarm, the Tsukuba-based National Agricultural and Research Organization, and the Kyoto-based textile manufacturer Hosoo; the silk has been engineered by injecting silkworm eggs with coral DNA so that it glows. And the designer Fernando Laposse's Totomoxtle is a new material made from the variously (and richly) colored husks of heirloom Mexican corn, a crop threatened by industrial agriculture in that country. The husks are pressed onto a paper or textile backing, and cut into small pieces to create a marquetry that can be used for furniture or interior surfaces, like the wall panels in the exhibition.

One of the Triennial's most intriguing combinations of design and bioengineering is the Origami Membrane for 3D Organ Engineering, a collaboration between the inventor Chuck Hoberman and researchers at the interdisciplinary Wyss Institute for Biologically Inspired Engineering at Harvard, including Richard Novak, Elizabeth Calamari, Sauveur Jeanty, and Donald Ingber, the institute's founding director. An inflatable foldable-membrane structure filled with hydrogels that contain organ cells is now being tested on kidney cells, for use outside the body as a portable dialysis device.

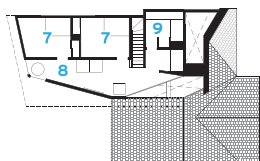
Among the more conceptual projects, the Madrid-based Ensemble Studio's Petrified River, which is set in the museum's garden, is a composition in concrete—a "hill" and a "pond," with a 40-foot "river" between them—that is a metaphor for what the architects call "the rich landscape that Manhattan once was, when it was known as Mannahatta or 'island of many hills.'" An equally poetic installation is the Austrian studio mischer

perspective **house of the month**

A NIMBLE ADDITION PLAYS OFF THE CHARACTER AND FORMS OF A MODEST LOS ANGELES BUNGALOW BY SARAH AMELAR

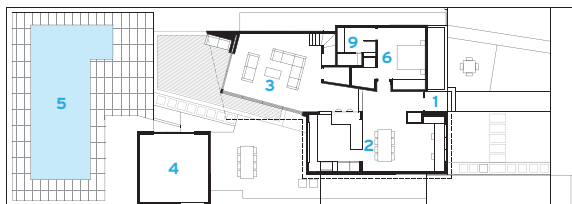


The front facade suggests a single unified composition and, at the same time, two separate volumes: the old and the new (above). The open-plan living spaces (far right) spill out onto the rear deck (right).

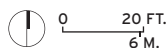


SECOND-FLOOR PLAN

- 1 ENTRANCE
- 2 DINING/ KITCHEN
- 3 LIVING
- 4 EXISTING GARAGE/ CABANA
- 5 EXISTING POOL
- 6 MASTER BEDROOM
- 7 BEDROOM
- 8 LOUNGE
- 9 BATHROOM



GROUND-FLOOR PLAN



ARCHITECT KATY BARKAN's renovation-expansion of a 1940s bungalow in Los Angeles is full of nuanced paradox. Like the attention-catching rays of an asterisk, the crisp, radiating lines of her addition—its roof ridges and troughs—converge mid-facade, where the house's existing and new sections meet. Yet the extension is also quiet, almost deferential: a pale-gray monolith that picks up the low-rise cadence of this residential streetscape. "It simultaneously stands out and fits in," says Barkan, who teaches architectural design at UCLA. With this inaugural project of her firm, Now Here, she has embraced the language of Los Angeles' ubiquitous, modest single-family house, yet deftly subverted it, engaging its material palette and construction methods while nimbly tweaking its familiar forms.

The result is "1/2 House." Or perhaps it should be called half-and-half house—or one/two house, since its exterior composition toggles between being one volume or two. The original Monopoly-piece bungalow and its side-by-side addition—both stucco-clad, balloon-frame construction with asphalt-shingled pitched roofs—merge compatibly, while remaining distinct in color, form, and character. Most striking is the new roof's inversion, with its V-shaped valley,



Inside, the house's new and existing (now gut-renovated) sections are joined by a gap: a lozenge-shaped, clerestory-lit area overhead.

instead of a peaking ridge. This geometric feat—almost imperceptibly sweeping up into a new second story toward the back—allows for vertical expansion (plus excellent drainage) without disrupting the streetscape's scale and gabled rhythms. The new facade essentially ends in half a gable (inspiring the name "1/2 House"), gesturing toward the upswing of the neighboring peak.

The composite facade of the original bungalow—now charcoal-colored and pared down in its details—with its lighter-gray counterpart has a solidity that makes the experience of crossing the threshold quite unexpected. The newly centered front door opens into a soaring, luminous space: there, daylit from above, the house's two parts are joined by a rift—as if the overlap of two solid forms resulted in a lozenge-shaped area of glowing transparency.

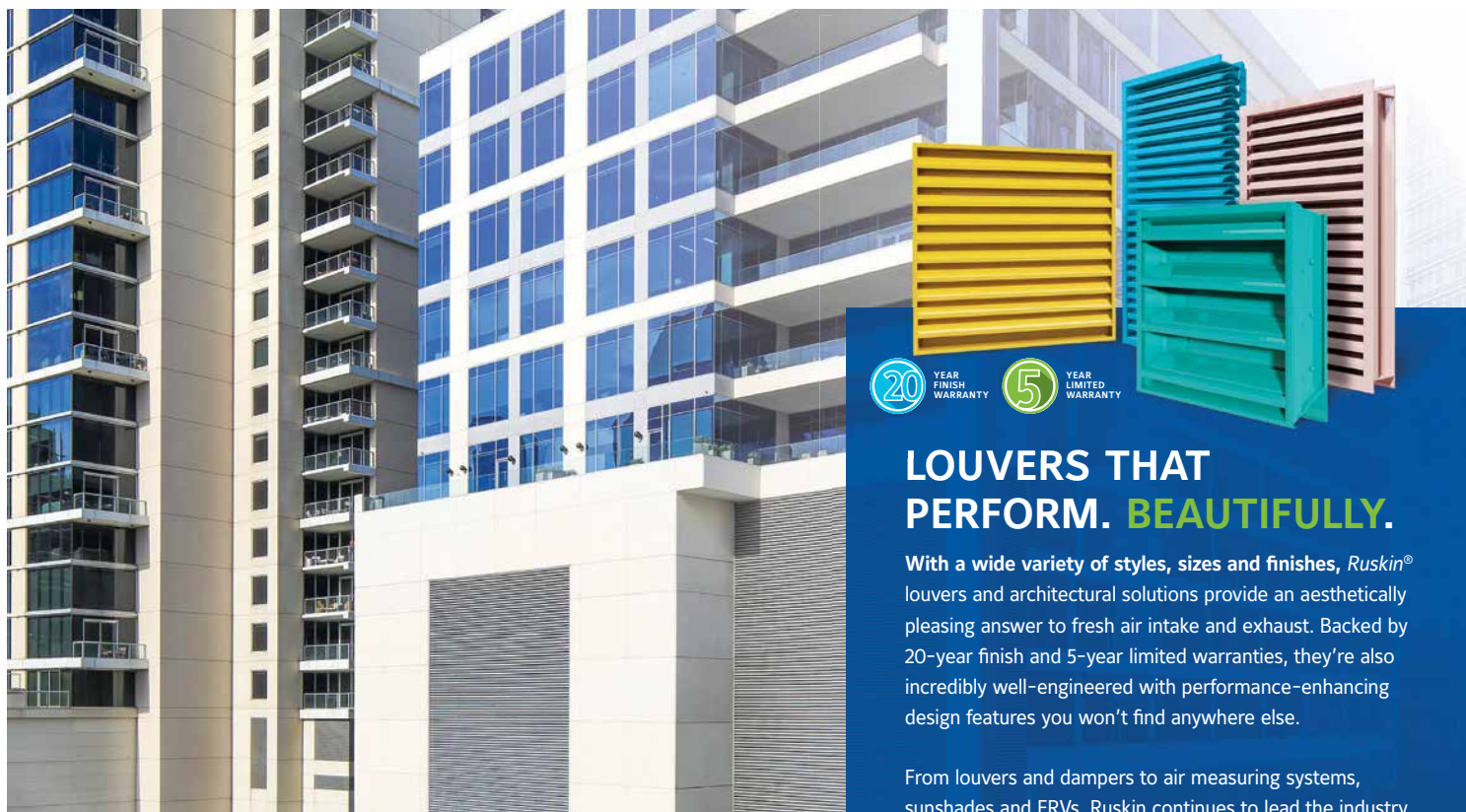
"We wanted to draw in the feeling of the front stoop, where we've always hung out with our neighbors," says Dev Larks, a nurse (and Barkan's sister), who commissioned the project with her husband, Roosevelt Larks, a

TV-industry grip and voice-over actor. "Our door is rarely closed. We love to entertain."

Now the interior space, and breezes, flow from the entrance, across the open kitchen and slightly skewed living room, out through sliding glass doors to the backyard and swimming pool. (The living room had to veer off the orthogonal to provide code-required clearance for the existing freestanding garage at back, currently used as a cabana—but that modest bend in plan gives the rear of the house more privacy.) The master suite is on the ground floor, beneath the inverted roof, and, upstairs, toward the yard, bedrooms for the couple's two teenage daughters share a lounge overlooking the main living areas.

"That view down was important to us," says Dev Larks, "even though we expanded our house from 1,150 to 2,400 square feet, we wanted to preserve the sense of being together and connected."

Since the bungalow's transformation, she adds, "people often stop their cars, snap photos, and shout, 'I love your house!'" It's also been a great calling card for Barkan, bringing in work from the neighborhood and beyond. ■



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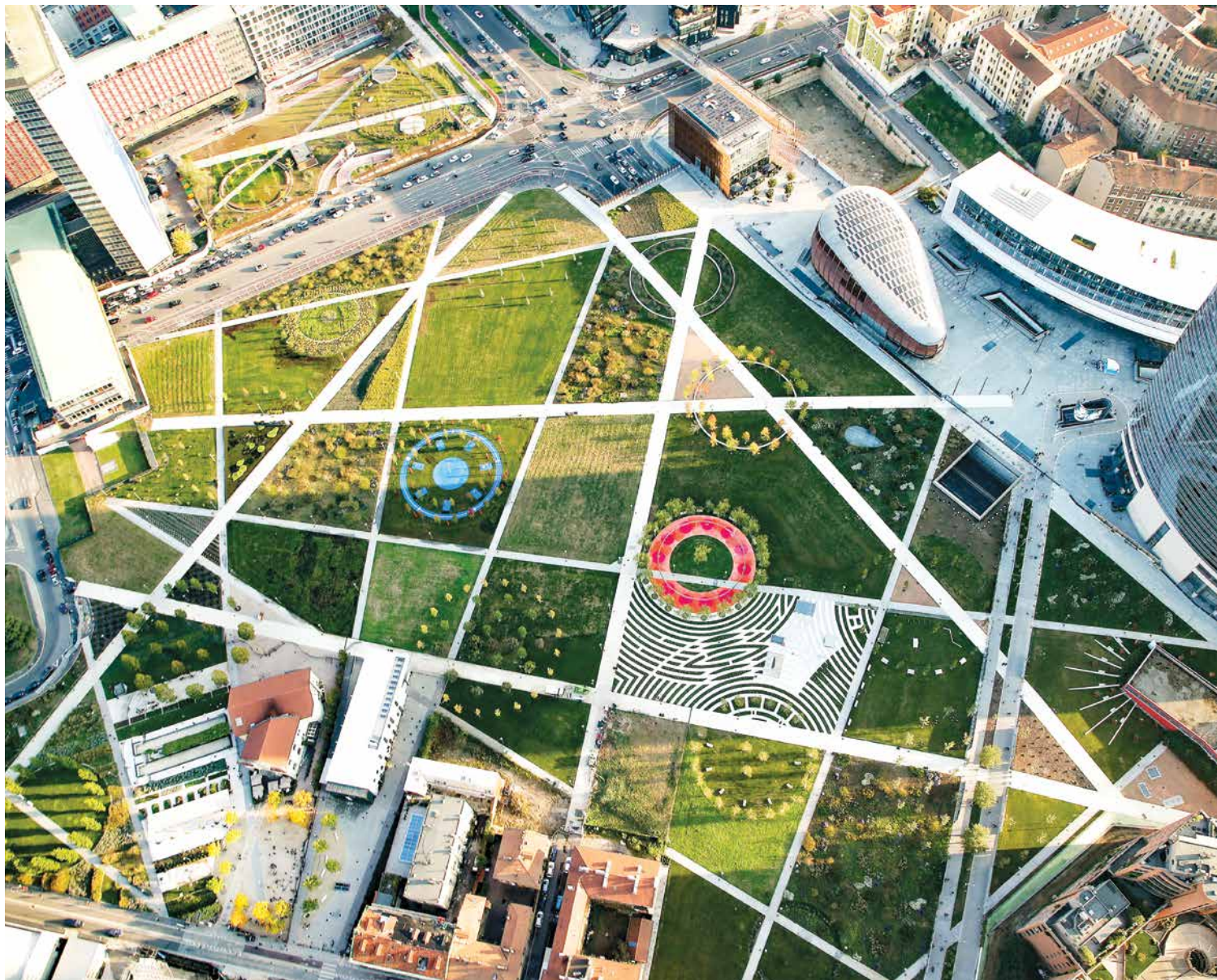
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A NEW PUBLIC PARK IN THE HEART OF MILAN RIFFS ON THE TRADITIONAL BOTANICAL GARDEN BY ALEX KLIMOSKI



FROM THE LANDSCAPE DESIGN for OMA's CCTV Tower in Beijing and Qatar National Library in Doha to dynamic textile creations for cultural, educational, and retail interiors around the globe, the work of Dutch landscape and interior-architecture firm Inside Outside is notable for a strong graphic quality. This hallmark underlies the firm's design for a new public park in Milan that, when viewed from above, appears as a patchwork of viridescent trapezoids and circles, as well as bold patterns.

Named the Biblioteca degli Alberi, or "library of trees," for its rich horticultural variety, the rectilinear park sits on a formerly derelict plot of city-owned land in the Giardini di Porta Nuova area at the intersection of residential, government, and commercial districts and transit hubs. Inside Outside, along with a multidisciplinary team that included urban planner Mirko Zardini and Michael Maltzan Architecture, won the municipal competition for the park in 2003, but political and financial setbacks delayed its opening until last October. While the project was on hold, the surrounding area developed dramatically; nonetheless, more than a decade later, the team

The park's design incorporates a network of pathways that connect pedestrians and cyclists to multiple areas and surrounding points of interest.

found their original concept still to be relevant. "The idea was always to connect all the different areas around the park," says firm founder Petra Blaisse, "so we drew an efficient web of paths linking the various points."

Besides providing access for pedestrians and cyclists to surrounding neighborhoods, the walkways intersect at varying angles, forming a mosaic of irregularly shaped and multitextured fields between. Each of these individual botanic gardens, as Blaisse refers to them, is planted with a different composition of flora, from herbs, shrubs, and roses to bamboo and aquatic plants. Some of the larger open, grassy patches are suitable for markets and events, while others provide areas for contemplation, play, or even have mazelike walkways. A series of ring-shaped stands of uniform trees—or circular forests—are programmed atop the dominant grid, "scattered like confetti," says Blaisse, with each "embodying a sort of pavilion or room that you can



Circular formations of trees appear throughout the park, each composed of a single, different plant species (above), as are borders between meandering walkways (right).

inhabit and use as a protective space.” Like the fields, each of the rings is made up of a different single species.

As with all of Inside Outside’s projects, activating the built environment with a range of strategies was the core consideration of the park’s planning and design. At the Biblioteca degli Alberi, the firm has overlapped layers of program and visual cues to create a choose-your-own adventure of sorts, which will become more spatially rich once the landscaping grows in. The park has not yet experienced its first summer, but with areas for children, dogs and their owners, places to sit, and different conditions for exploration, it has already been energetically received. “You can make it as complex or as simple as you wish,” says Blaise. “It’s all one big story.” ■



ARCHITECTURAL RECORD

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The former Schocken department store in Chemnitz, Germany, was designed by **Erich Mendelsohn**, a Berlin-based architect known for his Expressionist Eisenstein Tower (1921) in Potsdam, Germany. The store, one of several Mendelsohn designed for the Schocken company, maintains its original streamlined aura with a sensitive recent conversion into the State Museum of Archeology Chemnitz.

By entering, you have a chance to win an iPad mini.

See the complete rules and entry form online at architecturalrecord.com/guessthearchitect.

A Day in the Life

A New York architect recalls an extraordinary birthday 45 years ago, when, as a young student, he met a constellation of Modernism's stars, all in a single day.

BY PETER STAMBERG

IN 1972, on a trip to Europe during my final year studying architecture at the Rhode Island School of Design, I met a fascinating woman who was in the furniture business in Italy, Maria Simoncini. Maria was brilliant, glamorous, and so bewitching that, the next year, when I was in graduate school at the Architectural Association in London, I would periodically hitchhike to Bologna just to spend time with her. As I was finishing the AA, I hitchhiked for one last visit, but, when I got there, Maria had been called away on business. I was crestfallen—until her assistant said that Maria's partner, Dino Gavina, would see me instead.

My life changed at that moment. I had read about Gavina and his ability to meld contemporary art and design. He was a legend: his company had become part of Knoll in 1968, bringing furniture designed by Breuer, Afra & Tobia Scarpa, Takahama, Matta, and others.

I spent a glorious five days with the wiry and energetic Gavina, talking intensely about the crisis in Modernism (some things never change), and, as I was about to head back to London, Gavina invited me to travel with him to Paris. "You won't need to hitchhike," he said with a grin. "I will buy you a ticket on the train."

We arrived in Paris late at night, and the next day was gorgeous. It was June 8, 1974, and it was my 25th birthday. We started to race around St. Germain des Pres buying gifts—for other people. First, an ancient liquor shop, then an exquisite old chocolatier. With each purchase, Gavina would declare, "Per Connie" or "Per Giulietta" or "Per Teeny" or "Per Claude." Loaded with packages, we hurried to the Musée des Arts Décoratifs, with Dino shouting to me about the beauty of the Parisian cityscape as we ran.

Waiting for us inside the museum entrance was none other than my god, Marcel Breuer, whose designs for the Hanson House (five minutes from where I grew up on Long Island), the Whitney Museum, and the Wassily chair had inspired me to study design. The optimism they expressed was the closest thing to a religion that I would ever believe in. Gavina's "per Connie" gift was for Breuer's wife. After breakfast, we walked around the galleries, with Breuer, Connie, and me speaking English and the curators translating for Dino. As we were saying goodbye, Breuer turned to me and said that if I decided to go back to New York, I should come work for him.



Portrait of the architect as a young man in his Wassily chair, with a Saint Bernard called Neil (above). Les Lalanne (below) with a flock of their sheep sculptures.



But there was no time for me to process this invitation to the gateway of heaven, because suddenly Gavina was off, and we were tearing back across the Pont Royal, toward the Luxembourg Gardens and down a narrow street that was strangely familiar to me. We stopped in front of a door, Gavina rapped on it, and I could hear a woman's heels clicking toward us. When the door opened, I saw a face that was familiar too: I had seen both her face and the streetscape in paintings at MoMA. The street was Rue Férou, the woman was Juliet Man Ray, and the MoMA paintings were by her husband, Man Ray.

Juliet and Dino embraced, and he gave her the "per Giulietta" gift as we walked in. The 84-year-old Man Ray struggled to get up from his chair, but, when he did, he gave Gavina a big hug. Then Gavina introduced me, but Man Ray, wary of newcomers, seemed less than pleased to have a stranger in his house. Yet, once he learned it was my birthday, Man paused for a moment, took a copy of his book *Autoportrait* from a shelf and inscribed it, "Pour Peter Stamberg—cordially Man Ray 1974."

For the next hour or so, I sat in the chair where Marcel Duchamp sat when he and Man played chess. Man had customized it for him by drilling a hole in the wooden arm for an ashtray for Duchamp's cigar. The house was modest, very much an artist's studio, and, to me, it was better than any museum. As we left, he handed me another little book of his, *Analphabet*.

Soon it was time for lunch. We headed to their regular lunch spot, Chez Napoleon on rue Bonaparte. As I had gained Man's trust, he held my arm as we walked down the street. In the restaurant, Man, as was his custom, sat with his back to the entrance so no one would recognize him. Of course, everyone there knew exactly who was sitting in that seat—though, just as we started to eat, I looked up to see David Hockney walking out. When I mentioned who had just left, Man laughed and said he had heard that Hockney had come to Paris to draw his portrait. Hockney had not seen Man and, so, the portrait would have to wait.

Back at the house after lunch, Gavina and Man talked about adapting a Man Ray lampshade for production by Sirrah, a lighting company Dino was guiding. He and I took the shade off its armature and opened it up. Dino held it flat over a sheet of paper while I traced it. Man then made suggestions, and we drew sketches of what a base could be. A few days later, Gavina would take the sketches and the tracing back to Italy, where they would become the lamp called *La Lune sous le Chapeau*.

Dino and I left Juliet and Man around 5 and sped to the Galerie Paul Facchetti on rue de Lille. Madame Facchetti greeted us, and we got into her car and drove to a small town outside the city. Dino hopped out and tugged a chain outside a door. A cowbell clanged. He had the gift "per Teeny"—and he introduced me to Teeny Duchamp. Duchamp's widow was born Alexina


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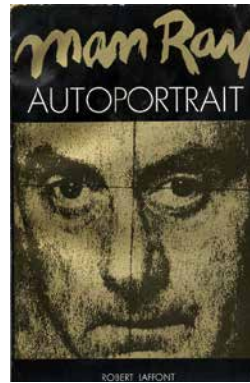
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Man Ray's birthday present to the author, with the inscription.

Sattler in Cincinnati, and, aside from her astonishing jewelry and French wardrobe, she looked every bit the Midwesterner. A friend later told me that she was never comfortable speaking French, so she was happy to be speaking American English with me.

I was excited to see that Teeny Duchamp's house was filled with furniture by two of my other design heroes, Claude and François-Xavier Lalanne, whose joyous work I had never seen in person. Now I was surrounded by it. Their blue fiberglass hippopotamus bathtub was in one bedroom. I flipped off my shoes and jumped into it. I was sorry to leave to visit more friends in the next town—until I learned our next stop would be the farmhouse of “Les Lalanne.” I had just been sitting in their furniture, and now I was about to have dinner in their house. I remember it as one of the most astonishing nights of my life, but—after too much food, way too much wine, and too much to experience on one birthday—I no longer can recall the conversation. Somehow, Mme. Facchetti got Teeny back to her house and Dino and me back to Paris. I'm not sure how I got to sleep, but somehow I did.

Cut to January 2007 and an exhibition of the work of Les Lalanne—the crocodile bench, the hippopotamus bar, the baboon cabinet—at the Paul Kasmin Gallery, in Chelsea in Manhattan. On the last day of the show, my husband, Paul Aferiat, and I decided to stop in to see it one more time. My heart skipped a beat when I saw Les Lalanne talking to Paul Kasmin in the back room. Without thinking, I unhooked a privacy chain and walked over to Claude and François-Xavier. “Excuse me,” I said, “you probably won't remember, but I was a friend of Dino Gavina's, and we came to your house for dinner one night a long time ago.” François-Xavier looked at me, put his hand on my forearm, smiled, and said, “It was your 25th birthday, a most fantastic night.”

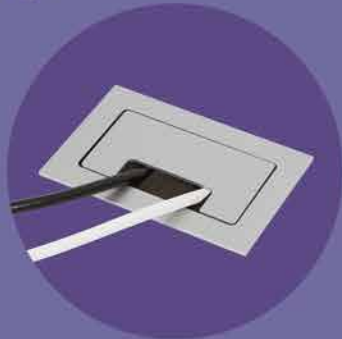
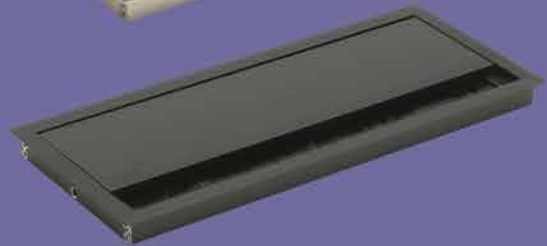
There was something else about that fantastic day and night that I had forgotten over the years but that I was reminded of some time later, when the Jewish Museum in New York had a Man Ray exhibition. In a vitrine in the last gallery was a copy of *Autoportrait*. “That is the 25th-birthday gift Man Ray gave me,” I told Paul. He looked at me as if I were delusional. I grew uneasy—I hadn't seen the book in years.

When we got home, I tried to remain calm as I strolled casually around our loft, scanning row upon row of bookshelves: nothing. My heart sank. Then suddenly, there they both were, tucked unassumingly among other titles on architecture and design: *Analphabet* and *Autoportrait*. I pulled them down gently and opened the cover of *Autoportrait*.

Having not seen the light of day in many years, the ink of the inscription was as black as the day it was written: “Pour Peter Stamberg—cordialement Man Ray 1974.” ■

Peter Stamberg is a New York-based architect whose work ranges from residential to institutional and hospitality.

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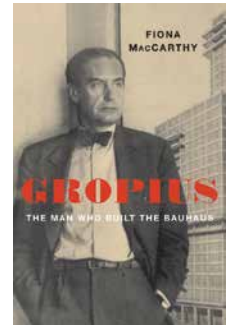
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Master of Fate

Gropius: The Man Who Built the Bauhaus, by Fiona MacCarthy. The Belknap Press of Harvard University Press, 560 pages, \$35.

Reviewed by Caroline Rob Zaleski



WELL TIMED for the Bauhaus centenary, this is the first biography of Walter Gropius (1883–1969) since Reginald Isaacs's *Gropius: An Illustrated Biography of the Creator of the Bauhaus* was translated from German and abbreviated in 1991. Isaacs worked on his original tome with Gropius and his second wife, Ise. Now Fiona MacCarthy breaks some new ground, writing in a popular style but relying heavily on Isaacs's classic. Her quest is to elaborate on the personal Gropius while leaving his inventive architecture and celebrated pedagogy in the background.

MacCarthy, who has written biographies of William Morris and Lord Byron and was a design writer for *The Guardian*, met Gropius when she was a young reporter. She had expected he would be formal and stern, and was surprised by his charm and sexual charisma. The impression influences her portrait and contrasts with her terse descriptions of Gropius's architectural practice and how he ran the Bauhaus like an opera impresario. Before meeting Ise, Gropius yearned for domesticity, and we can see why after reading bits of tormenting letters his notorious first wife, Alma Mahler, wrote to him while he served as a cavalry officer in World War I. The fanciful Alma dismissed her husband as a dullard and refused to easily share their child, Manon. Deeply troubled by his painful marriage and suffering battle nightmares, Gropius started the Bauhaus in Weimar and got a divorce.

The book divides a complicated life into three phases: German, English, and American. We see the tortured genius behind the “Knight in Armor” (Ise's moniker), a shy, self-examining man of enormous self-control. Gropius administered the Bauhaus while confronting an intensely demanding faculty, lack of funds, and menacing right-wing government officials. In 1928, he left his post at the Bauhaus—by then established in Dessau—for Berlin.

In 1934, he and Ise slipped out of Nazi Germany and went to London, where he became head of design for the architecture firm Isokon, but building commissions were sparse. In 1937, Harvard's dean of the Graduate School of Design, Joseph Hudnut, appointed him chair of architecture, and Gropius and Ise moved to the U.S. Here, he reignited the Bauhaus flame and designed, with his former student Marcel Breuer, a number of superb New England houses, including his own in Lincoln, Massachusetts. In 1945, Gropius agreed to become *éminence grise* for The Architects Collaborative (TAC) and helped the young founding partners make it one of the most prolific architecture firms of the time.

Unfortunately, the American context that MacCarthy paints lacks a sense of place and some truly important people. Where's Gropius's great American friend and promoter, architect Lawrence Kocher? Gropius and Kocher met in 1929, when Kocher was *RECORD's* managing editor and soon to be known as co-designer (with Albert Frey) of the *Aluminaire House* (1931). Gropius and Kocher talked of creating a Bauhaus in Long Island and had more interchange when Kocher later took over Black Mountain College in North Carolina.

More expertly covered by the British author are the London sojourn and Gropius's late-in-life travels around the world, in the final chapter, to receive recognition and honor for his contributions to the Bauhaus and modern architecture. In spite of omissions, this volume is an engrossing read. ■

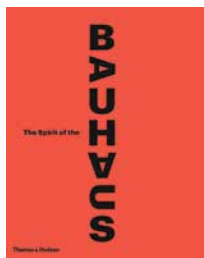
Caroline Rob Zaleski is the author of *Long Island Modernism: 1930–1980*, published by Norton.

From Weimar, Dessau, and Beyond

Reviewed by Wendy Moonan

The Spirit of the Bauhaus, translated from the French catalogue *L'Esprit du Bauhaus*, by Ruth Sharman; edited by Olivier Gabet and Anne Monier. Thames & Hudson, 188 pages, \$50.

This fine new English translation of the French catalogue for the Bauhaus show at the Musée des Arts Décoratifs in Paris, in 2016, is a worthy addition to the scholarship on the legendary school as it celebrates its 100th anniversary.



The tenure of the Bauhaus was famously short, from 1919 to 1933. This book provides a definitive retrospective of its accomplishments, with 24 provocative essays by director Olivier Gabet and six curators of the Musée des Arts Décoratifs, as well as scholars Jean-Louis Gaillemain and Nicholas Fox Weber.

The focus is the inner workings of the school as it morphed under each director—Walter Gropius (1919–28), Hannes Meyer (1928–30), and Ludwig Mies van der Rohe (1930–33). The Bauhaus was an evolving, avant-garde, utopian experiment in Modernism, whose instructors included Gropius, Mies, Josef and Anni Albers, Marcel Breuer, Herbert Bayer, Paul Klee, and Wassily Kandinsky.

Half the essays focus on individual workshops, including painting, architecture, sculpture, ceramics, stained glass, cabinet-making, metalworking, mural painting, photography, bookbinding, and theater.

A few essays cite the teachers' various ideological roots. In his Bauhaus manifesto, Gropius urged “architects, painters, and sculptors to return to traditional crafts as a source of regeneration. Together let us desire, conceive, and create the new structure of the future.”

Klee and Alma Mahler had a passion for Theosophy and Rudolf Steiner's writings. Kandinsky was interested in astrology, alchemy, and “the spiritual in art.” Johannes Itten followed Otoman Zur-Adusht Hanish, founder of the Mazdaznan faith (which combined elements of Christianity, Zoroastrianism, and Tantrism). Some members of the Bauhaus were Socialist, others Communist.

The book reads as if it were a contemporaneous account, complete with photos of the participants, their jubilant activities, and workshop output. It's a perfect companion to Barry Bergdoll and Leah Dickerman's excel-

lent catalogue for the 2009 MoMA exhibition, *Bauhaus: 1919–1933: Workshops for Modernity*.

Bauhaus Journal 1926–1931, facsimile edition. Lars Müller Publishers, 428 pages, \$80.

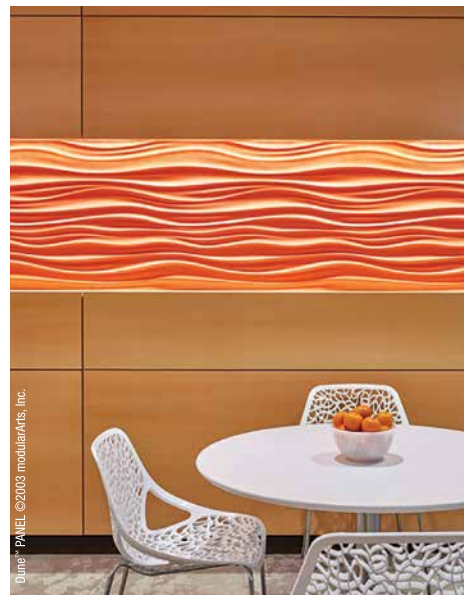
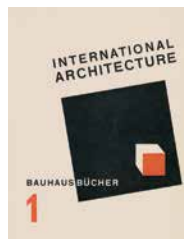
A key primary source for scholars, this is the first publication of the Bauhaus journals in English and in a font large enough to read easily, unlike the originals. From 1926 to 1931, the school produced 14 issues—really six-page newspapers—for some 3,000 subscribers. The idea was to disseminate the Bauhaus's artistic and social ideas with news, illustrated articles, and photographs of art and objects produced in the workshops. Each issue had a different editor and thrust. While László Moholy-Nagy devoted his to typography, Gropius focused on product standardization, and Oskar Schlemmer on his innovative designs for theater.

Publisher Lars Müller and the director of Berlin's Bauhaus-Archiv/Museum für Gestaltung, Annemarie Jaeggi, have written short essays on how crucial it was that a small school reached a wide audience across Europe.

Bauhausbücher 1, 2, 5, and 8. Lars Müller Publishers, \$45; \$34 paper.

Müller has also published handsome facsimiles, without commentary, of four slim, Bauhaus-produced volumes from the 1920s. *International Architecture*, edited by Gropius, is a book of photos of modern buildings, models, and designs by him and his Modernist contemporaries, including Frank Lloyd Wright, Mies, Adolf Loos, Bruno Taut, and Peter Behrens. Moholy-Nagy's *Painting, Photography, Film* is a defense of photography as an art form, illustrated by manipulated photographs. Klee's *Pedagogical Sketchbook* reproduces the drawing lessons of his Bauhaus instruction plan. And in *New Design: Neoplasticism*, Piet Mondrian shares his (incomprehensible) theories on “new painting” and its relationship to the unconscious, music, architecture, and dance. ■

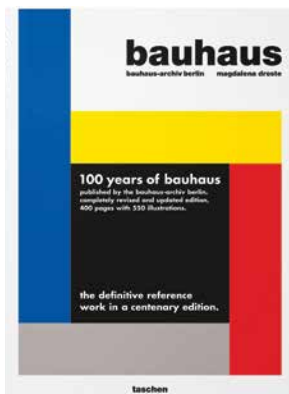
Wendy Moonan, based in New York, writes on design and architecture and is the author of *New York Splendor: The City's Most Memorable Rooms*.



The Best of the Rest: the Bauhaus and Modernism

Reviewed by Clifford Pearson

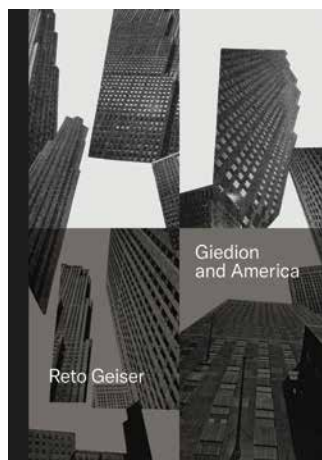
Bauhaus: 1919–1933, by Magdalena Droste. Taschen, 400 pages, \$50. Produced in collaboration with the Bauhaus-Archiv/Museum für Gestaltung in Berlin, which has the largest collection Bauhaus documents and works, this revised and updated edition of a 1990 book offers a comprehensive look at the famous school. The author, who worked at the Bauhaus-Archiv and was a professor of art history at the Brandenburg University of Technology, Cottbus, covers the three iterations of the school—in Weimar, Dessau, and Berlin—examining the ideas and personalities that drove each one. More than 500 illustrations show the full range of work produced at the Bauhaus, from weavings and pottery to graphic design and architecture.



Bauhaus Imaginista: A School in the World, edited by Marion von Osten and Grant Watson. Thames & Hudson, 312 pages, \$60. This large-format book (over 9 by 12 inches) looks at the Bauhaus's impact around the globe. Essays by artists, historians, and cultural theorists—such as Beatriz Colomina, Mark Wigley, Eduard Kögel, Zvi Efrat, and Magdalena Droste (see above)—chart the dissemination of Bauhaus ideas to places as diverse as India, Japan, and Nigeria, and also examine some of the cultures the Bauhaus drew upon, from North Africa, Mexico, and Argentina.



Giedion and America: Repositioning the History of Modern Architecture, by Reto Geiser. gta Verlag, 465 pages, \$85. This reevaluation of the work of Sigfried Giedion focuses attention on the Swiss art and architecture historian's stays in the U.S. and his lectures at Harvard in the late 1930s, when Walter Gropius was chair of the architecture department. The lectures preceded the publication of the landmark *Space, Time and Architecture: the Growth of a New Tradition*, in 1941. Giedion, who was an active member of the Modernist movement as both a scholar and secretary general of the International Congresses for Modern Architecture (CIAM), developed close relationships with key intellectuals from a range of fields, including media theorist Marshall McLuhan, writer Lewis Mumford, architect Josep Lluís Sert, and artist László Moholy-Nagy. Geiser paints Giedion as a valuable figure “in between”—continents, professions, and intellectual contexts.



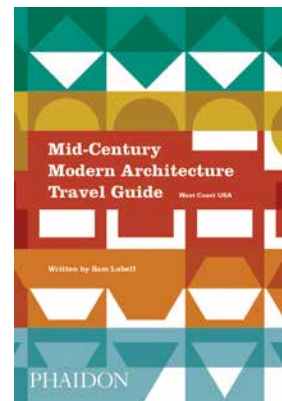
The ABC's of Triangle, Square, Circle: The Bauhaus and Design Theory, edited by Ellen Lupton and J. Abbott Miller. Princeton Architectural Press, 72 pages, \$30.

A fascinating work of design theory and graphic design, this new edition of a book first published in 1991 starts with Wassily Kandinsky's assertion of a universal correspondence between the three elementary shapes and the three primary colors. As the editors explain, “the dynamic triangle is inherently yellow, the static square is intrinsically red, and the serene circle is naturally blue.” Lupton, who is a graphic designer and a curator at the Cooper Hewitt, and Miller, who is a graphic designer and partner at Pentagram, explore the Bauhaus notion “that two-dimensional design is a language structured by universal laws of geometry and perception.”

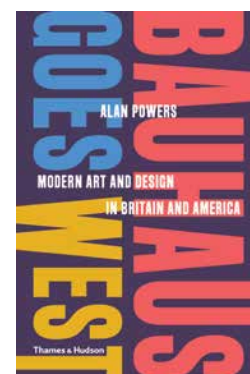


Mid-Century Modern Architecture Travel Guide: East Coast USA, by Sam Lubell, with photography by Darren Bradley. Phaidon, 377 pages, \$35.

The author, a former RECORD editor, calls this book a Midcentury Modern road trip from New Hampshire to Florida. The handsome design, new color photography, and informative text make it a pleasant journey that includes a number of works by Bauhaus alums such as Gropius, Breuer, and Mies. The book offers a helpful introduction and then presents more than 250 buildings, ranging from the Gropius House in Lincoln, Massachusetts, to Breuer's Stillman House I in Litchfield, Connecticut, and Mies's One Charles Center in Baltimore. The author lets you know if each destination is open to the public, charges an admission fee, or has a café/restaurant or gift/bookshop. If you're a Modernist junkie and are planning trips to Manchester, New Hampshire; Norfolk, Virginia; or Sarasota, Florida, you'll want to bring this guide along for the ride.



Bauhaus Goes West: Modern Art and Design in Britain and America, by Alan Powers. Thames & Hudson, 256 pages, \$40. Powers, who teaches architecture and cultural history in London, traces the impact of the Bauhaus diaspora after the Nazis closed the school in 1933 and key figures such as Gropius, Breuer, and Moholy-Nagy made their way to Britain and then America. The author examines the exchange of ideas between continental Modernism and progressive design in both the UK and the U.S.



New Wine for an Old Home

A vineyard in the Chinese countryside both incorporates tradition and defies it.

BY CLIFFORD A. PEARSON
PHOTOGRAPHY BY CHAO ZHANG



LIKE THE notion of cultivating Cabernet Sauvignon, Pinot Noir, and sauvignon blanc grapes in China, Qingyun Ma's design of GateHall grafts Western concepts onto local Asian roots. This latest addition to the architect's Jade Valley Winery, outside of Xi'an, in the center of the country, is a hybrid that's simultaneously familiar and odd. A multi-purpose three-story building, which includes an art gallery as well as dining and guest rooms, shares a lineage with nearby farmhouses in its simple rectangular footprint, poured-concrete frame, and river-stone cladding. But the 21,000-square-foot building has been warped by foreign influences—so much

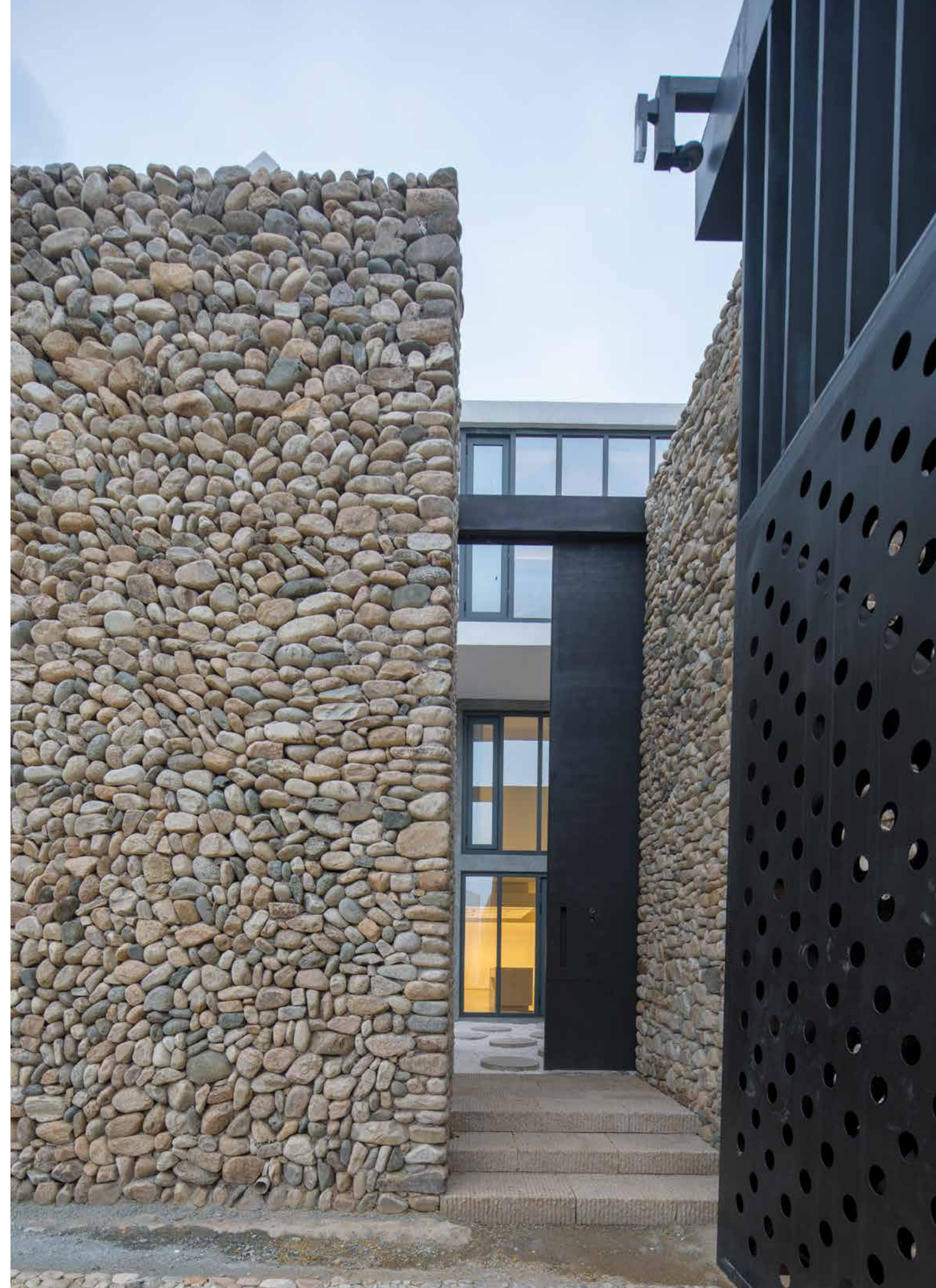
so that one facade, which is almost completely glazed, has a gabled roof, broken by a fractal-inspired dormer, an elevation with no true precedent in Chinese or imported architecture. Even seemingly indigenous elements become subverted by alien concepts, including an entry court with stone walls nearly 20 feet high, defying local tradition in their dimensions.

Since Ma, principal of MADA s.p.a.m., started making French-style wines in 2000 in the foothills of the Qinling Mountains, this Chinese-born architect—who was dean at the University of Southern California (USC) School of Architecture from 2007 to 2017—has been building his

YIN AND YANG The three-story building borrows the simple rectangular footprint, concrete frame, and river-stone cladding of the local vernacular but infuses them with contemporary elements, such as a glazed facade and a fractal-inspired dormer (above and opposite).

winery as an experiment in cultural and architectural cross-fertilization. He started with a much acclaimed stone-and-bamboo house for his father and went on to create a series of structures for making and tasting wine, as well as mini-hotels in new and renovated buildings.

Ma grew up in the city of Xi'an, but his parents come from this rural area, so he feels a connection to it and wants to revive the local economy with wine-making and tourism. In





NEW AGE With spaces for art, fine dining, sleeping, and reflection, GateHall aims to stimulate the local rural economy with wine-making and tourism (this page and opposite).

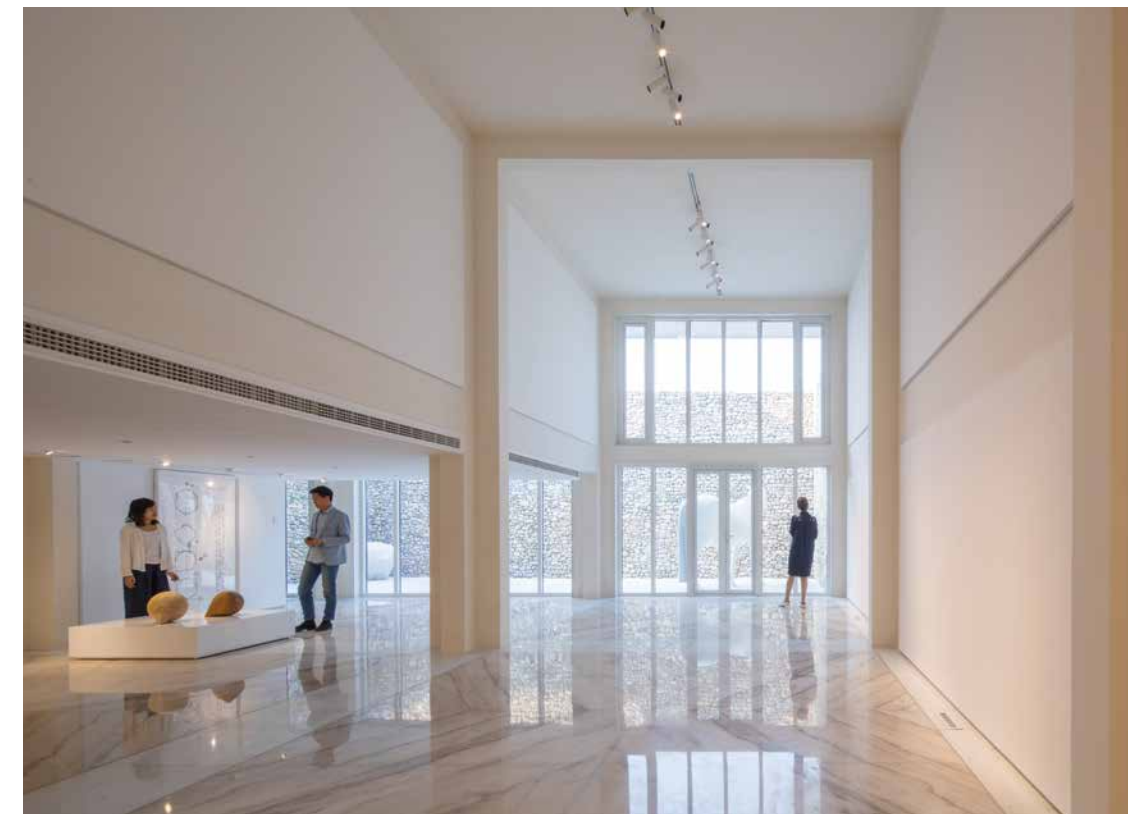
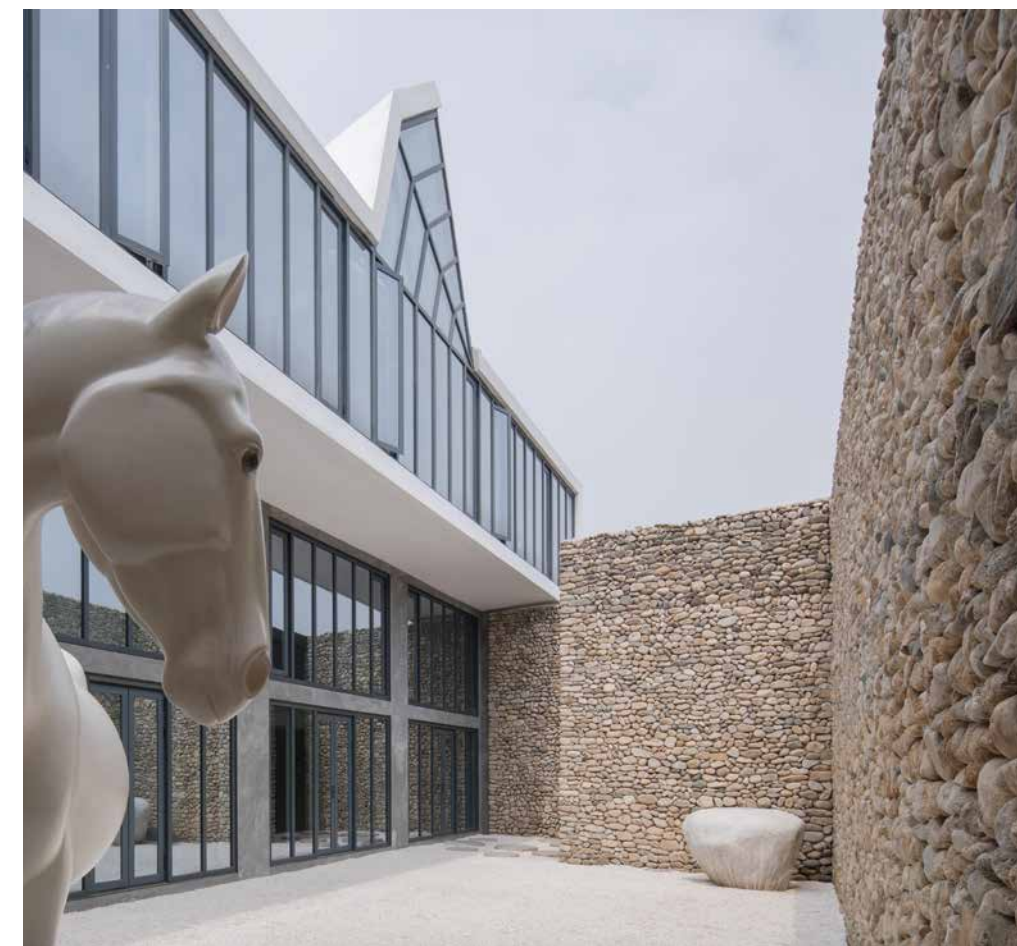
recent years, newly affluent Chinese from rapidly growing urban centers have developed a taste for European-style wines, while rediscovering the lure of the Chinese countryside—now seen as a healthy getaway and a link to an ancient culture in which scholars, poets, and painters found inspiration in forests and mountains.

“The goal is to integrate culture, agriculture, and nature,” says Ma. “In China, we talk about *lao jia*, or ‘old home,’ which is the place you come from. I see GateHall as a ‘home at old home,’ not specifically for my family but for everyone who has roots in the countryside. It will be both a memory of old times and a promise of the future.”

Called GateHall because it’s at the base of a gravel road leading uphill to Jade Valley’s main winery structures, the new building plays on notions of duality. Not purely a gate—which is either open or closed—it’s a place where people can linger to see art, drink wine, dine, even spend a night. It’s both private and public, a threshold and a destination. “In Chinese, there are the terms *men-shi* (market gate) and *men-lei* (guest gate), referring to public and private entries,” says Ma. “GateHall is both.”

Approaching it from a narrow rural road, visitors enter through an opening in the high-walled side yard. On the ground floor is a reception area with art displayed in both a double-height gallery and more intimate, single-height spaces. The top floor provides generous cooking and eating areas beneath the gabled roof, while sleeping quarters for tourists and artists-in-residence are on the second and third levels. There’s a wine cellar in the basement.

Fusing opposites has been part of Ma’s identity since his undergraduate years at Tsinghua University, in Beijing, and graduate studies at the University of Pennsylvania. After working for Kling Lindquist in Philadelphia and Kohn Pederson Fox in New York, he returned to China to set up his own practice, MADA s.p.a.m., before heading back to the States for his deanship at USC a few years later. Now he plans to use Jade Valley as a base for his American Academy in China, for students from design schools there and elsewhere. The larger goal is to transform part of China’s countryside by bridging it economically and culturally to cities and to the 21st century. “Tradition needs to be open to the future,” says Ma. “We need both to respect and violate it.” ■



Learning Tools

SHoP's Innovation Lab for the Benchmark School addresses academic challenges through architectural thinking.

BY JAMES S. RUSSELL, FAIA

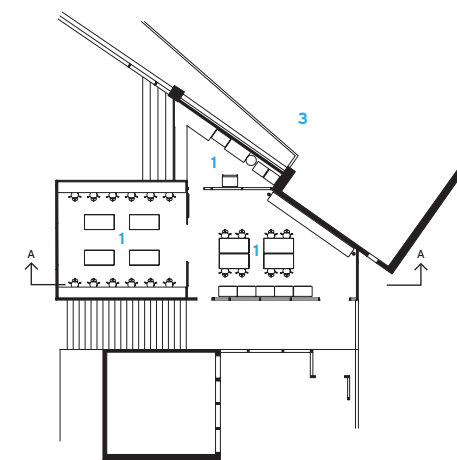


QUESTIONS CONCERNING how students learn do not automatically suggest design solutions, but when the Benchmark School approached William and Chris Sharples, two of the founding principals of SHoP Architects, for help in the development of robotics as a teaching tool, they saw opportunity.

The architects, identical twins and the “SH” in the firm’s name, are alumni of the independent school, founded in 1970, by Irene W. Gaskins, to help students who learn differently. In a recent phone conversation they finished each other’s rapid-fire sentences, such was their enthusiasm for the school that changed their lives. “We had graduated sixth grade, but our reading comprehension was barely at third-grade level,” said William. Their parents, aware how challenged their apparently bright sons were, enrolled them in the then-new institution. “We were very upset after the first day,” the Sharples said. “Two weeks later, we were having a ball.”

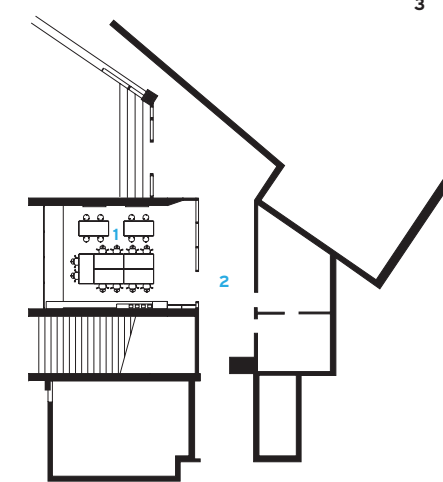
The two were ultimately diagnosed with dyslexia, which the school is geared to address, along with such diagnoses as perceptual difficulties and attention-deficit disorders—by first building confidence and then helping children discover their own ways of learning, an ap-

The Benchmark School’s metal-clad Innovation Lab is set at an angle between a stucco-faced performing-arts building and another wing (above). Students see into the lab through the glass entry. Metal panels (left and previous page) are created in a descending pattern to reflect light.



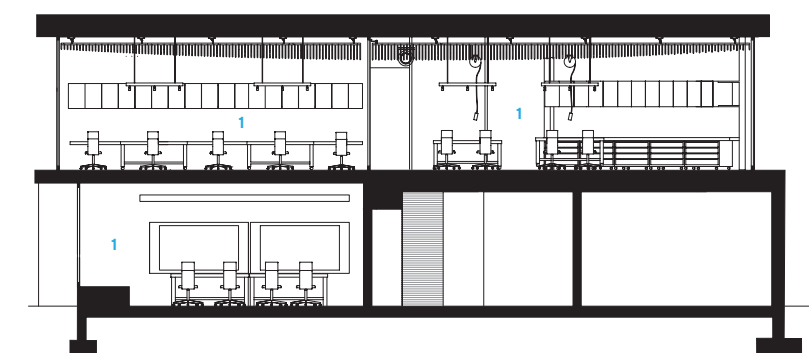
UPPER-LEVEL PLAN

- 1 LAB SPACE
- 2 CORRIDOR
- 3 EXISTING BUILDING



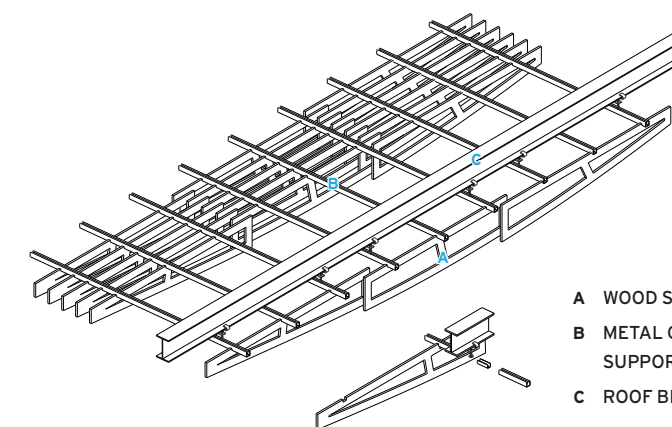
LOWER-LEVEL PLAN

0 15 FT.
5 M.



SECTION A - A

0 10 FT.
3 M.



- A WOOD SLAT
- B METAL CEILING SUPPORT
- C ROOF BEAM

CEILING ASSEMBLY

proach that has been influential. “We meet the students where they are, not where their age says they are supposed to be,” explained Betsy Cunicelli, Benchmark’s director of special projects.

Located in Media, Pennsylvania, 13 miles west of Philadelphia, Benchmark is a five-building, 23-acre campus serving 185 first- through eighth-grade students. There’s a heavy focus on reading and math, with instructors applying a wide range of learning research to support students individually in such tasks as time management, persistence, working collaboratively, and thinking critically.

Many dyslexics use visualization and hands-on experiences to commit concepts to memory. Students who struggle to comprehend a verbal explanation of something may understand better by assembling it on their own. This “constructing knowledge through experience,” as Benchmark puts it, is one way students learn.

Benchmark’s leaders and students visited both SHoP’s Manhattan office and the firm’s lab in an industrial space in Brooklyn, where they saw a repurposed auto-assembly line robot and tools for model-making, comparing fabrication possibilities, and mocking up assemblies to assess their constructability and visual impact. The school’s staff was impressed not only by the students’ excitement over the lab, but by the iterative problem-solving common in architecture. SHoP and the educators together concluded that an innovation lab could give students new opportunities to choose their own approach for addressing open-ended

problems, while collaborating with others to succeed.

The resulting lab is a diminutive 2,200-square-foot glass-and-metal-clad two-story structure tucked like a hinge into a gap between two existing buildings. The full-height glass entry wall puts the Innovation Lab’s activities on display, engaging passing students. The upper level houses three spaces for middle-school pupils: two open labs separated by a sliding-glass partition for maximum flexibility, and a small triangular space (for messier projects) wedged between them behind a glazed wall. A classroom for the youngest children is on the lower level. With butcher-block lab-style tables, and counters along the walls for computers, the rooms include sinks, adjustable track lighting, power-cord outlets that drop down from the ceiling, and whiteboard wall surfaces.

Bowed wood strips suspended from the ceiling of the upper-level space demonstrate the assembly processes that students will use on their own; they were computer-designed and then CNC-milled in SHoP’s Brooklyn lab. Students learn how the ceiling was made by viewing the sequence of fabrication and assembly in a virtual-reality film; they can then apply a design-and-build process to their own work. Instructors also show off a similar design-to-fabrication process used for the exterior metal panels. The creases in the panels vary light reflections, designed according to a computer-generated algorithm.

The lab was completed in August 2018 but was fitted out over ensu-



Gently draping ceiling slats in the upper-level labs were designed on a computer that directed cutting on a CNC machine, much like the work students visualize on computers and then make on the lab tables (above). The large windows on both levels look out onto extensive wooded grounds.

ing months. Pedagogically, it will remain a work in progress, with Benchmark director of innovation Emma Mattesky, who oversees the lab, helping instructors discover its possibilities. “We start with what we’re teaching already and use the lab as an enhancement, and technology as a tool,” said Mattesky. The techniques and materials can run the gamut from the quotidian to the specialized: spaghetti, glue, and Legos to computers, 3-D printers, and little model robots that can be assembled and coded by students to perform tasks like completing obstacle courses. “We’re thinking about how the lab reflects our teaching and practice strategies,” she adds.

“Visual art is lacking in a lot of curriculums and is not part of STEM programs,” said the Sharples. “For a learning-disabled student to say, ‘I can script [a computer program], I can build, and I can 3-D print’ gives them a big edge. This is what we hungered for back in sixth grade.” ■

James S. Russell, FAIA, who previously directed strategic initiatives at the New York City Department of Design and Construction, is a journalist and consultant.

credits

ARCHITECT: SHoP Architects – William Sharples, Christopher Sharples, John Cerone, Violette de la Selle, Geof Bell, Mike Budzinsky, Kendra Ho, Charlie Wynter, Aaron King, Carter Read, design team

ARCHITECT OF RECORD: CICADA Architecture/Planning

ENGINEERS: Bruce Brooks & Associates (m/e/p/fp); Orndorf & Associates (structural)

CONSULTANTS: Diversified Lighting Associates (lighting design); Northstar (owner’s rep)

GENERAL CONTRACTOR: W.S. Cumby

CLIENT: Benchmark School

SIZE: 2,200 square feet

COST: withheld

COMPLETION DATE: September 2018

SOURCES

CLADDING: Sobotec (metal panels); Kawneer (curtain wall); W.R. Meadows (moisture barrier)

GLAZING: Alderfer (glass); Dormakaba (frameless partitions)

ROOF: Firestone; Drexel Metals

DOORS: Assa Abloy; C.R. Lawrence (pulls)

INTERIOR FINISHES: CertainTeed (ceilings); Sherwin-Williams (coatings); Wilsonart (plastic laminate); Johnsonite (rubber floor)

FURNITURE: Goebelwood (casework); Enea; Tolix; Artek (seating); Knoll; Global Industrial (tables)

LIGHTING: Finelite; Pinnacle Architectural; Bruckl Con-Tech; U.S. Architectural

Pick a Color

Manufacturers of everything from acoustic materials to upholstery fabric are debuting their brightest innovations at the annual Chicago trade show this month.

By Kelly Beamon



Architect Jean Nouvel, designer of the Jumper chair



Jumper

A new line of task chairs by 2008 Pritzker Prize laureate Jean Nouvel offers a menu of attractive options for active sitting. Designers can choose a molded polypropylene or wood seat in one of two styles, eight sizes, five bases, and virtually any color. All combinations encourage movement while resting.

vsamerica.com





Radii

To distinguish it from other file cabinets, Radii, an exuberantly colorful collection from Allsteel in collaboration with IDA Design, boasts lots of compact compartments, drawer dividers, and accessories. In addition to helping personalize storage in today's virtually paperless offices, the colorful steel pedestals are available with optional undercounter mounting hardware that works with any desk.

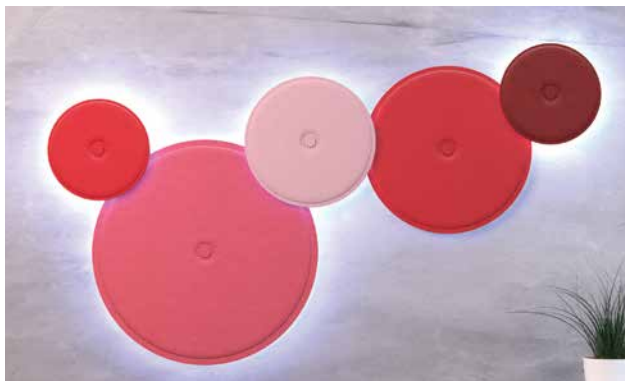
allsteeloffice.com



Flip

One of the innovative three-dimensional shapes in Xorel Artform's popular line of acoustic elements, Flip adds squares and rectangles to panel options. Available with an NRC of 0.7 or 0.8 and in sizes 16" x 24", 16" x 48", 24" x 48", and 24" square, Flip also comes with wall, ceiling, or suspension mounting hardware.

xorelartform.com



Waffles Wall Tile

Luxxbox is debuting a new LED-backlit version of its Waffles Wall Tile, extending the sound-control options of its hybrid acoustic-lighting fixture line. The Discs are available in diameter sizes ranging from just over 17" to about 39". Each Disc features an NRC of 0.45+ and the company's high-quality PET fabric.

luxxbox.com



Premier Silicone K2292

Premier is Knoll's first upholstery textile made using its proprietary SiO medical-grade silicone resin, to withstand abrasive cleaners and resist scuffing and scratching for up to 200,000 double rubs. It is available in 54"-wide bolts and 33 bleach-cleanable colors.

knoll.com



Future Tense

This Suzanne Tick–designed fabric collection emphasizes an oversize scale and takes inspiration from the large forms of such movements as Brutalism and Surrealism. Among the patterns, Schema (shown) is a contract-grade, bleach-cleanable acrylic-and-polyester blend that is free of heavy metals and comes in six colorways.

luumtextiles.com



iD Mixonomi

This line of modular vinyl floor tiles expands Tarkett's solutions for durable flooring that also adds visual interest. The iD Mixonomi collection is made with 32% recycled content and is phthalate-free. Tiles are available in 34 colors and feature seven graphic patterns and three miniature-shape patterns.

professionals.tarkett.com



Dado

Award-winning industrial designer Alfredo Häberli developed this contract-grade indoor sofa with forms that break apart for easy reconfiguration. Users can personalize the arrangement of lounge chairs, chaise longues, footrests, and center and corner modules, and combine an unlimited number to suit settings ranging from health-care waiting rooms and offices to hotel guest rooms.

andreuworld.com



GOOD DESIGN IS GOOD BUSINESS

Record's 22nd annual program demonstrates how architecture can benefit a business's bottom line.

104 Boies Schiller Flexner
Schiller Projects

106 Center for Advanced &
Emerging Technology
BNIM

107 Turnstyle
Architecture Outfit

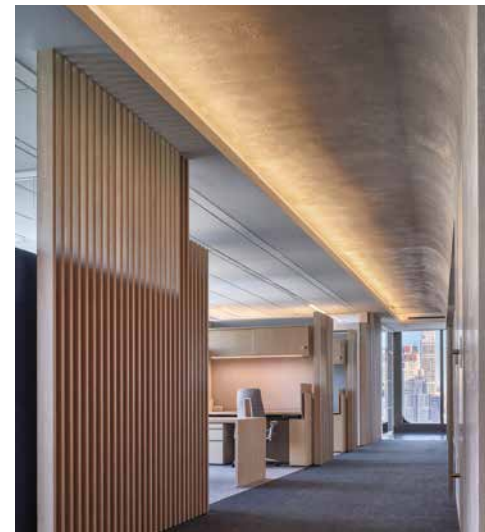
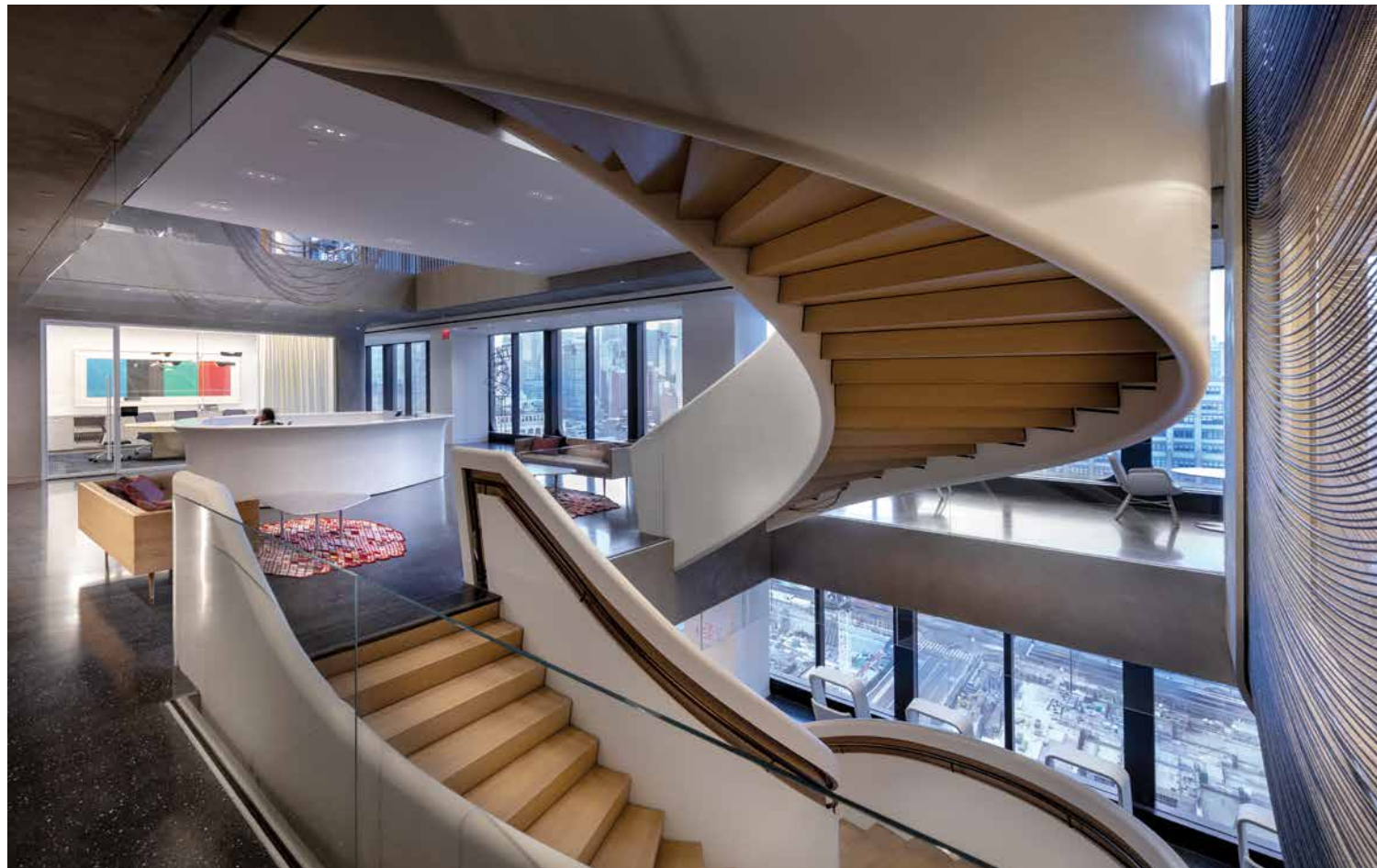
108 Blue Bottle Coffee
Bohlin Cywinski Jackson

110 AOS Office Renovation
*EskewDumezRipple and
VergesRome Architects*

111 Hines New York
LSM

112 Hudson Woods
Lang Architecture

113 New Lab
Marvel Architects



A spiral stair (opposite, top) links the firm's three floors. A lounge near a boardroom (opposite, bottom) overlooks reception. Halls are flanked by associate work areas (above), plus glazed partner offices and veiled reading and phone hubs (right). Small meeting rooms and informal seating (below) are available throughout.



Boies Schiller Flexner at 55 Hudson Yards
New York City
Schiller Projects

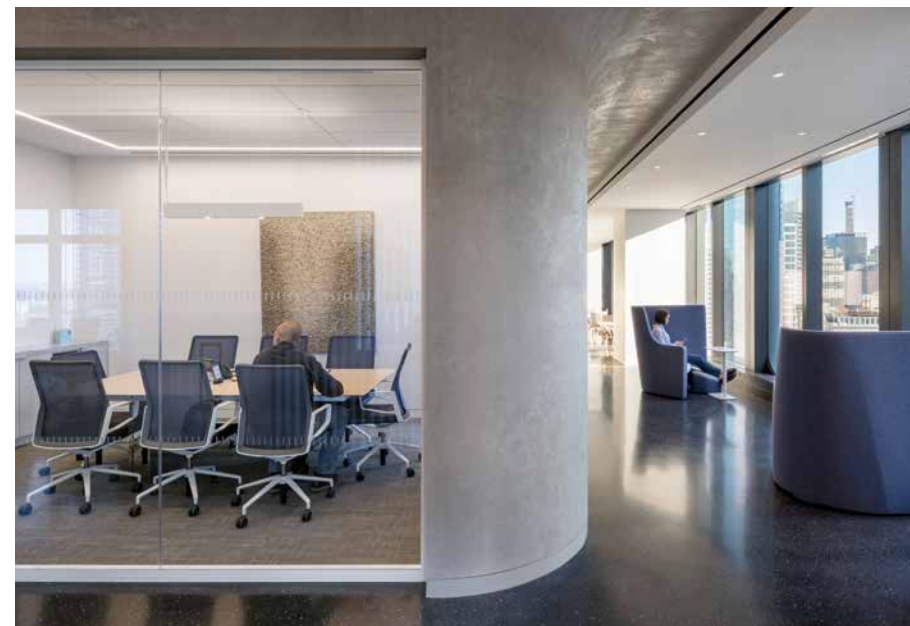
IN 2016, when law practice Boies Schiller Flexner (BSF) decided to relocate its Manhattan office from traditional, disjointed Midtown quarters to four contiguous floors in 55 Hudson Yards—a new skyscraper by KPF that was under construction at the time—the firm commissioned Schiller Projects (SP) to invigorate its workplace by reflecting its increasingly collaborative culture. In response, the architecture studio launched an 11-week audit of the existing facility to determine logistical and spatial needs, and what should change. The resulting data enabled the design team to clearly communicate its strategy to the client and develop a program that would substantially revise the way it does business.

The initial buildout encompasses three floors connected by a gracious spiral stair that sparks chance meetings. SP eliminated the typical hierarchical law-office layout, says principal Aaron Schiller and, instead, crafted a visually open plan on all levels, each with a social hub at its center: coffee bar and cafeteria, reception

area, and casual seating for work or conversation. To underpin employee recruitment and retention, they devised friendly daylit spaces flanking fluid, gently curved corridors. Support staff and associates are now clustered along window walls, with nearby private hubs for reading, phone calls, and smaller groups. Glass-enclosed partner offices within the core face these areas, while a reduced number of glazed conference rooms are scattered throughout the office—along with break areas and lounges—instead of being isolated on a dedicated floor.

As the architects reimaged BSF's workplace, they convinced the client to adopt a virtual data-management system. A staff portal was developed for access to key resources on mobile phone, computer, or wall display, and the firm's document maintenance was digitized to minimize paper use and storage, a move that BSF predicts will save the company up to \$3 million by 2022. These changes also free employees to work anywhere in the office.

While BSJ's Hudson Yards office is 30,000 square feet smaller than its previous location, the efficient organization and plan leave significant room for collaboration and growth, says Schiller. In the words of one of BSF's partners, "This has been a 'bet-the-business' move for us." *Linda C. Lentz*



PHOTOGRAPHY: © DAVID SUNDBERG/ESTO (4); MATT CARBONE (TOP, LEFT)

credits

ARCHITECT: Schiller Projects – Aaron Schiller, design principal; Colin Cleland, project architect; Ollie Zlotnicki, strategy lead

ARCHITECT OF RECORD: Spacesmith – Marc Gordon, Will Wong

ENGINEERS: Silman (structural); AMA Engineering (m/e/p); TM Technology Partners (it/sec)

GENERAL CONTRACTOR: Structuretone

CONSULTANTS: Longman Lindsey (acoustic); Davella (food service)

CLIENT: Boies Schiller Flexner

SIZE: 108,000 square feet

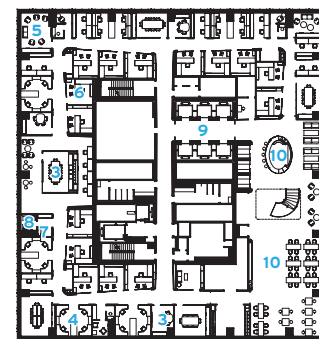
COST: \$44.3 million
COMPLETION DATE: January 2019

SOURCES

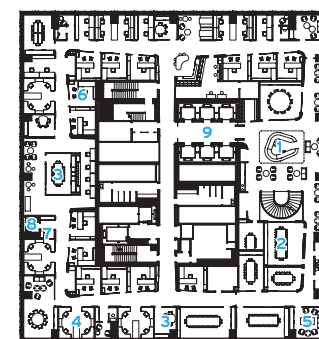
SURFACE MATERIALS: Armourcoat; Filzfelt; Pionite; Formica; Dupont; Zonc; Porcelanosa; Shaw Contract; Bentley; Armstrong

SHADES: Lutron
STAIR: Caliper Studios
FURNISHINGS: Miller Blaker; Tuohy; Bernhardt; Haworth; Vitra; Keilhauer; Arper; Blu Dot; Muuto; Maharam; De La Espada

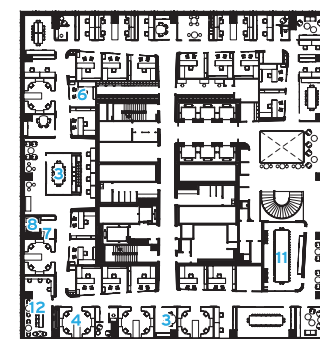
LIGHTING: HDLC



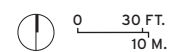
LEVEL-NINETEEN PLAN



LEVEL-TWENTY PLAN



LEVEL-TWENTY ONE PLAN



- 1 RECEPTION
- 2 CONFERENCE ROOM
- 3 WORKROOM
- 4 ASSOCIATE WORK POD
- 5 CONFERENCE LOUNGE
- 6 PARTNER OFFICE
- 7 CALL ROOM
- 8 READING ROOM
- 9 ELEVATOR LOBBY
- 10 COFFEE BAR/CAFÉ
- 11 BOARDROOM
- 12 LIBRARY



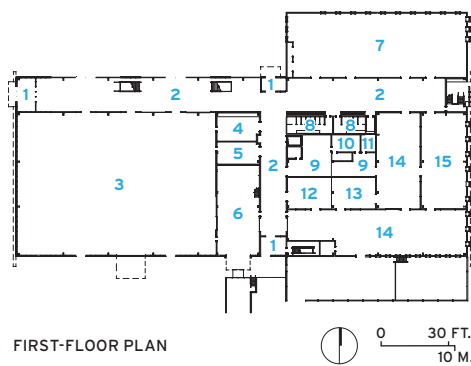
Center for Advanced & Emerging Technology

Omaha
BNIM

A NEW BUILDING at the Metropolitan Community College (MCC) in Omaha has become a versatile research, development, and training resource for students and industry. Designed by BNIM, the 65,000-square-foot Center for Advanced and Emerging Technology (CAET) includes a virtual-reality lab, 3-D printing, laser cutters, plasma-cutting technology, and a high-bay space for such endeavors as prototyping new equipment.

Central to an MCC 2010 master plan, which prioritized consolidating campus facilities, improving education delivery, and creating a job pipeline, the CAET also provides cutting-edge facilities to train professional teams. The contemporary steel structure, clad with white precast-concrete panels on the east and west, opens onto a two-story high-bay volume called Innovation Central with glazed garage doors. A main corridor on the north, the primary circulation spine, is the social hub and connects Innovation Central to the rest of the program: training rooms, a data center, multifunction spaces, and offices. Glass curtain walls provide views and daylight that reaches into interior training rooms, while a perforated metal screen on the building's south elevation manages solar gain. The architects redeveloped an existing urban site for the project, where they improved stormwater management for the area. They also created pedestrian and public-transportation connections to the neighborhood.

Since CAET opened in 2017, corporate training at MCC is up more than 300 percent, generating income for the school and employment opportunities for students. The building now serves as a national training center for EPI-USA, a California-based data-center-training organization. Additionally, in the first year of a new Prototype Design degree, six of 17 enrolled students received job offers after completing only half of a two-year program. Designed to be adaptable, the LEED Gold building will allow the school to grow and adapt to suit the spatial and technological needs of future students and business partners. *Laura Raskin*



- | | |
|----------------------|-----------------|
| 1 ENTRANCE | 9 STORAGE |
| 2 CORRIDOR | 10 ELECTRICAL |
| 3 INNOVATION CENTRAL | 11 DATA ROOM |
| 4 KITCHEN | 12 ELECTRONICS |
| 5 CUSTODIAL | 13 FIT & FINISH |
| 6 LOADING/RECEIVING | 14 PROTOTYPING |
| 7 EMERGING LABS | 15 DESIGN ROOM |
| 8 RESTROOM | |



A glazed garage door opens to Innovation Central (left), the building's main space. To its north, a double-height main corridor (above) serves as a social commons and connects to the building's various other facilities.

credits

ARCHITECT: BNIM – Kevin Nordmeyer, Jeff Shaffer, Dana Sorensen, Rod Kruse, Carey Nagle, Tina Wehrman, Sarah Hirsch, design team

EXECUTIVE ARCHITECT:
Holland Basham Architects

ENGINEERS: Nielsen-Baumert (structural); Morrissey Engineers (m/e/p)

CONSULTANTS: Lamp Rynearson (civil and landscape); The Sextant Group (av/it)

GENERAL CONTRACTOR:
Kiewit Corporation

CLIENT: Metropolitan Community College, Omaha

SIZE: 65,000 square feet

COST: \$20.4 million

COMPLETION DATE: June 2017

SOURCES

CLADDING: Swiss Pearl; Kawneer; Knight Wall; Enterprise Precast Concrete; Arconic Architectural Products; VaproShield
GLAZING: Vitro Architectural Products; Solatube

DOORS: Schweiss; Steelcraft; VT Industries; Kawneer



Colored tile indicates areas where pedestrians and shoppers can pause, eat, and chat (above). Overhead, a spine of mirror and perforated metal screens—laser-cut to reference historic subway-tile motifs—conceal m/e/p components. Backlit storefront signage (top, right) keeps the design cohesive. Small kiosks at the center are rented by niche vendors.

Turnstyle New York City Architecture Outfit

IN NEW YORK, where real-estate costs are at a premium, it's practically criminal to waste space—even the subterranean kind. One underutilized site was a block-long passage below street level that leads from the Columbus Circle subway station to West 57th Street. In 2014, local firm Architecture Outfit began working with Oases Development to devise a plan for the Metropolitan Transit Authority to transform it into a flexible underground food-and-shopping pedestrian street named Turnstyle.

The business opportunity was huge in a place traversed daily by 80,000 people, so the architects maximized the number of tenants—initially 34—giving them room to breathe. Two rows of small shops flank the corridor, the scale aimed at varying vendor types and minimizing vacancy periods. Large vendors can remove partitions to merge two or three shops.

The team visually opened and polished the site. Transoms above fixed- or folding-glass storefronts create the illusion of a lofty environment despite low beams. Mirrored panels and white-painted surfaces help distribute light. Perforated metal



screens conceal overhead conduits, pipes, and HVAC equipment. Blackened-steel signage adds an urban vibe, as do black pavers arranged in the same pattern as Rafael Guastavino's tile vaults at Grand Central Terminal. Elsewhere on the floor, additional kiosks sit on islands of light or multicolored tiles.

Still popular nearly three years in, the 30,000-plus-square-foot Turnstyle has managed to procure rents at market rates comparable to street-level retail and maintain 90 percent occupancy since opening. It has also generated more than 600 jobs. The project demonstrates how good design can engage the public and boost the business of shopkeepers. *Sheila Kim*

credits

ARCHITECT: Architecture Outfit – Marta Sanders, Thaddeus Briner, principals; Stephen Nielson, project manager

ENGINEER: Buro Happold (m/e/p/fp)

CONSULTANTS: Urban Projects Collaborative (project manager); Lighting Workshop (lighting)

GENERAL CONTRACTOR: ZDG

CLIENT: Oases Development

SIZE: 30,000 square feet

COST: withheld

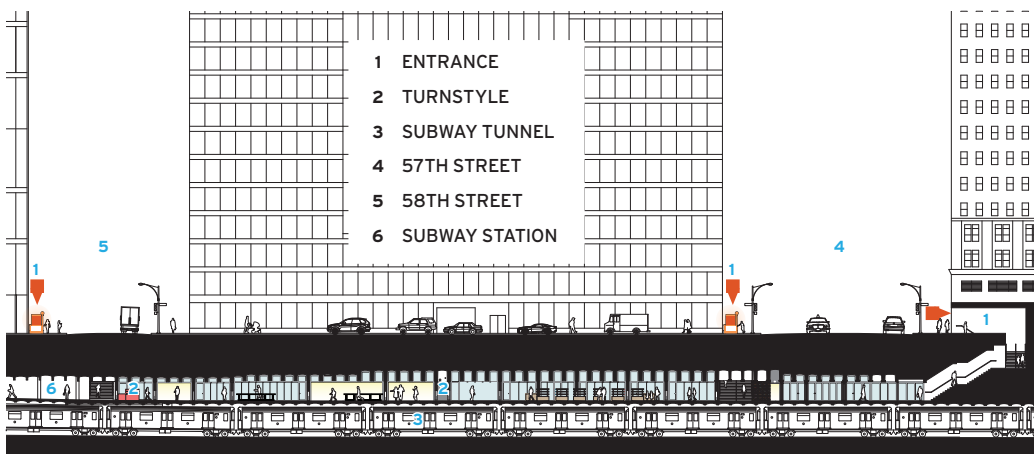
COMPLETION DATE: April 2016

SOURCES

STOREFRONT: Oldcastle BuildingEnvelope; Dorma

METAL: Kammetal

LIGHTING: Apogee; Luraline



LONGITUDINAL SECTION



A 600-square-foot retail nook on California Street in San Francisco's Financial District plays with scale and perspective (above). In Old Oakland, BCJ transformed the ground floor of a former 19th-century hotel into a café (below) with custom furnishings and modular elements designed to adapt over time. The height of the World Trade Center space in New York (bottom, right) is modulated with millwork ribs.



Blue Bottle Coffee

Various locations
Bohlin Cywinski Jackson

FOUNDED IN 2002, Blue Bottle Coffee has developed a network of cafés across the United States, Japan, and South Korea—minimalist oases for urbanites who need a caffeine fix. Initially, there were only a small number, with different plans and a range of aesthetics. In 2016, the company was ready to expand its U.S. operations and engaged Bohlin Cywinski Jackson (BCJ) to apply a more rigorous approach to the overall café design, with codified specifications and functional layouts and more predictable schedules and budgets.

"Design has always been a key part of our brand identity, and partly what we attribute our success to," says Lukas Bruggemann, Blue Bottle director of café development. Architects from BCJ's San Francisco and Philadelphia offices have maintained this strategy by creating more than 20 cafés in six metropolitan areas across the country, keeping pace with the specialty brewer's growth without sacrificing its standards.

The new cafés are cheerful, light-filled galleries with transparent storefronts that put the performance of coffee making on display in clutter-free spaces. The design emphasizes a common use of humble materials such as plywood and butcher block, combined with thoughtful configurations for brewing equipment, food presentation, and merchandise display. With barista input, the architects for each store also crafted a set of benchmarks early in the design process that standardized certain elements of every café, from bars that open to allow employees to easily interact with guests to dedicated spaces for supplies needed within arm's reach, and intimate seating nooks.

Simultaneously, BCJ worked with Blue Bottle to design and tweak distinct locations that respond to the surrounding architectural constraints and customer demands. For example, a café in Williamsburg, Brooklyn, features room for strollers, in response to the number of parents in the neighborhood. The space also features a gently curving wall, with vertical wood slats, that choreographs traffic.

The new cafés have increased efficiency and customer loyalty, says Bruggemann. Indeed, by inviting guests to be a part of the coffee-making process, Blue Bottle has improved the experience of both its customers and staff—without sacrificing the quality of the beverages.
Laura Raskin



A lattice of plywood box lanterns in the South Park, San Francisco, café (top, left) displays merchandise and emits a soft glow in the historic warehouse. In Boston's Exchange, a 350-square-foot micro-kiosk sits within a vast atrium (top, right). A metal frame wrapped with perforated panels brings natural light to every surface. In Williamsburg, Brooklyn (above), curving walls choreograph the customer experience.

credits

ARCHITECT: Bohlin Cywinski Jackson – Greg Mottola, Christopher Orsega, Alex Gregor, Ashley Hinton, James Kirkpatrick, California design team; Tom Kirk, Ryan Simpson, Sophia Lee, Christopher Renn, Daniel Lee, Daniel Stanislaw, Nora Chase, Karolina Kaczmarczyk, Boston and New York design team

ENGINEERS: California: MHC (m/e/p); Boston and New York: Silman (structural); WSP (m/e/p)

CONSULTANTS: TJ Hale; Arnold and Egan; Okayama Works; Digifabshop (millwork)

GENERAL CONTRACTOR: Eric F. Anderson; Alsterlind (San Francisco); Bali Construction (Oakland); Starloc (Boston); DCR (Williamsburg); Schimenti (World Trade Center)

CLIENT: Blue Bottle Coffee

SIZE: 600 square feet-2,200 square feet

COST: withheld

COMPLETION DATE: November 2016 – May 2018

SOURCES

SURFACING: Dupont Corian; Daltile

CEILINGS: Armstrong

LIGHTING: Tech Lighting; Delray; Bruck; HE Williams; Lucifer; Aion; Nuvo; Boca Flasher

PAINTS & STAINS: Dunn-Edwards

FURNISHINGS: Vitra; Carl Hansen

PHOTOGRAPHY: © ADAM ROUSE (OPPOSITE, TOP AND BOTTOM LEFT); JEFFREY TOTARO (OPPOSITE, BOTTOM RIGHT AND THIS PAGE, BOTTOM); MATTHEW MILLMAN (TOP, LEFT); DANIEL LEE (TOP, RIGHT)



Rows of acoustic baffles define borders between workstations and certain gathering areas such as the library (above). Conference rooms of varying sizes allow flexibility, whether for a formal meeting or an impromptu collaboration (right).



AOS Office Renovation

New Orleans

EskewDumezRipple and VergesRome Architects

SETTING AN EXAMPLE is often more compelling than verbally trying to sell an idea, as contract-furniture dealer AOS can attest. When the New Orleans-based business was renovating and expanding its offices, it turned to local firms EskewDumezRipple (EDR) and VergesRome Architects for a design solution that would enhance employee productivity and increase sales. In response, the architects put the products AOS represents to work rather than on display.

EDR prioritized the employee experience, focusing on comfort, flexibility, and aesthetic appeal. A light-hued palette of mainly white and gray replaces the previous red-and-black color scheme to create a clean and versatile backdrop. Like many current workplaces, the office features a variety of zones—workstations, collaborative areas, private phone booths, and lounges—to support the range of employees and activities. The design team anchored each area with customized, prefabricated millwork and wall systems by DIRT—the software-based construction-planning and fabrication service—that sped up the building process to a mere six weeks. Instead of a cacophony of disparate goods, a cohesive collection of products that AOS sells furnishes both workspace and lounge areas to show it in use. (In the workstation zone alone there are more than 40 product lines, yet all complement each other.)

Open since 2017, the 7,000-square-foot office and showroom has seen an increase in client traffic (including showroom tours and events) by more than 150 percent, as well as a revenue increase from approximately \$42 million in 2017 to upwards of \$60 million this year. AOS believes that the design of the space has had the biggest impact, estimating that 90 percent of client tours have resulted in a purchase. When all is said and done, it's also indicative of how design has improved team productivity. *Sheila Kim*

credits

ARCHITECTS: EskewDumezRipple; VergesRome Architects

GENERAL CONTRACTOR: Kent Design + Build

CLIENT: AOS

SIZE: 10,000 square feet

COST: \$1.46 million

COMPLETION DATE: August 2017

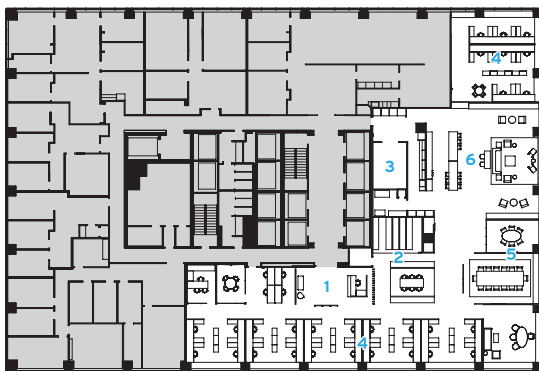
SOURCES

ENTRANCE: C.R. Laurence

SYSTEMS AND CASEWORK: DIRT (hardware, acoustical ceiling, demountable partitions, paneling, raised floor); Newmat (suspension grid)

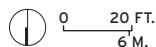
FLOORS AND WALLS: Pratt & Lambert; Benjamin Moore; Knoll; DesignTex; Ceramiche Caesar; Bentley; Shaw; Abet Laminati

FURNISHINGS: Knoll; Maharam; Alias; Davis; Coalesse; Nucraft



- 1 RECEPTION
- 2 RESOURCE LIBRARY
- 3 SUPPORT
- 4 WORKSTATIONS
- 5 CONFERENCE ROOM
- 6 LOUNGE/
SHOWROOM

FLOOR PLAN





Hines
New York City
LSM

WHEN THE developer Hines's New York office was hired by historic Trinity Church to redevelop its properties in Manhattan's Hudson Square neighborhood, the real-estate entity decided to relocate its own base in the city from Park Avenue to that area south of the West Village. The design of their new location is an homage to the community's history as a home of printing presses, yet it projects the refinement of the Houston-based company's brand. Occupying nearly 12,000 square feet in one of the 11 Trinity-owned buildings, the new LSM-designed space doubles as the marketing center for the entire Hudson Square portfolio—including five potential development sites—saving more than \$2 million that would have gone into an off-site facility.

The architects stripped back the space in the 1930s-era building, unearthing the existing concrete slab and columns, and maximizing ceiling height to recall its industrial character. Drop ceilings in some places control noise and conceal electric, mechanical, and sprinkler components. Glazed aluminum-framed partitions delineate various zones, from conference rooms to amenity areas, while keeping many sight lines clear to encourage interaction. Near the center of the floor is what the architects named the farm table—a counter-high communal dining surface on trestle legs for staff breaks and conversation.

As a model for the development's potential, Hines's office has attracted such high-caliber tenants as Google: last winter, the tech giant announced a \$1 billion campus expansion across three downtown buildings, two of them in Trinity's Hudson Square portfolio. Overall, the buildings boast a low vacancy-rate total of 2 percent. The design also benefits the company internally: since moving in 2017, employees are converging and interacting in the communal spaces more than they ever have. "At 499 Park, no one ever ate lunch together," says senior managing director Tommy Craig. "Now, on a weekly basis, we will have 20 people sitting together at the farm table." *Sheila Kim*



- FLOOR PLAN
- 1 RECEPTION
 - 2 CONFERENCE ROOM
 - 3 FARM TABLE
 - 4 PANTRY
 - 5 TERRACE
 - 6 OPEN OFFICE

credits

ARCHITECT: LSM – Debra Lehman Smith, James McLeish, Rick Bilski, Gregory Weber, Marc Pelletier

ENGINEERS: Thornton Tomasetti (structural); AKF (m/e/p)

CONSULTANTS: Fisher Marantz Stone (lighting); Cerami (acoustic); Lisa Austin & Associates (art)

GENERAL CONTRACTOR: Reidy Contracting Group

CLIENT: Hines Interests Limited Partnership

SIZE: 11,700 square feet

COST: withheld

COMPLETION DATE: June 2017

SOURCES

DEMOUNTABLE PARTITIONS: Unifor

CEILING: Snaptex; Armstrong

FLOORS: Stile Pavimenti Legno; Armstrong; Shaw Contract; CTS Concrete Flooring

Existing concrete structure reflects the neighborhood's industrial roots, while contemporary glass partitions maximize daylight and sightlines (top). The communal farm table (above) is a gathering spot situated at the center of the floor. A drop ceiling controls noise and conceals lighting and mechanical components.



The typical Hudson Woods residence (above) features a taut gable shape that references the region's historic agricultural buildings; all residences are clad in cedar. Oak-lined interiors face walls of windows that provide a connection to the outdoors (left). The kitchen opens to the living area, with colors and materials that reflect the nature motif (below).



Hudson Woods

Kerhonkson, New York

LANG Architecture

MANHATTAN-BASED architect Drew Lang has alternated between design and small development projects, such as renovating and flipping single-family houses, since founding his studio in 2003. Besides stabilizing his company's overall revenue, the diversified-business model turns up new opportunities.

Interacting with design clients, Lang sensed both a hunger for custom weekend homes and a worry that commissioning one would take too much time. In 2011, when the architect discovered 131 forested acres for sale about two hours north of New York by car, he realized he could unlock that latent demand with an alternative to the traditional subdivision.

For his firm's first multi-residence venture—dubbed Hudson Woods and launched without brokers, via social media, local partnerships, and word-of-mouth in 2014—Lang and his team devised a modern vernacular, designing and building a 2,300-square-foot model house, from which prospective homeowners could choose between two- or three-bedroom versions to be constructed on one of 26 lots. The architect/developer offered 30 possible upgrades for each house, and sited purchased units sensitively, in order to meet market desire for a unique property. Hudson Woods's scale allowed Lang to realize each residence at about half the expense of a one-off.

Hudson Woods's base pricing increased five times over the course of 26 sales and three years. The most expensive house—a three-bedroom model with multiple upgrades that included out-buildings—sold for \$2.5 million toward the end of this period. Lang and his partners' initial \$1.8 million investment covered the land purchase, construction of the model house, Phase 1 infrastructure improvements, and early marketing. Each house thereafter cost an average of \$885,000 to build; the completed development returned the partners' equity more than twice over. Lang also draws a line from Hudson Woods to 12 new projects totaling \$350 million in construction-cost value, and—discovering yet another business to run alongside his studio—he has fielded 200 inquiries to license the project's design. *David Sokol*

credits

ARCHITECT: LANG Architecture – Drew Lang, Jeremy Babel, Matt Hart, Will Gregory, George Hajjar, Jackson Hahne, Elisa Finoli, Michael Kolodesh
ENGINEERS: Luke Amey (structural); Roberto Plumbing & Heating (m/p)
CONSULTANT: Sanderson (brand and marketing)
CLIENT: LANG Architecture
SIZE: 100,250 square feet
COST: \$31.3 million
COMPLETION DATE: May 2019

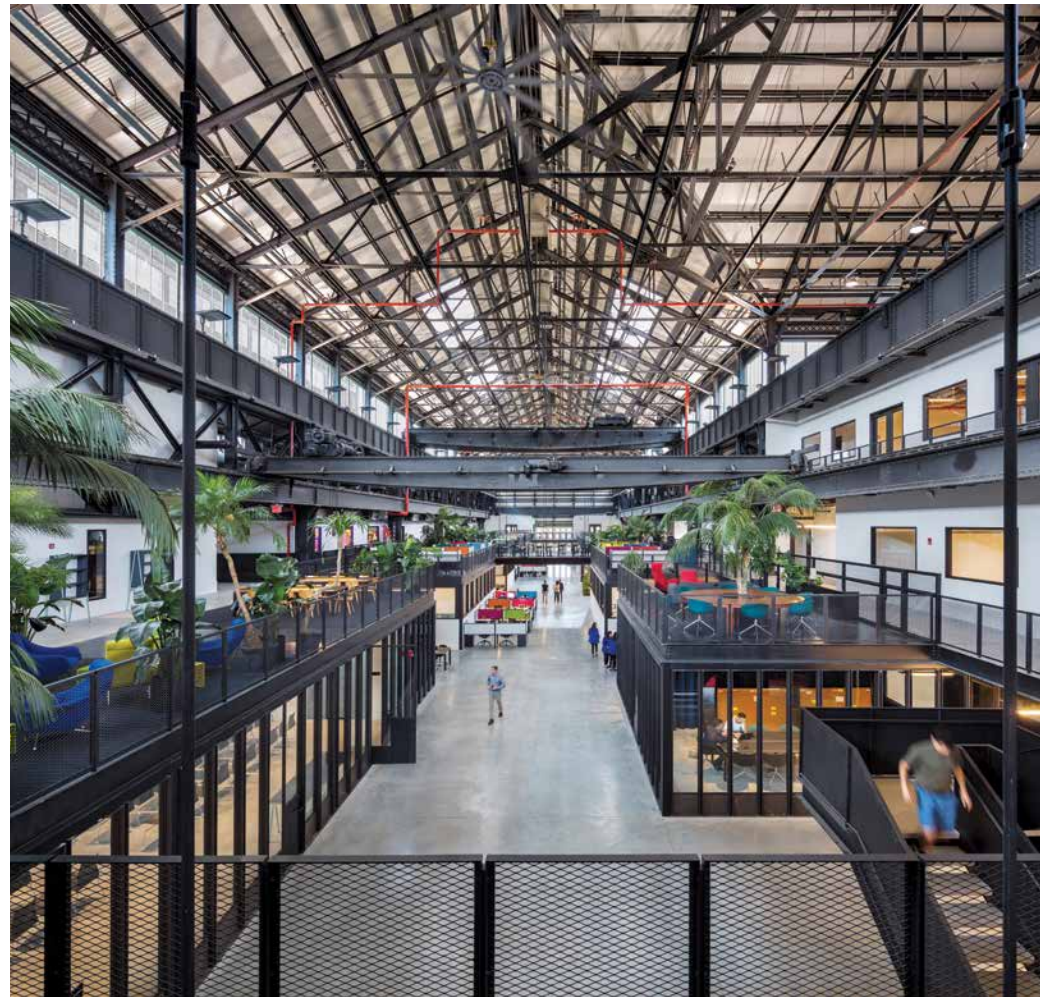
SOURCES

CLADDING: Andrew Becker Design (architectural metal)
PAINTS & STAINS: Benjamin Moore

ROOFING: S.A.P. Exteriors
WINDOWS & DOORS: Bildau & Bussman
HARDWARE: Sun Valley Bronze
PANELING & FLOORING: Allegheny Mountain Hardwood
TILE: Heath (ceramic); Walker Zanger (stone)
SURFACING: Trueform Concrete; M. Treixeira Soapstone
WOOD STOVE: Wittus Stoves
CONTROLS: Nest
LIGHTING: Allied Maker; Workstead
PLUMBING: Kohler; Delta; Duravit; Hansgrohe



Historically accurate insulated windows and cladding replace the existing envelope to bring the building up to date (top and above); Inside, single-story buildouts—housing studios, meeting rooms, and a makerspace—flank a central corridor and form a mezzanine.



New Lab at the Brooklyn Navy Yard

New York City

Marvel Architects

ORIGINALLY A machine shop for naval equipment, the Brooklyn Navy Yard Building 128, built in 1899, seemed a symbolic fit for modern-day fabrication. Encouraged by historic-restoration grants, loans, and tax credits from government agencies, developer Macro Sea entered into a public-private partnership to convert the building into New Lab, a co-working community with onsite prototyping facilities for frontier-tech entrepreneurs. To bring the structure up to date, Macro Sea tapped New York-based Marvel Architects.

The architects stripped the exterior back to the building's steel skeleton and restored its original historic appearance with insulated metal panels and windows. Inside, the project team preserved structural relics, such as the existing trusses and gables, while inserting new elements that both refer to the building's past and meet contemporary programming needs. Single-story enclosures, for example, evoke the material stacks and machining stations that once lined the ground floor's perimeter. But they also contain key spaces—such as studios and the fabrication lab—while forming the base for a mezzanine floor. A new second level, occupying two sides of the interior, overlooks this mezzanine and the ground floor, with bridges, supported by the gables, providing access across the interior. These buildouts increased the square footage by 32,000, bringing the total area to 84,000 square feet.

A variety of spaces—from private offices and benching zones to meeting rooms and breakout lounges—helps foster connections among member tenants and ensures that there's an environment well suited to accommodate numerous work styles and endeavors, whether to develop robotics or advance artificial intelligence. Since its opening in 2016, New Lab has been flourishing, seeing the start-ups and small companies it houses raise upwards of \$450 million in capital; some have entered into particularly lucrative deals, such as that of JUMP, a bike-sharing venture whose R&D team called New Lab home from the start, which was acquired by UBER for \$250 million. *Sheila Kim*

credits

ARCHITECT: Marvel Architects – Scott Demel, Eckart Graeve, Zachary Cohen, Elise DeChard, Teo Quintana

INTERIOR AND CONCEPT DESIGN: Macro Sea

ENGINEERS: Engineering Associates (structural); BD Engineering (m/e/p)

CONSULTANTS: DGA Lighting (lighting design); Higgins Quasebarth (tax credits)

GENERAL CONTRACTOR: Yorke Construction

CLIENT: New Lab

SIZE: 84,000 square feet

COST: withheld

COMPLETION DATE: July 2016

SOURCES

CLADDING: Kingspan

ROOF: Metl-Span

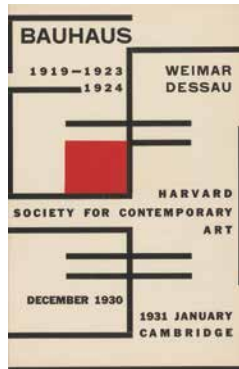
GLASS: Oldcastle BuildingEnvelope

WINDOWS: Graham (metal frames)

HARDWARE: Dorma; Salto

LIGHTING: Cree; Northstar; Peerless; Aculux; Bartco

DOORS: Karp; Juarez Custom Steel Fabrication



Origin Story

The Bauhaus may have been short-lived in Germany, but its reach was long.

BY MARGRET KENTGENS-CRAIG



AT ITS CENTENNIAL, the Bauhaus's design legacy seems more present than ever, in spite of the fact that the famous German school of design lasted merely 14 years and enrolled fewer than 1,400 students. Known for its interdisciplinary focus, merging arts, crafts, industrial design, and architecture, its attention to scale went from a cream pitcher to a city plan. In its short life, it had three directors and three locations.

Founded by Walter Gropius in Weimar in 1919, it moved to Dessau in 1925. When Gropius left in 1928, architect Hannes Meyer took over until 1930. At that point, Ludwig Mies van der Rohe moved the school to Berlin, where he led it until political pressure forced him to close it in 1933.

Now, 100 years after its founding, a new museum devoted to the Bauhaus has just opened in Weimar (page 134); another will open in Dessau this fall, while yet a third is

planned for Berlin. Over the years, digitization has made remote collections, archives, and other documentation readily available, while early masterpieces such as Ludwig Mies van der Rohe's Barcelona Pavilion (1929), Walter Gropius's Dessau Bauhaus Building (1926), and the Mies Tugendhat House in Brno (1930) have been restored or reconstructed. New publications and films are coming out, along with hundreds of exhibitions. The influence of the original participants, plus their activities, ideas, and their successors are being explored far beyond the Bauhaus birthplace. The media and social networks are full of the school's global impact. But how profound was the reach of the Bauhaus and its influence, especially in America?

As early as the 1920s and 1930s, the U.S. and the Bauhaus formed an extraordinary transatlantic relationship when American visitors and students explored the school in its various locations, with the arrestingly modern Dessau Bauhaus Building providing a particularly major attraction. Bauhaus artists looked to America for inspiration, and, in turn, audiences began to encounter the work here. In 1924, the art collector Galka Scheyer began promoting the Bauhaus painters Lyonel Feininger, Paul Klee, and Wassily Kandinsky, along with Alexei Jawlenski, under the name the Blue Four, in galleries in New York and Northern California.

Then, in 1930, American audiences were treated to the first Bauhaus exhibition in the country, *Bauhaus Weimar, Dessau*. Organized at Harvard University by recent graduate Lincoln Kirstein and fellow students of the Harvard Society of Contemporary Art, the exhibition traveled to New York and Chicago. Of course, the Bauhaus became more widely recognized in 1932 as part of the Museum of Modern Art's *Modern Architecture: International Exhibition*,

When Walter Gropius (middle) founded the Bauhaus in 1919, the school occupied two Art Nouveau buildings that Henry van de Velde had designed for the Grand Ducal School for Arts and Crafts in 1904 and 1911 (left).



PHOTOGRAPHY: IMAGE HUD 3298; COURTESY HARVARD UNIVERSITY ARCHIVES (TOP); LOUIS HELD/BAUHAUS-ARCHIV BERLIN (MIDDLE); THURINGIAN STATE OFFICE FOR HISTORIC MONUMENTS AND ARCHEOLOGY, WENZEL-ORF (BOTTOM); YVONNE TENSCHERT/BAUHAUS DESSAU FOUNDATION (OPPOSITE, TOP AND BOTTOM RIGHT); BAUHAUS DESSAU FOUNDATION (OPPOSITE, BOTTOM LEFT);



curated by Philip Johnson and Henry-Russell Hitchcock under the auspices of museum director Alfred H. Barr Jr. Accompanied by an exhibition catalogue and a book, it portrayed Bauhaus founder Walter Gropius and subsequent director Ludwig Mies van der Rohe as the leading protagonists of the European avant-garde, along with Le Corbusier and J.J.P. Oud. Influential architecture magazines such as *RECORD*, *Architectural Forum*, and *Pencil Points* reinforced the recognition.

The closing of the Bauhaus during the Third Reich led to the diaspora of the school's faculty, many of whom emigrated to the U.S. and other countries. Both Barr and Johnson were instrumental in helping to relocate these designers and artists, since they knew the school firsthand from their travels to Europe, beginning in late 1920s when they began formulating the 1932 exhibition.

Soon after the show, Johnson recommended that Bauhaus artist Josef Albers be hired by John Andrew Rice, the founder of Black Mountain College in North Carolina in 1933. At Black Mountain, Albers, who had been a student, teacher, and then deputy director of the



In 1925, the Bauhaus moved from Weimar to Dessau and into a reinforced-concrete complex (top) formed of three buildings, connected by a bridge and a one-story wing. Designed by Walter Gropius, it included workshops, teaching spaces, administrative offices, and the photogenic Preller House, with 28 studios and cantilevered balconies (above, left and right). The school opened in 1926, and, after a recent restoration, is now home to the Bauhaus Dessau Foundation.



Mies van der Rohe (above) became the third director of the Bauhaus, in 1930. His spatially rich, materially refined German Pavilion for the 1929 World Exposition in Barcelona (top, right) indicated a strong design aesthetic. Hannes Meyer (right) was the Bauhaus's second director, from 1928 to 1930. Meyer's socialist viewpoint was reflected in his highly functional architecture, such as the ADGB Trade Union School (far right) in Bernau (1930).



Bauhaus, continued his investigations into the nature of materials, color, and visual perception, while teaching his highly influential foundation course—perhaps today's most relevant inheritance from the Bauhaus. His wife, Anni, expanded on her distinguished career as a weaver, which she began at the Bauhaus. Albers eventually left, in 1950, to teach at Yale University's School of Art.

In 1937, Walter Gropius came to Harvard University to assume the chair of the Graduate School of Design, at the behest of the new dean, Joseph Hudnut. Mies van der Rohe arrived in Chicago in 1938 with the help of colleagues and former students, including Bertrand Goldberg and Michael van Beuren, to head the Armour Institute. When it merged in 1940 with the Illinois Institute of Technology, Mies designed the now historic main campus.

Some of the Bauhaus-related efforts in this country are less well known today. For example, in 1937, László Moholy-Nagy established the New Bauhaus in Chicago. The former instructor of art, photography, and metalwork at Weimar and Dessau, from 1923 to 1928, was invited to the city by the Association of Arts and Industries. The innovative school, dependent on private funds, had financial problems and closed in 1938. But in 1939, Moholy-Nagy opened the School of Design, whose advisors included Gropius and Hudnut. By 1944, the school's name had changed to the Institute of Design. In 1949, three years after Moholy-Nagy died, it folded into IIT.

In 1946, Walter Paepcke, chairman of the Container Corporation of America and patron of Chicago's New Bauhaus, enlisted graphic designer Herbert Bayer to come to Aspen,

Colorado, to help shape the campus of the new Aspen Institute's facilities. Previously, in 1935, Mills College in Oakland, California, offered Alfred Neumeier, a Berlin-based art historian, a position as a professor and director of the museum, which showcased Bauhaus art.

In the end, none of these initiatives could match the influence of the two famous Bauhaus architects, Gropius at Harvard and Mies at IIT. Once they set foot on American shores, the Bauhaus reception here was dominated by architecture, as Mies van der Rohe's Farnsworth House (1951), Crown Hall at IIT (1956), and the Seagram Building (1958) show. Gropius's own status was helped substantially by another exhibition mounted at MoMA, in 1938, *Bauhaus 1919–1928*, covering the exact years he was director. Mies, the last director of the Bauhaus, opted out of participating in the

show. Hannes Meyer, the second director, was ignored. While Mies's success did not depend upon his Bauhaus affiliation, Meyer never achieved recognition in this country, particularly since he moved to the USSR, then Mexico, and finally Switzerland.

One of the biggest misperceptions of the Bauhaus is that there was one unified set of principles. The three directors' approaches differed in crucial ways. Gropius's vision to meld pragmatic design, quality, and affordability with "beauty" proved to be idealistic. Hannes Meyer defined architecture as a "collective, economic, and function-oriented process" for the benefit of the people, and at the cost of artistic expression. Mies avoided the challenge altogether by disregarding affordability—and the social agenda at the core of the Bauhaus—in favor of a spiritual and aesthetic understanding of building as art—*Baukunst*.

In America during WWII and immediately after, the influence of the Bauhaus's leading principals was limited. In those years, the Bauhaus emigrés were confronted by an anti-German atmosphere as a number of them, including Gropius, came under FBI investigation. If their language and nationality projected a sense of "otherness," so did their architecture. In traditional New England, Gropius's simple "ultra-modern" house in Lincoln, Massachusetts, which he had built in 1938, didn't quite fit.

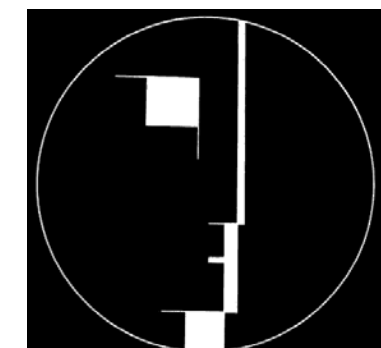
The Bauhaus's roots were particular to its own time and place and simply were not shared with other countries'. Formed in the aftermath of WWI, the school had sought an optimistic new beginning in which its artists were determined to build a better world, with a basis in the Enlightenment. But by the 1960s, Modernism everywhere was being questioned. The Holocaust and the Gulag, WWII, and Hiroshima had exposed the dark side of technology and shattered the trust in reason. In the 1970s and '80s, such theoretical approaches such as Postmodernism and Deconstruction called into question the Eurocentric idea of a linear and continuous historical evolution, cultural tradition, and philosophy. Still, many maintain today that a pluralistic modernism is an ongoing project.

The Bauhaus arguably has received more attention than any other school or artistic movement of the 20th century. The centennial reminds us that it was, in the first place, a school of design, with profound connections to the material world, industry, and a mission to solve problems to high aesthetic standards.

But the name "Bauhaus" is often taken out of its original context, because there is money in the branding of all things Bauhaus. One memorable legal fight broke out over the



In 1937, the artist and photographer László Moholy-Nagy, who taught at the Bauhaus, emigrated to Chicago and established the New Bauhaus (above) and logo (top, right). Another Bauhausier, Marcel Breuer, had great popularity in the U.S. with his B-9 nesting tables (right). The house Gropius designed (with Breuer) for his own family in Lincoln, Massachusetts (below), soon became a landmark of Modernism.



rights to Marcel Breuer's small B-9 side table. Breuer, contrary to his colleagues, had not passed his artistic ownership on to the Dessau Bauhaus, where he had designed it. By 1999, four different companies claimed legal rights. One company was Knoll International. A number of high-end manufacturers, such as the German wallpaper company Rasch, sell Bauhaus reproductions successfully or have developed new "Bauhaus" product lines based on a history with the Dessau school.

The impact of the Bauhaus is perhaps more profoundly evident in its general principles of forms and materials true to an object's nature and function. Bath-fixture manufacturer Dornbracht and jewelry-maker Niessing are among those paying homage to the Bauhaus, and Terence Conran has cited it as a major influence on his furniture chain Habitat.

If anyone in the corporate world recognized the Bauhaus for its potential, it was Steve Jobs, who came to define Apple as a design rather than a technology company. Jobs hired German industrial designer Hartmut Esslinger and then the British talent Jonathan Ive—both from Bauhaus-informed institutions or schools of thought—to develop Apple's design sensibility.

After 100 years, assessments of the Bauhaus may differ as much as the multitude of aspects of its ever-evolving identity. Yet the school showed that interdisciplinary skills and collaboration, with strong philosophical positions as well as determination and idealism, led to innovative solutions that still influence theory and practice. ■

Margret Kentgens-Craig is the author of *The Bauhaus and America: First Contacts, 1919–1936*.



Reality Check

Three historians unpack the myth and essence of the legendary school.

EDITED BY SUZANNE STEPHENS



Rosemarie Haag Bletter



Barry Bergdoll



Mary McLeod

IN RECOGNITION of the Bauhaus's 100th anniversary, *RECORD* brought together three scholars of architectural history to discuss its meaning and legacy. They are Rosemarie Haag Bletter, professor emerita of architectural history and theory at the City University of New York; Mary McLeod, professor of architecture in the School of Architecture, Preservation and Planning at Columbia University; and Barry Bergdoll, the Meyer Schapiro professor of art history in the Graduate School of Arts and Sciences at Columbia, and an architecture curator at New York's Museum of Modern Art, who co-organized the exhibition *Bauhaus 1919–1933: Workshops for Modernity* in 2009.

WHAT ACTUALLY WAS THE BAUHAUS?

Barry Bergdoll: In this centennial year, there's this huge urge to find the essential Bauhaus. I don't believe there is an essential Bauhaus. In its short existence, it was highly experimental, highly politicized, and continually shifting in nature, from the Bauhaus that began in 1919 in Weimar, then moved to Dessau in 1925, and finally to Berlin in 1930.

Rosemarie Haag Bletter: Not only were there different directors—Gropius from 1919 until 1928; Hannes Meyer from 1928 until 1930; and then Ludwig Mies van der Rohe from 1930 until 1933—but the Bauhaus was first a state entity, then a municipal one, and finally a private school, under assault from rising Nazi power. That accounts for some of the different attitudes.

BB: Another thorny issue is how to untangle the Bauhaus from other avant-garde initiatives, some of which were also educational institutions, while others were not.

RHB: And there's still confusion about what the Bauhaus means. It was a school, not a style, and there were many styles, not just one, in its 14-year history. What gets attention is the middle, or Dessau, period, with objects, such as Marcel Breuer's tubular-steel chairs. Most of the designs produced at the Bauhaus are interesting forms, but almost never functional or useful in a practical sense. I largely blame Gropius, not the general public, for the widespread misperception

about form and function. He was a very good promoter.

BB: When MoMA mounted the 90th-anniversary exhibition *Bauhaus 1919–1933: Workshops for Modernity*, exactly 10 years ago, my cocurator, Leah Dickerman, and I were very strict about what was included. Everything we showed was made at the Bauhaus itself.

WHAT ABOUT THE ARCHITECTURE COMPONENT IN THE BAUHAUS CURRICULUM?

BB: The Bauhaus kept delaying the actual teaching of architecture, and, in Weimar, the students took architecture courses in a local trade school.

RHB: Architecture was not actually taught within the Bauhaus until the fourth year—and not all students stayed that long. It was a much more informal school than we tend to think, not a traditional academy. They probably got architectural fundamentals in the workshops, but not all students may have studied architecture.

Mary McLeod: The architecture associated with the Bauhaus, such as the school building in Dessau or the Masters' Houses nearby, aren't a product of the training there per se, but came out of Gropius's own office.

RHB: It's like the Haus am Horn in Weimar, [designed by Georg Muche, a painter who taught at the Bauhaus, with construction overseen by architect Adolf Meyer]. The furnishings and fittings were executed by students, but it was not architecture that came out of the Bauhaus.

WHAT ABOUT THE SHIFTING IDENTITIES OF THE SCHOOL IN TERMS OF ITS ORIENTATION?

BB: In Weimar, there were two moments, which got blurred in the move to Dessau. This first phase, 1919 to 1923, was marked by open-ended invention, and was heralded by a major exhibition in 1923.

RHB: The second Weimar moment absorbed other contemporary moments. After the painter, photographer, and metalworker László Moholy-Nagy arrived at Weimar in 1923, he, together with artist Theo van Doesburg, tended to shift attention toward the other Modernist influences



—Russian Constructivism and Dutch de Stijl.

BB: And then, at Dessau in 1925, there was a consolidation of influences. Still, the school managed to associate ideas about avant-garde art education with the brand name *Bauhaus*. When Gropius left Weimar, he insisted on taking ownership of the Bauhaus name with him to Dessau. Then he departed in 1928, along with graphic designer Herbert Bayer and Marcel Breuer.

The two years of Meyer's directorship, beginning in 1928, were very productive but convulsed by political assaults from the Nazis and the rest of the right wing.

RHB: Gropius had always taken care that people from the school didn't speak publicly about politics because he was worried about being denied funding; Hannes Meyer wasn't so careful. But Meyer did shift the Bauhaus more to what we think of as a school of architecture.

HOW DOES THE BAUHAUS RELATE TO THE OVERALL CATEGORY OF MODERNISM?

MM: As we noted, with the arrival of Moholy-Nagy and van Doesburg in Weimar, Bauhaus designs began to be influenced by de Stijl and Constructivism. So there were always interconnections—and differences. The modern movement, or, if we use a broader term like *Modernism*, embraces the Bauhaus, as well as many other tendencies.

RHB: Le Corbusier and Mies van der Rohe probably had more influence on modern architecture than the Bauhaus did.

BB: The Bauhaus shared the preoccupation with new solutions to the pressing problems of urban housing, a situation intensified by the First World War, but this was also a focus of architects from Paris to Moscow. While

The newly restored Haus am Horn in Weimar (top), is now open to the public. It was designed by the Bauhaus painter Georg Muche, with construction overseen by architect Adolf Meyer, for the 1923 school exhibition. In Dessau, another restoration (right) allows visitors to see the double house (1926) where Bauhaus masters Paul Klee and Wassily Kandinsky lived.



Gropius's interests in prefabrication connected with research under way elsewhere, here he was a pioneer. Yet the most influential housing models of the period came not from the Bauhaus, not from its limited production in Dessau, but from the programs under Bruno Taut in Berlin or Ernst May in Frankfurt. In the 1923 Bauhaus exhibition, the housing was largely from elsewhere, including the Netherlands.

WHAT IS THE SIGNIFICANCE OF SO MANY FEMALE STUDENTS AT THE BAUHAUS?

MM: In the first group of students at Weimar, there were more women than men—84 females versus 79 males. At the time of the school's opening, Gropius proclaimed that there "should be no differences between the beautiful and strong sexes." But he quickly retreated from this stance—perhaps out of political fears—and steered women toward the weaving workshop. Only a few, such as Marianne Brandt, managed to escape to the

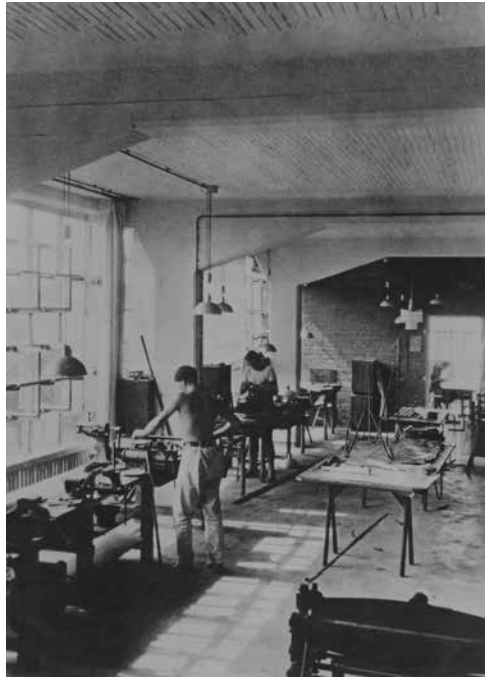
metal one. But it's important to recognize that the Bauhaus offered a way for women to enter design fields and become innovative professionals instead of enrolling in the traditional craft schools, which still stressed "feminine," or domestic, handicrafts.

RHB: In spite of the fact that Gropius backtracked, Marianne Brandt was put in charge of a workshop, one of the few women. She was important in training both men and women.

MM: Gunta Stölzl's textile design was one of the most commercially successful enterprises, bringing considerable funds to the school.

BB: There were huge debates, fights, and lawsuits over ownership. Gropius always had a notion that somehow the school was going to produce things and sell them to generate revenue. Breuer wanted to own his patents on the furniture, which created unhappiness between him and Gropius. The Bauhaus was an incredibly intense place that put into high relief some of the contradictions of modernity.

Ironically, one of the few moneymakers in



Marianne Brandt headed the metal workshop (above) in the Dessau Bauhaus Building, designed by Gropius (1926). Her sleek objects, from lighting fixtures to teapots, helped advance the school's efforts in industrial production.

the school's product line was Bauhaus wallpaper, franchised to a manufacturer. Production continued even under Hannes Meyer, despite his utilitarian ethos and lack of interest in it for his work. And we even find a few Bauhaus wallpapers for sale during the National Socialist period, after the school had closed.

WHEN THE BAUHAUS SHUT DOWN, HOW DID THE DIASPORA OF ITS FACULTY AFFECT U.S. ARCHITECTURAL EDUCATION?

BB: You have a completely different Bauhaus when the emigrés came to the United States during the Nazi period, or to the Soviet Union or to Mexico. So there is a proliferation of Bauhauses.

RHB: Once Gropius arrived in the U.S., he became very dogmatic. He was already somewhat dogmatic at the Bauhaus, but more so at Harvard. It's especially evident with his relationship to Joseph Hudnut, the first dean of the Graduate School of Design, who was helpful in bringing Gropius there in 1937 as the architecture chair. Gropius tried to reestablish the Bauhaus by introducing a preliminary course conducted by Naum Gabo and Josef Albers. But toward the end, there was great tension between Hudnut and Gropius. Hudnut began to criticize the International Style, as he had done earlier when he considered the Beaux Arts no longer appropriate as an architectural approach. Harvard had to cut back

funds, and Gropius lost some of his assistants. He left in 1952.

BB: In the American context, what is the rightful heir to the Bauhaus? Is it Harvard or IIT? Is it László Moholy-Nagy's short-lived New Bauhaus in Chicago, or Black Mountain College near Asheville, North Carolina?

RHB: Gropius as a self-promoter was in evidence with the 1938 exhibition at MoMA. For that reason, I would not consider his work at Harvard a real continuation of the Bauhaus. IIT perhaps came closer, although Mies's exclusive interest in architecture is not part of the general perception of the Bauhaus either, even if he emphasized architecture as its last director.

MM: The phase of the Bauhaus when Hannes Meyer was director is closer to how architecture schools evolved, at least from the 1960s onward—for example, the emphasis on urban planning, sociology, and programming.

Ironically, one of the few moneymakers in the school's product line was Bauhaus wallpaper, franchised to a manufacturer.

BB: The Bauhaus completely opposed the university structure in Germany and invented an entirely new concept of a school. Yet Bauhaus emigré architects often entered professional schools inside the university setting.

WHAT ABOUT THE REST OF THE BAUHAUS TRAINING IN THE U.S.?

MM: If American universities taught art or any crafts, they were usually secondary pursuits. Yale was one of the few exceptions: it has long had a serious graduate program in art, which existed side by side with the architecture program. Perhaps it's no coincidence that Josef Albers, a former Bauhaus student and teacher, taught for years in Yale's School of Art.

BB: Another paradox at the Bauhaus was the incredible presence of painters Paul Klee and Wassily Kandinsky, who, despite being powerful avant-garde artists, were not training students to become painters.

RHB: Josef Albers's color theory was disseminated in this country through publications and teaching at many schools.

MM: But Albers's role at Yale was perhaps more important to the art world than to architecture.

RHB: Also, look at Black Mountain College. It had people from the Bauhaus, such as Gropius and Josef and Anni Albers, but also it had such Americans as Merce Cunningham and John Cage. It was really an innovative American school that fostered an interdisciplinary approach.

BB: In the preliminary course of the Bauhaus, the students discussed one another's work. At the École des Beaux Arts, the students were not present when the work was criticized—the judgment for awarding a prize was more private. So this culture at the Bauhaus, of making everyone look at a student's work, and talking about it, was fantastic.

COULD YOU COMPARE THE BAUHAUS TO THE CRANBROOK ACADEMY OF ART, FOUNDED IN 1922 IN BLOOMFIELD HILLS, MICHIGAN, AS AN INTERDISCIPLINARY ART AND DESIGN SCHOOL?

RHB: It seems to have been more traditional in its approach.

MM: Yes. Cranbrook was more of a traditional craft school, if one in a more progressive mode. It was never as radical as the Bauhaus.

BB: The fact that the Bauhaus only existed for 14 years transformed it almost immediately into a myth. If the Bauhaus had continued for another 20 years, we don't know if it would be so interesting. Cranbrook continues to exist.

MM: When I was an undergraduate at Brown (Pembroke College) in the late 1960s, my first art class was informally dubbed "spots and dots" and was based on Bauhaus art training. And at Princeton, where I transferred in 1970, the architecture school had a course on color theory that was definitely influenced by Bauhaus ideas.

BB: Indeed, the most lasting influence was in the various interpretations of the "preliminary course." It was a total rejection of the inherited academic notion of learning by copying things and studying nature and the human body.

IS THE BAUHAUS EMPHASIS ON INTERDISCIPLINARY WORK AND TEAM COLLABORATION STILL COMMON IN SCHOOLS TODAY?

RHB: While environmental and urban concerns are prevalent in schools, it seems they are in separate programs within schools of architecture. You don't get that total interdisciplinarity that the Bauhaus encouraged.

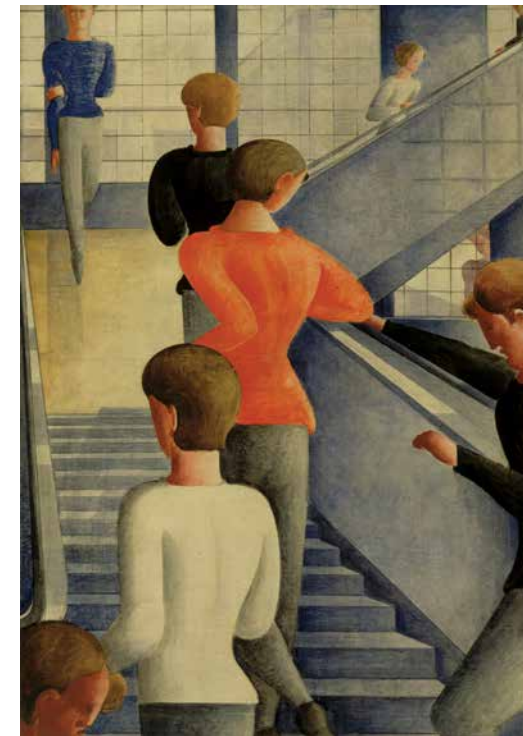
Oddly, the increasing recognition of the necessity of collaboration has happened simultaneously with the rise of the star system.

MM: We have team teaching now, with faculty from different fields, but how deep or serious is it? At Columbia, a real-estate faculty member often teaches a design studio with someone from architecture, and I gather something similar happens at Yale. We still have silos within architecture schools—for example, between planning and architecture. What we've inherited from the Bauhaus notion of teamwork is the recognition that architectural practice is a group endeavor. As corporate as The Architects Collaborative was, it was an extension of Gropius's vision of the Bauhaus and his earlier ideas of teamwork. Although firms like SOM may not have been directly influenced by Bauhaus ideas, the notion of architecture as a collaborative effort is an important product of the Modern movement. Oddly, the increasing recognition of the necessity of collaboration (for example, with consultants) has happened simultaneously with the rise of the star system. I don't know how to put those two things together—that tension in architecture culture and practice remains.

WHAT DO YOU FIND MISSING FROM BAUHAUS PEDAGOGY?

BB: I'm struck that an avant-garde school in the mid-1920s would not be teaching film. Admittedly, it would have been very expensive to have cameras, and the Bauhaus was always short on cash. The other thing missing is a focus on landscape. Here they were in Dessau, with one of the great 18th-century works of landscape—Wörlitz and its related gardens. Yet there was no formal training in landscape at the Bauhaus.

MM: Omitted in today's received impression would be its link to contemporary art, which was taught at the Bauhaus. What's curious is how the connection with painting has fallen by the wayside in architecture schools. At Columbia, teachers such as Steven Holl remain deeply interested in the relationship between



The artist and stage designer Oskar Schlemmer painted the *Bauhaus Stairway* in 1932 (top, left), now hanging in New York's MoMA. As inspiration, Schlemmer turned to a photo of Gunta Stözl and other weavers (top, right) taken by T. Lux Feininger, which Schlemmer helped stage in 1927. The restored stair is still in use in the Dessau Bauhaus Building (above, left). The MoMA exhibition of 2009 in NYC (above, right) featured wood furniture from the early years of the school.

art and architecture. But, otherwise, art doesn't seem to be a major concern. Perhaps the worlds of art and architecture have become too large.

DOES THE BAUHAUS TODAY EXIST PRIMARILY AS A STYLE?

MM: Modernism as a historical style is thriving today. But I wonder to what extent that revival is mixed with a lack of concern with functionalism and social conditions—and is just about style.

RHB: The commercialized version of what we now call International Style architecture is most commonly misunderstood by the general



public as "Bauhaus design." But the integration of all the arts within a collaborative social context remains the greatest legacy of the Bauhaus.

BB: Bauhaus style is such a fashion now, yet, as we've said, the Bauhaus opposed the notion of style. This was a battle they fought continuously, as the success of their products on the market depended on the Bauhaus label recognition, yet they pushed back whenever critics spoke of a style. One of the great successes of Gropius's Bauhaus was as a point of intersection of the European avant-gardes in architecture and design. Today, that success leads to a reductionism: calling all diverse modernisms "Bauhaus." ■



Bauhaus on My Mind

Three women's formative learning experiences helped develop their criticism.

Sibyl Moholy-Nagy

BY SUZANNE STEPHENS

SIBYL MOHOLY-NAGY called herself a late bloomer. No argument there: she was 47 when she launched her career as an architectural historian and critic. Her book *Moholy-Nagy: Experiment in Totality*, a biography of her husband László, the Hungarian-born artist and photographer who had been a teacher and central figure at the Bauhaus, appeared in 1950, four years after his death from leukemia. It demonstrated her gift for writing, her strong analytical skills, and knowledge of design. Shortly before his death, Sybil began teaching at the Institute of Design that Moholy-Nagy, who had fled Berlin, established in Chicago. He had come to Chicago to set up a school, the New Bauhaus, in 1937, but it only lasted one year. The second venture, first called the School of Design, then the Institute of Design, started up in 1939. But after 1946, Serge Chermayeff led it through its merger with the Illinois Institute of Technology, in 1949. By that time, Sibyl, a German-born mother of two, had moved to San Francisco to teach architectural history at the Schaeffer School of Design and at the University of California, Berkeley, before landing at Pratt Institute in Brooklyn in 1951. Until 1969, Sibyl taught architectural history there and had such a strong reputation that she was a magnet for attracting students.

At the same time, her writings in *Progressive Architecture* and *Architectural Forum*, as well as her subsequent books—*Native Genius in Anonymous Architecture* (1957) and *Matrix of Man: An Illustrated History of Urban Environment* (1968)—secured her a strong position in the critical

firmament on topics not necessarily in the main-stream. *Native Genius*, which emphasized how attention to site, local materials, and climate generated a strong vernacular tradition, sprang forth at a time when machine-made glass, steel, and concrete architecture had seized the day. *Matrix of Man*, which explored the physical forms of cities (such as orthogonal, linear, or concentric) from classical Greece to the present day, argued for the place-based generation of large-scale communities, at a time when many planners were imposing a one-concept-fits-all approach to



In her 20s, Sibylle Pietzsch, later to be known as Sibyl Moholy-Nagy, performed on the stage and screen in Germany.

city planning and urban renewal.

Sibyl Moholy-Nagy's intelligence, style, commitment, and courage made architects and the general public pay attention to her words, especially when she freely criticized the postwar work of her husband's former colleagues at the Bauhaus, notably Walter Gropius and Marcel Breuer.

By the time Sibyl had moved into high critical gear in the 1960s, it was clear she was disenchanted with the postwar architecture of László's former cohorts. Even though she had been married to one of its most talented teachers, she felt no obligation to defend the Bauhaus's influence in the U.S. In 1968, she wrote, in an article published in *Art in America*, "In 1933 Hitler shook the tree and America picked up the fruit of German genius. In the best of Satanic traditions some of this fruit was poisoned . . . The lethal harvest was functionalism and the Johnnies who spread the apple seed were the Bauhaus masters, Walter Gropius, Mies van der Rohe and Marcel Breuer." This couldn't have seemed very charitable to Gropius, who had written the introduction to *Experiment in Totality*, warmly discussing his collaboration with László—even though he took credit for having "secured his leadership for the New Bauhaus in Chicago."

The true point of Sibyl's critique, "Hitler's Revenge," however, was to take apart Marcel Breuer's overblown scheme for a tower plopped on top of Grand Central Terminal. [It] "crushes the last remnant of the past era of extroverted design responsibility under the monstrous load of profit dictatorship," she wrote.

Earlier, in 1965, in the *Journal of the Society of Architectural Historians*, Sibyl had castigated Bauhaus functionalism in America as pure ideology. She referred to the residences that Gropius and Breuer designed in the Northeast,

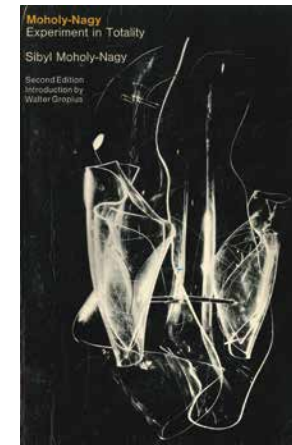
as "those astonishingly ugly little houses leading up to the permanent diner of [Gropius's] Harvard Graduate Center." Mies didn't fare well either. In the same article, she called his first scheme of the campus for IIT "painfully reminiscent of his deadly fascist designs for the German Reichsbank . . ."

Sibyl's daring to criticize the Bauhaus boys may well have stemmed from not having been part of the school when Moholy was there. (He taught from 1923 to 1928 before going to Berlin to work in stage design and film.) Interestingly, Sibyl could be nice to others. In 1962, she wrote in *Perspecta: the Yale Architectural Journal* that she favored Philip Johnson's architectural trajectory over the gridlocked Mies van Rohe's, and called Johnson a "syncretic formalist." Syncretic, she explained, is "the designer who absorbs the heritage of his spiritual fathers and coalesces it into his own synthesis." She also commended Paul Rudolph's architecture for paying more attention to the local site, as well as for "this love of visual delight [that] is specifically American." He had got rid of a "straitjacket of his international training" at Harvard under Gropius.

Her thinking was sophisticated, her knowledge of history extensive, and her approach to criticism fearless.

But there was one irony. She always felt insecure about her educational background. As she wrote in her diaries in the 1950s (available through the Smithsonian's Archives of American Art), "I cannot admit to anybody, not even to my children . . . that I had no schooling whatsoever, that I left school at 16 with actually only one year at a lyceum . . . So under this (carefully hidden) aspect I have done a creditable job." However, she added, "I also know that I shall not become the great person I was absolutely sure I would."

She had been bedeviled by anxieties for years. Four nights after László died, when Gropius was visiting to discuss the future of her husband's school, Sibyl had a dream: she was about to start her lecture before an audience of all-male students, when "Moholy got up beside me . . . and said in a very loud strident voice that I was not going to give my lecture, that I was not good enough for it." At first she was "mortified, hurt" in the dream,



In 1950, Sibyl Moholy-Nagy published a biography (above) of her husband László, who had died four years earlier. In 1939, Sibyl and László (right) began running a summer design camp in Somonauk, IL, not far from László's Institute of Design in Chicago.



As she wrote in 1968: "In 1933 Hitler shook the tree and America picked up the fruit of German genius . . . some of this fruit was poisoned."

and then, feeling "a blind rage," she swung around and hit her husband's face with her hand. She woke up crying. "It was the dilemma of my married life," she wrote in the diaries. "There was his open disdain for all my mental capacities when we first met. Later there was the incessant struggle against the crushing detail of house making, secretarial work [for the school] and childrearing."

Hilde Heynen, whose biography of Sibyl Moholy-Nagy will be published the summer, has suggested that the critic's affinity to vernacular architecture built without formal schooling in *Native Genius* may have paralleled the author's own autodidactic immersion in architectural history and criticism.

Sibyl probably learned the discipline of architecture through intellectual osmosis. Her

father, the architect Martin Pietzsch, was head of the Dresden Academy. Her first husband, whom she married in 1929, was Carl Dreyfuss, a scion of a banking family, who taught sociology and was an amateur architectural historian. Later, married to László, she was immersed in the broader subject of art and design. Her diaries do not explicitly explain why she left school so early to take odd jobs and act on stage and in films before joining Tobis Film Berlin as a scriptwriter and editor in her mid-20s. While working at Tobis in 1931, she met László and began helping him on his experimental films. They had a daughter, Hattula, in 1933, and by 1935 had married and moved to London, where they had their second daughter, Claudia.

In 1944, Sibyl published a semi-autobiographical novel, *Children's Children*, under a pseudonym, S.D. Peech. If she had written her own biography, she could have called it "Matrix of a Woman." The vicissitudes of her career—her accomplishments and disappointments—provide a striking portrait of a strong, intelligent woman whose life was inextricably entwined with architecture. Unafraid to speak out about the mistakes being made in its name, she kept alive a critical consciousness much needed amid the euphoric growth of the postwar era.

The essays on Sibyl Moholy-Nagy and Catherine Bauer have been adapted from "Voices of Consequence: Four Architectural Critics," by Suzanne Stephens, published in *Women in American Architecture*, edited by Susana Torre, © 1977 by Watson-Guption, an imprint of Penguin Random House LLC. Used by permission of Watson-Guption, an imprint of Random House, a division of Penguin Random House LLC. All rights reserved.

Catherine Bauer Wurster

BY SUZANNE STEPHENS

AS THE UNITED STATES faces a crisis today of inadequate affordable and low-income housing, it is a timely moment to look back at the work of Catherine Bauer, a leading 20th-century reformer and activist who helped introduce the socially minded goals of European architects to America through her seminal book, *Modern Housing*, published in 1934. She helped formulate the revolutionary U.S. Housing Act of 1937, with which the federal government, for the first time, embraced the concept that housing the poor was not a private affair; the legislation created a federal loan and subsidy program to spur construction of decent low-income housing. Like the Bauhaus architects and other European Modernists, Bauer believed that good design for public housing should be an abiding concern for the architectural profession.

Born in Elizabeth, New Jersey, in 1905, Catherine, along with her younger sister (museum curator Elizabeth Mock Kassler) went to Vassar College. Catherine left to study architecture for a year at Cornell University, but returned to Vassar to graduate in 1926. After a sojourn in Paris, she was working in promotion and publishing in New York when she met Lewis Mumford. Through him, her interest in architecture was rekindled. The mentorship by the married man turned into a romance.

In 1930, Bauer traveled to Europe to investigate housing projects. “What I saw was so exciting,” she later recalled. “It transformed me from an aesthete to a housing reformer.”

Bauer’s winning essay on social housing, for a *Fortune* magazine contest sponsored by Edgar Kaufmann (who later was Frank Lloyd Wright’s client for Fallingwater), was published in 1931, and she became an “instant housing expert.” She assisted Mumford in organizing the housing section of MoMA’s *Modern Architecture: International Exhibition* (1932). When *Fortune* commissioned Mumford to write a series of articles on housing, he turned to Bauer to collaborate. Another trip to Europe ensued.

Most of the significant architecture she saw in Europe was low-income housing, including Walter Gropius’s Siemstadt housing (1930) for Berlin and J.J.P. Oud’s Workers’ Housing at the Hook of Holland (1926). Learning the principles of *existenz minimum*—the goals of decent, safe, sanitary housing for all that were promulgated in Europe—had a big impact on her subsequent work in America. In *Modern Housing*, she urged that a functionalist, vernacular design replace the chaotic and architecturally eclectic housing being built here. Even the new International Style was promoted in this country on stylistic terms, she argued, not for the social and planning ideas implicit in its forms.

When *Modern Housing* first appeared in the midst of the Depression, new-home building was at a virtual standstill. So Bauer began to promote housing sponsored by labor unions, such as the Carl Mackley Houses in Philadelphia, which was backed by the American Federation of Hosiery Workers and built under a Public Works Administration program. Bauer was hired by the Labor Housing Conference to help other unions learn from this prototype. From there, she worked with reformers pushing for the landmark Housing Act of 1937. Under this legislation, the U.S. Housing Authority was created to channel loans and subsidies for low-income housing through local government. Although Bauer had been the first person to win a Guggenheim Fellowship in architecture and planning, in 1936, after the Housing Act was passed, she postponed work on a new book to become the director of Research and Information for the new U.S. Housing Authority.

Initially, Bauer advocated slum clearance and urban renewal to build new low-cost housing, and endorsed standardized construction with “superblock” planning. Through standardization, she argued, costs would be reduced. Later she modified these positions, as the pitfalls of the monotonous tower-in-the-park became all too clear in the 1950s. In her article “Dreary Deadlock in Public Housing,” for *Architectural Forum* in 1957, she noted that public housing had not won wide support, and that

only a small percentage of eligible people—the most desperately poor—were actually applying to live in such places. Standardization had led to institutionalization; those superblocks had created large, bland buildings, and a housing project was identified with the lowest-income group. As Bauer wrote, “We’ve embraced too many functional and collectivist theories and ignored certain subtleties and



Catherine Bauer in the 1940s (above); she wrote about J.J.P. Oud’s Hook of Holland Workers’ Housing (bottom).

aesthetic values and basic social needs.” What families needed, she concluded, were private outdoor spaces and differing design treatments.

Bauer had foreseen the danger of urban renewal as a form of “people removal” from existing slum neighborhoods. She urged a balanced clearance and relocation effort so that residents could stay in the same community during the process and be guaranteed accommodations in new housing. Other proposals of hers included zoning that would cluster different sizes and types of housing, and property-tax assessments to encourage the construction of low-scale community facilities and shops.

Another idea advocated by Bauer was for public-housing agencies to work with private investors to create an agglomerated housing market. As suburbanization became widespread following World War II, and cities faced competition from suburbs for the tax dollar, she urged that regional land controls, housing policy, and transportation be unified.

Married in 1940 to architect William Wurster, Bauer moved with him to the Bay Area, where she began teaching city planning. On November 21, 1964, she was found on the coast near Mount Tamalpais, dead of a brain concussion and exposure, apparently having fallen while on a walk. She was 59.

Bauer never forsook her early ideals for raising the quality of housing in this country. Shortly before her death, she observed that the poor still didn’t have a minimum standard of housing (nor do they today). And she castigated modern architects for not continuing their early experimentation in this social arena, which held so much promise when she began her historic role as a reformer.

Aline Saarinen

BY CATHLEEN MCGUIGAN

THOUGH Aline Bernstein Louchheim Saarinen (1914–72) was an acclaimed journalist in her day, she slipped into obscurity—only to begin to emerge as her husband Eero Saarinen’s architectural star began rising again in recent years. Yet, well before her marriage to Saarinen in 1954, she was a cultural force, writing hundreds of articles for magazines and as an art critic for *The New York Times*, where she was a vigorous defender of modern architecture, at a time when much of America was dubious about contemporary design.

Born into a privileged New York family, Aline was taken on her first grand tour of Europe at the age of 9. But her deep education in Modernism really began at Vassar College, where John McAndrew was her influential teacher. McAndrew had studied architecture at Harvard and was part of a circle that included Henry Russell Hitchcock and Lincoln Kirstein, who became players in the nascent Museum of Modern Art. In 1929, McAndrew traveled in Europe with another member of that tribe, Philip Johnson, visiting J.J.P. Oud housing and Brinkman & Van der Vlugt’s Van Nelle Factory. At the Bauhaus in Dessau, they met Gropius, though he was no longer running the school.

The Bauhaus and other strands of European Modernism were embedded in McAndrew’s thinking when he arrived at Vassar in 1932. He not only taught the history of art and architecture, he redesigned Vassar’s art library and gallery, creating the “first modern interior of an academic building on an American campus,” according to Mardges Bacon in her book *John*



Aline Saarinen and the modern Vassar bookshop (top, right), which she reviewed.

McAndrew’s Modernist Vision. Though Aline had graduated when those spaces opened in 1937, she saw a precursor in McAndrew’s clean design of the Vassar Cooperative Bookshop, which she reviewed as art editor of the student newspaper, noting its Mies van der Rohe chairs, chairs “adapted from Le Corbusier,” and a desk by Marcel Breuer. Vassar had a strong link to MoMA—where McAndrew later became curator of architecture—and Aline likely heard both Johnson and Hitchcock lecture at the college about their 1932 International exhibition at the museum, which she well could have seen herself.

A student of exceptional promise, Aline was married to Joseph Louchheim within a week of her graduation in 1935. Yet she didn’t settle for domesticity but enrolled in the master’s program at the Institute of Fine Arts at New York University, pursuing her degree while raising two young sons.

Aline worked at *Art News*, rising to managing editor, and then was hired away by the *Times* in December 1947. In her first *Times* review, she argued for the link between modern art and architecture. “Abstract art still puzzles many people,” she noted, but Mondrian, for example, was “a fountainhead of inspiration” for architects such as Oud and Mies. Later pieces focused on a Marcel Breuer prototype house at MoMA; the architecture of factories; and the firm SOM, about whose work she wrote, “The shadows of Mies Van der Rohe, Le Corbusier, and Gropius fall on the drafting boards.” Her lucid writing brought her honors, including the International Award for Best Foreign Criticism at the Venice Biennale in 1951.

But it was an assignment in January 1953 that changed her life: she went to Bloomfield Hills, Michigan, to report on Eero Saarinen for the *Times Magazine*. In the wake of the death of his father, Eliel, Eero was moving their firm in a new direction. In her piece “Now Saarinen the Son,” Aline told, in almost Shakespearean terms, how Eero had emerged from his father’s long shadow to create an architectural idiom in which “interlock[ing] form, honest functional solutions, and structural clarity become an expression of our way of life.” The article perfectly positioned Eero for the wave of success that awaited him; he couldn’t have written it better himself—and in a way, he did. Their meeting had been a coup de foudre—and not only did Aline commit the journalistic sin of sleeping with her subject, but she let him vet the piece in advance.

Aline by then was divorced and, within a year, Eero had divorced his wife.

She could not write about Eero for the *Times* after they married, but, in 1955, *Vogue* ran her piece “Four Architects Helping to Change the Look of America.” The four were Mies, as a kind



of godfather figure, plus three younger architects who were dubbed “Miesian”: Johnson, Gordon Bunshaft—and Eero. Eero declared Mies “a great moral force in architecture,” while Aline described her husband as a “professor” type who manages to “make a neatly pressed suit look slept-in within ten minutes”; she also described their house, without saying she lived in it. It was awkward, to say the least: *Vogue* attached an odd disclaimer saying the editors chose the four architects, not Mrs. Saarinen.

Aline and Eero were a power couple—both were extraordinarily ambitious for themselves and each other. Aline boosted his career through her East Coast connections, and helped shape his image through her deft PR skills. Her own career was in full gear as well, with articles for the *Times* and her 1958 bestselling book, *The Proud Possessors*, about great art collectors from J.P. Morgan to Peggy Guggenheim.

All that was shattered in 1961, when Eero died of a brain tumor at the age of 51. Devastated, Aline went into overdrive, becoming a kind of Yoko Ono of architecture, working hard to control his legacy. She played a hugely significant role, too, in ensuring that his many unfinished projects were completed.

In 1962, Aline arranged for the *Today* show to broadcast from Eero’s TWA terminal when it opened, and she chatted easily on camera with the show’s host. She soon launched her next career, in television—first covering the arts for *Today*, and later as a correspondent for the NBC evening news. In 1971, NBC sent her to Paris, the first woman to run a network foreign bureau. But it was a short-lived triumph: she died the next year, of cancer. A media pioneer, she knew how to communicate sophisticated ideas about culture to a popular audience, on television as she had in print. One critic put it this way: she never made “the highbrow seem high blown.” ■

Cathleen McGuigan is working on a biography of Aline Saarinen.



The Next Bauhaus

Like the first school, it will probably be generated outside of architecture.

BY JOHN RONAN

THE BAUHAUS is the Keith Richards of design schools: influential, legendary, and stubbornly refusing to die. The fanfare occasioned by its 100th anniversary is largely deserved—it's still the gold standard among design schools—but the fact that it was in existence only for 14 years raises the obvious question: *Why are we still talking about the Bauhaus?* and a more elusive one: *Why has no design school superseded its influence in the intervening century?*

If we're talking about the school, rather than the style, we need to acknowledge that there is no such thing as the Bauhaus. The school went through several manifestations during its short existence, so it is only one

thing in the same way a caterpillar and a butterfly are one thing: the school that Walter Gropius started in 1919 bears little resemblance to the school Mies would disband in 1933. Gropius's utopian vision of uniting all the arts under one roof where they could cross-fertilize was the central idea behind its founding, reminiscent of composer Richard Wagner's earlier efforts to unify all arts via opera into "the total work of art." This Germanic predilection for overarching visions unfortunately didn't stop at the arts, which would later factor into the Bauhaus's undoing.

It was said that Gropius didn't know how to draw. This seemingly insignificant detail is, I

believe, crucial to deciphering the source of the Bauhaus's influence, for, had Gropius been a virtuoso architect (like Mies), the Bauhaus likely would never have been formed. Gropius was more of an ideas man, the rare individual who can assemble a diverse collection of talented people—which included the eccentric Johannes Itten, who dressed like a monk—to work together toward a common goal. Gropius was the orchestra conductor, and this ability—not his design skills—was his special gift. Since it's probably been a hundred years since someone could get a group of academics to all pull in the same direction, this, by itself, should be cause for celebration.

Gropius was the orchestra conductor, and this ability—not his design skills—was his special gift.

But the school never stood still for too long (perhaps a secret to its success). After four years, Gropius abruptly changed course, adopting a new focus on design for mass production; "Art into Industry" was the new motto (the monk would have to go). In this iteration, the designer would harness industrial technology and create well-designed mass-produced goods. Hannes Meyer, Gropius's successor, took the school in a more overtly political direction, putting an emphasis on "design for the masses" that would become one of the school's hallmarks but also get Meyer in hot water with the local authorities, who would turn to the apolitical Mies van der Rohe to reboot the school a third time.



Mies with the model of his Crown Hall, which became the centerpiece of the IIT campus.

If the Bauhaus owes its origin to Gropius, it owes its influence in the realm of architecture to Mies. He doubled down on the Bauhaus's emphasis on understanding materials, explaining, "No design is possible until the materials with which you design are completely understood," and, like Josef Albers—who focused on the limits of visual perception—stressed objectivity and a search for "truth" in an extra-moral sense. "Architecture, in my opinion," Mies would later say, "is not a subjective affair. The tendency should be in an objective direction." Subjectivity was for painters, not architects, according to Mies, so he redrew the line between the arts and architecture that previous iterations of the Bauhaus had sought so assiduously to erase. The Bauhaus had become an architecture school.

The school was already famous by the time it was shut down by the National Socialists in 1933, enabling its faculty to emigrate across the globe to disseminate its teachings—Meyer to the Soviet Union, Albers to Black Mountain College, and Gropius to Harvard's GSD, where he promptly gave away the library because students shouldn't be looking at history books (you're welcome, Columbia). Ironically, the Nazis' attempt to destroy the Bauhaus only served to amplify its influence and ensure its legacy. Mies van der Rohe landed in Chicago at IIT, where his

stripped-down Bauhaus approach found a welcome home in the no-nonsense Midwest metropolis. Mies's objective "solutions" to the "problem" of building turned out to be a smash hit with both developers and corporate America, and were subsequently reproduced across the American landscape (but never improved upon), in the same way the German delicacy Hamburg steak became the ubiquitous hamburger here. Speaking in a lecture at the Blackstone Hotel in Chicago in 1953, 20 years after the Bauhaus's closing, Mies was asked about the school's enduring impact: "The fact that the Bauhaus was an idea, I think, is the cause of the enormous influence it had on any progressive school around the world. You cannot do that with organization, you cannot do that with propaganda. Only an idea spreads so far."

And spread it did. Any great idea eventually becomes a victim of its own success, its influence eventually so pervasive that it becomes invisible, and so it is with the Bauhaus. Architecture, its greatest beneficiary, for the most part, has turned its back on Bauhaus doctrine and currently preoccupies itself with the kind of subjective self-expression and vacuous formalism that Mies and his Bauhaus colleagues abhorred. But, elsewhere, the principles of the Bauhaus live on today, hiding in plain sight. For it's in the iPhone that art meets technology, and

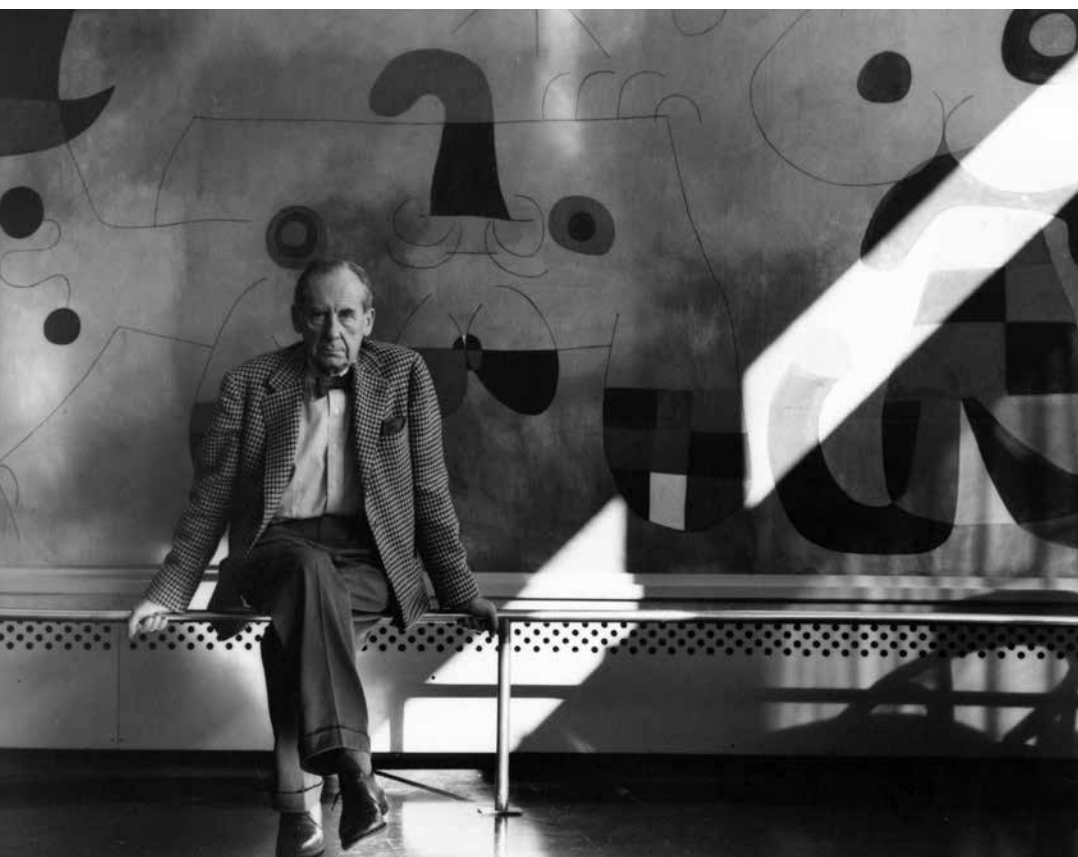
"The fact that the Bauhaus was an idea is the cause of the enormous influence it had on any progressive school around the world. You cannot do that with organization, you cannot do that with propaganda. Only an idea spreads so far."

—Mies van der Rohe

the Bauhaus ethos is fully realized—a product for the masses that is functional but beautiful, with clean lines, simplicity, and sophisticated use of advanced materials. It embodies the argument that everything can be improved through design. From the phone itself to its packaging, advertising, and the design of the store in which it's sold, is it not the "total work of art" that Gropius (and Wagner) imagined?

School in existence for a mere 14 years, no school since has superseded the Bauhaus's global impact on architecture and design. But it's important to remember that it didn't begin as an architecture school but grew out of an arts-and-crafts movement and ideas about the relationship between art and technology. Architecture wasn't added as a course of study until 1927. The Bauhaus evolved into an architecture school over time, and eventually transcended the field. It is likely that the next Bauhaus will emerge from an idea about technology, and come from somewhere other than architecture. ■

John Ronan is founding principal of John Ronan Architects in Chicago, an alumnus of Harvard Graduate School of Design (post-Gropius), and the John & Jeanne Rowe Endowed Professor in Architecture at the Illinois Institute of Technology (post-Mies).



Gropius in front of the Miró mural at the Harvard Graduate Center, which he designed with his firm TAC.



Under the Influence

Architects describe the impact of the Bauhaus on their lives and work.

INTERVIEWS BY FRED A. BERNSTEIN

Claire Weisz

Principal in Charge,
WXY Architecture and Urban Design, NYC

In my first year of architecture school at the University of Toronto in the 1980s, I discovered Paul Klee's *Pedagogical Sketchbook*, based on his design-theory course at the Bauhaus. I remember one chapter about line and structure; Klee's point was that structure was something you could draw, not just calculate. The book taught me how to think about composition and function together—it erased the somewhat artificial line between the way artists and architects think.

But most early works on the Bauhaus omitted the women, so we didn't grasp the full range of ideas, and need to consider the Bauhaus and its influence anew.

Juergen Riehm

Founding Principal, 1100 Architect, NYC

I was educated in Trier, which is filled with Roman ruins and thought to be Germany's oldest city—not a lot of modern architecture there. The Bauhaus was taught mainly as part of architectural history. After graduating, I traveled to Berlin and visited the Bauhaus Archive. (Dessau and Weimar, then in East Germany, were not accessible to me.) Seeing it all together made a powerful impression. One of the lessons, which has stayed with me, is the importance of creating architecture that will endure over time, rather than a fashion statement.

Meijin Yoon

Dean, College of Architecture, Art and Planning,
Cornell University

Principal, Höweler + Yoon, Boston

To me, the Bauhaus represents the understanding that architecture is an applied art that intersects with industry, technology, society, politics, even communications and media. It's significant that so many Bauhaus members were accomplished in more than one field.

Herbert Bayer's *Diagram of the Field of Vision*, advocating a multidisciplinary approach to

solving problems, couldn't be more timely. The Bauhaus was dealing with relatively straightforward new materials and methods of industrial production. But today, technology has exploded, and we should be looking to intersections between design and fields like biology and computation. We need to take the Bauhaus's original tree-ring diagram, showing its expansive approach, and add a few more rings to make it even more relevant now.

My teachers at Yale, all former students of Gropius at Harvard, had to go through death-throes of agony to overcome the Bauhaus.

—Robert A.M. Stern

Helmut Jahn

Design Director/CEO, Jahn, Chicago

I was taught by people from the Bauhaus or their successors—although, interestingly enough, when I was in architecture school in Munich, in the early '60s, everyone was looking to the American skyscrapers of Mies and SOM. But, except for Mies, the Bauhaus people who came to the U.S. never did anything better than they'd done at the Bauhaus.

Robert A.M. Stern

Founder and Senior Partner,

Robert A.M. Stern Architects, NYC

Former Dean, Yale School of Architecture

I'm anti-Bauhaus, in that I didn't jettison historical styles. In fact, I had to figure them out for myself as a reaction against the nihilism of

the Bauhaus and its heirs at Yale.

The Bauhaus was a wild, completely undisciplined environment. When I was in architecture school, in the early 1960s, we would sit around late at night, mulling over the sex lives of the Bauhausians. Sybil Moholy-Nagy, then a frequent visitor to Yale, took fabulous swipes at the Bauhaus and the pretensions of the "Bauhauslers," who came to America and rewrote the story for delicate ears in Cambridge.

My teachers at Yale, all former students of Gropius at Harvard, had to go through death-throes of agony to overcome the Bauhaus. Among them were Philip Johnson and Paul Rudolph, who was in many ways Gropius's best student. They were interested in the Bauhaus, but they never accepted its principles.

Whole careers were built on having been or studied with someone who'd been there. There were genuine talents at the Bauhaus, but the architecture that came out of it wasn't really very interesting. It was a better place for crafts.

As for me, I had to fundamentally reject much of what I was taught as gospel in the early 1960s. The Bauhaus caused me a lot of architectural soul-searching.

Will Bruder

Principal, Will Bruder Architects, Phoenix

In 1965, I was accepted at IIT, where I was going to study with Mies. But over the summer, I got a job in Wisconsin with William Wenzler, a pioneer in thin-shell concrete. I loved his work, so I decided to stay and enroll at the University of Wisconsin-Milwaukee instead of IIT. My first-year design instructor was Fred Berman, and it was as if I was at the Bauhaus. We learned color theory, proportion, scale through Bauhaus-style exercises—fundamentals that gave everyone equal footing. Those two semesters changed my life.

Tom Kundig

Principal/Owner, Olson Kundig, Seattle

I grew up under the influence of the Bauhaus. My parents were Swiss; my father, Moritz

Kundig, was an architect who'd studied at the ETH, in Zurich. In Spokane, where we lived, he was part of a group of very good architects, a number of whom had trained with Gropius at Harvard and carried his ideas back with them. In the postwar years, there was a moment, in many mid-sized towns, when there was a lot of uniformly good Modernist work. I grew up around it. What I learned over the years, directly from the Bauhaus, is that the beauty of the building is in the craft, the tectonics—the making of the thing.

Deborah Berke

Dean, Yale School of Architecture;
Partner, Deborah Berke Partners, NYC

At RISD, where I studied as an undergraduate, everyone comes together under one roof, whether you're going to be an illustrator, a glassblower, a painter, a furniture maker, or an architect. RISD is not a direct descendent of the Bauhaus, but there's a parallel in the nonhierarchical intermingling of design and making at all scales. Common to both the Bauhaus, during the brief period when it functioned as the Bauhaus, and RISD is that people with all those different talents study together. I consider a range in ways of thinking and making key to being a good architect.

Craig Hodgetts

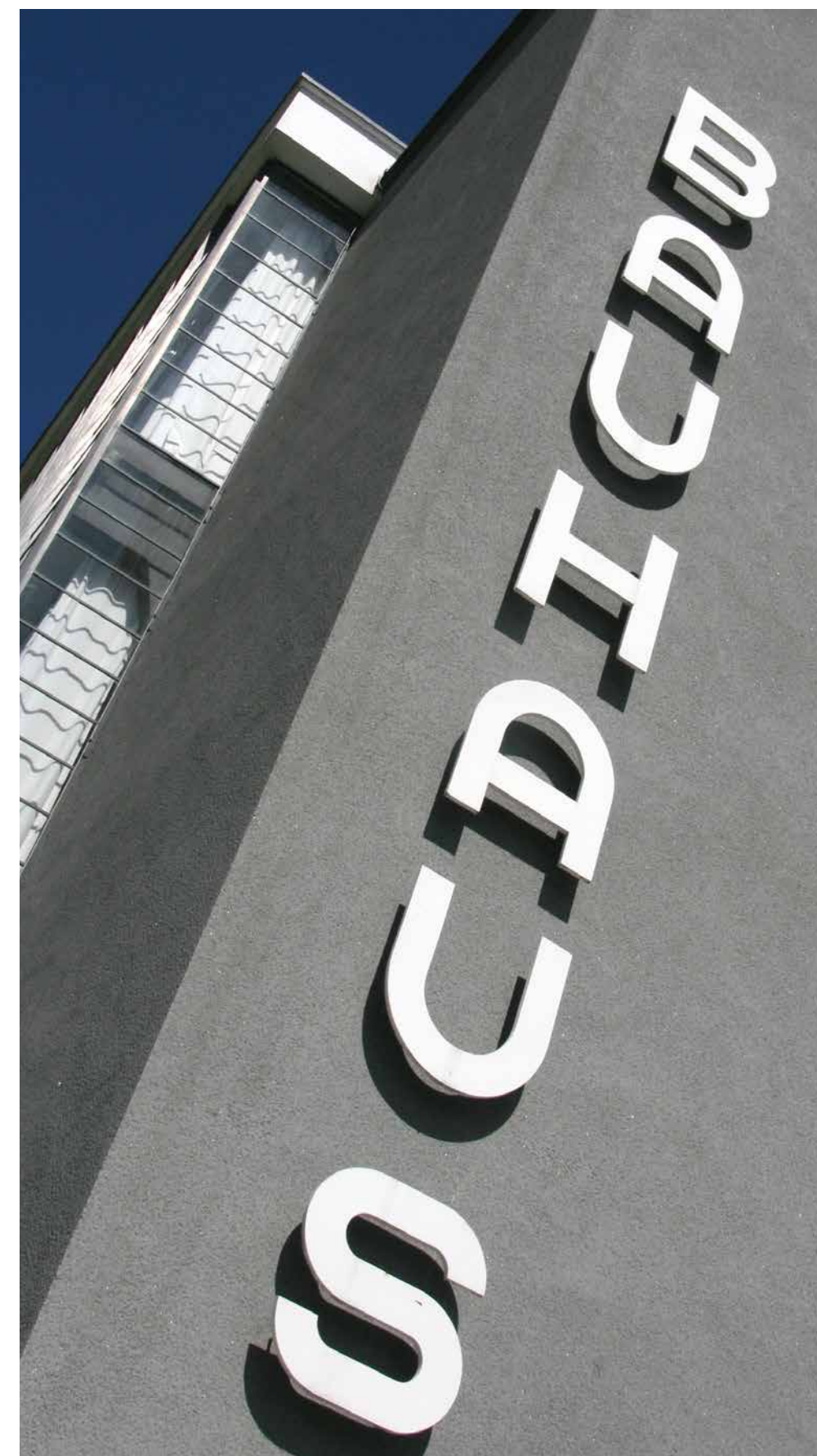
Design Partner, Mithun | Hodgetts + Fung,
Culver City, California

Before I went to architecture school, I studied engineering, theater, and art. So I was very attracted to the Bauhaus's cross-disciplinary nature. In 1969, I helped start the design school at CalArts, which I thought of as a modern incarnation of the Bauhaus. I remember doing architecture exercises with the theater and dance departments. That lasted about four years, until the administration changed.

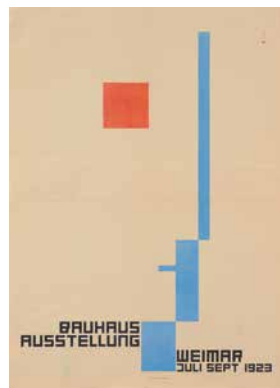
A few years later, Ming Fung and I created a short-lived design consortium called Harmonica, which included architects, filmmakers, graphic designers—again, like the Bauhaus. During that time, I resisted being called an architect, because I didn't want to be pigeonholed.

We still seek cross-disciplinary work, but the opportunities today are fewer because the market is so segmented. The Bauhaus had lots of very, very eccentric people, breaking the box in all kinds of ways. I would have had a blast there. ■

These interviews have been edited and condensed for space.



PHOTOGRAPHY: © CHRISTIN IRRGANG, 2011, BAUHAUS DESSAU FOUNDATION; TOBIAS ADAM/WIKIMEDIA COMMONS (OPPOSITE, TOP)



Bau Means Building

A new museum in Weimar is the first of a trio of structures honoring the Bauhaus centennial.

BY OLIVER WAINWRIGHT

ONE HUNDRED YEARS after the Bauhaus was founded, its products have become so ubiquitous that they've faded into the background—or else descended into kitsch. Nothing says generic corporate lobby like a Mies van der Rohe Barcelona chair, while Josef Albers's colored nesting tables have been replicated to oblivion. In this centenary year of design-themed German travel articles and glossy features on overpriced limited-edition products, it is easy to suffer from Bauhaus fatigue. But persevere. Because the new Bauhaus Museum in Weimar has the power to surprise even the most hardened design geek.

"We wanted to tell the story of the early years of the Bauhaus, which isn't so well known," says Wolfgang Holler, director of the Klassik Stiftung Weimar, the city's foundation for cultural heritage, which initiated the \$30 million museum. He is standing in the first-floor exhibition, where the objects around him range from Expressionist sculptures to folksy ceramic pots, a far cry from what you might think of as the stripped-down "Bauhaus style." Instead, what emerges is a picture of a wildly heterogeneous place, where breathing exercises taught by pseudo-Zoroastrian vegan painters were conducted side by side with welding classes and cosmic-puppetry workshops.

The riotous range of work on show stands in marked contrast to the neutral, if not bleak,



The new Bauhaus Museum in Weimar is a concrete block with thin horizontal bands that glow at night like the lines of a musical score (above). The Dessau museum (below) is expected to open in September.

container in which it is housed. The result of an open international competition in 2012, the design is the first built work of Heike Hanada, a German architect who studied and taught at the current Bauhaus University in Weimar. Her building stands as a blank gray concrete block on the edge of a new public space, re-

lieved only by thin, indented horizontal strata, which glow at night like the lines of a musical score. Its austere, uncompromising form has provoked a mixed reception. Some locals call it the bunker. Others have compared it to the imposing Nazi-era stone tower across the street, designed to the orders of Hitler himself. Either way, it exudes the cold, monolithic presence of a memorial structure—which is somehow fitting. Weimar's right-wing politicians did their best to destroy the Bauhaus in its early days, and the city remains a hotbed of the conservative forces that finally drove the school out to Dessau in 1925.

"We had to make a tough statement to stand up to the highly political context," says Hanada. The museum is located right next to the 1930s Gauforum, built by the National Socialists to administer their forced-labor program. With the country's far right once again on the rise, the building's central square (formerly named Adolf Hitler Platz) remains fenced off in order to prevent neo-Nazi gatherings.

Inside the museum, the large, windowless gallery spaces are kept simple and raw, with gray terrazzo floors, ribbed concrete ceilings, and white-painted concrete walls, a minimal world populated by steel handrails, felt-topped benches and naked light bulbs. "We tried to be as poor as possible with the materials," says Hanada. The approach has paid off, allowing



Holographic allusions to Oskar Schlemmer's *Triadic Ballet* animate various galleries (above, left and right). In other exhibition areas, ceramic and metal objects and furniture are displayed (bottom).

the work on show to stand out. There is plenty of room for the exhibitions to breathe, with sectional changes where the galleries leap from single to double and triple height, and places where windows are punched through so you can see to the levels above, while narrow staircases create a dramatic sense of compression and expansion as you move between the floors. As you leave, picture windows frame poignant views out to a memorial tower in the distance, marking the site of the Buchenwald concentration camp, whose gates were designed by prisoner and former Bauhaus student Franz Ehrlich.

The Weimar museum is the first of a trio of new buildings planned for the Bauhaus centenary, and the only one to be completed on time. Dessau, where Walter Gropius's industrial studio complex still stands, is awaiting the September opening of a big glass hangar by the young Barcelona practice Addenda Architects (also the result of an open competition), planned to house a floating black-box

gallery above an open ground floor. Berlin, where the Bauhaus fled for one final year in 1932, is to receive an extension to its Gropius-designed archive building, in the form of a glass tower by local architect Volker Staab, delayed until 2021.

Weimar is not only the first but, perhaps, the most important of the three, since it explains how the school was not a blip out of the blue but an evolution of what had been brewing in the region since the late 19th century. A fascinating complementary show at the city's revamped Neues Museum nearby helps to illuminate how the work of figures like Henry van de Velde, who established Weimar's School of Arts and Crafts in 1905, laid the foundations for what Gropius would develop. Together, the two museums reveal the Bauhaus period to be a richer and more complex phenomenon than you might ever have imagined. ■

Oliver Wainwright is *The Guardian's* architecture and design critic.





Haus Party

Events celebrating 100 years of the Bauhaus

BY KARA MAVROS

In celebration of the Bauhaus centennial, institutions across Germany, the U.S., and other countries are holding conferences, exhibitions, and related events throughout the year. In Weimar, visitors can attend the recently renovated Neues Museum, only a short walk from two Henry van de Velde–designed buildings that compose today’s Bauhaus University, Weimar. Other enthusiasts can head to Dessau to dine at the Kornhaus restaurant, designed by Carl Fieger (1930), or stay overnight in the Gropius-designed “Prellerhaus,” part of the Dessau Bauhaus Building, where students of the school lived and worked.

Bauhaus Imaginista Exhibition

Indianapolis

Through June 22, 2019

This exhibition at the Tube Factory Artspace presents the four essential elements of the Bauhaus: reform pedagogy, the design debate, material cultures outside the Western world, and experimental visual practices. More details at tubefactory.org.

Oskar Schlemmer: The Bauhaus and the Path to Modernity

Gotha, Germany

Through July 29, 2019

This exhibition at Herzogliches Museum Gotha focuses on the life and work of Oskar

Schlemmer, who is recognized for his *Triadic Ballet* and contributions as a painter, draftsman, graphic artist, sculptor, stage designer, and muralist. Details at bauhaus100.org.

Bayer & Bauhaus

Aspen, Colorado

Through April 25, 2020

This new exhibition delves into the profound but often unnoticed influence of Herbert Bayer’s work on Aspen, Colorado. More information at bauhaus100aspen.org.

Van de Velde, Nietzsche, and Modernism Around 1900

Weimar, Germany

Through April 1, 2024

The new exhibition at the Neues Museum Weimar, formerly used for temporary exhibitions, opened in April with a presentation of Art Nouveau architect and designer Henry van de Velde’s work, including the Nietzsche archive. More at bauhaus100.com.

The Bauhaus and Harvard

Cambridge, Massachusetts

Through July 28, 2019

This exhibition at Harvard presents rarely seen design objects and photography from the Busch-Reisinger Museum’s Bauhaus collection. Information at harvardartmuseums.org.

Bauhaus Beginnings

Los Angeles

June 11–October 13, 2019

This exhibition at the Getty Research Institute examines the founding principles of the Bauhaus by featuring over 250 rare prints, drawings, collages, notebooks, and ephemera from its early years. More information at getty.edu.

Bauhaus on Screen

Los Angeles

June 16, 2019 at 4 p.m.

This program at the Getty Center presents 90 minutes of short black-and-white films pro-



Kornhaus restaurant by Carl Fieger, 1930. Dessau, Germany.

duced between 1919 and 1933 by figures at or associated with the landmark institution. Learn more at getty.edu.

Challenging the Bauhaus Today: A Conversation with Architects

Frankfurt

June 18, 2019 at 7 p.m.

A panel discussion at the Center for Critical Studies in Architecture features architects Jan de Vlyder and Verena von Beckrath, moderated by Elli Mosayebi. For more information, go to criticalarchitecture.org.

Opening of Bauhaus Museum Dessau

September 8, 2019

This new museum will display the Bauhaus Dessau Foundation’s collection in honor of the centenary of the founding of the Bauhaus and will also host contemporary events at the Bauhaus buildings. Learn more details at bauhaus-dessau.de/en.

ReVIEWING Black Mountain College

Asheville, North Carolina

September 20–22, 2019

The conference at UNC Asheville will focus on interdisciplinary education, information networks, and new media as they relate to the school. More at blackmountaincollege.org. ■



One of the Van de Velde rooms at Neues Museum Weimar.

DESIGN VANGUARD 2019

**RECORD's annual
honors highlight
10 emerging
practices from
around the globe.**

FEATURED FIRMS

ZOOCO
MADRID

**ADAM SOKOL ARCHITECTURE
PRACTICE**
LOS ANGELES

G3 ARQUITECTOS
QUERÉTARO, MEXICO

JO JINMAN
SEOUL

SPIEGEL AIHARA WORKSHOP
SAN FRANCISCO

POOL LEBER
MUNICH

BAREND KOOLHAAS
AMSTERDAM

MICHAN ARCHITECTURE
MEXICO CITY

FRENCH 2D
BOSTON

CHYBIK+KRISTOF
BRNO, CZECH REPUBLIC

PHOTOGRAPHY: © ROLAND HALBE

VERIN ARTS CENTER, SPAIN,
ZOOCO



VERIN ARTS CENTER The project offers the intimacy of a house and the heterogeneity of a small town. The displacement and delicate turns of a series of volumes—which house a lobby, galleries, a large theater, and a restaurant—produces a seemingly random plan and appearance, but highly flexible spaces of varying scales.



JHOUSE This project involved building a house inside of a house. The different levels and heights, all linked by stairs or short corridors, work as furniture that changes its use by the spaces it generates.



DE VINOS Y VIANDAS The architects used three materials for this winery: wood for the ribs that reference wine barrels, stone for the floor like that in antique cellars, and a mirrorlike material that creates reflections throughout the space.

ZOOCO MADRID

PARTNERS MIGUEL CRESPO, Javier Guzmán, and Sixto Martín, all 39, are survivors—they founded Zooco studio in 2009 as Spain's economy tanked. Their practice began like many in those days, with two competition wins for small-town public projects, but crisis-driven budget cuts canceled one and reduced the other by half. Now on the other side of the storm, the three are reemerging, like the delicate recovering economy itself, with small- and medium-size private commissions ranging from tiny boutiques to upgrading a faded resort hotel.

To tackle this varied portfolio, the partners develop systems of geometric assembly and formal repetition. "We like to use a single element that responds to many requirements," explains Martín. For Nuilea, a natural cosmetics shop in a trendy Madrid neighborhood, they designed a 16-inch cubic building block, made of MDF board and with two open sides, to build a sales counter and a fabric-covered bench. Blocks along the walls alternate open and closed faces for display and storage. Others, with Japanese parchment over the openings, house lights. "Those blocks are like a spreading virus," Martín jokes, "colonizing even the ceiling."

Similarly, a cloud of Plexiglas boxes containing point lighting drops from the ceiling of Melguiza, a Madrid shop specializing in Spanish saffron. Identical boxes, suspended lower, serve as display cases. The idea, the architects explain, was to handle the precious saffron like jewelry while underscoring its lightness and fragility. In a wine shop in Valladolid, the walls and ceiling are lined with arching ribs of MDF. The effect suggests a wine cellar or cave, as well as oak casks for aging wine. And a system of metal tube framing with infill panels of glass and wood invades a high-ceilinged residential loft in Madrid, creating a multilevel maze of spaces for study, lounging, and storage, organized around the principal rooms and along an elevated circulation gallery.

In larger works, the repetition of formal themes becomes looser, adapting to more complex programs. For the Velin Arts Center in northwest Spain, the architects broke the program into individual granite-clad blocks, which are connected by a free-form interstitial lobby. The blocks can thus operate independently, and they bring the project's scale closer to that of its residential surroundings.

Zooco's renovation of the Flamingo Club Hotel in the Canary Islands includes an addition containing new public spaces. "We wanted to take the outdated eclecticism of the original towards something with cleaner lines," says Guzmán, "a bit more Miami, more Art Deco."

The three partners were schoolmates at the Escuela Técnica Superior de Arquitectura de Madrid, the city's leading architecture school. They started working together in Madrid, but Guzmán decamped to his native Santander, on Spain's northern coast, when his daughter was born. Now their design process sometimes includes remote group chats and construction supervision in which they digitally exchange images and sketches, resulting in a "storyboard of each project," Guzmán observes. By this and other means, the three maintain the bonds formed in school as their practice grows in geographic reach and scale. *David Cohn*



FOUNDED: 2009

DESIGN STAFF: 10-12

PRINCIPALS: Miguel Crespo Picot, Javier Guzmán Benito, Sixto Martín Martínez

EDUCATION: Picot and Martínez: B.Arch., ETSAM, 2007; Benito: B.Arch., ETSAM, 2008

WORK HISTORY: Picot: Estudio Entresitio, 2007-09; Benito and Martínez: Amman, Cánovas y Maruri, 2008-09

KEY COMPLETED PROJECTS: M4 House, Madrid, 2018; Flamingo Club, Tenerife, 2018; JHouse, Madrid, 2018; De Vinos y Viandas Wineshop, Valladolid, 2018; Melguiza saffron shop, Madrid, 2018; Nuilea shop, Madrid, 2018; Big & Tiny multipurpose space, Santa Monica, California; Centro de las Artes Escénicas de Verín, Orense, 2016 (all in Spain, except as noted)

KEY CURRENT PROJECTS: Morning Riders Surf Club, Loreda, Cantabria; Boutique Hotel, Málaga; V138 House, Madrid; Restaurant La Hermosa, Santander; Restaurant El Camino, Santander; Hotel Oasis Lanz, Lanzarote; Hotel Atlantic Garden, Fuerteventura; 2Houses in Loreda, Cantabria (all in Spain)

zooco.es



FLAMINGO CLUB In this renovation, the structure is set back from the facade, where curving horizontal bands create a smooth transition between the contrasting, more orthogonal north and south elevations over a steep slope.

ADAM SOKOL ARCHITECTURE PRACTICE

LOS ANGELES



FOUNDED: 2011

DESIGN STAFF: 5

PRINCIPAL: Adam Sokol

EDUCATION: Yale University, M.Arch., 2004; Columbia University, History of Architecture B.A., 2001

WORK HISTORY: Visiting assistant professor, University of Buffalo, 2006–11; Skidmore, Owings & Merrill, New York, 2004–06

KEY COMPLETED PROJECTS: Arbeit Software, Buffalo, 2019; Park Hyatt X-House, Beijing, 2018; Apartment of Perfect Brightness, Beijing, 2015; The Emperor Hotel Qianmen, Beijing, 2014; Black Diamond House, Buffalo, 2011

KEY CURRENT PROJECTS: Spring Street Hotel, Los Angeles; Slope Museum, Nanjing, China; Allen Apartments II, Buffalo; residential interiors, Los Angeles & Beijing; traveling exhibition on tea culture; West Side Bazaar, Buffalo

asap.pro

AN APT illustration of Adam Sokol's architectural philosophy is his Black Diamond House of 2011, in Buffalo, a respectful but abstracted version of the pitched-roof houses that surround it. Sokol rotated the building's ridgeline to allow a view of a former psychiatric hospital designed by H.H. Richardson, now a hotel (RECORD, September 2017). The city's "amazing architectural pedigree," Sokol says, also includes Sullivan, Wright, and the Saarinens, "and everyone there knows who these people are." In locations ranging from Buffalo to Beijing and Los Angeles, where Sokol's main office is, Adam Sokol Architecture Practice (asap) is designing buildings and interiors that combine an emphatically modern aesthetic with historical references and an emphasis on architecture's narrative and experiential powers.

The Emperor Hotel Qianmen (2013) in Beijing, asap's first project in China, takes its inspiration from the public bath that once occupied the site, using water as its theme, from the cantilevered rooftop pool to a glass atrium with a 49-foot "rainfall," to an underground waterfall and pool. "I wanted people to experience water flowing through the interior," Sokol says. In the more recent Park Hyatt X House, a 2,200-square-foot apartment in Beijing's tallest residential tower, asap designed a business-entertaining space containing a sequence of eighteen domes, clad variously in materials like gold, glass mosaic, and velvet, and connected by arched openings. The apartment, Sokol says, "feels vast because it has so many spaces. I was excited about developing a typological language."

Sokol, 39, established his practice in Buffalo in 2011, having moved there to teach at the University of Buffalo. He had received a bachelor's degree in the history of architecture at Columbia, and a master's of architecture at Yale. His favorite teachers included Kenneth Frampton, Barry Bergdoll ("He has total mastery over significant chunks of history but can still focus on contemporary work") and the late Vincent Scully ("He would talk about empathy—an interesting way to think about the world").

In 2016, Sokol moved his headquarters to Los Angeles, where asap's current projects include the not-yet-under-construction Spring Street Hotel, in the city's historic downtown. Sandwiched between two landmarked buildings, the 28-story structure respects the street wall to their shared cornice line (at 150 feet) before morphing into a tower, with

folded planes, that was inspired by ancient cliff dwellings. It raises, Sokol explains, "the issue of how to occupy the city—how do you inhabit a mountain?" Other projects in the works include a pair of temporary, inflatable teahouses, a proposed museum in China that will be built inside an artificial hill, and a public market in Buffalo with vaulted bays inspired by historic models in the Middle East. Sokol contrasts his interests with the impermanence of today's social media and news cycles, saying, "I look at things that last millennia." *Pilar Viladas*



BLACK DIAMOND HOUSE An early project for the firm, this 2,000-square-foot house builds on Buffalo's rich architectural heritage. Adjustments were made to accommodate programmatic needs, such as angling one wall back 6 degrees to improve daylight, and shifting the ridgeline off center to capture exterior views.



PARK HYATT X-HOUSE Situated on a high floor of Beijing's tallest residential building, the 2,200-square-foot apartment was conceived as a business-entertaining suite designed around a series of spaces—wine cellar, living room, bar, dining room, study, bedroom, and bath—housed in 18 intersecting domes.

SPRING STREET HOTEL For this on-the-boards project in downtown Los Angeles, asap's building design is inspired by rock formations and land art from the city and the Southwest, benefiting from the tension with the existing historic buildings to create a distinctive structure in the urban landscape.



THE EMPEROR HOTEL QIANMEN Located on a site in Beijing once occupied by a public bath, the 80,000-square-foot hotel is infused with water throughout, from the cantilevered rooftop pool and a 49-foot-high interior "rainfall" down to an underground waterfall and pool.

G3 ARQUITECTOS

QUERÉTARO, MEXICO



FOUNDED: 2011
DESIGN STAFF: 6-8
PRINCIPAL:
 Juan Alfonso Garduño Jardón
EDUCATION: Harvard University Graduate School of Design, MAUD, 2007; Instituto Tecnológico y de Estudios Superiores de Monterrey, B.Arch., 1997
WORK HISTORY:
 G3 Arquitectos (in partnership), 1997-2011; (sole principal) 2011
KEY COMPLETED PROJECTS:
 New Cathedral of Querétaro, 2018; El Eco Pavilion, Mexico City, 2015; Casa L, 2015; Casa GG, 2015; Territories of Collective Empowerment, 2012; Kínder Álamos, 2011 (all in Querétaro, Mexico, except as noted)
KEY CURRENT PROJECTS:
 Casa Calvarito; Casa Lola, Guanajuato, Mexico; 5H mixed-use (all in Querétaro, Mexico, except as noted)
g3arquitectos.com

“IN MEXICO, you don’t need anything to practice—a lawyer could do architecture,” says Juan Alfonso Garduño Jardón, “which is not great, but good for young architects.” So good that he, his sister Maria de los Ángeles Garduño, and classmate Armando González, established their own firm in 1997, before any of them had even received degrees in architecture. For Garduño Jardón, a parallel career in academia also began around this time, when the dean of their college asked him to substitute for a professor who couldn’t make it to class.

As a young man teaching and practicing, Garduño Jardón, now 45, became increasingly disillusioned by the work his firm was pursuing. “We were very ambitious,” he recalls, “but we weren’t earning money.” An experience with a housing project in 2003 left him particularly jaded. “The developer totally ripped us off,” says Garduño Jardón. That signaled a turning point for the architect, who applied to the Urban Design program at the Harvard Graduate School of Design. Given his experiences at the time, Garduño Jardón decided against another architecture degree because “I wanted to learn how I could use the city to benefit myself—just like any developer.” When he graduated from the GSD in 2007, however, his approach to urbanism had shifted: “The responsibility that



CASA GG Sited at the edge of a ravine, the residence was designed to maximize views, and to have a strong indoor-outdoor connection. A twisting circulation path that culminates at a roof garden informed the structure’s angular form.

citizens, architects, and developers have to contribute to a better city became a lot clearer,” he says.

After returning to Mexico, Garduño Jardón went back to the firm with Maria and Armando, and became dean of his alma mater. The practice, he admits, was not thriving, and his partners were keen on following other interests—in 2011, de los Ángeles Garduño left to pursue her own master’s degree, while González shipped off to clown school in Europe. It was then that Garduño Jardón decided to step down from his deanship and reestablish the practice as his own—one with a more urban-centric perspective. He kept the original firm name, G3, because “the idea of having a solo name never made me comfortable,” he says.

With this new iteration, Garduño Jardón has taken on more work in the public realm. In a design-build project that began as a collaboration with students, and that was exhibited at the 2016 Venice Architecture Biennale’s Mexican pavilion, his team proposed a model for territorial development to empower disadvantaged urban communities. Currently the firm is working on a large urban project in Querétaro with housing, retail, and offices. It’s a typical developer-driven project, “but we are pushing for an interesting way to understand this part of the city,” he says.

That’s not to say that G3 doesn’t engage in private projects—particularly single-family houses—which help to finance the firm’s interventions in marginalized areas. Garduño Jardón sees overlap between his public work and his residences, which are characterized by their sculptural forms and earthen tones and textures. Across typologies, he looks to incorporate “phenomenological spaces,” moments of peace and introspection. He also adopts an efficient, contextually sensitive approach to materials. For example, when building in a community with limited means, Garduño Jardón learned to work with earth bricks, which he then used for a high-end residence. For another house, he covered brick walls in concrete, which proved to be cheaper and easier to control than poured concrete. “One project informs the other,” says the architect.

Expanding on that idea, he adds, “We really try to stretch ourselves to use natural materials in different yet practical ways,” Garduño Jardón notes. And while the firm maintains an urban edge, nothing is off the table. “We like doing everything—schools, labs, places of worship,” says the architect. “It’s hard for us to say no.” *Alex Klimoski*



CASA L Located on a site with many restrictions, the concrete monolith is significantly set back from the street. An introverted scheme integrates gardens and planters. Patios are carved out of the structure at different heights to admit light and naturally ventilate the interior.



INSIDE-OUT As part of an installation for the New York Architectural League, this concrete and wood structure was designed as an abstract representation of the experience of light and materials in the home.



ALAMOS KINDERGARDEN Situated between urban and natural areas, the project creates an unusually shaped courtyard, enclosed by walls of stone excavated from the site, designed to spur children’s imaginations.

JO JINMAN ARCHITECTS

SEOUL



FOUNDED: 2014

DESIGN STAFF: 7

PRINCIPAL: Jo Jinman

EDUCATION: Tsinghua University, M.Arch., 2010; Hanyang University, B.Arch., 2002

WORK HISTORY: OMA, 2009-12; Iroje Architects, 2002-09

KEY COMPLETED PROJECTS: K2 Tower, 2018; Naesoop Library, 2018; Overpass Forest, 2018; NVX, 2018; Riverside Apse, Gongju, 2017; Layered Terrace House, Pangyo, 2015; City Wall visitor pavilion, 2015 (all in Seoul, except as noted; all in Korea)

KEY CURRENT PROJECTS: Changshin Quarry viewing gallery; C-project; rooftop (all in Seoul)

jo-jinman.com

WHILE MANY architects hope for ideal site conditions, Seoul-based Jo Jinman, 43, welcomes challenging ones. “I love site restrictions and limits—they give my work a unique identity,” he says. Prior to founding his eponymous firm in 2014, he studied architecture at Seoul’s Hanyang University, focusing on urban design’s potential to enhance social infrastructure—a foreshadowing of the architect’s work to come. He then pursued a graduate degree at Tsinghua University in Beijing, concurrently developing pragmatic skills by establishing the Beijing outpost for Iroje Architects & Planners, and eventually he joined the Beijing and Rotterdam offices of OMA. Unsurprisingly, the latter challenged him to continuously explore fresh solutions for each new project—a methodology that closely mirrors his own design philosophy. Jo’s portfolio of original, often eccentric concepts exemplifies this.

Indeed, no two projects are alike, due to the complexity of their sites. Consider Naesoop Public Library in Seoul, a multilevel structure that Jo built



into a hillside. There, he angled the building to reference the surrounding hilly terrain, but also to cleverly form the foundation for outdoor community spaces—including a rooftop amphitheater—and connect users directly to the mountain park above (previously only accessible via a circuitous route).

The designer’s K2 office tower—which sits on a small 39-by-46-foot lot in Seoul—is a contorted rectangular volume, with lower floors set at a 45-degree angle to the street, upper floors set perpendicular, and middle floors rotated to create a transition between the two sections. This composition gives the building its distinctive “twist,” but it also enables the project to meet, for instance, the zoning requirement for a setback to increase daylight.

On yet another tricky site, a narrow plot adjacent to Jaemin Stream in Gongju, a client wanted to build a personal office, multipurpose space, and a café. Aiming to provide all these while preventing obstruction of the community’s river walk, Jo devised an offbeat concrete hemisphere that is glazed on the creek-facing side and shaded with privacy louvers for the office on the upper portion. By pulling the café back from the stream and underneath the second floor’s cantilever, he carved out a public seating enclave while maintaining clearance for the pedestrian path.

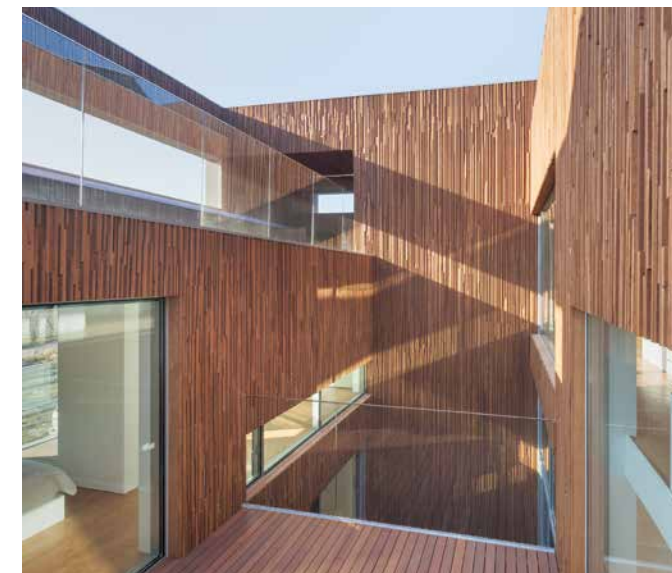
Connecting people, city, and nature is a recurring theme for Jo, rendering his other role as a public architect for the Seoul Metropolitan Government a perfect fit. In this capacity, he completed the Overpass Forest, an urban amenity that reclaims areas under three of the city’s highway overpasses for public use. In addition to a flexible indoor space, greenery, and an amphitheater, the Forest features a dramatic canopy of 5,000 mirrors.

As if he didn’t have enough on his plate, Jo is also an adjunct professor at his alma mater, Hanyang, teaching future generations of architects in Korea to champion originality—and even unpredictability. *Sheila Kim*

NXV In this tower in Gangnam, Seoul, the concrete lower portion contains offices while the cantilevering glazed upper block contains residential units for two families.



LAYERED TERRACE HOUSE The facade of this residence for an extended family has a rough materiality on the street side, blending into the chaotic streetscape (above), while the courtyard facades are entirely clad in an array of irregularly sized pieces of leftover wood (below).



RIVERSIDE APSE A concrete shell in the shape of a hemisphere, housing a range of programs, opens up to face a stream along with a walkway, popular with locals, that has been created through the Ecological River Development project.

PHOTOGRAPHY: © KYUNG SUB SHIN



K2 TOWER The envelope of the twisting office building, located at the intersection of Seoul’s central business district and a densely populated residential neighborhood, features cement panels cut into narrow pieces and arranged like louvers, giving it a lightness that belies its monolithic aspect.





LOW/RISE HOUSE The traditional forms of the California ranch house and farm tower were appropriated to create a new suburban housing type. A flexible layout allows for various program configurations.

A-TO-Z HOUSE

This addition to a 1930s vernacular developer house in Golden Gate Heights, San Francisco (right), manipulates and rescues the structure's existing forms, creating a second story with sweeping views of the hillside (far right).



SPIEGEL AIHARA WORKSHOP

SAN FRANCISCO

IN 2006, when Dan Spiegel and Megumi Aihara were dating, the fellow Harvard GSD students won a traveling fellowship that allowed them to explore Paris together. For the research paper required by the grant, the couple analyzed the conversion of a 19th-century viaduct into the Coulée verte René-Dumont elevated park. "It was an opportunity to put together some ideas about how things change over a long period, sometimes unexpectedly," Spiegel says of his and Aihara's first collaboration. As cofounders of San Francisco-based studio Spiegel Aihara Workshop (SAW), the 38-year-olds create environments that support and even welcome diverse outcomes over time.

After Spiegel and Aihara graduated from the GSD with degrees, respectively, in architecture and landscape architecture, Spiegel began devising a Menlo Park, California, residence for his parents while Aihara worked full-time for other firms, pitching in on the 4,500-square-foot house on nights and weekends. Completed in 2013, the dwelling comprises narrow, daylight-filled vertical and horizontal elements, which reference northern California's historic farm towers and pervasive ranch houses. The volumes include a flat ground level and independent upper-floor living suite, so Mom and Dad may comfortably occupy only a portion of the interior or open up the entire house for entertaining kids and grandkids; further down the road, the design will allow them to age in place with the help of a caretaker inhabiting the tower apartment.

The partners married that same year, and Aihara joined SAW full-time in 2014, when the studio was tapped to design a 650-square-foot expansion of a Depression-era house tucked into a Golden Gate Heights hillside. Since then, SAW's growing team—the office now numbers eight—has incorporated unscripted experiences into its definition of design excellence in earnest. For mattress company Casper's 15,000-square-foot West Coast laboratory, completed in 2017, SAW allocated rooms for functions like foam testing and package prototyping, but enclosed them in low prefabricated partitions with wide thresholds to encourage

creative exchange among colleagues. A venue currently on the boards for the Cheyenne River Sioux Tribe's annual powwow is not so much a rigid design but a set of instructions for making pavilions of local rammed earth and straw in several sizes; community members choose the number of volumes to construct according to the needs of that year's meeting, and the overall grouping will expand as successive powwows boast greater attendance, so younger workers may practice indigenous construction techniques.

Even designers who embrace unpredictability encounter surprises: when the Golden Gate Heights project was nearing completion in 2016, SAW's client became pregnant with twins; Casper doubled in size between its first outreach to SAW and design phases, and it is preparing to more than double again. In turn, Spiegel and Aihara invest their own resources in so-called post-concept models—as-built maquettes that identify spots where an unexpected perspective may help the designers discover fresh avenues of approach. One could draw a line from pregnancy to the expandable powwow scheme or Casper's interior partitions to a prefabricated-house project currently getting under way in Hawaii. Taken together, these lessons form a wideranging exercise in self-reflection that Aihara describes as "learning to accept the future, and to envision it less specifically." *David Sokol*



MOBILE SPACES The architects created an intimate space called The True&Co Try-On-Truck for women to try on lingerie within public settings. The structure, which travels across the country, has evolved from an alternative retail experience to a prototype for mobile spaces.



FOUNDED: 2011
DESIGN STAFF: 8

PRINCIPALS:
Megumi Aihara, Dan Spiegel

EDUCATION: *Aihara:* Harvard Graduate School of Design, M.L.A., 2007; Brown University, A.B. Visual Arts, 2002.

Spiegel: Harvard Graduate School of Design, M.Arch., 2008; Stanford University, B.A. Public Policy, 2003

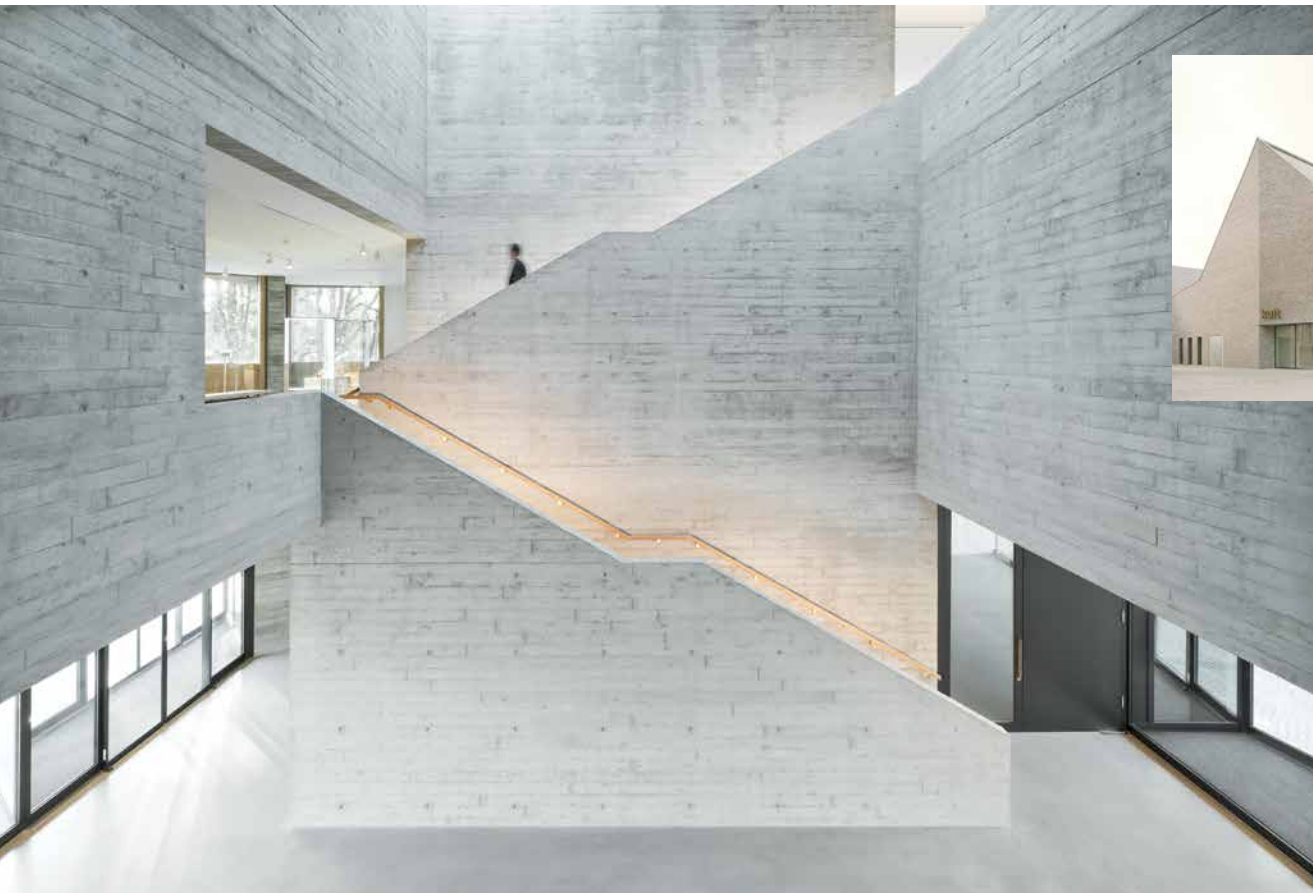
WORK HISTORY: *Aihara:* Andrea Cochran Landscape Architecture, 2011-14; Michael Van Valkenburgh Associates, 2005-11.

Spiegel: Peter Rose + Partners, 2008-11; Architecture Research Office, 2003-04

KEY COMPLETED PROJECTS:
Casper Labs, San Francisco, 2017; A-to-Z House, San Francisco, 2016; Low/Rise House, Menlo Park, California, 2013

KEY CURRENT PROJECTS:
Casper Labs Phase II (with ARO), San Francisco; Kauhikoa Farm Residence, Haiku, Hawaii; Mobile Barber Shop (with Mobile Office Architects), various locations; Same House, San Francisco

sawinc.com



KULT MUSEUM AND CULTURAL CENTER

The project sensitively integrates itself with its Medieval context in Vreden, in northern Germany, while establishing a contemporary landmark. Two new structures clad with local bricks, which gently change in color, have been added to four existing ones, shaping a complex that spans from the 14th century to the present. Interiors are dominated by board-formed concrete.



WOHNEN OHNE AUTO Translated as “Living Without a Car,” this cohousing project was developed in a process of participatory design with a community of future residents.



HILLSIDE HOUSE This house in Salem, in southern Germany, is a partial refurbishment of an old farmhouse, on a hillside overlooking a lake. Two new structures, a tower and a box-shaped volume, interlock with each other, increasing in height at a slope that echoes the hill's.

POOL LEBER

MUNICH

ALTHOUGH MUNICH-BASED architects Isabella Leber and Martin Pool had collaborated on residential projects for seven years, it was only in 2011 that they decided to open an office together. The venture soon paid off, and in 2013 they won an open competition for a museum in the northern German city of Vreden. Completed in 2017 to much acclaim, their scheme combines new and existing buildings along a Medieval city wall to recall a townscape on the exterior and form a unified interior functioning as a cultural complex.

Looking back, they feel that starting an office in Germany was fairly uncomplicated, even when the market in 2011 was quite competitive. Making such a move in midcareer had advantages too. Both partners, who were in their early 40s at the time, had accumulated a wealth of professional and personal experience, and easily gained the support of private and public-sector clients.

After studying in Karlsruhe and London, Leber, 52, a mother of three, soon opted for self-employ-

ment, with a focus on residential work, continuing in this capacity when her husband's career required moves first to Denmark and then to Munich. Pool, 49, who is British, was raised in Belgium and educated at the universities of Cardiff and Sheffield, but meager job prospects in the UK in the early 1990s drove him to Berlin and then Darmstadt, where he concentrated on housing and infrastructure. Self-employed starting in the late 1990s, he relocated to Munich in 2000 to join his French wife, who works there (they have two children), and met Leber through mutual friends.

Their office eschews a signature style, preferring individual solutions for both new buildings and adaptive-reuse projects. “Our architecture is quite varied,” says Pool. “We take our cues from the situation, what the client wants, and what is in the program. We don't start out with a particular idea about what a building should look like.” The architects note, however, that their projects—including private residences, multifamily housing, museums, or bicycle and transportation infrastructure—strive to make connections between new structures and their contexts, and allow space for collective interaction, like a communal rooftop terrace on a housing block in Munich for residents who contract not to own a car (completed 2017) or a public courtyard in a former post office complex being repurposed as a museum in Mittenwald (completion expected in 2021).

Finally, Pool Leber's example highlights the shifting attitudes regarding work, family, and architecture taking place in Germany. Leber notes that in previous generations, many German women architects worked almost exclusively with their husbands. Referencing other European nations he knows well—France, the UK, and Belgium—Pool emphasizes the “open work culture” he encounters in Germany, noting that, once clients feels the architect is competent, they are supportive regardless of age, experience, or background.

In the end, Pool and Leber's partnership, forged in midcareer, shows how a long-term commitment to architecture by both of them led to a rewarding collaboration: “It is like writing a book together,” says Leber. “You have to work on an interpersonal and a professional level, and have the same spirit and share trust.” *Mary Pepchinski*



FOUNDED: 2011

DESIGN STAFF: 5

PRINCIPALS: Isabella Leber, Martin Pool

EDUCATION: *Leber:* M.A., architecture & urban design, U. of Karlsruhe, 1998; M.A. architecture, U. of North London, 1996; B.A., architecture, U. of Karlsruhe, 1990. *Pool:* M.A., architecture, U. of Sheffield, 1993; B.A., U. of Cardiff, 1990

WORK HISTORY: *Leber:* private practice, 2001-10; Stölken Schmidt, 1998; Behnisch, 1994. *Pool:* private practice, 2000-10; Fritsch Ruby Pool, 1998-2000; Topos, 1997-98

KEY COMPLETED PROJECTS:

Mixed-use building, Rottmanstraße, 2018; three-sided brick villa, 2018; Kult Museum and Cultural Center, Vreden, 2017; Wohnen Ohne Auto, 2017; Hillside House, Salem, 2015; conversion of a listed building, Munich, 2011 (all in Munich, except as noted, and all in Germany)

KEY CURRENT PROJECTS: art museum in former post office, Mittenwald; school conversion into housing, Hochstetten-Dhaun; mobility center Oertelplatz, Munich; Villa in Insulating Concrete, Munich (all in Germany)

poolleberarch.de

PHOTOGRAPHY: © FILIP GORZSKI (TOP); BRIGIDA GONZÁLEZ (BOTTOM, OPPOSITE, TOP 2 AND BOTTOM, LEFT); SASCHA KLETZSCH (OPPOSITE, BOTTOM RIGHT)



R11 EXTENSION Two solid-wood stories were added to a multifamily residential building, creating a vibrant rooftop space with angular overhanging windows and cutout balconies.

BAREND KOOLHAAS

AMSTERDAM



FOUNDED: 2011

DESIGN STAFF: 3

PRINCIPAL: Barend Koolhaas

EDUCATION: Delft University of Technology, MSc Arch., 1994–2001; Cooper Union, 1998–99

WORK HISTORY: OMA 2006–08, 2010; IDEO 2005

KEY COMPLETED PROJECTS: EENWERK & IBO, Amsterdam, 2017; Claudy Jongstra exhibition, Fries Museum, 2016; House in Almen, 2014; House in Oudemirdum, 2014; Wildflower, Hoogvliet, 2004 (all in the Netherlands)

KEY CURRENT PROJECTS: The New Building, Amersfoort; renovation of a canal house, Amsterdam (all in the Netherlands)

barendkoolhaas.com

FOR BAREND Koolhaas, it's not a family business, but there's definitely something in the genes. His father's brother, Teun Koolhaas, was a noted Dutch architect and urban planner. Then, of course, there's Rem—one of several cousins in the profession.

Barend, however, grew up wanting to design cars. After graduating with an architecture degree from the Delft University of Technology, he had a small commission for a project that was part architecture, part design object. Wildflower, a small, round construction with a floor plan that opens and closes like a flower, was a prototype meant to be sold as an alternative to the unimaginative school annex buildings found throughout the Netherlands.

The project, says Barend, 43, fed a "nagging feeling to do industrial design." Shortly after Wildflower was completed, he moved to California to work for global design and consulting firm IDEO. Adds Barend, "It was a good experience seeing that type of business, which is very different from architecture."

Eventually, though, Barend ended up back at the Rotterdam office of Rem's OMA, where he had begun working as a summer intern in 1994 when he was just 18 years old. There, he took on large-scale urban master-planning projects in the Middle East and Asia, moving to Hong Kong in 2010 to develop plans for the West Kowloon Cultural District. But those projects coincided with the global economic

crisis. "None of the work I did for OMA materialized," says Barend. "Ultimately, I am a builder. And I wanted to build."

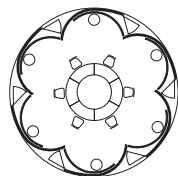
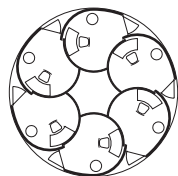
He opened his own studio in 2011, designing a series of shoe shops to look like rooms in the imaginary house of avant-garde Dutch shoe designer Jan Jansen. Within a few months, he had commissions for a couple of private residences—one in Curaçao that wasn't realized, and a weekend house in Almen, in the Dutch countryside, built in 2014.

He continues to design at a range of scales, from exhibitions to textiles, working in collaboration on two collections for Belgian fashion house Marga Weimans. "It was fun to do," recalls Barend. "As architects, we use collage a lot. It was nice to apply that technique in a real result on fabric."

In 2017, he completed his most significant project to date—EENWERK and Irma Boom Office (IBO) combines renovated workspace for famed graphic designer Irma Boom, with whom Barend collaborated at OMA, and new construction for a gallery for Boom's partner, Julius Vermeulen. "The spaces are intertwined and connected on two levels," describes Barend. "It's the architectural equivalent of their relationship."

Currently, he is working on The New Building. It's not just his latest, but a new type of flexible building whose parts, and plans, are left open to accommodate an ever-evolving program. For

now, that includes a large garage but is dependent on the developing site and neighboring programs. According to Barend, "How we design buildings, cities, and cars is all connected." *Josephine Minutillo*



WILDFLOWER The 700-square-foot prefabricated school annex contains convex sliding doors that make it possible to switch between a classroom and six small workspaces for individual tutoring.



EENWERK & IBO Meaning "one work," EENWERK is an art space that exhibits one work at a time. Its steel, glass, and basalt shell is built on the footprint of a former car garage, between typical Dutch neo-Renaissance brick houses, one of which houses the renovated offices of Irma Boom, to which it is internally connected. Although the contrast between the old and the new building is clear on the outside, from inside it is blurred by the sequence of spaces and the various openings between them.



HOUSE IN ALMEN This 1,075-square-foot house is designed around a 57-foot-long panoramic window with a view into the garden and surrounding landscape. The sharply angled glass wall gives the house its characteristic triangular floor plan. The wood-clad facades are designed to resemble the local barns.

MICHAN ARCHITECTURE

MEXICO CITY



FOUNDED: 2010

DESIGN STAFF: 3-8

PRINCIPAL: Isaac Michan

EDUCATION: Pratt Institute, M.S.Arch., 2013; Universidad Iberoamericana, B.Arch., 2010

WORK HISTORY:

Lab Architecture Studio, 2007

KEY COMPLETED PROJECTS:

ODP 921 Apartments, 2018; Oku, 2018; Luma Café, 2017; AL Apartment, 2016; Z53 Social Housing, 2012 (all in Mexico City)

KEY CURRENT PROJECTS:

DL 1310 Apartments (with Young & Ayata), Mexico City; TL 2816, Mexico City; DL 5155 Apartments, Mexico City; Huachinango, Cancún (all in Mexico)

michanarchitecture.com

ISAAC MICHAN is fascinated by the uncanny, by that fine line between the overly familiar and the eerily unrecognizable. The 34-year-old founder of Michan Architecture—a Mexico City–based studio launched in 2010—creates structures that “propose a new reality for that place,” he says, “but not something completely new from zero.”

Attempting to describe this professional preoccupation in more tangible terms, Michan aptly brings up masonry—particularly the red-mud artisanal bricks incorporated into his design for Z53 Social Housing, a project completed in 2012 that consists of 42 units spread across three towers. “That whole area of the city is built with brick walls,” he explains, “but in an extremely standardized way, because everything needs to be cheap.” Michan upends expectations by carefully arranging the bricks so that they actively respond to light and shadow. They may even appear to be undulating as you waltz past the building. You see? Uncanny.

This year, work is nearly complete on DL 1310 Apartments, a collaboration four years in the making between Michan Architecture and Brooklyn-based Young & Ayata (founded by Michael Young and Kutan Ayata, it was a 2016 RECORD Vanguard firm). For this cast-in-place concrete, nine-unit residential building in Mexico City, Michan and company set their sights on bay windows rather than brick walls. The rectangular openings are twisted into the building’s facade so as to appear subtly jutting at odd trapezoidal angles—a peeping tom’s fever dream. “The building is concrete, like so many buildings in Mexico,” Michan says, “and we’re just playing with the windows, that small detail.”

Michan clearly isn’t an architect interested in settling for the tried-and-true. In 2010, he graduated from Universidad Iberoamericana with a bachelor’s degree in architecture, founding Michan Architecture that same year. He hit the pause button two years later in order to attend New York’s Pratt Institute, where he ultimately received his master’s degree in 2013. “The education in Mexico is a bit more conservative,” he explains. “It’s focused on Modernist architecture and practicing architects. It’s not about pushing the boundaries.”

It sounds as if he found a perfect match for his sensibilities at Pratt: “I loved it,” he says. “You can speculate about how things can be.” (This was how he met Kutan Ayata, who was Michan’s thesis advisor.)

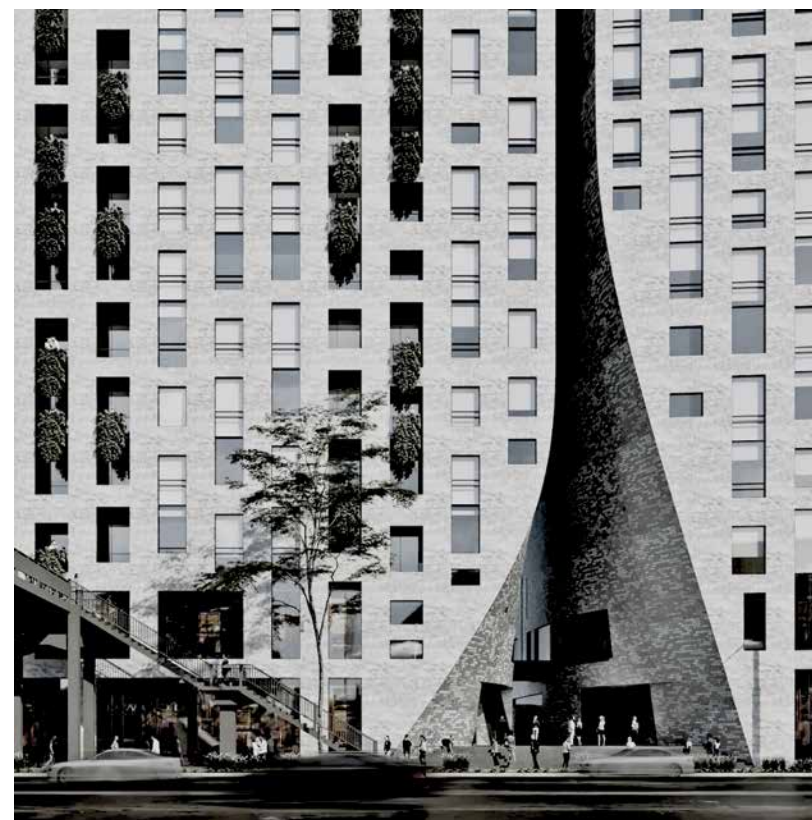
Meanwhile, Mexico is the ideal incubator for Michan’s ongoing architectural experiments, with

surprisingly few hurdles to leap in terms of getting things built. “Unlike the way it is in the U.S. or Europe, you can get really hands-on with the construction in Mexico,” he says. “You can test stuff and see how it works. There’s no middleman. I don’t need to talk to a contractor. I can speak directly with the construction guys.”

Without all the red tape, everyone gets to enjoy the process: “It’s fun,” Michan says, “because we’re constantly testing ourselves to see how we can improve the quality of the work.” *Derek De Koff*



OKU Completed last year, this Japanese restaurant has a faceted ceiling. Two of the facets open up as inverted oculi over the sushi bar, whose interiors are clad in brass to contrast with the raw finish of the rest of the ceiling. The remaining interiors are oak.



TL 2816 A mixed-use development under construction in the southwest part of Mexico City, this project is divided into two towers—one for offices, the other for housing—that diverge at the ground level, where a new pedestrian street filled with retail space is located.

PHOTOGRAPHY: © YOSHIRO KOITANI; COURTESY MICHAN ARCHITECTURE (TOP, LEFT; OPPOSITE, TOP LEFT); RAFAEL CAMO (OPPOSITE, TOP RIGHT); JAIME NAVARRO (OPPOSITE, BOTTOM LEFT); VICENTE MUÑOS (OPPOSITE, BOTTOM RIGHT)



() PAVILION

The temporary pavilion, part of 2018’s MEXTRÓPOLI, the largest architecture festival in Latin America, appeared as a simple box from the outside but revealed a dynamic concave arrangement of bricks on the inside.

LUMA CAFÉ

The subtle space features exposed-concrete benches, graphic terrazzo floors, traditional textured-stucco vertical lines on walls, and a ceiling element that combines cabled light bulbs and large hanging felt mounds.



Z53 SOCIAL HOUSING The structure at the parking level is reinforced concrete, transferring the loads to masonry walls, which blur the boundary between structure and ornament, on the floors above.





OUTLIER LOFTS French 2D transformed a building in Boston's Charlestown neighborhood into a "strange cartoon icon," says Jenny, by reorienting the entrance and adding an upper story. Viewed from one side, the three-unit building has a traditional form; from another, a sawtooth roof (above) presents as a series of off-kilter gables, reflected in the ceiling of the top story (left).



BAY STATE COMMONS For several years, Jenny and Anda have worked with a group of some 30 households to design a 50,000-square-foot cohousing complex, or "condo commune," in Boston. A drawing of the project, rendered in their distinctive style, depicts a collection of connected gabled structures.



PLACE/SETTING Part public installation, part intimate dinner party, the sisters created a "warm but weird" pavilion for a series of gatherings on Boston City Hall Plaza, aiming to spur dialogue between scholars, community organizers, and others working in related spheres.

FRENCH 2D

BOSTON

THE IN-BETWEEN spaces are where sisters Anda and Jenny French thrive—between practice and academia, between two and three dimensions, and between conventional project types. Their academic and professional backgrounds have paved the way for a housing-focused firm that balances social considerations with formal choices, resulting in high-minded designs with quirky personalities.

Before coming together in 2012 to launch French 2D, the Boston natives had brief stints at other studios. "We were looking to gain specific practical skills to deploy later," says Anda, 39, the older sibling, "and trying to find models that might work for us to stay in conversation across academia and practice, rather than becoming part of another office's pedigree." For inspiration about balancing design and teaching, they looked to leaders in the field like Sarah Whiting (page 40), who was Anda's thesis advisor at Princeton, where she earned her M.Arch.; Karen Fairbanks at Barnard College, Anda's undergraduate alma mater; and Mack Scogin, with whom Jenny studied at Harvard for her M.Arch.

While the sisters occasionally work with interns or other designers, they are each other's primary collaborator. "It's pretty amazing to have an office environment that is usually a salon of just the two of us," says Jenny, 35, adding that their professional relationship has deepened and enriched their familial one, and vice versa. "There's a kind of emotional support that one generally has with siblings," says Anda, "and when that translates to intellectual and practical work, it produces, for us at least, a confidence that I don't know we'd have individually."

The design duo see things the same way—and that's not just a figure of speech; both women have an eye condition that affects their depth perception and shapes how they represent spaces in two and three dimensions. Much of their work has a "light strangeness" to it, says Jenny—from their drawings, where collapsed perspectives lend a cartoonish feel, to projects like a graphic screen for Kendall Street Garage in Cambridge, Massachusetts. "We want to create consensus that you're looking at a familiar object, but then twist the form so that it makes you look again," Anda says.

They apply this mentality, of tweaking the expected, to all types and scales of multifamily projects. For a microunit building in Boston, one of the studio's first projects, they worked to ensure that the compact size of the 350-square-foot units still supported a "full life" says Anda. This meant adding amenities like bike storage, a coffee area, and a library. "It became an exercise in understanding social relationships," Anda explains. "We're interested in how housing can combat larger issues, like social isolation and polarization."

That train of thought was the perfect segue into a cohousing project, currently in the approval process, in Boston. The 30-unit building will have 5,000 square feet of shared living and dining space for some 100 occupants across age groups who have opted to live communally. "One- and two-person households are on the rise, so we need to redefine what a household is, and create new networks that aren't just for the 'ideal' upper middle-class millennial," says Jenny—just the challenge for an office that flourishes in reconceiving the familiar. *Miriam Sitz*

KENDALL SQUARE GARAGE SCREENS French 2D created a 26,000-square-foot drawing for the facade of a garage in Cambridge, MA, that plays with depth and shadow. They made dresses using the same design, at the same scale, to become "big-scale-figure cartoons" in the photographs.



FOUNDED: 2012
DESIGN STAFF: 2-4

PRINCIPALS:

Anda French, Jenny French

EDUCATION: *Anda:* Princeton School of Architecture, M.Arch., 2006; Barnard College, B.Arch., 2002. *Jenny:* Harvard Graduate School of Design, M.Arch., 2011; Dartmouth College, B.A., 2006

WORK HISTORY: *Anda:* Hillier Architecture/RMJM, 2006-08; William Rawn Associates, 2003. *Jenny:* Bergmeyer Associates, 2013-14; ShoP Architects, 2009

KEY COMPLETED PROJECTS:

Kendall Square Garage, Cambridge, MA, 2019; Outlier Lofts, Boston, 2018; 1047 Commonwealth Microhousing, Boston, 2016

KEY CURRENT PROJECTS:

Bay State Commons Cohousing, Malden, MA; 500 Main, Boston; "Just Around the Corner Objects" (object prototypes)

french2d.com

CHYBIK+KRISTOF

BRNO, CZECH REPUBLIC



FOUNDED: 2010

DESIGN STAFF: 50+

PRINCIPALS: Ondřej Chybík, Michal Křištof

EDUCATION: Chybík: ETH Zurich, Master of Advanced Studies in Urban Design, 2014; Brno University of Technology, M.Arch. and Urban Design, 2011. Křištof: Brno University of Technology, M.Arch. and Urban Design, 2011.

WORK HISTORY: Chybík: PPAG Architects, 2009–10. Křištof: Bjarke Ingels Group, 2010.

KEY COMPLETED PROJECTS: Urban Infill, 2018; Pavilion of Humanity, 2016; Gallery of Furniture, 2016; Waltrovka master plan and residential building, Prague, 2016; Czech pavilion at Expo 2015, Milan (all in Brno, Czech Republic, except as noted)

KEY CURRENT PROJECTS: Lahofer Winery, Znojmo, Czech Republic; Czech Forestry Commission headquarters, Hradec Kralove; airport terminal, Prague; Spring Dales Public School, Kashmir, India
chybik-kristof.com

BASED IN the Czech city of Brno, with offices in Prague and Bratislava, Chybík+Křištof has grown quickly since its early days. The 50-person firm was officially established eight years ago. But its founding partners, Ondřej Chybík and Michal Křištof, point out that their origin story, like so many firms' stories, began earlier, in 2010: "We just set up the studio in a bar," says Chybík. The two met as students while attending that year's Venice Biennale and later joined forces on an architecture competition. "We didn't win, but it was nice to hear opinions from a totally different angle," says Chybík. The duo did win another competition, for an apartment building next to the Danube River in Bratislava, Slovakia, which led them to put aside ideas of joining larger firms to start their own architecture and urban-design practice just months after graduating.

Today, the office is taking part in—and setting standards for—a new era of Czech architecture. "We really want to show the world what's happening here, because it's not so well known," says Chybík. After the Velvet Revolution in 1989 and the fall of the Iron Curtain in 1991, architecture students were still being trained in the popular functionalist style of Czechoslovakia's interwar era; Chybík and Křištof see their peers and themselves as the first generation emerging from almost a century of "white boxes" to show clients a new approach. They are a "European generation," says Křištof, whereas their teachers were closed off from the influence of other countries and international media.

One of the firm's longest-running projects is a winery in the Moravian countryside outside Znojmo. Four years ago, after seeing a local newspaper article about Lahofer Winery's plan to build a new

facility, Chybík and Křištof made contact and eventually landed the commission. "It's also a feature of our generation to be very proactive," says Křištof. "There are a lot of older, very good architects all around us, so we cannot just put our names on a website and wait for the call."

Located in one of the country's important wine-making regions, the facility will function as a cultural center for the community rather than just as a private vineyard. For the same client, Chybík and Křištof are also transforming a 1970s-era brewery into a wine bar in Znojmo.

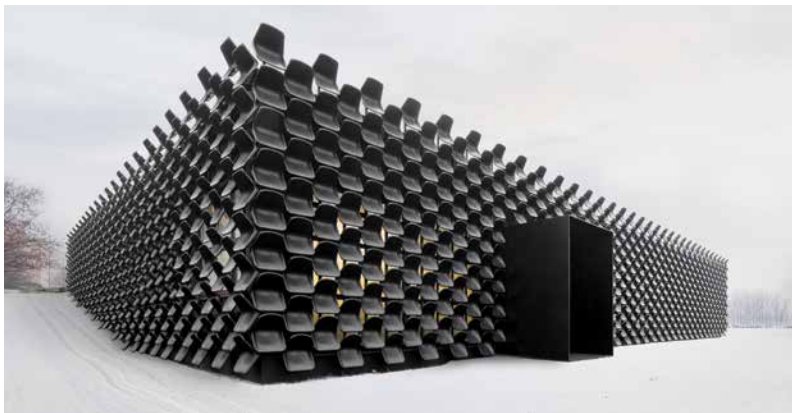
Entering competitions continues to bring in new types of work. One recent win resulted in a project for the Czech Forestry Commission headquarters in Hradec Králové, where the firm is redesigning the 1950s campus and adding a public pedestrian path between the new, passively ventilated buildings. "We love the idea that the employees can sit in front of their desks and breathe the best air in the world," says Křištof.

Broadly, they see "creative improvisation" as the strength of the practice. To them, that means being able to nimbly transition between ideas, conversations, and clients, at all scales. Take two new projects—one for a terminal at the Prague airport and another for a school in India's Kashmir region. "It's really thrilling to think in the morning with a structural engineer about the longest and slimmest roof made out of steel for the airport, and in the afternoon to Skype with a construction company in Kashmir about how to build a rammed-earth wall," says Chybík. "That, I think, is our potential as the most recent generation of European architects."

Jen Krichels

GALLERY OF FURNITURE

In 2016, the firm transformed a furniture showroom in Brno, Czech Republic, rearranging interior spaces to better showcase the company's products and creating an exterior shell of chairs made by the client.



IMAGES: © VOJTECH VEŠKRNA (TOP); LUKAS PELECH (BOTTOM); CHYBIK+KRISTOF (OPPOSITE, TOP); ALEX SHOOT'S BUILDINGS (OPPOSITE, LEFT); LUKAS ILDZA (BOTTOM, RIGHT)



LAHOFER WINERY Responding to the topography of Znojmo, Czech Republic, the firm placed a public amphitheater on the winery's sloping roof (above), offering visitors views of the scenic Moravian countryside. The project, under construction now (right), will wrap up this year.



URBAN INFILL Situated in the Czech city of Brno, in an area undergoing rapid revitalization, this building, designed in 2015 and completed last year, contains retail on the ground floor and residences on the upper levels. A single neon light on the facade emphasizes the verticality of the project.



PAVILION OF HUMANITY A skeletal temporary installation in the busy town square of Brno, Czech Republic, on view during the summer of 2016, documented and commemorated the way the square and the city have changed and been influenced by cultures new to the locale.



Gehry House | Santa Monica, California | Frank Gehry

Moving On

Frank Gehry, whose unorthodox Santa Monica house helped make his name in the 1970s, has shifted to a larger glass and timber home he designed with his son, set within a lush garden.

BY VICTORIA NEWHOUSE

PHOTOGRAPHY BY IWAN BAAN

INSIDE/OUT A profusion of lavender under olive trees animates the entrance terrace.

Frank Gehry's imposing new house in Santa Monica might seem to be the polar opposite of the "unfinished" look he sought for his renovation of a modest 1920s Dutch colonial, also in Santa Monica, four decades ago. The current residence was designed in collaboration with his younger son, Sam, who has been active in the firm since 2008, when Gehry entrusted him with the creation of the Serpentine Gallery Pavilion in London's Hyde Park. The new house bears little resemblance to Gehry's youthful venture, which instantly became a landmark of residential design. Yet there are a

surprising number of similarities between the two.

For the renovation, in 1977, Gehry worked with Paul Lubowicki as his design partner; Lubowicki was then a young man at the beginning of his career, and the relationship between the two was similar to the one that Gehry enjoyed with his son in 2010. Sam used as a starting point the wood framing and large, crisscrossing beams in one of his dad's models for the Serpentine. After many years of toying with designs for a new house, it was Sam's involvement that made Frank and his wife, Berta, decide to proceed with a move to the prime 0.8-acre

Santa Monica property Gehry had acquired around 2009 as an investment for their two sons. Sam considered Berta to be the client, and Gehry admits that "Sam is easier to work with than I am. I did nothing except plan with Berta how we would use the house."

Both houses rely on timber (plywood for the older house, Douglas fir for the new one). Although the two wings of the new residence are large (10,000 square feet in total), in comparison to the old house (4,000 square feet), the main wing of the new house is only 1,000 square feet bigger than its predecessor. In fact, the modest dimen-

sions of the family room and the master bedroom are exactly the same as in the older building.

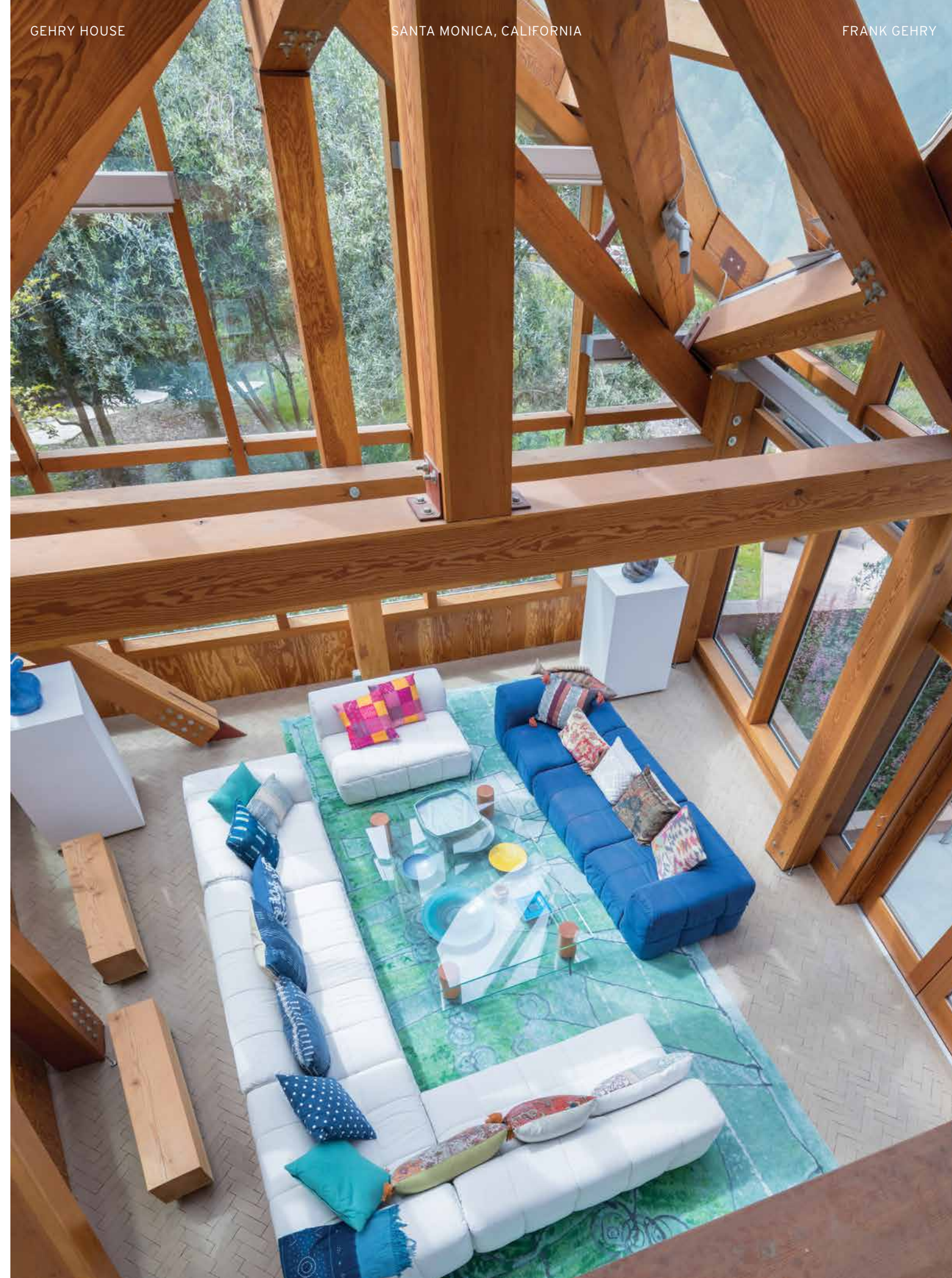
Just as Gehry had played with unusual materials and forms for the early renovation, Sam wanted to test his ideas about sustainability for the new project. The house is heated or cooled primarily by radiant floors (fed by nine geothermal wells), ventilation, and shading. These can be supplemented by gravity walls—cavities in the walls that contain vertical pipes for cool or warm water, and an airspace. Solar panels and solar water heaters cover the guest wings' roofs. Gehry



FLYING FISH Gehry's famous light fixtures hang in the dining room (above). In a birds-eye view, the main house is to the right, while the guest wings, with solar panels, are to the left (left). The lofty living room is sunk into the site for a cozy intimacy (opposite).

confesses that they are still fine-tuning the system: "It was a tricky experiment and is not yet perfect."

Oriented to the northeast and northwest of the entrance foyer, and facing the street, are the dining room and living room, both dominated by heavy, intertwined timber beams that contrast dramatically with large expanses of glass. Gehry marvels at the intricacy of what he describes as "the beams' connections to connections." Every room enjoys magnificent views across the garden to the Santa Monica Canyon, but the two men wanted the views to vary. Thus the dining room is slightly elevated, with vistas that stretch to the ocean, while the living room sinks gently into the site for a more intimate outlook, toward Pacific Palisades. Both spaces have 20-foot-high ceilings, and doors that open to the garden. Accessed by an elevator and stairs, the second



level contains a master suite. Gehry envisioned the interior balconies on this level, which overlook the ground floor and the ocean, as sites where musicians could play to the rooms below.

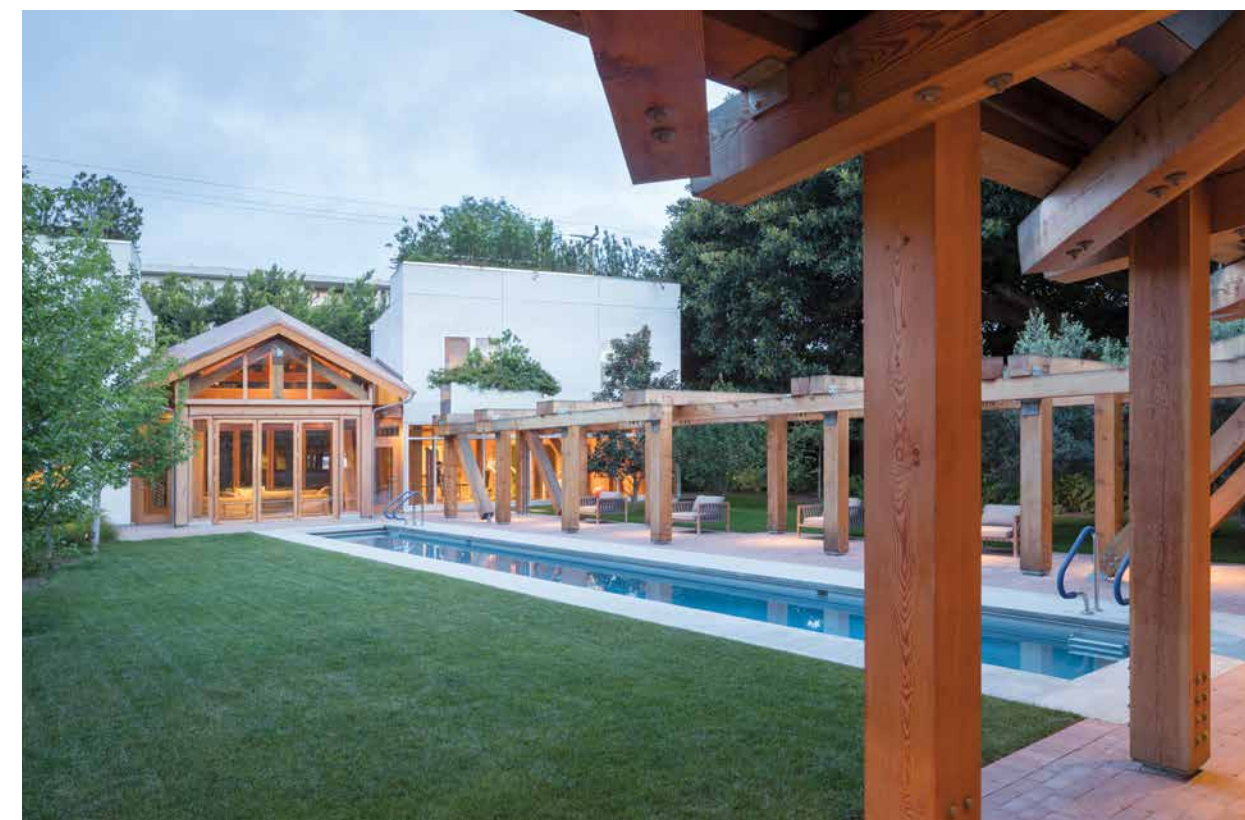
One specific request was for rooms that the Gehrys could inhabit at different times of the day. In contrast to the soaring living and dining rooms, cozy reading nooks at the east and west on the two levels catch rays of the rising and setting sun. A small study west of the ground-level family room provides an additional intimate space.

Creating the house was a family affair beyond having Sam as the design partner and designer of the furniture: his wife, Joyce, created all the carpets, and Berta chose the kitchen's colorful Granada-tile floor. Further personalizing the home are Gehry's famous fish lamps, which hang from the dining room ceiling, and numerous artworks, most of which were gifts from artist friends and from the Gehrys' older son, Alejo, a painter.

A 60-foot lap pool separates the North House from the smaller South House, which contains two guest rooms and a suite for longer-term visitors, a changing room, a gym, and a large concert room (another request from Frank and Berta). Gehry calls the patio between the two structures the "entertainment plaza"; it too has a stunning view of the ocean. (Landscape architect Laurie Olin added to the existing sweetgum trees—a species Gehry favors for its deep red leaves in autumn—and also chose Chinese cinnamon trees for their golden blossoms, while Spanish lavender, California lilac, and mission olive trees bring a profusion of color to the front.) The senior Gehry has already hosted performances in the concert room, one by members of Daniel Barenboim's West-Eastern Divan Orchestra, the second by musicians from the Colburn School in Los Angeles, for which the architect is designing a new building. They hope to have other musicians—possibly jazz—come and stay at the pavilion.

The angled, gabled roof, clad in a metal that glows almost pink at dusk, and the tilted skylights are unmistakably Gehry. Such resemblances are not unusual in architect father-son collaborations. To I.M. Pei and his two sons, Chien Chung and Li Chung; to Eliel and Eero Saarinen; to César and Rafael Pelli, we can now add Frank and Sam Gehry. ■

Architectural historian Victoria Newhouse, whose books have focused on cultural buildings, is currently preparing one on new public parks worldwide.



THAT'S ENTERTAINMENT

The family room is modestly scaled (opposite, top and bottom). Outdoor spaces include the terrace (above) and the lawn by the lap pool, in front of the guest wings, that Gehry calls the "entertainment plaza."

SPIRITUAL PLACES

- 174 *Hikma Religious-Secular Complex, Dandaji, Niger*
Atelier Masomi and Studio Chahar
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- 190 *Birkat Itzjak Synagogue, Mexico City*
Cherem Arquitectos

PHOTOGRAPHY: © JAMES WANG

HIKMA RELIGIOUS-SECULAR COMPLEX IN NIGER
BY ATELIER MASOMI AND STUDIO CHAHAR

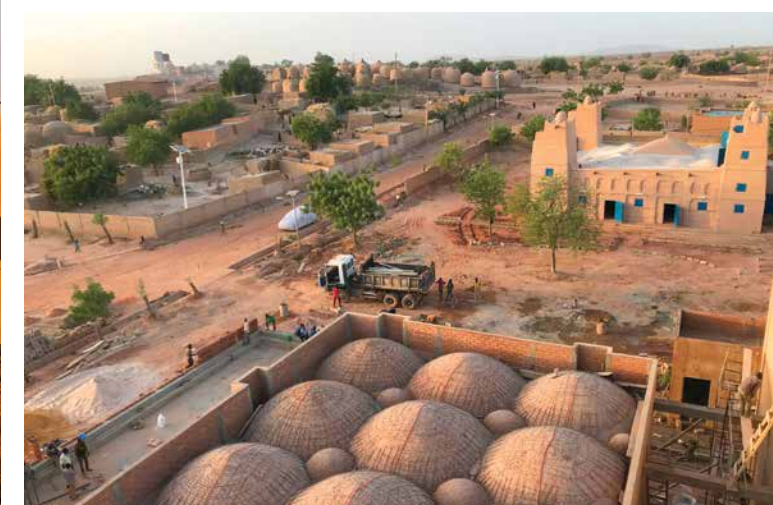
Hikma Religious-Secular Complex | Dandaji, Niger | Atelier Masomi and Studio Chahar

Speaking Volumes

In a village in sub-Saharan Africa, two buildings from different eras celebrate a shared architectural tradition.

BY KELLY BEAMON

PHOTOGRAPHY BY JAMES WANG



ON THE SURFACE
In a new mosque (opposite), the architects used compressed-earth block (CEB) to echo clay architectural elements of the building they converted to a library (foreground, above). The roof domes of one new prayer hall (foreground, left) are contemporary versions of the library's.

There was a time in Niger when village mosques were maintained by their communities. The earthen structures, like one designed in the desert town of Dandaji by the late Nigerien architect Falké Barmou 20 years ago, was an honored type, repaired and replastered as needed in a collective gesture of religious devotion, to withstand the region's seasonal downpours.

But times have changed. When the Dandaji mosque began to crumble—its chunky parapets and corner towers eroded by water damage and neglect—the villagers wanted to tear it down and fund construction of a modern building with easier maintenance and more room for the growing population of 3,000, preferably in durable concrete.

That's when architect Mariam Kamara, founder of Atelier Masomi, based in Niger's capital, Niamey, learned of the problem from family friends (her father had grown up in Dandaji). She successfully advocated for saving the old mosque by recalling its history. The boxy mud-brick volume, with its artisanal hand-plastered exterior, was a small replica of another that Barmou had designed in nearby Yaama, which won the

prestigious Aga Khan Award for Architecture in 1986. Like that earlier, larger mosque, Dandaji's "is an amazing example of a traditional type of Islamic architecture," says Kamara, "one which we can't easily maintain anymore because the skills are disappearing."

But she believed that, with improved building materials and methods, and a new program as a library (a bonus, since Dandaji also has the only middle school for miles, used by students from five towns), the hefty maintenance requirements could be eased, and the building could once more serve as valuable community space. An area adjacent to it would be the site of the new mosque, if the clients approved of pursuing two projects instead of one. Convinced of the existing mosque's importance, the villagers agreed.

To handle the larger-than-expected brief, Kamara, who earned her M.Arch. from the University of Washington, asked another alum of that program, Yasaman Esmaili, principal of the Tehran- and Boston-based Studio Chahar, to collaborate with her. Kamara and Esmaili had met as students while assisting professors, the late Robert Hull (founding principal of Miller Hull) and Elizabeth Golden, on the Gohar

Khatoon Girls' School in northern Afghanistan (RECORD, January 2016). As they worked, they bonded over stories about their Muslim upbringings—Esmaili in Iran and Kamara in Niger. Since that time, they'd also worked together designing a housing project in Niamey.

The 24,140-square-foot rectangular campus they conceived for Dandaji is defined by a concrete wall that encloses the restored and repurposed mosque at the north end, the spacious new mosque composed of a set of prayer halls and ablution buildings at the south end, and a community courtyard in the middle.

Crisp Art Deco-like details and tall, razor-straight walls enclose the new mosque's volumes, including the prayer halls. Between them, at the southernmost end of a long walkway, sits the minaret, formed by two rectangular prisms, with the narrower one stacked on top, culminating in a spire. Just north and east of this neat cluster are two smaller boxes, the stations for ritual washing before prayers.

While its hue echoes the library's, its bones have a different DNA: the mosque and its ancillary structures are not built of local clay but compressed-earth blocks, or CEBs, which feature a mix of soil and other

content. This composite material, which Esmaili and Kamara first used in the Niamey housing development, requires less maintenance than clay while providing the same thermal benefits.

To encourage daily use of the halls, the architects laid a concrete path from the library to the mosque's first point of entry, the ablution building on the north side. From there, a door featuring steel lattice-work, used throughout the complex and fabricated by local craftspeople, leads to an outdoor corridor and the mosque itself. The larger hall used by men opens onto a hallway across from the smaller one designated for women. Each room has views into the other when doors along the corridor separating them are open. Once inside the halls, the gaze of worshipers is focused upward, following the height of the concrete columns that support the clean-lined, white-painted concrete arches that frame red CEB vaults. The underside of each dome holds a pendant fixture that twinkles like a star at the center.

The architects' intention was that nothing on the white-painted walls would distract from the dramatic ceiling or, during sermons, from the imam, whose podium is a simple set of steps on the western



BUILD, KNEEL, PRAY The new mosque has two prayer halls, one for men (above) and for women (opposite, top). These rooms have views of each other across a walkway (left) when their metal doors are open. What appear to be clay-brick ceiling vaults (opposite, bottom) in both halls are actually CEBs.

wall. Under the paint, the wall itself is plastered in a mixture of cement and an iron-rich soil, laterite, for strength.

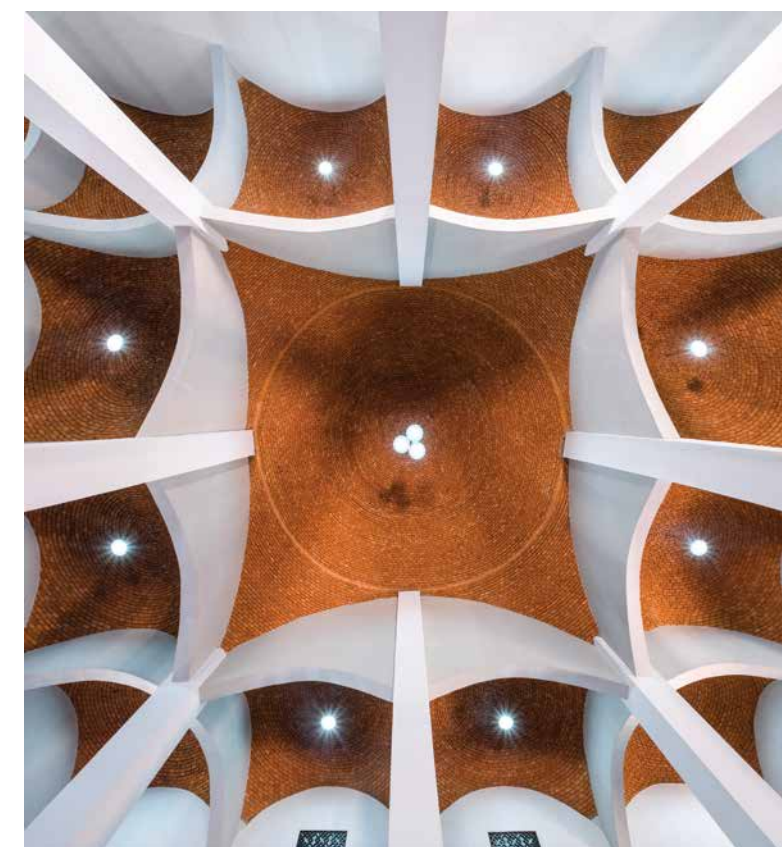
The adjacent restoration is another story. “The projects are two totally different animals, in terms of materials,” Kamara says.

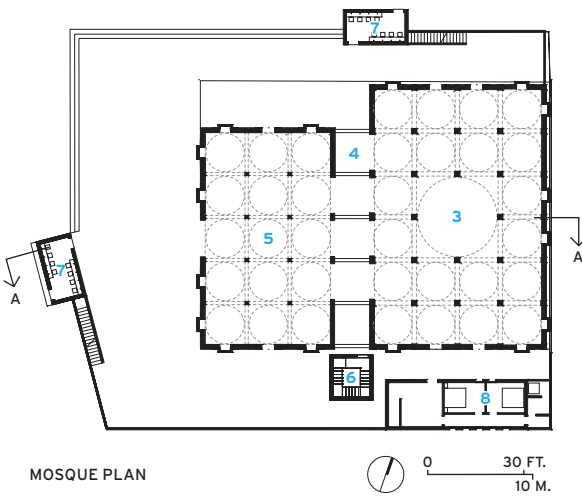
In fact, the library’s irregularly shaped walls make it appear as though it were sculpted from a single slab of clay. Elevations are punctuated by blue-painted steel shutters and doors and rows of shallow carved niches, their edges softened by age. The team enlisted original architect Barmou’s former assistant to oversee the restoration of its walls and roof. In places where walls needed to be rebuilt or repaired, the method of construction was similar to what’s used for cast-in-place concrete with rebar, but, instead, raw clay

was packed and molded by hand around wood dowels. The exterior has a new coating of plaster made of clay, shea butter, sand, and the nontraditional laterite, which is so durable it should reduce the replastering schedule from an annual task to one that happens every 10 years. The interior walls, too, received a fresh coat of plaster, but with a slightly different recipe.

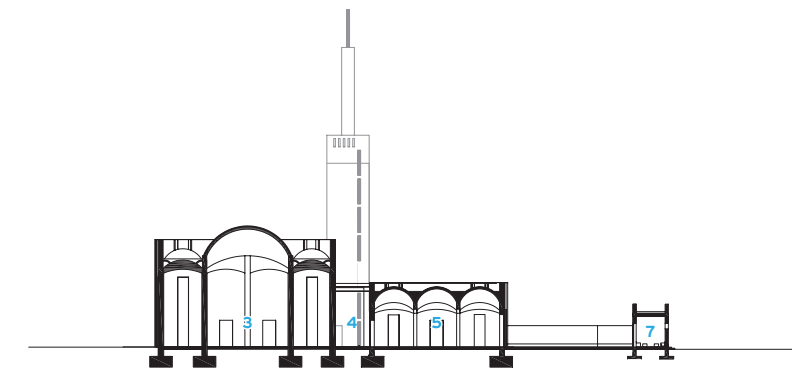
To convert the interior into a library, the architects designed a series of steel-framed insertions: shelves between columns that double as partitions, and a mezzanine accessed by a short flight of stairs, which creates a perch for reading and studying cross-legged on mats under the roof’s multiple domes. Outside the west-facing entrance, the team built an annex for educational workshops on subjects ranging from math to literacy to farm production. Although it is made of CEBs, like the other new structures, village masons made sure its domed roof, parapets, and plasterwork appeared identical to those elements on the converted mosque, as if the decades-old building and the addition were built at the same time.

The masons’ skills, says Kamara, ensured a cohesive mix of modern and traditional. “I knew of these techniques. I had studied them, but I hadn’t seen them done,” says Kamara, explaining how some age-old methods were woven together with hers and Esmaili’s more modern ones, citing the protective plaster for the exterior walls of both the new mosque and the library.

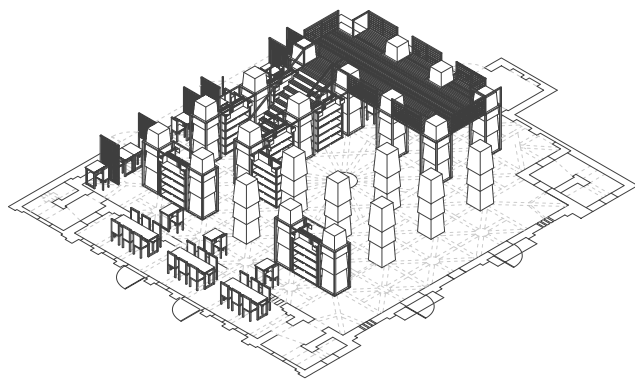




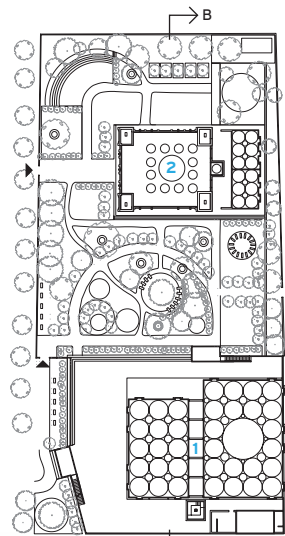
- 1 MOSQUE
- 2 LIBRARY
- 3 MEN'S PRAYER HALL
- 4 CORRIDOR
- 5 WOMEN'S PRAYER HALL
- 6 MINARET
- 7 ABLUTION BUILDING
- 8 IMAM'S QUARTERS



SECTION A - A



AXONOMETRIC DIAGRAM - LIBRARY



SITE PLAN



SECTION B-B



DESERT-PROOF Clay-and-wood vaults over the library's mezzanine (above) provide the same thermal benefits as CEB vaults in the mosque's entrances.

Because the architects were receptive to the mason's practices, the artisans in turn showed patience with theirs. "There was a lot of exchange. We are architects, but we are not there just to prescribe from our Western educations," says Esmaili. Kamara agrees: "It's way more interesting to learn from them," she says. "That process shows that modernity is not synonymous with a Western aesthetic." ■

credits

ARCHITECT: Atelier Masomi - Mariam Kamara, principal

ASSOCIATE ARCHITECT: Studio Chahar - Yasaman Esmaili, principal

ENGINEERS: URBATEC (structural); Willi Demo Sekangay (electrical)

GENERAL CONTRACTOR: Entreprise Salou Alpha & Fils

CLIENT: Village of Dandaji, Niger

SIZE: 24,140 square feet

COST: \$544,300

COMPLETION DATE: May 2018

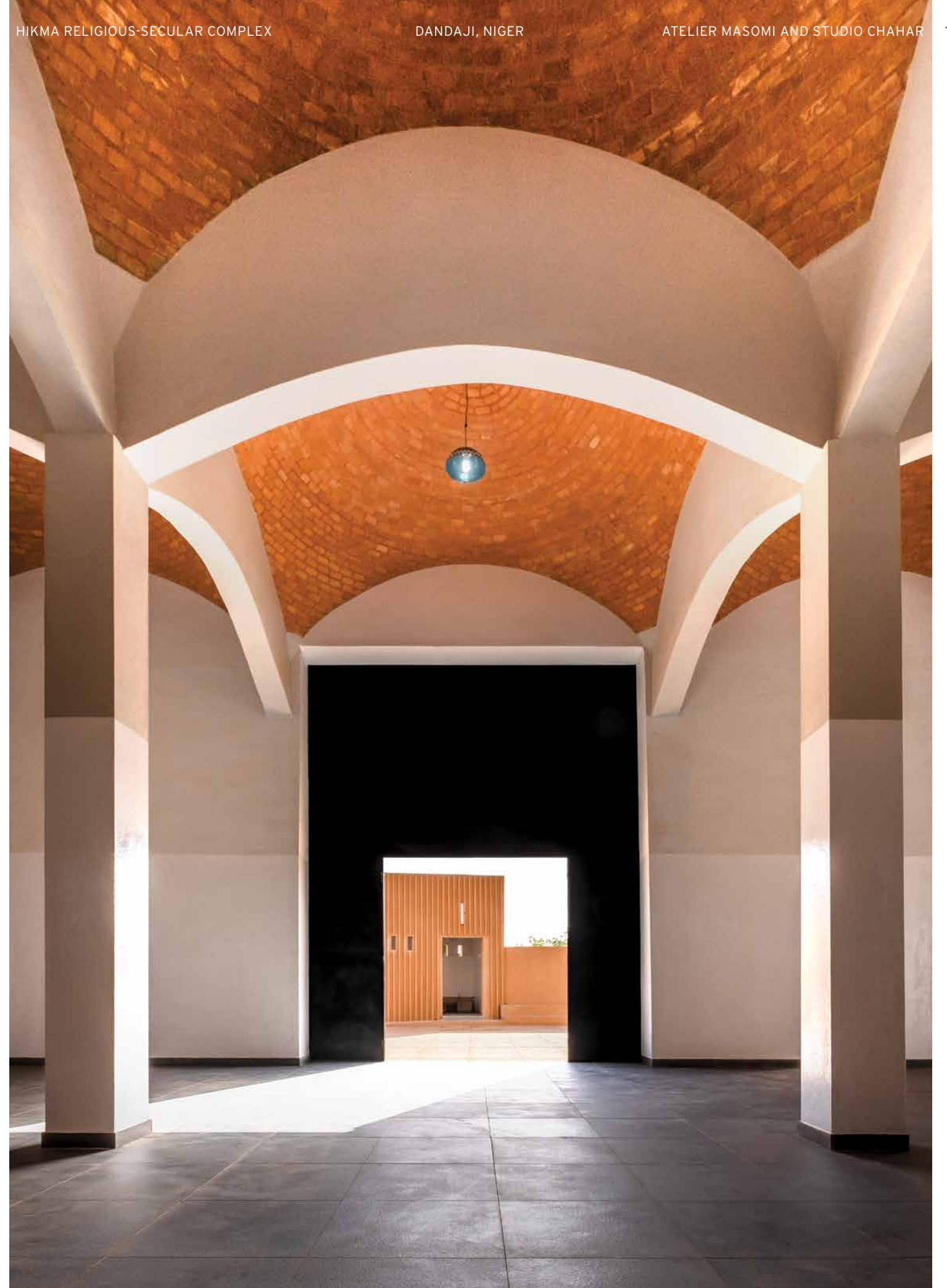
SOURCES

PAINT: National Paints

LIGHTING: Egelec

DOORS & WINDOWS: Atelier de Technologie Métallique

LOCKSETS: Paco



St. Mary's Student Chapel | Albany, California | Mark Cavagnero Associates

School Crossing

A serene, meditative sanctuary beckons to young people on campus.

BY JOHN KING



CONCRETE IDEAS Just inside the campus's entry gate, the rectangular "steeple" comes into view (above). The architect used luminous white Portland cement for exterior and interior walls (opposite and above, right).



Mark Cavagnero readily admits that his personal relationship with Catholicism ended after he attended a parish school as a child in Connecticut. So, when he received a request to interview for a commission to design a student chapel for a Catholic high school in the San Francisco Bay Area, he wasn't sure he was up to the task.

"My faith had wavered, to say the least,"

Cavagnero recalls. But then he began to think about the intersection of spirituality and architecture in a broader way—as "idealized space that could offer empathy, with room for contemplation that may, or may not, include prayer."

That impulse is now embodied in a small structure of concrete and glass at the entrance to St. Mary's College High School, in Albany, California. Unapologetically modern yet suffused with tranquil warmth, it serves as a symbolic portal to the campus, as well as an open refuge for students seeking inspiration or solitude, often at conflicted times in their lives.

Unlike other buildings on the 12.5-acre campus, most of which were built as needed during the past 30 years and have a vague air of Mission Revival style, the 4,400-square-foot chapel makes a striking first impression. Just inside the campus's entry gate, off a shaded street of single-family homes, a rectangular concrete "steeple" rises, its back pitched and its eastward face inset with glass that is divided into quarters by a thin metal cross. Around and behind the tower, like rectangular ridges beneath a mountain peak, the building's lower sections hold the chapel and a small sacristy.

The religious imagery is obvious. But the steeple, a great, hollowed-out light shaft, also allows morning sunlight to slice into the sanctuary, illuminating the altar, where a priest addresses the pupils, who often gather for brief talks or services before classes begin. Later in the day, when a student might come on his



MATERIAL WEALTH
The pews and slatted screen, all of white oak, play against floors of smooth Alabama limestone (above). Glass doors fold wide open to connect the sanctuary with the courtyard and its small reflecting pool (left and opposite).



or her own, the altar fades into the shadows while the chapel is lit from behind.

"It seemed important to break the room down into different scales," explains Cavagnero, who in 2015 won the coveted Maybeck Award from the AIA California Council. "I was thinking about what it would be like if I was going through a moment of stress in my life. I'd want a space where I could think and brood and wonder."

While the morning light is clean and direct, the afternoon sun—entering through floor-to-ceiling glass panels at the chapel's southwest corner—fills the sanctuary with a diffused glow. A clerestory window of frosted glass, tucked along the north edge of the space, evens out the illumination without calling attention to itself.

The pews are white oak. So are the slats along the chapel's southern wall—positioned not only to direct light toward the front of the chapel, but also to form a screen that blocks distracting outside views from the pews. The floor is smooth Alabama limestone. The vertical plane behind the altar is the same stone, but split-face, and the other walls are of white Portland cement. "The best way to make a space that's visually and spiritually quiet," suggests Cavagnero, "is to use as few elements as possible, and to keep them under control."

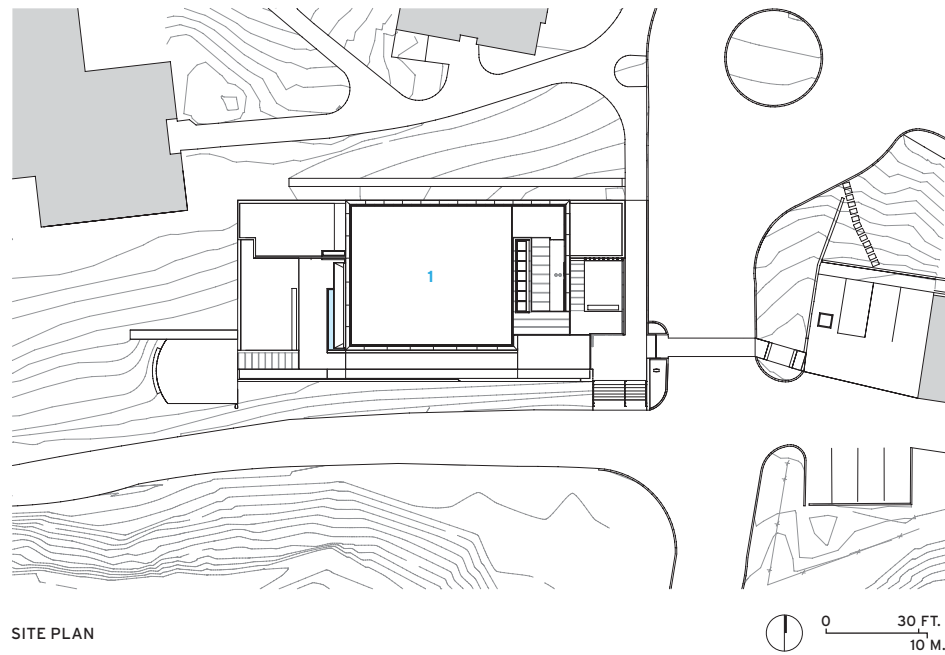
The architect was less successful, however, in his quest to make the chapel feel like a sanctuary entirely apart from the hectic commotion

of a high school with more than 600 students, and other challenging conditions. Though the site parallels a creek lined with tall redwood trees—hints of nature that filter into the chapel and its courtyard—it's also bordered by a service road. The tower, meanwhile, faces a wide asphalt roadway and a utility building.

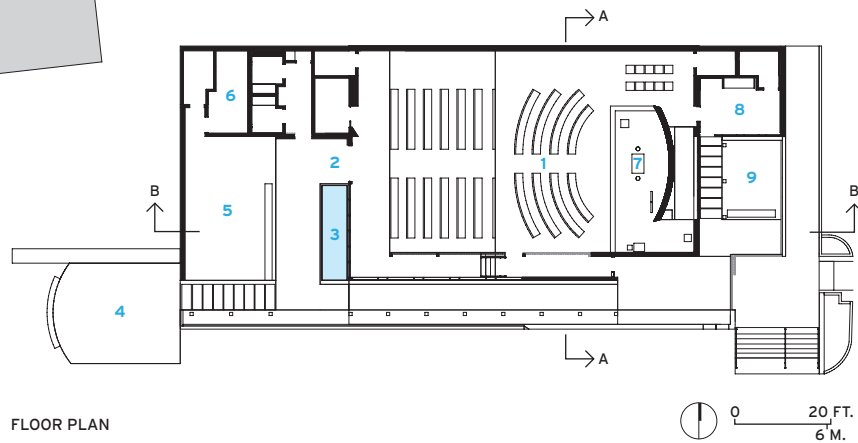
To counter these encroachments, the design moves the chapel entrance to the site's rear, in a small courtyard, reached from the east by a pathway, flanked by Cavagnero's building on one side and, on the other, by a concrete wall that drops from 8 to 4 feet high as it nears the courtyard. When the three Japanese maples that are part of Andrea Cochran's landscape design grow in, the sense of passage should feel more natural. It's an imaginative response to a challenging site, but a self-consciously choreographed one, as well.

Once inside the chapel, though, emotional resonance emerges in the way clean details are infused with higher purpose. The choice of the chalky-white Portland cement for the walls—its superlative quality being an expense that Cavagnero defended from value engineering—brings a subdued luster to a material that students and staff might otherwise dismiss as cold and stark. There's delicacy in the tall cross within the tower. The light in the chapel, diffused and entering from all sides, is at once comforting and solemn.

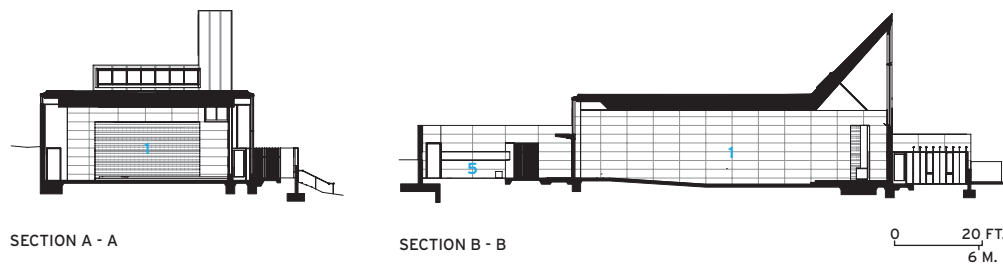
In the past, when religious faith was unquestioned, churches were



SITE PLAN



FLOOR PLAN



SECTION A - A

SECTION B - B

- 1 CHAPEL
- 2 MAIN ENTRANCE
- 3 REFLECTING POOL
- 4 GROTTO
- 5 GARDEN
- 6 MECHANICAL
- 7 ALTAR
- 8 SACRISTY
- 9 COURTYARD



designed to awe believers with majestic force. We live in a different, less doctrinaire age—in which many people choose to set traditional religion aside, or to draw on a variety of different philosophies and creeds. This is what St. Mary's chapel responds to, glowing with an offer of sanctuary and solace, whatever form one's beliefs might take. ■

John King is the urban-design critic of the San Francisco Chronicle.

credits

ARCHITECT: Mark Cavagnero Associates – Mark Cavagnero, John Fung, Ellen Leuenberger, Andy Lau, Mark Jewell

CONSULTANTS: CSW|ST2 (civil); Mar Structural Design (structural); Costa Engineers (m/p); O'Mahony & Myer (electrical); Andrea Cochran Landscape Architecture (landscape); Charles M. Salter Associates (acoustics); Archdiocese of Omaha (liturgical)

GENERAL CONTRACTOR: Roebbelen Contracting

CLIENT: Saint Mary's College High School

SIZE: 4,400 square feet

COST: withheld

COMPLETION DATE: September 2018

SOURCES

LIGHTING: B-K Lighting, BEGA, Volt Lighting Group, Juno Lighting Group, Amerlux, Philips, Focal Point, Axis Lighting, Vode, Lumenpulse

DOORS: Minton Door Company, Eggers Industries, NanaWall

BUILT-UP ROOFING: Johns Manville

PEWS: New Holland Church Furnishings



PHOTOGRAPHY: © JOE FLETCHER

SCREEN PLAY Wood slats shield the interior from southern light (opposite). Restrained in its ornamentation, the building has little outward iconography other than the tower's thin cross and the one incised in a wall (above).

Saya Park Chapel | South Korea
Álvaro Siza and Carlos Castanheira

High Altar

A hilltop chapel's geometric forms draw on the history of sacred buildings.

BY DAVID COHN

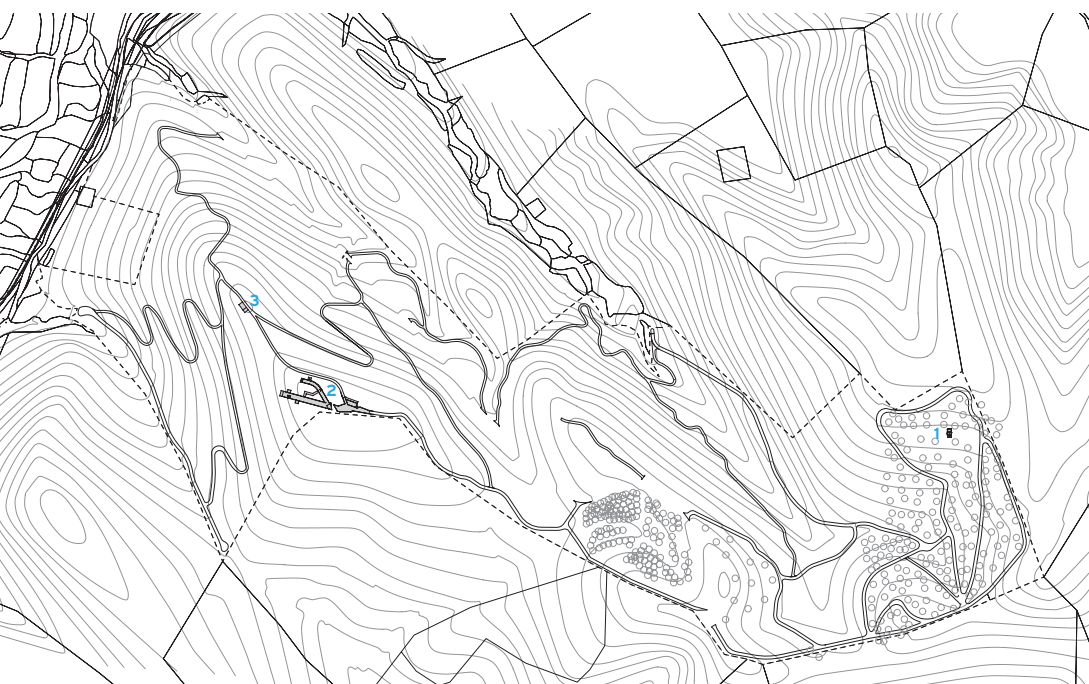
PHOTOGRAPHY BY DUCCIO MALAGAMBA

When famed Portuguese architect Álvaro Siza, a Pritzker Prize laureate, now 86, began to design a small chapel for a remote mountainside in South Korea, he drew, as he recalls, "on centuries of marvelous church buildings." His project condenses the basic elements of those traditions and, in so doing, transforms them with his characteristic quirky grace.

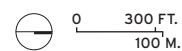
Facing east down a hillside, the white stucco chapel is composed of three volumes that step up in height. Frontmost is a peculiar pediment, columnless, with an exaggerated cantilever. Hovering over the entry, the building reinterprets a Neoclassical portico with a dash of contemporary structural swagger. The two succeeding volumes make up the sanctuary itself: rising to a steep triangular peak, the first opens into a taller flat-roofed space over the altar, much the way a church nave meets the



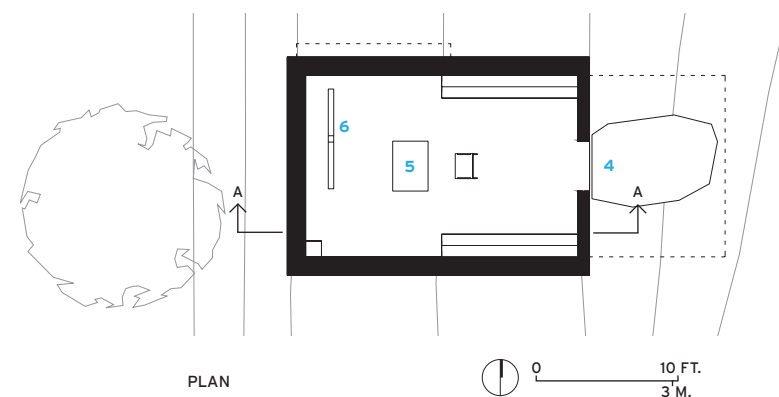
GREEK TEMPLE REDUX A cantilevered pediment, with no columns, forms the chapel's entry canopy (above). The exterior's crisp, white stucco surfaces give way to exposed board-formed concrete on the interior (opposite).



SITE PLAN



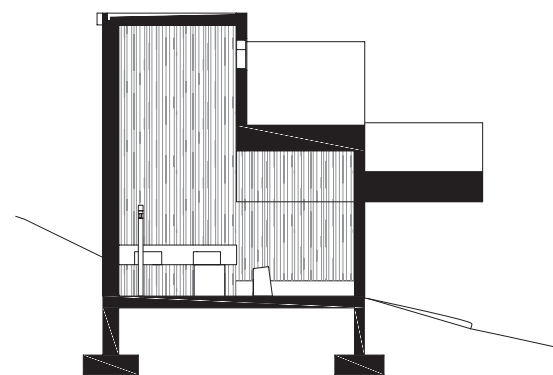
OUT ON A LIMB Elsewhere in the park, Siza and Castanheira's Art Pavilion has a branching form (above).



PLAN



- 1 CHAPEL
- 2 ART PAVILION
- 3 PLANNED TOWER
- 4 ENTRANCE
- 5 ALTAR
- 6 CROSS



SECTION A - A

crossing. Where the two volumes join, an off-kilter opening—like a misplaced oculus or rose window—cuts into a high spandrel. The aim is to cast a moving spot of daylight across the altar, with the rays filtering through a thin pane of alabaster rather than glass. With just these few bold, theatrical moves—the two-stage spatial sequence and framing, the penumbra, and the almost hidden source of light—the architect seeks to achieve a luminous, spiritual atmosphere.

The 450-square-foot chapel is one of three structures Siza designed with a longtime collaborator, architect Carlos Castanheira, for the 75-acre Saya Park, in North Gyeongsang Province. Created by retired businessman Jaesung Yoo, this ambitious project is open to the public. Siza and Castanheira's Art Pavilion there opened in April, but their Observation Tower is yet unbuilt. Along the park's wooded trails, Yoo has selected special places for contemplative meditation—a bench in a clearing or overlooking a view, or near a group of sculptures. His other structures on-site include an open-air music pavilion beside a mountain stream. The chapel, built for his wife, who is Catholic, stands in a far corner of the park, near a family burial plot marked by two boulders and a pair of ancient trees.

Yoo first came to Siza with the idea of realizing a project never intended to be built, a museum commissioned for a Madrid exhibition in 1992. The architect demurred, suggesting a new design, but Yoo insisted. "It was very amus-

DIVINE LIGHT A high opening, like a misplaced rose window (right), casts a spot of sunlight—moving over the course of the day—across the altar. The rays filter through a thin pane of alabaster, rather than glass (left).

ing," Siza confides. That scheme, only slightly altered, is now the Art Pavilion, used for installations and events. With long, curving, branchlike wings, it was originally conceived to feature Picasso's "Guernica," the famous (and unavailable) painting, which Siza has replaced with his own marble, wood, and Cor-Ten-steel sculptures and ceramic-tile murals.

Like the Art Pavilion, the chapel is built of poured concrete, white-stuccoed on the exterior, but with the rough texture left by the board formwork exposed inside. The altar—a simple rectangular block—is of Portuguese marble; and the cross, tabernacle, benches, and pivoting entry door were all crafted in Portugal, of Afzelia, an African hardwood that Siza first used for his Boa Nova Tea House in 1963 (RECORD, February 2015).

The architect has designed several churches, including Santa Maria in Marco de Canaveses, Portugal (1996), and a private chapel for the Quinta Santa Ovidio estate (RECORD, April 2003), projects that Yoo visited before this work began. (Some of Siza's other recent religious structures include his chapel in Algarve, Portugal [RECORD, May 2018], and his Anastasis Church, near Rennes, France [RECORD, April 2018].) Like much of that earlier work, the Saya Park chapel plays with archetypal forms. Outside, the structure is as sharply drawn and proportioned as a Renaissance tempietto. Inside, without losing this elemental clarity, its spatial unfolding and raw concrete seem closer to the Romanesque's dark, primitive masonry interiors. Yet for all the history this work invokes, it is unmistakably of the present, fresh and surprising—the performance of a master. ■

credits

ARCHITECT: Álvaro Siza and Carlos Castanheira, with Rita Ferreira, Diana Vasconcelos, Luíza Felizardo, Nuno Rodrigues, Filipa Guedes (project team)

ENGINEER: HDP (structural)

CLIENT: Jaesung Yoo

SIZE: 450 square feet

COST: withheld

COMPLETION DATE: September 2018

SOURCES

CUSTOM CABINETRY AND WOODWORK:

Serafim Pereira Simões Sucessores

STONE ALTAR: Sousa Mármore

LIGHTING: THPG

DOOR BOLT: CBC

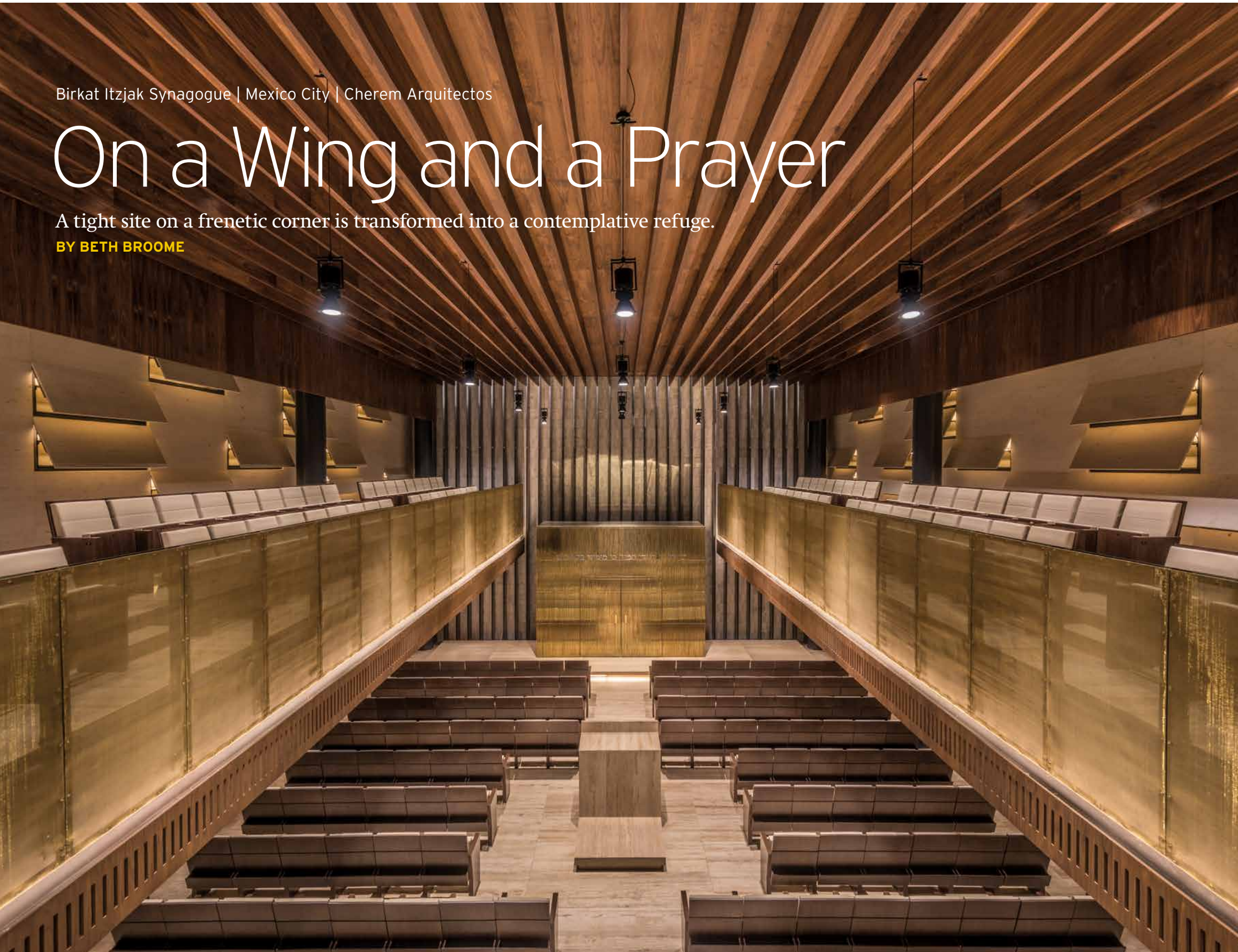


Birkat Itzjak Synagogue | Mexico City | Cherem Arquitectos

On a Wing and a Prayer

A tight site on a frenetic corner is transformed into a contemplative refuge.

BY BETH BROOME



How do you find spirituality on a tiny site shoehorned onto a frenetic, traffic-clogged corner in the megalopolis of Mexico City? This was the question that Cherem Arquitectos had to ponder when they took on the

commission to build the Birkat Itzjak synagogue in the Lomas del Chamizal neighborhood on the city's western periphery.

In recent years, this enclave, home to low-rise residential buildings interspersed with dry cleaners, convenience stores, and other small businesses, has undergone a transformation as developers purchased lots to build luxury high-rise housing. The burgeoning population includes an Orthodox Sephardic Jewish community, named Maguén David, that, with all the growth, soon found itself in need of a new space to worship. Because driving a car is among the activities forbidden on

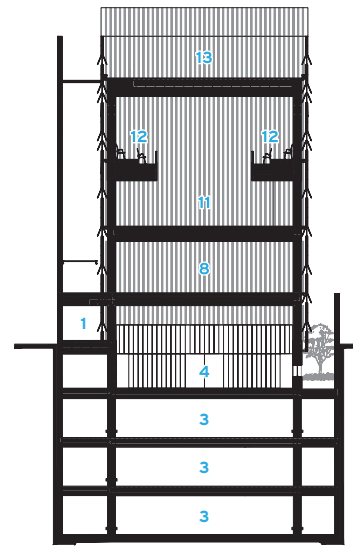
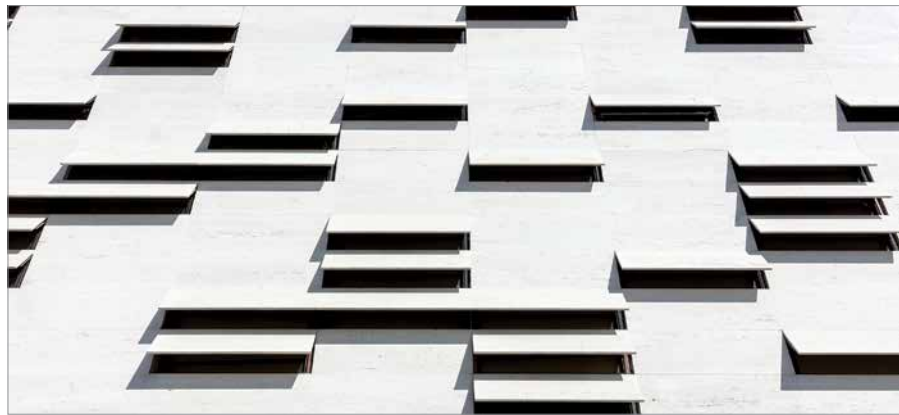
Shabbat, the Sabbath, the group saw value in this 6,000-square-foot site, which, despite its awkwardness—atop a hill and hemmed in by streets on three sides—is within walking distance of the legions of residential towers. The funds to build were donated by a single family within the community.

Inside, as well as out, the building is its own island. "One of our first thoughts," says principal Abraham Cherem, "was that, given the surroundings, which aren't that nice, it was not a place to open views. We needed to make it introspective, its own shell." And, adds partner José Antonio Aguilar, "we had to figure out how to bring in natural light without having conventional windows." The steel-frame building, which is clad in travertine, is a simple rectangle in form and appears almost as a solid mass. (It has no sign or iconography, in part to "keep it quiet," the architects say, and as a security measure.) Light enters through an arrangement



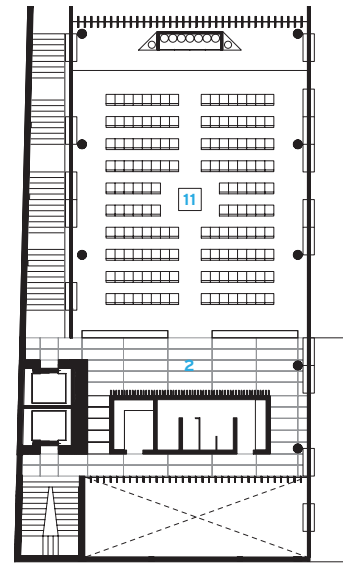
PHOTOGRAPHY: © JAIME NAVARRO (LEFT); ENRIQUE MACIAS (RIGHT)

URBAN OASIS A palette of travertine, walnut, and brass lend the sanctuary (left) a quiet dignity. Eyelid-like louvers shield the south elevation's array of apertures which, at night, are illuminated with LEDs embedded beneath the flaps of stone (above).

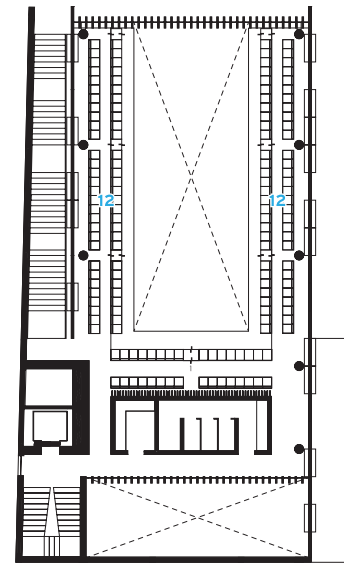


SECTION A - A

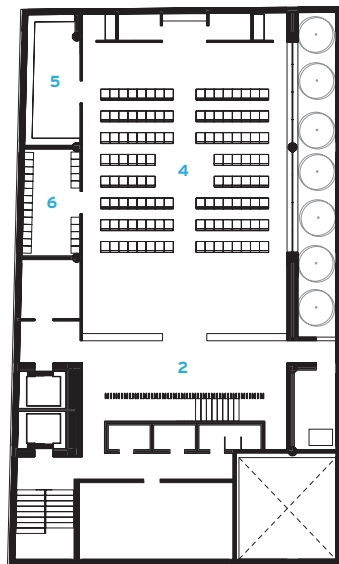
- 1 ENTRANCE
- 2 VESTIBULE
- 3 PARKING
- 4 MIDRASH (STUDY ROOM)
- 5 LIBRARY
- 6 LOCKERS
- 7 RABBI'S OFFICE
- 8 EVENT ROOM
- 9 COURTYARD
- 10 KITCHEN
- 11 SANCTUARY, WITH MEN'S SEATING
- 12 WOMEN'S MEZZANINE SEATING
- 13 WOMEN'S RITUAL BATHS



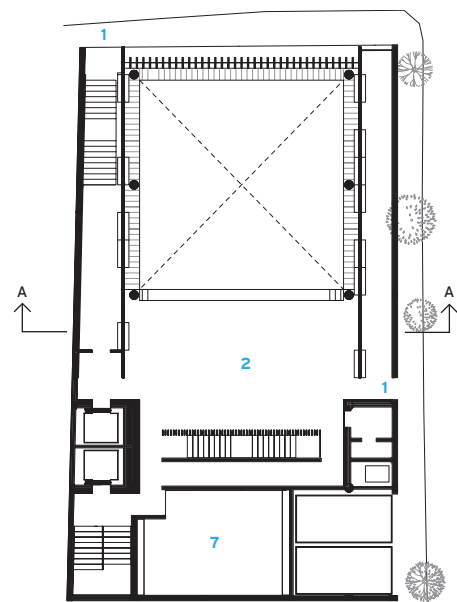
LEVEL-4 PLAN



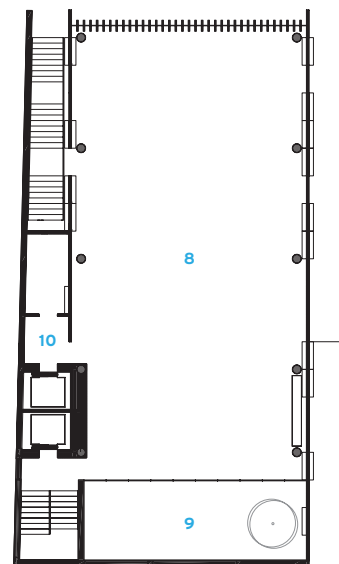
LEVEL-5 PLAN



LEVEL-1 PLAN



LEVEL-2 PLAN



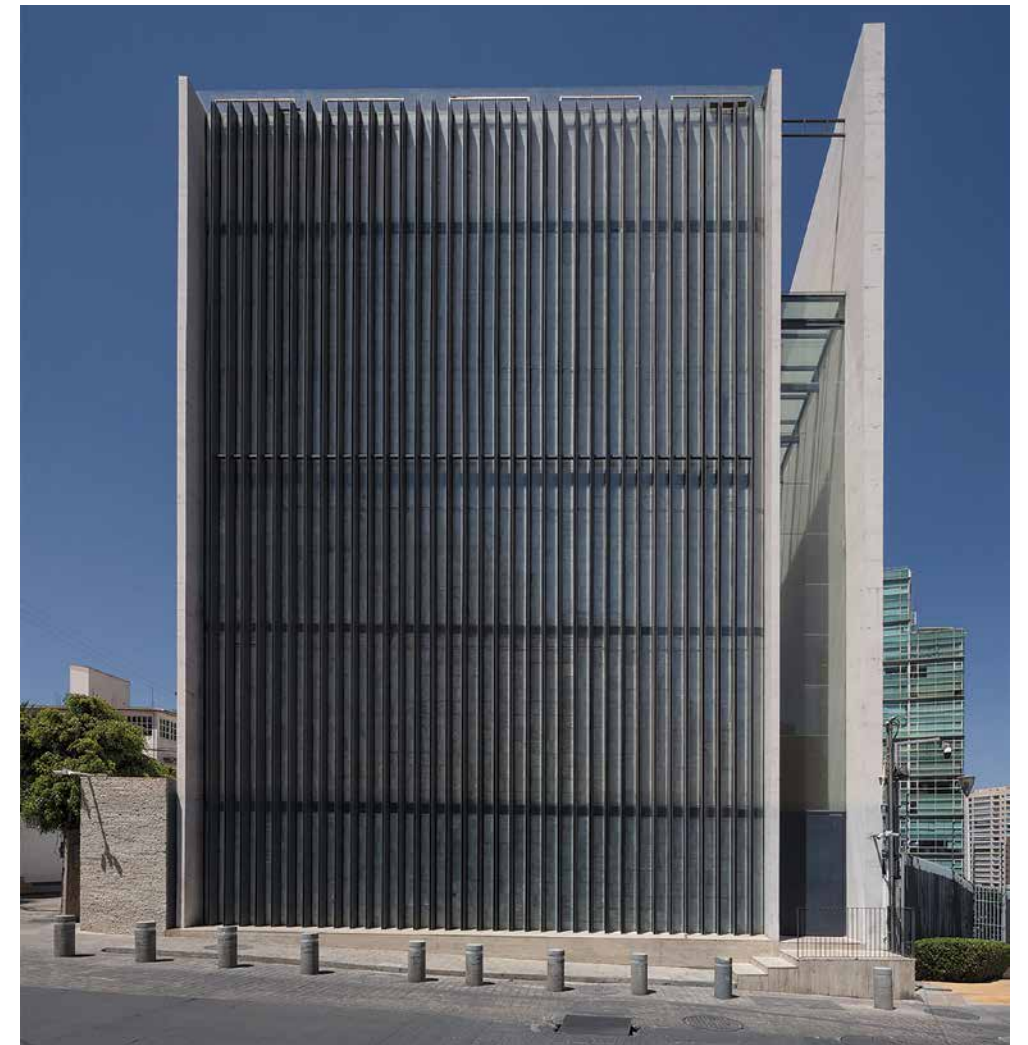
LEVEL-3 PLAN

STREET SMART The steel structure is visible on the front facade and frames a wall of onyx (right). The main entry slips into a channel. The onyx carries light inside, including into the sanctuary (bottom), where the east-facing wall glows behind the brass ark, which contains the Torah scrolls.

of small rectangular apertures on the building's long southern side, which are shaded by fixed, eyelid-like louvers made of the same travertine and hung at 21 degrees. On the front, east-facing facade, steel structural ribs rise the height of the building, framing thin sheets of cloudy white onyx that carry light into the synagogue on all levels (this strategy is mimicked at the back, with clear glazing in place of the stone). Acoustic laminated glass behind the onyx and elsewhere, and double layers of drywall sandwiched between the exterior and interior travertine walls, reduce noise transmittal.

In addition to the limited square footage, the site came with a height restriction of about 70 feet, presenting a challenge for packing in the all the spaces the institution desired for its congregation of about 2,000. The program is stacked neatly into the envelope. Three levels of below-grade parking accommodate cars on non-Sabbath days, necessary given the limited space on the surrounding narrow streets. On top of this, also below grade, is the midrash, or study room, a double-height space that can be viewed (as well as accessed by an open-tread travertine stair) from the entry vestibule above, which sits at ground level and is entered from the small side street to the south. A multifunction room for gatherings and celebrations, which opens onto a protected, travertine-enclosed courtyard, sits on top of that. The next level holds the sanctuary and men's seating area of the temple, with the women's section above in the mezzanine flanking the double-height space on three sides. At the top will be the women's ritual baths, which have yet to be completed.

On the Sabbath, when the elevator is off limits, worshippers use a generous straight run of stairs off the front, main entry. Rising along the mostly opaque northern side, it connects all the floors and is drenched in light, entering through a strip of clear glass that extends the full height of the front facade as well as a skylight running the length of this slot-like zone. Throughout the interiors, travertine and walnut line the floors, walls, and ceilings, accented by inflections of brass. The tight material palette complements straightforward floor plans and the understated language of the architecture, contributing to a contemplative mood for prayer and the pursuit of wisdom.



PHOTOGRAPHY: © ENRIQUE MACIAS (TOP, BOTTOM, AND OPPOSITE)



ALL IN At the back of the building, steel-framed glass panels pivot to connect the events room to a travertine-lined courtyard, where rituals revolving around the New Moon Festival and Sukkot take place. A shallow stream of water animates the west side, and stone for the abutting elevation is rusticated, a nod to the Walls of Jerusalem.

The east-west axis of the site was serendipitous. Since synagogues must be oriented toward Jerusalem, the building fit the site nicely, with the short end of the rectilinear form facing east and, of course, the rising sun. Situated in this way, morning light streams through the wall of onyx, bathing the interiors—most notably the main sanctuary—with a honey glow. “If the east were in another position,” notes Cherem, “it would have complicated the design a lot.”

The team’s instincts for creating an inward-looking, light-filled space with carefully selected materials jibed well with the mystical aura they hoped to achieve. Scale also played an important role in evoking the sacred, say the architects (who did the work pro bono), pointing to the compression of the secondary and transition spaces relative to the expansive, more majestic sanctuary and, to a lesser extent, the midrash. “Here, introspection is important,” says Cherem, “but so is the feeling that there is something bigger than you—and scale can do that.” Other details underscore the notion. For example, the beamed walnut ceiling in the temple aligns with the vertical steel structure that holds the onyx, directing the gaze to the brass ark, the cabinet at the front of the sanctuary holding the Torah scrolls.

As the honking of horns and squealing of brakes persists outside against an equally cacophonous visual backdrop, inside the synagogue a soothing, even quality of light pervades, and all is silent, making Birkat Itzjak a little oasis for prayer, study, and community gathering. ■

credits

ARCHITECT: Cherem Arquitectos – Abraham Cherem Cherem, principal; José Antonio Aguilar, partner; David Cherem, David Junco, Malena Martinez

ASSOCIATE ARCHITECTS: Abraham Cherem Cassab, Abraham Cherem Dayan

ENGINEER: Aguilar Consultore Ingenieros (structural)

GENERAL CONTRACTOR: Vidarq

CLIENT: Maguén David Jewish Community

SIZE: 44,000 square feet (including parking)

COST: \$5 million

COMPLETION DATE: July 2017

SOURCES

STONE: Stones Piedras Naturales

STEEL: Bysa

GLASS: Testa

WALNUT: Sergio Lucas

BRASS ARK & BRASS MESH: Atra

FURNISHINGS: AlisMobile, Alexander Anderson, Pedro Ramirez Vazquez

LIGHTING: iGuzzini

ELEVATORS: Mitsubishi



Designs on Data

Smart technologies and sophisticated analytical tools are helping us understand and address urban challenges.

By Katharine Logan

DESPITE THE BUZZ around a few hyperconnected cities and districts being planned and built as urban utopias from the ground up—such as Portugal’s PlanIT Valley, Toronto’s Quayside district, Qatar’s Lusail, and South Korea’s Songdo—the real potential for technol-

ogy to boost the quality of life lies in existing cities, where most people already live.

“The spaces around us are becoming permeated with the Internet of Things, a fusion of bits and atoms,” says architect Carlo Ratti, director of the Senseable City Lab, a multidis-

ciplinary research initiative at the Massachusetts Institute of Technology. “Its manifestations are everywhere. From energy to waste management, mobility to water distribution, city planning to citizen engagement, digital technology is facilitating novel interactions with urban space.” In New York, sidewalk kiosks on former pay phone sites provide access to public Wi-Fi and city services, while in Moscow, an intelligent transport system tackles the city’s near-critical congestion. Connected water infrastructure in Christchurch, New Zealand, helped prioritize repairs following a major earthquake; air-quality sensors inform Beijing’s regulation of construction and traffic; and real-time consumption data facilitates distributed energy

Barcelona is implementing a superblock initiative that is freeing up space previously dominated by cars for other uses (above). Within each nine-block precinct (right), no through traffic is permitted and speeds are reduced. To facilitate the transition, speed limits drop in two phases.

initiatives in Copenhagen. Around the world, to varying degrees, existing municipalities are retrofitting with new technology in pursuit of familiar priorities, in combinations tailored to each city’s particular circumstances.

But it’s not the technology per se that’s having the impact. It’s not even the data that the tech generates. The significance of “smart” technology comes from how people use the data to inform decisions about their city.

“Smart city” is a catch-all for the use of

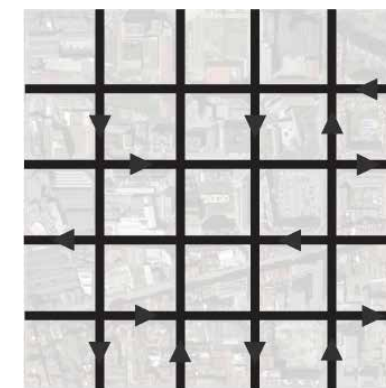
information and communications technology (ICT) to improve a city’s operations and its citizens’ quality of life. The term lacks consistent usage, even among experts, who generally don’t like it, preferring alternatives with more inherent meaning, such as “connected,” “sensing,” or even the neologism “senseable,” which, says Ratti, implies both “able to sense” and “sensible.” Whatever they want to call it, some cities are crafting a more livable urban fabric, particularly two municipalities perennially acknowledged to be among the world’s most connected, Barcelona and Singapore. Another showing potential to use this data this way is Los Angeles.

Barcelona’s development of its technological infrastructure stretches back about 30 years, and now encompasses more than 40 programs. One of the most transformative may be the city’s “superblocks,” an initiative being instituted in existing neighborhoods in response to increasingly congested streets and associated noise and pollution levels.

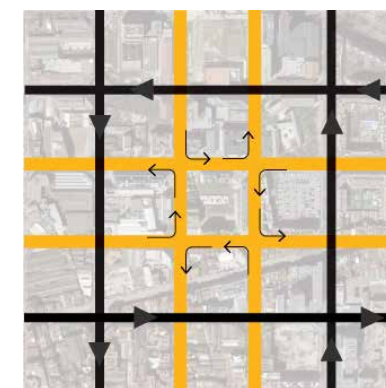
Not to be confused with the disconnected, monolithic superblocks that Jane Jacobs effectively discredited, each Barcelona superblock comprises a three-by-three, nine-block neighborhood of traffic-calmed and shared streets. Local traffic can enter only along the center block of each side, drive slowly around that block, and reemerge on the street from which it entered, which limits through-traffic to the perimeter. Within the block, the scheme liberates more than 70 percent of the surface previously occupied by cars, reducing noise, improving air quality, and providing much-needed public space.

The clustering of blocks, exclusion of traffic, and installation of picnic tables, play areas, and potted trees may seem like an analog initiative, but it rests on “data-integrated decision-making,” says Salvador Rueda, director of the Agència d’Ecologia Urbana de Barcelona (BCN Ecologia) and originator of the superblock program. Rueda first proposed the superblock concept in 1987 (even then, noise and poor air quality were marring city life), but a lack of reliable projections about traffic impacts stalled it. Now, with contemporary sensing and simulation technologies, says Rueda, “we can use data to advocate, to plan, and to verify.”

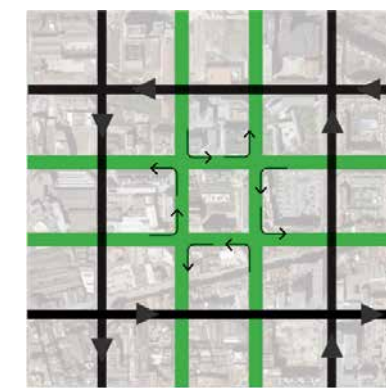
For example, increasingly sophisticated monitoring equipment has enabled the creation of a network of fixed and moving sensors that connect with ICTs and a cloud-computing process. These make it possible to assess a range of air-quality parameters—particulates, nitrogen dioxide, and other pollutants—and to generate accurate, real-time estimates of doses inhaled daily by residents



CURRENT STATUS



PHASE 1 SPEED REDUCTION



PHASE 2 SPEED REDUCTION

- Basic Network: 50 km/h
- ▶ Traffic Direction
- Local Network: 20 km/h; bicycles circulate in local network in both directions
- Public Space: 10 km/h; bicycles circulate in local network in both directions



ACOUSTIC COMFORT—WITHOUT SUPERBLOCKS



ACOUSTIC COMFORT—WITH SUPERBLOCKS

If realized as envisioned in Barcelona's mobility plan, the superblocks are projected to reduce traffic and bring about a host of associated benefits, including shortened waits for public transit, enhanced safety, improved air quality, and noise-pollution reductions (above, left and right), with red indicating zones with high noise levels.

and commuters. Similarly, traffic flow is measured with sensors (mainly cameras) positioned in intersections, superblock access roads, and calmed streets.

Variables analyzed through data-based simulations and subsequent verifications (conducted by validating simulation results with on-street measurements and other local data) include traffic, public transport, and cycle routes; beyond mobility, they include environmental impacts such as air quality, noise, thermal comfort in public space, green surface and soil permeability, greenhouse-gas production, and biodiversity. It even quantifies more nuanced factors, such as social cohesiveness, which is measured by assessing diversity of income, culture, and age among people living in a superblock, as well as the provision and spatial distribution of social housing and urban amenities. Using comparative risk assessment and other standard methodologies, Rueda's team can estimate preventable premature mortality, gains in life expectancy, and economic impacts related to the superblocks. "A scientific approach based on data allows decision-makers to understand what the improvements will be if they implement the idea," says Rueda.

To date, five superblocks have been implemented, three are in development, and three more were announced in April. (Insufficient community consultation resulted in opposition to one of the projects, but that subsided as the benefits—especially the new social spaces—became clear. Now the superblocks' popularity is raising concerns about gentrification.) The city's transit system has been

overhauled from radial to orthogonal routes that coordinate with the superblock grid. If realized as envisioned in Barcelona's Sustainable Urban Mobility Plan 2013–2018, there will eventually be 503 superblocks city-wide.

The scheme is projected to achieve a 21 percent reduction in overall traffic, which will shorten trip times and improve safety, reduce the wait for public transit to an average of two minutes, bring air pollution levels citywide within recommended values (currently over 40 percent of residents live with excessive pollution), allow for increased social connectivity and green space, and prevent an estimated 670 pollution-related premature deaths annually. "The reduction of impacts and the improvement of the quality of life is huge," says Rueda.

Barcelona's ability to try out an urban-design concept in limited areas of the city before rolling it out at full scale is, from Singapore's perspective, something of a luxury. "Singapore is a city-state, and there's rarely the room for us to experiment with our plans," according to Siau Yong Ng, director of the Singapore Land Authority's geospatial division. So, in a global first, the city is synthesizing all of the 3-D efforts of its various government agencies, along with vast stores of associated data from existing geospatial and other platforms, to create a digital twin of the entire city.

The \$54 million project, scheduled for phased deployment beginning this year, will provide a single, authoritative digital platform for government and private-sector users, as

well as researchers and the public, to better understand the city and to explore ways to improve it. Users will be able to pretest concepts and services that range from energy and food production to mobility, from development proposals to long-term land-use planning.

Astonishingly detailed for such an enormous construct, the platform's semantic 3-D modeling provides information on terrain attributes, transportation infrastructure, and buildings and their geometry and components, right down to floorplans and materials composition. Multiple sources of static, dynamic, and real-time city data, including information from government agencies, the internet, and Internet of Things devices, enrich the platform with demographics, traffic, and weather. According to a statement from Singapore's National Research Foundation (NRF), which led the development of the model, "the potential uses of Virtual Singapore in tackling livability issues are limitless."

For the city's designers, planners, and decision-makers, the platform allows sharing and reviewing project documentation in context, and to conduct more meaningful public consultations. In turn, this enhanced contextualization and collaboration also allow for a more integrated consideration of how proposed changes will affect the public realm.

For example, planners can simulate the effect of proposed green roofs on temperature and light intensity in the surrounding area, overlay heat and noise maps on existing and proposed developments, or model a building's influence on wind flows in the street. With



Virtual Singapore, a synthesis of the digital models of various government agencies and vast stores of data, can be put to a wide variety of uses, including producing a visual display of apartment resale values (top), or helping bicycle commuters map the best route between two points (bottom).

slopes, steps, and curbs modeled, it will be possible to visualize universally accessible routes. The platform will also allow users to filter buildings based on pre-set parameters: apartment blocks suitable for solar panels under the country's Greenprint initiative could be quickly identified by number of stories and roof type.

From their own experience with building information modeling, architects may already be familiar with many of these capabilities, but to bring them together in a project of Virtual Singapore's scope and scale

offers to revolutionize the way cities understand themselves. Concentrating so much information in one, publicly accessible platform, however, is also raising unprecedented issues of privacy and security. "This information will help our daily lives, but it could also fall in the wrong hands and create problems for Singapore," George Loh, the NRF's director of programs, told Reuters. "We need to think about that. We need to be two or three steps ahead."

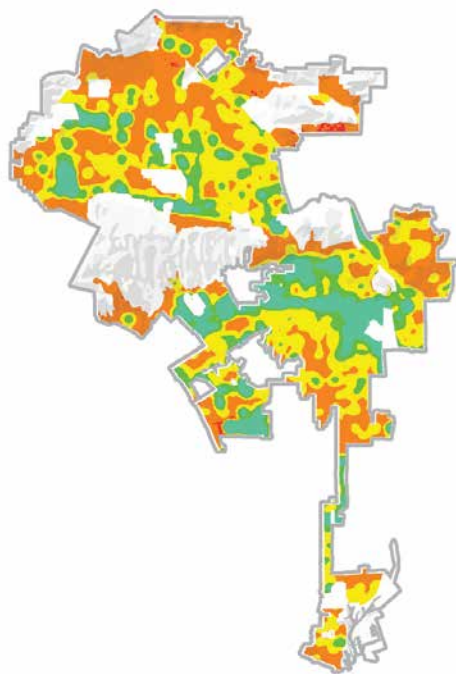
A newer entrant in the smart-city stakes, Los Angeles, is also using big data to under-

stand risks and opportunities. Projects that address two prominent L.A. priorities include an artificial intelligence-enabled disaster preparation and management program, and a mapping-based community-development initiative.

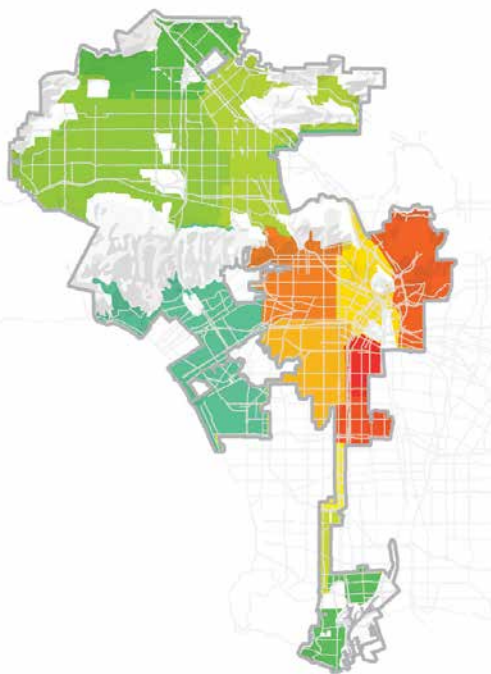
According to the United States Geological Survey (USGS), odds are that a magnitude 6.7 earthquake will hit Los Angeles in the next 30 years (with lower, but still considerable, odds for a quake of greater magnitude). As part of its efforts to mitigate the impacts of such a disaster, the L.A. Emergency Management Department (EMD) is testing a software platform that incorporates data on hundreds of attributes for three key vectors: the natural environment (from such sources as topographical maps, soil surveys, and USGS seismic sensors); the built environment (building code and permit documentation, zoning maps, satellite imagery); and demographics (from the U.S. Census Bureau). The software combines these data to run simulations of, say, the thousand most likely earthquakes—or particular quakes of defined magnitude, depth, and location—and applies machine learning and predictive analytics to forecast impacts at the census-block level. In the event of an actual disaster, it would provide near real-time information on where and what types of damage to expect and what populations were likely to be affected.

"Which buildings are going to collapse and block emergency routes, so we can prioritize upgrading them? Which major highways in the supply chain are going to collapse, and which will survive, so I can designate them as alternates?" These are some of the questions Aram Sahakian, EMD's general manager, hopes the software can help with. He is planning to run a simulation in a public-private partnership with several grocery distribution centers located on the San Andreas Fault. Since they are a critical part of the city's infrastructure, Sahakian wants them up and running three to four weeks after a major quake. He's hoping that the data-based predictions will motivate the companies to start planning for resilience. "As businesses, it's in their interest too," he says. About a year into the trial, it's too early for Sahakian to judge how useful the software will be, but it's promising, he says.

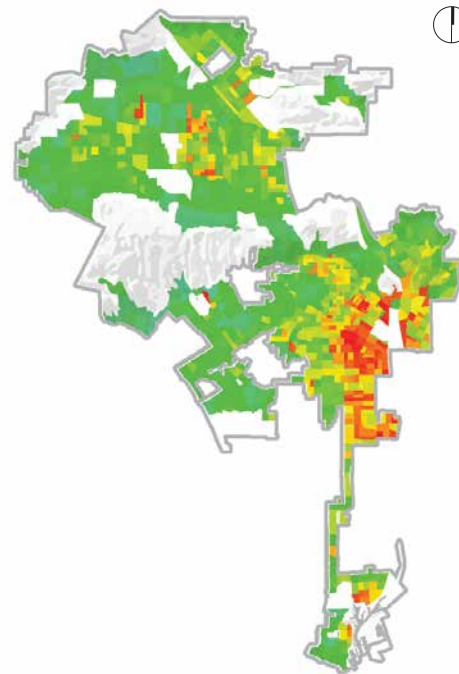
While the EMD uses data to prepare for the worst, RegenCities, a 2018 American Planning Association Smart Cities Award-winning research initiative by SOM, aims for the best. RegenCities draws on an SOM-developed, systems-based methodology, which the firm calls "health topography." It uses geo-referenced information to analyze a city's vital signs. A



JOB DENSITY



CHRONIC DISEASES



POVERTY

SOM's Los Angeles research project RegenCities collects data from open-source portals, combining them with census-tract data. Deploying a systems-based methodology to understand vulnerabilities and opportunities, it analyzes this information across several indicators, including those for public health and socioeconomic standing.

scan of public data from open-source portals is combined with census-tract data for a defined area, and categorized according to five urban systems: built, natural, infrastructure, socioeconomic, and cultural. The data are then aggregated, mapped, and cross-referenced against 10 principles, or traits, of regenerative cities (such as energy, economy, and mobility) to reveal areas of abundance and scarcity. The data sets themselves are not intended to be conclusive, says Gunnar Hand, leader of SOM's city-design practice. Instead, they help to focus discussion among the people involved.

Beginning with a health-topography assessment conducted for South L.A., SOM partnered with local businesses, nonprofit organizations and community leaders, and the Los Angeles mayor's office to found a community development initiative called RemakeLA. Returning to data, this time for property ownership, RemakeLA identified and mapped about 5,000 municipally owned surplus sites (property severed during a road construction, for example, and left to deteriorate into a weedy nuisance). It then developed an online geohub to open a public conversation about these sites' potential for community-based economic development, entrepreneurship, and reinvestment.

As a result, SOM is now collaborating with the architecture program at Los Angeles Trade Technical College, whose students come predominantly from South Los Angeles, to develop a pilot program for one of the sites. Participants will use the geohub to identify a parcel suitable for locating an open architecture studio—a base for community-student architectural collaborations. If approved, the facility will be designed and built by students in the college's programs. One primary goal for the pilot "is to prove to the mayor's office that permitting use of these parcels could be a valuable tool in their economic-development box—empowering the public," says Hand.

Responding to the particular circumstances and priorities of their home place, these examples of how cities are using technology to understand and improve themselves vary wildly. Yet they share a common theme: the integration of data to craft a comprehensive strategy. "We need a holistic approach to cities," says Rueda, "because our main subject is humanity." ■

Katharine Logan is an architectural designer and writer focusing on design, sustainability, and well-being.

Continuing Education

To earn one AIA learning unit (LU), including one hour of health, safety, and welfare (HSW) credit, read "Designs on Data," review the supplemental material found at architecturalrecord.com, and complete the quiz at continuingeducation.bnmedia.com or by using the Architectural Record CE Center app available in the iTunes Store. Upon passing the test, you will receive a certificate of completion, and your credit will be automatically reported to the AIA. Additional information regarding credit-reporting and continuing-education requirements can be found at continuingeducation.bnmedia.com.

Learning Objectives

- 1 Explain such terms as *smart cities*, *connected cities*, and *senseable cities*.
- 2 Describe how sensing technologies and big data can be used improve the quality of life and the health of urban inhabitants.
- 3 Explain how networked urban infrastructure can help urban areas resume normal operations after natural disasters, such as earthquakes.
- 4 Discuss some of the potential negative impacts of ubiquitous data-collection devices.

AIA/CES Course #K1906A

New and Upcoming Exhibitions

Museum Mile Festival

New York City

June 11, 2019

The event allows attendees to visit seven of the city's cultural institutions free, from 6 p.m. until 9 p.m. including the Metropolitan Museum of Art; Neue Galerie New York; Solomon R. Guggenheim Museum; Cooper Hewitt, Smithsonian Design Museum; the Jewish Museum; Museum of the City of New York; and El Museo del Barrio. Learn more at museummilefestival.org.

Design With Nature Now

Philadelphia

June 21–September 15, 2019

The legacy of environmental planner and landscape architect Ian L. McHarg is explored by showing the efforts of individuals and collectives to mitigate the effects of climate change through ecological design. For more information, visit mcharg.upenn.edu.

Second Home Serpentine Pavilion

Los Angeles

June 28–November 24, 2019

Second Home and the Natural History Museums of Los Angeles County are bringing SelgasCano's 2015 installation to Los Angeles. A pavilion will be at the La Brea Tar Pits with public programs and events focusing on the intersection of art, design, science, and nature. More information at pavilion.secondhome.io.

Ongoing Exhibitions

The Value of Good Design

New York City

Through June 15, 2019

This exhibition at the Museum of Modern Art features design objects from domestic life, beginning with MoMA's Good Design initiatives in the 1930's and going to the present day, to explore what constitutes good design for a 21st-century audience. See moma.org.

Hugh Kaptur: Organic Desert Architecture

Palm Springs, California

Through June 17, 2019

Exploring the visionary designer's body of

work, this exhibit places him in the context of his Desert Modern peers through archival drawings, models, sketches, slides, period photographs, and ephemera. At the Palm Springs Art Museum. Visit psmuseum.org.

Beyond the Structure

Madrid

Through June 20, 2019

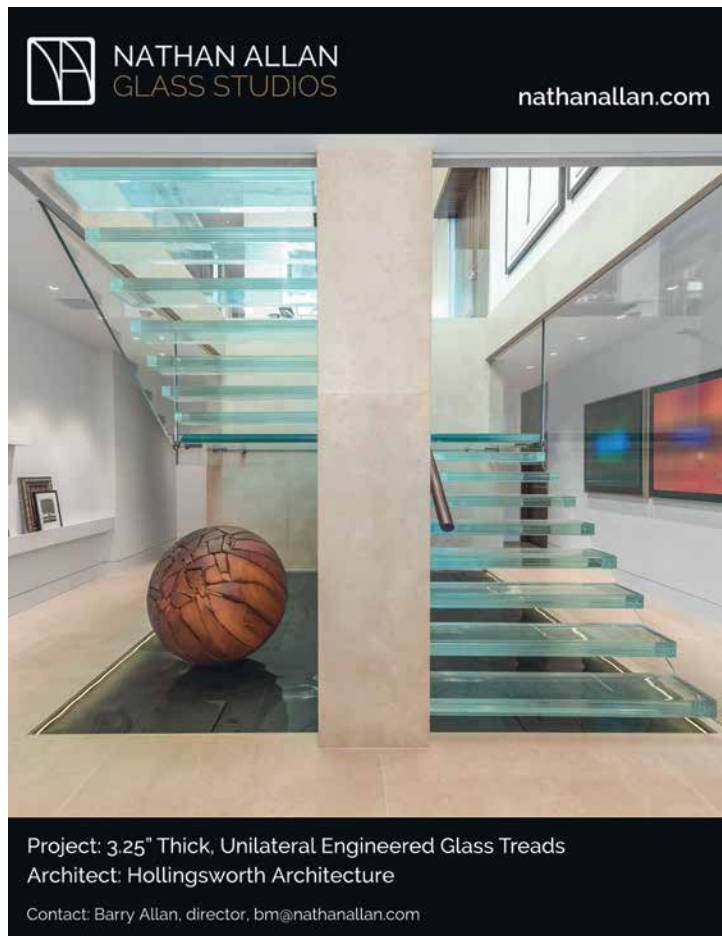
Skidmore, Owings & Merrill (SOM) presents this exhibition in conjunction with COAM Architecture Foundation. It focuses on the integration of SOM's structural-engineering practice with architectural design, but also features panel discussions, workshops, and guided tours scheduled throughout the exhibition's run. Visit som.com for more details.

About Face: Stonewall, Revolt and New Queer Art

Chicago

Through July 20, 2019

On the 50th anniversary of the Stonewall Rebellion, this exhibition at Wrightwood 659 features almost 500 works of photography, painting, sculpture, film, and performance art that seek to reframe the traditional views



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about the uprising, along with sexuality and gender identity. More at wrightwood659.org.

Matter and Place

Jakarta, Indonesia
Through July 21, 2019

This exhibition at Museum MACAN's Sculpture Garden examines ideas surrounding identity, politics, economy, and culture that are connected to specific locations and geographical regions. It features installations by Indonesian, Malaysian, Vietnamese, and American artists on architecture and materiality. Details at museummacan.org.

Secret Cities: The Architecture and Planning of the Manhattan Project

Washington, D.C.
Through July 28, 2019

The exhibition delves into the innovative design and construction of three cities born out of the Manhattan Project, tracing their precedents in the Bauhaus and other early-modern schools of architectural thought. The show looks at daily life within those cities and how it was shaped by their physical form. At the National Building Museum. Visit nbm.org.

The Bauhaus and Harvard

Cambridge, Massachusetts
Through July 28, 2019

In conjunction with the 100th anniversary of the founding of the Bauhaus, this exhibition at Harvard presents rarely seen student exercises, iconic design objects, photography, textiles, typography, paintings, and archival materials, including works by 74 artists from the Busch-Reisinger Museum's Bauhaus collection. Learn more at harvardartmuseums.org.

David Adjaye: Making Memory

London
Through August 4, 2019

This exhibition at the Design Museum features seven projects selected by Sir David Adjaye, displayed with full-scale installations, films, architectural models, and artifacts that influenced the creative process. Visitors will also receive a first look at the proposed Coretta Scott King and Martin Luther King Jr. Memorial in Boston. More at designmuseum.org.

Kabbalah: The Art of Jewish Mysticism

Amsterdam
Through August 25, 2019

This temporary exhibit showcases the many

sides of Kabbalah with displays of ancient texts alongside work by modern and contemporary artists, at Amsterdam's Jewish Cultural Quarter. Visit jck.nl/en for more details.

Serious Play: Design in Midcentury America

Denver
Through August 25, 2019

The exhibition at the Denver Art Museum features the ways architects and designers used the concept of playfulness in postwar American design as a catalyst for creativity in the American home, children's toys, and corporate identities. Co-organized by the Milwaukee Art Museum, the collection includes over 200 works in various media. See more at denverartmuseum.org.

Rites of Spring

East Hampton, New York
Through October 5, 2019

The LongHouse Reserve is displaying this art collection for its 28th season. The outdoor museum features sculptures and furniture by artists including Wendell Castle, Young Jae Lee, Will Ryman, and Joseph Walsh. Details at longhouse.org.

Vienna Biennale for Change: Brave New Virtues

Vienna
Through October 6, 2019

This third Vienna biennale will explore what an economically just, socially fair, and ecologically sustainable future could be. Artists, designers, and architects from all continents will focus on visions for achieving this. Learn more at viennabiennale.org.

Our Happy Life: Architecture and Well-Being in the Age of Emotional Capitalism

Montreal
Through October 8, 2019

Focused on the decade following the 2008 economic crash, *Our Happy Life* investigates today's "cult of happiness" and its many contradictions, questioning how the happiness agenda influences the design of our built environment. See more at cca.qc.ca.

Prisoner of Love

Chicago
Through October 27, 2019

The exhibition, which examines human experience by attempting to capture the intensities of love, fear, and grief, features artist Arthur

Jafa's *Love Is the Message, the Message Is Death*, a film that explores the African-American experience in the 20th and 21st centuries. The work is set to the gospel-infused song "Ultralight Beam" by rapper Kanye West. At the Museum of Contemporary Art Chicago. For more, see mcachicago.org.

In Frederic Church's Ombra: Architecture in Conversation with Nature

Hudson, New York
Through November 3, 2019

Showcasing multimedia design concepts and installations, this exhibition at the Sharp Family Gallery by guest curator Barry Bergdoll combines hand-drawn sketches, painted renderings, three-dimensional models, and animations examining the relationship of architecture and landscape at Olana. See more at olana.org.

Written by Water

Luxembourg
Through November 24, 2019

This immersive exhibition at the Luxembourg Pavilion by Portuguese artist Marco Gondinho examines the relationships that mankind has with the sea. See luxembourgpavilion.lu.

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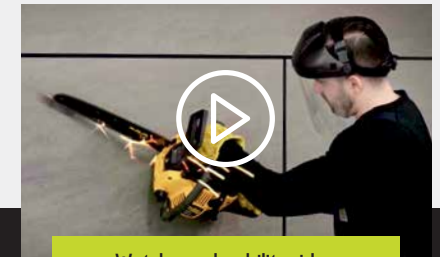
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HOOPS

Washington, D.C.

Through January 5, 2020

This exhibition presents photographer Bill Bamberger's images of private and community basketball courts around the United States and abroad, taking viewers from the deserts of Arizona and Mexico to the playgrounds of South Africa. At the National Building Museum. Visit nbm.org.

Nature—Cooper Hewitt Design Triennial

New York

Through January 20, 2020

Over 60 projects will be featured in this exhibition demonstrating how designers are collaborating on inventive solutions to the environmental and social challenges confronting humanity. For more information, visit cooperhewitt.org.

Van de Velde, Nietzsche and Modernism Around 1900

Weimar, Germany

Through April 1, 2024

This new, permanent exhibition is centered around Nietzsche as philosopher and cult figure, and features Weimar Art School exponents and work by the architect Henry Van de Velde. Learn more at bauhaus100.com.

Lectures, Conferences, and Symposia

Atlanta Design Festival

Atlanta

June 1–9, 2019

The week-plus event will include a series of architecture tours, showroom presentations, talks, and installations around the city, putting its growing design industry in the spotlight. See atlantadesignfestival.net.

AIA Conference on Architecture

Las Vegas

June 6–8, 2019

The American Institute of Architects' annual conference event will have the theme Blueprint for a Better Future; at the Las Vegas Convention Center. For more information, go to conferenceonarchitecture.com.

The Housing System

New York City

June 10, 2019 at 4 p.m.

This final event of the series by the Architectural League of New York will be a discussion between Rosanne Haggerty and Donald Berwick on land use, design, finance, occupancy, and management practices that

could allow New Yorkers to achieve adequate housing for all. The free event is open to the public and will be held at Scholastic's Big Red Auditorium. More at archleague.org.

NeoCon

Chicago

June 10–12, 2019

This is the 51st year of the annual commercial design event that showcases thousands of new interiors products and hosts 100 CEU seminars in addition to keynote programming. For more information, visit neocon.com.

LA Design Festival

Los Angeles

June 20–23, 2019

The ninth year of LA Design Festival includes public design installations, tours, confabs, and international exhibitions reflective of the city's diversity and talent. For more information, see ladesignfestival.org.

Record on the Road Denver

Denver

June 26, 2019

ARCHITECTURAL RECORD will present an evening symposium at the Denver Art Museum moderated by managing editor Beth Broome, followed by a cocktail reception. For more, see architecturalrecord.com.

Seattle Design Festival

Seattle

August 16–25, 2019

The Design in Public program gathers over 30,000 designers, community members, and civic leaders to explore how we design for this year's theme, which is Balance. The event celebrates all the ways that design makes life better for Seattle. For more information see designinpublic.org.

Competitions

Buildings of Excellence Competition

Deadline: June 4, 2019

New York State governor Andrew Cuomo launched this competition to accelerate the design, development, construction, and operation of very low- or zero carbon-emitting buildings. New York State Energy Research and Development Authority is seeking proposals for projects that reduce energy consumption and per capita carbon emissions. Winners are eligible to receive up to \$1 million in direct funding. More at nyscrda.ny.gov.

Dedalo Minosse International Prize

Deadline: June 7, 2019

The 11th edition of this international prize

honors the client's role in the design process along with the architect's. Any private or public client, its architects, building firms, the companies supplying the works and materials, or anyone else involved in the building process is entitled to enter the competition. Works must have been completed in the 2018 calendar year. Visit dedalominosse.org/eng.

The Met's 150th Anniversary Design Competition

Deadline: June 13, 2019

In honor of the New York Metropolitan Museum's 150th anniversary, a cash prize of \$1,000 is being offered for designs for products for the Met Store; realizations of winning entries will be launched in April 2020. Enter a JPG or PNG of an original design in any medium. For more details visit metmuseum.org.

Hyde Park Music Pavilion

Deadline: June 14, 2019

This competition for students of architecture and young architects requests proposals for a space in London's Hyde Park to provide information about past and future concerts there as well as host concerts and visitors. More at arquideas.net.

2019 Architect Studio Prize

Deadline: June 21, 2019

The prize recognizes thoughtful, innovative, and ethical studio courses at accredited architecture schools around the world. A jury of design professionals will judge each studio course according to its initial brief, research, process, and resulting student work. Winners may receive up to \$25,000 in prize money. Read more submission details at studioprize.com

Lunawood Urban Challenge

Deadline: June 24, 2019

All architecture students, architects, and creative professionals are invited to develop and submit ideas to lower the carbon footprint of buildings and increase healthy living experiences by using the renewable wood material Lunawood Thermowood. Visit lunawood.com.

Zero Threshold Design Competition

Deadline: June 28, 2019

The competition, inspired by (dis)ABLED Beauty at the Kent State University Museum in 2016–17, is open to individuals or teams of students and professionals working toward building a barrier-free future. Winning entries will receive a cash prize and be featured in an

exhibition and publication. More details at zerethreshold.org.

The People's Notre-Dame Cathedral Design Competition

Deadline: June 30, 2019

After the roof and spire of the iconic building were burned on April 15, this competition to redesign the people's cathedral was launched. Every approved submission will be open to public voting, and the winner will receive a \$1,000 cash prize. Submissions must include an aerial, street-level, and unique-experience image, along with a short description. Competition details at goarchitect.com.

Barbara Cappochin Biennial International Architecture Prize

Deadline: June 30, 2019

Organized by the Barbara Cappochin Foundation, the prize focuses on the central role that architecture plays in the evolution of landscape through urban peripheries, the use of bio-architecture, energy efficiency, and sustainable urban development. A jury, including a representative of the National Council of Architects, Planners, Landscapers, and Conservationists of Italy, will choose the winner. More info at en.bcbiennial.info.



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Tulum Plastic School: Art, Wellness, Environment*Deadline: July 3, 2019*

This built-project competition, presented by Archstorming, aims to design an art school made from recycled plastics in Tulum, Mexico. Winners will be chosen by a jury and will see their proposals built, and also receive a cash prize. More information at archstorming.com.

The Complete City: Imagined*Deadline: July 22, 2019*

Since 2017, the Portland Society for Architecture has been using blank maps of Portland, Maine, as tools to collect comments and ideas about and for the city. Publicly sourced submissions will serve as inspiration for what Portland can become in the future. The winning entries will be chosen by a design jury and will receive cash prizes. For details visit thecompletecity.com.

Vectorworks Design Scholarship*Deadline: August 29, 2019*

Undergraduates and graduate students are eligible to submit their best design work for

the chance to win up to \$10,000 from the Vectorworks Design Scholarship or the Richard Diehl Design Award. For more information visit vectorworks.net.

Architectural Review Emerging Architects Awards*Deadline: August 30, 2019*

For the 20th year, the AREA Awards will reward excellence in an emerging architect's overall body of work rather than a single completed building. To be eligible for submission, all practice founders must be under the age of 45 as of December 5, 2019. For more, see emergingarchitecture.architectural-review.com.

Robert Wood Johnson Foundation Challenge*Deadline: August 31, 2019*

The theme is Building Health into Everyday Life. In the near future, technology might be used to enhance health as part of our daily routines. Entries should include ideas that will be feasible in five to 10 years and will change the built environment to a healthier default. There will be two categories of winning de-

signs: one targeting specific healthy behaviors and one that envisions broad, systemic change. For more, visit centerhxd.com.

2019 Cocktail Napkin Sketch Contest*Deadline: September 6, 2019*

Licensed architects or related professionals who practice in the United States are eligible to enter this annual architectural-drawing competition, for which two Grand Prize-winners will be chosen. The winning sketches and runners-up will be published in the November 2019 issue of ARCHITECTURAL RECORD and online. For more, see architecturalrecord.com.

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IN VIETNAM, you don't need to travel to the countryside to experience the nation's agrarian roots. In the dense capital of Hanoi, the self-sufficient Vườn Ao Chuồng (VAC) farming system, which incorporates hydroponics, aquaponics, and animal husbandry, is still an integral part of many households. To create a flexible prototype that could be implemented in various urban settings, local firm Farming Architects has devised a modular wood-lattice frame with an adjacent pond. Home to roosters, koi, plants, and even books, the model also provides a place for children to learn and play. *Alex Klimoski*